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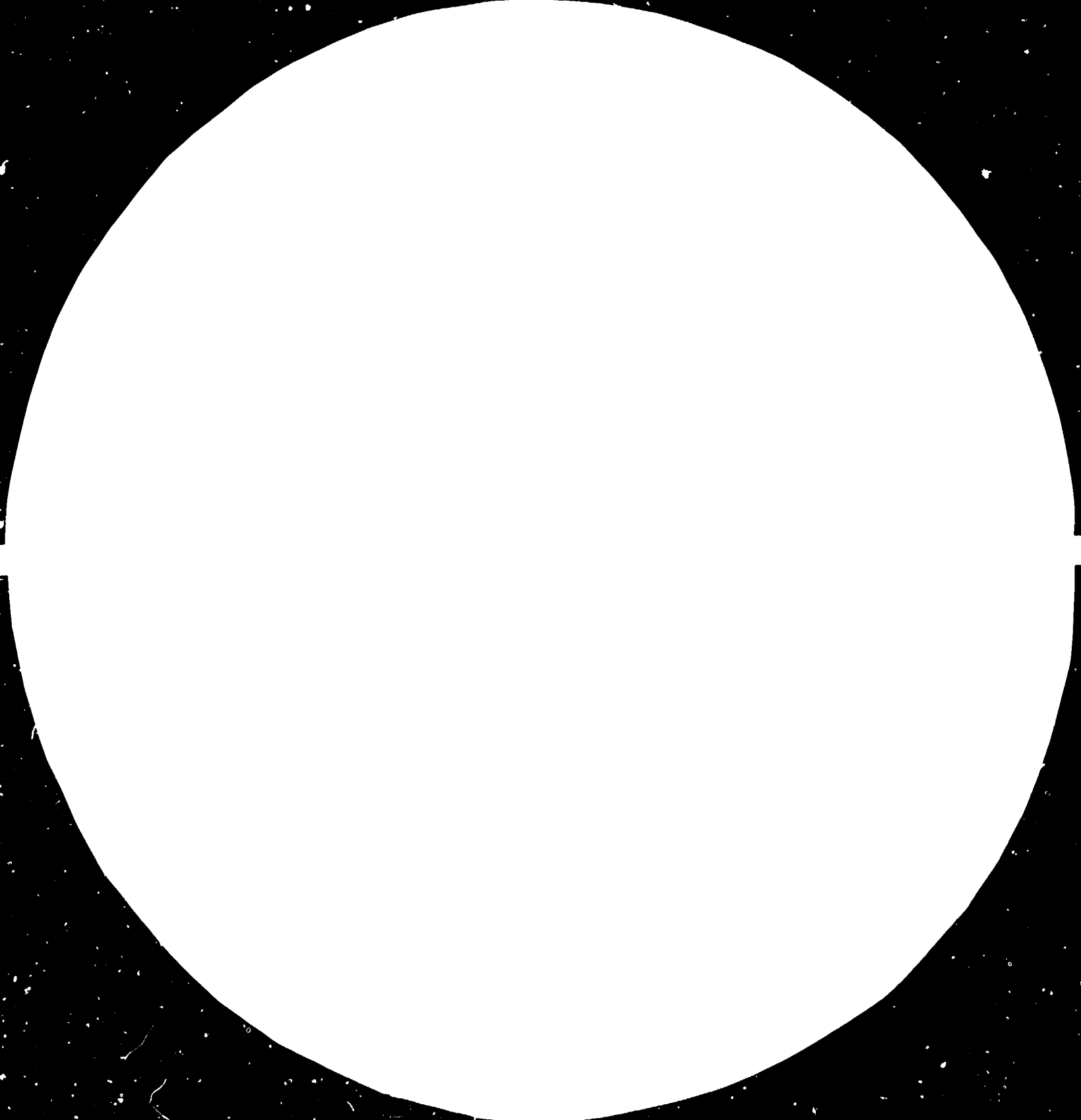


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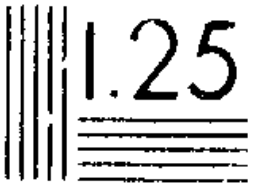
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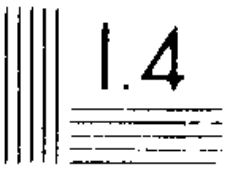
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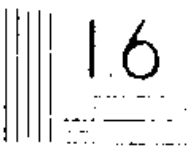
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DEVELOPMENT OF CAPITAL GOODS INDUSTRIES

DP/TUR/76/034

TURKEY

Turkey

Technical Report No. XIV : Capital Goods Demands for Pulp and Paper Industry with Special Reference to SEKA

SUBAT 1983

UNITED NATIONS DEVELOPMENT PROGRAMME IN TURKEY

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION

RESTRICTED
JANUARY 1983
English

DEVELOPMENT OF CAPITAL GOODS INDUSTRIES

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Technical report No. XIV.

Capital Goods Demands for Pulp and Paper Industry with special reference to SEKA

Prepared for the Government of Turkey
by the United Nations Industrial Development Organization
acting as executing agency for the United Nations Development Programme

Based on the work of
Capital Goods Development Project Team in Turkey
United Nations Industrial Development Organization
Vienna

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

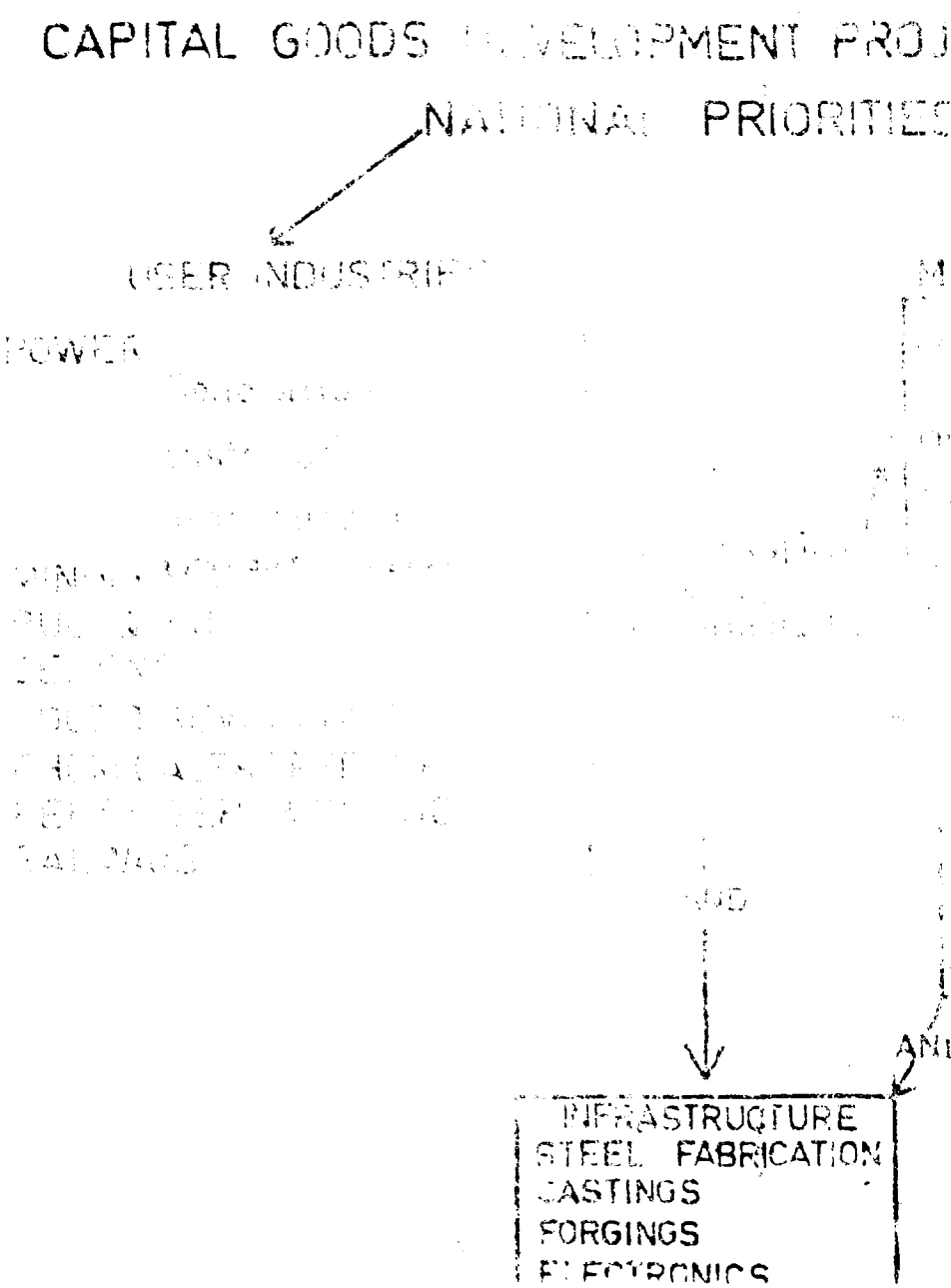
1.1. The State Planning Organisation of Turkey in close collaboration with the United Nations Industrial Development Organisation (UNIDO) had undertaken a detailed study to develop and expand the capital goods manufacturing industries. The priority sectors selected by the Government for this study are represented in a chart on Page 2.

1.2. (SEKA), the General Directorate of Pulp and Paper Mills Enterprise of Turkey, the State enterprise engaged on large-scale production of pulp and paper, was asked by SPO to undertake the Pulp and Paper sector of this comprehensive study.

1.3. The whole project involving various industry sectors has been conducted under the direction of Dr. N.H. Luther, Chief Technical Advi er, since Nov. 1979, Mr. K.M. Grie[illegible], Mechanical Engineer, joined the project as a consultant on 1.4.82 and was assigned to work with SEKA experts. He carried out his studies over a period of 3 months.

1.4. In the course of this study, experts Teoman Ilgen, Cahit Seymen, Rezan Celikdemir, Bulent Tek and Ikbal Kadioglu, assigned by SEKA, worked on part time basis on future demands of equipment and machinery of Pulp and Paper plants in SEKA and in particular, the SAMSUN ATATURK Plant for printing and writing paper. This study has been done under the overall direction of Mr. Celal Belarslan, Manager Investment Department of SEKA, Izmit.

1.5. Mrs. Guler Izmirlioglu, Ziya Siddiki, National Project Coordinators were continously associated with the work at all stages.


CAPITAL GOODS
PRIORITIES
POWER
INFRASTRUCTURE
STEEL FABRICATION
CASTINGS
FORGINGS

ECT IN TURKEY

ING INDUSTRIES

TAL CUTTING
FORMING
NGINES
DUSTRIAL
MACHINERY
RS

1.6. This report has been discussed with the management of SEKA who are in agreement with it.

1.7. This report follows the methodology for process industries detailed in Technical Report No. 1 by Mr. [illegible] Luther, UNIDO, Capital Goods Development Project. It outlines the requirement of capital goods for the Samsun Arsenic Plant [illegible] for materialisation in 84-90 as well as requirements for replacements plant wise and year wise according to 15 digit codes and value of imports 3 to 5 digit SITC codes, both by [illegible] and origin.

1.8. SOURCES OF INFORMATION

(i) Members of the [illegible] Central Directorate of SEKA.
(ii) SEKA Mill [illegible], Balikesir and Izmit.
(iii) Feasibility Study [illegible] Lurgi International.
(iv) Tank and [illegible] SEKA & ISI SANAYII A.S.
(v) [illegible]
(vi) [illegible]

[illegible] Annex on pages 283-287

30.12.82

[illegible] M.I.PROD.E.(LOND), F.I.PROD.E.(LOND),
CHIEF TECHNICAL ADVISER,
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY.

CHAPTER II

OBJECTIVES AND METHODOLOGY

2.1. OBJECTIVES OF THE PROJECT

2.1.1. The main objective of the Capital Goods Development Project is to plan the long range development of capital goods industry in Turkey through identification of machinery and equipment requirements of industrial plants planned to be constructed up to 2000 and prepare plans for manufacture of as many of these capital goods as possible to reduce the level of their imports.

2.1.2. The demand for capital goods for process industries has been determined by following the methodology presented in Technical Report No.I, "Methodology for planning of Capital Goods Industries" by CTA, UNIDO. It deals with the details of equipment and machinery in terms of their specifications as well as manufacturing characteristics.

2.1.3. By means of a computer programme the expected requirements for groups of equipment for the plants were determined and sorted in ascending numerical order according to their codes and classified into groups of equipment.

The computer programme also lists for each equipment the quantity required, unit weight and unit cost in US dollars (1980 base) and furthermore, gives weight and cost distributions, yearwise on the basis of anticipated year of commissioning. These lists have been complied as a result of examination of the modular production charts, modular flow diagrams and plant lay-out forms which are explained in the following sections.

2.2. METHODOLOGY FOR PROCESS INDUSTRIES

2.2.1. Different concepts have been used by the Capital Goods Development Project teams for working out future demands of capital goods in different types of industries. This section briefly outlines the methodology as developed for process industries, including Pulp and Paper. The technology and plant size for each plant have been considered and a mathematical model developed. The data has been codified under 15 digit codes and information transferred on to a computer programme. Using a computer system, it will be possible to identify common items and to readily establish requirements first for each plant, then for the particular industry and finally for all industries.

Estimated cost data for each item has also been included in the programme.

Instruments and electrical requirements are not included in this study.

2.3. CLASSIFICATION OF INDUSTRY

2.3.1. COMMODITY CLASSIFICATION

The 4 digit International Standard Industrial Classification of all Economic Activities of United Nations (ISIC) has been used as the basis for classification of different parameters of industry to suit the Turkish conditions. A fifth digit has been to identify the specific commodity under consideration.

2.3.1.1. Code 3411 of ISIC covers the following:-

"Manufacture of pulp-paper and paperboard
The manufacture of pulp from wood, rags and other fibres; and paper, paperboard fibre building paper and fibreboard. The manufacture of off-machine coated, glazzed, gummed, and laminated paper and paperboard is classified in group 3419 (Manufacture of pulp, paper and paperboard articles n.e.c.); the production of asphalted and tar-saturated paper is classified in group 3540 (manufacture of miscellaneous products of petroleum and coal); the manufacture of sensitized photographic paper is classified in group 3529 (Manufacture of chemical products n.e.c.); the production of abrasive paper is included in group 3669 (Manufacture

of non-metallic mineral products n.e.c.); and the manufacture of carbon and stencil papers is covered in group 3909 (Manufacturing industries n.e.c.)".

2.3.1.2. Code 3411-1 has been used for Pulp and writing paper.

2.3.2. MODULAR PRODUCTION CHART

This chart shows the use of raw materials, the resultant intermediate products, by-products, waste products and of course the final products.

It does not take into account the process used not the type of machinery or plant capacities. The main products and by-products are indicated in a square and the waste products where identified, in an ellipse. Full lines joining any two represent a production module in which the machine pool exists. In case of more than one entry to the same production module, these multiple production lines converging for production modules are represented by a full production line. Each product (Main, by-, intermediate or waste) has been given a two digit number. The chart is on page 22.

2.3.3. INDUSTRY ACTIVITIES CHART

To classify and codify the process industries and production activities, an industry activities chart showing the stages of production has been prepared for each main product. A cumulative 9 digit coding system consisting of SITC code for industry sector (4), main product (1), intermediate product or production stage (2), technology (1), capacity (1) has been used. As explained in Para 2.3.1., the 5th digit identifies the main product, a specific item in the sector covered by the relevant ISIC code. Out of the remaining 4 digits on the industry activity chart, the first 2 for intermediate products which are processed in a production module. The 8th and 9th digits are for the alternative technologies and capacities of a particular production module respectively, in addition the name of the critical equipment and its capacity (defined as the 8th digit of SITC Codification system which will be described later) are also shown on the chart. In case of more than one critical equipment determining the capacity the item with the highest value is considered as critical.These charts are on pages 23 to 26.

2.3.4. MODULAR PROCESS FLOW DIAGRAM AND PLANT SURVEY FORM

To identify each machine in each production module one modular process flow diagram showing the proecss flow and one plant survey for recording the required information have been prepared.

2.3.4.1. The modular process diagram shows the process flow between equipment and machines in the order they are required. The left hand side of the diagram is the flow diagram and the right hand side is the list of equipment which are used in the process together with their 15 digit codes quantitative and machine funtion codes. Different sysmbols and code numbers are given to the equipment according to their functions. The circle symbol (o) and numbers between 0-29 are used for process equipment while the square symbol (□) and numbers 30-39 for inspection, the triangle symbol (△) and numbers 40-59 for storage, the arrow symbol (→) and numbers 60-79 for transport equipment. Full lines (—) represent work flow. These are on pages 27-37.

2.3.4.2. Plant survey form shows besides actual costs and 1980 basis costs, all the actual data of specifications and manufacturing characteristics and identifies specifically the 15 digit code for each. For the Samsun plant they are on pages 78-123 and for replacements in existing units on pages 242-250.

2.4. CLASSIFICATION AND CODIFICATION OF CAPITAL GOODS

2.4.1. A 15 digit system based on the 5 digit SITC code has been evolved to cover all capital goods expected to be used in sectors considered by the Capital Goods Development Project in Turkey. The first 5 digits are the SITC are the SITC codes and classify machines and equipment according to their functions. The next 9 digits have been allocated for definition of nomenclatures, specifications and manufacturing characteristic and the last digit is used for information on whether it is imported or manufactured in Turkey. This system is schematically shown on page 9.

LAYOUT OF 15 DIGIT CODES FOR CAPITAL GOODS

1 2 3 4 5	SITC Group name
6 7	Machine name
8	Major specification (Capacity)
9	Major specification (Optional)
10	Major specification (Optional)
11	Type
12	Manufacturing Characteristics 1 (Weight)
13	Manufacturing Characteristics 2(x)
14	Manufacturing Characteristics 3(xx)
15	Origin

(x) Type of material in the case of fabricated equipment (eg. type of steel) and that of principal parts in the case of machines (eg. type of casting).

(xx) Plate thickness is the case of fabricated equipment and maximum weight of component in the case of machinery.

2.4.2. EXAMPLE OF CAPITAL GOODS CODES BASED ON SITC

The 15 digit codes developed on the basis of SITC code Number 69241 is on page 10.

If, for example, a particular drum has to be codified the 15 digit code for it 692410510322611 would be evolved as under:

The particulars of a drum to be codified are given below:

SITC CODE	69241
Nomenclature	Drum (Digits 6 and 7, Code 05)
Capacity	7.5 m^3 (Digit 8-Code 1)
Major specification 1	Nil (Digit 9-Code 0)
Major specification 2	Temp. 70°C (Digit 10-Code 3)
Type	Cylindrical (Digit 11-Code 2)
Weight	6T (Digit 12-Code 2)
Material	Stainless steel plate (Digit 13-Code 6)
Plate thickness	12mm (Digit 14-Code 1)
Origin	Turkey (Digit 15-Code 1)

2.4.3. Code 725.11 of SITC (Rev. II) covers machinery for cellulosic pulp and 725.12, machinery for making or finishing paper or paperboard. Since these could not adequately cover the codes needed to identify pulp and paper machines, two additional 5 digit codes, 725.13 and 725.14 have been added.

SITC Code 69241 - Casks, drums, cans, boxes and similar containers of sheet or plate iron or steel of a description commonly used for the conveyance or packing of goods.

6-7		8		9	10		11		12		13		14		15	
Basic Machine Nomenclature		Major Specification (Capacity)		Major Spec.-1 Optional	Major Spec.-2 Optional		Type		Manufacturing characteristic -1		Manufacturing characteristic -2		Manufacturing characteristic -3		Origin	
Code	Name	Code	Cubic meters (m^3)	Code	Code	Temperature °C	Code	Description	Code	Weight(tons)	Code	Main body materials	Code	Plate thickness mm.	Code	
01	Boxes	1	Upto 10		1	Above 500	1	Rectangular/ cubic	1	Upto 5	1	Mild steel upto 0.20 carbon (untested quality)	1	Upto 20	1	Turkey
02	Cans	2	10-25		2	500-100	2	Circular cylindrical, semi-cylindrical, elliptical	2	5-10	2	Carbon steel above 0.20 C tested quality	2	20-40	2	Imports
03	Casks	3	25-50		3	100-0	3	Spherical	3	10-25	3	Boiler steel	3	40-50		
04	Containers	4	50-75		4	0-(-25)			4	25-50	4	Alloy steel	4	Over 50		
05	Drums	5	75-100		5	(-25)-(-50)			5	50-100	5	High alloy steel				
06	Vessels	6	100-150		6	(-50)-(-100)			6	100-200	6	Stainless steel				
07	Vessels (lined)	7	150-200		7	(-100)-(-120)			7	200-300	7	Non-ferrous materials				
08	Pots	8	200-300		8	(-120)-(-170)			8	300-500	9	Others				
		9	Over 300		9	Below (-170)			9	Over 500						
99	Others (nia)						9	Others (nia)								

CHAPTER III

DEMAND PROJECTIONS

3.1. SEKA FACILITIES

3.1.1. SEKA Plants either existing or under construction are given on Page 12.

3.1.2. The only other new plant planned is the "SAMSUN ATATURK PULP AND PAPER MILL" envisaged for commissioning in 89-90.

3.2. PROPOSED PULP AND PAPER MILL "SAMSUN ATATURK"

It is anticipated by SEKA that the next pulp and paper mill will be built in the Province of Samsun, and will produce writing and printing paper from two paper making machines, each of 65,00 tonnes per annum capacity. Three grades will be made, Grade 1 being a blend of softwood kraft pulp and hardwood kraft pulp and Grades 2 and 3 will also use chemi-mechanical pulp (CMP). Softwood kraft pulp and CMP will be available for marketing.

3.3. The summary of demand for capital goods according to the 5 digit SITC Code both weight-wise and value-wise is on Page 13.

SEKA PRODUCTION FACILITIES

LOCATION	YEAR OF START-UP	KINDS OF PRODUCTS
1-İZMİT	1936 1944 1954 1945	Writing paper,Newspaper,Wrapping paper, Various types of cartons, Cigarette paper,(Chanel cardboard papers) Klor-alcali products
2-ÇAYCUMA	1970	Kraft bag paper,Kraft liner,Fluting (NSSC), In and out wrapping paper, Formica papers
3-AKSU	1970	Newspaper,III.paste paper,multiplication paper,School book paper
4-DALAMAN	1971	Writing paper,Cartons Klor-alcali
5-AFYON	1979	Reed and straw celulose
6-BALIKESİR	1981	Newspaper and lumber
7-AKDENİZ	1983	Kraft liner Kraft bag paper Lumber
8-KASTAMONU	1984 1985	Cigarette paper,hemp celulose Plywood

SAMSUN ATATURK PLANT

SUMMARY OF REQUIRED

SITC CODE	DESCRIPTION	WEIGHT (Tons)			VALUE (1000 US$)		
		86	87	Total	86	87	Total
72513	Tanks, Silos and Bins	297	2915	3212	1829	5903	7732
72514	Agitators and Mixers		90	90	-	690	690
72512-3-4	Specialised items	2596	1333	3929	42218	11563	53782
72831	Metal detectors and Magnetic separators	-	25	25	-	75	75
69243,71111,72831 72832,74121,74163 74165,74342,74362	General items	-	1805	1805	-	8641	8641
74161	Coolers, Chillers, Heat Exchangers	-	85	85	-	649	649
74162	Evaporators	-	254	254		3469	3469
74166	Stripping tower, Scrubbers absorption columns	-	16	16		136	136
74210,74220,74230	Pumps	157	34	191	1874	519	2393
74312	Vacuum pumps	-	59	59	-	792	792
74313,74341	Fans and compressors	-	15	15	-	711	711
72341,74411	Loasers, forklifts, dozers	189	-	189	487	-	487
74422	Cranes and hoists	461		461	3555	-	3555
74426	Conveyors, feeders	1894	59	1953	2752	230	2982
74525	Scales	10	-	10	77	-	77
	TOTAL	5605	6690	12295	52799	33378	86171

UNITED NATIONS BUILDING, 197 ATATURK BULVARI, P.O. BOX 407 ANKARA, TURKEY

3.5. OTHER OBSERVATIONS

3.5.1. SEKA do not propose to install a sawmill, or a debarker. But the position should be reviewed at the time of placing an order for the pulp mill, because the design of the power boiler mill depends upon whether or not sawdust, or bark, is to be burnt.

3.5.2. This work has been based on a feasibility study, and not on a final design. The economic return from a highly complex process such as this depends on the correct sizing of various items, such as heat exchangers for the recovery of heat, and the correct sizing of motors, as well as the suitability of the more obvious items, such as the paper-making machines. Omissions from the feasibility study, and occasional errors have been made good in the coded specifications as far as possible, but when the time comes to order the plant, the supplier should design the plant as one whole economic system, without being influenced by the coded specifications.

3.5.3. It is of some concern that no definition of paper quality has been made, other than "Grades 1,2 and 3". The kraft pulp is of sufficient quality to form a good quality,

strong sheet, such as required by export-conscious companies. It is suggested that this market should be sought regarding the "Grade 1" papers, which would preferably be watermarked for reasons of prestige.

3.5.4. Good writing paper is not yet normally made upon a paper-machine of the twin-wire type. The machines at present proposed might be limited, due to drying capacity (provision of rewetting in a size press has been noted) to a speed of about 340 metres/min. when on the heaviest paper, 90 g/m^2. A twin-wire machine is not expected to work satisfactorily at this slow speed. It is suggested that SEKA might consider a fourdrinier wire part, which can give a sheet with good formation down to slow speeds.

3.5.5. With regard to future manufacture of components for the pulp and paper industries, the pulping components are of a different type from the paper making machine. For the former, boilers are of medium complexity, but other items are of basically simple design. The expertise is in the design of whole, so that each item is correctly sized for good economic returns from the plant, and designed, regarding plant layout, for efficient operation. Chemical engineers with good academic qualifications plus practical

experience would be the major requirement because already many components are being made in Turkey. Details however will be considered when the demand and manufacturing facilities for process industries as a whole are taken up.

3.5.6. The requirements of the paper making machine are different in that some parts are made to great accuracy, other parts if made incorrectly will leave blemishes on the paper and the whole machine has to work as one unit with maximum efficiency in dewatering and drying. The difficulties of the task cannot be overlooked. The method suggested to be adopted is to have a small engineering workshop who would have the necessary machines for repairing components from Turkish pulp and paper mills and could also manufacture simple rollers and other simple parts. They should then try to progress onto the more complex items by degrees. The paper making machine calls for mechanical engineering, as opposed to pulping which calls for chemical engineering.

3.5.7. The tendency to install paper machines as wide as 7 metres is worthy of review. It is believed that lost time increases with these wide machines, and a detailed study to determine where the best economic return lies would be desirable. It may be that the best width is from 5 to 6 metres. Another factor which might be worthy of further study concerns the integrated pulp and paper operation. A drying operation is omitted, and transport costs are reduced by having the pulp and paper at the same site. By having the pulp made at one big pulp mill, however, the benefits of a large capacity plant can bring economies. The pulp has then to be transported to paper mills, which, having no pulping operation, require little space and can often be sited near an existing centre of population. Because the paper mill is not tied to any one type of pulp, it can change the blend of pulps to conform to market demands, and thus achieve greater versitility.

3.6. REPLACEMENT REQUIREMENTS

3.6.1. These have been based on the reports of RUST International for Aksu, Dalaman, Afyon and Caycuma plants. Rehabilitation of Izmit plant has just been completed and the other plants are now under installation.

3.6.2. Demand details, year by year, according to 15 digit codes are given on pages 257 to 266 by weight and pages 267 to 282 by value in US$.

3.6.3. A summary of the demand projection is on page 19.

REPLACEMENT

SUMMARY OF DEMAND

SITC CODE	DESCRIPTION	WEIGHT (tons) 84	WEIGHT (tons) 85	VALUE (1000 US$) 84	VALUE (1000 US$) 85	PLANT
69211,72513	Tanks	-	23	-	43	AKSU
74210,74220	Pumps	-	26	-	246	AKSU
71111,72513,72514, 74426	General items	-	375	-	2788	AKSU
	Total	-	424	-	3077	AKSU
72513,72831,74342	Tanks and General Items	45	-	85	-	DALAMAN
74220	Pumps	4	-	32	-	DALAMAN
	Total	49	-	117	-	DALAMAN
72514,72831,74161, 74525	Specialised items	57	-	336	-	AFYON
74312,74341,74220	Pump	12	-	167	-	AFYON
74426	Material Handling Equipment	171	-	303	-	AFYON
	Total	240	-	806	-	AFYON
72513	Tanks	-	118	-	259	CAYCUMA
72514	Specialised items	-	41	-	323	CAYCUMA
71111,72831,74166. 74341,74342,7452.,	General items	-	470	-	1353	CAYCUMA
74161,74162	General items	-	137	-	1823	CAYCUMA
74220,74312	Pumps	-	15	-	256	CAYCUMA
74426	Conveyors	-	18	-	4089	CAYCUMA
	Grand Total for Replacemant	289	1220	923	7162	

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CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

4.1. A summary of anticipated demand upto 1990 is given below:-

Year	Demand by weight (Tons)			Demand by value (1000 US$)		
	Samsun	Rep.	Total	Samsun	Rep.	Total
1984	-	289	289	-	923	923
1985	-	1220	1220	-	7162	7162
1986	5605	-	5605	52793	-	52793
1987	6690	-	6690	33378	-	33378
TOTAL	12295	1509	13804	86171	8085	94256

4.2. It is essential to form some estimate of demand of pulp and paper machines by the private sector.

4.3. SEKA have a proposal to set up a Central Maintenance Workshop for manufacture of machine and equipment. The capacity originally proposed is 10000 T/year. It is recommended that

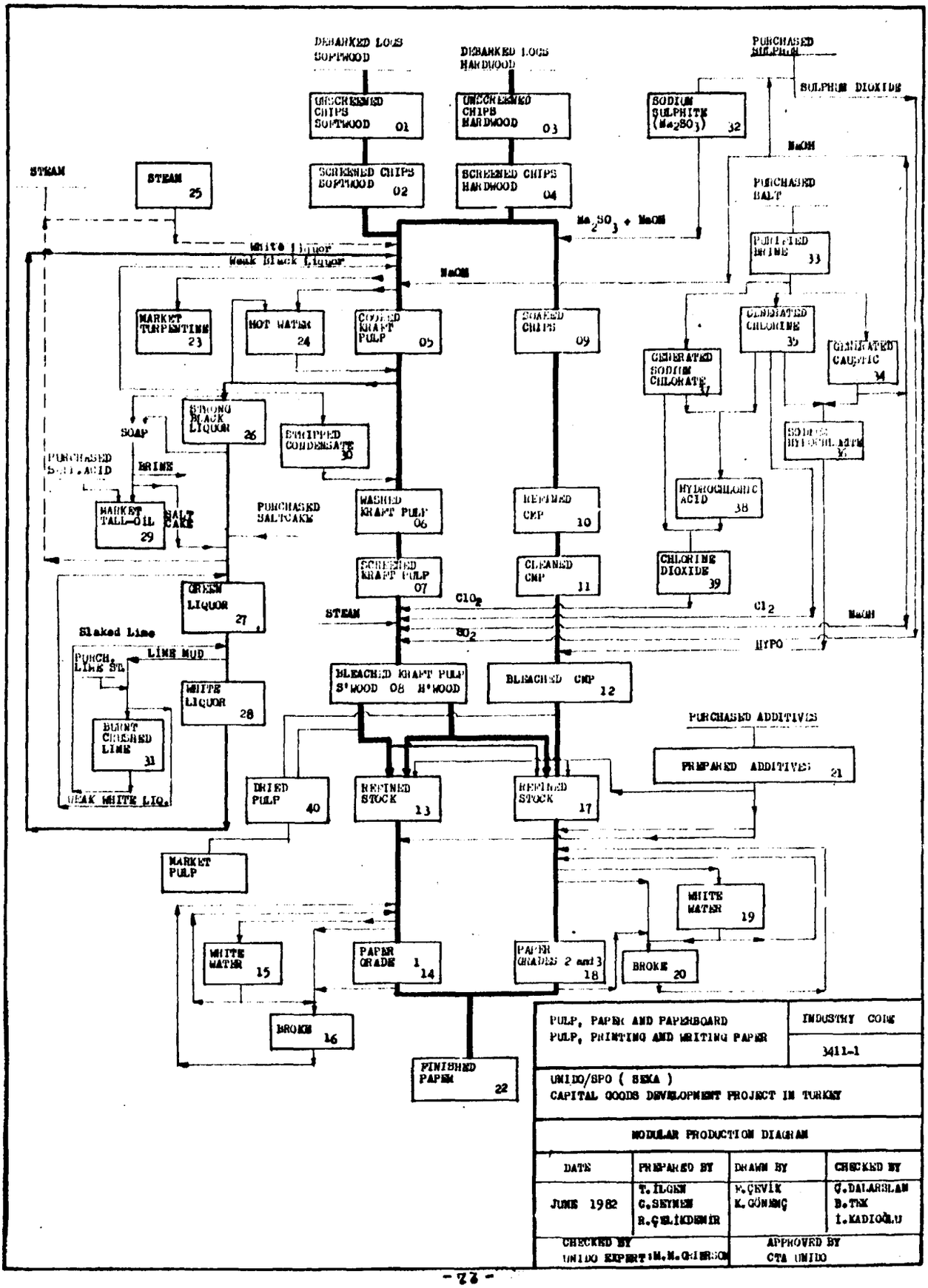
(i) a careful survey of the capacity available in the private sector for meeting the demands of SEKA mills should be undertaken keeping in view the supply sources already established and their potential for growth,

(ii) the new workshop should in principle, deal with specialised items requiring high degree of precision and stringent quality control and meet the needs of SEKA as well as private sector for them,

(iii) a study being conducted by SEKA should be coordinated with the Capital Goods Development Project so that if necessary, items for sectors other

than pulp and paper but requiring the same manufacturing facilities can be considered for the workshop to improve its economic viability.

(iv) the need for and nature of environmental considerations covering raw material preparations, pulping paper manufacturing (and forest management) and machinery and plant for them should be assessed for existing and new units. These will include efficient disposal, gaseous and particulate of emissions at different stages of manufacture and will involve mach nery for incineration, condensation, scrubbing, steam and air stripping, adorption and precipitating.


DEBARKED LOGS SOFTWOOD
DEBARKED LOGS HARDWOOD
PURCHASED SULPHUR
SULPHUR DIOXIDE
UNSCREENED CHIPS SOFTWOOD 01
UNSCREENED CHIPS HARDWOOD 03
SODIUM SULPHITE (Na_2SO_3) 32
NaOH
STEAM
STEAM 25
SCREENED CHIPS SOFTWOOD 02
SCREENED CHIPS HARDWOOD 04
PURCHASED SALT
Na_2SO_3 + NaOH
PURIFIED BRINE 33
White Liquor
Weak Black Liquor
NaOH
MARKET TURPENTINE 23
HOT WATER 24
COOKED KRAFT PULP 05
SOAKED CHIPS 09
GENERATED CHLORINE 35
GENERATED CAUSTIC 34
GENERATED SODIUM CHLORATE 37
SODIUM HYDROXIDE 36
STRONG BLACK LIQUOR 26
STRIPPED CONDENSATE 30
SOAP
PURCHASED SALT CAKE
BRINE
MARKET TALL OIL 29
SALT CAKE
PURCHASED SALTCAKE
WASHED KRAFT PULP 06
REFINED CMP 10
HYDROCHLORIC ACID 38
SCREENED KRAFT PULP 07
CLEANED CMP 11
CHLORINE DIOXIDE 39
GREEN LIQUOR 27
ClO_2
Cl_2
NaOH
STEAM
SO_2
HYPO
Slaked Lime
LIME MUD
$PURCH._2$ LIME SL.
WHITE LIQUOR 28
BLEACHED KRAFT PULP S'WOOD 08 H'WOOD
BLEACHED CMP 12
PURCHASED ADDITIVES
BLENT CHEMED LIME 31
PREPARED ADDITIVES 21
WEAK WHITE LIQ.
DRIED PULP 40
REFINED STOCK 13
REFINED STOCK 17
MARKET PULP
WHITE WATER 19
WHITE WATER 15
PAPER GRADE 1 14
PAPER GRADES 2 and 3 18
BROKE 20
BROKE 16
FINISHED PAPER 22
PULP, PAPER AND PAPERBOARD
PULP, PRINTING AND WRITING PAPER
INDUSTRY CODE
3411-1
UNIDO/SPO (SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY
MODULAR PRODUCTION DIAGRAM
DATE
PREPARED BY
DRAWN BY
CHECKED BY
JUNE 1982
T.İLGEN
C.SEYMEN
R.ÇELİKDEMİR
F.ÇEVİK
K.GÖNENÇ
Ç.DALARSLAN
B.TEK
İ.KADIOĞLU
CHECKED BY
UNIDO EXPERT: M.M.GIBSON
APPROVED BY
CTA UNIDO

UNIDO/SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PREPARED BY	CHECKED BY	APPROVED BY
T. İLGEN	UNIDO EXPERT H.M. GRIERSON	UNIDO CTA

COMMODITY CODE : 3411-1
COMMODITY NAME : PULP AND PAPER PAPERBOARD

PRODUCTION ACTIVITIES CHART

PRODUCTION STAGE		TECHNOLOGY		CRITICAL EQUIPMENT		DESIGN LINE CAPACITY	
Code	Name	Code	Name	Name	Capacity Range	Code	Capacity
01	UNSCREENED CHIPS S'WOOD	1	Chipping	Chipper	44.5 t/h	1	32 t/h
02	SCREENED CHIPS S'WOOD	1	Chip Screening	Vibrating Screen	44.5 t/h	1	32 t/h
03	UNSCREENED CHIPS H'WOOD	1	Chipping	Chipper	55.5 t/h	1	40 t/h
04	SCREENED CHIPS H'WOOD	1	Chip Screening	Vibrating Screen	55.5 t/h	1	40 t/h
05	COOKED KRAFT PULP	1	Sulphate Pulping	Digester	6.6 t/h	1	19 t/h Oven Dry
06	WASHED KRAFT PULP	1	Washing	Washers	20.4 t/h	1	19 t/h " "
07	SCREENED KRAFT PULP	1	Pulp Screening	Pressure Screen	13.2 t/h	1	19 t/h " "
08	BLEACHED KRAFT PULP	1	Bleaching	Bleach Tower	24.3 t/h	1	17.5 t/h " "
09	SOAKED CHIPS	1	Chip Impregnating	Chip Impregnator	13.5 t/h	1	9.7 t/h " "
10	REFINED CMP	1	Pulp Refining	Pulp Refiner	6.75 t/h	1	9.7 t/h " "
11	CLEANED CMP	1	Pulp Cleaning	Centrifugal Cleaner	0.061 t/h	1	9.7 t/h " "
12	BLEACHED CMP	1	Bleaching	Bleach Tower	13.5 t/h	1	9.7 t/h " "
13	REFINED STOCK	1	Stock Refining	Refiner	4.7 t/h	1	8.4 t/h " "

UNIDO/SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

COMMODITY CODE : 3411-1
COMMODITY NAME : PULP, PAPER AND PAPERBOARD

PREPARED BY	CHECKED BY	APPROVED BY
T. İLGEN	UNIDO EXPERT H.M.GRIERSON	UNIDO CTA

PRODUCTION ACTIVITIES CHART

PRODUCTION STAGE		TECHNOLOGY		CRITICAL EQUIPMENT		DESIGN LINE CAPACITY	
Code	Name	Code	Name	Name	Capacity Range	Code	Capacity
14	PAPER GRADE 1	1	Paper Making	Paper Making Machine	9.3 t/h	1	8.4 t/h Oven Dry
15	WHITE WATER	1	Fibre Recovery	Saveall	2.7 t/h	1	2.4 t/h " "
16	BROKE	1	Fibre Reclaimation	Pulper	10 t/h	1	0.9 t/h " "
17	REFINED STOCK	1	Stock Refining	Refiner	4.7 t/h	1	8.4 t/h " "
18	PAPER GRADES 2 and 3	1	Paper Making	Paper Making Machine	9.3 t/h	1	8.4 t/h " "
19	WHITE WATER	1	Fibre Recovery	Saveall	2.7 t/h	1	2.4 t/h " "
20	BROKE	1	Fibre Reclaimation	Pulper	10 t/h	1	0.9 t/h " "
21	PREPARED ADDITIVES	1	Additive Preparation	Starch Cooker	0.93 t/h	1	0.84 t/h " "
22	FINISHED PAPER	1	Paper Finishing	Sheet Cutter	3.9 t/h	1	16.8 t/h " "
23	MARKET TURPENTINE	1	Turpentine Production	Decanter	8.6 t/h	1	7.7 t/h
24	HOT WATER	1	Heat Recovery	Accumulator	-	1	-
	STEAM	1	Steam Generation	Power Boiler	140 t/h	1	126 t/h
26	STRONG BLACK LIQUOR	1	Liquor Concentration	Evaporators	33 t/h solids	1	30 t/h solids

UNIDO/SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

COMMODITY CODE : 3411-1
COMMODITY NAME : PULP, PAPER and PAPERBOARD

PREPARED BY	CHECKED BY UNIDO EXPERT	APPROVED BY UNIDO CTA
T.İLGEN	H.M.GRIERSON	

PRODUCTION STAGE		TECHNOLOGY		CRITICAL EQUIPMENT		DESIGN LINE CAPACITY	
Code	Name	Code	Name	Name	Capacity Range	Code	Capacity
27	GREEN LIQUOR	1	Liquor Recovery	Recovery Boiler	33 t/h solids	1	30 t/h solids
28	WHITE LIQUOR	1	Causticising	Recausticiser	30 t/h solids	1	27 t/h solids
29	MARKET TALL-OIL	1	Tall-oil Production	Reaction Vessel	-	1	-
30	STRIPPED CONDENSATE	1	Stripping	Stripping Tower	-	1	-
31	BURNT CRUSHED LIME	1	Lime Reburning	Lime Kiln	6.0 t/h	1	5.4 t/h
32	SODIUM SULPHITE	1	Absorbtion	Absorbtion Tower	0,29 t/h	1	0.26 t/h
33	PURIFIED BRINE	1	Brine Purification	Clarifier	5.5 t/h	1	5 t/h
34	GENERATED CAUSTIC	1	Electrolysis	Electrolytic Cells	0.154 t/h	1	3.3 t/h
35	GENERATED CHLORINE	1	Electrolysis	Electrolytic Cells	0.138 t/h	1	2.9 t/h
36	SODIUM HYPOCHLORITE	1	Sodium Hypochlorite Production	Tower	0.81 t/h	1	0.73 t/h
37	GENERATED SODIUM CHLORATE	1	Electrolysis	Electrolytic Cells	0.027 t/h	1	0.58 t/h
38	HYDROCHLORIC ACID	1	Combustion	Combustion Chamber	0.93 t/h	1	0.83 t/h
39	CHLORINE DIOXIDE	1	Generation	Generator	0.37 t/h	1	0.33 t/h

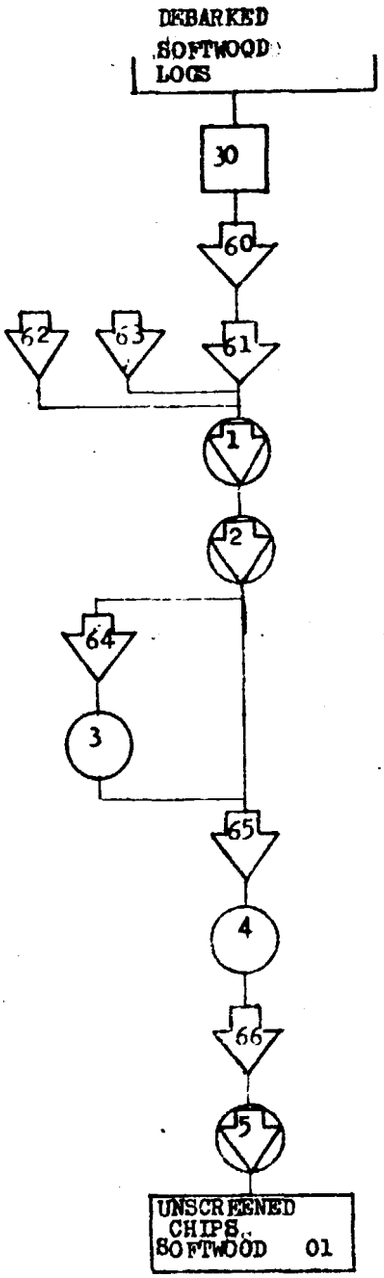
UNIDO /SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

COMMODITY CODE: 3411-1
COMMODITY NAME: PULP, PAPER and PAPERBOARD

PREPARED BY	CHECKED BY	APPROVED BY
T. İLGEN	UNIDO EXPERT H.M. CRIERSON	UNIDO CTA

PRODUCTION ACTIVITIES CHART

PRODUCTION STAGE		TECHNOLOGY		CRITICAL EQUIPMENT		DESIGN LINE CAPACITY	
Code	Name	Code	Name	Name	Capacity Range	Code	Capacity
40	DRIED PULP	1	Pulp Forming	Pulp Dryer	16.8 t/h	1	12 t/h Oven Dry



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	01	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
30	745250375211931	TRUCK SCALES	1
60	744221633124941	PORTAL CRANE	1
61	744110062004932	LOADER-FORK AND BUCKET	1
62	723412010013932	CHIP DOZER	1
63	744222121113932	MOBILE CRANE	1
1	744261325018951	RECLAIM CONVEYOR	2
2	744261323015941	SORTING CONVEYOR	1
64	744220222141912	BOOM LOADER	1
3	725130223442112	LOG SPLITTER	1
65	744260223013941	BELT CONVEYOR	1
4	728313130031912	METAL DETECTOR	1
66	744263122012931	ROLL CASE CONVEYOR	1
5	725145091553252	CHIPPER AND BLOWER	1

CAPACITY CALCULATION

Name of Critical Equip. : CHIPPER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 44.5 tons

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : ~~44.5x0.72 = 32 t~~

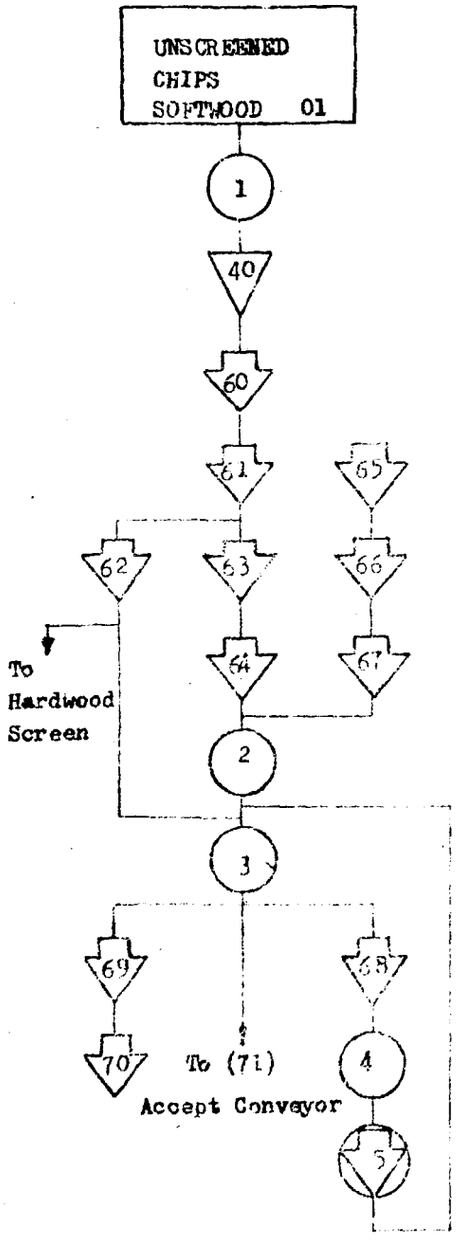
per hour	per shift	per day	per year
32 t	256 t	512 t	170496

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	UNSCREENED CHIPS SOFTWOOD	CHIPPING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	32 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T.İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M. CHILSON — APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	02	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	728314330012941	DISC CYCLONE	1
40	725133024372111	METERING BIN	1
60	744260223014931	BELT CONVEYOR	1
61	744267123011921	DISC CHUTE	1
62	744267123011921	DISC CHUTE	1
63	744260223013931	BELT CONVEYOR	1
64	744260223015931	STOCKOUT CONVEYOR	1
65	744261115015931	CHIP RECLAIMER	1
66	744260213014931	RECLAIM CONVEYOR	1
67	744260213014931	RECLAIM CONVEYOR	1
2	728313130637932	MAGNETIC SEPARATOR	1
3	725141092062932	CHIP SCREEN	1
68	744260217011911	OVERS CONVEYOR	1
4	728313110631932	MAGNETIC SEPARATOR	1
5	725141051352232	RECHIPPER AND BLOWER	1
69	744260212011911	FINES CONVEYOR	1
70	744260212012911	FINES CONVEYOR	1

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

DESIGN LINE CAPACITY :

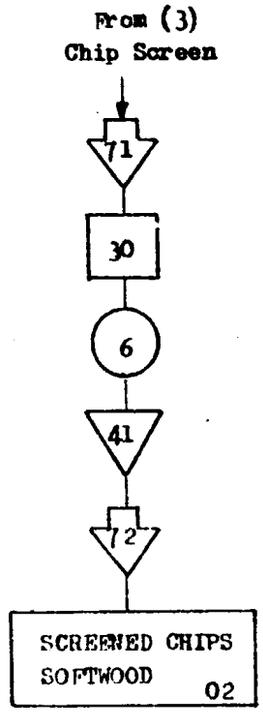
per hour	per shift	per day	per year

UNIDO / SPPC / 82 / 1

CAPITAL GOODS DEVELOPMENT PROJECT 1/2

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	SUBSECTOR	TECHNOLOGY
PULP AND PAPER	SAWMILL CHIPS SOFTWOOD	NOT GIVEN
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SPECIFICATIONS	12 t/h
PREPARED BY	DRAWN BY	CHECKED BY
C. SEYMEN	K. GÖNENÇ	E. TEK
CHECKED BY	APPROVED BY
UNIDO Expert	C.T.A UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	02	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
71	744260223015931	ACCEPT CONVEYOR	1
30	745250670211912	BELT SCALES	1
6	728313130031932	MAGNETIC SEPARATOR	1
41	725133056344111	CHIP SILO	1
72	744267420011931	TABLE FEEDER	1

CAPACITY CALCULATION

Name of Critical Equip. : SCREEN

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 44,5 tons

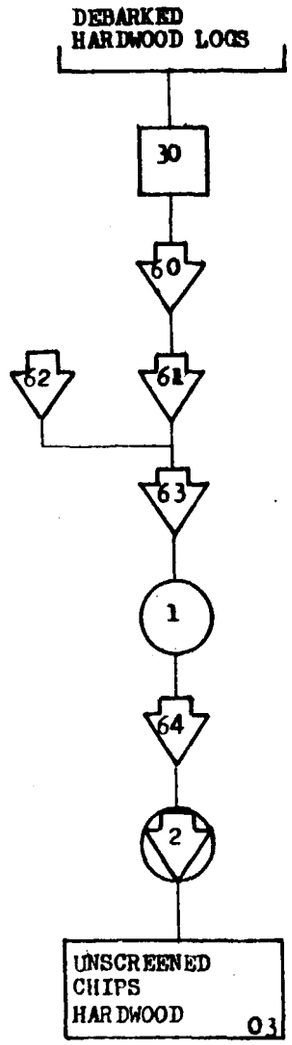
No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 44,5x0,72= 32 t.

per hour	per shift	per day	per year
32 t	256 t	512 t	170496 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT
MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	FLOW DIAGRAM
PULP AND PAPER	SCREENED CHIPS S'WOOD	SCREENING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	32 t/h
PREPARED BY	DRAWN BY	CHECKED BY
C. SEZGİN	K. GÖNENÇ	[illegible]
CHECKED BY UNIDO Expert	J.W. [illegible]ERSON	APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411 - 1	03	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
30	745250375211931	TRUCK SCALES	1
60	744221633124941	PORTAL CRANE	1
61	744110062004932	FRONTEND LOADER	1
62	723412010013932	CHIP DOZER	1
63	744260223013941	BELT CONVEYOR	1
1	728313130031912	METAL DETECTOR	1
64	744263122012931	ROLL CASE CONVEYOR	1
2	725145091553252	CHIPPER AND BLOWER	1

CAPACITY CALCULATION

Name of Critical Equip. : CHIPPER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 55,5 tons

No. of Critical Equipment : 1

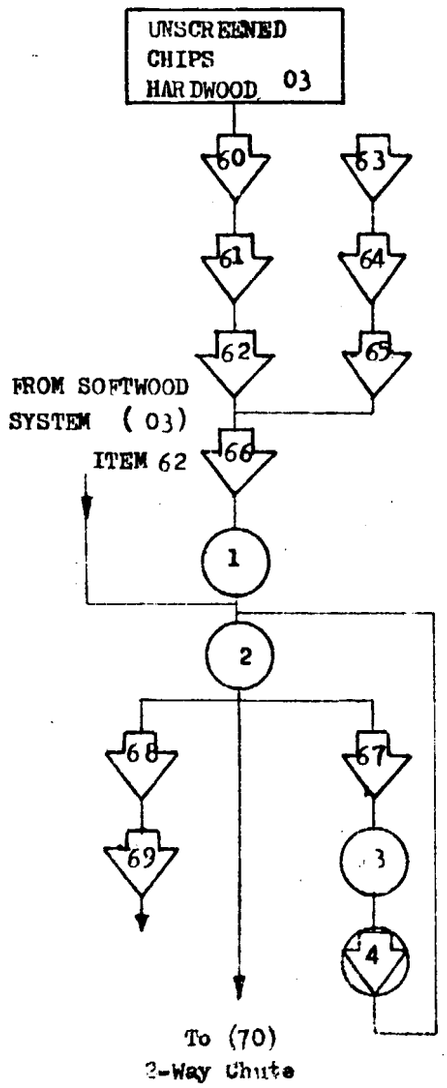
DESIGN LINE CAPACITY 55.5x0.72 = 39.9 t

per hour	per shift	per day	per year
40 t	320 t	640 t	213120 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	UNSCREENED CHIPS HARDWOOD	CHIPPING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	40 t/h
PREPARED BY	DRAWN BY	CHECKED BY
C. SEYMEN	K. ÇÖNENÇ	B. TEK
CHECKED BY	APPROVED BY	
UNIDO Expert	CTA UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411.1	04	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	744267123011921	2.WAY CHUTE	1
61	744260223013931	BELT CONVEYOR	1
62	744260223015931	STACKOUT CONVEYOR	1
63	744261115015931	CHIP RECLAIMER	1
64	744260213014931	RECLAIM CONVEYOR	1
65	744260213014931	RECLAIM CONVEYOR	1
66	744267123012931	CHUTE	1
1	728313130031932	MAGNETIC SEPARATOR	1
2	725141092062932	CHIP SCREEN	1
67	744260212012911	OVERS CONVEYOR	1
3	728313110031932	MAGNETIC SEPARATOR	1
4	725145051352222	RECHIPPER AND BLOWER	1
68	744260212011911	FINES CONVEYOR	1
69	744267112011911	DISC CHUTE	1

CAPACITY CALCULATION

Name of Critical Equip. : SCREEN

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 55.5 tons

No. of Critical Equipment : 1

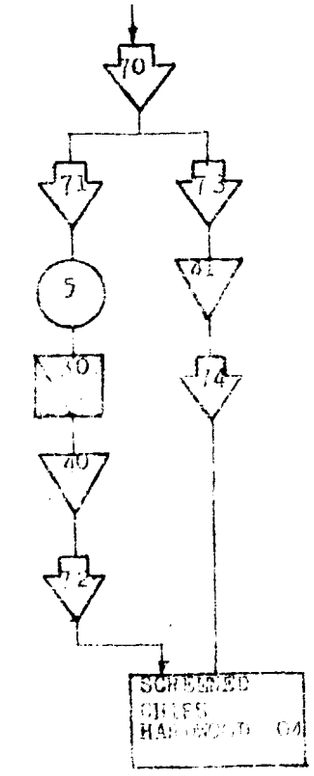
DESIGN LINE CAPACITY :

per hour	per shift	per day	per year
40 t	320 t	640 t	213120 t

UNIDO / SPO (SEKA) Sheet
CAPITAL GOODS DEVELOPMENT PROJECT 1/2

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	SCREENED CHIPS HARDWOOD	SCREENING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	40 t/h
PREPARED BY	DRAWN BY	CHECKED BY
T.İLGEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert	H.M.CRIERSON	APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411 - 1	04	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
70	7442671230119?1	2-WAY CHUTE	1
71	7442602230159?1	ACCEPT CONV-1	
5	7283131300319?2	ACOUSTIC SENSOR	
80	7452506702119?2	BELT SCALES	1
80	7251330561141?1	WOOD CHIP SILO	1
72	7442674200119?1	TABLE FEEDER	1
73	7442602230159?1	CONVEYOR	1
41	7251330563441?1	(CNP) CHIP SILO	1
74	7442674200119?1	TABLE FEEDER	1

CAPACITY CALCULATION

Name of Critical Equip. : SCREEN

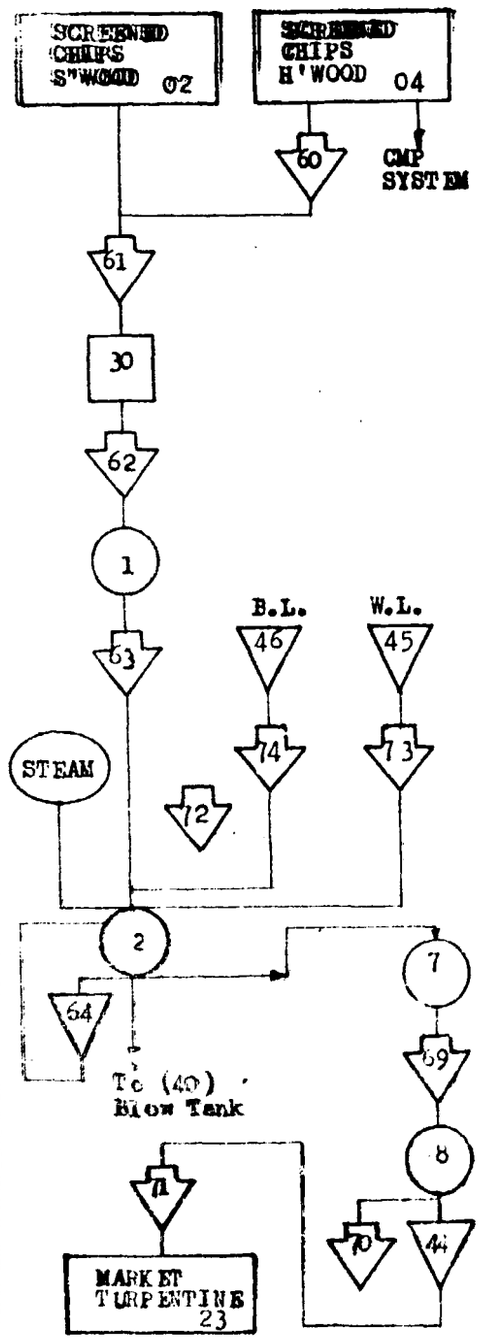
DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 55.5 tons

No of Critical Equipment : 1

DESIGN LINE CAPACITY : 55.5x0.72 = 39.9

per hour	per shift	per day	per year
40 t	320 t	640 t	1[illegible] t

INDUSTRY	DESIGNED	CAPACITY
PULP AND PAPER	[illegible]	[illegible]
DATE	[illegible]	[illegible]
JANUARY 1982	[illegible]	[illegible]
PREPARED BY	[illegible]	[illegible]
T.ILGEN	[illegible]	[illegible]
CHECKED BY	[illegible]	[illegible]



ACTIVITY CODE				
	3411-1	05	1	1

No.	MACHINE CODE	MACHINE NAME	QTY.
60	744267123011921	DISC CHUTE	1
61	744260223013931	CONVEYOR	1
30	745250670211912	BELT SCALES	1
62	744260223015931	CONVEYOR	1
1	728313130031932	MAGNETIC SEPARATOR	1
63	744260223014931	CONVEYOR	1
2	725131034225231	DIGESTER	4
64	742200261211712	PUMP-RECIRCULATION	4
7	741610541411612	CONDENSER	1
69	742200231211212	PUMP	1
8	725134013322111	DECANTER	1
70	742200231211212	PUMP	1
44	725134034323111	TANK-TURPENTINE	1
71	742200221211712	PUMP	1
72	744211324021921	HOIST	1
45	725134024323111	TANK-WHITE LIQUOR STORAGE	1
73	742200252511712	PUMP	2
46	725134013322111	TANK-BLACK LIQUOR	1
74	742200241211712	PUMP	1

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

DESIGN LINE CAPACITY :

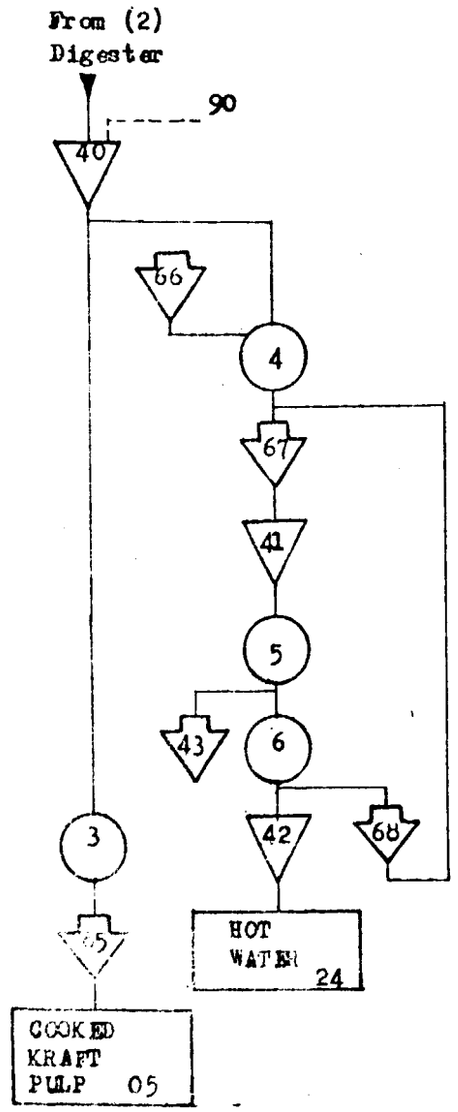
per hour	*per shift*	*per day*	*per year*

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT 2/3

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	*PRODUCT*	*TECHNOLOGY*
PULP AND PAPER	COOKED KRAFT PULP	SULPHATE PULPING
DATE	*SAMPLE PLANT*	*CAPACITY*
JANUARY 1982	SAMSUN/ATATÜRK	19 ODT/h
PREPARED BY	*DRAWN BY*	*CHECKED BY*
C. SEYMEN	K. GÖNENÇ	L. YÜK

CHECKED BY H.M. GRIERSON *APPROVED BY*
UNIDO Expert *UTA UNIDO*



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411.1	05	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
90	725147156051212	AGITATOR	2
40	725134045256111	BLOW TANK	2
3	728313110021212	MAGNETIC SEPARATOR	1
65	742200252411212	PUMP	2
4	741610542351612	CONDENSER	1
66	742200242211212	PUMP TO CONDENSER	1
67	742200242211212	PUMP TO ACCUMULATOR	1
41	725134045225111	ACCUMULATOR-HOT W.T.	1
5	741610121111612	HEAT EXCHANGER	1
6	743627081001612	STRAINER	2
42	725134013322111	TANK_HOT WATER	1
43	725134013322111	TANK_WARM WATER	1
68	742200262211222	PUMP-RECIRCULATION	1

CAPACITY CALCULATION

Name of Critical Equip. : DIGESTER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 6.6 ODT/h

No. of Critical Equipment : 4

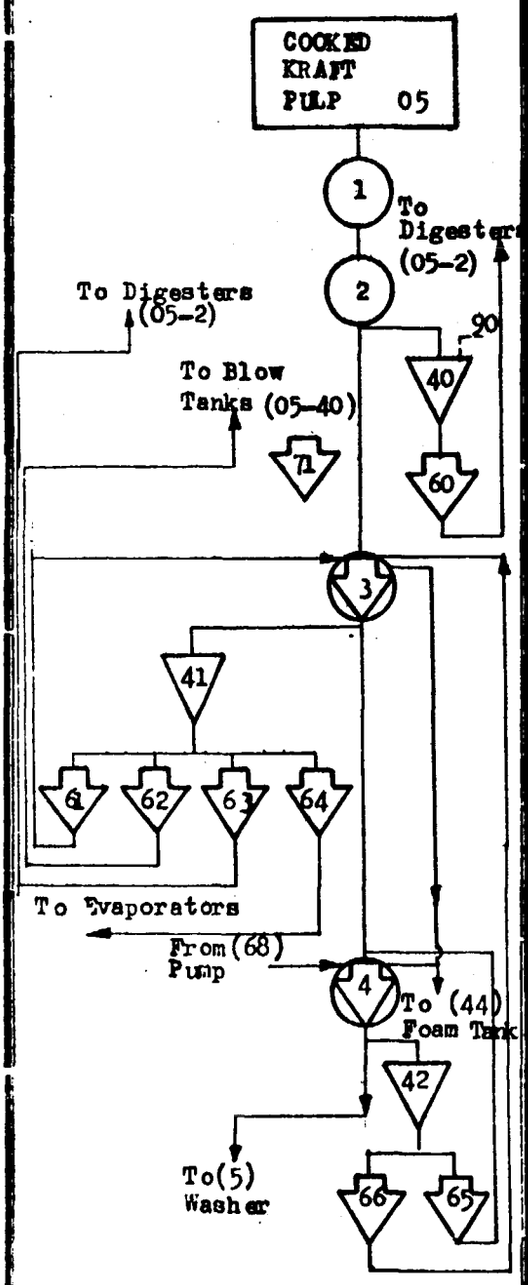
DESIGN LINE CAPACITY 26.4x0.72=19 t.

per hour	per shift	per day	per year
19 t	152 t	456 t	151848t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 2/2

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	COOKED KRAFT PULP	SULPHATE PULPING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	19 ODT/h
PREPARED BY	DRAWN BY	CHECKED BY
C. SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY H. M. CRIERSON UNIDO Expert	APPROVED BY CTA UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	06	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	728314310021912	LIQUID CYCLONE	1
2	725141071241722	KNOTTER	2
40	725134024322111	TANK (KNOTS)	1
90	725147145051212	AGITATOR	1
60	742200232611212	PUMP TO DIGESTERS	1
3	725143074635262	WASHER 1 ST. STAGE	1
41	725134057325111	TANK No 1 FILTRATE	1
61	742200252211212	PUMP TO VAT DIL.	1
62	742200252211212	PUMP TO BLOW TANKS	1
63	742200241211212	PUMP TO DIGESTERS	1
64	742200242211212	PUMP TO EVAPORATORS	1
4	725143074634262	WASHER 2ND STAGE	1
42	725134047324111	TANK NO2 FILTRATE	1
65	742200252211212	PUMP TO INTERM.PULP	1
66	742200242211212	PUMP	1

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

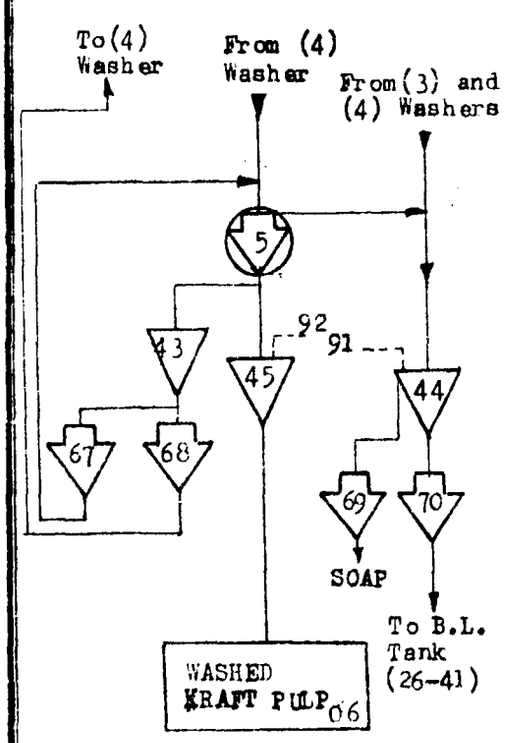
DESIGN LINE CAPACITY :

per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 1/2

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	WASHED KRAFT PULP	WASHING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	19 ODT/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T. İLGEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert H.M.GRIERSON	**APPROVED BY** CTA UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	06	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
5	725143074634262	WASHER 3RD STAGE	1
43	725134046324111	TANK NO3 FILTRATE	1
67	742200252211212	PUMP TO THICKENER	1
68	742200242211212	PUMP	1
44	725134045324111	TANK-FOAM TOWER	1
91	728311410012922	FOAM BREAKER	2
69	742300032611212	PUMP-SOAP	1
70	742200231211212	PUMP TO B.L.TANK	1
45	725134034353111	TANK-3.D. WASHED PULP	1
92	725147155051212	AGITATOR	1
71	744221442224931	CRANE	1

CAPACITY CALCULATION

Name of Critical Equip. : WASHERS

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 26.4tons

No. of Critical Equipment : 3

DESIGN LINE CAPACITY : 26.4x0.72=19 t

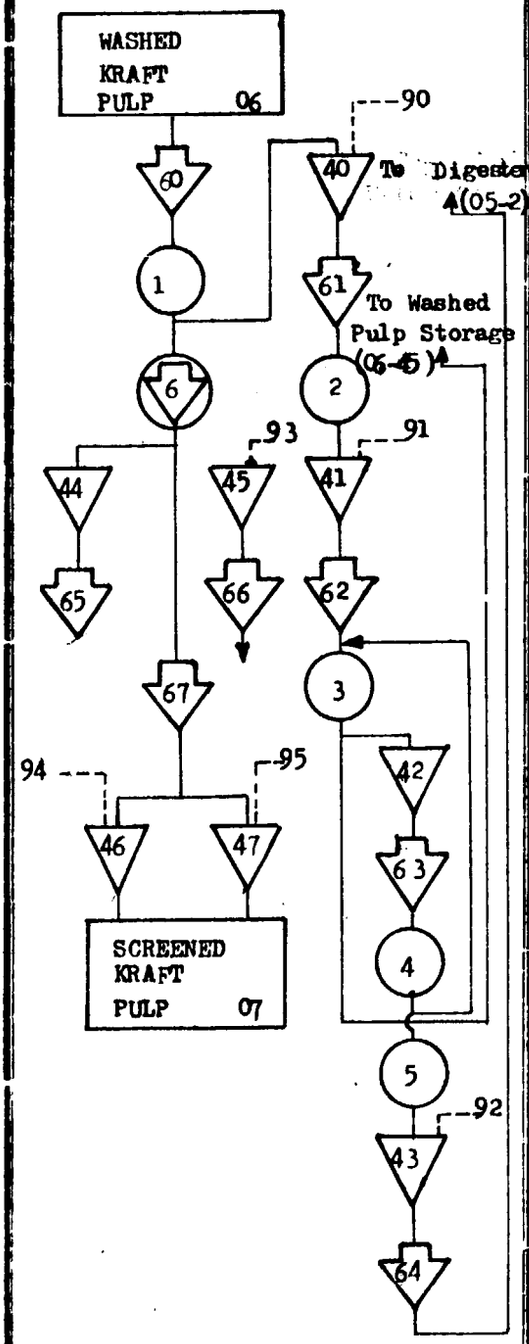
per hour	per shift	per day	per year
19 ODT	152 t	456 t	151948 t

UNIDO / SID PROJECT

CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS PLANT DATA BASE

INDUSTRY	EQUIPMENT	TECHNOLOGY
PULP AND PAPER	WASHED KRAFT PULP	WASHING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/TATARY	19 ODT/D
PREPARED BY	DRAWN BY	COPIED BY
T. ILGEN	E. GOGUNG	[illegible]
CHECKED BY	APPROVED BY	
UNIDO Expert H.M. GRIERSON	C.A. UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	07	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200252111212	PUMP	2
1	725141071242722	PRIMARY SCREEN	2
40	725134013351111	TANK-REJECTS	1
90	725147126051212	AGITATOR	1
61	742200242111212	PUMP-TO SECOND.SCREEN	1
2	725141071242722	SECONDARY SCREEN	1
41	725134013351611	TANK-SCREEN ACCEPTS	1
91	725147126051212	AGITATOR	1
62	742200252111212	PUMP TO PRIM.CLEANERS	1
3	725136011341612	PRIMARY CLEANERS	18
42	725134012321111	TANK-CLEANERS REJECTS	1
63	742200242111212	PUMP TO SECOND.CLEAN.	1
4	725136011341612	SECONDARY CLEANERS	7
5	725141031141722	TERTIARY SCREEN	1
43	725134012351111	TANK-SCREEN REJECTS	1
92	725147116051212	AGITATOR	1
64	742200232111212	PUMP TO DIGESTERS	1
6	725144074635262	DECKER	1
44	725134040314111	TANK-WHITE WATER	1
65	742200242111212	PUMP-WHITE WATER	2
45	725134035353611	TANK-AREA DUMP	1
93	725147146051212	AGITATOR	1
66	742200241611212	PUMP	1
67	742200242611212	PUMP-THICK STOCK	1
46	725134056356111	TANK-H.D.S'WOOD	1
47	725134056356111	TANK-H.D.H'WOOD	1
94	725147165051212	AGITATOR (S'WOOD)	1
95	725147165051212	AGITATOR (H'WOOD)	1

CAPACITY CALCULATION

Name of Critical Equip. SCREENS

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 13.2 ODT

No. of Critical Equipment : 2

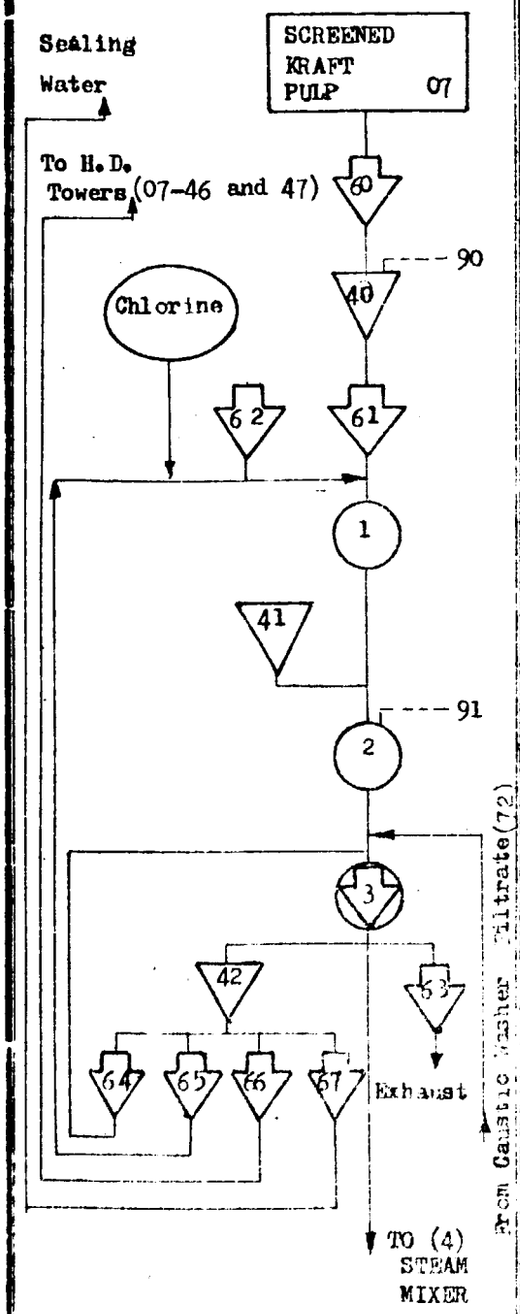
DESIGN LINE CAPACITY 26.4x0.72=19 ODT

per hour	per shift	per day	per year
19 ODT	152 t	456 t	151848 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	SCREENED KRAFT PULP SCREENING	
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	19 ODT/h
PREPARED BY	DRAWN BY	CHECKED BY
C.SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert H.M.GRIERSON	APPROVED BY CTA UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	08	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200241611212	PUMP	2
40	725134024352111	CHEST LEVELLING	1
90	725147145051212	AGITATOR	1
61	742200258611212	PUMP	1
62	742200233111212	PUMP	1
1	725134022322111	PRE-RETENTION TUBE	1
2	-	D/C BLEACH TOWER	1
91	725147135051212	AGITATOR	1
41	725134012321111	HEAD TANK	1
3	725143074634266	WASHER D/C	1
42	725134023330301	SEAL TANK	1
63	743410135221212	EXHAUST FAN	1
64	742200261111212	PUMP TO WASHER	1
65	742200233111212	PUMP TO Cl2 INJECTOR	1
66	742200342111712	PUMP	1
67	742200232111212	PUMP TO PUMP SEALING	1

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

DESIGN LINE CAPACITY :

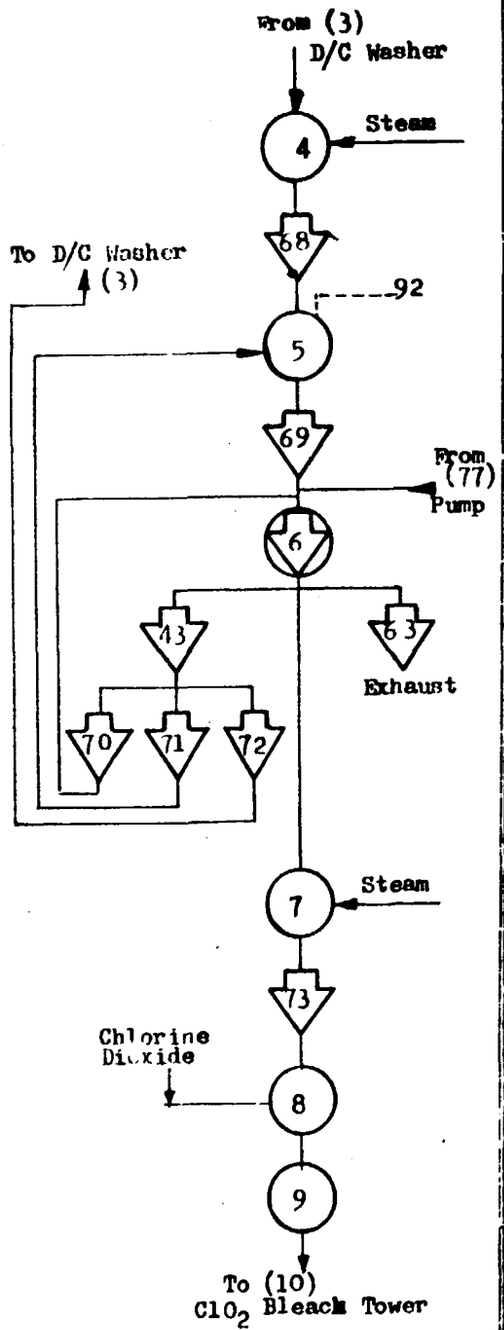
per hour	per shift	per day	per year

UNIDO / SPO/TUR/83/

CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 1/3

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	BLEACHED KRAFT PULP BLEACHING	
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1987	SAKARYA/ATATÜRK	17.5 ODT/h
PREPARED BY	DRAWN BY	CHECKED BY
T. İLGEN	K. COŞAR	B. TAŞ
CHECKED BY UNIDO Expert H.E. GRIFFITHS	APPROVED BY C.T.A. UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	08	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
4	725147052011232	STEAM MIXER	1
68	742200242611212	PUMP	1
5	-	CAUSTIC TOWER	1
92	725147135051212	AGITATOR	1
69	742200251611212	PUMP	1
6	725143074634262	WASHER-CAUSTIC	1
43	725134023320901	SEAL TANK	1
70	742200261111222	PUMP TO NaOH WASHER	1
71	742200242111212	PUMP TO NaOH TOWER	1
72	742200242111212	PUMP D/C WASHER	1
7	725147052011232	STEAM MIXER	1
73	742200242611212	PUMP	1
8	725147072012232	MIXER-ClO_2	1
9	725134022323111	PRE-RETENTION TUBE	1

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

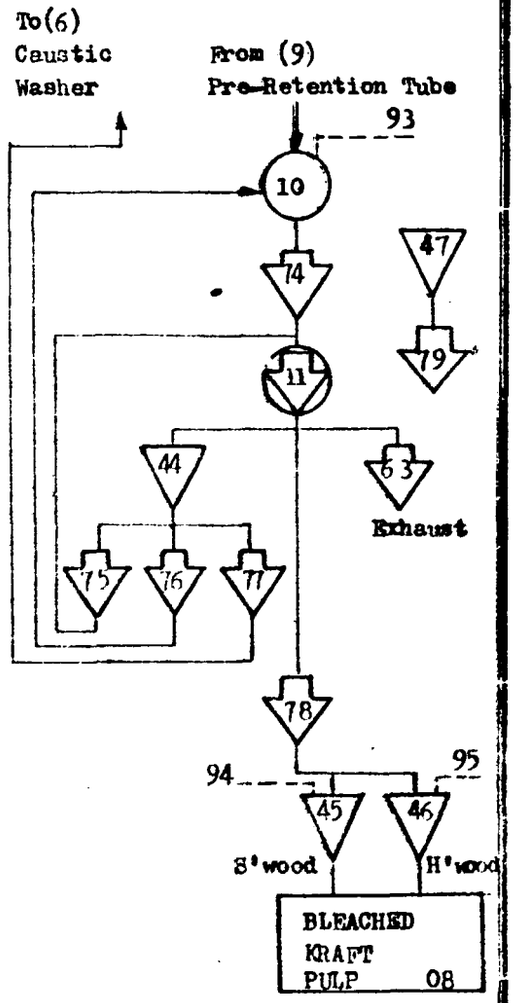
DESIGN LINE CAPACITY :

per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 2/3

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	BLEACHED KRAFT PULP	BLEACHING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	17,5 OD t/h
PREPARED BY	DRAWN BY	CHECKED BY
T. İLGEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert	W.M. GRIERSON	APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	08	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
10	-	BLEACH TOWER ClO_2	1
93	7251471350512 12	AGITATOR	2
74	742200251611712	PUMP	1
11	7251430746342 62	ClO_2 WASHER	1
44	7251340233209 01	SEAL TANK	1
75	7422002611117 22	PUMP TO ClO_2 WASHER	1
76	7422002421117 12	PUMP TO ClO_2 TOWER	1
77	7422002421117 12	PUMP TO NaOH WASHER	1
78	7422002426117 12	PUMP THICK STOCK	1
45	7251340673571 11	TANK H.D.ST.S'WOOD	2
46	7251340773571 11	TANK H.D.ST.H'WOOD	1
94	7251471650512 12	AGITATOR S'WOOD	2
95	7251471650512 22	AGITATOR H'WOOD	1
47	7251340353231 11	DUMP TANK	1
79	7422002316112 12	PUMP DUMP TANK	1

CAPACITY CALCULATION

Name of Critical Equip. : BLEACH TOWER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 24.3 ODT

No. of Critical Equipment : 3

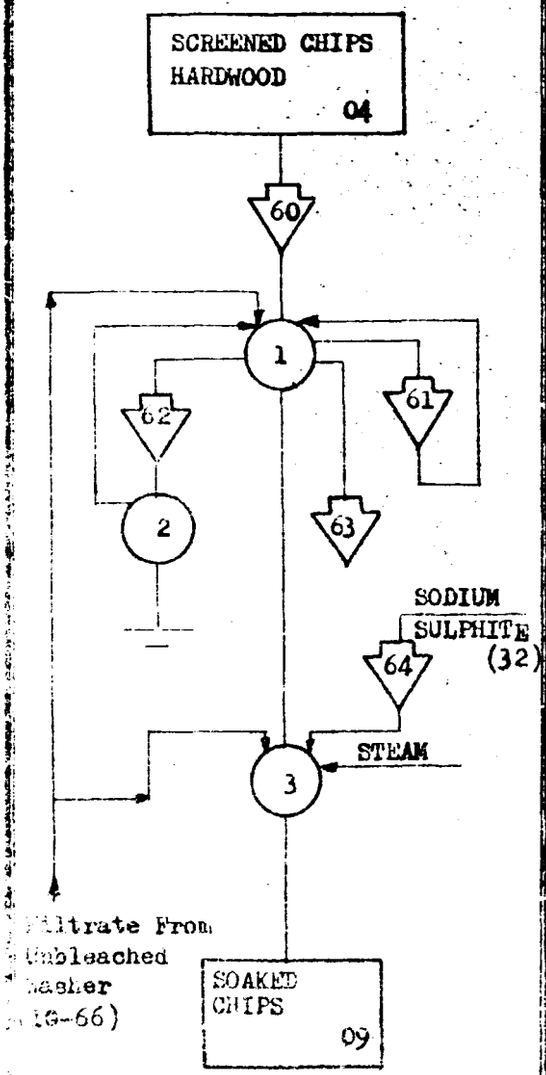
DESIGN LINE CAPACITY : 24.3x0.72=17.49t

per hour	per shift	per day	per year
17.5 t	140 t	420 t	139860 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	BLEACHED KRAFT PULP	BLEACHING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	17,5 ODT/D
PREPARED BY	DRAWN BY	CHECKED BY
T. İLGEN	K. GÖNENÇ	E. TEK
CHECKED BY UNIDO Expert	H.M. GRIERSON	APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	09	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	744260213014921	CONVEYOR-CHIPS	1
1	725141062063932	WASHER/SCREEN	1
61	742200251111212	PUMP_CIRCULATION	1
62	742200242111212	PUMP_CLEANER	1
2	726311210021911	CYCLONE	1
63	744260212011921	CONVEYOR_REJECTS	1
3	725131123323111	CHIP IMPREGNATOR	1
64	742200221511712	PUMP-SODIUM SULPHITE	1

CAPACITY CALCULATION

Name of Critical Equip. : CHIP IMPREGNATOR

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 13.5 ODT

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 13.5x0.72=9.7 ODT

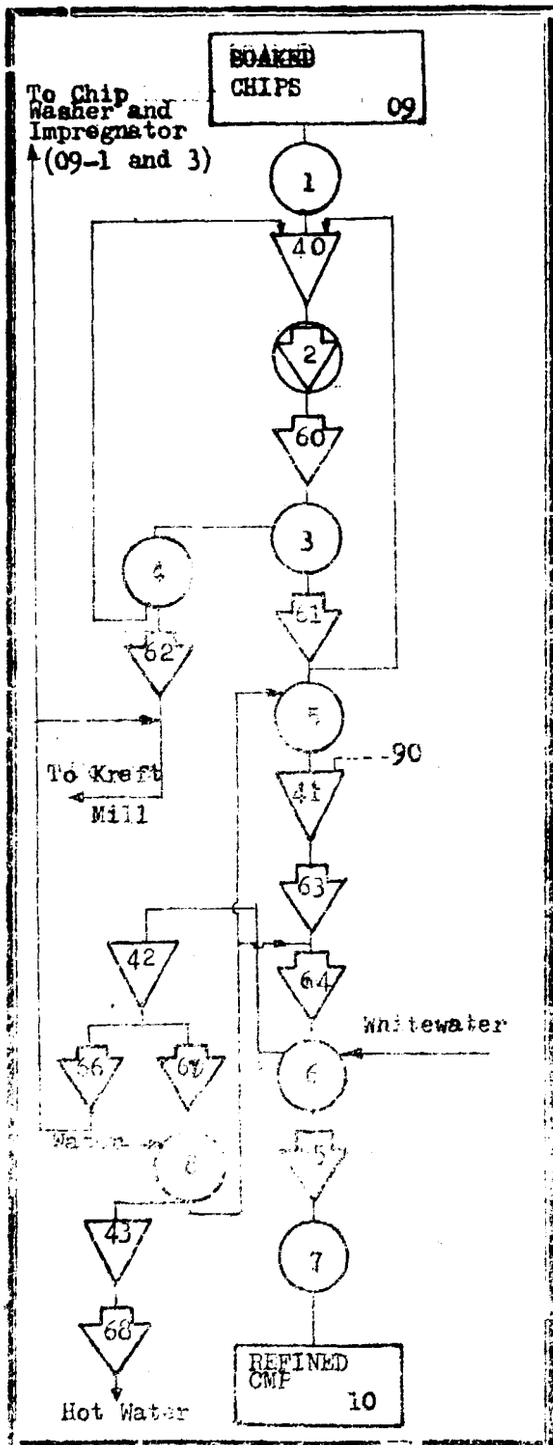
per hour	per shift	per day	per year
9.7 ODT	77.8 t	233 t	77522 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	*PRODUCT*	*TECHNOLOGY*
PULP AND PAPER	SOAKED CHIPS	CHIP IMPREGN.
DATE	*SAMPLE PLANT*	*CAPACITY*
JANUARY 1982	SAMSUN/ATATÜRK	9.7 OD t/h
PREPARED BY	*DRAWN BY*	*CHECKED BY*
T.İLGEN	K. GÖNENÇ	S. [illegible]

CHECKED BY UNIDO Expert J.M.GIBERSON *APPROVED BY* [illegible]



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411 - 1	10	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	725146071031732	SHREDDER	1
40	725134010071111	LIVE BOTTOM BIN	1
2	744264012011921	DEWATERING CONVEYOR	1
60	744264012011911	CONVEYOR	1
3	725144081231232	SCREW THICKENER	1
61	744264012011921	CONVEYOR (PRESSATE)	1
4	725141021131132	SCREEN - PRESSATE	1
62	742200833113212	PUMP	1
5	725145044034262	PRIMARY REFINER	2
41	-	REFINED STOCK CHEST	1
90	725147246091212	ACTIVATOR	-
63	742200241011212	PUMP 4%	1
64	742200261211212	PUMP 3%	1
6	725143064733242	WATER	1
65	744264012011921	CONVEYOR	1
7	725146044034262	SECONDARY REFINER	2
42	725134030312121	[illegible]	1
66	742200232112212	PUMP [illegible]	1
67	[illegible]	[illegible]	-
8	[illegible]	[illegible]	-
43	725134030312611	[illegible]	-
68	742200241011212	[illegible]	-

CAPACITY CALCULATION

Name of Critical Equip. : REFINER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 6.75 ODT

No. of Critical Equipment : 4

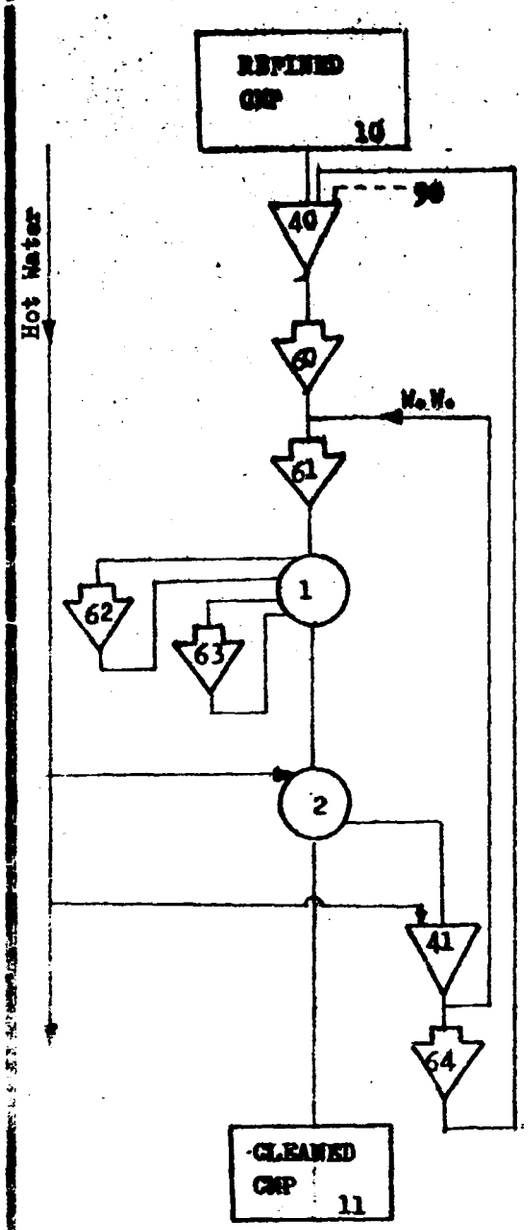
DESIGN LINE CAPACITY 13.5x0.72=9.7

per hour	per shift	per day	per year
9.7 ODT	77.8 ODT	233 ODT	77522 ODT

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT
MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PROJECT	TECHNOLOGY
PULP AND PAPER	REFINED CMP	PULP REFINING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUNJATAN PK	9.7 ODT/h
PREPARED BY	DRAWN BY	CHECKED BY
T. ILGEN	E. [illegible]	[illegible] PK

CHECKED BY [illegible] APPROVED BY
UNIDO Representative [illegible]



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411.1	11	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
40	-	CHEST	1
90	725147146051212	AGITATOR	1
60	742200241611212	PUMP - 4%	1
61	742200261111212	PUMP -0.9 %	1
1	725136011321611	CLEANERS	220
62	742200241111712	PUMP- PRIMARY REJECTS	1
63	742200241111712	PUMP SECOND. REJECTS	1
2	725144064733242	THICKENER - DECKER	1
41	725134030313611	CHEST-WHITEWATER	1
64	742200241111712	PUMP-WHITEWATER	2

CAPACITY CALCULATION

Name of Critical Equip. : CLEANERS

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 13.5 ODT

No. of Critical Equipment : 1 Set of 220 Units

DESIGN LINE CAPACITY 13.5x0.72=9.7 t

per hour	per shift	per day	per year
9.7 ODT	77.8 t	233 t	77522 t

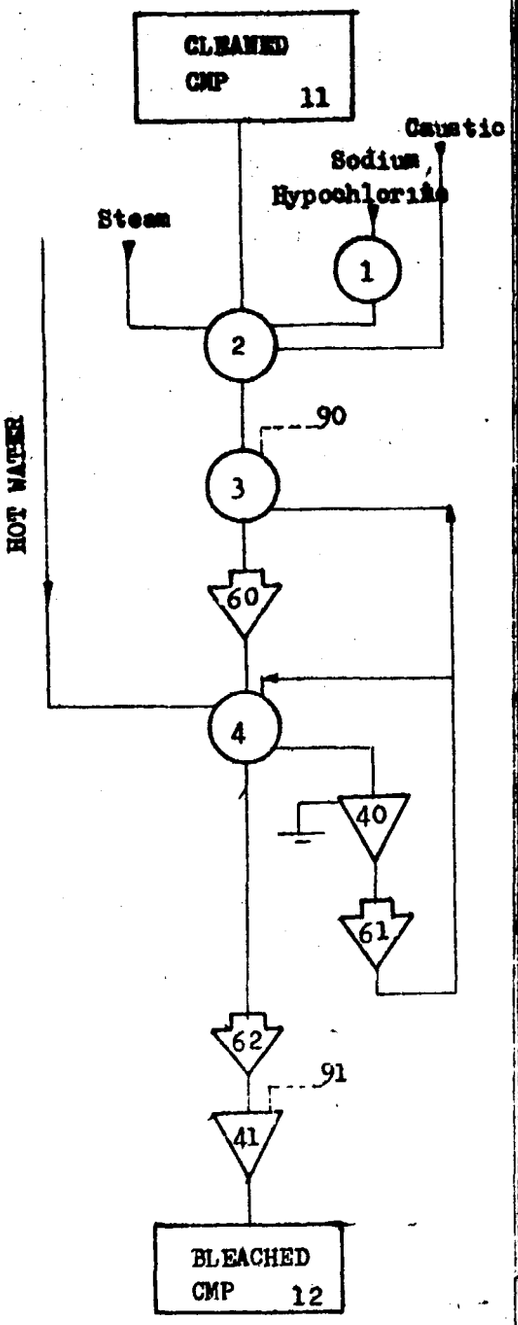
UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	CLEANED CHP	CLEANING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	9.7 ODT/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T. İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M. CRIERSON

APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	12	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	725141023011722	FILTER	1
2	728330027011232	MIXER	1
3	-	BLEACH TOWER	1
90	725147136051212	AGITATOR	1
60	742200241111712	PUMP	1
4	725143064733242	WASHER	1
40	725134030313611	CHEST_FILTRATE	1
61	742200261111722	PUMP	1
62	742200232611732	PUMP_THICK STOCK	1
41	725134077326111	TANK_H.D.STORAGE	1
91	725147165051212	AGITATOR	1

CAPACITY CALCULATION

Name of Critical Equip. :BLEACH TOWER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 13.5 ODT

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 13.5x0,72=9.7 ODT

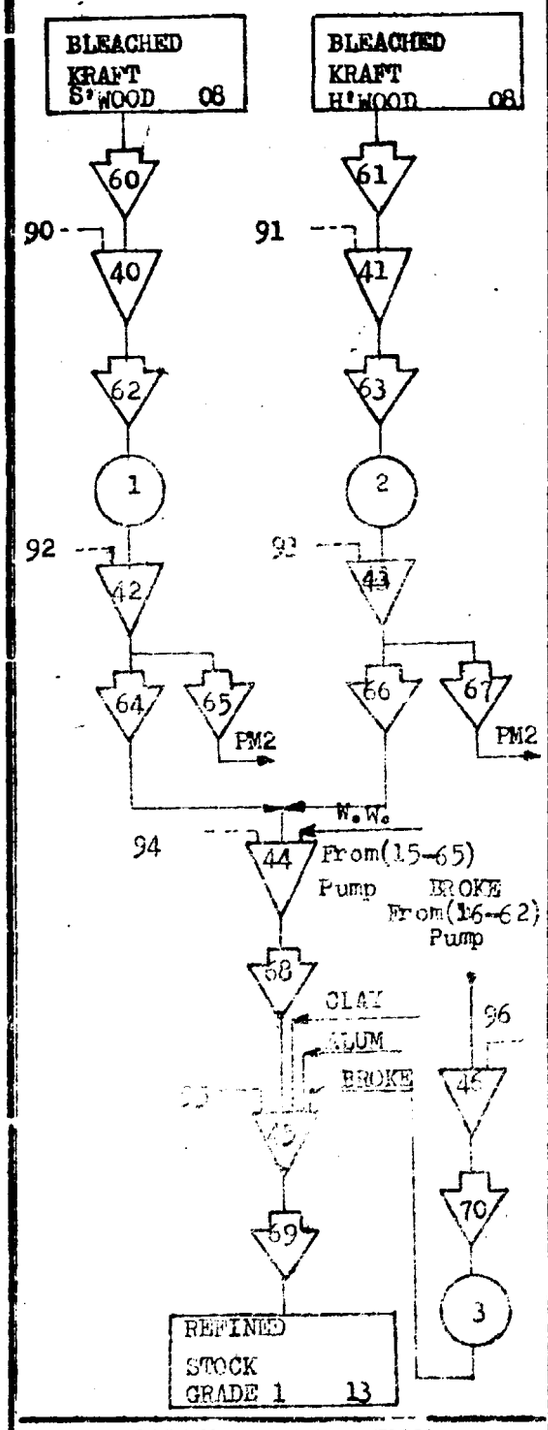
per hour	per shift	per day	per year
9.7 ODT	77.8 t	233 t	77522 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	BLEACHED CMP	BLEACHING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	9,7 ODT/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T. İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M. GRIERSON | APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	13	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200231611712	PUMP-S'WOOD STOCK	1
61	742200241611712	PUMP-H'WOOD STOCK	1
40	-	CHEST-S'WOOD STORAGE	1
41		CHEST-H'WOOD STORAGE	1
90	725147145051212	AGITATOR	2
91	725147145051212	AGITATOR	2
62	742200231611712	PUMP-SOFTWOOD	1
1	725146042032732	REFINER	3
63	742200241611712	PUMP-HARDWOOD	1
2	725146042032732	REFINER	3
42	-	CHEST-REFINED KRAFT	1
43	-	CHEST-REFINED KRAFT	1
92	725147145051212	AGITATOR	2
93	725147145051212	AGITATOR	2
64	742200231611712	PUMP-S'W TO PM 1	1
65	742200231611712	PUMP-S'W TO PM 2	1
66	742200241611712	PUMP-H'W TO PM1	1
67	742200231611712	PUMP-H'W TO PM 2	1
44	-	BLEND CHEST	1
94	725147145051212	AGITATOR	2
68	742200241611712	PUMP	1
45	-	MACHINE CHEST	1
95	725147155051212	AGITATOR	2
69	742200242611712	PUMP-STOCK TO PM1	1
46	725134024352611	BROKE CHEST	1
96	725147145051212	AGITATOR	1
70	742200231611712	PUMP-BROKE	1
3	725146111011732	DEFLAKER	1

CAPACITY CALCULATION

Name of Critical Equip. : REFINER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 4.7 ODT

No. of Critical Equipment : 6

DESIGN LINE CAPACITY : 9.4x0.9=8.4 ODT

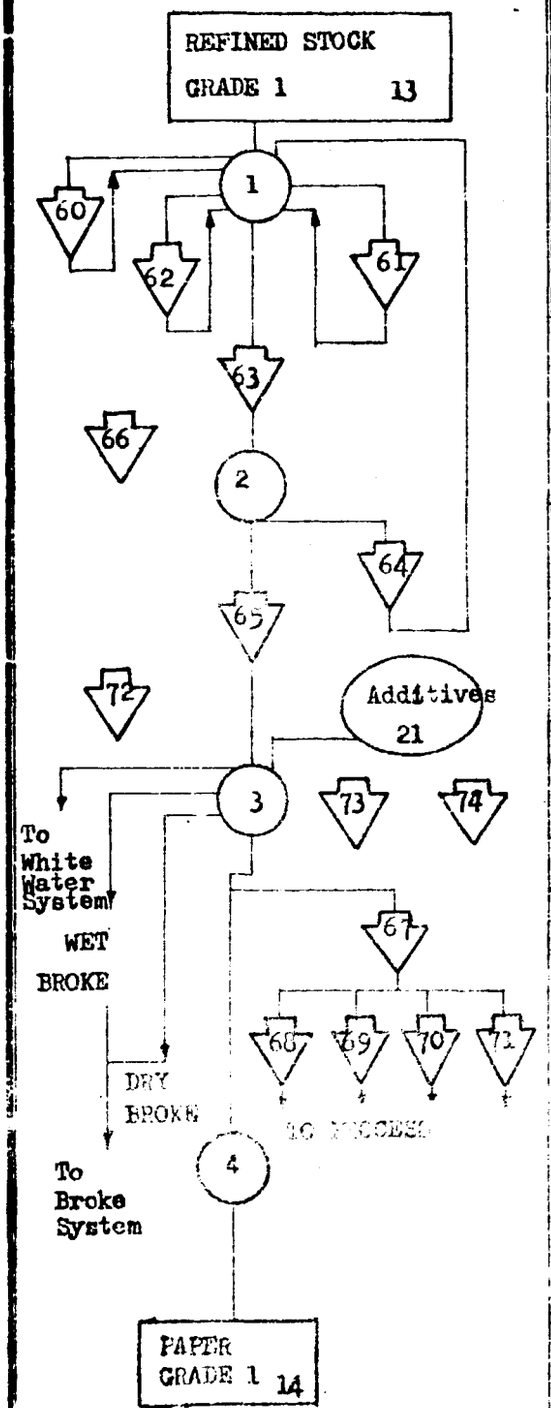
per hour	per shift	per day	per year
8.4 ODT	67.2 t	202 t	67133 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	GRADE 1 REFINED STOCK	REFINING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	8.4 ODT/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	F. TEK

CHECKED BY H.M.GRIERSON APPROVED BY
UNIDO Expert CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	14	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	725136012322612	DECULATOR/CLEANER	1
60	742200242111712	PUMP-PRIM. REJECT	1
61	742200232111712	PUMP-SECOND. REJECT	1
62	742200231111712	PUMP-TERT. REJECT	1
63	742200262111732	PUMP - PRIMARY FAN	1
2	725141051341732	SCREEN	1
64	742200242111712	PUMP-REJECT	1
65	742200262111732	PUMP - FAN	1
3	725120146549262	PAPER MAKING MACHINE	1
66	744221531123931	CRANE-GANTRY	1
4	725122056914242	REWINDER	1
67	743122361112242	VACUUM PUMP	2
68	742200231111712	PUMP-VACUUM SEPAR.	1
69	742200231111712	PUMP-VACUUM SEPAR.	1
70	742200231111712	PUMP-VACUUM SEPAR.	1
71	742200231111712	PUMP-VACUUM SEPAR.	1
72	742200231611212	PUMP - SUMP	2
73	744221553026931	CRANE-MACHINE	1
74	744221532122931	CRANE -DRIVE ALLY	1

CAPACITY CALCULATION

Name of Critical Equip. : PAPER MAKING MACHINE

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 9.3 t

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 9.3x0.9=8.4 ODT

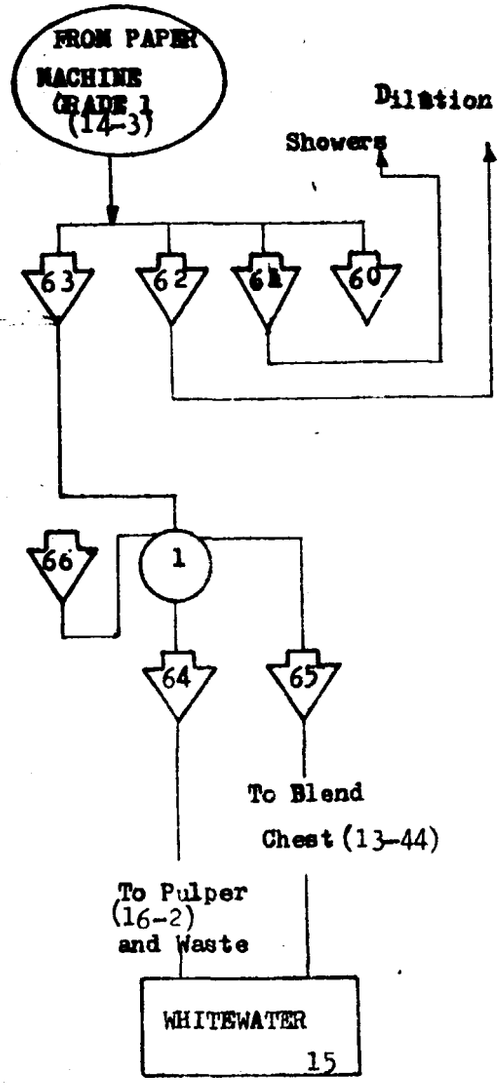
per hour	per shift	per day	per year
8.4 ODT	67.2 t	202 t	67133 t

UNIDO / SFO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	PAPER GRADE 1	PAPER MAKING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	8.4 ODT/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK

CHECKED BY H.M.GRIERSON (UNIDO Expert) APPROVED BY (CTA UNIDO)



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	15	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200242111712	PUMP	1
61	7422011361111712	PUMP-SHOWERS	2
62	7422002621111712	PUMP-DILUTION	1
63	7422002411111712	PUMP TO SAVEALL	1
1	725142096652232	SAVEALL	1
64	7422002421111712	PUMP-CLARIFIED WATER	1
65	7422002421111712	PUMP-CLOUDY WATER	1
66	7422002416111712	PUMP-SAVEALL	1

CAPACITY CALCULATION

Name of Critical Equip. : **SAVEALL**

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 2.7 t/h

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 2.7x0.9 = 2.4 t

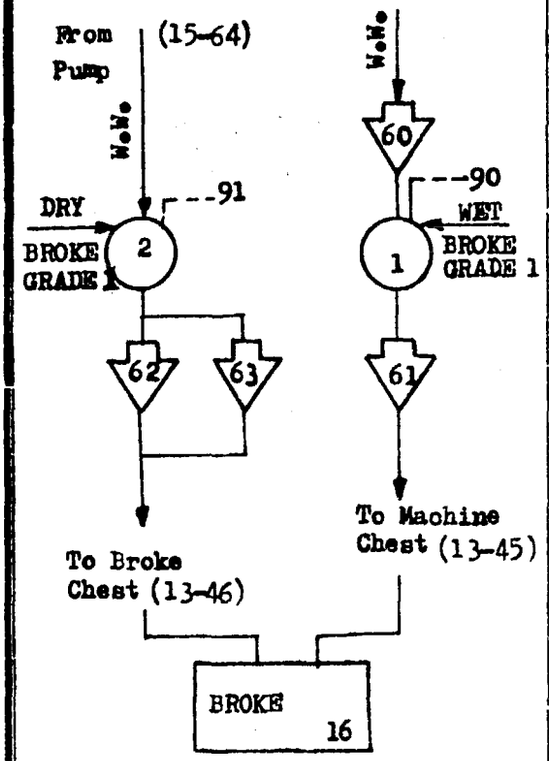
per hour	per shift	per day	per year
2.4 t	19.2 t	57.6	19180 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	WHITE WATER	FIBRE RECOVERY
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	2.4 adt/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK

CHECKED BY H.B. GRIERSON (UNIDO Expert) APPROVED BY (CTA UNIDO)



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411.1	16	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200241611712	PUMP-COUCH PIT	1
1	-	COUCH PIT	1
90	725147175021222	ROTOR-PULPING	2
61	742200231611712	PUMP TO M/C CHEST	1
2	-	PULPER	1
91	725147175021222	ROTOR	2
62	742200241611712	PUMP TO BROKE CHEST	1
63	742200232611712	PUMP TO BROKE CHEST	1

CAPACITY CALCULATION

Name of Critical Equip. : PULPER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 10 t/h

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 10%of10x0.9=0.9

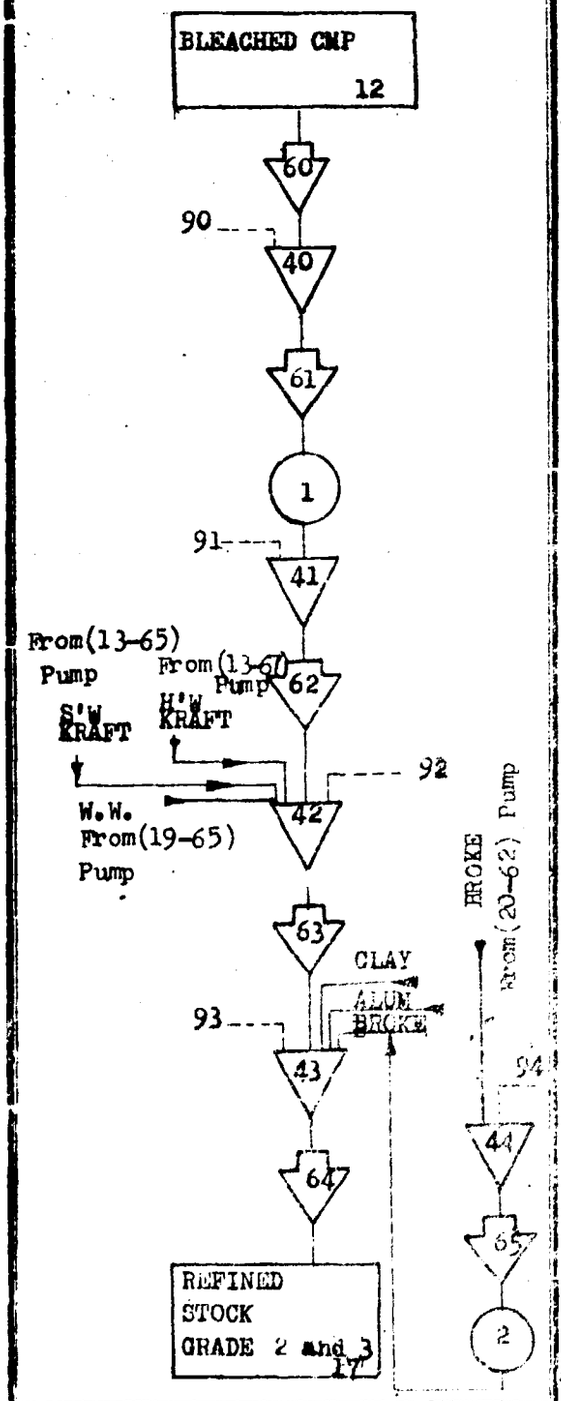
per hour	per shift	per day	per year
0.9 ODT	7.2 t	21.6 t	7193 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	BROKE	FIBRE RECOV.
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	0.90 ODT/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T.İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M.GRIERSON — APPROVED BY CTA UNIDO



CAPACITY CALCULATION

Name of Critical Equip. : REFINER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 9,3 ODT

No. of Critical Equipment : 3

DESIGN LINE CAPACITY : 9,3 x0,9=8,37 ODT

per hour	per shift	per day	per year
8,4 ODT	67,2 t	202 t	67133 t

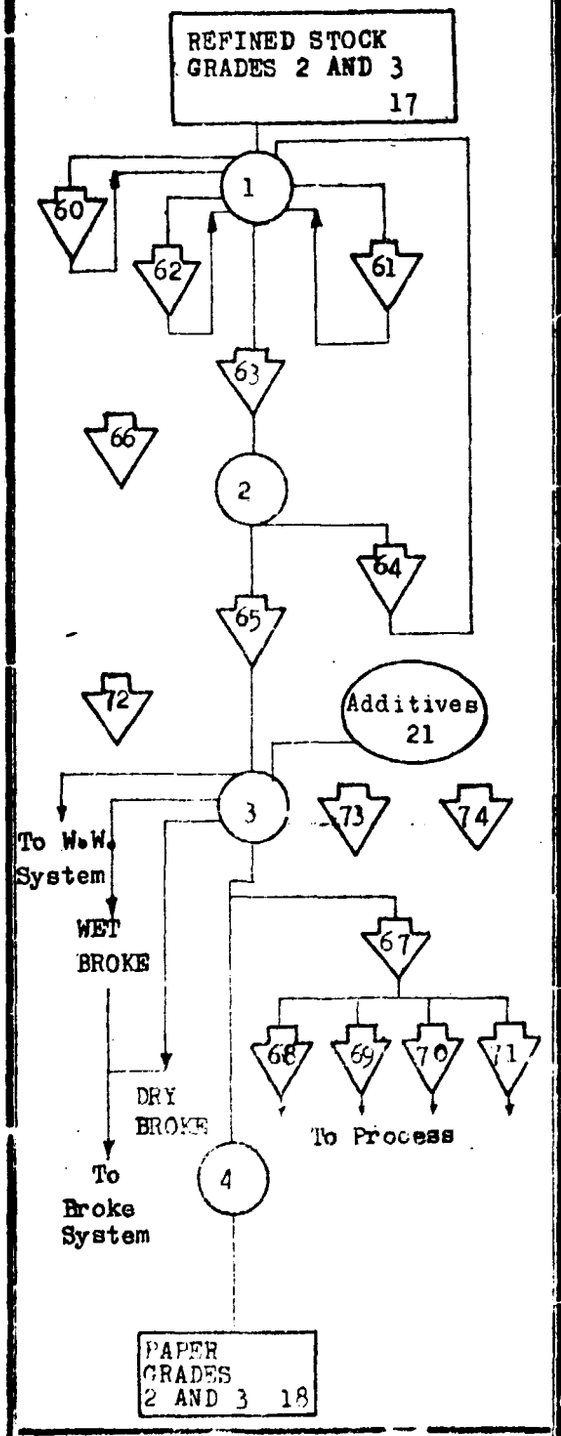
ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	17	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200241611712	PUMP	1
40	-	CHEST	1
90	725147145051212	AGITATOR	2
61	742200241611712	PUMP	1
1	725146042032732	REFINER	3
41	-	CHEST	1
91	725147145051212	AGITATOR	2
62	742200242611712	PUMP	1
42	-	CHEST-BLEND	1
92	725147155051212	AGITATOR	2
63	742200242611712	PUMP	1
43	-	CHEST-MACHINE	1
93	725147155051212	AGITATOR	2
64	742200242611712	PUMP	1
44	725134024352611	CHEST- BROKE	1
94	725147145051212	AGITATOR	1
65	[illegible]	PUMP	1
2	725146111012732	DEFLAKER	1

UNIDO / SPO (SERA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	REFINED STOCK GRADE 2 and 3	REFINING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATAT'RK	8,4 OD T/h
PREPARED BY	DRAWN BY	CHECKED BY
T.İLGEN	K. ÖZGENÇ	B. TEK
CHECKED BY M.M. CHOUDHURY UNIDO Consultant	APPROVED BY UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	18	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	725136012322612	DECULATOR/CLEANER	1
60	742200242111712	PUMP-PRIM.REJECT	1
61	742200232111712	PUMP-SECOND. REJECT	1
62	742200231111712	PUMP-TERTI. REJECT	1
63	742200262111732	PUMP-PRIMARY FAN	1
2	725141051341732	SCREEN	1
64	742200242111712	PUMP-REJECT	1
65	742200262111732	PUMP - FAN	1
3	725120146549262	PAPER MAKING MACHINE	1
66	744221531123931	CRANE-GANTRY	1
4	725122056914242	REWINDER	1
67	743122361112242	VACUUM PUMP	2
68	742200231111712	PUMP-VACUUM SEPAR.	1
69	742200231111712	PUMP-VACUUM SEPAR.	1
70	742200231111712	PUMP-VACUUM SEPAR.	1
71	742200231111712	PUMP-VACUUM SEPAR.	1
72	742200231611212	PUMP-(SUMP)	2
73	744221553026931	CRANE-MACHINE	1
74	744221532122931	CRANE-DRIVE ALLEY	1

CAPACITY CALCULATION

Name of Critical Equip. : PAPER MAKING MACHINE

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 9.3 t

No. of Critical Equipment : 1

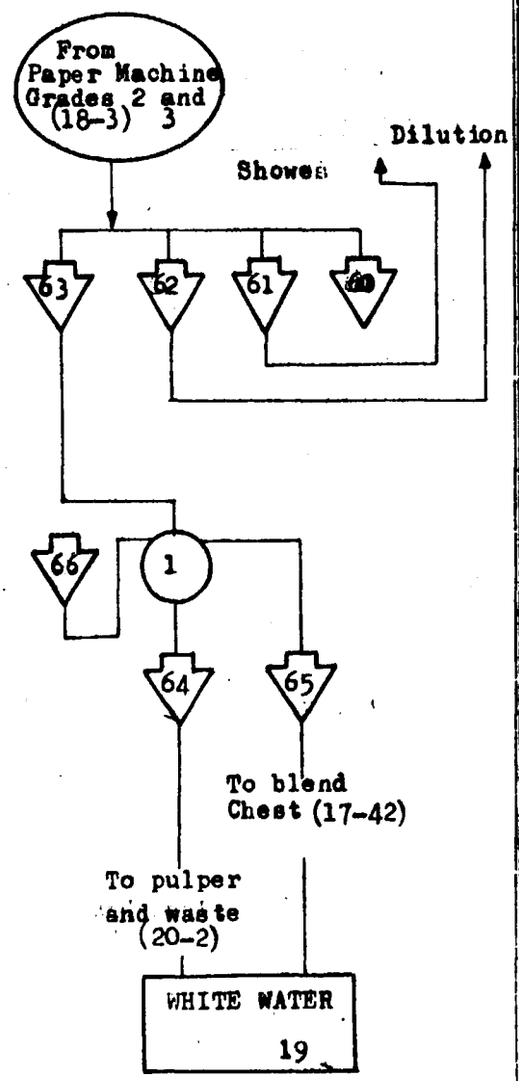
DESIGN LINE CAPACITY : 9.3x0.9=8.4 ODT

per hour	per shift	per day	per year
8.4 ODT	67.2t	202 t	67133 t

UNIDO / SFO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	PAPER GRADE 3	PAPER MAKING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	8.4 ODT/h
PREPARED BY	DRAWN BY	CHECKED BY
C.SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert	R.M.GRIERSON	APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	19	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200242111712	PUMP	1
61	742201136111712	PUMP-SHOWERS	2
62	742200262111712	PUMP-DILUTION	1
63	742200241111712	PUMP TO SAVEALL	1
1	725142096652232	SAVEALL	1
64	742200242111712	PUMP-CLARIFIED WATER	1
65	742200242111712	PUMP-CLOUDY WATER	1
66	742200241611712	PUMP-SAVEALL	1

CAPACITY CALCULATION

Name of Critical Equip. : SAVEALL

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 2.7 OD t/h

No. of Critical Equipment : 1

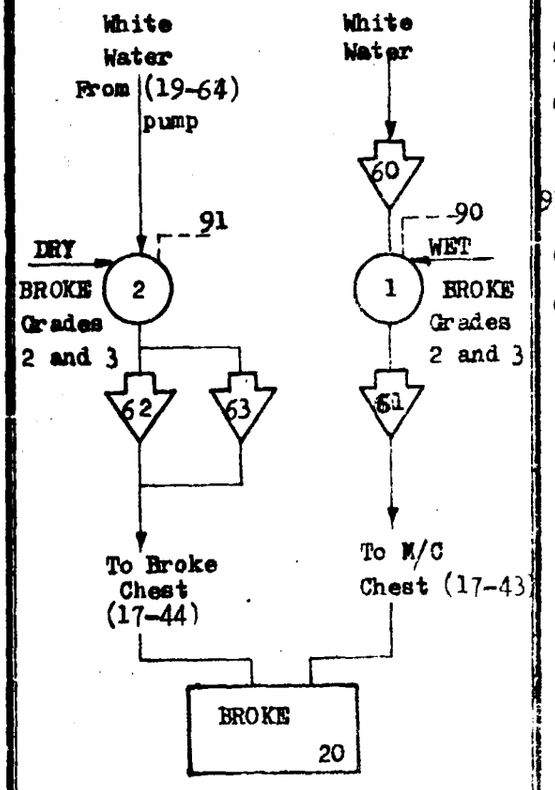
DESIGN LINE CAPACITY 2.7x0.9=2.4 ODT

per hour	per shift	per day	per year
2.4 ODT	19.2 t	57.6 t	19180 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	WHITE WATER	FIBRE RECOV.
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	2.4 OD t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert H.M.GRIERSON		**APPROVED BY** CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	20	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200241611712	PUMP_COUCH PIT	1
1	-	COUCH PIT	1
90	725147175021222	ROTOR_PULPING	2
61	742200231611712	PUMP TO M/C CHEST	1
2	-	PULPER	1
91	725147175021222	ROTOR	2
62	742200241611712	PUMP TO BROKE CHEST	1
63	742200232611712	PUMP TO BROKE CHEST	1

CAPACITY CALCULATION

Name of Critical Equip. : PULPER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 10 ODT

No. of Critical Equipment : 1

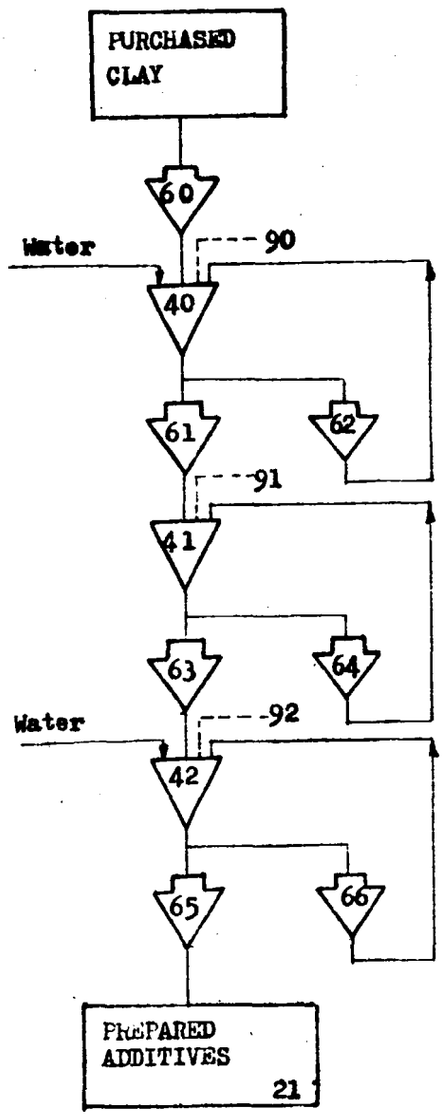
DESIGN LINE CAPACITY 10 % of 10x0,9=0,9t

per hour	per shift	per day	per year
0,9 ODT	7,2 t	21,6 t	7193 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	BROKE	FIBRE RECOVERY
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	0,9 ODT/h
PREPARED BY	DRAWN BY	CHECKED BY
C. SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert H. McGRIERSON	APPROVED BY GTA UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411.1	21	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	743122331111212	VACUUM PUMP	1
40	725134024352611	TANK-70% MAKE UP CLAY	1
90	725147123011212	AGITATOR	1
61	742200231711212	PUMP-70%	1
62	742200231711212	PUMP-70% RECIRC.	1
41	-	TANK-70% STORAGE	2
91	725147133011212	AGITATOR	2
63	742200231711212	PUMP	1
64	742200231711212	PUMP	1
42	725134013321611	TANK-35% CLAY	2
92	725147123011212	AGITATOR	2
65	742200222711212	PUMP-35% TRANSFER	2
66	742200222711212	PUMP-35% RECIRC.	2

CAPACITY CALCULATION

Name of Critical Equip. : TANK

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 3.4 t

No. of Critical Equipment : 1

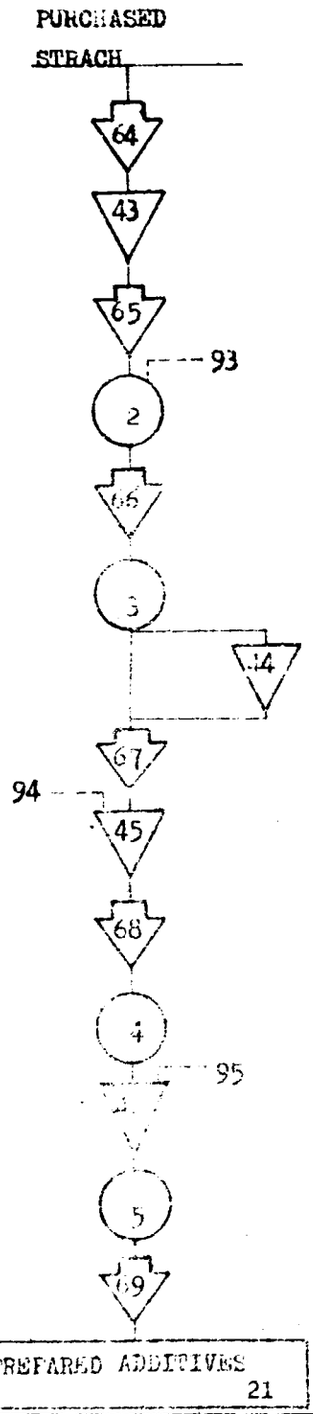
DESIGN LINE CAPACITY 3.4x0.9= 3.1 t

per hour	per shift	per day	per year
3.1 t	24.8 t	75 t	24975 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 1/3

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	CLAY	ADDITIVE PREP.
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	3.1 t/h
PREPARED BY	DRAWN BY	CHECKED BY
.SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert	H.M.GRIERSON	APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411 - 1	21	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
64	7431223311111[illegible]	VACUUM PUMP	1
43	725133033342611	SILO	1
65	744264211011921	SCREW CONVEYOR	1
2	725134013351611	TANK-MAKE UP SLURRY	2
93	7251471120412l2	AGITATOR	2
66	7422002[illegible]1611712	PUMP	2
3	7416599112214l2	COOKER	2
44	725134012321611	TANK-SURGE	1
67	7422002[illegible]1611712	PUMP	2
45	725134013351611	TANK-COOKED STORAGE	2
94	725147120512l2	AGITATOR	2
68	7422002316117l2	PUMP	2
4	725141071217l2	SCREEN	2
46	725134013351611	TANK-DAY	2
95	725147112051212	AGITATOR	2
5	7436270210016l2	CONTAINER	2
69	[illegible]	POINT OF SALE PRODUCTS	6

UNIDO / SPC (SEAS)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 2/1

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	STRACH	COOKING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SARDINIA/ITALY/RE	0.84 t/h
PREPARED BY	DRAWN BY	CHECKED BY
C.SIVERON	K.[illegible]	A. TAK
CHECKED BY	APPROVED BY	
C.S.SIVERON	U.N.UNIDO	

CAPACITY CALCULATION

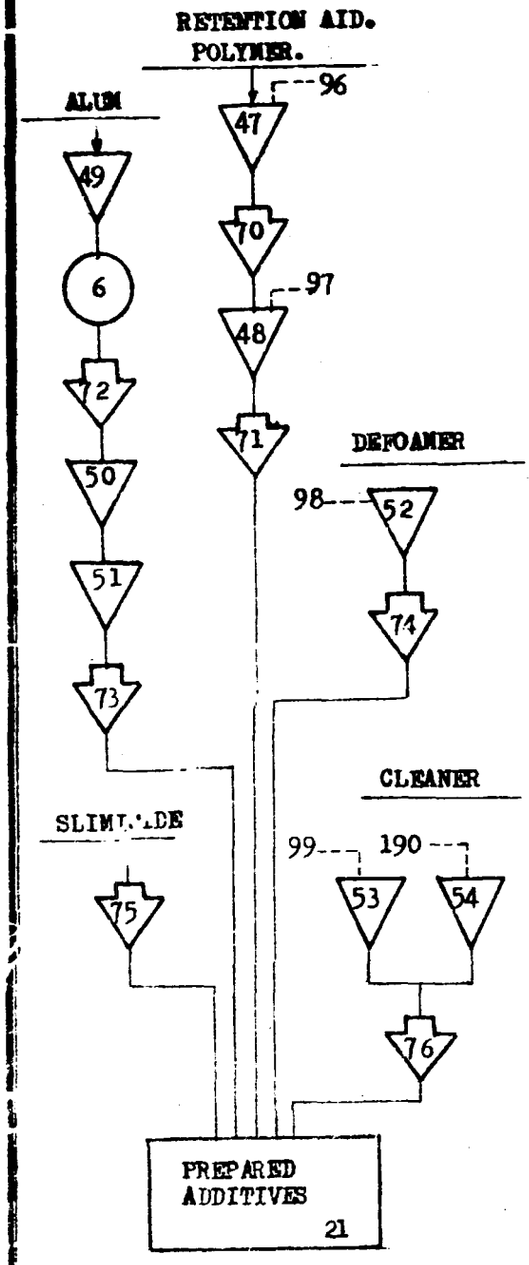
Name of Critical Equip. : COOKER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 0.93 t

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 0.93x0.9=0.84 t

per hour	per shift	per day	per year
0.84 t	6.7 t	20 t	6722 t



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	21	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
47	725134013351611	TANK_MIX.POLYMER	1
96	725147116041212	AGITATOR	1
70	742102031611212	PUMP	1
48	725134013351611	TANK-STORAGE	1
97	725147116041212	AGITATOR	1
71	742102022611212	PUMP TO M/C_POLYMER	2
49	725134013321611	TANK- ALUM	1
6	725141011121712	FILTER	2
72	742200231611712	PUMP	2
50	725134013321611	HEAD TANK-ALUM	1
51	725134024321611	TANK-ALUM STORAGE	1
73	742200222111712	PUMP ALUM TO M/C	2
52	725134013351611	TANK-DEFOAMER	1
98	725147116041212	AGITATOR	1
74	742200222111712	PUMP DEFOAMER TO M/C	2
75	742301011111712	PUMP-SLIMICIDE	8
53	725134013351611	TANK-FELT CLEANER	1
99	725147115041212	AGITATOR	1
54	725134013351611	TANK-FABRIC CLEANER	1
190	725147115041212	AGITATOR	1
76	742301023111712	PUMP	2

CAPACITY CALCULATION

Name of Critical Equip. : TANK

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR NEGLIGIBLE

No. of Critical Equipment :

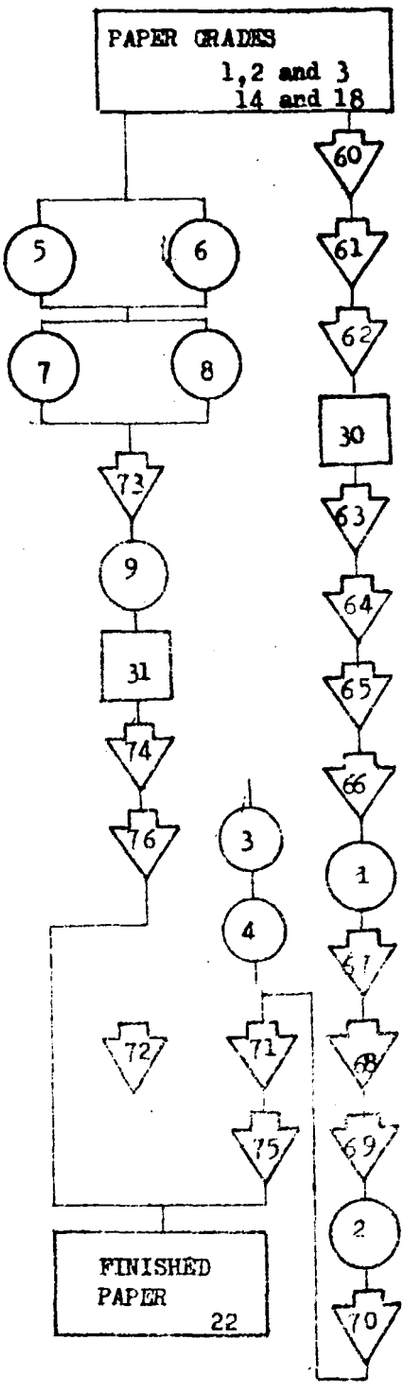
DESIGN LINE CAPACITY :

per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 3/3

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	ADDITIVES	ADDITIVE PREP
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert H.M.GRIERSON	**APPROVED BY** CTA UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	22	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	744261211013912	CONVEYOR	1
61	725127081011922	KICKER	1
62	725127181011912	ROLL STOP	1
30	745250142211922	SCALES	1
63	725127081011922	KICKER	1
64	725127181011912	ROLL STOP	1
65	725127181011912	ROLL STOP	6
66	725127081011922	KICKER	1
1	725126081010902	ROLL WRAPPER	1
67	744240242012922	LOWERATOR	1
68	744261211012912	CONVEYOR	1
69	725127081011922	KICKER	1
2	725122041/14942	WINDER-SALVAGE	1
70	744261211011912	CONVEYOR	1
71	725127081011922	KICKER	4
3	725126220001912	CORE CUTTER	1
4	725126320013922	CORE WINDER	1
5	725123031422222	SHEET CUTTER	2
6	725123031422222	SHEET CUTTER	6
72	744281511121921	CRANE	4
7	725126081021922	BEAM WRAPPER	4
8	725126081021922	BEAM WRAPPER	2
73	744261211022912	CONVEYOR	1
9	725126141021922	PALLET STRAPPER	1
31	745250542211922	WEIGHING STATION	1
74	744261211022912	CONVEYOR	1
75	744110042003932	TRUCK- CLAMP LIFT	3
76	744110042003932	TRUCK - FORK LIFT	3

CAPACITY CALCULATION

Name of Critical Equip. : SHEET CUTTER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 3.9 ODT

No. of Critical Equipment : 6

DESIGN LINE CAPACITY 23.4x0,72=16.8 ODT

per hour	per shift	per day	per year
16.8 t	134 t	403 t	134265 t

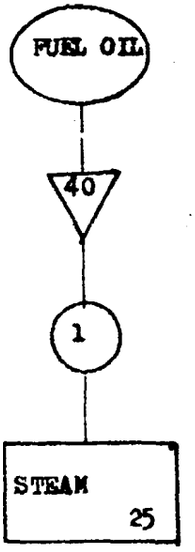
UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	FINISHED PAPER	FINISHING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	16.8 ODT/h
PREPARED BY	DRAWN BY	CHECKED BY
C.SEYMEN	K. GÖNENÇ	B. TEK

CHECKED BY
UNIDO Expert H. M. GRIERSON

APPROVED BY
CTA CHIEF



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	25	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
40	692110754326111	OIL TANK	1
1	711110042548321	POWER BOILER	1

CAPACITY CALCULATION

Name of Critical Equip. : BOILER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 140 t

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 140x0.9 = 126 t

per hour	per shift	per day	per year
126 t	1008 t	3024 t	1.006.990 t

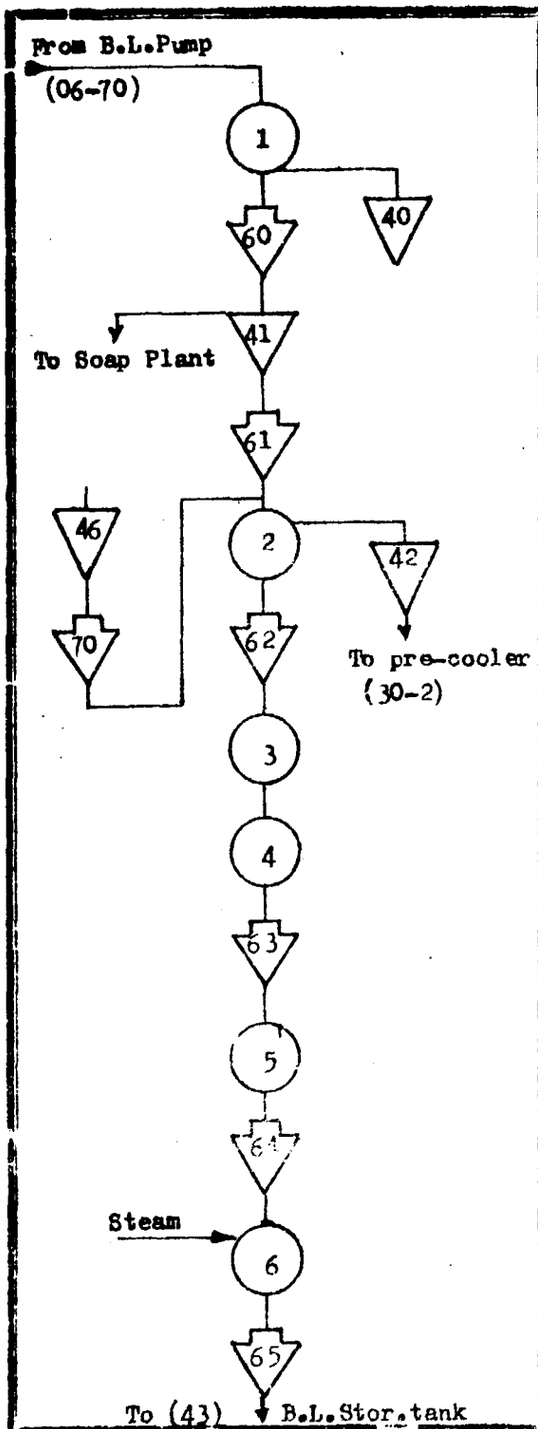
UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	STEAM	STEAM GENERATION
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	126 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYHEN	K. GÖNENÇ	B. TEK

CHECKED BY
UNIDO Expert H.M.GRIERSON

APPROVED BY
CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	26	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	725141092332932	FILTER	1
40	725134013321111	SUMP TANK-W.B.L.	1
60	742200242211712	PUMP - W.B.L.	1
41	725134046325111	TANK - W.B.L.	2
61	742200242211712	PUMP - W.B.L.	2
2	741620141534612	EVAPORATOR 5TH EFFECT	1
42	725134012221111	FLASH TANK	1
62	742200242211712	PUMP	1
3	741620141534612	EVAPORATOR 4TH EFFECT	1
4	741620141534612	EVAPORATOR 3RD EFFECT	1
63	742200242211712	PUMP	1
5	741620142534612	EVAPORATOR 2ND EFFECT	1
64	742200231211712	PUMP	1
6	741620142535612	EVAPORATOR 1ST EFFECT	1
65	742200231611712	PUMP - 50 % B.L.	2

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

DESIGN LINE CAPACITY :

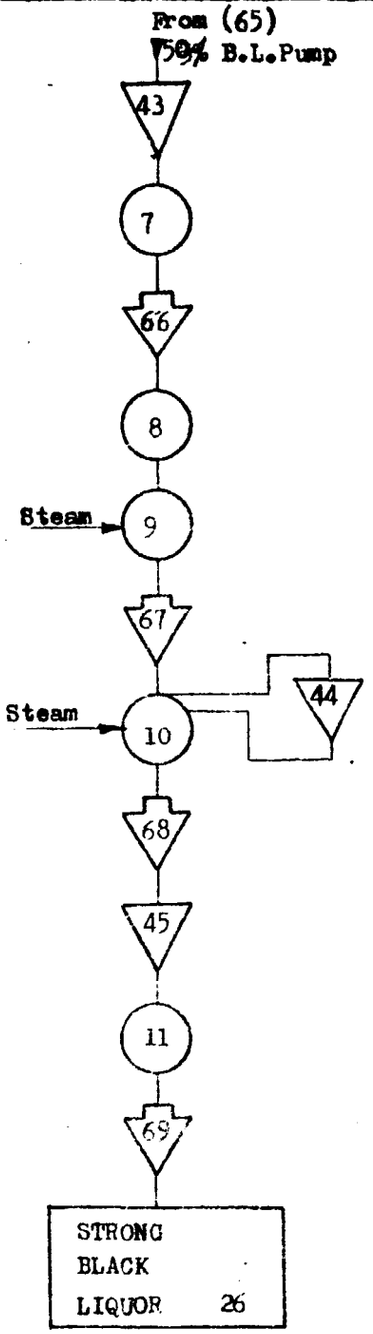
per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 1/2

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	STRONG BLACK LIQ.	LIQUOR CONCENTRATION.
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	30 t/h SOLIDS
PREPARED BY	DRAWN BY	CHECKED BY
C.SEYMEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M.GRIERSON | APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	26	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
43	725134046325111	TANK - 50 % B.L.STOR.	1
7	741610141411112	HEAT EXCHANGER	1
66	742200231611712	PUMP	2
8	741611021111612	PREHEATER	1
9	741620121413612	CONCENTRATOR 1ST	1
67	742200231611712	PUMP	1
10	741620121413612	CONCENTRATOR 2ND	1
44	725134012321111	SURGE TANK	1
68	742200231611712	PUMP	2
45	725134035323111	TANK - S.B.L.	2
11	741610141411612	HEAT EXCHANGER	1
69	742200231611712	PUMP TO RECOV. BOILER	2
46	725134035323111	BOILOUT TANK	1
70	742200241211712	PUMP	1

CAPACITY CALCULATION

Name of Critical Equip. : EVAPORATORS

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 33 t SOLIDS

No. of Critical Equipment : 5 EFFECT

DESIGN LINE CAPACITY : 33x0.9=30 t SOLIDS

per hour	per shift	per day	per year
30 t	240 t	720 t	239760 t

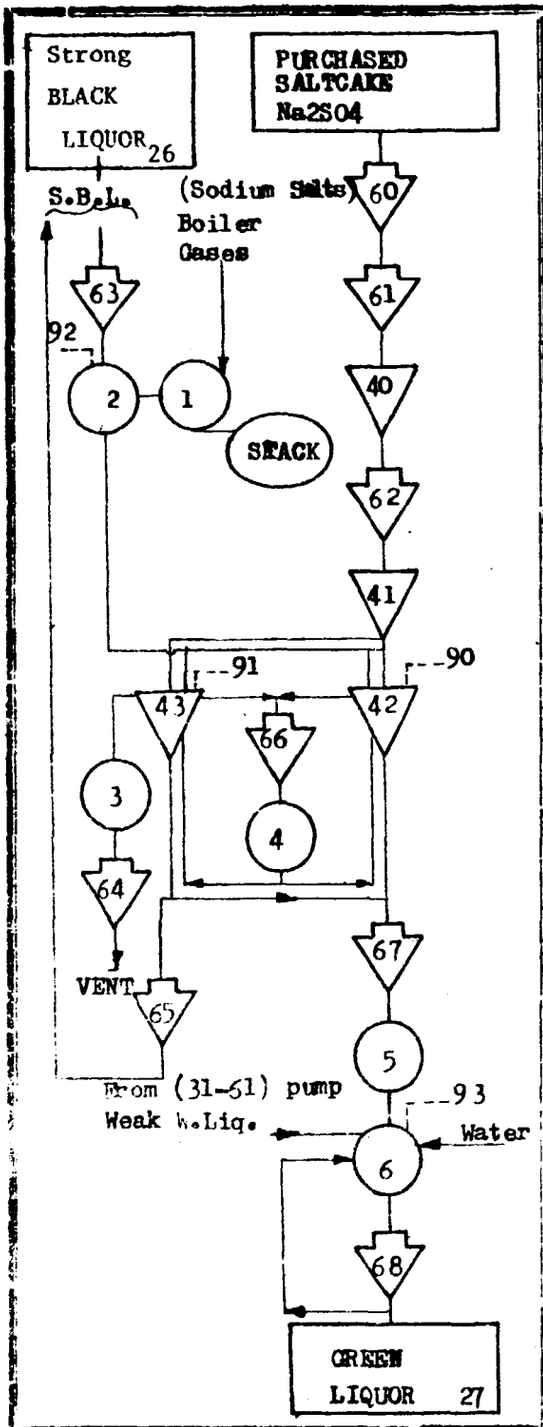
UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 2/2

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	STRONG BLACK LIQUOR	LIQUOR CONCENT.
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	30 t/h SOLIDS
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H. M. CRIERSON

APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	27	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	743420041111222	BLOWER	1
61	744267611011212	ROTARY FEEDER	1
40	725133034323111	SILO-SALT CAKE	1
62	744267611011212	ROTARY FEEDER	1
41	725134013321111	DAY TANK	1
42	725134024352611	MIX-TANK-SALT CAKE	1
90	725147125051212	AGITATOR	
43	725134013351611	DISSOLVING TANK	1
91	725147145051212	AGITATOR	1
63	742200231611722	PUMP- S.B.L.	2
1	-	PRECIPITATOR	1
2	-	MIX TANK-PRECIPITATOR	1
92	725147125051212	AGITATOR	2
3	741660211421611	SCRUBBER	1
64	743410136221732	VENT FAN	1
65	742200231611712	PUMP_RETURN S.B.L.	2
66	742200242611712	PUMP-RECIRCN.	2
4	741610742472611	AIR HEATER	1
67	742200231611712	PUMP-S.B.L.	1
5	711110042569321	RECOVERY BOILER	1
6	725134025353111	SMELT DISSOLVING TANK	1
93	725147135051212	AGITATOR	1
68	742200232611712	PUMP- GREEN LIQ.	2

CAPACITY CALCULATION

Name of Critical Equip. : RECOVERY BOILER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR 33 t SOLIDS

No. of Critical Equipment : 1

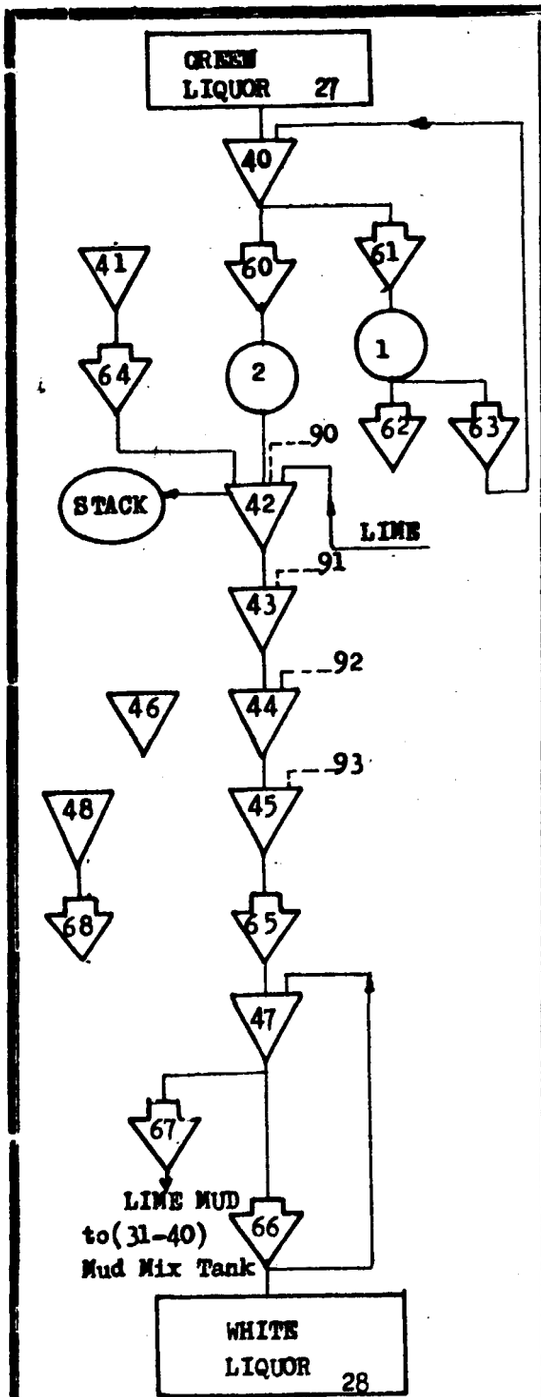
DESIGN LINE CAPACITY 33x0.9=30 t SOLIDS

per hour	per shift	per day	per year
30 t/h	240	720	239760

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	GREEN LIQUOR	LIQUOR RECOVERY
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	30 t/h SOLIDS
PREPARED BY	DRAWN BY	CHECKED BY
C.SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert	H.M. GRIERSON	APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	28	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
40	7251340573251111	GREEN LIQ.CLARIFIER	1
60	7422002326117 12	PUMP	2
61	7422002217117 12	PUMP-DREGS	2
1	7251410314317 22	FILTER-DREGS	1
62	7431211322217 12	VACUUM PUMP	1
63	7422002212117 12	PUMP-FILTRATE	1
2	7416107211111 12	HEATER/COOLER	1
41	7251340243221 11	TANK- CONTAM.HOT WATER	1
64	7422002422117 12	PUMP	2
42	7251350133516 12	LIME SLAKER/CLASSIFIER	1
90	7251471360512 12	AGITATOR	1
43	7251340243521 11	CAUSTICIZER NO:1	1
91	7251471360512 12	AGITATOR	1
44	7251340243521 11	CAUSTICIZER NO:2	1
92	7251471360512 12	AGITATOR	1
45	7251340243521 11	CAUSTICIZER NO:3	1
93	7251471360512 12	AGITATOR	1
46	7251340123216 11	SUMP TANK	1
65	7422002325117 12	PUMP	2
47	7251340673261 11	CLARIFIER W.LIQ.AND ST.	1
66	7422002315117 12	PUMP-WHITE LIQUOR	2
67	7422002315117 12	PUMP TO LIME MUD	2
48	7251340353236 11	AREA DUMP TANK	1
68	7422002415117 12	PUMP-DUMP TANK	1

CAPACITY CALCULATION

Name of Critical Equip. : CAUSTICIZER TANKS

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 30 t.SOLID

No. of Critical Equipment : 3

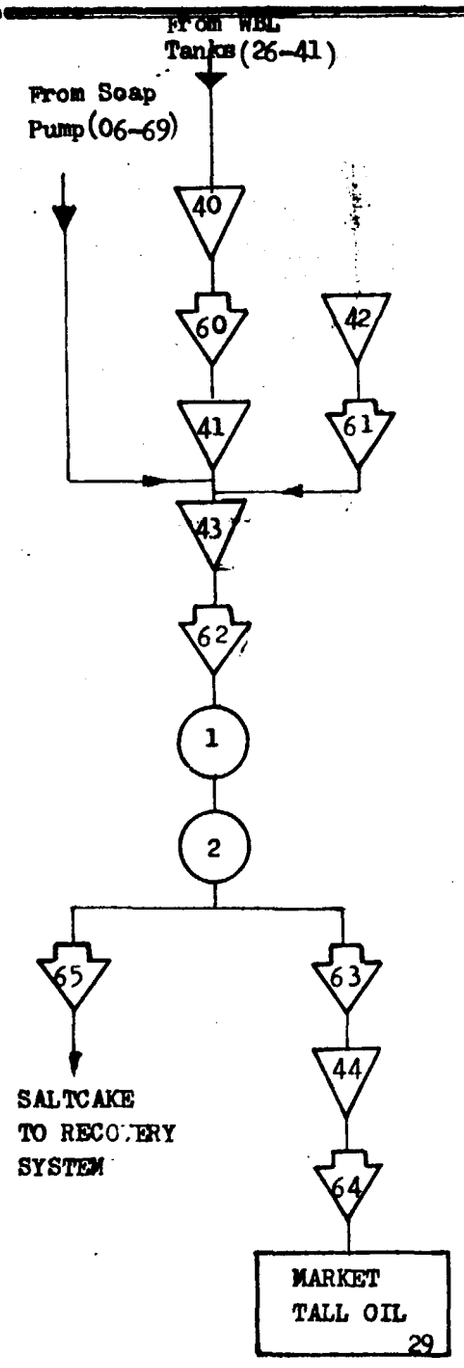
DESIGN LINE CAPACITY 30x0,9= 27 t

per hour	per shift	per day	per year
27 t	216 t	648t	215784 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	WHITE LIQUOR	CAUSTICIZING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	27 t/h SOLIDS
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert H.M. GRIERSON	**APPROVED BY** CTA UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	29	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
40	7251340123211111	SUMP TANK-SOAP	1
60	7423000236117112	PUMP-SOAP	1
41	7251340353231111	TANK-SOAP SKIMMING	1
42	7251340123211111	SUMP TANK-SOAP	1
61	7423000236117112	PUMP - SOAP	1
43	7251340353231111	TANK - SOAP STORAGE	1
62	7423000336112112	PUMP	1
1	7251340343231111	TALL-OIL REAC.VESSEL	1
2	7251340243221111	TALL-OIL SETTL.TANK	1
63	7422002211211712	PUMP-TALL OIL	1
44	7251340133211111	STORAGE TANK - TALL OIL	1
64	7422002211117112	PUMP-TALL OIL	1
65	7422002322117112	PUMP - SALTCAKE	1

CAPACITY CALCULATION

Name of Critical Equip. : REACTION VESSEL

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment : 1

DESIGN LINE CAPACITY :

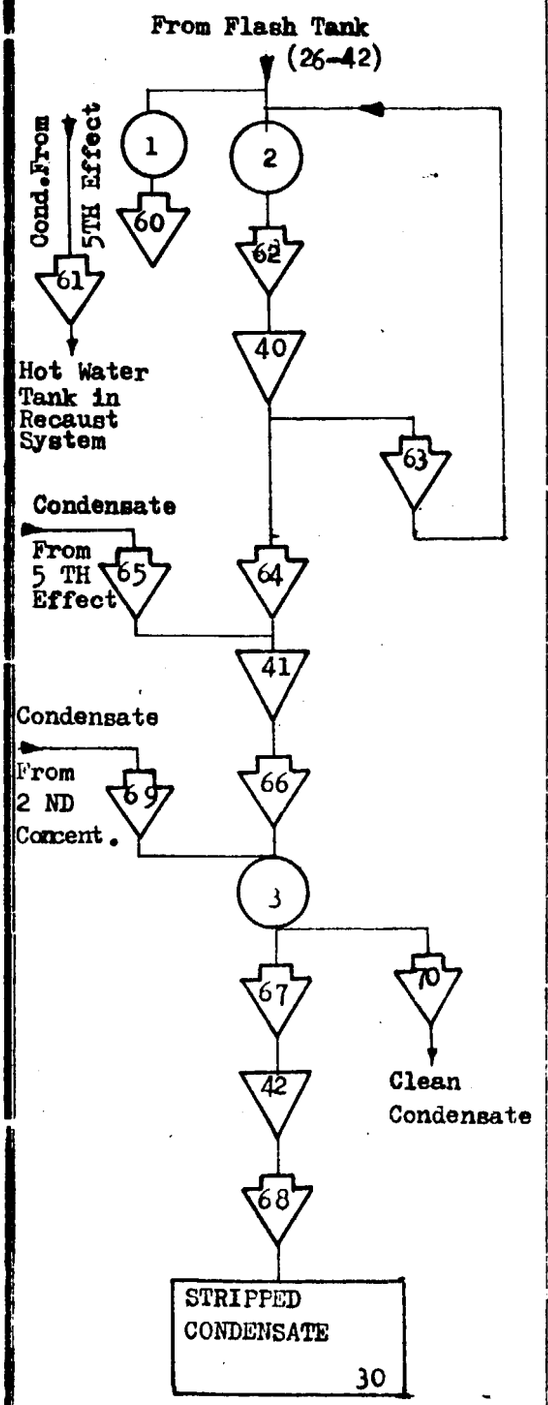
per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	TALL-OIL	TALL-OIL PRODUCTION
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	-
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK

CHECKED BY	APPROVED BY
UNIDO Expert H.M. GRIERSON	CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	30	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	741610541411112	CONDENSER	1
60	742200231211212	PUMP	1
61	742200231211212	PUMP	1
2	741610341411112	PRE-COOLER	1
62	743121111111222	VACUUM PUMP	1
40	725134012321111	TANK	1
63	742200231211712	PUMP	1
64	742200221211712	PUMP	1
65	742200221211712	PUMP	1
41	725134023322611	TANK-CONTAM.COND.	1
66	742200232211712	PUMP	1
3	741660711411611	STRIPPING TOWER	1
67	742200232211712	PUMP	1
42	725134024323611	TANK-STRIPPED COND.	1
68	742200232211712	PUMP	1
69	742200221211712	PUMP	1
70	742200231211212	PUMP-CLEAN COND.	1

CAPACITY CALCULATION

Name of Critical Equip. : STRIPPING TOWER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment : 1

DESIGN LINE CAPACITY :

per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	STRIPPED CONDENSATE	STRIPPING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	-
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK

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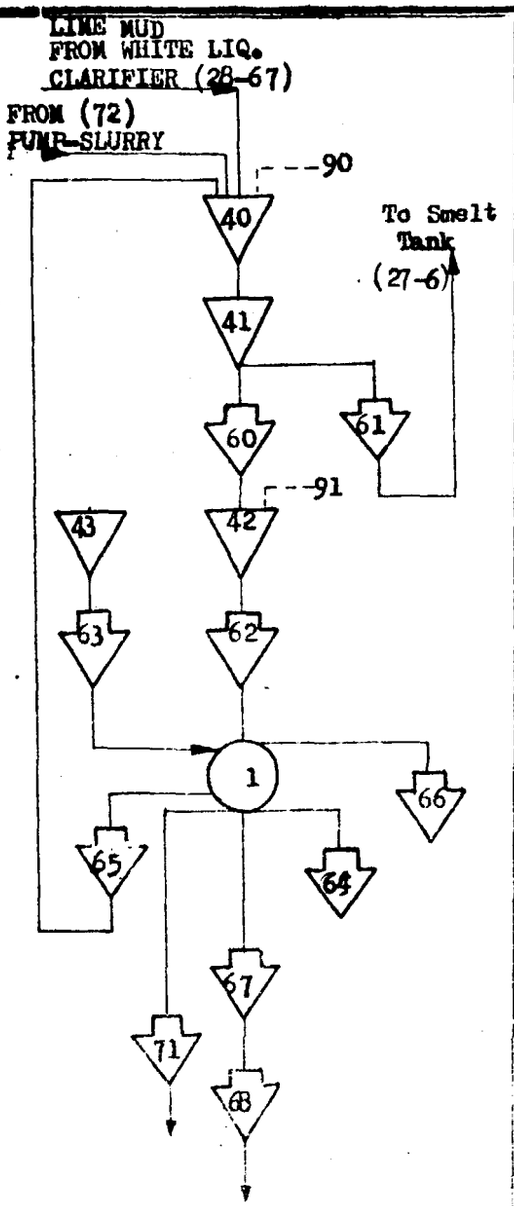
APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	31	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
40	725134013351111	MUD MIX TANK	1
90	725147136051212	AGITATOR	1
41	725134057325111	TANK- WEAK WHITE LIQ.	1
60	742200231411712	PUMP-LIME MUD	2
61	742200232511712	PUMP -WEAK WL. TO SMELT	2
42	725134035353111	TANK-STOR LIME MUD	1
91	725147136051212	AGITATOR	1
62	742200231411712	PUMP	2
43	725134012320901	ACID TANK	1
63	742200221511712	PUMP-ACID TO FILTER	1
1	725141042532722	LIME MUD FILTER	1
64	743122342121732	VACUUM PUMP	1
65	742200231411712	FILTRATE PUMP	1
66	743410135121712	VENT FAN	1
67	744264311011911	SCREW CONVEYOR	1
68	744264311011911	SCREW CONVEYOR	1

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

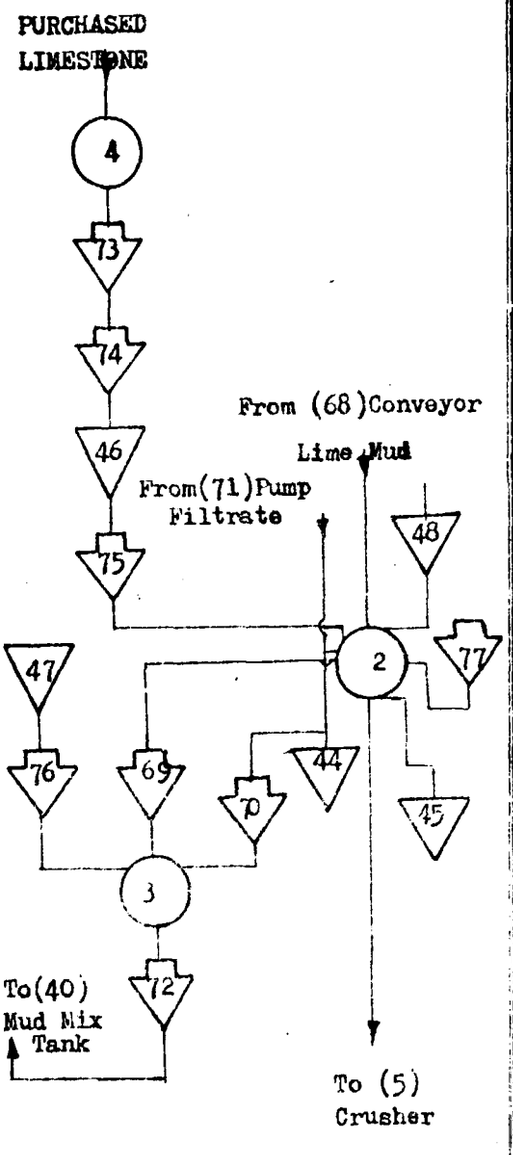
DESIGN LINE CAPACITY :

per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 1/3

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	LIGHT CRUSHED LIME	LIME REBURNING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	5.4 t/ h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert	H.M. GRIERSON	**APPROVED BY** UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	31	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
2	741631214266211	LIME KILN	1
69	743410137221222	I.D. FAN	1
3	741660211421611	SCRUBBER	1
70	742200241711712	PUMP - SLURRY TO SCR.	2
71	742200231211712	PUMP- FILTRATE	1
44	725134012321111	SEAL TANK	1
72	7422002317117l2	PUMP SLURRY	1
45	725134013321111	SUMP SEPARATOR-TANK	1
4	728320214212231	LIMESTONE CRUSHER	1
73	744261212012931	CONVEYOR	1
74	744265111013932	ELEVATOR	1
46	725134024323111	STORAGE BIN-LIMESTONE	1
75	744267411011921	TABLE FEEDER	1
47	725134012321111	TANK-COOLING WATER	1
76	7422002312112l2	PUMP- WATER TO SCR.	1
48	725134013322111	DAY OIL TANK	1
77	743410135121712	PRIMARY AIR FAN	1

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

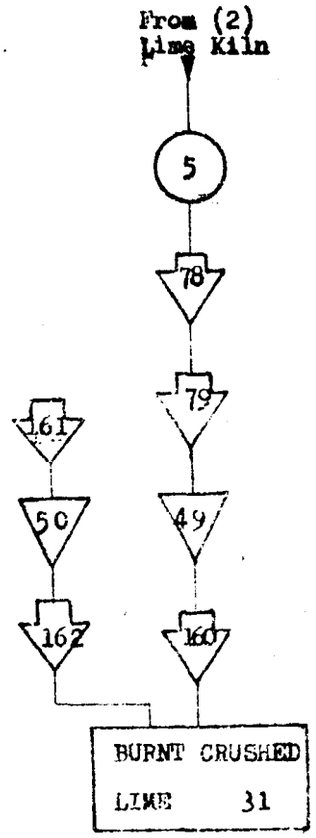
DESIGN LINE CAPACITY :

per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT 2/3

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	BURNT CRUSHED LIME	LIME REBURNING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	5.4 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.ŞEYMEN	K. GÖNENÇ	B. TEK
CHECKED BY	**APPROVED BY**	
M.M. GRIERSON UNIDO Expert	CTA UNIDO	



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	31	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
5	728320213121232	HOT LIME CRUSHER	1
78	744261211011931	CONVEYOR-LIME	1
79	744265111013932	ELEVATOR	1
49	725134024322111	STORAGE BIN	1
160	744264311011931	SCREW CONVEYOR	1
161	744261211011931	CONVEYOR	1
50	725134024323111	STORAGE BIN-LIME	1
162	744264311011931	SCREW CONVEYOR	1

CAPACITY CALCULATION

Name of Critical Equip. : LIME KILN

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 6 t

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 6x0.9 = 5.4 t

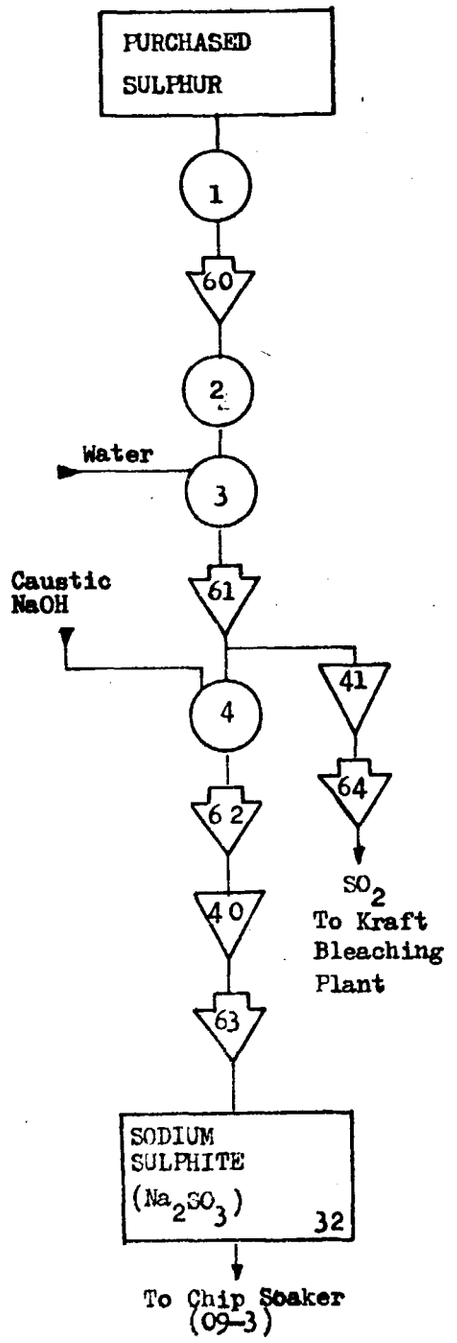
per hour	per shift	per day	per year
5.4 t	43 t	130 t	43157 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 3/3

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	BURNT CRUSHED LIME	LIME REBURNING
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	5.4 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
C.SEYMEN	K. GÖNENÇ	B. TEK

CHECKED BY H.M.GEERSON (UNIDO Expert) APPROVED BY (UNIDO)



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	32	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	725134010211111	SULPHUR MELTER	1
60	742200211411212	PUMP–MOLTEN SULPHUR	1
2	741210015052942	SULPHUR BURNER	1
3	741660311421611	SO_2 ABSORB. TOWER	1
61	742200221111212	PUMP–SO_2 SOLN.	1
4	741660311421611	Na_2SO_3 ABSORB. TOWER	1
62	742200221111212	PUMP–Na_2SO_3	1
40	725134020311611	CHEST–Na_2SO_3 SOLN.	2
63	742200221111212	PUMP Na_2SO_3 TO SOAKER	1
41	725134020311611	CHEST–SO_2 SOLN.	1
64	742200221111212	PUMP SO_2 TO BLEACH.	1

CAPACITY CALCULATION

Name of Critical Equip. :
ABSORBTION TOWER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 0.29 t

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 0.29x0.9=0.26 t

per hour	per shift	per day	per year
0.26 t	2 t	6 t	2078 t

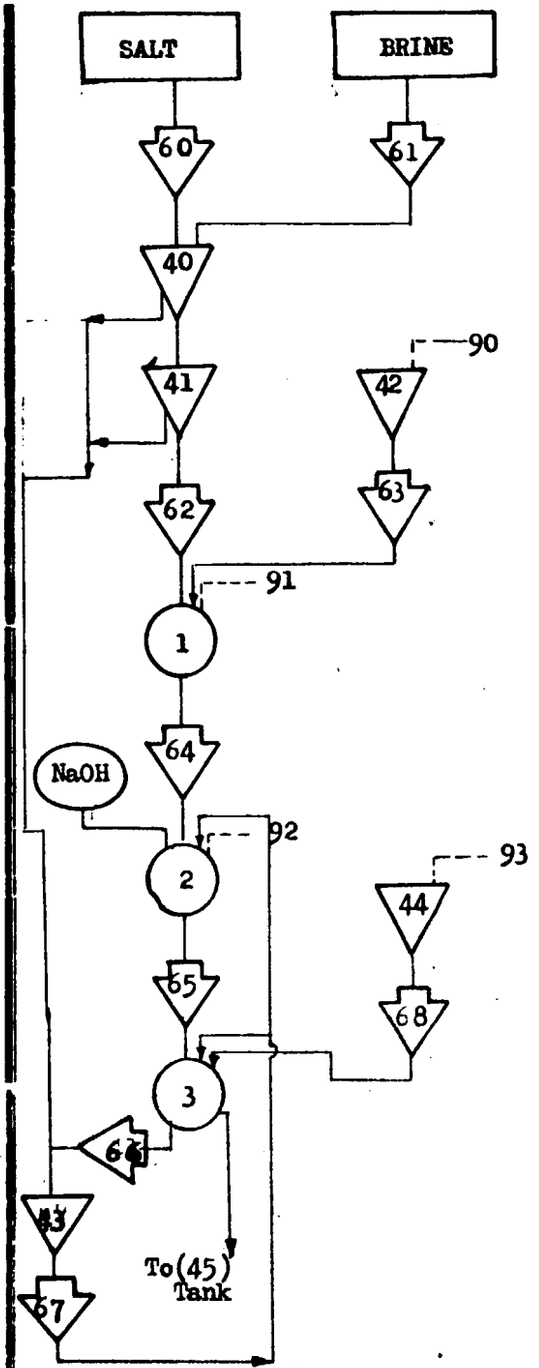
UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	SODIUM SULPHITE	ABSORBTION
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	0.26 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T. İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert: H.M. GRIERSON

APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	33	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	744260212011921	SALT CONVEYOR	1
40	692110722323611	BRINE DISSOLVI.TANK	1
61	742200231211212	BRINE RECIRC.PUMP	1
41	725134024321611	TANK WITH HEATER	1
62	742200231211212	PUMP	2
42	725134012321611	CARBONATE TANK	2
90	725147115031212	AGITATOR	2
63	742200211111212	CARBONATE PUMP	1
1	725134012321611	CARBONATE REACT.TANK	1
91	725147115031212	AGITATOR	1
64	742200231211212	PUMP	1
2	725134013321611	NaOH REACTOR TANK	1
92	725147115031212	AGITATOR	1
65	742200231211212	PUMP	1
3	725134046324611	BRINE CLARIFIER	1
66	742200221411212	SLUDGE PUMP	2
43	725134010311611	SLUDGE PIT	1
67	742200221311212	PUMP	1
44	725134012321111	COAGULANT MIXING TANK	1
93	725147115031212	AGITATOR	1
68	742102011111712	METERING PUMP	1

CAPACITY CALCULATION

Name of Critical Equip. : CLARIFIER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR 5.5 t SOLID

No. of Critical Equipment : 1

DESIGN LINE CAPACITY 5.5x0.9=5 t

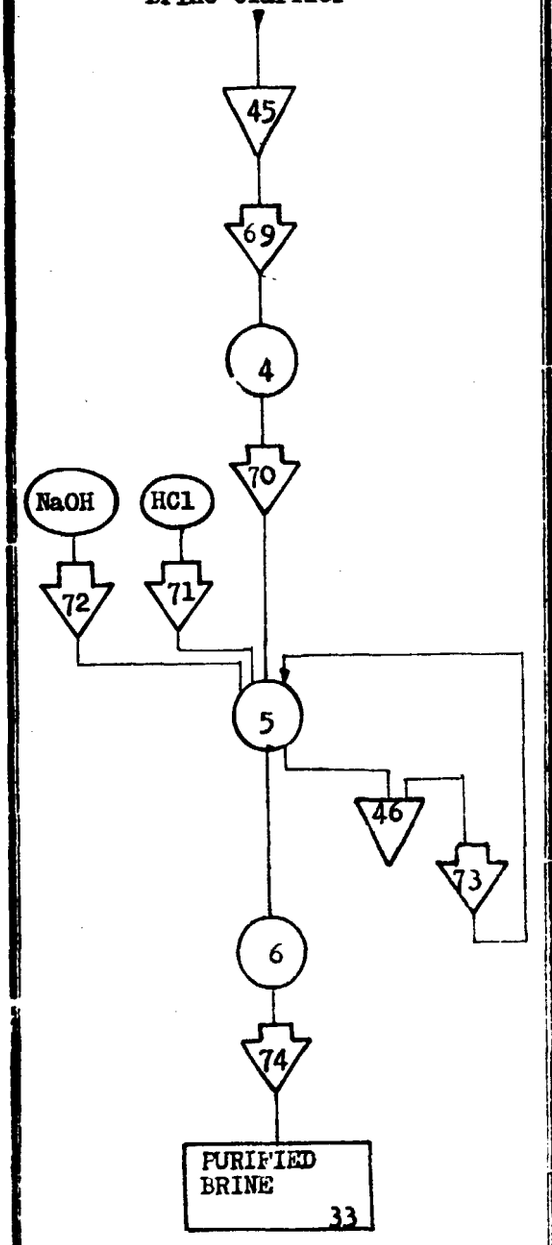
per hour	per shift	per day	per year
5 t	40 t	120 t	39960 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM 1/2

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	PURIFIED BRINE	BRINE PURIFIC.
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	5t/h SOLIDS
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T.İLGEN	K. GÖNENÇ	E. TEK

CHECKED BY UNIDO Expert J.M.GRIERSON | APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	33	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
45	725134013321611	TANK	1
69	742200231211212	PUMP	2
4	728312220022642	BRINE FILTER	2
70	742200231211212	FILTER PUMP	2
71	742102011111712	METERING PUMP -HCl	1
72	742102011111712	METERING PUMP-NaOH	1
5	741669911431612	ION EXCH.COLUMNS	1
46	725134012321611	SPENT REGEN.TANK	1
73	742200211211212	ION REGEN. PUMP	1
6	725134013321611	TANK WITH HEATER	2
74	742200231211212	PURIFIED BRINE PUMP	2

CAPACITY CALCULATION

Name of Critical Equip. : CLARIFIER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 5.5t SOLID

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 5.5x0.9=5 t

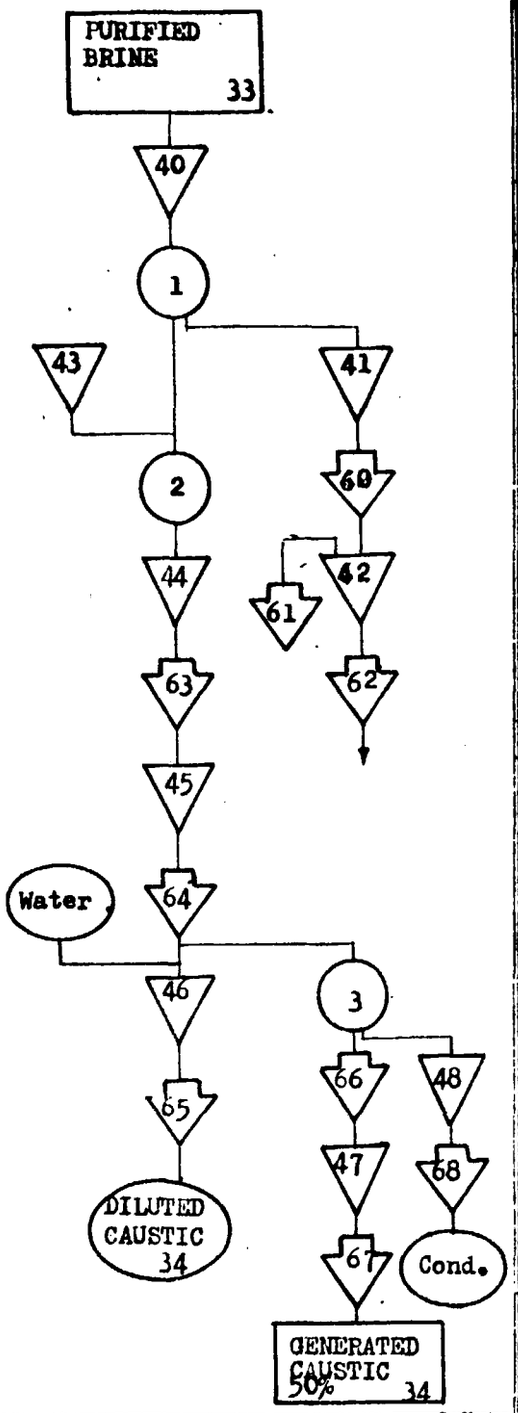
per hour	per shift	per day	per year
5 t	40 t	120 t	39960 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT 2/2

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	PURIFIED BRINE	BRINE PURIF.
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	5 t/h SOLIDS
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T.İLGEN	K. GÖNENÇ	B. TFK

CHECKED BY H.M.GRIERSON (UNIDO Expert) | APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	34	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
40	725134013321611	BRINE HEAD TANK	1
1	725145542012232	ELECTROLYTIC CELLS	24
41	725134013321611	BRINE STORAGE TANK	1
60	742200231211212	PUMP	2
42	725134011321611	DECHLORINATION TANK	1
61	743122321111212	VACUUM PUMP	1
62	742200231211212	BRİNE PUMP	2
43	725134012321611	DEMIN.WATER TANK	1
2	741610321411612	CAUSTIC COOLER	1
44	725134013321111	CAUSTIC RECEIVER TANK	1
63	742200221211212	30% CAUSTIC PUMP	2
45	725134035323111	30%CAUSTIC TANK	2
64	742200221211212	TRANSFER PUMP	2
46	725134035323111	10% CAUSTIC TANK	1
65	742200231111212	TRANSFER PUMP	2
3	741620111431611	EVAPORATOR	1
66	742200221111712	50% NaOH PUMP	2
47	725134024322611	50% NaOH STOR.TANK	1
67	742200231111712	PUMP	1
48	725134013321611	CONDENSATE TANK	1
68	742200221211712	CONDENSATE PUMP	1

CAPACITY CALCULATION

Name of Critical Equip. : ELECTROLYTIC CELLS

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 0.154 t

No. of Critical Equipment : 24

DESIGN LINE CAPACITY : 3.7x0.9=3.3 t

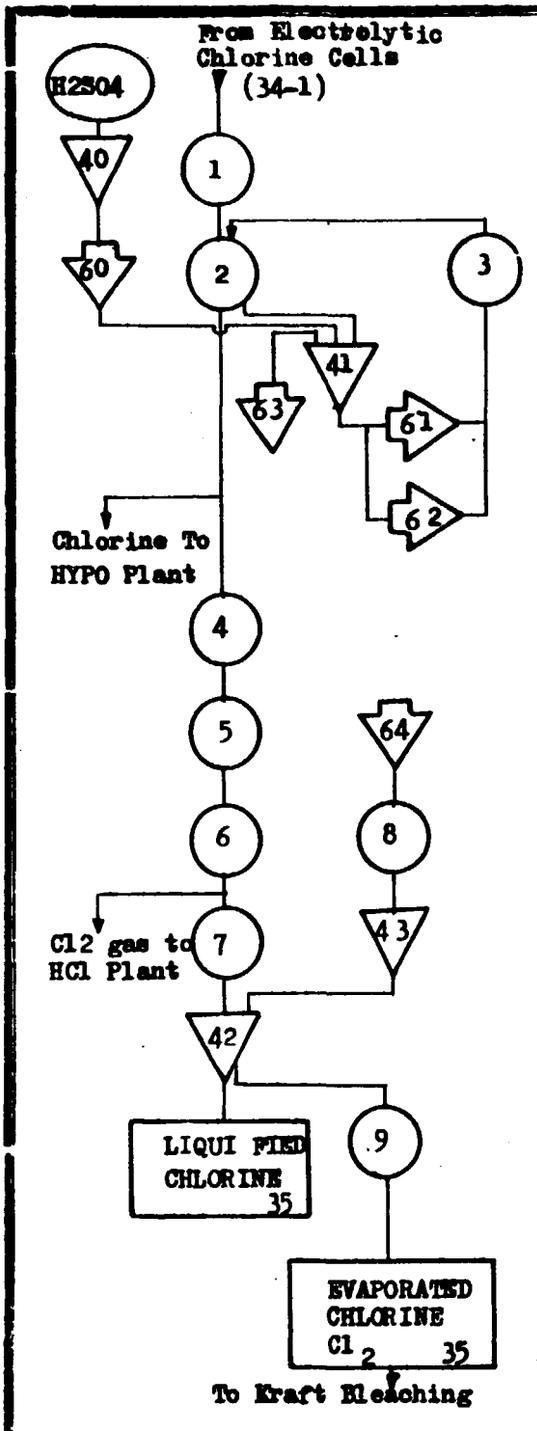
per hour	per shift	per day	per year
3.3 t	26.4 t	79 t	26374 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	GENERATED CAUSTIC	ELECTROLYSIS
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	3.3 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T.İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M.GRIERSON | APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	35	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	7416103313116 12	CHLORINE GAS COOLER	1
2	7416603124316 11	CHLORINE DRYING TOWER	1
40	7251340133221 11	H2SO4 STORAGE TANK	1
60	7422002215117 12	H2SO4 PUMP	1
41	7251340123211 11	H2SO4 DUMP TANK	1
61	7422002215117 12	H2SO4 PUMP	1
62	7422002215117 12	H2SO4 PUMP	3
63	7422002115117 12	PUMP	1
3	7416103212116 12	H2SO4 COOLER	2
4	7431320512112 22	CHLORINE COMPRESSOR	2
5	7416103213116 12	ACID SEPARATOR/COOLER	1
6	7251340113211 11	ACID DEMISTER	1
7	7416104313112 12	CHLORINE LIQUIFIER	1
42	7251340233226 11	LIQUID CHLORINE TANK	4
64	7431320231112 12	COMPRESSOR	2
8	7416107212711 12	AIR DRYER	1
43	6924304123221 11	AIR RECEIVER	1
9	7416109313116 12	CHLORINE VAPOURISER	2

CAPACITY CALCULATION

Name of Critical Equip. ELECTROLYTIC CELLS

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 0.138 t

No. of Critical Equipment 24

DESIGN LINE CAPACITY 3.3x0.9=2.9 t

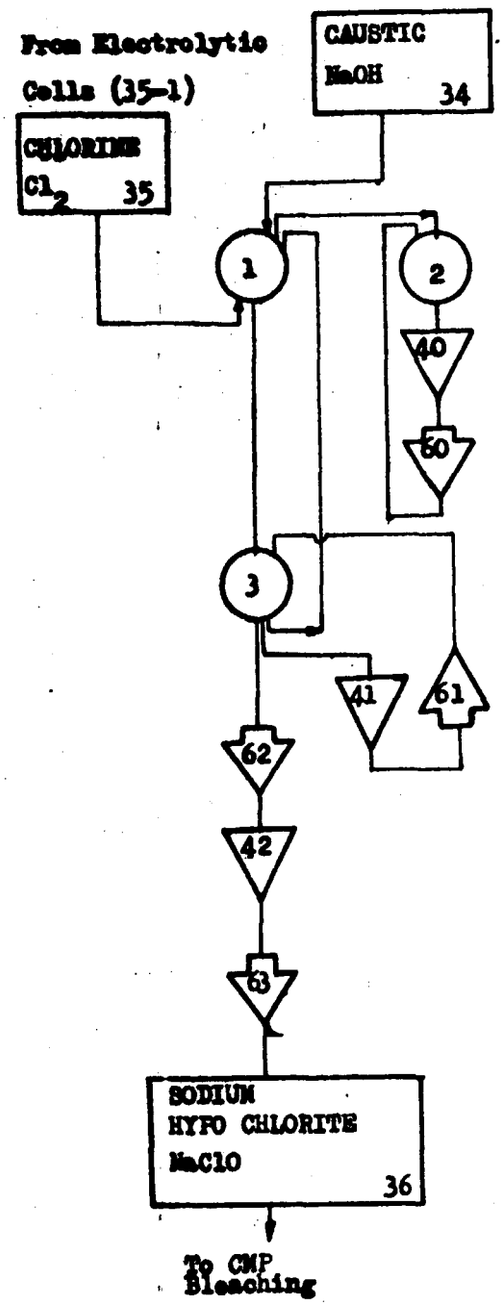
per hour	per shift	per day	per year
2.9 t	23 t	70 t	23177 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	CHLORINE	ELECTROLYSIS
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	2.9 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T. İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M.GRIERSON | APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	36	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	725134012321611	SODIUM HYPO .TOWER	1
2	741660211421611	VENT SCRUBBER	1
40	725134013321611	TANK	1
60	742200222211712	PUMP	1
3	741610450053612	CHILLER	2
41	725134013321611	CHILLED WATER STOR.T.	1
61	742200242111712	PUMP	2
62	742200231111712	HYPO PUMP	2
42	725134035323611	HYPO STORAGE TANK	2
63	742200232111712	HYPO TO PROCESS PUMP	2

CAPACITY CALCULATION

Name of Critical Equip. : TOWER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 0.81 t

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 0.81x0.9=0.73 t

per hour	per shift	per day	per year
0.73 t	5.84 t	17.5 t	5834 t

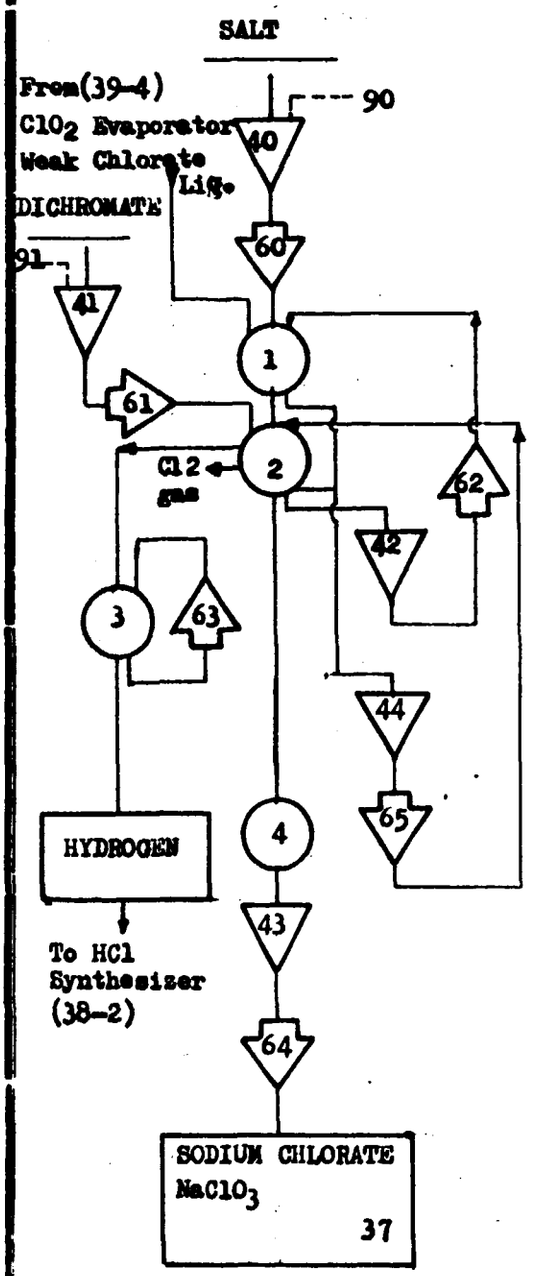
UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	SODIUM HYPOCH.	HYPO PRODUCT.
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	0.73 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T.İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M. GRIERSON

APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	37	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
40	725134013322611	SALT DISSOLVING TANK	1
90	725147116051212	AGITATOR	1
60	742200221111712	BRINE PUMP TO CELLS	1
1	725145511011912	ELECTROLYTIC CELLS	24
2	725134013321611	REACTORS	6
41	721134012321611	DICHROMATE MIX TANK	1
91	725147115041212	AGITATOR	1
61	742301011111712	PUMP	1
42	725134012321611	CELL LIQ.CIRC.TANK	1
62	742200221111712	CELL LIQ.CIRC.PUMP	2
3	741660211421611	HYDROGEN SCRUBBER	1
63	742200221111712	PUMP	1
4	741610311111612	CHLORATE COOLER	1
43	725134013321611	CHLORATE STOR.TANK	2
64	742200221111712	$NaClO_3$ PUMP	2
44	725134013321611	DUMP TANK	1
65	742200221111712	PUMP	1

CAPACITY CALCULATION

Name of Critical Equip. : ELECTROLYTIC CELLS

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 0.027 t

No. of Critical Equipment : 24

DESIGN LINE CAPACITY : 0.65x0.9=0.58 t

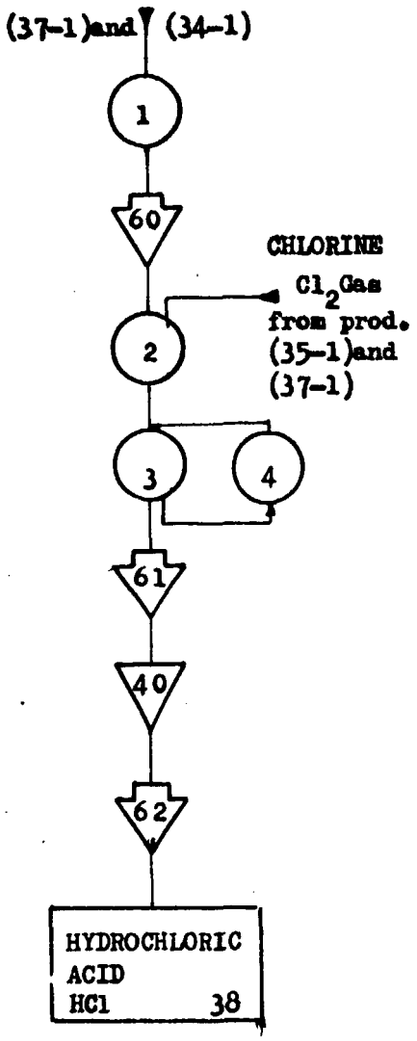
per hour	per shift	per day	per year
0.58 t	4.6 t	13.9 t	4635 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	SODIUM CHLORATE	ELECTROLYSIS
DATE	**SAMPLE PLANT**	**CAPACITY**
JANUARY 1982	SAMSUN/ATATÜRK	0.58 t/h
PREPARED BY	**DRAWN BY**	**CHECKED BY**
T.İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert: H.M.GRIERSON — APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	38	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	741610311111212	HYDROGEN COOLER	24
60	743420031231212	HYDROGEN BLOWER	1
2	741650812241212	HCl COMBUSTION CHAM.	1
3	741660312411212	ABSORBTION CHAMBER	1
61	742200221511712	HCl PUMP	1
40	725134024322611	33% HCl STOR.TANK	1
62	742200221511712	HCl TRANSFER PUMP	1
4	741660212421111	TAIL GAS SCRUBBER	1

CAPACITY CALCULATION

Name of Critical Equip. :
COMBUSTION CHAMBER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 0.93 t

No. of Critical Equipment : 1

DESIGN LINE CAPACITY : 0.93x0.9=0.83 t

per hour	per shift	per day	per year
0.83 t	6.6 t	19.9t	6633 t

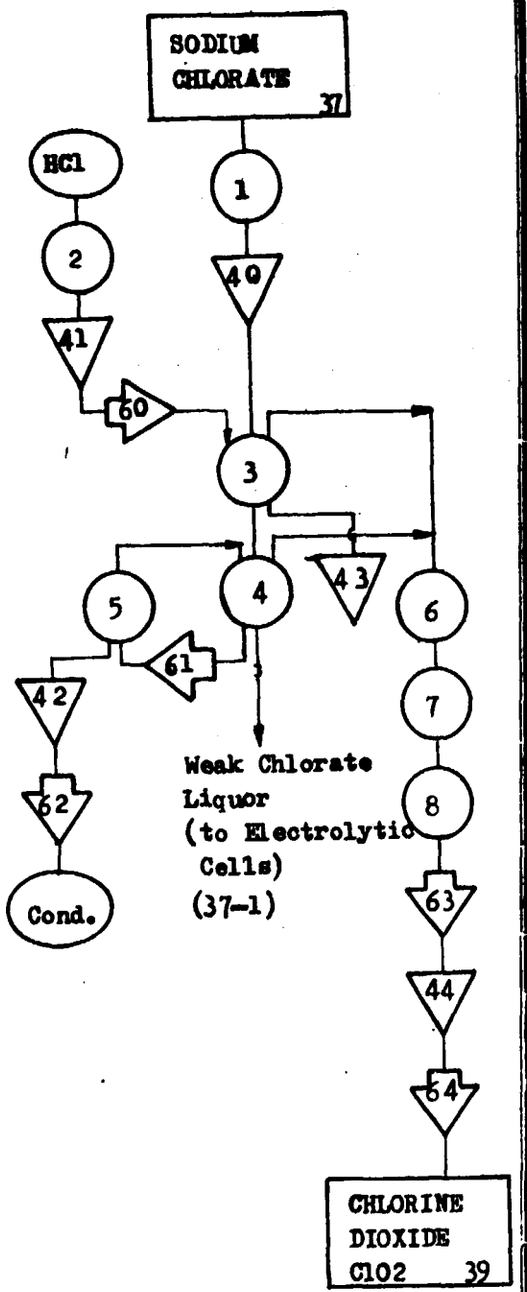
UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	HYDROCHLORIC ACID	COMBUSTION
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	0.83 t/h
PREPARED BY	DRAWN BY	CHECKED BY
T.İLGEN	K. GÖNENÇ	B. TEK

CHECKED BY H.M.GRIERSON
UNIDO Expert

APPROVED BY
CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	39	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
1	725141011121712	FİLTER	1
40	725134012321611	TANK	1
2	725141011121712	HCl FILTER	1
41	725134012321611	HCl TANK	1
60	742200211511712	HCl FEED PUMP	1
3	725134012321611	ClO2 GENERATOR	1
4	741620121131612	ClO2 EVAPORATOR	1
61	742200231611712	SLURRY CIRCUL.PUMP	2
5	741610221311612	REBOILER	1
42	725134012321611	CONDENSATE TANK	1
62	742200221211712	CONDENSATE PUMP	1
43	725134012321611	DUMP TANK	1
6	741610321311612	ClO2 COOLER	1
7	741610521311612	SURFACE CONDENSER	1
8	741660311421611	ClO2 ABSORPTION TOWER	1
63	742200232511712	ClO2 SOL'N PUMP	2
44	725134034323611	ClO2 SOL'N TANK	2
64	742200233511712	ClO2 SOL'N SUPPLY PUMP	2

CAPACITY CALCULATION

Name of Critical Equip. GENERATOR

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR : 0.37 t

No. of Critical Equipment : 1

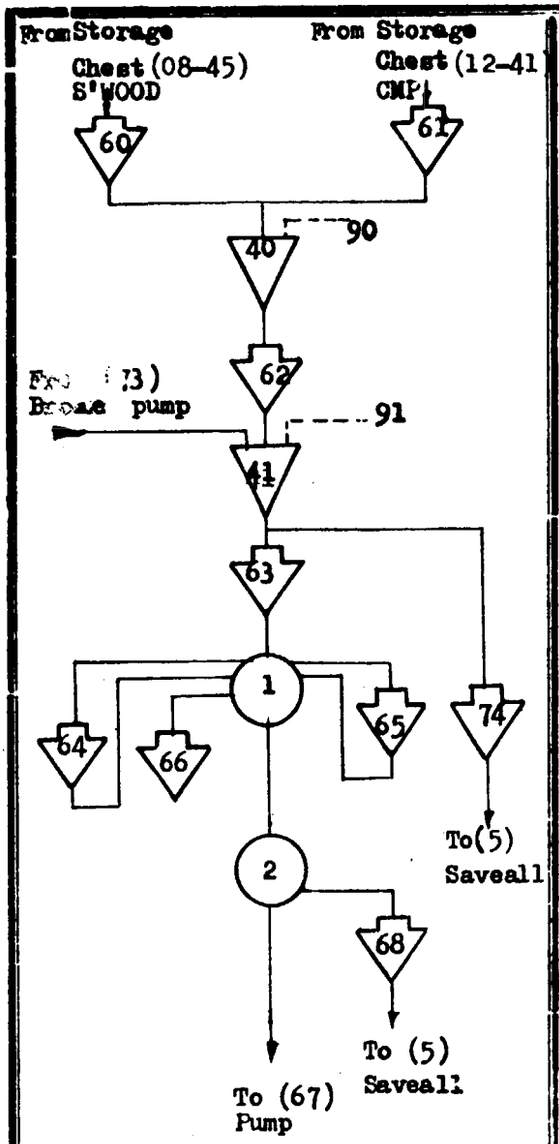
DESIGN LINE CAPACITY 0.37x0.9=0.33 t

per hour	per shift	per day	per year
0.33 t	2.6 t	7.9 t	2637 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	CHLORINE DIOXIDE GENERATION	
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	0.33 t/h
PREPARED BY	DRAWN BY	CHECKED BY
T. İLGEN	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert	H.M.GRIERSON	APPROVED BY CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411-1	40	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
60	742200241611712	PUMP-S'WOOD	1
61	742200241611712	PUMP-C.M.P.	1
40	725134035322611	PULP CHEST	1
90	725147145051212	AGITATOR	2
62	742200242611712	PUMP	1
41	-	MACHINE CHEST	1
91	725147145051212	AGITATOR	2
63	742200242611712	PUMP	1
1	725136011321612	CLEANERS	24
64	742200242111712	PUMP-PRIMARY REJECT	1
65	742200232111712	PUMP-SEC.REJECT	1
66	742200231111712	PUMP-TERT. REJECT	1
2	725141071242722	PRESSURE SCREEN	1
68	742200232111712	PUMP SCREEN REJECT	1

CAPACITY CALCULATION

Name of Critical Equip. :

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR :

No. of Critical Equipment :

DESIGN LINE CAPACITY :

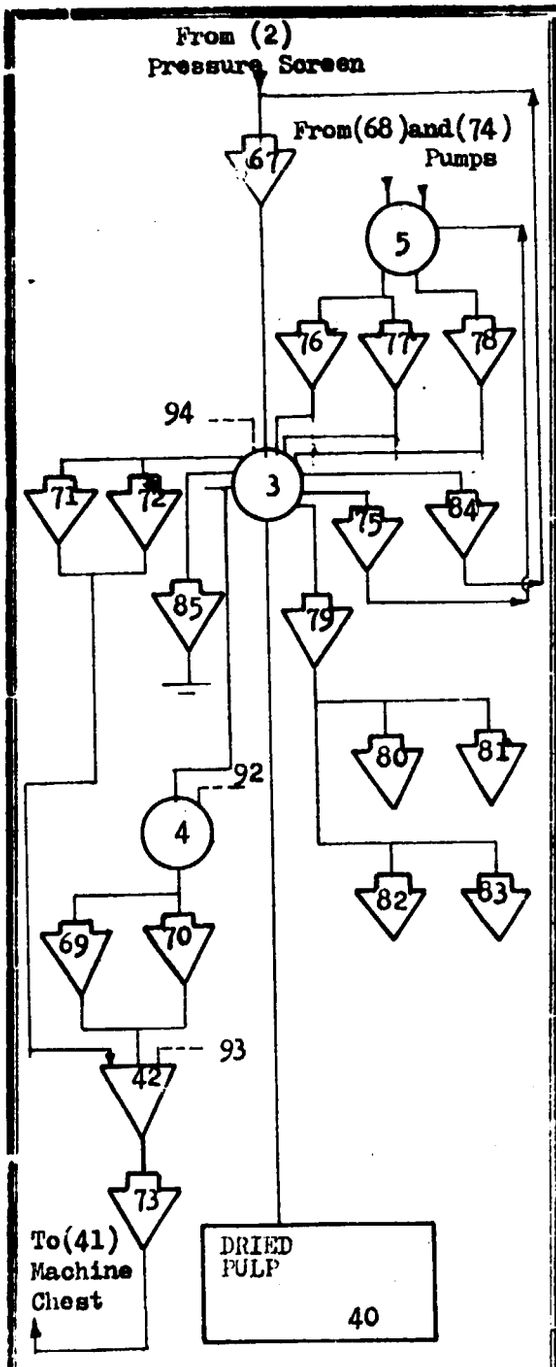
per hour	per shift	per day	per year

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT 1/2

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	*PRODUCT*	*TECHNOLOGY*
PULP AND PAPER	DRIED PULP	PULP FORMING
DATE	*SAMPLE PLANT*	*CAPACITY*
JANUARY 1982	SAMSUN/ATATÜRK	12 ODT/h
PREPARED BY	*DRAWN BY*	*CHECKED BY*
C.SEYMEN	K. GÖNENÇ	B. TEK

CHECKED BY UNIDO Expert H.M.GRIERSON | *APPROVED BY* CTA UNIDO



ACTIVITY CODE	INDUSTRY	PROD	TEC	CAP
	3411 - 1	40	1	1

No.	MACHINE CODE	MACHINE NAME	QTY
67	742200262111732	PUMP	1
3	725121154118252	PULP DRYER	1
4	-	PULPER	1
92	725147165051222	AGITATOR	2
69	742200232611712	PUMP	1
70	742200242611712	PUMP	1
42	-	BROKE CHEST	1
93	725147145051212	AGITATOR	2
94	725147165051222	AGITATOR-COUCH PIT	2
71	742200232611712	PUMP	1
72	742200242611712	PUMP	1
73	742200242611712	PUMP - BROKE	1
5	725142096652232	SAVEALL	1
74	742200242111712	PUMP (SWEETENER)	1
75	742200241111712	PUMP W.W.TO SAVEALL	1
76	742201136111712	PUMP TO SHOWERS	2
77	742200241111712	PUMP-CLEAR W.W.	1
78	742200242111712	PUMP-CLOUDY W.W.	1
79	743122361112242	VACUUM PUMP	2
80	742200231111712	PUMP	1
81	742200231111712	PUMP	1
82	742200231111712	PUMP	1
83	742200231111712	PUMP	1
84	742200262111722	PUMP-WHITEWATER	1
85	742200231111212	PUMP-SUMP	1

CAPACITY CALCULATION

Name of Critical Equip. : PULP DRYER

DESIGN THEORETICAL CAPACITY OF THE CRITICAL EQUIPMENT PER HOUR	16.8 ODT
No. of Critical Equipment :	1
DESIGN LINE CAPACITY	:16.8x0.72=12 ODT

per hour	per shift	per day	per year
12 ODT	96 t	288 t	95900 t

UNIDO / SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT 2/2

MODULAR PROCESS FLOW DIAGRAM

INDUSTRY	PRODUCT	TECHNOLOGY
PULP AND PAPER	DRIED PULP	PULP FORMING
DATE	SAMPLE PLANT	CAPACITY
JANUARY 1982	SAMSUN/ATATÜRK	12 ODT/h
PREPARED BY	DRAWN BY	CHECKED BY
C. [illegible]	K. GÖNENÇ	B. TEK
CHECKED BY UNIDO Expert	[illegible]	APPROVED BY CTA UNIDO

UNIDO/SPO (SAKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code:3411-1-0111

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
30		TRUCK SCALES	60t	15m2	ELEC	FIXED	3t	M.S.	2 t	TUR	1	76	76	0.76	0.76	81	7 4 5 2 5 0 3 7 5 2 1 1 9 3 1
60		PORTAL CRANE	10t	12m	SINGLE	TT	46t	M.S.	5 t	TUR	1	31000	31000	339.7	339.7	82	7 4 4 2 2 1 6 3 3 1 2 4 9 4 1
61		LOADER FORK AND BUCKET	8t	15km/h	-	-	36t	STEEL BAR	4 t	IMP	1	£ 27	£ 27	62.8	62.8	80	7 4 4 1 1 0 0 6 2 0 0 4 9 3 2
62		CHIP DOZER	2.5m3	-	-	ROTTER STRAND	10.26t	STEEL BAR	3 t	IMP	1	£ 27.7	£ 27.7	64.4	64.4	80	7 2 3 4 1 2 0 1 0 0 1 3 9 3 2
63		MOBILE CRANE	7.5t	4m	SINGLE	REV.	15.7t	STEEL BAR	4t	IMP	1	£ 34	£ 34	79.-	79.-	78	7 4 4 2 2 2 1 2 1 1 1 3 9 3 2
1		RECLAIM CHAIN CONVEYOR	74t/h	5000mm	-	BULK	450t	STEEL BAR	10t	TUR	2	2175	4350	75.4	150.8	79	7 4 4 2 6 1 3 2 5 0 1 8 9 5 1
2		SORTING CHAIN CONVEYOR	74t/h	1070mm	-	BULK	55t	STEEL BAR	6t	TUR	1	1104	1104	38.1	38.1	79	7 4 4 2 6 1 3 2 3 0 1 5 9 4 1
64		BOOM LOADER	5t	5m	SINGL	REV. LOPER	1.3 t	S.STEEL	0.8t	IMP	1	27.1	27.1	26.-	26.-	78	7 4 4 2 2 0 2 2 2 1 4 1 9 1 2
3		LOG SPLITTER	5t	8lm	3m	KNIFE	6 t	M.S.	1.5m	IMP	1	12.3	12.3	12,3	12,3	80	7 2 5 1 3 0 2 2 3 4 4 2 1 1 2
65		BELT CONVEYOR	74t/h	1970mm	-	BULK	18t	STEEL BAR	5t	TUR	1	200	200	18.7	18.7	76	7 4 4 2 6 0 2 2 3 0 1 3 9 4 1
4		METAL DETECTOR	74t/h	N/A	-	BELT	0.35t	STEEL BAR	0.3t	IMP	1	11.8	11.8	11.9	11.9	77	7 2 8 3 1 3 1 3 0 0 3 1 9 1 2
66		ROLL CASE FEED CONVEYOR	74t/h	760mm	-	BULK	3.5t	STEEL BAR	2 t	TUR	1	270	270	25.3	25.3	76	7 4 4 2 6 3 1 2 2 0 1 2 9 3 1
5		CHIPPER (BLOWER)	74 t/h	6.8m2	2.95m	DISC	22 t	STC	12 t	IMP	1	CAN $ 120	CAN $ 120	182	182	76	7 2 5 1 4 5 0 9 1 5 5 3 2 5 2

PLANT SURVEY FORM

Sample Plant : SAMSUN-ATATÜRK

UNIDO/SPO (SIDA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code: 34111 0211

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Specs. Cap.	Major Spec. 1	Major Spec. 2	Type Des.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		DISC CYCLONE	74 t/h	N/A	-	DRY DRUM	5 t	M.S.	5 t.	TUR	1	TL 700	TL 700	9.2	9.2	80	7 2 8 3 1 4 3 3 0 0 1 2 9 4 1
40		METERING BIN	60 m3	ϕ 4 m	30°C	VIBRAT.	8 t	M.S.	8 mm.	TUR	1	TL 1200	TL 1200	18.8	18.8	80	7 2 5 1 3 3 0 2 4 3 7 2 1 1 1
60		BELT CONVEYOR	74 t/h	1220mm	-	BULK	35 t	M.S.	4 t	TUR	1	TL 960	TL 960	90.04	90.04	76	7 4 4 2 6 0 2 2 3 0 1 4 9 3 1
61		DISC CHUTE	74 t/h	1220mm	-	BULK	1 t	M.S.	1 t	TUR	1	TL 140	TL 140	1.8	1.8	80	7 4 4 2 6 7 1 2 3 0 1 1 9 2 1
62		DISC CHUTE	74 t/h	1220mm	-	BULK	1 t	M.S.	1 t	TUR	1	TL 140	TL 140	1.8	1.8	80	7 4 4 2 6 7 1 2 3 0 1 1 9 2 1
63		BELT CONVEYOR	74 t/h	1220mm	-	BULK	15 t	M.S.	2 t	TUR	1	TL 730	TL 730	68.47	68.47	76	7 4 4 2 6 0 2 2 3 0 1 3 9 3 1
54		STACKOUT CONVEYOR	74 t/h	1220mm	-	BULK	70 t	M.S.	4 t	TUR	1	TL 1415	TL 1415	132.7	132.7	76	7 4 4 2 6 0 2 2 3 0 1 5 9 3 1
55		CHIP RECLAIMER	7 t/h	2000mm	-	BULK	75 t	M.S.	4 t	TUR	1	TL 1056	TL 1056	99	99	76	7 4 4 2 6 1 1 1 5 0 1 5 9 3 1
66		RECLAIM CONVEYOR	7 t/h	1220mm	-	BULK	40 t	M.S.	4 t	TUR	1	TL 1300	TL 1300	121.9	121.9	76	7 4 4 2 6 0 2 1 3 0 1 4 9 3 1
57		RECLAIM CONVEYOR	7 t/h	1220mm	-	BULK	40 t	M.S.	4 t	TUR	1	TL 1300	TL 1300	121.9	121.9	76	7 4 4 2 6 0 2 1 3 0 1 4 9 3 1
2		MAGNETIC SEPARATOR	74 t/h	N/A	-	BELT	3.55 t	ST.FAB.	2.5 t	IMP	1	$ 5.6	$ 5.6	6.6	6.6	78	7 2 8 3 1 3 1 3 0 0 3 1 9 3 2
3		CHIP SCREEN	74 t/h	20 m2	-	CHIP	5.5 t	ST.FAB.	2 t	IMP	1	DM 53.9	DM 53.9	29.6	29.6	80	7 2 5 1 4 3 0 9 2 0 6 2 9 3 2
68		OVERS CONVEYOR	7 t/h	760mm	-	BULK	4 t	M.S.	0.8 t	TUR	1	TL 91	TL 91	8.5	8.5	76	7 4 4 2 6 0 2 1 2 0 1 1 9 1 1
4		MAGNETIC SEPARATOR	7 t/h	N/A	-	BELT	3 t	M.S. FAB	2 t	IMP	1	$ 5.0	$ 5.0	5.9	5.9	78	7 2 8 3 1 3 1 1 0 0 3 1 9 3 2
5		RECHIPPER AND BLOWER	7 t/h	1.17 m2	ϕ1.22 m.	DISC	6 t	GIC	2 t	IMP	1	$ 50	$ 50	58.8	58.8	78	7 2 5 1 4 5 0 5 1 3 5 2 2 3 2
69		FINES CONVEYOR	6 t/h	760mm	-	BULK	4 t	M.S.	0.8 t	TUR	1	TL 100	TL 100	9.37	9.37	76	7 4 4 2 6 0 2 1 2 0 1 1 9 1 1
70		FINES CONVEYOR	6 t/h	920mm	-	BULK	5 t	M.S.	0.8 t	TUR	1	TL 350	TL 350	32.8	32.8	76	7 4 4 2 6 0 2 1 2 0 1 2 9 1 1
71		ACCEPT CONVEYOR	74 t/h	1070mm	-	BULK	50 t	M.S.	4 t	TUR	1	TL 1100	TL 1100	103.1	103.1	76	7 4 4 2 6 0 2 2 3 0 1 5 9 3 1
30		BELT SCALES	74 t/h	N/A	ELEC	FIXED	0.1 t	ST. FAB.	0.05 t	IMP	1	TL 130	TL 130	1.71	1.71	80	7 4 5 2 5 0 6 7 0 2 1 1 9 1 2
6		MAGNETIC SEPARATOR	74 t/h	N/A	-	BELT	3.55t	ST. FAB.	2.5 t	IMP	1	$ 5.6	$ 5.6	6.6	6.4	78	7 2 8 3 1 3 1 3 0 0 3 1 9 3 2
41		CHIP SILO	1133 m3	ϕ 11 m.	30°C	CONICAL	37 t	M.S.	8 mm	TUR	1	TL 5.180	TL 5.180	68.1	68.1	80	7 2 5 1 3 3 0 5 6 3 4 4 1 1 1
72		TABLE FEEDER	74 t/h	-	-	BULK	4.5t	M.S.	4 t	TUR	1	$ 11.6	$ 11.6	44.3	44.3	77	7 4 4 2 6 7 4 2 0 0 1 1 9 3 1

UNIDO/ICG (8MEA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant: [illegible]

PRODUCTION ACTIVITY Code : 3411-1 ISIC

Srl. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1960 Year Cost US $ (in Thousand) Unit	Constant 1960 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
30		TRUCK SCALES	60 t	15m	ELEC	FIXED	3t	M.S.	2 t	TUR	1	No 76	No 76	0.76	0.76	61	7 4 5 2 5 0 3 7 5 2 1 1 9 3 1
60		PORTAL CRANE	10t	12m	SINGLE	TT	46t	M.S.	5 t	TUR	1	No 31000	No 31000	339.7	339.7	62	7 4 4 2 2 1 6 3 3 1 2 4 9 4 1
61		FRONT END LOADER	8t	15km/h	-	-	36t	STEEL PAR	4 t	IMP	1	£ 27	£ 27	62.8	62.8	60	7 4 4 1 1 0 0 6 2 0 0 4 9 3 2
62		CHIP DOZER	2.5m3	-	-	RUBBER TIRED	10.2t	S.PAR	.3t	IMP	1	£ 27.7	£ 27.7	64.4	64.4	66	7 2 3 4 1 2 0 1 0 0 3 3 9 3 2
63		BELT CONVEYOR	67t/h	16[illegible]m	-	BULK	15 t	STEEL FAB	5t	TUR	1	No 1100	No 1100	38	38	79	7 4 4 2 6 0 2 2 3 0 1 3 9 4 1
1		METAL DETECTOR	67t/h	N/A	-	BELT	0.36t	ST FAB	0.3 t	IMP	1	DM 21.6	DM 21.6	11.9	11.9	77	7 2 8 3 1 3 1 3 0 0 3 1 9 1 2
64		ROLL CASE CONVEYOR	67t/h	788 mm	-	BULK	8.5t	ST FAB	2 t	TUR	1	No 270	No 270	25.3	25.3	76	7 4 4 2 6 3 1 2 2 0 1 2 9 3 1
2		CHIPPER AND BLOWER	67t/h	6.8m2	2.95m	DISC	22t	CIC	12t	IMP	1	CAN $ 120	CAN $ 120	182	182	76	7 2 5 1 4 5 0 9 1 5 5 3 2 5 2

UNIDO /SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411-1 04 11

Sr. No	PARK/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec-2	Major Spec-3	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1980 Year Cost US $(in Thousand) Unit	Constant 1980 Year Cost US $(in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		2_WAY CHUTE	67 t/h	1220mm	-	BULK	1 t	M.S	1 t	TUR	1	TL 140	TL 140	1.8	1.8	80	7 4 4 2 6 7 1 2 3 0 1 1 9 2 1
61		BELT CONVEYOR	67 t/h	1220mm	-	BULK	15 t	M.S.	2 t	TUR	1	TL 730	TL 730	68.47	68.47	76	7 4 4 2 6 0 2 2 3 0 1 3 9 3 1
62		CONVEYOR-STACKOUT -	67 t/h	1220mm	-	BULK	70 t	M.S.	4 t	TUR	1	TL 1415	TL 1415	132.7	132.7	76	7 4 4 2 6 0 2 2 3 0 1 5 9 3 1
63		CHIP RECLAIMER	7 t/h	2000mm	-	BULK	75 t	M.S.	4 t	TUR	1	TL 1056	TL 1056	99	99	76	7 4 4 2 6 1 1 1 5 0 1 5 9 3 1
64		RECLAIM CONVEYOR	7 t/h	1220mm	-	BULK	40 t	M.S.	4 t	TUR	1	TL 1300	TL 1300	122	122	76	7 4 4 2 6 0 2 1 3 0 1 4 9 3 1
65		RECLAIM CONVEYOR	7 t/h	1220mm	-	BULK	40 t	M.S.	4 t	TUR	1	TL 1300	TL 1300	122	122	76	7 4 4 2 6 0 2 1 3 0 1 4 9 3 1
66		CHUTE	67 t/h	1300mm	-	BULK	5 t	M.S.	2 t	TUR	1	TL 700	TL 700	9.2	9.2	80	7 4 4 2 6 7 1 2 3 0 1 2 9 3 1
1		MAGNETIC SEPARATOR	67 t/h	N/A	-	BELT	3.55 t	P.P. FAB	2.5t	IMP	1	$ 5.6	$ 5.6	6.6	6.6	78	7 2 8 3 1 3 1 3 0 0 3 1 9 3 2
2		CHIP SCREEN	67 t/h	20m2	-	CHIP	5.5 t	M.S. FAB	2 t	IMP	1	DM 53.9	DM 53.9	29.6	29.6	80	7 2 5 1 4 1 0 9 2 0 6 2 9 3 2
67		OVERS CONVEYOR	7 t/h	910mm	-	BULK	5 t	M.S.	0.8	TUR	1	DM 91	DM 91	8.5	8.5	76	7 4 4 2 6 0 2 1 2 0 1 2 9 1 1
3		MAGNETIC SEPARATOR	7 t/h	N/A	-	BELT	3 t	M.S. FAB	2t	IMP	1	$ 5.0	$ 5.0	5.87	5.87	78	7 2 8 3 1 3 1 1 0 0 3 1 9 3 2
4		RECHIPPER AND BLOWER	7 t/h	1.17m2	21.22 k	DISC	6 t	GIC	2t	IMP	1	$ 50	$ 50	58.7	58.7	78	7 2 5 3 4 5 0 5 1 3 5 2 2 2 2
68		FINES CONVEYOR	6 t/h	910mm	-	BULK	4 t	M.S.	0.8 t	TUR	1	TL 100	TL 100	9.38	9.38	76	7 4 4 2 6 0 2 1 2 0 1 1 9 1 1
69		DISC CHUTE	6 t/h	910mm	-	BULK	1 t	M.S.	0.9 t	TUR	1	TL 140	TL 140	1.8	1.8	80	7 4 4 2 6 7 1 1 2 0 1 1 9 1 1
70		2-WAY CHUTE	67 t/h	1070mm	-	BULK	1 t	M.S.	1 t	TUR	1	TL 140	TL 140	1.8	1.8	80	7 4 4 2 6 7 1 2 3 0 1 1 9 2 1
71		ACCEPT CONVEYOR	67 t/h	1070mm	-	BULK	50 t	M.S.	4 t	TUR	1	TL 1100	TL 1100	103	103	76	7 4 4 2 6 0 2 2 3 0 1 5 9 3 1
5		MAGNETIC SEPERATOR	67 t/h	N/A	-	BELT	3.55t	M.S. FAB	2.5 t	IMP	1	$ 5.6	$ 5.6	6.6	6.6	78	7 2 8 3 1 3 3 3 0 0 3 1 9 3 2
30		BELT SCALES	67 t/h	N/A	ELSC	FIXED	0.1 t	M.S.	0.05t	IMP	1	TL 130	TL 130	1.7	1.7	80	7 4 5 2 5 0 6 7 0 2 1 1 9 1 2
40		CHIP SILO HANDWOOD	1133m3	31m	30 °C	CONIC.	37 t	M.S.	8mm	TUR	1	TL 5180	TL 5180	68.1	68.1	80	7 2 5 1 3 3 0 5 6 3 4 4 1 1 1
72		TABLE FEEDER	67 t/h	-	-	BULK	4.5 t	M.S.	4t	TUR	1	$ 31.6	$ 31.6	47.5	47.5	76	7 4 4 2 6 7 4 2 0 0 1 1 9 3 1
73		CONVEYOR	67t/h	1070mm	-	BULK	50 t	M.S.	4t	TUR	1	TL 1100	TL 1100	103	103	76	7 4 4 2 6 0 2 2 3 0 1 5 9 3 1
41		CHIP SILO (CHP)	1133m3	31m	30 °C	CONIC.	37 t	M.S.	8mm	TUR	1	TL 5180	TL 5180	68.1	68.1	80	7 2 5 1 3 3 0 5 6 3 4 4 1 1 1
74		TABLE FEEDER	67t/h	-	-	BULK	4.5 t	M.S.	4t	TUR	1	$ 31.6	$ 31.6	47.5	47.5	76	7 4 4 2 6 7 4 2 0 0 1 1 9 3 1

UNIDO /SPO (SHIA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411-1 05 11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 (T(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1980 Year Cost US $(in Thousand) Unit	Constant 1980 Year Cost US $(in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		DISC CHUTE	78 t/h	1060mm	-	BULK	1 t	M.S.	1 t	TUR	1	TL 140	TL 140	1.8	1.8	80	7 4 4 2 6 7 1 2 3 0 1 1 9 2 1
61		CONVEYOR	74 t/h	1060mm	-	BULK	20 t	M.S.	4 t	TUR	1	TL 250	TL 250	23.4	23.4	76	7 4 4 2 6 0 2 2 3 0 1 3 9 3 1
30		BELT SCALES	74 t/h	N/A	ELEC	FIXED	0.1 t	M.S.	0.05t	IMP	1	TL 130	TL 130	1.7	1.7	80	7 4 5 2 5 0 6 7 0 2 1 1 9 1 2
62		CONVEYOR	74 t/h	1060mm	-	BULK	50 t	M.S.	4 t	TUR	1	TL 1100	TL 1100	103	103	76	7 4 4 2 6 0 2 2 3 0 1 5 9 3 1
1		SEPARATOR-MAGNETIC	74 t/h	N/A	-	BELT	3.55t	M.S. FE	2.5 t	IMP	1	$ 5.6	$ 5.6	6.6	6.6	78	7 2 8 3 1 3 1 3 0 0 3 1 9 3 2
63		CONVEYOR	74t/h	1280mm	-	BULK	25 t	M.S.	4 t	TUR	1	TL 320	TL 320	30	30	76	7 4 4 2 6 0 2 2 3 0 1 4 9 3 1
2		DIGESTER	176 m3	$ 4.1 m	180 °C	CYL	95 t	CARBON STEEL	45mm	TUR	4	TL 2785	TL 11156	279	1116	75	7 2 5 1 3 1 0 3 4 2 2 5 2 3 1
64		PUMP RECIRC.LATION	1270m3/h	24m	HCLC	HOR	0.79 t	ASC	0.48 t	IMP	4	DM 18.6	DM 74.4	10.9	43.6	78	7 4 2 2 0 0 2 6 1 2 1 1 7 1 2
40		BLOW TANK	570m3	$ 7.9 m	180 °C	AGIT	113 t	M.S.	18 mm	TUR	2	TL 15820	TL 31640	208	416	80	7 2 5 1 3 4 0 4 5 2 5 6 1 1 1
90		AGITATOR	75Kw	1450 rpm	-	SIDE	1.25t	CIC	0.6 t	IMP	2	CAN $ 8.2	CAN $ 16.4	10	20	77	7 2 5 1 4 7 1 5 6 0 5 1 2 1 2
1		SEPARATOR MAGNETIC	19 t/h OD	N/A	-	MET DRUM	0.8 t	CIC	0.8 t	CER.FAB. CIC	1	$ 5.6	$ 5.6	6.58	6.58	78	7 2 8 3 1 3 1 1 0 0 2 1 2 1 2
65		PUMP	756m3/h	38 m	HDR	HOR	1.9 t	CIC	0.95t	IMP	2	DM 23.0	DM 46.0	12.7	25.4	76	7 4 2 2 0 0 2 5 2 4 1 1 2 1 2
4		CONDENSER	214 m2	$ 1.8m	4 m	PLATES	4.6 t	S.S.	10 mm	IMP	1	TL 2800	TL 2800	14	14	80	7 4 1 6 1 0 5 4 2 3 5 1 6 1 2
66		CONDENSER WATER PUMP	132 m3/h	40m	HCLC	HOR	0.5 t	CIC	0.27t	IMP	1	DM 9.5	DM 9.5	5.6	5.6	78	7 4 2 2 0 0 2 4 2 2 1 1 2 1 2
67		PUMP TO ACCUMULATOR	480m3/h	40m	HCLC	HOR	1.3 t	CIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3	3	79	7 4 2 2 0 0 2 4 2 2 1 1 2 1 2
41		ACCUMULATOR HOT WATER(TANK)	556 m3	$6.7m	180 °C	CYL	61 t	M.S.	16 mm	TUR	1	TL 8540	TL 3540	112.3	112.3	80	7 2 5 1 3 4 0 4 5 2 2 8 1 1 1
5		HEAT EXCHANGER	37.2m2	$0.5m	2.9 m	Shell+ Tube Fixed	2 t	S.S.	10 mm	IMP	1	TL 630	TL 630	8.28	8.28	80	7 4 1 6 1 0 1 2 1 1 1 1 6 1 2
6		STRAINER	2700m3/h	$6.9.9	-	-	1.4 t	S.S.	10 mm	IMP	2	TL 100	TL 200	1.31	2.62	80	7 4 3 6 2 7 0 9 1 0 0 1 6 1 2
42		HOT WATER TANK	38 m3	$ 3.7m	95 °C	CYL	5 t	M.S.	8 mm	TUR	1	TL 700	TL 700	9.2	9.2	80	7 2 5 1 3 4 0 1 3 3 2 2 1 1 1
43		MAKE WATER TANK	38 m3	$3.7m	60 °C	CYL	5 t	M.S.	8 mm	TUR	1	TL 700	TL 700	9.2	9.2	80	7 2 5 1 3 4 0 1 3 3 2 2 1 1 1
68		PUMP (RECIRCULATION)	2100m3/h	30m	HCLC	HOR	2.1 t	CIC	1.3 t	IMP	1	DM 14.0	DM 14.0	20	20	78	7 4 2 2 0 0 2 6 2 2 1 1 2 2 2
7		CONDENSER	180 m2	$ 0.8m	6.1 m	Shell+ Tube Fixed	2.5 t	S.S.	10mm	IMP	1	TL 2000	TL 2000	26.3	26.3	80	7 4 1 6 1 0 5 4 1 4 1 1 6 1 2
69		PUMP	24m3/h	15 m	HCLC	HOR	0.22 t	CIC	0.12 t	IMP	1	DM 5.6	DM 5.6	3.3	3.3	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
8		DECANTER	36 m3	$2.5m	80 °C	CYL	7 t	M.S.	10mm	TUR	1	TL 980	TL 980	12.9	12.9	80	7 2 5 1 3 4 0 1 3 3 2 2 1 1 1
44		TURPENTINE TANK	163 m3	$6.8 m	60 °C	CYL	24 t	M.S.	14mm	TUR	1	TL 3360	TL 3360	44.2	44.2	80	7 2 5 1 3 4 0 3 4 3 2 3 1 1 1
70		PUMP	21m3/h	22 m	HCLC	HOR	0.22 t	CIC	0.12t	IMP	1	DM 5.6	DM 5.6	3.3	3.3	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
71		PUMP	3.6m3/h	15 m	HCLC	HOR	0.20 t	ASC	0.112 t	IMP	1	$ 1.9	$ 1.9	2.1	2.1	78	7 4 2 2 0 0 2 2 1 2 1 1 2 1 2

UNIDO/EPO (SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411- 10511

Sr. No	MARK/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec- 1	Major Spec- 2	Type Desc.	Manuf. Charac 1	Manuf. Charac. 2	Manuf. Charac. 3	Origin	Qty	Purchase Cost (in Thousands And Currency		Constant 1980 Year Cost US $ (in Thousand)		Year of Purchase and Remarks	SITC Code (For Computer)
												Unit	Total	Unit	Total		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
72		DIST (DWST DIGESTER)	2 t	5m	-	MISC.	3 t	CS. PAR.	1 t	TUR	1	TL 3800	TL 3800	41.6	41.6	82	7 4 4 2 1 1 3 2 4 0 2 1 9 2 1
45		TANK M.L. STORAGE	116 m3	Ø5.5m	10°C	CYL	10 t	M.S.	8mm	TUR	1	TL 1400	TL 1400	18.4	18.4	80	7 2 5 1 3 4 0 2 4 3 2 3 1 1 1
73		PUMP	540m3/h	27m	CORRO-SIVE	MOR	0.53 t	ASC	0.33 t	IMP	2	$ 5.7	$ 11.4	6.7	13.4	78	7 4 2 2 0 0 2 5 2 5 1 1 7 1 2
46		TANK B.LIQ.	46m3	Ø3.7m	40 °C	CYL	5 t	M.S.	8mm	TUR	1	TL 700	TL 700	9.2	9.2	80	7 2 5 1 3 4 0 1 3 3 2 2 1 1 1
74		PUMP	300m3/h	27m	SEA	MOR	0.50t	CIC	0.27t	IMP	1	DM 9.5	DM 9.5	5.6	5.6	78	7 4 2 2 0 0 2 4 2 4 1 1 1 1 3

UNIDO/IPO (SIKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411 1 C6 11

Sr. No	MARK / Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec-1	Major Spec-2	Type Desc.	Manuf. Charac. 1 (MT Term)	Manuf. Charac. 2 (MATL	Manuf. Charac. 3 (MTTerm)	Origin	Qty	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1980 Year Cost (in Thousand) Unit	Constant 1980 Year Cost (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		LIQUET CYCLONE	39 OPT/h	N/A	-	WET DRUM	0.6t	SS 316	0.6 t	IMP	1	TL 252	TL 252	3.3	3.3	80	7 2 8 3 1 4 3 1 0 0 2 1 9 1 2
2		KNOTTER	39 OT/h	1.9m2	ϕ 0.9 m	PRESS.	2.2 t	S.S.	1.7 t	IMP	2	$ Kr 204	$ Kr 408	71	142	75	7 2 5 1 4 1 0 7 1 2 4 1 7 2 2
40		TANK KNOTS	92 m3	ϕ4.9m	90°C	CYL	9 t	MS	6 mm	TUR	1	TL 1260	TL 1260	16.6	16.6	1980	7 2 5 1 3 4 0 2 4 3 2 2 1 1 1
90		AGITATOR	35 kW	980rpm	-	SIDE ENTRY	0.55t	CIC	0.3t	IMP	1	CAN $ 4.3	CAN $ 4.3	5.3	5.3	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
60		PUMP	72m3/h	30 m	VISCOS	HOR	0.53t	CIC	0.33t	IMP	1	DM 9.7	DM 9.7	5.7	5.7	79	7 4 2 2 0 6 2 3 2 6 1 1 2 1 2
3		WASHER STAGE 1	39OT/h	74 m2	ϕ 3.5 m	CYL	51 t	CIC	19 t	IMP	1	CAN $ 160	CAN $ 160	227	227	75	7 2 5 1 4 3 0 7 4 6 3 5 2 6 2
41		TANK FILTRATE 1	150 m3	ϕ1.33m	95°C	CYL	57 t	M.S.	8 mm	TUR	1	TL 7980	TL 7980	105	105	1980	7 2 5 1 3 4 0 5 7 3 2 5 1 1 1
61		PUMP TO VAT DILUTION	900m3/h	28 m	HCLC	HOR	1.4 t	CIC	0.75t	IMP	1	DM 19.0	DM 19.0	11.2	11.2	78	7 4 2 2 0 0 2 5 2 2 1 1 2 1 2
62		PUMP TO BLOW TANKS	600m3/h	26 m	HCLC	HOR	1.1 t	CIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3.-	3.-	79	7 4 2 2 0 0 2 5 2 2 1 1 2 1 2
63		PUMP TO DIGESTERS	190m3/h	20 m	HCLC	HOR	0.46t	CIC	0.24t	IMP	1	DM 8.4	DM 8.4	4.9	4.9	78	7 4 2 2 0 0 2 4 1 2 1 1 2 1 2
64		PUMP TO EVAPORATORS	280m3/h	27 m	HCLC	HOR	0.46t	CIC	0.24t	IMP	1	DM 8.4	DM 8.4	4.9	4.9	78	7 4 2 2 0 0 2 4 2 2 1 1 2 1 2
4		WASHER STAGE 2	35 ODT/h	74 m2	ϕ 3.5 m	CYL	46t	CIC	19t	IMP	1	CAN $ 160	CAN $ 160	227	227	75	7 2 5 1 4 3 0 7 4 6 3 4 2 6 2
42		TANK FILTRATE 2	99 m3	ϕ1.22m	95°C	CYL	45t	M.S.	8 mm	TUR	1	TL 6300	TL 6300	82.9	82.9	1980	7 2 5 1 3 4 0 4 7 3 2 4 1 1 1
65		PUMP TO INTERMEDIATE PULPER	840m3/h	25 m	HCLC	HOR	1.4t	CIC	0.75t	IMP	1	DM 19.0	DM 19.0	11.2	11.2	78	7 4 2 2 0 0 2 5 2 2 1 1 2 1 2
66		PUMP	192m3/h	30 m	HCLC	HOR	0.46t	CIC	0.24t	IMP	1	DM 8.4	DM 8.4	4.9	4.9	78	7 4 2 2 0 0 2 4 2 2 1 1 2 1 2
5		WASHER STAGE 3	35 ODT/h	74m2	ϕ 3.5 m	CYL	40t	CIC	19 t	IMP	1	CAN $ 160	CAN $ 160	227	227	75	7 2 5 1 4 3 0 7 4 6 3 4 2 6 2
43		TANK FILTRATE 3	807 m3	ϕ 11m	95°C	CYL	39 t	MS	8 mm	TUR	1	TL 5460	TL 5460	71.8	71.8	1980	7 2 5 1 3 4 0 4 6 3 2 4 1 1 1
67		PUMP	840m3/h	25 m	HCLC	HOR	1.4 t	CIC	0.75 t	IMP	1	DM 19	DM 19	11.5	11.5	78	7 4 2 2 0 0 2 5 2 2 1 1 2 1 2
68		PUMP	192m3/h	30 m	HCLC	HOR	0.46t	CIC	0.24 t	IMP	1	DM 8.4	DM 8.4	4.9	4.9	78	7 4 2 2 0 0 2 4 2 2 1 1 2 1 2
44		TANK FOAM TOWER	53m3	ϕ7.32 m	90°	CYL	30 t	MS.	8 mm	TUR	1	TL 4200	TL 4200	55.2	55.2	80	7 2 5 1 3 4 0 4 5 3 2 4 1 1 1
91		FOAM BREAKER	1 t/h	N/A	-	OPEN TYPE	7 t	ST. STL. PIPE	1 t	IMP	2	TL 6750	TL 13500	88	176	80	7 2 8 3 1 1 4 1 0 0 1 2 9 2 8
69		PUMP(SOAP)	70m3/h	30 m	WIR.	HOR	0.2 t	CIC	0.1t	IMP	1	$ 1.3	$ 1.3	1.4	1.4	79	7 4 2 3 0 0 0 3 2 6 1 1 2 1 2
70		PUMP TO BLACK LIQUOR TANK	30m3/h	15 m	HCLC	HOR	0.18t	CIC	0.09t	IMP	1	DM 3.5	DM 3.5	2.1	2.1	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
45		TANK L.D. WASHED PULP	3.66m3	ϕ 3.5m	95°C	AGIT.	17 t	M.S.	10 mm	TUR	1	TL 2380	TL 2380	13.3	13.3	80	7 2 5 1 3 4 0 3 4 3 5 3 1 1 1
92		AGITATOR	55 kW	980 rpm	-	SIDE ENTRY	0.82t	CIC	0.5 t	IMP	1	CAN $ 6.3	CAN $ 6.3	7.7	7.7	77	7 2 5 1 4 7 1 5 5 0 5 1 2 1 2
71		CRANE	30 t	5 m	DOUBLE	T.T.	33 t	M.S.	4 t	TUR	1	TL 12.500	TL 12.500	181	181	82	7 4 8 2 2 1 4 4 2 2 2 4 9 3 1

PLANT SURVEY FORM

UNIDO /SPO(SSKA)

Sample Plant: SAMSUN ATATÜRK

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code : 3411-1 07 11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. (Cap)	Major Spec-1 (Opti.)	Major Spec-2 (Opti.)	Type Descr.	Manuf. Char.1 MT(Tons)	Manuf. Char.2 MATL	Manuf. Char.3 MT(Tons)	Origin	Qty	Purchase Cost (in Thousands And Currency Unit	Purchase Cost (in Thousands And Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		PUMP	726 m3/h	40 m	CCLC	HOR	1.3 t	CIC	0.73 t	IMP	2	$ 6.1	$ 12.2	6.6	13.2	79	7 4 2 2 0 0 2 5 2 1 1 1 2 1 2
1		PRIMARY SCREEN	19 DDT/H	1.3m2	0.56	PRESS.	5.0 t	S.S.	1.6 t	IMP	2	$ 21.360	$ 42.720	104.4	208.8	1979	7 2 5 1 4 1 0 7 12 4 2 7 2 2
40		TANK REJECTS	17 m3	$ 2.6m	50°C	AGIT	3 t	M.S.	8 mm	TUR	1	TL 420	TL 420	5.5	5.5	80	7 2 5 1 3 4 0 1 3 3 5 1 1 1 1
90		AGITATOR	7.5 KW	1450	-	SIDE ENTRY	0.28 t	CIC	0.16 t	IMP	1	CAN $ 1.0	CANS 1.0	3.7	3.7	77	7 2 5 1 4 7 1 2 6 0 5 1 2 1 2
61		PUMP TO 2 nd SCREEN	168 m3/h	12 m	CCLC	HOR	0.55 t	CIC	0.36 t	IMP	1	$ 1.7	$ 1.7	1.8	1.8	79	7 4 2 2 0 0 2 4 2 1 1 1 2 1 2
2		SECONDARY SCREEN	19 DDT/H	1.3 m2	0.56m	PRESS.	5.0 t	S.S.	1.6 t	IMP	1	$ 19.150	$ 19.150	93.5	93.5	1979	7 2 5 1 4 1 0 7 1 2 4 2 7 2 2
41		TANK ACCEPTS	2 m3	$ 3m	50°C	AGIT	4 t	S.S.	8 mm	TUR	1	TL 560	TL 560	7.3	7.3	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
91		AGITATOR	7.5 KW	1450	-	SIDE ENTRY	0.28 t	CIC	0.16 t	IMP	1	CAN $ 1.0	CAN $ 1.0	3.7	3.7	77	7 2 5 1 4 7 1 2 6 0 5 1 2 1 2
62		PUMP TO PRIM CLEANERS	510 m3/h	40 m	CCLC	HOR	1.1 t	CIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3.-	3.-	79	7 4 2 2 0 0 2 5 2 1 1 1 2 1 2
3		PRIMARY CLEANERS	0.07 m3	0.3 m	50°C	CONICAL	0.12 t	S.S.	2 mm	IMP	18	DM 11.4	DM 205.2	6.5	117	77	7 2 5 1 3 6 0 1 1 3 4 1 6 1 2
42		TANK REJECTS	2.8 m3	$ 1.5m	50°C	CYL	0.7 t	M.S.	6 mm	TUR	1	TL 98	TL 98	1.3	1.3	80	7 2 5 1 3 4 0 1 2 3 2 1 1 1 1
63		PUMP TO SEC CLEANERS	108 m3/h	36 m	CCLC	HOR	0.35 t	CIC	0.20 t	IMP	1	DM 6.0	DM 6.0	3.5	3.5	78	7 4 2 2 0 0 2 4 2 1 1 1 2 1 2
4		SECONDARY CLEANERS	0.07 m3	0.3 m	50°C	CONIC.	0.12 t	S.S.	2 mm	IMP	7	DM 11.4	DM 79.8	6.5	45.5	77	7 2 5 1 3 6 0 1 1 3 4 1 6 1 2
5		TERTIARY SCREEN	3.300t/h	1 m2	$0.45m	PRESSUR	3.7 t	S.S.	1.4 t	IMP	1	DM 11.4	DM 11.4	6.5	6.5	77	7 2 5 1 4 1 0 3 1 1 4 1 7 2 2
43		TANK REJECTS	4.3 m3	$ 1.5 m	50°C	AGIT	0.9 t	M.S.	6 mm	TUR	1	TL 126.000	TL 126000	1.7	1.7	1980	7 2 5 1 3 4 0 1 2 3 5 1 1 1 1
92		AGITATOR	3.5 kw	1450 rpm	-	SIDE ENTRY	0.2 t	CIC	0.1 t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 6 0 5 1 2 1 2
64		PUMP TO DIGESTERS	12 m3/H	30 m	CCLC	HOR	0.11 t	CIC	0.55 t	IMP	1	DM 3	DM 3	1.8	1.8	78	7 4 2 2 0 0 2 3 2 1 1 1 2 1 2
6		DIGER	19 DDT/H	74 m2	$3.5 m	CYL	51 t	CIC	19 t	IMP	1	CAN $ 150	CAN $ 160	227	227	75	7 2 5 1 4 4 0 7 4 6 3 5 2 6 2
44		TANK WHITEWATER	560 m3	0	50°C	RECT	43 t	M.S.	8mm	TUR	1	TL 6020	TL 6020	79.1	79.1	80	7 2 5 1 3 4 0 4 0 3 1 4 1 1 1
65		PUMP WHITEWATER	111m3/h	30 m	CCLC	HOR	1.05 t	CIC	0.50 t	IMP	2	$ 2.2	$ 4.4	2.6	5.2	78	7 4 2 2 0 0 2 4 2 1 1 1 2 1 2
45		TANK AREA DUMP	240 m3	$ 6 m	50°C	AGIT	17 t	S.S.	8 mm	TUR	1	TL 2.180	TL 2.180	31.3	31.3	80	7 2 5 1 3 4 0 3 5 3 5 3 6 1 1
93		AGITATOR	22 kw	1450 rpm	-	SIDE ENTRY	0.35 t	CIC	0.2 t	IMP	1	CAN $ 3.3	CAN $ 3.3	4.-	4.-	77	7 2 5 1 4 7 1 4 6 0 5 1 2 1 2
66		PUMP	360m3/h	24 m	VISC	HOR	1.1 t	CIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3.-	3.-	79	7 4 2 2 0 0 2 4 1 6 1 1 2 1 2
67		PUMP THICK STOCK	156m3/h	30 m	V.S.	HOR	1.10 t	CIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3.-	3.-	79	7 4 2 2 0 0 2 4 2 6 1 1 2 1 2
46		TANK H.D. S'WOOD	1880m3	$ 10.7m	50°C	AGIT	122 t	M.S.	12 mm	TUR	1	TL 17.080	TL 17.080	224.6	224.6	80	7 2 5 1 3 4 0 5 6 3 5 6 1 1 1
47		TANK H.D.S'WOOD	1880m3	$ 10.7m	50°C	AGIT	122 t	M.S.	12 mm	TUR	1	TL 17.080	TL 17.080	224.6	224.6	80	7 2 5 1 3 4 0 5 6 3 5 6 1 1 1
94		AGITATOR (S'WOOD)	110 kw	980 rpm	-	SIDE ENTRY	1.4 t	CIC	0.9 t	IMP	1	CAN $ 10.5	CAN $ 10.5	12.8	12.8	77	7 2 5 1 4 7 1 6 5 0 5 1 2 1 2
95		AGITATOR (S'WOOD)	110 kw	980rpm	-	SIDE ENTRY	1.4 t	CIC	0.9 t	IMP	1	CAN $ 10.5	CAN $ 10.5	12.8	12.8	77	7 2 5 1 4 7 1 6 5 0 5 1 2 1 2

UNIDO/SPO (SUMA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATURK

PRODUCTION ACTIVITY Code : 3411-10-11

Cr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manf. Charac. 1 MT(Tons)	Manf. Charac. 2 MATL	Manf. Charac. 3 MT(Tons)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		PUMP	462m3/h	21m	VISC.	HOR	1.1 t	CIC	0.6 t	IMP	2	$ 2.8	$ 5.6	3.-	6.-	79	7 4 2 2 0 0 2 4 1 6 1 1 2 1 2
40		LEVELLING CHUST	100m3	$ 4.6m	50°C	AGIT	9 t	M.S.	8mm	TUR	1	TL 1260	TL 1260	16.6	16.6	80	7 2 5 1 3 4 0 2 6 3 5 2 1 1 1
90		AGITATOR	45kw	960rpm	-	SIDE E.	0.8 t	CIC	0.5 t	IMP	1	CAN $ 5.1	CAN $ 5.1	6.2	6.2	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
61		PUMP TO PRECHLORINATION TUBE	528m3/h	40 m	VISC	HOR	1.1 t	CIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3.-	3.-	79	7 4 2 2 0 0 2 5 2 6 1 1 2 1 2
62		PUMP WATER TO Cl_2 INJECTOR	90m3/h	75 m	CCLC	HOR	0.22t	CIC	0.12t	IMP	1	DM 5.6	DM 5.6	3.3	3.3	78	7 4 2 2 0 0 2 3 3 1 1 1 2 1 2
1		PRECHLORINATION TUBE	53m3	$1.8 m	50°C	CYL	9 t	M.S.	8 mm	TUR	1	TL 1260	TL 1260	16.6	16.6	80	7 2 5 1 3 4 0 2 2 3 2 2 1 1 1
2		D/C BRANCH TOWER	321m3	$4.6 m	50°C	AGIT	-	CONC	-	TUR	1						
91		AGITATOR	15kw	960rpm	-	SIDE E.	0.3t	CIC	0.18 t	IMP	2	CAN $ 3.2	CAN $ 6.4	3.9	7.8	77	7 2 5 1 4 7 1 3 5 0 5 1 2 1 2
41		HEAD TANK	1m3	$1.2m	50°C	CYL	0.6t	M.C.	5mm	TUR	1	TL 84	TL 84	1.1	1.1	80	7 2 5 1 3 4 0 1 8 3 2 1 1 1 1
3		D/C WASHER	19 ODT/h	67m2	$3.5 m	CYL	40 t	CIC	17 t	IMP	1	CAN $ 140	CAN $ 140	198.6	198.6	75	7 2 5 1 4 3 0 7 4 6 3 4 2 6 2
42		SEAL TANK	51 m3	$3.7 m	50 °C	CYL	-	FRP	-	TUR	1	TL 1000	TL 1000	13.1	13.1	80	7 2 5 1 3 4 0 2 3 3 2 0 9 0 1
63		EXCAUST FAN FOR 3 WASHERS	3m3/S	100mm	1450 RPM	IND. DFT.	0.0 t	CIC	0.4t	IMP	3	CAN $ 15	CAN $ 45	22.1	66.9	75	7 4 3 4 1 0 1 2 5 2 2 1 2 1 2
64		PUMP TO D/C WASHER	1200m3/h	22m	CCLC	HOR	1.5 t	ASC	0.78t	IMP	1	$ 17.5	$ 17.5	18.9	18.9	79	7 4 2 2 0 0 2 6 1 1 1 1 7 1 2
65		PUMP TO Cl_2 INJECTOR	90m3/h	75 m	CCLC	HOR	0.22t	ASC	0.12t	IMP	1	DM. 8.0	DM. 8.0	4.7	4.7	78	7 4 2 2 0 0 2 3 3 1 1 1 7 1 2
66		PUMP TO H_2O_2 WASHED PULP TOWER	150m3/h	30 m	CCLC	HOR	0.79 t	ASC	0.48 t	IMP	1	DM. 18.6	DM. 18.6	10.9	10.9	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
67		PUMP(PUMP SEALING)	24 m3/h	48m	CCLC	HOR	0.1 t	CIC	0.06t	IMP	1	DM. 3.2	DM. 3.2	1.8	1.8	78	7 4 2 2 0 0 2 3 2 1 1 1 2 1 2
4		STEAM MIXER	55 kW	150rpm	-	REDUC. GEAR	3.5 t	CIC	2.8 t	IMP	1	$ 7.5	$ 7.5	7.5	7.5	80	7 2 5 1 4 7 0 5 2 0 1 1 2 3 2
68		PUMP	168m3/h	25m	VIS	HOR	1.1 t	CIC	0.6 .	IMP	1	$ 2.8	$ 2.8	3.-	3.-	79	7 4 2 2 0 0 2 4 2 6 1 1 2 1 2
5		CAUSTIC TOWER	253m3	$4 m	50 °C	AGIT	-	CONC	-	TUR	1						
92		AGITATOR	19 kW	980rpm	-	SIDE E.	0.35t	CIC	0.2 t	IMP	1	CAN $ 3.3	CAN $ 3.3	4.0	4.0	77	7 2 5 1 4 7 1 3 5 0 5 1 2 1 2
69		PUMP	516m3/h	22m	VIS	HOR	1.3 t	CIC	0.73t	IMP	1	$ 6.1	$ 6.1	6.6	6.6	79	7 4 2 2 0 0 2 5 1 6 1 1 2 1 2
6		CAUSTIC WASHER	19 ODT/h	67 m2	$ 3.5m	CYL	40 t	CIC	17t	IMP	1	CAN $ 140	CAN $ 140	198.6	198.6	75	7 2 5 1 4 3 0 7 4 6 3 4 2 6 2
43		SEAL TANK	51 m3	$3.7m	50 °C	CYL	-	FRP	-	TUR	1	TL 500	TL 500	6.5	6.5	80	7 2 5 1 3 4 0 2 3 3 2 0 9 0 1
70		PUMP TO CAUSTIC WASHER	1200m3/h	24m	CCLC	HOR	2.0t	CIC	1.2 t	IMP	1	$ 9.5	$ 9.5	10.3	10.3	79	7 4 2 2 0 0 2 6 1 1 1 1 2 2 2
71		PUMP TO CAUSTIC TOWER	130m3/h	40m	CCLC	HOR	0.50t	CIC	0.29t	IMP	1	DM 9.3	DM 9.3	2.47	2.47	78	7 4 2 2 0 0 2 4 2 1 1 1 2 1 2
72		PUMP TO D/C WASHER	180m3/h	27m	CCLC	HOR	0.25 t	CIC	0.13t	IMP	1	DM 5.5	DM 5.5	3.2	3.2	78	7 4 2 2 0 0 2 4 2 1 1 1 2 1 2
7		STEAM MIXER	55kW	150rpm	-	REDUC. GEAR	3.5 t	CIC	2.8t	IMP	1	$ 7.5	$ 7.5	7.5	7.5	80	7 2 5 1 4 7 0 5 2 0 1 1 2 3 2

UNIDO/SPO (SSSA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SARKUY STATION

PRODUCTION ACTIVITY Code : 3411-30811

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 MT (Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Purchase Cost (in Thousands and Currency) Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
73		PUMP	156m3/h	25m	VISC	HOR	1.1t	CIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3.0	3.0	79	7 4 2 2 0 0 2 4 2 6 1 1 2 1 2
8		MIXER ClO_2	150KW	150rpm	-	ENDUC. GEAR	5.5t	CIC	4.5t	IMP	1	$ 10	$ 10	18	18	80	7 8 5 1 4 7 0 7 2 0 1 2 2 8 2
9		PRE-RETENTION TUBE	60m3	ϕ1.8 m	50°C	CYL	11 t	M.S.	8 mm	TUR	1	TL 1540	TL 1540	20.3	20.3	80	7 8 5 1 3 4 0 2 2 3 2 3 1 1 1
10		CHLORINE DIOXIDE BLEACH TOWER	650m3	ϕ 6.1m	50 °C	AGIT	-	CONC	-	TUR	1						
93		AGITATOR	19KW	980rpm	-	SIDE E	M.S.0.35t	CIC	0.2t	IMP	2	CAN $ 3.3	CAN $ 6.6	4.4	8.8	87	7 8 5 1 4 7 1 3 5 0 5 1 2 1 2
74		PUMP	5m3/h	22m	VISC	HOR	1.3t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	16.9	16.9	78	7 4 2 2 0 0 2 5 1 6 1 1 7 1 2
11		CHLORINE DIOXIDE WASHER	19 TPD	67m2	ϕ 3.5m	CYL	40t	CIC	17t	IMP	1	CAN $ 140	CAN $ 140	198.6	198.6	75	7 8 5 1 4 3 0 7 4 6 3 4 2 6 2
14		SEAL TANK	51 m3	ϕ3.7m	50 °C	CYL	-	FRP	-	TUR	1	TL 500	TL 500	6.5	6.5	80	7 8 5 1 3 4 0 2 3 3 2 0 9 0 2
75		PUMP TO ClO_2 WASHER	1200m3/h	24m	OCLC	HOR	2.0 t	ASC	1.1t	IMP	1	$ 27	$ 27	31.9	31.9	78	7 4 2 2 0 0 2 6 1 1 1 1 7 2 2
76		PUMP TO ClO_2 TOWER	130m3/h	40m	OCLC	HOR	0.5Qt	ASC	0.2Qt	IMP	1	$ 4.4	$ 4.4	5.2	5.2	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
77		PUMP TO CAUSTIC WASHER	150m3/h	27m	OCLC	HOR	0.25t	ASC	0.13t	IMP	1	$ 2.3	$ 2.3	2.7	2.7	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
78		PUMP THICK STOCK	150m3/h	10m	VIS	HOR	1.1 t	ASC	0.6 t	IMP	1	$ 32.1	$ 32.1	45	45	78	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
45		TANK M.D.S'WOOD	3450m3	ϕ14.63m	50°C	AGIT	21.9t	M.S.	10 mm	TUR	2	TL 30660	TL 611320	403.8	806.6	80	7 8 5 1 3 4 0 6 7 3 5 7 1 1 1
46		TANK M.D.S'WOOD	4350m3	ϕ14.63m	50°C	AGIT	26Qt	M.S.	10mm	TUR	1	TL 30400	TL 30400	478.7	478.7	80	7 8 5 1 3 4 0 7 7 3 5 7 1 1 1
94		AGITATOR(TANKS 45)	95KW	980rpm	-	SIDE E	1.6t	CIC	0.9t	IMP	2	CAN $ 9.7	CAN $ 19.4	11.9	23.8	77	7 8 5 1 4 7 1 6 5 0 5 1 2 1 2
95		AGITATOR(TANK 46)	110KW	980rpm	-	SIDE E	1.8'	CIC	1 t	IMP	1	CAN $ 10.5	CAN $ 10.5	12.8	12.8	77	7 8 5 1 4 7 1 6 5 0 5 1 2 2 2
47		DUMP TANK	240m3	ϕ6 m	50°C	CYL	17t	M.S.	8mm	TUR	1	TL 2360	TL 2360	33.3	33.3	80	7 8 5 1 3 4 0 3 5 3 2 3 1 1 1
79		PUMP (DUMP TANK)	10m3/h	24m	VIS	HOR	1.3t	CIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3.0	3.0	79	7 4 2 2 0 0 2 3 1 6 1 1 2 1 2

UNIDO/SPO (SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM
Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code: 3411-0911

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 MT(Tons)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1960 Year Cost US $ (in Thousand) Unit	Constant 1960 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code(For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	- 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		CHIPS BELT CONVEYOR	12 t/h	1000mm	-	BULK	40t	ST.FAB.	1 t	TUR	1	TL 2500	TL 2500	234.5	234.5	76	7 4 4 2 6 0 2 1 3 0 1 4 9 2 1
1		WASHER/SCREEN	12t/h	25m2	-	CHIPS	12t	ST.FAB.	3 t	IMP	1	TL 3000	TL 3000	39.4	39.4	80	7 2 5 1 4 1 0 6 2 0 6 3 9 3 2
61		CIRCULATION PUMP	510m3/h	15m	CCLC	HOR	1.3t	CIC	0.6t	IMP	1	$ 2.8	$ 2.8	3.0	3.0	79	7 4 2 2 0 0 2 5 1 1 1 1 2 1 2
62		CLEANER PUMP	240m3/h	25m	CCLC	HOR	0.55t	CIC	0.36t	IMP	1	$ 1.7	$ 1.7	1.81	1.81	79	7 4 2 2 0 0 2 4 2 1 1 1 2 1 2
2		CYCLONE	0.4t/h	(0.7m)	-	PRESS.	0.2t	M.S.	0.2t	TUR	1	TL 28	TL 28	0.368	0.368	80	7 2 8 3 1 1 2 1 0 0 2 1 9 1 1
63		BELT CONVEYOR(REJECTS)	1 t/h	600mm	-	BULK	3t	ST.FAB. (SS LINE)	1t	TUR	1	TL 150	TL 150	12.8	12.8	76	7 4 4 2 6 0 2 1 2 0 1 1 5 2 1
3		CHIP IMPREGNATOR	53m3	$ 2m	70°C	CYL	17t	M.S.	16mm	TUR	1	TL 4800	TL 4800	63.1	63.1	80	7 2 5 1 3 1 1 2 3 3 2 3 1 1 1
64		SODIUM SULFITE PUMP	9m3/h	15m	CORR.	HOR	0.15t	S.S.	0.8t	IMP	1	DM 7.0	DM 7.0	3.8	3.8	80	7 4 2 2 0 0 2 2 1 5 1 1 7 1 2

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

UNIDO/SPO (SEKA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code: 341111011

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec-1 Cap.	Major Spec-1	Major Spec-2	Type Descr.	Manuf. Char. 1	Manuf. Char. 2	Manuf. Char. 3	Origin	Qty	Purchase Cost (in Thousands And Currency) Unit	Purchase Cost (in Thousands And Currency) Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		SHREDDER	13.5t/h	6.3m2	-	DOUBLE DISC	3.5 t	ASC	3 t	IMP	1	$ 22.5	$ 22.5	33	33	75	7 2 5 1 4 6 0 7 1 0 2 1 7 3 2
40		LIVE BOTTOM BIN	30 m3	-	-	(RECT) VIBRA	4.7 t	M.S.	8 mm	TUR	1	$ 858	$ 858	11.2	11.2	80	7 2 5 1 3 4 0 3 0 0 7 1 1 1 1
2		PRESS CONVEYOR	25 ODT/h	600mm	-	BULK	1.2 t	M.S.	1.2 t	TUR	1	$ 3.3	$ 3.3	4.62	4.62	77	7 4 4 2 6 4 0 1 2 0 1 1 9 2 1
50		CONVEYOR	25 ODT/h	500mm	-	BULK	0.6t	M.S.	0.6 t	TUR	1	$ 2	$ 2	2.8	2.8	77	7 4 4 2 6 4 0 1 2 0 1 1 9 1 1
3		SCREW THICKENER	25 ODT/h	4 m2	ø 0.3 m	CYL	4.5 t	GIC SS lad	3 t	IMP	1	TL 2800	TL 2800	36.8	36.8	80	7 2 5 1 4 4 0 8 1 2 3 1 2 3 2
51		CONVEYOR(PRESSATE)	25 ODT/h	600mm	-	BULK	105 t	M.S.	1.5 t	TUR	1	$ 4	$ 4	5.6	5.6	77	7 4 4 2 6 4 0 1 2 0 1 1 9 2 1
4		SCREEN	1 ODT/h	1 m2	ø 0.3m	CYL	3 t	GIC	2.5 t	IMP	1	$ 11	$ 11	11	11	80	7 2 5 1 4 1 0 2 1 1 3 1 2 3 2
52		PUMP TO KRAFT MILL	12.3m3/h	50 m	CSLC	HOR	0.18t	GIC	0.09 t	IMP	1	DM 1.5	DM 1.5	2	2	76	7 4 2 2 0 0 2 3 3 1 1 1 2 1 2
5		REFINER(PRIMARY)	6.40DT/h	2.7m2	-	DOUBLE DISC	49 t	(SS LAD) GIC	20 t	IMP	2	$ 1214	$ 2428	1690.2	3380.4	76	7 2 5 1 4 6 0 4 4 0 3 4 2 6 2
41		CHEST(REFINED STOCK)	280m3	-	60°C	(ACID.) RECT	-	CONC	-	-	1						
90		AGITATOR	30KW	1450rpm	-	SIDE ENTRY	0.5 t	GIC	0.27t	IMP	1	CAN $ 1.9	CAN $ 1.9	4.7	4.7	77	7 2 5 1 4 7 1 4 6 0 5 1 2 1 2
63		PUMP 4 %	108m3/h	10 m	VISC	HOR	1.1 t	GIC	0.6 t	IMP	1	$ 2.8	$ 2.8	3.0	3.0	79	7 4 2 2 0 0 2 4 1 5 1 1 2 1 2
64		PUMP 1 %	1350m3/h	15 m	HCLC	HOR	1.6 t	GIC	0.79t	IMP	1	DM 19.8	DM 19.8	10.9	10.9	76	7 4 2 2 0 0 2 6 1 2 1 1 2 1 2
0		WASHER	11 ODT/h	98m2	ø4.2 m	CYL	12 t	GIC	5 t	IMP	1	CAN $ 100	CAN $ 100	141.8	141.8	75	7 2 5 1 4 3 0 6 4 7 3 3 2 4 2
65		CONVEYOR	15 ODT/h	600mm	ø	BULK	1.5 t	M.S.	1.5 t	TUR	1	$ 4	$ 4	5.6	5.6	77	7 4 4 2 6 4 0 1 2 0 1 1 9 2 1
7		REFINER (SECONDARY)	5.4 ODT/h	2.7m2	-	DOUBLE DISC	48 t	(SS LAD) GIC	20 t	IMP	2	$ 1214	$ 2428	1690.2	3380.4	76	7 2 5 1 4 6 0 4 4 0 3 4 2 6 2
42		CHEST (FILTRATE)	240m3	-	90°C	RECT	14t	M.S.	6 mm	TUR	1	TL 1960	TL 1960	25.7	25.7	80	7 2 5 1 3 4 0 3 0 3 1 3 1 1 1
66		PUMP (FILTRATE)	56m3/h	35 m	HCLC	HOR	0.46t	GIC	0.24 t	IMP	2	DM 8.4	DM 16.8	4.9	9.8	78	7 4 2 2 0 0 2 3 2 2 1 1 2 1 2
67		PUMP TO HEAT EX. CHANGER	118m3/h	20m	HCLC	HOR	0.5 t	GIC	0.28 t	IMP	2	DM 9.7	DM 19.4	5.7	11.4	78	7 4 2 2 0 0 2 4 1 2 1 1 2 1 2
8		HEAT EXCHANGER	700m3	91.3m	10 m	M.S.S.	1.7t	SS	8mm	IMP	1	TL 4000	TL 4000	52.6	52.6	80	7 4 1 6 1 0 1 5 2 4 1 1 6 1 2
43		TANK(HOT WATER)	240 m3	-	80°C	RECT	14 t	SS	6mm	TUR	1	TL 5880	TL 5880	77.3	77.3	80	7 2 5 1 3 4 0 3 0 3 1 3 6 1 1
68		PUMP	270m3/h	20 m	HCLC	HOR	0.46 t	SS	0.24 t	IMP	2	$ 3.7	$ 7.4	4.3	8.6	78	7 4 2 2 0 0 2 4 1 2 1 1 7 1 2

UNIDO/SPO (SIDA)

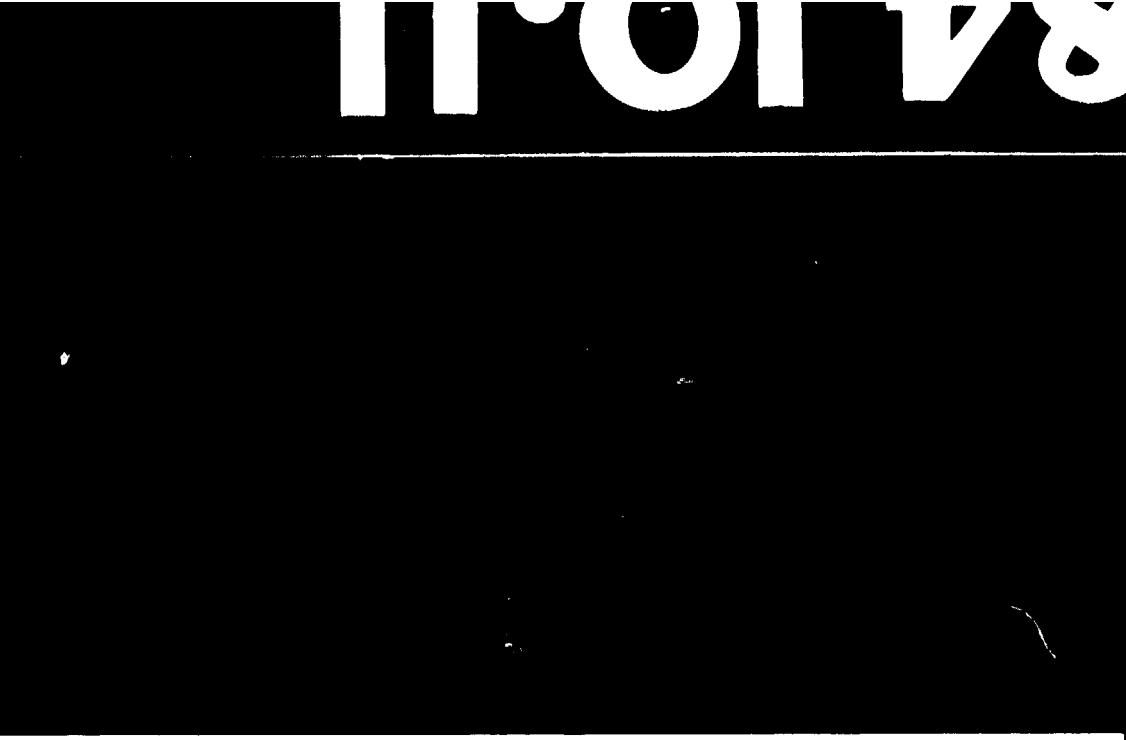
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

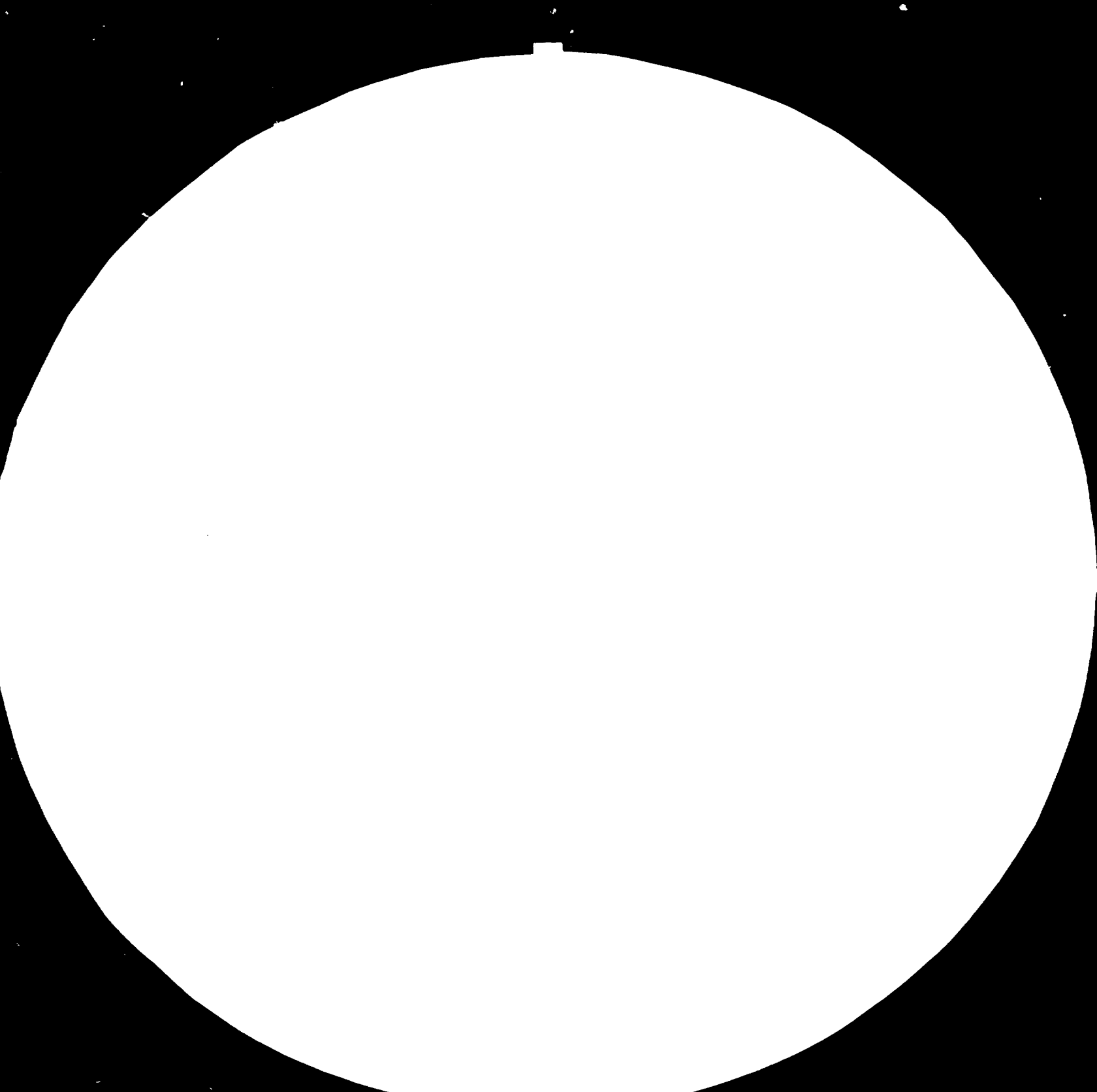
PLANT SURVEY FORM

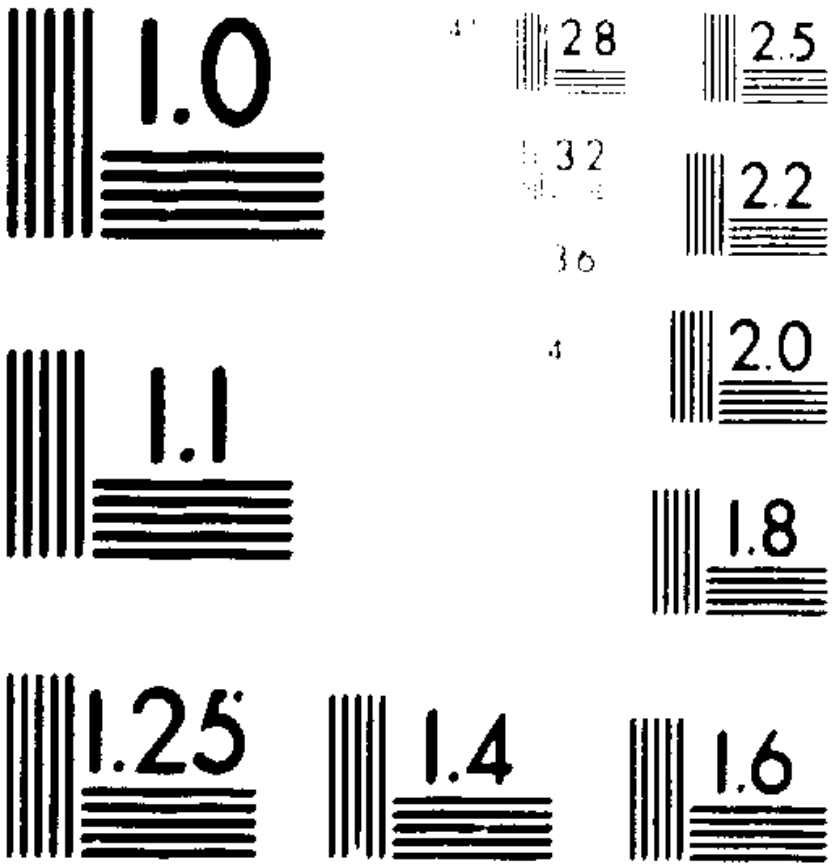
Sample Plant : SAMSON ATATÜRK

PRODUCTION ACTIVITY Code :3411-1 11 11

Sr. No.	Mark Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1	Manuf. Charac. 2	Manuf. Charac. 3	Origin	Qty	Purchase Cost (in Thousands) and Currency		Constant 1980 Year Cost US $ (in Thousand)		Year of Purchase and Remarks	SITC Code (Per Computer)
												Unit	Total	Unit	Total		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
40		UNBLEACHED STOCK CHEST	280m3	-	70°C	RECT	-	CONC	-		1						
90		AGITATOR	30 kW	145Orpm	-	SIDE ENTRY	0.5t	CIC	0.27 t	IMP	1	CAN$ 3.9	CAN$ 3.9	4.7	4.7	77	7 2 5 1 4 7 1 4 6 0 5 1 2 1 2
60		PUMP(4 %)	294m3/h	10 m	VISC.	HOR	1.05 t	CIC	0.5 t	IMP	1	$ 2.2	$ 2.2	2.6	2.6	78	7 4 2 2 0 0 2 4 1 6 1 1 2 1 2
61		PUMP(0.9 %)	1800m3/h	20 m	CCLC	HOR	1.6 t	CIC	0.79t	IMP	1	DM 19.9	DM 19.9	11	11	76	7 4 2 2 0 0 2 6 1 1 1 1 2 1 2
1		CLEANERS	0.006m3	80.13m	40°C	CYL	0.836 t	SS	2 mm	TUR	220	TL 2.27	TL 500	0,03	6.6	80	7 2 5 1 3 6 0 1 1 3 2 1 6 1 1
62		PRIMARY REJECTS PUMP	480m3/h	20 m	CCLC	HOR	0.95 t	SS	0.5t	IMP	1	DM 15.8	DM 15.8	9.3	9.3	78	7 4 2 2 0 0 2 4 1 1 1 1 7 1 2
63		SECONDARY REJECTS PUMP	150m3/h	20 m	CCLC	HOR	0.35 t	SS	0.2 t	IMP	1	$ 3.0	$ 3.0	3.5	3.5	78	7 4 2 2 0 0 2 4 1 1 1 1 7 1 2
2		DECKER-THICKENER	11 ODT/H	98 m2	34.2m	CYL	12 t	SS(lined) CIC	5t	IMP	1	CAN$ 130	CAN$ 130	184.4	184.4	75	7 2 5 1 4 4 0 6 4 7 3 3 2 4 2
41		WHITEWATER CHEST	240m3	-	40°C	RECT	14t	SS	6mm	TUR	1	TL 5880	TL 5880	77.3	77.3	80	7 2 5 1 3 4 0 3 0 3 1 3 6 1 1
64		WHITEWATER PUMP	360m3/h	20m	CCLC	HOR	0.7t	SS	0.35t	IMP	2	$ 6.5	$ 13.0	7.6	15.2	78	7 4 2 2 0 0 2 4 1 1 1 1 7 1 2







UNIDO/SPO(SWEA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code: 3411-1 1211

Sr. No.	Mark/ Note	Basic Machine Nomenclature	Major Spec. (Cap.)	Major Spec-1	Major Spec-2	Type (Descr.)	Manufac. Charac. 1 WT(Tons)	Manufac. Charac. 2 MATL	Manufac. Charac. 3 WT(Tons)	Origin	Q'ty	Purchase Cost (in Thousands And Currency) Unit	Purchase Cost (in Thousands And Currency) Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	1 8
1		FILTER	1 t/h	30 m2	-	RECT.	3 t	SS	1 t	IMP	1	TL 1260	TL 1260	16.57	16.57	80	7 2 5 1 4 1 8 2 3 0 1 1 7 2 2
2		MIXER	36 kw	138 rpm	-	Reduc. GEAR	3.8 t	(SS LINED) CIC	3 t	IMP	1	TL 800	TL 800	10.5	10.5	80	7 2 5 1 4 7 8 4 1 0 1 1 2 3 2
3		TOWER(BLEACH)	70 m3	ϕ3 m	40°C	CYL	-	CONC	-	-	1						
90		AGITATOR	11 kw	1450rpm	-	SIDE ENTRY	0.29 t	CIC	0.17 t	IMP	1	CAN $ 3.1	CAN $ 3.1	3.8	3.8	77	7 2 5 1 4 7 1 3 6 0 5 1 2 1 2
60		PUMP TO BLEACH WASHER	270m3/h	15 m	CCLG	HOR	0.79 t	SS	0.48 t	IMP	1	DM 18.5	DM 18.5	10.8	10.8	78	7 4 2 2 0 0 2 4 1 1 1 1 7 1 2
4		WASHER	11 t/h OD	98 m2	ϕ 4.2m	CYL	12 t	(SS LINED) CIC	5 t	IMP	1	CAN $ 130	CAN $ 130	184.4	184.4	75	7 2 5 1 4 3 0 6 4 7 3 3 2 4 2
40		CHEST(FILTRATE)	240m3	-	40°C	RECT	14 t	SS	6 mm	TUR	1	TL 5880	TL 5880	77.3	77.3	80	7 2 5 1 3 4 0 3 0 3 1 3 6 1 1
61		PUMP(FILTRATE)	1390m3/h	15 m	CCLG	HOR	2 t	SS	1.1 t	IMP	1	$ 27	$ 27	31.9	31.9	78	7 4 2 2 0 0 2 6 1 1 1 1 7 2 2
62		PUMP(THICK STOCK 12 %)	95m3/h	35 m	Vlss.	HOR	3 t	SS	2.5 t	IMP	1	$ 20	$ 20	20	20	80	7 4 2 2 0 0 2 3 2 6 1 1 7 3 2
41		TANK(HIGH DENSITY STORAGE)	4990m3	ϕ17 m	30°C	CYL	187 t	(SS LINED) M.S.	12 mm	TUR	1	TL 36180	TL 36180	475.8	475.8	80	7 2 5 1 3 4 0 7 7 3 2 5 1 1 1
91		AGITATOR	95 kw	980rpm	-	SIDE ENTRY	0.8 t	CIC	0.5 t	IMP	1	CAN $ 9.7	CAN $ 9.7	11.88	11.88	77	7 2 5 1 4 7 1 6 5 0 5 1 2 1 2

PLANT SURVEY FORM

UNIDO/SPO(SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code:3411-11311

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Spec.	Manuf. Charac. 1 (T(Tons	Manuf. Charac. 2 RATL	Manuf. Charac. 3 T(Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency Unit	Purchase Cost (in Thousands and Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		PUMP - SOFTWOOD STOCK 4 $	90m3/h	20 m	VIS	HOR	0.53 %	ASC	0.33 %	IMP	1	£ 5.7	£ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
61		PUMP- HARDWOOD STOCK 4 $	180m3/h	20 m	VIS	HOR	1.1 %	ASC	0.6 %	IMP	1	£ 12.6	£ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
40		STORAGE CHEST-S'WOOD	700m3	$ 10	50°C	AGIT	-	CONC.	-	TUR	1						
41		STORAGE CHEST-H'WOOD	300m3	$ 8	50°C	AGIT	-	CONC	-	TUR	1						
90		AGITATOR	35kW	980rpm	-	SIDE E.	0.45%	SIC	0.25 %	IMP	2	CAN $ 4.3	CAN $ 8.6	5.2	10.4	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
91		AGITATOR	35 kW	980rpm	-	SIDE E.	0.45 %	SIC	0.25%	IMP	2	CAN $ 4.3	CAN $ N.A	5.2	10.4	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
62		PUMP	90m3/h	20m	VIS	HOR	1.05 %	ASC	0.5 %	IMP	1	DM. 10	DM. 10	5.87	5.87	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
1		REFINER	5.2t/h	0.8m2	-	DOUBLE DISC	5.5 %	ASC	4.5%	IMP	3	£ 62	£ 186	91	273	75	7 2 5 1 4 6 0 4 2 0 3 2 7 3 2
63		PUMP	180m3/h	20	VIS	HOR	1.1 %	ASC	0.6%	IMP	1	£ 12.6	£ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
2		REFINER	5.2t/h	0.8m2	-	DOUBLE DISK	5.5 %	ASC	4.5 %	IMP	3	£ 62	£ 186	91	273	75	7 2 5 1 4 6 0 4 2 0 3 2 7 3 2
42		REFINED CHEST	160m3	$6	50°C	AGIT	-	CONC	-	TUR	1						
43		REFINED CHEST	220m3	$8	50°C	AGIT	-	CONC	-	TUR	1						
92		AGITATOR	35kW	980rpm	-	SIDE E.	0.45 %	SIC	0.25%	IMP	2	CAN $ 4.3	CAN $ 8.6	5.2	10.4	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
93		AGITATOR	35 kW	980rpm	-	SIDE E.	0.45%	SIC	0.25 %	IMP	2	CAN $ 4.3	CAN $ 8.6	5.2	10.4	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
64		PUMP S'WOOD TO PM1	60m3/h	20m	VIS	HOR	0.53 %	ASC	0.33 %	IMP	1	£ 5.7	£ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
65		PUMP S'WOOD TO PM2	60m3/h	20m	VIS	HOR	0.53%	ASC	0.33 %	IMP	1	£ 5.7	£ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
66		PUMP H'WOOD TO PM1	180m3/h	20m	VIS	HOR	1.1 %	ASC	0.6 %	IMP	1	£ 12.6	£ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
67		PUMP H'WOOD TO PM2	60m3/h	20m	VIS	HOR	0.53%	ASC	0.33%	IMP	1	£ 5.7	£ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
44		CHEST -BLEND	470m3	$10	50°C	AGIT	-	CONC	-	TUR	1						
94		AGITATOR	35kW	980rpm	-	SIDE E.	0.45%	SIC	0.25%	IMP	2	CAN $ 4.3	CAN $ 8.6	5.2	10.4	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
68		PUMP	300m3/h	20m	VIS	HOR	1.1%	ASC	0.6%	IMP	1	£ 12.6	£ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
45		CHEST - MACHINE	870m3	$ 18	50 °C	AGIT	-	CONC	-	TUR	1						
95		AGITATOR	55kW	980rpm	-	SIDE E.	0.8%	SIC	0.5%	IMP	2	CAN $ 6.3	CAN $ 12.6	7.7	15.4	77	7 2 5 1 4 7 1 5 5 0 5 1 2 1 2
69		PUMP - STOCK TO PM1	300m3/h	11m	VIS	HOR	1.1%	ASC	0.6%	IMP	1	£ 12.6	£ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
46		CHEST (BROKE)	70m3	$4	50°C	AGIT	5%	S.S.	5mm	TUR	1	lir. 2100	lir. 2100	27.4	27.4	80	7 2 5 1 3 4 0 8 4 3 5 8 6 1 1
96		AGITATOR	35kW	980rpm	-	SIDE E.	0.45%	SIC	0.25%	IMP	1	CAN $ 4.3	CAN $ 4.3	5.2	5.2	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
70		PUMP - BROKE	90m3/h	20m	VIS	HOR	0.53%	ASC	0.33 %	IMP	1	£ 5.7	£ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
3		DEFLAKER	1.5t/h	0.3m2	-	CONIC.	3.5 %	ASC	3 %	IMP	1	£ 22.5	£ 22.5	33	33	75	7 2 5 1 4 6 1 1 1 2 1 1 7 3 2

UNIDO/SPO(SEMA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code: 3411-11&11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 T(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 T(Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Purchase Cost (in Thousands and Currency) Total	Constant-1960 Year Cost US$ (in Thousand) Unit	Constant-1960 Year Cost US$ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18													
1		DESULATOR/CLEANER	9m3 WDV/H	ø1.2m	40 °C	CYL	5 t	C.S.	16 mm	IMP	1	$ 232.2	$ 232.2	866.7	866.7	79	7	2	5	1	3	6	0	1	2	3	2	2	6	1	2
60		PUMP (PRIMARY REJECT)	480m3/h	48m	CCLC	HOR	0.46t	ASC	0.24t	IMP	1	$ 3.7	$ 3.7	4.4	4.4	78	7	4	2	2	0	0	2	4	2	1	1	3	7	1	2
61		PUMP (SECONDARY REJECT)	96m3/h	48m	CCLC	HOR	0.1t	ASC	0.16t	IMP	1	$ 2.8	$ 2.8	3.3	3.3	78	7	4	2	2	0	0	2	3	2	1	1	1	7	1	2
62		PUMP (TERTIARY REJECT)	12m3/h	20m	CCLC	HOR	0.11 t	ASC	0.055 t	IMP	1	$ 1.0	$ 1.0	1.2	1.2	78	7	4	2	2	0	0	2	3	1	1	1	1	7	1	2
63		PUMP- PRIMARY FAN	2280m3/h	48m	CCLC	HOR	3.65 t	ASC	3.17t	IMP	1	$ 80.0	$ 80.0	86.4	86.4	79	7	4	2	2	0	0	2	6	2	1	1	1	7	3	2
2		SCREEN	9m3 WDV/H	4m2	ø1.3m	PRES.	4.35t	ASC	4.35t	IMP	1	$ 171.56	$ 171.56	83.6	83.6	75	7	2	5	1	4	1	0	5	1	3	4	1	7	3	2
64		PUMP (REJECT)	120m3/h	38m	CCLC	HOR	0.25 t	ASC	0.13 t	IMP	1	$ 2.3	$ 2.3	2.7	2.7	78	7	4	2	2	0	0	2	4	2	1	1	1	7	1	2
65		PUMP - FAN	2280m3/h	48m	CCLC	HOR	3.65 t	ASC	3.17t	IMP	1	$ 80.0	$ 80.0	86.4	86.4	79	7	4	2	2	0	0	2	6	2	1	1	1	7	3	2
3		PAPER MAKING MACHINE	9m3 WDV/H	TRIM (2.1m	670m/min	VERT.	1020t	SIC	15t	IMP	1	$ 10576	$ 10576	14925.3	14925.3	76	7	2	5	1	2	0	1	4	6	5	4	9	2	6	2
66		GANTRY CRANE	80 t	4m	SI Gle. HOIST	TT	13 t	ST.AB	3 t	TUR	1	T.no 14000	T.no 14000	153.4	153.4	82	7	4	4	2	2	1	5	3	1	1	2	3	9	3	1
4		BEATHER	9m3 ODV/H	6.2m	2000m/min	ROLL MIX	32t	SIC	8 t	IMP	1	T.no 12600	T.no 12600	1262.6	1262.6	75	7	2	5	1	2	2	9	5	5	9	1	4	2	4	2
67		VACUUM PUMP	330m3/min	700 mm hg	AIR	HOR	8.6t	CIC	8 t	IMP	2	T.no 680	T.no 1360	69.0	138.0	75	7	4	3	1	2	2	3	6	1	1	1	2	2	4	2
68		PUMP VACUUM SEPARATOR	30m3/h	10m	CCLC	HOR	0.2t	ASC	0.1t	IMP	1	$ 1.8	$ 1.8	2.1	2.1	78	7	4	2	2	0	0	2	3	2	1	1	1	7	1	2
69		PUMP VACUUM SEPARATOR	38m3/h	10m	CCLC	HOR	0.2t	ASC	0.1t	IMP	1	$ 1.8	$ 1.8	2.1	2.1	78	7	4	2	2	0	0	2	3	1	1	1	1	7	1	2
70		PUMP VACUUM SEPARATOR	96m3/h	10m	CCLC	HOR	0.3t	ASC	0.15t	IMP	1	$ 2.7	$ 2.7	3.2	3.2	78	7	4	2	2	0	0	2	3	1	1	1	1	7	1	2
71		PUMP VACUUM SEPARATOR	30m3/h	10 m	CCLC	HOR	0.3 t	ASC	0.15 t	IMP	1	$ 2.7	$ 2.7	3.2	3.2	78	7	4	2	2	0	0	2	3	1	1	1	1	7	1	2
72		PUMP (SUMP TO WASTE)	57m3/h	20m	VIS	HOR	0.53 t	CIC	0.13t	IMP	2	DM 9.7	DM 19.4	5.7	11.4	79	7	4	2	2	0	0	2	3	1	6	1	1	2	1	2
73		CRANE(MACHINE)	50t	10m	DBL. HOIS.	TT	124 t	N.S.	4 t	TUR	1	T.no 73000	T.no 73000	873.26	873.26	82	7	4	4	2	2	1	5	5	3	0	2	6	9	3	1
74		CRANE(DRIVE ALLEY)	10t	7m	SINGLE HOIST	TT	7.5 t	N.S.	3 t	TUR	1	T.no 10500	T.no 10500	115	115	82	7	4	4	2	2	1	5	3	2	1	2	2	9	3	1

PLANT SURVEY FORM

Sample Plant : SAMSUN-ATATÜRK

UNIDO/ISO (SIDA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code : 3411-1 3511

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. (Cap.)	Major Spec-1	Major Spec-2	Type Desig.	Manuf Charac-1 WT(Tons)	Manuf Charac-2 MATL	Manuf Charac-3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		PUMP	120m3/h	40 m	CCLC	HOR	0.35 t	ASC	0.2 t	IMP	1	$ 3.0	$ 3.0	3.5	3.5	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
61		PUMP-SHOWERS	12 m3/h	460 m	CCLC	HOR	0.72 t	ASC	0.3 t	IMP	2	$ 5.0	$ 10.0	5.9	11.8	78	7 4 2 2 0 1 1 3 6 1 1 1 7 1 2
62		PUMP-DILUTION	1200m3/h	40 m	CCLC	HOR	1.05t	ASC	0.5 t	IMP	1	$ 10.0	$ 10.0	11.8	11.8	78	7 4 2 2 0 0 2 6 2 1 1 1 7 1 2
63		PUMP TO SAVEALL	300m3/h	20 m	CCLC	HOR	0.51t	ASC	0.27t	IMP	1	$ 4.0	$ 4.0	4.7	4.7	78	7 4 2 2 0 0 2 4 1 1 1 1 7 1 2
1		SAVEALL	120t/h	168 m2	3.66m	DISC	7.00t	GIC	3.5 t	IMP	1	GER $ 232.5	CAN $ 236.1	292.7	292.7	77	7 2 5 1 4 2 0 9 6 6 5 2 8 3 2
64		PUMP-CLARIFIED WATER	300m3/h	30 m	CCLC	HOR	0.51t	ASC	0.27 t	IMP	1	$ 4.0	$ 4.0	4.7	4.7	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
65		PUMP-CLOSED WATER	120m3/h	30 m	CCLC	HOR	0.26 t	ASC	0.12 t	IMP	1	$ 1.9	$ 1.9	2.2	2.2	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
66		PUMP-SAVEALL/THICKENER	120m3/h	20 m	VTL	HOR	0.53 t	ASC	0.35 t	IMP	1	$ 5.7	$ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

UNIDO/SPS (SHKA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code : 3411-1 16 11

Sr. No.	Mark Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) And Currency		Constant 1980 Year Cost TS $ (in Thousand)		Year of Purchase and	SITC Code (Per computer)													
												Unit	Total	Unit	Total	Remarks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18														
60		PUMP (COUCH PIT.)	300 m3/h	20m	VIS	HOR	1.1 t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7	4	2	2	0	0	2	4	1	6	1	1	7	1	2
1		COUCH PIT(INCLUDED IN PAPER MACHINE)						CONC.			1																			
90		ROTOR(PULPING)	190kW	980rpm	-	STOCK	2.7t	GIC	1.7t	IMP	2	$ CAN 15	$ CAN 30	18.4	36.8	77	7	2	5	1	4	7	1	7	5	0	2	1	2	2	2
61		PUMP TO MACHINE CHEST	48m3/h	20m	VIS	HOR	0.53t	ASC	0.33t	IMP	1	$ 5.7	$ 5.7	6.7	6.7	78	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
2		PULPER(INCLUDED IN PAPER MACHINE)						CONC			1																			
91		ROTOR	190kW	980rpm	-	STOCK	2.7t	GIC	1.7t	IMP	2	CAN$ 15	CAN$ 30	18.4	36.8	77	7	2	5	1	4	7	1	7	5	0	2	1	2	2	2
62		PUMP TO BROKE CHEST	300m3/h	20m	VIS	HOR	1.1t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7	4	2	2	0	0	2	4	1	6	1	1	7	1	2
63		PUMP TO BROKE CHEST	30m3/h	40m	VIS	HOR	0.53t	ASC	0.33t	IMP	1	$ 5.7	$ 5.7	6.7	6.7	78	7	4	2	2	0	0	2	3	2	6	1	1	7	1	2

UNIDO/SPO (SHSA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant RAHMAN ATATÜRK

PRODUCTION ACTIVITY Code : 3411-1 17 11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Rep.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1	Manuf. Charac. 2	Manuf. Charac. 2	Origin	Qty	Purchase Cost (in Thousands and Currency		Constant 1980 Year Cost US $ (in Thousand)		Year of Purchase and Remarks	SITC Code (Per Computer)
							WT(Tons)	MATL	WT(Tons)			Unit	Total	Unit	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		PUMP	180m3/h	20 m	VIS	HOR	1.1 t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
40		CHEST	540m3	Ø10 m	30°C	AGIT.	-	CONC.	-		1						
90		AGITATOR	35kW	930rpm	-	SIDE ENTRY	0.45 t	CIC	0.25t	IMP	2	CAMP 4.3	CAMP 6.6	5.2	10.4	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
61		PUMP	180m3/h	20m	VIS	HOR	1.1t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
1		REFINER	5.2t/h	0.8m2	-	DOUBLE DISC	5.5t	ASC	4.5t	IMP	1	$ 62	$ 186	91	273	75	7 2 5 1 4 6 0 4 2 0 3 2 7 3 2
41		REFINED CHEST	230m3	Ø7 m	30°C	AGIT	-	CONC	-	-	1						
91		AGITATOR	35kW	980rpm	-	SIDE ENTRY	0.45t	CIC	0.25t	IMP	2	CAMP 4.3	CAMP 6.6	5.2	10.4	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
62		PUMP	180m3/h	33m	VIS	HOR	1.1 t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
42		BLEND CHEST	470m3	Ø 10 m	30°C	AGIT	-	CONS	-	-	1						
92		AGITATOR	55kW	980rpm	-	SIDE ENTRY	0.8 t	CIC	0.5 t	IMP	2	CAMP 6.3	CAMP 12.6	7.6	15.2	77	7 2 5 1 4 7 1 5 5 0 5 1 2 1 2
63		PUMP	300m3/h	33m	VIS	HOR	1.1t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
43		MACHINE CHEST	470m3	Ø 10 m	30°C	AGIT	-	CONS	-		1						
93		AGITATOR	55 kW	980rpm	-	SIDE ENTRY	0.8t	CIC	0.5 t	IMP	2	CAMP 6.3	CAMP 12.6	7.6	15.2	77	7 2 5 1 4 7 1 5 5 0 5 1 2 1 2
64		PUMP	300m3/h	33m	VIS	HOR	1.1 t	ASC	0.6 t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
44		CHEST	70 m3	Ø 4 m	50°C	AGIT	5t	SS	5mm	TUR	1	TL 2.100	TL 2100	27.6	27.6	80	7 2 5 1 3 4 0 2 4 3 5 2 6 1 1
94		AGITATOR	35 kW	980rpm	-	SIDE ENTRY	0.45t	CIC	0.25t	IMP	1	CAMP 4.3	CAMP 4.3	5.2	5.2	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
65		PUMP	90m3/h	20 m	VIS	HOR	0.53t	SS	0.33t	IMP	1	$ 5.7	$ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
2		REFLAKER	1.5t/h	0.3m2	-	CONICAL	3.5t	ASC	3t	IMP	1	$ 22,5	$ 22.5	33	33	75	7 2 5 1 4 6 1 1 1 0 1 1 7 3 2

UNIDO/SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATURK

PRODUCTION ACTIVITY Code: 3411-11811

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 MT(Tons)	Origin	Qty	Purchase Cost in Thousands and Currency Unit	Purchase Cost in Thousands and Currency Total	Constant 1980 Year Cost US$ (in Thousand) Unit	Constant 1980 Year Cost US$ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		DECOLATOR/CLEANER	OD 9.3t/h	ø1.2m	40°C	CYL	5 t	S.S.	10cm	IMP	1	£ 232.2	£ 232.2	248.7	248.7	79	7 2 5 1 3 6 0 1 2 3 2 2 6 1 2
60		PUMP (PRIMARY REJECT)	480m3/h	48m	CCLC	HOR	0.66t	ASC	0.24t	IMP	1	£ 3.7	£ 3.7	4.4	4.4	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
61		PUMP (SECONDARY REJECT)	96m3/h	48m	CCLC	HOR	0.3t	ASC	0.16t	IMP	1	£ 2.6	£ 2.8	3.3	3.3	78	7 4 2 2 0 0 2 3 2 1 1 1 7 1 2
62		PUMP (TERTIARY REJECT)	12m3/h	20m	CCLC	HOR	0.11 t	ASC	0.065 t	IMP	1	£ 1.0	£ 1.0	1.2	1.2	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
63		PUMP - PRIMARY FAN	2280m3/h	48m	CCLC	HOR	3.65 t	ASC	3.17 t	IMP	1	£ 60.0	£ 60.0	86.4	86.4	79	7 4 2 2 0 0 2 6 2 1 1 1 7 3 2
2		SCREEN	OD 9.3 t/h	4 m2	ø1.3m	FRES.	4.35 t	ASC	4.35 t	IMP	1	£ 17156	£ 17156	83.6	83.6	75	7 2 5 1 4 1 0 5 1 3 4 1 7 3 2
64		PUMP (REJECT)	120m3/h	36m	CCLC	HOR	0.25 t	ASC	0.13 t	IMP	1	£ 2.3	£ 2.3	2.7	2.7	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
65		PUMP - FAN	2280m3/h	48m	CCLC	HOR	3.65 t	ASC	3.17 t	IMP	1	£ 60.0	£ 60.0	86.4	86.4	79	7 4 2 2 0 0 2 6 2 1 1 1 7 3 2
3		PAPER MAKING MACHINE	OD 9.3 t/h	THICK 6.3m	670m/min	TWIN WIRE VERT.	1020 t	OIC	15 t	IMP	1	£ 10576	£ 10576	14925.3	14925.3	76	7 2 5 1 2 0 1 4 6 2 4 9 2 6 2
66		GANTRY CRANE	20 t	4 m		DOUBLE GIRDER HOIST	TT	18 t	ST.: AP.	3 t	TUR	1	Tue 14000	Tue 14000	153.4	153.4	82	7 4 4 2 2 1 5 3 1 1 2 3 9 3 1
4		REMINDER	OD 9.3t/h	6.2m	2000m/min	FULL	32 t	GIC	8 t	IMP	1	Tue 12600	Tue 12600	1262.6	1262.6	75	7 2 5 1 2 2 0 5 6 9 1 4 2 4 2
67		VACUUM PUMP	930m3/min	700 mm Hg	AIR	HOR	8.6t	GIC	6 t	IMP	2	Tue 680	Tue 1360	69.0	138.0	75	7 4 3 1 2 2 3 6 1 1 1 2 2 6 2
68		PUMP VACUUM SEPERATOR	60m3/h	10m	CCLC	HOR	0.2t	ASC	0.1 t	IMP	1	£ 1.8	£ 1.8	2.1	2.1	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
69		PUMP VACUUM SEPERATOR	48m3/h	10m	CCLC	HOR	0.2 t	ASC	0.1 t	IMP	1	£ 1.8	£ 1.8	2.1	2.1	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
70		PUMP VACUUM SEPARATOR	36m3/h	10m	CCLC	HOR	0.3 t	ASC	0.15t	IMP	1	£ 2.7	£ 2.7	3.2	3.2	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
71		PUMP VACUUM SEPARATOR	30m3/h	10 m	CCLC	HOR	0.3 t	ASC	0.15t	IMP	1	£ 2.7	£ 2.7	3.2	3.2	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
72		PUMP (SLURP TO MASTE)	57m3/h	20m	VIS	HOR	0.53 t	OIC	0.3t	IMP	2	DM 9.7	DM 19.4	5.7	11.4	79	7 4 2 2 0 0 2 3 1 6 1 1 2 1 2
73		CRANE(MACHINE)	50 t	10m	TRIPLE HOIST	TT	124 t	M.S.	4 t	TUR	1	Tue 73000	Tue 73000	671.26	671.26	82	7 4 4 2 2 1 5 5 3 0 2 6 9 3 1
74		CRANE(DRIVE ALLEY)	10t	7m	DOUBLE GIRDER HOIST	TT	7.5t	M.S.	3 t	TUR	1	Tue 10500	Tue 10500	115	115	82	7 4 4 2 2 1 5 3 2 1 2 2 9 3 2

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

UNIDO/SPO(SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code: 3411-1 1911

Sr. No.	Mark Model	Basic Machine Nomenclature	Major Spec. (Cap.)	Major Spec-1	Major Spec-2	Type Descr.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		PUMP	120m3/h	40 m	CCLC	HOR	0.35 t	ASC	0.2 t	IMP	8	$ 1.0	$ 1.0	1.5	1.5	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
61		PUMP-SHOWERS	12 m3/h	460 m	CCLC	HOR	0.72 t	ASC	0.3 t	IMP	2	$ 5.0	$ 10.0	5.9	11.8	78	7 4 2 2 0 1 1 3 6 1 1 1 7 1 2
62		PUMP-DILUTION	1200m3/h	40 m	CCLC	HOR	1.05 t	ASC	0.5 t	IMP	1	$ 10.0	$ 10.0	11.8	11.8	78	7 4 2 2 0 0 2 6 2 1 1 1 7 1 2
63		PUMP TO SAVSALL	300m3/h	20 m	CCLC	HOR	0.51 t	ASC	0.27 t	IMP	1	$ 4.0	$ 4.0	4.7	4.7	78	7 4 2 2 0 0 2 4 1 1 1 1 7 1 2
1		SAVSALL	120 t/h	168m2	3.66m	DISC	7.60 t	GIC	3.5 t	IMP	1	CAN $ 236.1	CAN $ 236.1	292.7	292.7	77	7 7 2 5 1 4 2 0 9 6 6 5 2 2 3 2
64		PUMP-CLARIFIED WATER	300m3/h	30 m	CCLC	HOR	0.51t	ASC	0.27 t	IMP	1	$ 4.0	$ 4.0	4.7	4.7	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
65		PUMP-CLOUDY WATER	120m3/h	30 m	CCLC	HOR	0.26 t	ASC	0.12 t	IMP	1	$ 1.9	$ 1.9	2.2	2.2	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
66		PUMP-SAVSALL SWEETENER	120m3/h	20 m	VIS.	HOR	0.53 t	ASC	0.35 t	IMP	1	$ 5.7	$ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2

UNIDO/SPO(SEMA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM
Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411-1 2011

Srl. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code : (Per Computer) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18													
60		PUMP(COUCH PIT)	300m3/h	20m	VIB	HOR	1.1 t	ASC	0.6 t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7	4	2	2	0	0	2	4	1	6	1	1	7	1	2
1		COUCH PIT(INCLUDED IN PAPER MAC.)						CONC.			1																			
90		BOTOR(PULPING)	190KW	980rpm	-	STOCK	2.7 t	GIC	1.7t	IMP	2	CAN $ 15	CAN $ 30	18.6	36.8	77	7	2	5	1	4	7	1	7	5	0	2	1	2	2	2
61		PUMP TO MACHINE CHEST	48m3/h	20m	VIB	HOR	0.53t	ASC	0.33t	IMP	-	$ 5.7	$ 5.7	6.7	6.7	78	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
2		PULPER(INCLUDED IN PAPER MACHINE)						CONC			1																			
91		BOTOR	190KW	980rpm	-	STOCK	2.7t	GIC	1.7 t	IMP	2	CAN $ 15	CAN $ 30	18.6	36.8	77	7	2	5	1	4	7	1	7	5	0	2	1	2	2	2
62		PUMP TO BROKE CHEST	300m3/h	20m	VIB	HOR	1.1 t	ASC	0.6 t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7	4	2	2	0	0	2	4	1	6	1	1	7	1	2
63		PUMP TO BROKE CHEST	30m3/h	40m	VIB	HOR	0.53 t	ASC	0.33t	IMP	1	$ 5.7	$ 5.7	6.7	6.7	78	7	4	2	2	0	0	2	3	2	6	1	1	7	1	2

MINO/EPC (SEKA)

FLAIT SURVEY FORM

Sheet 1 of 3

[illegible] GOODS DEVELOPMENT PROJECT:IN TURKEY

Sample Plant : SAMSUN - ATATURK

PRODUCTION ACTIVITY Code : 3411-121 11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manufg. Charac. 1	Manufg. Charac. 2	Manufg. Charac. 3	Origin	Qty	Procurement Cost in Foreign and Currency Unit	Procurement Cost in Foreign and Currency Total	Current 1980 Cost (000 Local Currency) Unit	Current 1980 Cost (000 Local Currency) Total	Year of Procurement and Remarks	SITC Code (For Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		VACUUM PUMP	14.16 m3/min	600 m3/hr	AIR	DOR	1.7 t	CIC	0.2%	IMP	1	$ 50	$ 50	73.4	73.4	75	7 4 3 1 2 2 3 3 1 1 1 1 2 1 2
40		70 $ Make-up CLAY TANK	78m3	ø 5 m	30°C	AGIT.	5.7 t	S.S.	6 mm	TUR	1	TL 170	TL 400	31.5	31.5	80	7 2 5 1 3 4 0 2 4 3 5 2 6 1 1
50		AGITATOR	7.5kW	300rpm	-	RED. GEAR	0.28t	CIC	0.16%	IMP	1	CAN$ 3.3	CAN$ 3	3.66	3.66	77	7 2 5 1 4 7 1 2 3 0 1 1 2 1 2
61		70 $ Transfer PUMP	30m3/h	20m	AERAS	HOR	0.53 t	LINED CIC	0.33%	IMP	1	DM 9.7	DM 9.7	5.7	5.7	79	7 4 2 2 0 0 2 3 1 7 1 1 2 1 2
62		70 $ recirc. PUMP	12m3/h	20m	AERAS	HOR	0.46%	LINED CIC	0.24%	IMP	1	DM 8.4	DM 8.4	4.9	4.9	78	7 4 2 2 0 0 2 3 1 7 1 1 2 1 2
41		70 $ Storage TANK (CLAY)	190m3	ø5.3m	30°C	AGIT.	-	CONC.	-	-	2						
51		AGITATOR	11 kW	300rpm	-	RED/OT. GEAR	0.2%	CIC	0.1%	IMP	2	CAN$ 3.1	CAN$ 6.2	3.8	7.6	77	7 2 5 1 4 7 1 3 3 0 1 1 2 1 2
63		70 $ Transfer PUMP	30m3/h	20 m	AERAS	HOR	0.53%	LINED CIC	0.33%	IMP	1	DM 3.7	DM 5.7	5.7	5.7	79	7 4 2 2 0 0 2 3 1 7 1 1 2 1 2
64		70 $ Recirculation PUMP	12m3/h	20m	AERAS	HOR	0.46%	LINED CIC	0.24%	IMP	1	DM 5.4	DM 5.4	4.9	4.9	78	7 4 2 2 0 0 2 3 1 7 1 1 2 1 2
42		35 $ TANK (CLAY)	9.9m3	ø2.5m	30°C	CYL	1 t	S.S.	4mm	TUR	2	TL 420	TL 840	5.5	11	80	7 2 5 1 3 4 0 1 3 3 8 1 6 1 1
52		AGITATOR	7.5kW	300 rpm	-	RED/OT. GEAR	0.28t	CIC	0.16%	IMP	2	CAN$ 3.0	CAN$ 6.0	3.66	7.32	77	7 2 5 1 4 7 1 2 3 0 1 1 2 1 2
65		35% Transfer PUMP	6 m3/h	30m	AERAS.	HOR	0.35%	LINED CIC	0.2 %	IMP	2	DM 5.0	DM 12.0	3.5	7.0	78	7 4 2 2 0 0 2 2 2 7 1 1 2 1 2
66		35 $ Recirc. PUMP	6m3/h	30m	AERAS	HOR	0.35%	LINED CIC	0.2%	IMP	2	DM 5.0	DM 12.0	3.5	7.0	78	7 4 2 2 0 0 2 2 2 7 1 1 2 1 2

UNIDO/SPO (SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411-12111

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec-1	Major Spec-2	Type Desc.	Manuf. Charac 1	Manuf. Charac 2	Manuf. Charac 3	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Purchase Cost (in Thousands and Currency) Total	Constant 1980 Year Cost (Thousand) Unit	Constant 1980 Year Cost (Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
54		VACUM PUMP	[illegible]	[illegible]	air	HOR	1.7t	ALC	0.8 t	IMP	1	$ 50	$ 50	73.4	73.4	75	7 4 3 1 2 2 3 3 1 1 1 2 1 2
53		SILO	100m3	ø 3 m	30°C	CONICAL	5 t	SS	6 mm	TUR	1	TL 700	TL 700	9.2	9.2	80	7 2 5 1 3 3 0 3 3 3 4 2 6 1 1
65		CONVEYOR (SCREW)	4 t/h	300mm	-	BULK	2 t	ST FOR.	1 t	TUR	1	TL 840	TL 840	78.8	78.8	76	7 4 4 2 6 4 2 1 1 0 1 1 9 2 1
2		TANK (MAKE UP SLURRY)	6 m3	ø 2 m	30°C	AGIT	0.7 t	SS	4 mm	TUR	2	TL 294	TL 588	3.9	7.8	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
93		AGITATOR	3.5kW	250 rpm	-	TOP SLURRY	0.4 t	CIC	0.2 t	IMP	2	CAN$ 3.5	CAN$ 7.0	4.3	8.6	77	7 2 5 1 4 7 1 1 2 0 4 1 2 1 2
66		PUMP	30m3/h	20m	VISC	HOR	0.9t	ASC	0.5 t	IMP	2	TM 15.8	TM 31.6	9.3	18.6	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
3		COOLER	20m3/h	2 ata.	WOR CAT	TUBE CONSTY.	3 t	ASC	4 mm	IMP	2	$ 12	$ 24	12	24	80	7 4 1 6 5 9 9 1 1 2 9 1 4 1 2
44		TANK(SURGE)	2 m3	ø 1.2 m	30°C	OIL	0.44 t	SS	4 mm	TUR	1	TL 185	TL 185	2.4	2.4	80	7 2 5 1 3 4 0 1 2 1 2 1 6 1 1
67		PUMP	45m3/h	30 m	VISC	HOR	1.2 t	ASC	0.7 t	IMP	2	$ 15.6	$ 30.0	13.3	36.6	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
45		TANK (COOKED STORAGE)	2 m3	ø 1 m	30°C	AGIT	1.6 t	SS	4 mm	TUR	2	TL 322	TL 644	8.8	17.6	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
94		AGITATOR	7.5kW	250rpm	-	SIDE ENTRY	0.4 t	CIC	0.2 t	IMP	2	CAN$ 4.0	CAN$ 8.0	4.9	9.8	77	7 2 5 1 4 7 1 2 2 0 5 1 2 1 2
68		PUMP	30m3/h	20 m	VISC	HOR	0.9t	ASC	0.5 t	IMP	2	TM 15.8	TM 31.6	9.3	18.6	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
4		SCREEN	20 t/h	0.075m2	ø 0.3 m	CONIC	0.4 t	SS	0.2 t	IMP	2	$ 2	$ 4	2	4	80	7 2 5 1 4 1 0 7 1 1 2 1 7 1 2
46		TANK	7 m3	ø2.2 m	30°C	AGIT	0.82t	SS	4mm	TUR	2	TL 344	TL 688	4.5	9.-	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
95		AGITATOR	3.5 kW	250 rpm	-	SIDE ENTRY	0.4 t	CIC	0.2 t	IMP	2	CAN$ 3.5	CAN$ 7.0	4.3	8.6	77	7 2 5 1 4 7 1 1 2 0 5 1 2 1 2
5		STRAINER	20 t/h	ø0.1 m	-	-	0.4 t	SS	5 mm	IMP	2	$ 5	$ 10	5	10	80	7 4 3 6 2 7 0 2 1 0 0 1 6 1 2
69		PUMP TO SIZE PRESSES	120m3/h	30 m	VISC	HOR	0.7 t	ASC	0.35 t	IMP	4	$ 6.5	$ 26.0	7.7	31.-	78	7 4 2 2 0 0 2 3 2 6 1 1 7 1 2

UNIDO/SPO(SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sheet 3 of 3

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411-121 11

Srl. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Capa.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 W.(Tons)	Manuf. Charac. 2 RATL	Manuf. Charac. 3 (Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Purchase Cost (in Thousands and Currency) Total	Constant 1968 Year Cost ... $ (in thousand) Unit	Constant 1968 Year Cost ... $ (in thousand) Total	Year of Purchase and Remarks	EITC Code(Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
47		TANK (MIX POLYMER)	6m3	⌀2 m	30°C	AGIT	0.7 t	S.S.	4mm	TUR	1	TL 294	TL 294	3.9	3.9	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
96		AGITATOR	3.5KW	1460rpm	-	TOP ENTRY	0.2t	SIC	0.1 t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 6 0 4 1 2 1 2
70		DIAPHRAGM PUMP	24m3/h	20m	VISC	ROR	0.6t	SIC	0.35t	IMP	1	DM 20	DM 20	11.7	11.7	78	7 4 2 1 0 2 0 3 1 6 1 1 2 1 2
48		TANK (STORAGE)	6m3	⌀ 2 m	30°C	AGIT	0.7t	S.S.	4mm	TUR	1	TL 294	TL 294	3.9	3.9	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
97		AGITATOR	3.5KW	1460rpm	-	TOP ENTRY	0.2t	SIC	0.1 t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 6 0 4 1 2 1 2
71		DIAPHRAGM PUMP(FOR RER TO M/C)	1.5m3/h	30m	VISC	ROR	0.3 t	SIC	0.14t	IMP	2	DM 11	DM 22	5.6	11.2	78	7 4 2 1 0 2 0 2 2 6 1 1 2 1 2
49		TANK (ALUM)	10m3	⌀2.5m	30°C	CYL	0.9t	S.S.	4mm	TUR	1	TL 378	TL 378	4.95	4.95	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
6		FILTER	0.4t/h	0.05m2	⌀0.25m	SING	0.4 t	S.S.	0.3 t	IMP	2	CAN $ 7.9	CAN $ 15.8	11.3	22.6	75	7 2 5 1 4 1 0 1 1 1 2 1 7 1 2
72		PUMP(SINK)	30m3/h	20m	VISC	ROR	0.22t	S.S.	0.12t	IMP	2	DM 8	DM 16	4.7	9.4	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
50		TANK (ALUM)	20m3	⌀3 m	30 °C	CYL	1.6t	S.S.	4mm	TUR	1	TL 672	TL 672	8.8	8.8	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
51		TANK (ALUM STORAGE)	60m3	⌀ 4 m	30 °C	CYL	1.3t	S.S.	5mm	TUR	1	TL 1536	TL 1536	21.-	21.-	80	7 2 5 1 3 4 0 2 4 3 2 1 6 1 1
73		PUMP(ALUM TO MACHINE)	7.2m3/h	30m	CCLG	ROR	0.17t	ABE	0.09 t	IMP	2	⌀ 1.1	⌀ 2.2	1.1	2.6	78	7 4 2 2 0 0 2 2 2 1 1 1 7 1 2
52		TANK (DEFOAMER)	6m3	⌀ 2m	30 °C	AGIT	0.7t	S.S.	4mm	TUR	1	TL 294	TL 294	3.9	3.9	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
98		AGITATOR	3.5KW	1460rpm	-	TOP ENTRY	0.2t	SIC	0.1t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 6 0 4 1 2 1 2
74		METERING PUMP (DEFOAMER TO M/C)	2.4m3/h	30m	CCLG	ROR	0.52t	S.S.	0.24t	IMP	2	DM 16	DM 32	9.4	18.8	78	7 4 2 2 0 0 2 2 2 1 1 1 7 1 2
75		METERING PUMP (SILICIDE)	0.006m3/h	20m	CCLG	ROR	0.02 t	S.S.	0.01 t	IMP	8	⌀ 2.5	⌀ 20	2.5	20	80	7 4 2 3 0 1 0 1 1 1 1 1 7 1 2
53		TANK (FELT CLEANER)	6m3	⌀ 2 m	30 °C	AGIT	0.7t	S.S.	4mm	TUR	1	TL 294	TL 294	3.9	3.9	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
99		AGITATOR	3.5KW	960rpm	-	TOP ENTRY	0.2t	SIC	0.1 t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 5 0 4 1 2 1 2
54		TANK (FABRIC CLEANER)	6m3	⌀2 m	30°C	AGIT	0.7t	S.S.	4mm	TUR	1	TL 294	TL 294	3.9	3.9	80	7 2 5 1 3 4 0 1 3 3 5 1 6 1 1
100		AGITATOR	3.5KW	960rpm	-	TOP ENTRY	0.2 t	SIC	0.1t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 5 0 4 1 2 1 2
76		PUMP	2.4m3/h	50m	CCLG	ROR	0.52t	S.S.	0.24 t	IMP	2	DM 16	DM 32	9.4	18.8	78	7 4 2 2 0 0 2 2 2 1 1 1 7 1 2

UNIDO/SPO(SHEA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM
Sample Plant: SANKUS AYATURK

PRODUCTION ACTIVITY Code:3411-18211

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 (Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands Currency Unit	Purchase Cost (in Thousands Currency Total	Constant 1960 Year Cost Unit (in Thousand)	Constant 1960 Year Cost Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		CONVEYOR	20t/h	450mm	-	BULK	10t	ST.FAB.	0.5t	IMP	1	Sw.Fr. 102.4	Sw.Fr. 102.4	59.8	59.8	77	7 4 4 2 6 1 2 1 1 0 1 1 9 1 2
61		KICKER	20t/h	1.8m	-	ROLL	3t	ST.FAB.	1.5t	IMP	1	Sw.Fr. 12.5	Sw.Fr. 12.5	7.3	7.3	77	7 2 5 1 2 7 0 8 1 0 1 1 9 2 2
62		ROLL STOP	20t/h	1.8m	-	ROLL	1t	ST.FAB.	0.5t	IMP	1	Sw.Fr. 26.4	Sw.Fr. 26.4	15.4	15.4	77	7 2 5 1 2 7 1 8 1 0 1 1 9 1 2
30		SCALES	5t	2.7m2	ELEC.	FIXED	2t	ST.FAB.	1t	IMP	1	£ 25	£ 25	58.1	58.1	80	7 4 5 2 5 0 1 4 2 2 1 1 9 2 2
63		KICKER	20t/h	1.8m	-	ROLL	3t	ST.FAB.	1.5t	IMP	1	Sw.Fr. 12.5	Sw.Fr. 12.5	7.3	7.3	77	7 2 5 1 2 7 0 8 1 0 1 1 9 2 2
64		ROLL STOP	20t/h	1.8m	-	ROLL	1t	ST.FAB.	0.5t	IMP	1	Sw.Fr. 19.5	Sw.Fr. 19.5	11.37	11.37	77	7 2 5 1 2 7 1 8 1 0 1 1 9 1 2
65		ROLL STOP	20t/h	1.8m	-	ROLL	1t	ST.FAB.	0.5t	IMP	6	Sw.Fr. 19.5	Sw.Fr. 117	11.37	68.22	77	7 2 5 1 2 7 1 8 1 0 1 1 9 1 2
66		KICKER	20t/h	1.8m	-	ROLL	3t	ST.FAB.	1.5t	IMP	1	Sw.Fr. 12.5	Sw.Fr. 12.5	7.3	7.3	77	7 2 5 1 2 7 0 8 1 0 1 1 9 2 2
1		ROLL WRAPPER	20t/h	1.8m	MA	ROLL	-	ST.FAB.	-	IMP	1	Sw.Fr. 720	Sw.Fr. 720	421.6	421.6	77	7 2 5 1 2 6 0 8 1 0 1 0 9 0 2
67		LOADERATOR	6t/h	10m	-	DRUM	5.2t	ST.FAB.	1.5t	IMP	1	Sw.Fr. 63.1	Sw.Fr. 63.1	36.8	36.8	77	7 4 4 2 4 0 2 4 2 0 1 2 9 2 2
68		CONVEYOR	20t/h	450mm	-	BULK	6t	ST.FAB.	0.5t	IMP	1	Sw.Fr. 102.4	Sw.Fr. 102.4	59.8	59.8	77	7 4 4 2 6 1 2 1 1 0 1 2 9 1 2
69		KICKER	20t/h	1.8m	-	ROLL	3t	ST.FAB.	1.5t	IMP	1	Sw.Fr. 12.5	Sw.Fr. 12.5	7.3	7.3	77	7 2 5 1 2 7 0 8 1 0 1 1 9 2 2
2		WINDER - SALVAGE -	5t/h	1.8m	1000m/min	ROLL	33t	ST.FAB.	8t	IMP	1	Lm 5750	Lm 5750	576.2	576.2	75	7 2 5 1 2 8 0 8 1 7 1 4 9 4 2
70		CONVEYOR	5t/h	450mm	-	BULK	2t	ST.FAB.	0.5t	IMP	1	Sw.Fr. 60	Sw.Fr. 60	46.7	46.7	77	7 4 4 2 6 1 2 1 1 0 1 1 9 1 2
71		KICKER	20t/h	1.8m	-	ROLL	3t	ST.FAB.	1.5t	IMP	4	Sw.Fr. 12.5	Sw.Fr. 50	7.3	29.2	77	7 2 5 1 2 7 0 8 1 0 1 1 9 2 2
3		CORE CUTTER	1t/h	MA	MA	MA	3t	ST.FAB.	0.9t	IMP	1	DM 28	DM 28	15.3	15.3	80	7 2 5 1 2 6 2 2 0 0 0 1 9 1 2
4		CORE WINDER	1t/h	-	MA	ROLL	10t	ST.FAB.	1.5t	IMP	1	DM 186	DM 186	102.2	102.2	80	7 2 5 1 2 6 3 2 0 0 1 3 9 2 2
5		SHEET CUTTER(1900mm)	2 t/h	1.9m	500m/min	BEAM	6 t	GIC	1t	IMP	2	DM 400	DM 800	219.7	439.4	80	7 2 5 1 2 3 0 3 1 4 2 2 2 2 2
6		SHEET CUTTER(1600mm)	2t/h	1.6m	500m/min	BEAM	6t	GIC	1t	IMP	6	DM 400	DM 2400	219.7	1318.2	80	7 2 5 1 2 3 0 3 1 4 2 2 2 2 2
72		CRANE	2t	4m	SINGLE JOIST	TT	3t	ST.FAB.	1t	TUR	4	Lm 5200	Lm 20800	56.9	227.6	82	7 4 4 2 2 1 5 1 1 1 2 1 9 2 1
7		BEAM WRAPPER AUTOMATIC	2 t/h	0.8m	-	BEAM	1t	ST.FAB.	1t	IMP	4	CAN $ 35	CAN $ 140	29.9	119.6	80	7 2 5 1 2 6 0 3 1 0 2 1 9 2 2
8		BEAM WRAPPER SEMI AUTO.	2 t/h	0.8m	-	BEAM	1t	ST.FAB.	1t	IMP	2	CAN $ 20	CAN $ 40	17.1	34.2	80	7 2 5 1 2 6 0 3 1 0 2 1 9 2 2
73		CONVEYOR	20t/h	450mm	-	PACK	6t	ST.FAB.	0.9t	IMP	1	Lm 111	Lm 111	10.6	10.6	76	7 4 4 2 6 1 2 1 1 0 2 2 9 1 2
9		PALLET STRAPPER	5t/h	1m	-	BEAM	2t	ST.FAB.	1t	IMP	1	CAN $ 27	CAN $ 27	33.6	33.6	77	7 2 5 1 2 6 1 4 1 0 2 1 9 2 2
31		WEIGHING STATION	5t	2.7m2	ELEC	FIXED	2t	ST.FAB.	1t	IMP	1	$ 12	$ 12	12	12	80	7 4 5 2 5 0 5 4 2 2 1 1 9 2 2
74		CONVEYOR	20t/h	450mm	-	PACK	6t	ST.FAB.	0.9t	IMP	1	Lm 111	Lm 111	10.4	10.4	76	7 4 4 2 6 1 2 1 1 0 2 2 9 1 2
75		TRUCK (CLAMP LIFT)	3t	10km/h	-	-	16t	ST.FAB.	3t	IMP	3	$ 33	$ 99	36.8	116.4	76	7 4 4 1 1 0 0 4 2 0 0 3 9 3 2
76		FORKLIFT TRUCK	3t	10km/h	-	-	16t	ST.FAB.	3t	IMP	3	$ 33	$ 99	36.8	116.4	76	7 4 4 1 1 0 0 4 2 0 0 3 9 3 2

UNIDO/SPO(ESHA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant: SAMSUN ATATURK

PRODUCTION ACTIVITY Code: 3411-12511

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Dim.	Major Spe..	Major Speed	Type Desc.	Manuf. Charac. 1	Manuf. Charac. 2	Manuf. Charac. 3	Origin	Qty	Purchase Cost (in Thousands) and Currency		Cost 1980 (our Cost US $ in Thousand)		Year of Purchase and Remarks	SITC Code (For Computer)
												Unit	Total	Unit	Total		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
40		OIL TANK	1250m3	16m	43 °C	CYL	112 t	M.S.	12 mm	TUR	1	TL 15680	TL 15680	206.2	206.2	80	6 9 2 1 1 0 7 5 4 3 2 6 1 1 1
1		POWER BOILER	140t/h	54kg/cm2	450° C	FUEL-OIL	440 t	30 TL/H ST.St.	25mm A/52	TUR	1	TL 47.269	TL 47.269	4737	4737	75	7 1 1 1 1 0 0 4 2 5 4 8 3 2 1

UNIDO/SPO(Saka)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

Sheet 1 of 1

Sr. No	Mark/ Model	Basic Machine Nomenclature	Major Spec. 1	Major Spec. 2	Major Spec.	Manuf. Charac. 1 (Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 (Tons)	Origin	Qty	Purchase Cost in Indicate Local Currency Unit	Purchase Cost in Indicate Local Currency Total	Constant 1980 Year Cost in Indicate Local Currency Unit	Constant 1980 Year Cost in Indicate Local Currency Total	Year of Purchase and Remarks	DITC Code (for Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		FILTER	222 m3	10.5m2	ø1.37m	SYL	0%	CS/AISI	2%	IMP	1	ø 20	ø 20	20	20	80	7 2 5 1 4 1 0 3 2 3 3
40		SUMP TANK (+BL)	16m3	ø2.74m	90°C	CYL	2.7%	MS	8mm	TUR	1	TL 178	TL 178	5.-	5.-	80	7 2 5 1 3 4 0 1 3 3 2 1 1 1
60		PUMP(+BL)	222m3/h	38m	SCLC	HOR	0.27%	ASC	0.145%	IMP	1	ø 2.6	ø 2.6	3.1	3.1	78	7 4 2 2 0 0 2 4 2 2 1 1 / 1 2
41		TANK(+BL)	3.5m3	ø3.75m	90°C	CYL	5B%	MS	12mm	TUR	2	TL 8120	TL 8240	106.8	213.6	80	7 2 5 1 3 4 0 4 6 3 2 5 1 1 1
61		PUMP(+BL)	1.2m3/h	35m	SCLC	HOR	0.27%	ASC	0.145%	IMP	2	ø 2.6	ø 5.2	3.1	6.2	78	7 4 2 2 0 0 2 4 2 2 1 1 7 1 2
2		EVAPORATOR 5TH EFFECT	1450m2	ø2.6m	8.5m	LTV	38%	SS	11mm	IMP	1	ø 450	ø 450	651.2	651.2	75	7 4 1 6 2 0 1 4 1 5 3 4 6 1 2
42		TANK (FLASH)	3.8m3	ø1.5m	120°C	CYL	0.6%	MS	5mm	TUR	1	TL 84	TL 84	1.1	1.1	80	7 2 5 1 3 4 0 1 2 2 2 1 1 1 -
62		PUMP	168m3/h	25m	SCLC	HOR	0.27%	ASC	0.145%	IMP	1	ø 2.6	ø 2.6	3.1	3.1	78	7 4 2 2 0 0 2 4 2 2 1 1 / - -
3		EVAPORATOR 4TH EFFECT	1558m2	ø2.6m	8.5m	LTV	36%	SS	12mm	IMP	1	ø 450	ø 450	651.2	651.2	75	7 4 1 6 2 0 1 4 1 5 3 4 6 1 2
4		EVAPORATOR 3RD EFFECT	1558m2	ø2.6m	8.5m	LTV	36%	SS	14mm	IMP	1	ø 450	ø 450	651.2	651.2	75	7 4 1 6 2 0 1 4 1 5 3 - - - -
63		PUMP	108m3/h	40m	SCLC	HOR	0.27%	ASC	0.145%	IMP	1	ø 2.6	ø 2.6	3.1	3.1	78	7 4 2 2 0 0 2 4 2 2 1 1 7 1 2
5		EVAPORATOR 2ND EFFECT	1945m2	ø3m	8.5m	LTV	40%	SS	15mm	IMP	1	ø 450	ø 450	651.2	651.2	75	7 4 1 6 2 0 1 4 2 5 3 4 6 1 2
64		PUMP	84m3/h	16m	SCLC	HOR	0.20%	ASC	0.111%	IMP	1	ø 1.3	ø 1.3	2.2	2.2	78	7 4 2 2 0 0 2 3 1 2 1 1 / 1 2
6		EVAPORATOR 1 ST EFFECT	1945m2	ø3m	8.5m	LTV	50%	SS	15mm	IMP	1	ø 450	ø 450	651.2	651.2	75	7 4 1 6 2 0 1 4 2 5 3 5 6 1 2
65		PUMP (50% Blo)	63m3/h	20m	VISC	HOR	0.22%	ASC	0.12%	IMP	2	DM 8.0	DM 16.0	4.7	9.4	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
41		TANK(50% BL STORAGE)	210m3	ø9.75 m	90°C	CYL	52%	AS	12mm	TUR	1	TL 7280	TL 280	95.7	95.7	80	7 2 5 1 3 4 0 4 6 3 2 5 1 1 1
7		HEAT EXCHANGER	210m2	ø0.91m	7.5m	FST	4.5%	MS	10mm	IMP	1	TL 2600	TL 2600	34.2	34.2	80	7 4 1 6 1 0 1 4 1 4 1 1 1 1 2
66		PUMP	63m3/h	20m	VISC	HOR	0.22%	ASC	0.12%	IMP	2	DM 8.0	DM 16.0	4.7	9.4	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
8		PREHEATER	34m2	ø0.4m	2.3m	FST	2%	SS	8mm	IMP	1	TL 600	TL 600	7.9	7.9	80	7 4 1 6 1 1 0 2 1 1 1 1 0 1 2
9		1 ST CONCENTRATOR	333m2	ø1.4m	7.3 m	FORCED CIRCN	17%	SS	10mm	IMP	1	TL 6600	TL 6600	89.4	89.4	80	7 4 1 6 2 0 1 2 1 4 1 3 6 1 2
67		PUMP	10m3/h	10m	VISC	HOR	0.2%	ASC	0.11%	IMP	1	ø 1.7	ø 1.9	2.2	2.2	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
10		2ND CONCENTRATOR	333m2	ø1.4m	7.3 m	FORCED CIRCN	17 %	SS	10mm	IMP	1	TL 6600	TL 6600	89.4	89.4	80	7 4 1 6 2 0 1 2 1 4 1 3 6 1 2
44		SURGE TANK	2m3	ø1.2m	90°C	CYL	0.4%	MS	5mm	TUR	1	TL 56	TL 56	0.7	0.7	80	7 2 5 1 3 4 0 1 2 3 2 1 1 1 1
68		PUMP	54m3/h	15m	VISC	HOR	0.22%	ASC	0.12%	IMP	2	DM 8.0	DM 16.0	4.7	9.4	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2
45		TANK (SBL)	189m3	ø6m	90°C	CYL	19%	MS	12mm	TUR	2	TL 2600	TL 5320	35.-	70.-	80	7 2 5 1 3 4 0 3 5 3 2 3 1 1 1
11		HEAT EXCHANGER	140m2	ø0.6m	6m	FST	2.5%	SS	10mm	IMP	1	TL 2000	TL 2000	26.1	26.1	80	7 4 1 6 1 0 1 4 1 4 1 1 6 1 2
69		(TO RECOVERY BOILER)PUMP	54m3/h	21m	VISC	HOR	0.22%	ASC	0.12%	IMP	2	DM 8.0	DM 16.0	4.7	9.4	78	7 4 2 2 0 0 2 3 1 6 1 1 7 1 2

[illegible] (1000)
[illegible] STEEL WORKS REORGANISATION COMMISSION IN CHINA

PLANT SURVEY FORM

Sample Plant: HANKOW STEEL WORKS

PRODUCTION ACTIVITY Code: 2811-1911

Srl No	Mach. Code	Basic Machine Nomenclature	Major Spec. Code	Major Spec. 1	Major Spec. 2	Type Desc.	Manf. Chara. 1 (Wt Tons)	Manf. Chara. 2 (Mfr.	Manf. Chara. 3 (Wt Tons)	Origin	Qty	Purchase Cost (In Thousands and Currency Unit	Purchase Cost (In Thousands and Currency Total	Constant 1960 Year Cost (In $ for Thousand) Unit	Constant 1960 Year Cost (In $ for Thousand) Total	Year of Purchase and Remarks	SIC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
68		[illegible]	[illegible]	[illegible]	90°C	CYL	175	M.S.	6mm	TUR	1	Tls 2350	Tls 2350	$1.43	$1.43	59	7 8 5 1 3 4 0 3 5 3 2 3 1 1 2
78		[illegible]	[illegible]	[illegible]	HOLC	MIX	1.48	ABC	0.25"	IMP	1	£465	£465	$5.5	$5.8	78	7 4 8 2 0 0 8 8 1 2 1 1 7 1 8

UNIDO/SPO (SSEA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SARKUS ATATÜRK

PRODUCTION ACTIVITY Code:3411-12711

Item No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Spec.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MaTL	Manuf. Charac. 3 MT(Tons)	Origin	Qty	Purchase Cost in Thousands and Currency Unit	Purchase Cost in Thousands and Currency Total	Constant 1968 Year Cost (thousands) Unit	Constant 1968 Year Cost (thousands) Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17														
60		BLOWER	30m3/min	0.7 kg/cm2	AIR	SINGLE ENTRY	2.35t	CIC	1.2t	IMP	1	$ 80	$ 80	23.6	23.6	76	7	4	3	4	2	0	0	4	1	1	1	2	2	2
61		ROTARY FEEDER	24t/h	400mm	-	SOLK	1.3t	CIC	0.6t	IMP	1	$ 10	$ 10	16.2	16.2	75	7	4	4	2	6	7	6	1	1	0	1	1	2	1	2
48		SALT CAKE(Na_2SO_4) SILO	100m3	ϕ5.4m	37°C	CYL	22 t	M.S.	6mm	TUR	1	TL 1060	TL 1080	40.5	40.5	80	7	2	5	1	3	3	0	3	4	3	2	3	1	1	1
62		ROTARY FEEDER	24t/h	400mm	-	SOLK	1.3t	CIC	0.6t	IMP	1	$ 10	$ 10	16.2	16.2	75	7	4	4	2	6	7	6	1	1	0	1	1	2	1	2
41		DAY TANK	25m3	ϕ3m	30°C	CYL	3t	M.S.	6mm	TUR	1	TL 220	TL 280	5.5	5.5	80	7	2	5	1	3	4	0	1	3	3	2	1	1	2	1
42		MIX TANK(SALT CAKE)	60m3	ϕ4m	30°C	AGIT	5?	315 S.S.	6mm	TUR	1	TL 2100	TL 2100	27.6	27.6	80	7	2	5	1	3	4	0	2	4	3	5	2	6	1	1
98		AGITATOR	7.5 kW	960rpm	-	SIDE ENTRY	0.28t	CIC	0.16t	IMP	1	CAN $ 3.0	CAN $ 3.0	3.7	3.7	77	7	2	5	1	4	7	1	2	5	0	5	1	2	1	2
43		SALT CAKE DISSOLVING TANK	40m3	ϕ3.4m	30°C	AGIT	3 t	316 S.S.	5mm	TUR	1	TL 1260	TL 1260	16.6	16.6	80	7	2	5	1	3	4	0	1	3	3	5	1	6	1	1
91		AGITATOR	15kW	960rpm	-	SIDE ENTRY	0.45t	CIC	0.25t	IMP	1	CAN $ 3.9	CAN $ 3.9	4.8	4.8	77	7	2	5	1	4	7	1	4	5	0	5	1	2	1	2
63		PUMP(STRONG BLACK LIQ.)	54m3/h	21m	VIS	HOR	2.2t	ASC	1.2t	IMP	2	$ 30	$ 60	35.6	70.8	78	7	4	2	2	0	0	2	3	1	6	1	1	7	2	2
1		PRECIPITATOR	INCLUDED IN RECOVERY BOILER								1																				
2		PRECIPITATOR MIX TANK	INCLUDED IN RECOVERY BOILER								1																				
98		AGITATOR	7.5kW	960rpm	-	SIDE ENTRY	0.28t	CIC	0.16t	IMP	2	CAN $ 3	CAN $ 6	3.7	7.4	77	7	2	5	1	4	7	1	2	5	0	5	1	2	1	2
3		SCRUBBER	1.06m3/s	4 atm	150°C	PKD MATL	0.9t	S.S.	4mm	TUR	1	TL 300	TL 360	5	5	80	7	4	1	6	6	0	2	1	1	4	2	1	6	1	1
64		VENT FAN	60m3/sec	300mm	DIV.	AXIL	3 t	ABC	3t	IMP	1	$ 30	$ 30	35.7	35.7	78	7	4	3	4	1	0	1	3	6	2	2	1	7	1	2
65		PUMP(RETURN S.B.L.)	54m3/h	21m	VISC	HOR	0.22t	ASC	0.12t	IMP	2	DM 6.0	DM 12.0	4.7	9.4	78	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
66		AIR HEATER RECIRCULATION PUMP	100m3/h	30m	VISC	HOR	0.25t	ASC	0.13t	IMP	2	$ 2.3	$ 4.6	2.7	5.4	78	7	4	2	2	0	0	2	4	2	6	1	1	7	1	2
A		AIR HEATER	240m2	31 m	8 m	SPIRAL TUBE	7.5 t	S.S.	10mm	TUR	1	TL 3000	TL 3000	39.4	39.4	80	7	4	1	6	1	0	7	4	2	4	7	1	6	1	1
67		PUMP(STRONG BLACK LIQ.)	54m3/h	21m	VISC	HOR	0.22t	ASC	0.12t	IMP	1	DM 8.0	DM 8.0	4.9	4.9	78	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
5		RECOVERY BOILER	101t/h	54kg/cm2	450°C	SUPER. BOILER	1444t	BOILER STEEL	AVER 25mm	TUR	1	DM. 5598	DM. 5598	3234	3234	76	7	1	1	1	1	0	0	4	2	5	6	9	3	2	1
6		SMELT DISSOLVING TANK	110m3	ϕ6m	90°C	AGIT	23t	M.S.	10mm	TUR	1	TL 3220	TL 3220	42.3	42.3	80	7	2	5	1	3	4	0	2	5	3	5	3	1	1	1
95		AGITATOR	11kW	960rpm	-	SIDE ENTRY	0.29t	CIC	0.17t	IMP	1	CAN $ 3.1	CAN $ 3.1	3.8	3.8	77	7	2	5	1	4	7	1	3	5	0	5	1	2	1	2
68		PUMP(CLOSE LIQ.)	90m3/h	34m	VISC	HOR	0.22t	ASC	0.12t	IMP	2	DM. 8.0	DM. 16.0	4.7	9.4	78	7	4	2	2	0	0	2	3	2	6	1	1	7	1	2

PLANT SURVEY FORM

Sample Plant : SAMPLE STATION

UNIDO /IPO (SERA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code : 3411-12611

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec.1 Option	Major Spec.2 Option	Type Constr.	Manuf Char. 1 WT(Tons)	Manuf Char. 2 MATL	Manuf Char. 3 WT(tons)	Origin	QTY	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1980 Year Cost (in Thousand) Unit	Constant 1980 Year Cost (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
49		CLARIFIER	1610 m3	Ø13.7m	90°C	CYL	90 t	M.S.	12 mm	TUR	1	TL 11,200	TL 11,200	147.3	147.3	80	7 2 5 1 3 4 0 5 7 3 2 5 1 1 1
60		PUMP	99 m3/h	36 m	VISC	HOR	0.25 t	ASC	0.13 t	IMP	2	$ 2.3	$ 4.6	2.7	5.4	78	7 4 2 2 0 0 2 3 2 6 1 1 7 1 2
61		PUMP (REGEN)	2.7m3/h	10 m	ABRAS	HOR	0.17 t	ASC	0.09 t	IMP	2	$ 1.2	$ 2.4	1.4	2.8	78	7 4 2 2 0 0 2 2 1 7 1 1 7 1 2
1		FILTER (REGEN)	2.7 t/h	9 m2	Ø1.5m	CYL	2.1 t	M.S.	1 t	IMP	1	$ 30	$ 30	20	20	80	7 2 5 1 4 1 0 3 1 4 3 1 7 2 2
62		VACUUM PUMP	20m3/min	300 mm	JABSO	VERT.	1.6 t	S.S.	0.8 t	IMP	1	$ 15	$ 15	22	22	75	7 4 3 1 2 1 1 3 2 2 2 1 7 1 2
63		PUMP REGRAD	6m3/h	16 m	HCLC	HOR	0.17 t	ASC	0.09 t	IMP	1	$ 1.2	$ 1.2	1.4	1.4	78	7 4 2 2 0 0 2 2 1 2 1 1 7 1 2
2		HEATER/COOLER	40 m2	Ø0.4 m	2.5m	SHELL TUBE	1.5 t	M.S.	1.5 mm	IMP	1	TL 670	TL 670	8.8	8.8	80	7 4 1 6 1 0 7 2 1 1 1 1 1 2
41		TANK (CONTAMINATED HOT WATER)	75 m3	Ø4.27m	70°C	CYL	8 t	M.S.	8 mm	TUR	1	TL 1120	TL 1120	14.7	14.7	80	7 2 5 1 3 4 0 2 4 3 2 2 1 1 1
64		PUMP (CONTAMINATED HOT WATER)	168 m3/h	30 m	HCLC	HOR	0.3 t	ASC	0.16 t	IMP	2	$ 2.8	$ 5.6	3.3	6.6	78	7 4 2 2 0 0 2 4 2 2 1 1 7 1 2
42		LIME SLAKER/CLASSIFIER	17 m3	Ø3.15 m	70°C	AGIT	2.1 t	S.S.	8 mm	IMP	1	TL 118	TL 318	4.1	8.1	80	7 2 5 1 3 5 0 1 3 3 5 1 6 1 2
90		AGITATOR	11 kw	1450rpm	-	SIDE ENTRY	0.29 t	CIC	0.17 t	IMP	1	CAN $ 1.1	CAN $ 1.1	1.8	1.8	77	7 2 5 1 4 7 1 3 6 0 5 1 2 1 2
43		CAUSTICIZER NO 1	55 m3	Ø 4.57m	70°C	AGIT.	8 t	M.S.	10 mm	TUR	1	TL 1120	TL 1120	14.7	14.7	80	7 2 5 1 3 4 0 2 4 3 5 2 1 1 1
91		AGITATOR	19 kw	1450rpm	-	SIDE ENTRY	0.35 t	CIC	0.2 t	IMP	1	CAN $ 1.3	CAN $ 1.3	4.-	4.-	77	7 2 5 1 4 7 1 3 6 0 5 1 2 1 2
44		CAUSTICIZER NO 2	55 m3	Ø 4.57m	70°C	AGIT	8 t	M.S.	10 mm	TUR	1	TL 1120	TL 1120	14.7	14.7	80	7 2 5 1 3 4 0 2 4 3 5 2 1 1 1
92		AGITATOR	19 kw	1450rpm	-	SIDE ENTRY	0.35 t	CIC	0.2 t	IMP	1	CAN $ 1.3	CAN $ 1.3	4.-	4.-	77	7 2 5 1 4 7 1 3 6 0 5 1 2 1 2
45		CAUSTICIZER NO 3	55 m3	Ø 4.57m	70°C	AGIT	8 t	M.S.	10 mm	TUR	1	TL 1120	TL 1120	14.7	14.7	80	7 2 5 1 3 4 0 2 4 3 5 2 1 1 1
93		AGITATOR	19 kw	1450rpm	-	SIDE ENTRY	0.35 t	CIC	0.2 t	IMP	1	CAN $ 1.3	CAN $ 1.3	4.-	4.-	77	7 2 5 1 4 7 1 3 6 0 5 1 2 1 2
46		SUMP TANK	3.5 m3	Ø1.2m	70°C	CYL	0.5 t	316 S.S.	4 mm	TUR	1	TL 210	TL 210	2.8	2.8	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
63		PUMP	99m3/h	28 m	CORR...	HOR	0.25 t	ASC	0.13 t	IMP	2	$ 2.3	$ 4.6	2.7	5.4	78	7 4 2 2 0 0 2 3 2 5 1 1 7 1 2
47		WHITE LIQ.CLARIFIER AND SETTLER	3385m3	Ø 19.8m	70°C	CYL	163 t	M.S.	14 mm	TUR	1	TL 22820	TL 22820	300.1	300.1	80	7 2 5 1 3 4 0 6 7 3 2 6 1 1 1
66		WHITE LIQ. PUMP	75 m3/h	22 m	CORRO.	HOR	0.28 t	ASC	0.13 t	IMP	2	$ 2.3	$ 4.6	2.7	5.4	78	7 4 2 2 0 0 2 3 1 5 1 1 7 1 2
67		30 LIME MUD PUMP	15m3/h	19 m	CORR.	HOR	0.2 t	ASC	0.11 t	IMP	2	$ 1.9	$ 3.8	2.2	4.4	78	7 4 2 2 0 0 2 3 1 5 1 1 7 1 2
48		TANK	240 m3	Ø 6 m	70°C	CYL	14 t	316 S.S.	8 mm	TUR	1	TL 2240	TL 2240	29.4	29.4	80	7 2 5 1 3 4 0 3 5 3 2 3 6 1 1
68		PUMP	360m3/h	24m	CORR.	HOR	0.53 t	ASC	0.33 t	IMP	1	$ 5.7	$ 5.7	6.7	6.7	78	7 4 2 2 0 0 2 4 1 5 1 1 7 1 2

UNIDO/SPO(SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code:3411-12911

Dr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	ype Desc.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 T(Tons)	Origin	Qty	Purchase Cost (in thousands) and Currency Unit	Purchase Cost (in thousands) and Currency Total	Constant 1963 Year Cost in $ (in thousand) Unit	Constant 1963 Year Cost in $ (in thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
40		TANK(SUMP.SOAP)	4.8m3	ø1.3m x	90°C	CYL	1 t	M.S.	8 mm	TUR	1	1.0	1.0	1.8	1.8	80	7 4 5 1 3 4 0 1 2 3 8 1 1 1 1
60		PUMP(SOAP)	2.7m3/h	64m	VISC	HOR	0.25 t	ASC	0.15 t	IMP	1	11.0 DM	11.0 DM	6.0	6.0	80	7 4 2 3 0 0 0 8 3 6 1 1 7 1 2
41		TANK (SOAP SKIMMING)	25m3	ø6 m	90°C	CYL	18t	M.S.	8mm	TUR	1	2700	2700	35.5	35.5	80	7 2 5 1 1 4 0 1 5 1 8 1 1 1 1
42		TANK(SUMP.SOAP)	4.8m3	ø1.83m	90°C	CYL	0.9t	M.S.	6mm	TUR	1	126	126	1.7	1.7	80	7 2 5 1 1 4 0 1 2 1 8 1 1 1 1
61		PUMP(SOAP)	3.3m3/h	50m	VISC	HOR	0.25 t	ASC	0.15 t	IMP	1	11.0 DM	11.0 DM	6.0	6.0	80	7 4 2 3 0 0 0 8 3 6 1 1 7 1 2
43		TANK (SOAP STORAGE)	150m3	ø 7 m	90°C	CYL	22t	M.S.	8mm	TUR	1	1000	1000	40.5	40.5	80	7 2 5 1 1 4 0 1 5 1 8 1 1 1 1
62		PUMP	27m3/h	85m	VISC	HOR	0.5t	ASC	0.28 t	IMP	1	9.1 DM	9.1 DM	5.5	5.5	78	7 4 2 3 0 0 0 3 3 6 1 1 8 1 2
1		TALL-OIL REACTION VESSEL	170m3	ø5.2 m	90°C	CYL	11t	M.S.	8mm	TUR	1	1.0	1.0	23.9	23.9	80	7 2 5 1 1 4 0 1 4 1 8 1 1 1 1
2		TALL-OIL SATTLING VESSEL	69m3	4.9 m	90 °C	CYL	7 t	M.S.	8mm	TUR	1	0.0	0.0	12.9	12.9	80	7 2 5 1 1 4 0 2 4 1 8 2 1 1 1
63		PUMP	1.8m3/h	15m	VISC	HOR	0.15 t	ASC	0.084 t	IMP	1	7.0 DM	7.0 DM	3.8	3.8	80	7 4 2 2 0 0 2 8 1 2 1 1 7 1 2
44		STORAGE TANK(TALL-OIL)	24m3	ø2.4 m	60°C	CYL	2 t	M.S.	8mm	TUR	1	20.0	20.0	3.7	3.7	80	7 2 5 1 1 4 0 1 3 1 8 1 1 1 1
64		PUMP(TALL-OIL)	3m3/h	10m	VISC	HOR	0.15 t	ASC	0.084 t	IMP	1	7.0 DM	7.0 DM	3.8	3.8	80	7 4 2 2 0 0 2 8 1 1 1 1 7 1 2
65		PUMP(SALT CAKE)	15m3/h	25m	VISC	HOR	0.2 t	ASC	0.113 t	IMP	1	1.3 $	1.3 $	2.2	2.2	78	7 4 2 2 0 0 2 3 2 8 1 1 7 1 2

UNIDO/IPO (SSEA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411-3 3511

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec-1	Major Spec-2	Type Desc.	Manuf. Charact 1 WT(Tons)	Manuf. Charact 2 MATL	Manuf. Charact 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency Unit	Purchase Cost (in Thousands and Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		CONDENSER	140m2	ϕ0.8m	6 m	F.S.T.	2.5 t	MS	10 mm	IMP	1	TL 2000	TL 2000	26.3	26.3	80	7 4 1 6 1 0 5 4 1 4 1 1 1 1 2
60		PUMP	48m3/h	18 m	HCLC	HOR	0.20 t	CIC	0.09t	IMP	1	DM 3.6	DM 3.6	2.1	2.1	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
61		PUMP	72m3/h	24 m	HCLC	HOR	0.20t	CIC	0.12t	IMP	1	DM 5.6	DM 5.6	3.3	3.3	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
2		PRE-COOLER	140m2	ϕ 0.8m	6m	F.S.T.	2.5 t	MS	10mm	IMP	1	TL 2000	TL 2000	26.3	26.3	80	7 4 1 6 1 0 3 4 1 4 1 1 1 1 2
62		VACUUM PUMP	48 kg/min	500m3/h	AIR	HOR	2.85t	CIC	1.4t	IMP	1	$ 72	$ 72	105.8	105.8	75	7 4 3 1 2 1 1 3 1 1 1 1 2 2 2
40		TANK	1.2m3	ϕ 1 m	95°C	CYL	0.3t	MS	5 mm	TUR	1	TL 42	TL 42	0.55	0.55	80	7 2 5 1 3 4 0 1 2 3 2 1 1 1 1
63		PUMP	10m3/h	15 m	HCLC	HOR	0.20t	ASC	0.09t	IMP	1	$ 1.2	$ 1.2	1.4	1.4	78	7 4 2 2 0 0 2 3 1 2 1 1 7 1 2
64		PUMP	7m3/h	18 m	HCLC	HOR	0.20 t	ASC	0.09t	IMP	1	$ 1.2	$ 1.2	1.4	1.4	78	7 4 2 2 0 0 2 2 1 2 1 1 7 1 2
65		PUMP	7m3/h	18m	HCLC	HOR	0.20t	ASC	0.09t	IMP	1	$ 1.2	$ 1.2	1.4	1.4	78	7 4 2 2 0 0 2 2 1 2 1 1 7 1 2
41		TANK(CONDENSATE)	62m3	ϕ3.8 m	95°C	CYL	5t	SS	6 mm	TUR	1	TL 2100	TL 2100	27.6	27.6	80	7 2 5 1 3 4 0 2 3 3 2 2 6 1 1
66		PUMP	32m3/h	23m	HCLC	HOR	0.20t	ASC	0.09t	IMP	1	$ 1.2	$ 1.2	1.4	1.4	78	7 4 2 2 0 0 2 3 2 2 1 1 7 1 2
3		STRIPPING TOWER	6m3	5 stn	160°C	PLATE BAFFLE	4t	SS	16mm	TUR	1	TL 1680	TL 1680	22.1	22.1	80	7 4 1 6 6 0 7 1 1 4 1 1 6 1 1
67		PUMP	32m3/h	28m	HCLC	HOR	0.20t	ASC	0.09t	IMP	1	$ 1.2	$ 1.2	1.4	1.4	78	7 4 2 2 0 0 2 3 2 2 1 1 7 1 2
42		TANK(STRIPPED CONDENSATE)	115m3	ϕ4.9m	95°C	CYL	10 t	SS 316	8 mm	TUR	1	TL 4200	TL 4200	55.2	55.2	80	7 2 5 1 3 4 0 3 4 3 2 3 6 1 1
68		PUMP (STRIPPED COND.TO MAKEUP)	96m3/h	30m	HCLC	HOR	0.30t	ASC	0.15t	IMP	1	$ 2.7	$ 2.7	3.2	3.2	78	7 4 2 2 0 0 2 3 2 2 1 1 7 1 2
69		PUMP (COND.FROM 2nd CONCENTRATOR)	5 m3/h	12m	HCLC	HOR	0.2t	ASC	0.09 t	IMP	1	$ 1.2	$ 1.2	1.4	1.4	78	7 4 2 2 0 0 2 2 1 2 1 1 7 1 2
70		PUMP (CLEAN CONDENSATE)	42m3/h	15m	HCLC	HOR	0.16t	CIC	0.07 t	IMP	1	DM 3.6	DM 3.8	2.2	2.2	78	7 4 2 2 0 0 2 3 2 2 1 1 2 1 2

UNIDO/SPO (SHKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sheet 1 of 2

Sample Plant SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code: 3411-1 II 11

Sr. No.	Mark, Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec-1	Major Spec-2	Type Desc.	Manuf. Charac. 1 WT(Tons	Manuf. Charac 2 MATL	Manuf. Charac. 3 WT(Tons	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1950 Year Cost US $ (in Thousand) Unit	Constant 1950 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
40		TANK	11m3	⌀2.4m	70°C	AGIT.	2 t	MS	8 mm	TUR	1	TL 280	TL 280	3.7	3.7	80	7 2 5 1 3 4 0 1 3 3 5 1 1 1 1
90		AGITATOR	15 kW	1450 rpm	-	SIDE ENTRY	0.3 t	CIC	0.16 t	IMP	1	CANS 1.2	CANS 1.2	3.9	3.9	77	7 2 5 1 4 7 1 3 6 0 5 1 2 1 2
41		TANK (WASHING AND WEAK W.LIQUOR)	1387m3	⌀15.2m	70°C	CYL	92 t	MS	12 mm	TUR	1	TL 12380	TL 13680	169.4	169.4	80	7 2 5 1 3 4 0 5 7 3 2 5 1 1 1
60		PUMP (LIME MUD)	29m3/h	15 m	H.D.M.	HOR	0.22t	ASC	0.12t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	78	7 4 2 2 0 0 2 3 1 4 1 1 7 1 2
61		PUMP-WEAK W.LIQ.TO SLAKER TANK	99m3/h	10 m	CORR.	HOR	0.2 t	ASC	0.1 t	IMP	2	$ 1.3	$ 3.6	2.1	4.2	78	7 4 2 2 0 0 2 3 2 5 1 1 7 1 2
42		TANK (STORAGE LIME MUD)	255m3	⌀7.3m	70°C	AGIT	17 t	MS	8 mm	TUR	1	TL 2380	TL 2380	31.3	31.3	80	7 2 5 1 3 4 0 3 5 3 5 3 1 1 1
21		AGITATOR	11 kW	1450 rpm	-	SIDE ENTRY	0.29 t	CIC	0.17t	IMP	1	CANS 3.1	CANS 3.1	3.8	3.8	77	7 2 5 1 4 7 1 3 6 0 5 1 2 1 2
62		PUMP	38m3/h	20 m	HDM	HOR	0.22t	ASC	0.12 t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	78	7 4 2 2 0 0 2 3 1 4 1 1 7 1 2
43		ACID TANK	5 m3	⌀ 1.8m	30°C	CYL	-	FRP	-	TUR	1	TL 195	TL 195	2.56	2.56	80	7 2 5 1 3 4 0 1 2 3 2 0 9 0 1
63		PUMP-ACID TO FILTER	1.8m3/h	15 m	CORR.	HOR	0.1t	SS.	0.05t	IMP	1	$ 0.9	$ 0.9	1.1	1.1	78	7 4 2 2 0 0 2 2 1 5 1 1 7 1 2
1		FILTER (LIME MUD)	6 t/h	24m2	⌀2.4m	CYL	5.1t	SS.	1.5t	IMP	1	$ 25	$ 25	85	85	80	7 2 5 1 4 1 0 4 2 5 3 2 7 2 2
64		VACUUM PUMP	60 m3/min	300mm	AIR	VER.	3 t	ARC	3 t	IMP	1	$ 72	$ 72	105.8	105.8	75	7 4 3 1 2 2 3 4 2 1 2 1 7 3 2
65		PUMP (FILTRATE)	22m3/h	15 m	HDM	HOR	0.2 t	ASC	0.10t	IMP	1	$ 1.8	$ 1.8	2.2	2.2	78	7 4 2 2 0 0 2 3 1 4 1 1 7 1 2
66		VENT FAN	20 m3/sec.	100cm	AIR	IND. DFT.	0.8t	ASC	0.5t	IMP	1	$ 4	$ 4	4.75	4.75	78	7 4 3 4 1 0 1 3 5 1 2 1 7 1 2
67		SCREW CONVEYOR	6t/h	⌀ 200mm	-	BULK	2 t	MS	0.9t	TUR	1	TL 840	TL 840	11.0	11.0	80	7 4 4 2 6 4 3 1 1 0 1 1 5 1 1
68		SCREW CONVEYOR	6 t/h	⌀ 400mm	-	BULK	2 t	MS	0.9t	TUR	1	TL 840	TL 840	11.0	11.0	80	7 4 4 2 6 4 3 1 1 0 1 1 5 1 1
2		LIME KILN	6t/h	980°C	LIQ. FUEL	CALCIN	155t	C.S.	19mm	TUR	1	TL 21.400	TL 21.400	281.4	281.4	80	7 4 1 6 3 1 2 1 4 2 6 6 2 1 1
69		I.D. FAN	25.6 m3/Sec	635mm Hg	DIV. GASES	IND. DFT.	2.1t	CIC	1.2 t	IMP	1	$ 50	$ 50	59.5	59.5	78	7 4 3 4 1 0 1 3 7 2 2 1 2 2 2
3		SCRUBBER	33 m3	3 ata.	150°C	PACK. MAT'L	0.9t	SS	4mm	TUR	1	TL 378	TL 378	5.-	5.-	80	7 4 1 6 6 0 2 1 1 4 2 1 6 1 1
70		PUMP-SLURRY TO SCRUBBER	330 m3/h	18 m	Abrasive	HOR	0.46t	ASC	0.24t	IMP	2	$ 3.7	$ 7.4	4.4	8.8	78	7 4 2 2 0 0 2 4 1 7 1 1 7 1 2
71		PUMP-FILTRATE TO DUST CHAMBER	11m3/h	10m	HCLC	HOR	0.16t	ASC	0.09t	IMP	1	$ 1.3	$ 1.7	1.4	1.4	78	7 4 2 2 0 0 2 3 1 2 1 1 7 1 2
44		SEAL TANK FOR DUST CHAMBER	2 m3	⌀1.2m	90°C	CYL	0.4t	MS	5 mm	TUR	1	TL 56	TL 56	0.7	0.7	80	7 2 5 1 3 4 0 1 2 3 2 1 1 1 1
72		PUMP SLURRY TO MUD MIX TANK	57m3/h	18 m	Abras.	HOR	0.22t	ASC	0.12t	IMP	1	DM 8.0	DM 8.0	4.7	4.7	78	7 4 2 2 0 0 2 3 1 7 1 1 7 1 2
45		SUMP TANK	17 m3	⌀ 3m	90°C	CYL	2 t	MS	6 mm	TUR	1	TL 280	TL 280	3.7	3.7	80	7 2 5 1 3 4 0 1 3 3 2 1 1 2 1
4		LIMESTONE CRUSHER	6 t/h	270 rpm	55kW	JAW HOR	8t	CIC	2 t	TUR	1	TL 440	TL 440	49.7	49.7	75	7 2 8 3 2 0 2 1 4 2 1 2 2 3 1
73		CONVEYOR	6 t/h	500mm	-	BULK	8 t	MS Belt.	2 t	TUR	1	TL 400	TL 400	37.5	37.5	76	7 4 4 2 6 1 2 1 2 0 1 2 9 3 1
74		ELEVATOR	6 t/h	300mm	-	BULK	12 t	M. S. FAB.	3.5t	IMP	1	DM 35.7	DM 35.7	20.9	20.9	78	7 4 4 2 6 5 1 1 1 0 1 3 9 3 2

SEIDO/IPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant SARGUN ATATÜRK

PRODUCTION ACTIVITY Code 3411-1 R 11

Dr. No.	Mark. Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1	Manuf. Charac. 2	Manuf. Charac. 3	Origin	Qty	Purchase Cost (in Thousands) and Currency		Constant 1980 Year Cost in Thousands		Year of Purchase and Remarks	SITC Code (For Computer)
												Unit	Total	Unit	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
46		LIMESTONE STORAGE BIN	79 m3	ϕ 4m	20° C	CYL	10 t	MS	10 mm	TUR	1	TL 1400	TL 1400	18.4	18.4	80	7 2 5 1 3 4 0 2 4 1 2 3 1 1 3
75		TABLE FEEDER	6 t/h	350 mm	-	BULK	3 t	MS	1 t	TUR	1	$ 20	$ 20	20	20	76	7 4 4 2 6 7 4 1 1 2 1 8 9 2 1
47		TANK (COOLING WATER)	2 m3	ϕ1.2m	20°C	CYL	0.3 t	MS	4 mm	TUR	1	TL 42	TL 42	0.6	0.6	80	7 2 5 1 3 4 0 1 2 3 2 1 1 1 1
76		PUMP (WATER TO SCRUBBER)	24m3/h	12 m	NCLC	NCM	0.50t	MIC	0.30t	IMP	1	DM 9.3	DM 9.3	5.5	5.5	78	7 4 2 2 0 0 8 3 5 8 2 1 1 2 1 2
48		RAW OIL TANK	36 m3	ϕ 3.6m	20°C	CYL	5 t	MS	8 mm	TUR	1	TL 700	TL 700	9.2	9.2	80	7 2 5 1 3 4 0 2 3 1 2 2 1 1 1
77		FAN (PRIMARY AIR)	80 m3/sec.	100 mm	AIR	RED Rot.	0.8 t	ASC	0.8 t	IMP	1	CAN$ 6	CAN$ 6	8.1	8.1	77	7 4 3 4 2 0 1 2 5 1 2 1 7 1 2
5		RAW LIME CRUSHER	6 t/h	56 rpm	3.5kW	(Jaw Vert.	2.5t	MSC	2 t	IMP	1	TL 650	TL 650	8.8	8.8	78	7 8 8 2 2 0 2 3 3 8 2 3 8 3 2
78		CONVEYOR	6 t/h	350mm	-	BULK	4 t	MS MB	2 t	TUR	1	DM 18.7	DM 18.7	12.4	12.4	78	7 4 4 2 6 1 2 1 0 1 1 9 3 1
79		ELEVATOR (BUCKET)	6 t/h	300mm	-	BULK	12 t	MS FAB.	3.5 t	IMP	1	DM 35.7	DM 35.7	23.7	23.7	78	7 4 4 2 6 5 1 2 1 0 1 3 9 3 2
49		BIN (STORAGE)	80m3	ϕ 4.9m	20°C	CYL	8 t	MS	8 mm	TUR	1	TL 1120	TL 1120	14.7	14.7	80	7 2 5 1 3 4 0 2 4 1 2 2 1 1 3
160		CONVEYOR (SCREW)	6 t/h	350mm	-	BULK	4 t	MS	2 t	TUR	1	DM 18.7	DM 18.7	12.4	12.4	78	7 4 4 2 6 4 3 1 1 0 1 1 9 3 1
161		CONVEYOR (UNLOADING PURCHASED LIME)	6 t/h	300mm	-	BULK	4 t	MS	2 t	TUR	1	DM 18.7	DM 18.7	12.4	12.4	78	7 4 4 2 6 1 2 1 1 0 1 1 9 3 1
50		BIN (STORAGE PURCHASED LIME)	80 m3	ϕ 4.9m	20°C	CYL	10 t	MS	10 mm	TUR	1	TL 1400	TL 1400	18.4	18.4	80	7 2 5 1 3 4 0 2 4 3 2 3 1 1 3
162		CONVEYOR (SCREW)	6 t/h	300 mm	-	BULK	4 t	MS	2 t	TUR	1	DM 18.7	DM 18.7	12.4	12.4	78	7 4 4 2 6 4 3 1 1 0 1 1 9 3 1

UNIDO/IPO (SHEA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Codes 3411-1 ISIC 11

Sr. No.	Mark Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Depo.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1980 Year Cost US$ (in Thousand) Unit	Constant 1980 Year Cost US$ (in Thousand) Total	Year of Purchase and Remarks	ISIC Code (Per Computer) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18													
1		SULFUR MELTER	8m3	-	400°C	RECT	3.5t	MS	12 mm	TUR	1	TL 700	TL 700	9.2	9.2	80	7	2	5	1	3	4	0	1	0	2	1	1	1	1	1
60		MOLTEN SULFUR PUMP	0.5m3/h	15m	MDR	MDR	0.15t	CIC	0.1t	IMP	1	DM 4.5	DM 4.5	2.6	2.6	78	7	4	2	2	0	0	2	1	1	4	1	2	1	2	
2		SULFUR BURNER AND COOLING CHAMBER	0.8t/h	FUEL OIL	-	AIR ATOM.	9 t	ST. PAR	9 t	IMP	1	TL 2200	TL 2200	28.9	28.9	80	7	4	1	2	1	0	0	1	5	0	5	2	9	4	2
3		SOR ABSORPTION TOWER	8.8m3	1 Atm.	40°C	FED MAT'L	2 t	SS	8 mm	TUR	1	TL 860	TL 860	11.0	11.0	80	7	4	1	6	6	0	3	1	1	4	2	1	6	1	1
61		PUMP (SOR SOLUTION)	9.6m3/h	10m	CCLC	MDR	0.18t	CIC	0.09t	IMP	1	DM 3.5	DM 3.5	2.0	2.0	78	7	4	2	2	0	0	2	2	1	1	1	1	2	1	2
4		H_2SO_3 ABSORPTION TOWER	8.8m3	1 Atm.	40°C	FED MAT'L	2 t	SS	8 mm	TUR	1	TL 860	TL 860	11.0	11.0	80	7	4	1	6	6	0	3	1	1	4	2	1	6	1	1
62		H_2SO_3 PUMP	9.3m3/h	10m	CCLC	MDR	0.18t	CIC	0.09 t	IMP	1	DM 3.5	DM 3.5	2.0	2.0	78	7	4	2	2	0	0	2	2	1	1	1	1	2	1	2
40		SODIUM SULFITE SOLUTION CHEST	64 m3	-	40°C	RECT	3.7t	SS	6 mm	TUR	2	TL 1554	TL 1108	20.4	40.8	80	7	2	5	1	3	4	0	2	0	3	1	1	6	1	1
63		PUMP(Na_2SO_3) TO SCRUBBER	9.3m3/h	15 m	CCLC	MDR	0.18t	CIC	0.09t	IMP	1	DM 3.5	DM 3.5	2.0	2.0	78	7	4	2	2	0	0	2	2	1	1	1	2	1	2	
41		SOR SOLUTION CHEST	64 m3	-	40°C	RECT	3.7t	SS	6 mm	TUR	1	TL 1554	TL 1554	20.4	20.4	80	7	2	5	1	3	4	0	2	0	3	1	1	6	1	1
64		PUMP (SOR) TO REACTING	9.6m3/h	20 m	CCLC	MDR	0.18t	CIC	0.09t	IMP	1	DM 3.5	DM 3.5	2.0	2.0	78	7	4	2	2	0	0	2	2	1	1	1	2	1	2	

PLANT SURVEY FORM

Sample Plant : [redacted]

[redacted]/UPG (NAGA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code : 3411-13311

Sr. No.	Yearly Rated	Basic Machine Denomination	Major Spec. (Cap.)	Major Spec.1	Major Spec.2	Type Constr.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 MT(Tons)	Origin	Q'ty	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1982 Yer Cost US $ (in Thousand) Unit	Constant 1982 Yer Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		FROM SALT PIT CONVEYOR	8 t/h	(600mm)	-	BELT	4 t	ST WEB	1.5 t	TUR	1	TL 496	TL 496	46.5	46.5	76	7 4 4 2 6 0 2 1 2 0 1 1 9 2 1
40		BRINE DISSOLVING TANK WITH FILTER	135m3	ø 5 m	30°C	CYL	11.5 t	S.S.	8 mm	TUR	1	TL 4830	TL 4830	63.5	63.5	80	7 2 5 1 3 4 0 2 4 3 2 3 6 1 1
61		BRINE RECIRCULATION PUMP	21m3/h	14 m	RCLC	HOR	0.21t	CIC	0.1 t	IMP	1	DM 4.5	DM 4.5	2.6	2.6	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
41		RAW BRINE STORAGE TANK WITH HEATER	60 m3	ø4.27 m	81°C	CYL	4.9 t	S.S.	6 mm	TUR	1	TL 2058	TL 2058	27.1	27.1	80	7 2 5 1 3 4 0 2 4 3 2 6 1 1
62		PUMP	21m3/h	16 m	RCLC	HOR	0.21 t	CIC	0.1 t	IMP	2	DM 4.5	DM 9.0	2.6	5.2	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
42		CARBONATE MAKE-UP TANK	2.5 m3	ø1.5m	30°C	CYL	0.6 t	S.S.	5mm	TUR	2	TL 252	TL 504	3.1	6.6	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
30		AGITATOR	1 kw	985rpm	-	CHEMIC.	0.08 t	CIC	0.02 t	IMP	2	CAN $ 2.0	CAN $ 4.0	2.4	4.8	77	7 2 5 1 4 7 1 1 5 0 1 1 2 1 2
63		CARBONATE PUMP	0.9m3/h	10 m	CCLC	HOR	0.1 t	CIC	0.06 t	IMP	1	DM 1.2	DM 1.2	1.88	1.88	78	7 4 2 2 0 0 2 1 1 1 1 2 1 2
1		CARBONATE REACTOR TANK	2.5 m3	ø1.5 m	81°C	CYL	0.6 t	S.S.	5 mm	TUR	1	TL 252	TL 252	3.3	3.3	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
31		AGITATOR	3.5 kw	980rpm	-	CHEMIC	0.2 t	CIC	0.1 t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 5 0 1 1 2 1 2
64		CARBONATE PUMP	22m3/h	10 m	RCLC	HOR	0.21t	CIC	0.1t	IMP	1	DM 4.5	DM 4.5	2.6	2.6	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
2		[redacted]ETIC TANK-REACTOR	5.3 m3	ø 2 m	81°C	CYL	0.8 t	S.S.	5 mm	TUR	1	TL 136	TL 136	4.4	4.4	80	7 2 5 1 3 4 0 1 3 1 2 1 6 1 1
32		AGITATOR	3.5 kw	980rpm	-	CHEMIC	0.2 t	CIC	0.1 t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 5 0 3 1 2 1 2
65		PUMP	24m3/h	12 m	RCLC	HOR	0.21 t	CIC	0.1 t	IMP	1	DM 4.5	DM 4.5	2.6	2.6	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
3		BRINE CLARIFIER WITH RAKE	430 m3	ø 10.67m	81°C	CYL	29 t	S.S.	8 mm	TUR	1	TL 14000	TL 14000	184.1	184.1	80	7 2 5 1 3 4 0 4 6 3 2 4 6 1 1
66		CLARIFIER SLUDGE PUMP	1.8 m3/h	15 m	RCC	HOR	0.26 t	CIC	0.12 t	IMP	2	DM 5.6	DM 11.2	3.3	6.6	78	7 4 2 2 0 0 2 2 1 4 1 1 2 1 2
43		SLUDGE PIT	40 m3	-	81°C	RECT.	3.5 t	S.S.	5 mm	TUR	1	TL 1470	TL 1470	19.1	19.1	80	7 2 5 1 3 4 0 1 0 3 1 1 6 1 1
67		SLUDGE TRANSFER PUMP	3.6 m3/h	12 m	CSM	HOR	0.26 t	CIC	0.12 t	IMP	1	DM 5.6	DM 5.6	3.3	3.3	78	7 4 2 2 0 0 2 2 1 3 1 1 2 1 2
44		COAGULANT MIX TANK	2 m3	ø1.22 m	30°C	CYL	0.45 t	S.S.	5 mm	TUR	1	TL 63	TL 63	0.8	0.8	80	7 2 5 1 3 4 0 1 2 3 2 1 1 1 1
33		AGITATOR	3.5 kw	985 rpm	-	CHEMIC	0.2 t	CIC	0.1 t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	77	7 2 5 1 4 7 1 1 5 0 3 1 2 1 2
68		PUMP (RE. "60)	0.3 m3/h	12 m	CCLC	HOR	0.025t	S.S.	0.01t	IMP	1	DM 9	DM 9	5.3	5.3	78	7 4 2 1 0 2 0 1 1 1 1 1 7 1 2
45		OVER FLOW TANK	11 m3	ø2.44m	81°C	CYL	1.4 t	S.S.	5 mm	TUR	1	TL 588	TL 588	7.7	7.7	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
69		CLARIFIED BRINE PUMP	22.8m3/h	15 m	RCLC	HOR	0.26 t	CIC	0.12 t	IMP	2	DM 5.6	DM 11.2	3.3	6.6	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
4		FILTER	40 t/h	-	-	PRESS	5.6 t	CS	5 t	IMP	2	CAN $ 10.7	CAN $ 21.8	15.6	31.2	76	7 2 8 3 1 2 2 2 0 0 2 2 6 4 2
70		PUMP	22.8m3/h	20 m	RCLC	HOR	0.26 t	CIC	0.12t	IMP	2	DM 5.6	DM 11.2	3.3	6.6	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
71		BRI.METERING PUMP	0.3m3/h	12 m	CCLC	HOR	0.025t	S.S.	0.01t	IMP	1	DM 9	DM 9	5.3	5.3	78	7 4 2 1 0 2 0 1 1 1 1 1 7 1 2
72		BASE METERING PUMP	0.3m3/h	12 m	CCLC	HOR	0.025t	S.S.	0.01t	IMP	1	DM 9	DM 9	5.3	5.3	78	7 4 2 1 0 2 0 1 1 1 1 1 7 1 2

PLANT SURVEY FORM

Sample Plant : SUGAR ANALYSIS

Sheet 2 of 2

UNIDO/SPO(SHEA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PRODUCTION ACTIVITY Code: 3413-13311

Sr. No.	Mark/ Model	Basic Machine Accessories	Major Spec. (Capa.)	Major Spec. 1	Major Spec. 2	Type (Descr.)	Manuf. Charac. 1 (Tons)	Manuf. Charac. 2 (kW)	Manuf. Charac. 3 (Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Purchase Cost (in Thousands and Currency) Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
5		ION EXCHANGER	1 m3	1 Atm.	70°C	SPRAY	1 t	S.S.	5 mm	IMP	1	$ 15	$ 15	$ 15	$ 15	80	7 4 1 6 6 9 9 1 1 4 3 1 6 1 2
46		SPENT REGENERATIVE TANK	2 m3	Pt.22m	81°C	CYL	0.45 t	S.S.	5 mm	TUR	1	TL 1259	TL 1259	2.5	2.5	80	7 2 5 1 3 4 8 1 2 3 8 1 6 1 1
73		SPENT REGENERATIVE PUMP	0.3m3/h	20 m	HCLG	MOR	0.16 t	CIC	0.07t	IMP	1	DM 3.8	DM 3.8	2.23	2.23	75	7 4 2 8 0 0 2 1 1 2 1 1 2 1 2
6		MIXING MIXER TANK	18 m3	83.1 m	81°C	CYL	3 t	S.S.	5 mm	TUR	1	TL 1260	TL 1260	16.6	16.6	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
76		PUMP	21m3/h	18 m	HCLG	MOR	0.35 t	CIC	0.12 t	IMP	8	DM 5.6	DM 11.2	1.1	6.6	78	7 4 8 2 8 0 2 3 1 2 1 1 2 1 2

UNIDO/SPO (SSSR)

CENTRAL CHEMO DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATIGÜM

PRODUCTION ACTIVITY Code : 3411-1 34 11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Purchase Cost (in Thousands and Currency) Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	BITC Code (Per Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
40		HEAD TANK -BRINE	30m3	ϕ 3.5m	RT°C	CYL	2.8 t	SS	5mm	TUR	1	TL 1176	TL 1176	15.5	15.5	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
1		ELECTROLYTIC CELLS	5.8 t/h	12.3m2	-	RECT.	8 t	GIC	4 t	IMP	26	CAEB 2566	CAEB 6[illegible].4	36.3	8[illegible]1.2	75	7 2 5 1 4 5 5 4 2 0 1 2 2 3 2
41		IMPLIFIED STORAGE TANK-BRINE	30m3	ϕ3.5m	RT°C	CYL	2.8t	SS	5 mm	TUR	1	TL 1176	TL 1176	15.5	15.5	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
60		PUMP	11m3/h	14 m	HCLC	HOR	0.18t	GIC	0.09t	IMP	2	DN 3.5	DN 7.0	2.0	4.0	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
42		DECHLORINATION TANK	1 m3	ϕ 0.7m	RT°C	CYL	0.4 t	SS	5 mm	TUR	1	TL 168	TL 168	2.2	2.2	80	7 2 5 1 3 4 0 1 1 3 2 1 6 1 1
61		VACUUM PUMP	2m3/min	600mmHg	AIR	HOR	0.3 t	GIC	0.2 t	IMP	1	ϕ 20	ϕ 20	20	20	80	7 4 3 1 2 2 3 2 1 1 1 1 2 1 2
62		DECHLORINATED BRINE PUMP	11m3/h	20m	HCLC	HOR	0.18t	GIC	0.09 t	IMP	2	DN 3.5	DN 7.0	2.0	4.0	78	7 4 2 2 0 0 2 3 1 2 1 1 2 1 2
43		DEMINERALIZED WATER TANK	4.8m3	ϕ1.83m	30°C	CYL	0.83t	S.S.	5mm	TUR	1	TL 349	TL 349	4.6	4.6	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
2		CAUSTIC COOLER	19m2	ϕ0.22m	8 m	R.S.T.	1 t	S.S.	8 mm	IMP	1	TL 180	TL 180	4.99	4.99	80	7 4 1 6 1 0 3 2 1 4 1 1 6 1 2
44		CAUSTIC RECEIVER TANK	15m3	ϕ 3 m	50°C	CYL	1.6 t	MS	5mm	TUR	1	TL 224	TL 224	2.9	2.9	80	7 2 5 1 3 4 0 1 3 3 2 1 1 1 1
63		30 % CAUSTIC PUMP	9m3/h	18 m	HCLC	HOR	0.18t	GIC	0.09t	IMP	2	DN 3.5	DN 7.0	2.0	4.0	78	7 4 2 2 0 0 2 2 1 2 1 1 2 1 2
45		30 % CAUSTIC STORAGE TANK	230m3	ϕ7.32m	50°C	CYL	16 t	MS	8 mm	TUR	2	TL 2240	TL 2480	29.5	59	80	7 2 5 1 3 4 0 3 5 3 2 3 1 1 1
64		30 % CAUSTIC PUMP	7.2m3/h	15 m	HCLC	HOR	0.16t	GIC	0.07t	IMP	2	DN 3.8	DN 7.6	2.23	4.46	78	7 4 2 2 0 0 2 2 1 2 1 1 2 1 2
46		10 % CAUSTIC TANK	230m3	ϕ7.32m	25°C	CYL	16 t	MS	8 mm	TUR	1	TL 2240	TL 2240	29.5	29.5	80	7 2 5 1 3 4 0 3 5 3 2 3 1 1 1
65		TO PROCESS 10 % PUMP	21m3/h	20m	CCLC	HOR	0.21t	GIC	0.1 t	IMP	2	DN 4.4	DN 8.8	2.58	5.16	78	7 4 2 2 0 0 2 3 1 1 1 1 2 1 2
3		(TO 50 %) EVAPORATOR	90 m2	ϕ0.4m	7 m	L.T.V.	3.2t	SS	5 mm	TUR	1	TL 1300	TL 1300	17.0	17.0	80	7 4 1 6 2 0 1 1 1 4 3 1 6 1 1
66		50 % PUMP	2.0m3/h	12m.	CCLC	HOR	0.15t	SS	0.08t	IMP	2	DN 7.0	DN 14.0	3.8	7.6	80	7 4 2 2 0 0 2 2 1 1 1 1 7 1 2
47		TANK 50 % CAUSTIC	68m3	ϕ 4.88	40°C	CYL	5.3t	SS	6mm	TUR	1	TL 2226	TL 2226	29.8	29.8	80	7 2 5 1 3 4 0 2 4 3 2 2 6 1 1
67		MARKET 50 %) PUMP	24m3/h	8 m	CCLC	HOR	0.2 t	SS	0.12t	IMP	1	DN 8	DN 8	4.7	4.7	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
48		CONDENSATE TANK	11m3	ϕ 2.44m	90°C	CYL	1.4 t	SS	5 mm	TUR	1	TL 588	TL 588	7.7	7.7	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
68		CONDENSATE PUMP	4.8m3/h	20 m	HCLC	HOR	0.15t	SS	0.08 t	IMP	1	DN 7.0	DN 7.0	3.8	3.8	80	7 4 2 2 0 0 2 2 1 2 1 1 7 1 2

UNIDO/ESS (SIKA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 3411-1 3411

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec-1	Major Spec-2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(tons)	Origin	Qty	Purchase Cost (in Thousands and Currency Unit	Purchase Cost (in Thousands and Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 1415
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		CHLORINE GAS COOLER	80m2	ϕ0.5m	5 m	F.S.T.	1.1 t	SS	8mm	IMP	1	TL 1000	TL 1000	13.1	13.1	80	7 4 1 6 1 0 3 3 1 3 1 1 6 1 2
2		CHLORINE DRYING TOWER	2 m3	10 atm.	60°C	SPRAY	1 t	SS	6mm	TUR	1	TL 420	TL 420	5.5	5.5	80	7 4 1 6 6 0 3 1 2 4 3 1 6 1 1
40		H2SO4 STORAGE TANK	38.5m3	ϕ3.66m	39°C	CYL.	6t	MS	10mm	TUR	1	TL 840	TL 840	11.—	11.—	80	7 2 5 1 3 4 0 1 3 3 2 2 1 1 1
60		H2SO4 PUMP	1.3m3/h	10 m	COR.	HOR.	0.15t	SS	C.08 t	IMP	1	DM 7.0	DM 7.0	3.8	3.8	80	7 4 2 2 0 0 2 2 1 5 1 1 7 1 2
41		H2SO4 SURGE TANK	4.8m3	ϕ1.83m	39°C	CYL.	1.2t	MS	8 mm	TUR	1	TL 168	TL 168	2.2	2.2	80	7 2 5 1 3 4 0 1 2 3 2 1 1 1 1
61		H2SO4 RECIRCULATION PUMP	2.4m3/h	15 m	COR.	HOR	0.2t	SS	0.1 t	IMP	1	$ 1.8	$ 1.8	2.1	2.1	78	7 4 2 2 0 0 2 2 1 5 1 1 7 1 2
62		H2SO4 RECIRCULATION PUMP	1.5m3/h	10 m	COR.	HOR.	0.15t	SS	0.08 t	IMP	3	DM 7.0	DM 21.0	3.8	11.4	80	7 4 2 2 0 0 2 2 1 5 1 1 7 1 2
63		PUMP SPARE H2SO4	0.9m3/h	20 m	COR.	HOR.	0.1 t	SS	0.06t	IMP	1	$ 1.1	$ 1.1	1.3	1.3	78	7 4 2 2 0 0 2 1 1 5 1 1 7 1 2
3		H2SO4 COOLER	20 m2	ϕ 0.3m	3.5m	F.S.T.	1 t	SS	3 mm	IMP	2	TL 390	TL 780	5.2	10.2	80	7 4 1 6 1 0 3 2 1 2 1 1 6 1 2
4		CHLORINE COMPRESSOR	430m3/min	3kg/cm2	GAS	HOR	1.7t	CIC	1t	IMP	2	$ 72.5	$ 145	106.5	213	75	7 8 3 1 3 2 0 5 1 2 1 1 2 2 2
5		ACID SEPARATOR/COOLER	45m2	ϕ 0.45m	4.5m	F.S.T.	1.8t	SS	5 mm	IMP	1	TL 730	TL 730	9.6	9.6	80	7 4 1 6 1 0 3 2 1 3 1 1 6 1 2
6		ACID DEMISTER	0.02m3	ϕ0.15m	39°C	CYL.	0.2t	MS	3mm	TUR	1	TL 28	TL 28	0.36	0.36	80	7 2 5 1 3 4 0 1 1 3 2 1 1 1 1
7		CHLORINE LIQUIFIER	70m2	ϕ 0.45m	4.5 m	F.S.T.	1.8t	CS	5mm	IMP	1	TL 730	TL 730	9.6	9.6	80	7 4 1 6 1 0 4 3 1 3 1 1 2 1 2
42		LIQUID CHLORINE TANK	64 m3	ϕ3.66 m	30°C	CYL.	3.8t	SS	10mm	TUR	4	TL 3696	TL 14784	48.6	194.4	80	7 2 5 1 3 4 0 2 3 3 2 2 6 1 3
64		COMPRESSOR	3m3/min	10.5 kg/cm2	AIR	HOR	1.2t	CIC	0.7t	IMP	2	$ 110	$ 220	161.6	323.2	75	7 4 3 1 3 2 0 2 3 1 1 1 2 1 2
8		AIR DRYER	20m2	ϕ0.3m	3.5 m	SPIRAL TUBE	1 t	MS	4mm	IMP	1	TL 390	TL 390	5.1	5.1	80	7 4 1 6 1 0 7 2 1 2 7 1 1 1 2
43		AIR RECEIVER	20 m3	10.5kg/cm2	70°C	CYL.	5.5t	MS	12mm	TUR	1	TL 900	TL 900	11.8	11.8	80	6 9 2 4 3 0 4 1 2 3 2 2 1 1 1
9		CHLORINE VAPORIZER	80m2	ϕ0.5 m	5 m	F.S.T.	3.2t	SS	4mm	IMP	8	TL 1300	TL 2600	17	34	80	7 4 1 6 1 0 9 3 1 3 1 1 6 1 2

UNIDO/ISID(SMIA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLAN SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code:3411-13611

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Capa	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Total	Constant 1960 Year Cost (in Thousand) Unit	Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		SODIUM HYPO TOWER	16m3	ϕ1.6m	30°C	CYL	3 t	S.S.	8mm	TUR	1	TL 1250	TL 1250	16.5	16.5	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
2		SCRUBBER	1.6m3	ϕ 40cm	150°C	PACKED BACL	0.9t	S.S.	4mm	TUR	1	TL 180	TL 180	5.0	5.0	80	7 4 1 6 6 0 2 1 1 4 2 1 6 1 1
40		SCRUBBER CIRCULATION TANK	6m3	ϕ 2 m	90 °C	CYL	0.8 t	S.S.	4mm	TUR	1	TL 136	TL 136	4.4	4.4	80	7 2 5 1 3 4 0 1 3 1 2 1 6 1 1
60		PUMP	1.5m3/h	15m	HCLC	HOR	0.1 t	S.S.	0.05 t	IMP	1	$ 0.9	$ 0.9	1.05	1.05	78	7 4 2 2 0 0 2 2 1 2 1 1 7 1 2
3		CHILLER	600m3	-	-	PLATES	12 t	S.S.	1 mm	IMP	2	TL 5100	TL 11200	67.0	134.0	80	7 4 1 6 1 0 4 5 0 0 5 1 6 1 2
41		CHILLED WATER TANK	6 m3	ϕ 2 m	10°C	CYL	0.8t	S.S.	4mm	TUR	1	TL 136	TL 136	4.4	4.4	80	7 2 5 1 3 4 0 1 3 1 2 1 6 1 1
61		CHILLED WATER PUMP	110m3/h	32m	CCLC	HOR	0.27 t	S.S.	0.145 t	IMP	2	$ 2.6	$ 5.2	3.0	6.0	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
62		HYPO PUMP	30m3/h	15m	CCLC	HOR	0.22t	S.S.	0.12 t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
42		HYPO STORAGE TANK	210m3	ϕ6.1 m	30°C	CYL	15t	S.S.	8mm	TUR	2	TL 6300	TL 12600	82.8	165.6	80	7 2 5 1 3 4 0 1 5 1 2 3 6 1 1
63		HYPO TO PROCESS PUMP	36m3/h	25m	CCLC	HOR	0.22 t	S.S.	0.12 t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	78	7 4 2 2 0 0 2 3 2 1 2 1 7 1 2

UNIDO/SPO (SEKA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code: 3411-1 3F 11

Sr. No.	Mark Model	Basic Machine Nomenclature	Major Speci. Cap.	Major Speci. 1	Major Speci. 2	Type Desc.	Manuf Charac. 1 WT(Tons)	Manuf Charac. 2 MATL	Manuf Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency Unit	Purchase Cost (in Thousands and Currency Total	Constant 1980 Year Cost in $ (in Thousand) Unit	Constant 1980 Year Cost in $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
40		SALT DISSOLVING TANK	11 m3	ø2.44m	30°C	CYL	9.5t	SS	5 mm	TUR	1	TL 3990	TL 3990	52.4	52.4	80	7 2 5 1 3 4 0 1 3 3 2 2 6 1 1
90		AGITATOR	2 kW	145Orpm	-	SIDE ENTRY	0.05 t	CIC	0.03t	IMP	1	CAN$ 2.0	CAN$ 2.0	2.4	2.4	77	7 2 5 1 4 7 1 1 6 0 5 1 2 1 2
60		BRINE PUMP TO CHLORATE CELLS	3m3/h	18m	CCLC	HOR	0.1 t	SS	0.05 t	IMP	1	$ 0.9	$ 0.9	1.0	1.0	78	7 4 2 2 0 0 2 2 1 1 1 1 7 1 2
1		ELECTROLYTIC CELLS	0.5t/h	9 m2	-	RECT	0.8 t	M.S.+ (RP)	0.4 t	IMP	24	CAN$ 13	CAN$ 312	13.4	321.6	1978	7 2 5 1 8 5 5 1 1 0 1 1 9 1 2
2		REACTORS	27 m3	ø2.1m	50°C	CYL.	1.2t	SS	6mm	TUR	6	TL 1344	TL 8064	17.7	106.2	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
41		DICHROMATE MIX.TANK	0.8m3	ø 1 m	50°C	CYL	0.2t	SS	4mm	TUR	1	TL 84	TL 84	1.1	1.1	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
91		AGITATOR	1 kW	980rpm	-	TOP ENTRY	0.05t	SIC	0.01t	IMP	1	CAN$ 2.0	CAN$ 2.0	2.4	2.4	77	7 2 5 1 4 7 1 1 5 0 4 1 2 1 2
61		DICHROMATE FEED PUMP (SCREW)	0.3m3/h	8m	CCLC	HOR	0.15t	SS	0.1 t	IMP	1	DM 9	DM 9	5.3	5.3	78	7 4 2 3 0 1 0 1 1 1 1 1 7 1 2
42		CELL LIQ. CIRCULATION TANK	1.5m3	ø 1 m	50°C	CYL	0.4t	SS	5mm	TUR	1	TL 168	TL 168	2.2	2.2	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
62		CELL LIQ.CIRCULATION PUMP	3m3/h	12m	CCLC	HOR	0.1 t	SS	0.05 t	IMP	2	$ 0.9	$ 1.8	1.0	2.0	78	7 4 2 2 0 0 2 2 1 1 1 1 7 1 2
3		HYDROGEN SCRUBBER	0.1m3	1 atm.	65°C	PACKED MATLS	0.2t	SS	3 mm	TUR	1	CAN$ 4.1	CAN$ 4.1	5.3	5.3	76	7 4 1 6 5 0 2 1 1 4 2 1 6 1 1
63		SCRUBBER CIRCULATION PUMP	1.8m3/h	10m	CCLC	HOR	0.1 t	SS	0.05 t	IMP	1	$ 0.9	$ 0.9	1.0	1.0	78	7 4 2 2 0 0 2 2 1 1 1 1 7 1 2
4		CHLORATE COOLER	3 m2	ø 0.15m	2.5m	S.S.T.	0.25t	SS	4mm	IMP	1	TL 100	TL 100	1.3	1.3	80	7 4 1 6 1 0 1 1 1 1 1 6 1 2
43		CHLORATE STORAGE TANK	38 m3	ø3.66 m	40°C	CYL	3.6 t	SS	6mm	TUR	2	TL 1512	TL 3024	19.9	39.8	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
64		SODIUM CHLORATE PUMP	1.8m3/h	20m	CCLC	HOR	0.1 t	SS	0.05t	IMP	2	$ 0.9	$ 1.8	1.0	2.0	78	7 4 2 2 0 0 2 2 1 1 1 1 7 1 2
44		DUMP TANK	17m3	ø3.05m	50°C	CYL	2.2t	SS	6mm	TUR	1	TL 924	TL 924	12.2	12.2	80	7 2 5 1 3 4 0 1 3 3 2 1 6 1 1
65		DUMP TANK PUMP	6m3/h	12m	CCLC	HOR	0.1t	SS	0.05 t	IMP	1	$ 0.9	$ 0.9	1.0	1.0	78	7 4 2 2 0 0 2 2 1 1 1 1 7 1 2

UNIDO/SPO (SSSR)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code : 34111 38 11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Total	Constant 1980 Year Cost US $(in Thousand) Unit	Total	Year of Purchase and Remarks	SITC Code (Per Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		HYDROGEN WASHER AND COOLER	2.43m2	$ 0.17t	0.8 m	P.S.T.	0.25 t	CS	0.25 t	IMP	24	TL 100	TL 2400	1.1	31.2	80	7 4 1 6 1 0 3 1 1 1 1 2 2 1 2
60		HYDROGEN BLOWER	16m3/min	0.2kg/cm2	GAS	BACKW. WARDS	1.2t	GUC	0.8 t	IMP	1	CANS 5.5	CANS 5.5	5.1	5.1	75	7 4 1 4 2 0 0 1 1 2 1 1 2 1 2
2		COMBUSTION CHAMBER	0.42m3	10kg/cm2	NOW CATALYT	Plat. Matl.	0.4.	C.S.	12mm	IMP	1	TL 96	TL 96	1.26	1.26	80	7 4 1 6 5 0 8 1 2 2 4 1 2 1 2
3		COOLING/ABSORBTION	0.7m3	10kg/cm2	45°C	PLATE BAFFLE	2 t	CS	12mm	IMP	1	TL 400	TL 400	5.26	5.26	80	7 4 1 6 6 0 3 1 0 4 1 1 2 1 2
61		HCL TRANSFER PUMP	1.8m3/h	10m	CGR	HCL	0.1 t	SS	0.05t	IMP	1	$ 0.9	$ 0.9	1	1	78	7 4 2 2 0 0 2 2 1 5 1 1 7 1 2
40		33 % HCL TANK	70m3	$4.27t	45°C	CYL	7.6 t	SS	10 mm	TUR	1	TL 3192	TL 3192	42.-	42.-	80	7 2 5 1 3 4 0 2 4 3 2 2 6 1 1
62		HCL TRANSFER PUMP	2.4m3/h	18 m	CGR	HCR	0.15t	SS	0.08t	IMP	1	DM 7.0	DM 7.0	3.8	3.8	80	7 4 2 2 0 0 2 2 1 5 1 1 7 1 2
4		SCRUBBER	0.34m3	10kg/cm2	45°C	Plat.	1.2t	M.S.	8mm	TUR	1	CANS 46	CANS 46	22.9	22.9	76	7 4 1 6 6 0 2 1 2 4 2 1 1 1 1

UNIDO/SPO(SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM
Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code: 3411-1 3911

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Capa	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 MT(Tons)	Origin	Qty	Purchase Cost (in Thousands and Currency) Unit	Purchase Cost (in Thousands and Currency) Total	Constant 1960 Year Cost US $(in Thousand) Unit	Constant 1960 Year Cost US $(in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		CHLORATE CHLORIDE FILTER	0.6t/h	0.15m2	ϕ0.45m	CIRC	0.3t	S.S.	0.3 t	IMP	1	CAN $ 10.5	CAN $ 10.5	14.9	14.9	75	7 2 5 1 4 1 0 1 1 1 2 1 7 1 2
40		HEAD TANK	0.8m3	ϕ1 m	30 °C	CYL	0.2t	S.S.	4mm	TUR	1	TL 84	TL 84	1.1	1.1	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
2		HCl FILTER	0.2t/h	0.008m2	ϕ0.1 m	CIRC	0.15 t	S.S.	0.15t	IMP	1	CAN $ 5.5	CAN $ 5.5	7.8	7.8	75	7 2 5 1 4 1 0 1 1 1 2 1 7 1 2
41		HCl TANK	0.8m3	ϕ 1 m	30°C	CYL	0.2t	S.S.	4mm	TUR	1	TL 84	TL 84	1.1	1.1	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
60		PUMP(HCl FEED)	0.6m3/h	15m	CORR.	HOR	0.15 t	S.S.	0.1 t	IMP	1	DM. 9	DM. 9	5.3	5.3	78	7 4 2 2 0 0 2 1 1 5 1 . 7 1 2
3		ClO_2 GENERATOR	9 m3	ϕ1.5 m	30°C	CYL	2.2t	S.S.	8mm	TUR	1	TL 924	TL 924	12.1	12.1	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
4		ClO_2 EVAPORATOR	100m2	ϕ1.3 m	2.2m	LTV	3.2t	S.S.	5mm	IMP	1	TL 1300	TL 1300	17.0	17.0	80	7 4 1 6 2 0 1 2 1 1 . 1 6 1 2
61		PUMP(SLURRY CIRCULATING)	11m3/h	20m	VISC	HOR	0.22t	S.S.	0.12t	IMP	2	DM. 8.0	DM. 16.0	4.7	9.4	78	7 4 2 2 0 0 2 1 1 6 1 1 7 1 2
5		REBOILER	45m2	ϕ0.45m	4.5m	FST	1.8t	S.S.	5mm	IMP	1	TL 730	TL 730	35.3	35.3	78	7 4 1 6 1 0 2 2 1 3 1 1 6 1 2
42		CONDENSATE TANK	0.8m3	ϕ1 m	90°C	CYL	0.2t	S.S.	4mm	TUR	1	TL 84	TL 84	1.1	1.1	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
62		CONDENSATE PUMP	2.4m3/h	15m	HCLC	HOR	0.25t	S.S.	0.08t	IMP	1	DM. 1.0	DM. 1.0	1.8	1.8	80	7 4 2 2 0 0 2 2 1 2 1 1 7 1 2
43		GENERATOR DRUM TANK	0.8m3	ϕ1 m	30°C	CYL	0.2t	S.S.	4mm	TUR	1	TL 84	TL 84	1.1	1.1	80	7 2 5 1 3 4 0 1 2 3 2 1 6 1 1
		ClO_2 COOLER	45m2	ϕ0.45m	4.5m	FST	1.8t	S.S.	5mm	IMP	1	TL 730	TL 730	35.3	35.3	78	7 4 1 6 1 0 3 2 1 3 1 1 6 1 2
7		SURFACE CONDENSER	45m2	ϕ0.45m	4.5 m	FST	1.8t	S.S.	5mm	IMP	1	TL 730	TL 730	35.3	35.3	78	7 4 1 6 1 0 5 2 1 3 1 1 6 1 2
8		ClO_2 ABSORPTION TOWER	0.9m3	1 Atm	30 °C	Pad	0.3t	S.S.	3mm	TUR	1	TL 126	TL 126	1.65	1.65	80	7 4 1 6 6 0 3 1 1 6 2 1 6 1 1
63		ClO_2 PUMP (TRANSFER)	48m3/h	25m	CORR	HOR	0.25t	S.S.	0.13 t	IMP	2	$ 2.3	$ 4.6	2.7	5.4	78	7 4 2 2 0 0 2 3 2 5 1 2 7 1 2
44		ClO_2 STORAGE TANK	170m3	ϕ 5.49m	30°C	CYL	13.2t	S.S.	8mm	TUR	2	TL 5564	TL 11360	267.2	534.4	78	7 2 5 1 3 4 0 3 4 3 2 3 6 1 1
64		ClO_2 SUPPLY PUMP	43m3/h	55m	CORR	HOR	0.25t	S.S.	0.13 t	IMP	2	$ 2.3	$ 4.6	2.7	5.4	78	7 4 2 2 0 0 2 3 3 5 1 1 7 1 2

METU/SPO (SHEA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

Sheet 1 of 2

PRODUCTION ACTIVITY Code : 3411-1 40 11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec. 1	Major Spec. 2	Type Desc.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MAT'L	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
60		PUMP (S'WOOD)	300m3/h	20 m	VISC	HOR	1.1 t	SS	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
61		PUMP (CHP)	300m3/h	20 m	VISC	HOR	1.1 t	SS	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
40		PULP CHEST	360 m3	36 m	30°C	CYL.	9.3t	SS	6mm	TUR	1	TL 3906	TL 3906	51.36	51.36	80	7 2 5 1 3 4 0 3 5 3 2 2 6 1 1
90		AGITATOR	15 kW	980rpm	-	SIDE ENTRY	0.55t	CIC	0.3t	IMP	2	CAN$ 4.3	CAN$ 8.6	5.27	10.54	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
62		PUMP	300m3/h	30 m	VISC	HOR	1.1 t	SS	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
41		MACHINE CHEST	168 m3	ϕ 6m	-	CYL	-	CONC	-	-	1						
91		AGITATOR	45 kW	980rpm	-	SIDE ENTRY	0.8 t	CIC	0.5 t	IMP	2	CAN$ 5.1	CAN$ 10.2	6.25	12.5	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
63		PUMP	420m3/h	30m	VISC	HOR	1.2t	SS	0.7t	IMP	1	$ 15.3	$ 15.5	18.3	18.3	78	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
1		CLEANERS	0.016m3	ϕ0.2m	40°C	CYL	0.007t	SS	2mm	IMP	24	TL 3.5	TL 84	0.046	1.104	80	7 2 5 1 3 6 0 1 1 3 2 1 6 1 2
64		PRIMARY REJECT PUMP	480m3/h	48 m	CCLC	HOR	1.1t	SS	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
65		SECONDARY REJECTS PUMP	96m3/h	48m	CCLC	HOR	0.7t	SS	0.35t	IMP	1	$ 6.3	$ 6.3	7.68	7.68	78	7 4 2 2 0 0 2 3 2 1 1 1 7 1 2
66		TERTIARY REJECTS PUMP	12m3/h	30m	CCLC	HOR	0.25t	SS	0.13t	IMP	1	$ 2.3	$ 2.3	2.7	2.7	78	7 4 2 2 0 0 2 3 1 1 1 7 1 2
2		PRESSURE SCREEN	OD 19 t/h	1.3m2	ϕ0.56m	PRESS	5.0t	SS	1.6t	IMP	1	$ 1360	$ 1360	104.4	104.4	79	7 2 5 1 4 1 0 7 1 2 4 2 7 2 2
67		PUMP FAN	3000m3/	48 m	CCLC	HOR	3.65t	SS	1.17t	IMP	1	$ 80.0	$ 80.0	86.3	86.3	79	7 4 2 2 0 0 2 6 2 1 1 1 7 3 2
3		PULP DRYER.	OPT/ 12 t/h	4.4m	40m/min	ROTARY	300t	CIC	12t	IMP	1	IC LIRA 1369065	IC LIRA 1369065	3082	3082	75	7 2 5 1 2 1 1 5 4 1 1 8 2 5 2
68		SCREEN REJECT PUMP	60m3/h	30m	CCLC	HOR	0.12t	SS	0.3t	IMP	1	$ 5	$ 5	5.9	5.9	78	7 4 2 2 0 0 2 3 2 1 1 1 7 1 2
4		PULPER	40m3	-	-	RECT.	-	CONC	-	-	1						
92		AGITATOR	140kW	980rpm	-	SIDE ENTRY	2.3t	CIC	1.4t	IMP	2	CAN$ 12	CAN$ 24	14.7	29.4	77	7 2 5 1 4 7 1 6 5 0 5 1 2 2 2
69		PUMP	78m3/h	30 m	VISC	HOR	0.53t	SS	0.33t	IMP	1	$ 5.7	$ 5.7	6.74	6.74	78	7 4 2 2 0 0 2 3 2 6 1 1 7 1 2
70		PUMP	390m3/h	30 m	VISC	HOR	1.1t	SS	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
42		BROKE CHEST	300m3	ϕ8m	40°C	CYL	-	CONC	-	-	1						
93		AGITATOR	45 kW	980rpm	-	SIDE ENTRY	0.8t	CIC	0.5 t	IMP	2	CAN$ 5.1	CAN$ 10.2	6.25	12.5	77	7 2 5 1 4 7 1 4 5 0 5 1 2 1 2
94		(COUCH PIT) AGITATOR	140kW	980 rpm	-	SIDE ENTRY	2.3t	CIC	1.4t	IMP	2	CAN$ 12	CAN$ 24	14.7	29.4	77	7 2 5 1 4 7 1 6 5 0 5 1 2 2 2
71		PUMP	78m3/h	30m	VISC	HOR	0.53t	SS	0.33t	IMP	1	$ 5.7	$ 5.7	6.74	6.74	78	7 4 2 2 0 0 2 3 2 6 1 1 7 1 2
72		PUMP	390m3/h	30m	VISC	HOR	1.1t	SS	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	79	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
73		BROKE PUMP	180m3/h	30m	VISC	HOR	0.79t	SS	0.48t	IMP	1	DM 18.5	DM 18.5	10.8	10.8	78	7 4 2 2 0 0 2 4 2 6 1 1 7 1 2
5		SAVEALL	120t/h	168m2	ϕ3.66m	DISC	7.60t	CIC	3.5 t	IMP	1	CAN$ 236.1	CAN$ 236.1	292.7	292.7	77	7 2 5 1 4 2 0 9 6 6 5 2 2 3 3

UNIDO/ICIS (SIDA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Sample Plant : SAMSUN ATATÜRK

PRODUCTION ACTIVITY Code: 3411-1 40 11

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Dimension Cap.	Major Speed 1	Major Size 2	Type Desc.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MAT.	Manuf. Charac. 3 MT(TONS)	Origin	Qty	Purchase Cost (in Thousands) and Currency Unit	Purchase Cost (in Thousands) and Currency Total	Constant 1980 Year Cost $ (in Thousand) Unit	Constant 1980 Year Cost $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (Per Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	16
74		(SWEETENER) PUMP	120m3/h	30 m	CCLC	HOR	0.26t	SS	0.12t	IMP	1	$ 1.9	$ 1.9	2.2	2.2	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
75		WATERMATEPUMP TO SAVBALL	300m3/h	20 m	CCLC	HOR	0.51t	SS	0.27t	IMP	1	$ 4.0	$ 4.0	4.7	4.7	78	7 4 2 2 0 0 2 4 1 1 1 1 7 1 2
76		SHOWERS MULTISTAGE PUMP	12m3/h	460m	CCLC	HOR	0.72t	SS	0.3t	IMP	2	$ 5.0	$ 10.0	5.9	11.8	78	7 4 2 2 0 1 1 3 6 1 1 1 7 1 2
77		CLARIFIED WA. PUMP	300m3/h	20 m	CCLC	HOR	0.51t	SS	0.27t	IMP	1	$ 4.0	$ 4.0	4.7	4.7	78	7 4 2 2 0 0 2 4 1 1 1 1 7 1 2
78		CLOUDY WHITE WATER PUMP	120m3/h	30m	CCLC	HOR	0.26t	SS	0.12t	IMP	1	$ 1.9	$ 1.9	2.2	2.2	78	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
79		VACUUM PUMP	710m3/ HUR.	5.20mm HG	AIR	HOR	7t	GIC	6.5t	IMP	2	TL 570	TL 1140	58	116	75	7 4 3 1 2 2 3 6 1 1 1 2 2 4 2
80		PUMP	60m3/h	18m	CCLC	HOR	0.35t	SS	0.2t	IMP	1	$ 3	$ 3	3.5	3.5	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
81		PUMP	48m3/h	18m	CCLC	HOR	0.3t	SS	0.16t	IMP	1	$ 2.8	$ 2.8	3.3	3.3	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
82		PUMP	36m3/h	10m	CCLC	HOR	0.2t	SS	0.145t	IMP	1	$ 2.6	$ 2.6	3.0	3.0	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
83		PUMP	30m3/h	18m	CCLC	HOR	0.27t	SS	0.145t	IMP	1	$ 2.6	$ 2.6	3.0	3.0	78	7 4 2 2 0 0 2 3 1 1 1 1 7 1 2
84		WATERWATER PUMP	1200m3/h	40m	CCLC	HOR	2.4t	SS	1.4 t	IMP	1	$ 37.6	$ 37.6	48.9	48.9	77	7 4 2 2 0 0 2 6 2 1 1 1 7 2 2
85		SUMP PUMP	57m3/h	20m	CCLC	HOR	0.35t	GIC	0.2t	IMP	1	DM 6.0	DM 6.0	3.5	3.5	78	7 4 2 2 0 0 2 3 1 1 1 1 2 1 2

TABLE NO. :

PAGE : 2

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 302437 2111	CHIP METERING BIN, SOFTWOOD	1	8.0	18.8							8.0				8.0
72513 305634 4111	CHIP SILO, SOFTWOOD	1	37.0	68.1							37.0				37.0
72513 305634 4111	CHIP SILO, HARDWOOD	1	37.0	68.1							37.0				37.0
72513 305634 4111	CHIP SILO, CHEMI MECHANICAL	1	37.0	68.1							37.0				37.0
72513 404525 6111	BLOW TANK	2	113.0	208.8							226.0				226.0
72513 404522 5111	ACCUMULATOR, HOT WATER	1	61.0	112.3							61.0				61.0
72513 401332 2111	HOT WATER TANK	1	5.0	9.2							5.0				5.0
72513 401332 2111	WARM WATER TANK	1	5.0	9.2							5.0				5.0
72513 401332 2111	TURPENTINE DECANTER	1	7.0	12.9							7.0				7.0
72513 403432 3111	TURPENTINE STORAGE TANK	1	24.0	44.2							24.0				24.0
72513 402432 3111	WHITE LIQUOR STORAGE TANK	1	10.0	18.4							10.0				10.0
72513 401332 2111	BLACK LIQUOR TANK	1	5.0	9.2							5.0				5.0
72513 402432 2111	KNOTS TANKS	1	9.0	16.6							9.0				9.0
72513 405732 5111	TANK, FILTRATE NO.1	1	57.0	105.0							57.0				57.0
											525.0				

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 404732 4111	TANK, FILTRATE NO.2	1	45.0	82.9							45.0				45.0
72513 404632 4111	TANK, FILTRATE NO.3	1	39.0	71.8							39.0				39.0
72513 404532 4111	TANK, FOAM TOWER	1	30.0	55.2							30.0				30.0
72513 403435 3111	LOW DENSITY WASHED PULP STOR.TANK	1	17.0	31.3							17.0				17.0
72513 401335 1111	PRIMARY REJECTS TANK	1	3.0	5.5							3.0				3.0
72513 401335 1611	SECONDARY SCREEN ACCEPTS TANK	1	4.0	7.3							4.0				4.0
72513 401232 1111	PRIMARY CLEANER REJECTS TANK	1	0.7	1.3							0.7				0.7
72513 401235 1111	TERTIARY SCREEN REJECTS TANK	1	0.9	1.7							0.9				0.9
72513 404031 4111	DECKER WHITE WATER TANK	1	43.0	79.1							43.0				43.0
72513 403535 3611	BROWN STOCK AREA DUMP TANK	1	17.0	31.3							17.0				17.0
72513 405635 6112	HIGH DENSITY S'WOOD STORAGE TANK	1	122.0	224.6							122.0				122.0
72513 405635 6111	HIGH DENSITY H'WOOD STORAGE TANK	1	122.0	224.6							122.0				122.0
72513 402435 2111	LEVELLING CHEST, BLEACHING PLANT	1	9.0	16.6							9.0				9.0
72513 402232 2111	D/C STAGE PRE-RETENTION TUBE	1	9.0	16.6							9.0				9.0
											461.6				

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total weight in tons

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $. 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
72513 401232 1111	HEAD TANK, D/C WASHER	1	0.6	1.1							0.6				0.6
72513 402332 0901	D/C WASHER SEAL TANK	1	-	13.1							-				-
72513 402332 0901	CAUSTIC WASHER SEAL TANK	1	-	6.5							-				-
72513 402232 3111	ClO_2 STAGE PRE-RETENTION TOWR	1	11.0	20.3							11.0				11.0
72513 402332 0901	CHLORINE DIOXIDE WASHER SEAL TANK	1	-	6.5							-				-
72513 406735 7111	TANK, H.D. STORAGE S'WOOD PULP	2	219.0	403.2							438.0				438.0
72513 407735 7111	TANK, H.D. STORAGE H'WOOD PULP	1	260.0	478.7							260.0				260.0
72513 403532 3111	DUMP TANK, BLEACH PLANT	1	17.0	31.3							17.0				17.0
72513 401007 1111	LIVE BOTTOM BIN, CMP PLANT	1	4.7	11.2							4.7				4.7
72513 403031 3111	FILTRATE CHEST FROM UNBLEACHED STOCK WASHER	1	14.0	25.7							14.0				14.0
72513 403031 3611	HOT WATER TANK	1	14.0	77.3							14.0				14.0
72513 403031 3611	DECKER WHITE WATER CHEST	1	14.0	77.3							14.0				14.0
72513 403031 3611	FILTRATE CHEST, FROM SEMI - BLEACHED STOCK WASHER	1	14.0	77.3							14.0				14.0
72513 407732 6111	TANK, HIGH DENSITY STORAGE - CMP	1	187.0	475.8							187.0				187.0
											974.3				

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 402435 2611	BROKE CHEST, PM1	1	5.0	27.6							5.0				5.0
72513 402435 2611	BROKE CHEST, PM2	1	5.0	27.6							5.0				5.0
72513 402435 2611	70% CLAY MAKE TANK	1	5.7	31.5							5.7				5.7
72513 401332 1611	35% CLAY TANK	2	1.0	5.5							2.0				2.0
72513 303334 2611	STARCH STORAGE SILO	1	5.0	9.2							5.0				5.0
72513 401335 1611	SLURRY MAKE UP TANK	2	0.7	3.9							1.4				1.4
72513 401232 1611	COOKED STARCH SURGE TANK	1	0.44	2.4							0.44				0.44
72513 401335 1611	COOKED STARCH STORAGE TANK	2	1.6	8.8							3.2				3.2
72513 401335 1611	STARCH DAY TANK	2	0.82	4.5							1.64				1.64
72513 401335 1611	POLYMER MIX TANK	1	0.7	3.9							0.7				0.7
72513 401335 1611	POLYMER STORAGE TANK	1	0.7	3.9							0.7				0.7
72513 401332 1611	ALUM DISSOLVING TANK	1	0.9	4.95							0.9				0.9
72513 401332 1611	ALUM HEAD TANK	1	1.6	8.8							1.6				1.6
72513 402432 1611	ALUM STORAGE TANK	1	3.8	21.0							3.8				3.8

37.08

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401335 1611	DEFOAMER BATCH TANK	1	0.7	3.9							0.7				0.7
72513 401335 1611	FELT CLEANER TANK	1	0.7	3.9							0.7				0.7
72513 401335 1611	FABRIC CLEANER TANK	1	0.7	3.9							0.7				0.7
69211 075432 6111	MILL OIL STORAGE TANK	1	112.0	206.2							112.0				112.0
72513 401332 1111	SUMP TANK, WEAK BLACK LIQUOR	1	2.7	5.0							2.7				2.7
72513 404632 5111	WEAK BLACK LIQUOR TANK	2	58.0	106.8							116.0				116.0
72513 401222 1111	LIQUOR FLASH TANK	1	0.6	1.1							0.6				0.6
72513 404632 5111	50% BLACK LIQUOR STORAGE TANK	1	52.0	95.7							52.0				52.0
72513 401232 1111	LIQUOR SURGE TANK	1	0.4	0.7							0.4				0.4
72513 403532 3111	62% STRONG BLACK LIQUOR STOR.TANK	2	19.0	35.0							38.0				38.0
72513 403532 3111	BOIL OUT LIQUOR TANK	1	17.0	31.3							17.0				17.0
72513 303432 3111	SALT CAKE (Na_2SO_4) STORAGE SILO	1	22.0	40.5							22.0				22.0
72513 401332 1111	SALT CAKE DAY TANK	1	3.0	5.5							3.0				3.0
72513 402435 2611	SALT CAKE MIX TANK	1	5.0	27.6							5.0				5.0
											370.8				

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401335 1611	SALT CAKE DISSOLVING TANK	1	3.0	16.6							3.0				3.0
72513 402535 3111	SMELT DISSOLVING TANK	1	23.0	42.3							23.0				23.0
72513 405732 5111	GREEN LIQUOR CLARIFIER AND STOR. TANK	1	80.0	147.3							80.0				80.0
72513 402432 2111	CONTAMINATED HOT WATER TANK	1	8.0	14.7							8.0				8.0
72513 402435 2111	CAUSTICIZER NO.1, TANK	1	8.0	14.7							8.0				8.0
72513 402435 2111	CAUSTICIZER NO.2, TANK	1	8.0	14.7							8.0				8.0
72513 402435 2111	CAUSTICIZER NO.3, TANK	1	8.0	14.7							8.0				8.0
72513 401232 1611	CAUSTICIZER SUMP TANK	1	0.5	2.8							0.5				0.5
72513 406732 6111	WHITE LIQ.CLARIFIER AND STOR.TANK	1	163.0	300.1							163.0				163.0
72513 403532 3611	CAUSTICIZING AREA DUMP TANK	1	16.0	29.4							16.0				16.0
72513 401232 1111	SOAP SUMP TANK	1	1.0	1.8							1.0				1.0
72513 403532 3111	SOAP SKIMMING TANK	1	18.0	35.5							18.0				18.0
72513 401232 1111	SOAP SUMP TANK	1	0.9	1.7							0.9				0.9
72513 403532 3111	SOAP STORAGE TANK	1	22.0	40.5							22.0				22.0
											359.4				

TABLE NO. :

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EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1968

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 403432 3111	TALL OIL REACTION VESSEL	1	13.0	23.9							13.0				13.0
72513 402432 2111	TALL OIL SETTLING VESSEL	1	7.0	12.9							7.0				7.0
72513 401332 1111	TALL OIL STORAGE TANK	1	2.0	3.7							2.0				2.0
72513 401232 1111	VACUUM PUMP RECEIVING TANK	1	0.3	0.55							0.3				0.3
72513 402332 2611	CONTAMINATED CONDENSATE TANK, EVAPORATORS	1	5.0	27.6							5.0				5.0
72513 402432 3611	STRIPPED CONDENSATE TANK	1	10.0	55.2							10.0				10.0
72513 401335 1111	MUD MIX TANK	1	2.0	3.7							2.0				2.0
72513 405732 5111	MUD WASHER AND WEAK WHITE LIQUOR STORAGE TANK	1	92.0	169.4							92.0				92.0
72513 403535 3111	LIME MUD STORAGE TANK	1	17.0	31.3							17.0				17.0
72513 401232 0901	ACID TANK	1	-	2.56							-				-
72513 401232 1111	SEAL TANK FOR DUST CHAMBER	1	0.4	0.7							0.4				0.4
72513 402332 1111	(LIME KILN) SUMP SEPARATOR-TANK	1	2.0	3.7							2.0				2.0
72513 402432 3111	LIME STONE STORAGE BIN	1	10.0	18.4							10.0				10.0
72513 401232 1111	COOLING WATER COLLECTION TANK	1	0.3	0.6							0.3				0.3

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANK, SILOS AND BINS)

Total weight in tons

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $. 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
72513 401332 2111	DAY OIL TANK, FOR LIME KILN	1	5.0	9.2							5.0				5.0
72513 402432 2111	BURNT LIME STORAGE BIN	1	8.0	14.7							8.0				8.0
72513 402432 3111	PURCHASED LIME STORAGE BIN	1	10.0	18.4							10.0				10.0
72513 401021 1111	SULPHUR MELTER	1	3.5	9.2						3.5					3.5
72513 402031 1611	SODIUM SULPHITE SOLUTION CHEST	2	3.7	20.4						7.4					7.4
72513 402031 1611	SO_2 SOLUTION CHEST	1	3.7	20.4						3.7					3.7
72513 402432 3611	BRINE DISSOLVING TANK WITH FILTER	1	11.5	63.5						11.5					11.5
72513 402432 1611	RAW BRINE STOR. TANK WITH HEATER	1	4.9	27.1						4.9					4.9
72513 401232 1611	CARBONATE MAKE UP TANK	2	0.6	3.3						1.2					1.2
72513 401232 1611	CARBONATE REACTOR - TANK	1	0.6	3.3						0.6					0.6
72513 401332 1611	CAUSTIC REACTOR - TANK	1	0.8	4.4						0.8					0.8
72513 404632 4611	BRINE CLARIFIER, WITH RAKE	1	29.0	184.1						29.0					29.0
72513 401031 1611	BRINE SLUDGE PIT	1	3.5	19.3						3.5					3.5
72513 401232 1111	COAGULANT MIXING TANK	1	0.45	0.8						0.45					0.45
										66.55	23.0				89.55

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANK, SILOS AND BINS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401332 1611	CLARIFIER OVER FLOW TANK	1	1.4	7.7						1.4					1.4
72513 401232 1611	SPENT REGENERATIVE TANK	1	0.45	2.5						0.45					0.45
72513 401332 1611	FINISHED BRINE TANK WITH HEATER FOR CHLORINE CELLS	1	3.0	16.6						3.0					3.0
72513 401332 1611	BRINE HEAD TANK	1	2.8	15.5						2.8					2.8
72513 401332 1611	DEPLETED BRINE STORAGE TANK	1	2.8	15.5						2.8					2.8
72513 401132 1611	DECHLORINATION TANK	1	0.4	2.2						0.4					0.4
72513 401232 1611	DEMINERALIZED WATER HEAD TANK	1	0.83	4.6						0.83					0.83
72513 401332 1111	CAUSTIC RECEIVER TANK	1	1.6	2.9						1.6					1.6
72513 403532 3111	30% CAUSTIC SODA STORAGE TANK	2	16.0	29.5						32.0					32.0
72513 403532 3111	10% CAUSTIC TANK	1	16.0	29.5						16.0					16.0
72513 402432 2611	50% CAUSTIC STORAGE TANK	1	5.3	29.2						5.3					5.3
72513 401332 1611	CONDENSATE TANK, 50% CAUSTIC EVAP	1	1.4	7.7						1.4					1.4
72513 401332 2111	98% H_2SO_4 STORAGE TANK	1	6.0	11.0						6.0					6.0
72513 401232 1111	SPENT H_2SO_4 DUMP TANK	1	1.2	2.2						1.2					1.2

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401132 1111	ACID DESISTER	1	0.2	0.36						0.2					0.2
72513 402332 2611	LIQUID CHLORINE STORAGE TANK	4	8.8	48.6						35.2					35.2
72513 401232 1611	SODIUM HYPOCHLORITE TOWER	1	3.0	16.5						3.0					3.0
72513 401232 1611	SCRUBBER CIRCULATION TANK	1	0.8	4.4						0.8					0.8
72513 401332 1611	CHILLED WATER STORAGE TANK	1	0.8	4.4						0.8					0.8
72513 403532 3611	HYPO STORAGE TANK	2	15.0	82.8						30.0					30.0
72513 401332 2611	SALT DISSOLVING TANK	1	9.5	52.4						9.5					9.5
72513 401332 1611	REACTORS, SODIUM CHLORATE	6	3.2	17.7						19.2					19.2
72513 401232 1611	DICHROMATE MIX TANK	1	0.2	1.1						0.2					0.2
72513 401232 1611	CELL LIQUOR CIRCULATION TANK, SODIUM CHLORATE	1	0.4	2.2						0.4					0.4
72513 401332 1611	CHLORATE STORAGE TANK	2	3.6	19.9						7.2					7.2
72513 401332 1611	CHEMICAL PLANT DUMP TANK	1	2.2	12.2						2.2					2.2
72513 402432 2611	33% HCl STORAGE TANK	1	7.6	42.0						7.6					7.6
72513 401232 1611	CHLORATE/CHLORIDE SOLUTION HEAD TANK	1	0.2	1.1						0.2					0.2

116.5

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401232 1611	HCl TANK	1	0.2	1.1						0.2					0.2
72513 401232 1611	ClO_2 GENERATOR	1	2.2	12.1						2.2					2.2
72513 401232 1611	CONDENSATE TANK, FROM REBOILER	1	0.2	1.1						0.2					0.2
72513 401232 1611	GENERATOR DUMP TANK	1	0.2	1.1						0.2					0.2
72513 403432 3611	ClO_2 SOLUTION STORAGE TANK	2	13.2	267.2						26.4					26.4
72513 403532 2611	PULP CHEST, FOR PULP DRYER	1	9.3	51.36						9.3					9.3
										296.73	2915.18		TOTAL		3211.91

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 715605 1212	AGITATOR, BLOW TANK	2	1.25	10.0							2.5				2.5
72514 714505 1212	AGITATOR, KNOTS TANK	1	0.55	5.3							0.55				0.55
72514 715505 1212	AGITATOR, WASHED PULP STORAGE TANK	1	0.82	7.7							0.82				0.82
72514 712605 1212	AGITATOR, PRIMARY REJECTS TANK	1	0.28	3.7							0.28				0.28
72514 712605 1212	AGITATOR, SECONDARY SCREEN ACCEPTS TANK	1	0.28	3.7							0.28				0.28
72514 711605 1212	AGITATOR, TERTIARY SCREEN REJECTS TANK	1	0.2	3.1							0.2				0.2
72514 714605 1212	AGITATOR, BROWN STOCK AREA DUMP TANK	1	0.35	4.0							0.35				0.35
72514 716505 1212	AGITATOR, HIGH DENSITY TOWER, S'WOOD	1	1.4	12.8							1.4				1.4
72514 716505 1212	AGITATOR, HIGH DENSITY TOWER H'WOOD	1	1.4	12.8							1.4				1.4
72514 714505 1212	AGITATOR, LEVELLING CHEST	1	0.8	6.2							0.8				0.8
72514 713505 1212	ACITATOR, D/C BLEACH TOWER	2	0.3	3.9							0.6				0.6
72514 705201 1232	STEAM MIXER, CAUSTIC STAGE	1	3.5	7.5							3.5				3.5
72514 713505 1212	AGITATOR, CAUSTIC TOWER	1	0.35	4.0							0.35				0.35
72514 705201 1232	STEAM MIXER, ClO_2 STAGE	1	3.5	7.5							3.5				3.5

TABLE NO.:

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 707201 2232	ClO_2 MIXER	1	5.5	10.0							5.5				5.5
72514 723505 1212	AGITATOR, ClO_2 BLEACH TOWER	2	0.35	4.0							0.7				0.7
72514 716505 1212	AGITATOR, H.D.STOR.TANK-S'WOOD PULP	2	1.6	11.9							3.2				3.2
72514 716505 1222	AGITATOR, H.D.STOR.TANK-H'WOOD PULP	1	1.8	12.8							1.8				1.8
72514 714605 1212	AGITATOR, REFINED STOCK CHEST	1	0.5	4.7							0.5				0.5
72514 714605 1212	AGITATOR, UNBLEACHED STOCK CHEST	1	0.5	4.7							0.5				0.5
72514 704201 1232	STEAM AND HYPO MIXER	1	3.8	10.5							3.8				3.8
72514 713605 1212	AGITATOR, HYPO BLEACH. TOWER	1	0.29	3.8							0.29				0.29
72514 716505 1212	AGITATOR, H.D.STORAGE TOWER-CMP	1	0.8	11.9							0.8				0.8
72514 714505 1212	AGITATOR, STORAGE CHEST-S'WOOD KRAFT STOCK	2	0.45	5.2							0.9				0.9
72514 714505 1212	AGITATOR, STORAGE CHEST-H'WOOD KRAFT STOCK	2	0.45	5.2							0.9				0.9
72514 714505 1212	AGITATOR, REFINED S'WOOD KRAFT CHEST	2	0.45	5.2							0.9				0.9
72514 714505 1212	AGITATOR, REFINED H'WOOD KRAFT CHEST	2	0.45	5.2							0.9				0.9
72514 714505 1212	AGITATOR, BLEND CHEST-GRADE 1	2	0.45	5.2							0.9				0.9

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS)

Total weight in tons

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $, 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
72514 715505 1212	AGITATOR, MACHINE CHEST-PM 1	2	0.8	7.7							1.6				1.6
72514 714505 1212	AGITATOR, BROKE CHEST-PM 1	1	0.45	5.2							0.45				0.45
72514 717502 1222	ROTOR(PULPING), COUCH PIT-PM 1	2	2.7	18.4							5.4				5.4
72514 717502 1222	ROTOR, BROKE PULPER-PM 1	2	2.7	18.4							5.4				5.4
72514 714505 1212	AGITATOR, STORAGE CHEST (H'WOOD) CHEMIMECHANICAL PULP	2	0.45	5.2							0.9				0.9
72514 714505 1212	AGITATOR, REFINED CHEST H'WOOD-CMP	2	0.45	5.2							0.9				0.9
72514 715505 1212	AGITATOR, BLEND CHEST GRADES 2 AND 3	2	0.8	7.6							1.6				1.6
72514 715505 1212	AGITATOR, MACHINE CHEST-PM 2	2	0.8	7.6							1.6				1.6
72514 714505 1212	AGITATOR, BROKE CHEST-PM 2	1	0.45	5.2							0.45				0.45
72514 717502 1222	ROTOR(PULPING)-COUCH PIT -PM 2	2	2.7	18.4							5.4				5.4
72514 717502 1222	ROTOR, BROKE PULPER-PM 2	2	2.7	18.4							5.4				5.4
72514 712301 1212	AGITATOR, 70% CLAY MAKE TANK	1	0.28	3.66							0.28				0.28
72514 713301 1212	AGITATOR, 70% CLAY STORAGE TANK	2	0.29	3.8							0.58				0.58
72514 712301 1212	AGITATOR, 35% CLAY TANK	2	0.28	3.66							0.56				0.56
											30.52				

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 711204 1212	AGITATOR, SLURRY MAKE TANK	2	0.4	4.3							0.8				0.8
72514 712205 1212	AGITATOR,COOKED STARCH STOR.TANK	2	0.4	4.9							0.8				0.8
72514 711205 1212	AGITATOR,STARCH DAY TANK	2	0.4	4.3							0.8				0.8
72514 711604 1212	AGITATOR,POLYMER MIX TANK	1	0.2	3.1							0.2				0.2
72514 711604 1212	AGITATOR,POLYMER STORAGE TANK	1	0.2	3.1							0.2				0.2
72514 711604 1212	AGITATOR,DEFOAMER BATCH TANK	1	0.2	3.1							0.2				0.2
72514 711504 1212	AGITATOR,FELT CLEANER TANK	1	0.2	3.1							0.2				0.2
72514 711504 1212	AGITATOR,FABRIC CLEANER TANK	1	0.2	3.1							0.2				0.2
72514 712505 1212	AGITATOR,SALT CAKE MIX TANK	1	0.28	3.7							0.28				0.28
72514 714505 1212	AGITATOR,SALT CAKE DISSOLVING TANK	1	0.45	4.8							0.45				0.45
72514 712505 1212	AGITATOR,PRECIPITATOR MIX TANK	2	0.28	3.7							0.56				0.56
72514 713505 1212	AGITATOR,SMELT DISSOLVING TANK	1	0.29	3.8							0.29				0.29
72514 713605 1212	AGITATOR,LIME SLAKER/CLASSIFIER	1	0.29	3.8							0.29				0.29
72514 713605 1212	AGITATOR,CAUSTICIZER NO.1 TANK	1	0.35	4.0							0.35				0.35

5.62

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 713605 1212	AGITATOR, CAUSTICIZER NO. 2 TANK	1	0.35	4.0							0.35				0.35
72514 713605 1212	AGITATOR, CAUSTICIZER NO. 3 TANK	11	0.35	4.0							0.35				0.35
72514 713605 1212	AGITATOR, MUD MIX TANK	11	0.3	3.9							0.3				0.3
72514 713605 1212	AGITATOR, LIME MUD STORAGE TANK	1	0.29	3.8							0.29				0.29

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 711503 1212	AGITATOR, CARBONATE MAKE UP TANK	2	0.05	2.4							0.1				0.1
72514 711503 1212	AGITATOR, CARBONATE REACTOR TANK	1	0.2	3.1							0.2				0.2
72514 711503 1212	AGITATOR, CAUSTIC REACTOR TANK	1	0.2	3.1							0.2				0.2
72514 711503 1212	AGITATOR, COAGULANT MIXING TANK	1	0.2	3.1							0.2				0.2
72514 711605 1212	AGITATOR, SALT DISSOLVING TANK SODIUM CHLORATE PRODUCTION	1	0.05	2.4							0.05				0.05
72514 711504 1212	AGITATOR, DICHROMATE MIX TANK	1	0.05	2.4							0.05				0.05
72514 714505 1212	AGITATOR, PULP CHEST FOR PULP DRYER	2	0.55	5.27							1.1				1.1
72514 714505 1212	AGITATOR, MACHINE CHEST-PULP DRYER	2	0.8	6.25							1.6				1.6
72514 716505 1222	AGITATOR(ROTOR), BROKE PULPER -PULP DRYER	2	2.3	14.7							4.6				4.6
72514 714505 1212	AGITATOR, BROKE CHEST- PULP DRYER	2	0.8	6.25							1.6				1.6
72514 716505 1222	AGITATOR, COUCH PIT-PULP DRYER	2	2.3	14.7							4.6				4.6
											89.85		TOTAL		89.85

14.30

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72543 022344 2112	LOG SPLITTER	1	8.0	12.3							8.0				8.0
72514 509155 3252	CHIPPER AND BLOWER, SOFT WOOD	1	22.0	182.0							22.0				22.0
72514 109206 2932	CHIP SCREEN, SOFTWOOD	1	5.5	29.6							5.5				5.5
72514 505135 2232	RECHIPPER AND BLOWER, SOFTWOOD	1	6.0	58.8							6.0				6.0
72514 509155 3252	CHIPPER AND BLOWER, HARDWOOD	1	22.0	182.0							22.0				22.0
72514 109206 2932	CHIP SCREEN, HARDWOOD	1	5.5	29.6							5.5				5.5
72514 505135 2222	RECHIPPER AND BLOWER, HARDWOOD	1	6.0	58.7							6.0				6.0
72513 103422 5231	DIGESTER	4	95.0	279.0							380.0				380.0
72514 107124 1722	PRESSURE KNOTTER	2	2.2	71.0							4.4				4.4
72514 307463 5262	BROWN STOCK WASHER, STAGE 1	1	51.0	227.0							51.0				51.0
72514 307463 4262	BROWN STOCK WASHER, STAGE 2	1	46.0	227.0							46.0				46.0
72514 307463 4262	BROWN STOCK WASHER, STAGE 3	1	40.0	227.0							40.0				40.0
72514 107124 2722	PRESSURE SCREEN, PRIMARY	2	5.0	104.4							10.0				10.0
72514 107124 2722	PRESSURE SCREEN, SECONDARY	1	5.0	93.5							5.0				5.0

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 601134 1612	PRIMARY CLEANERS	18	0.12	6.5							2.16				2.16
72513 601134 1612	SECONDARY CLEANERS	7	0.12	6.5							0.84				0.84
72514 103114 1722	PRESSURE SCREEN, TERTIARY	1	3.7	6.5							3.7				3.7
72514 407463 5262	DECKER	1	51.0	227.0							51.0				51.0
72514 307463 4262	D/C WASHER	1	40.0	198.6							40.0				40.0
72514 307463 4262	CAUSTIC WASHER	1	40.0	198.6							40.0				40.0
72514 307463 4262	CHLORINE DIOXIDE WASHER	1	40.0	198.6							40.0				40.0
72514 106206 3932	CHIP WASHER/SCREEN	1	12.0	39.4							12.0				12.0
72513 112332 3111	CHIP IMPREGNATOR (SOAKER)	1	17.0	63.1							17.0				17.0
72514 607102 1732	SHREDDER	1	3.5	33.0							3.5				3.5
72514 408123 1232	SCREW THICKENER	1	4.5	36.8							4.5				4.5
72514 102113 1232	PRESSATE SCREEN	1	3.0	13.0							3.0				3.0
72514 604403 4262	PRIMARY REFINER (DISC)	2	48.0	1690.2						96.0					96.0
72514 306473 3242	REFINED STOCK WASHER	1	12.0	141.8							12.0				12.0
										96.0	219.7				

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY(SPECIALIZED ITEMS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 604403 4262	SECONDARY REFINER (DISC)	2	48.0	1690.2						96.0	.				96.0
72513 601132 1611	CENTRIFUGAL CLEANERS-3 STAGE SYSTEM	220	0.036	.0.03							7.92				7.92
72514 406473 3242	DECKER-THICKENER	1	12.0	184.4							12.0				12.0
72514 102301 1722	HYPO FILTER	1	3.0	16.6							3.0				3.0
72514 306473 3242	SEMI-BLEACHED STOCK WASHER	1	12.0	184.4							12.0				12.0
72514 604203 2732	REFINER, SOFT WOOD STOCK	3	5.5	91.0							16.5				16.5
72514 604203 2732	REFINER, HARD WOOD STOCK	3	5.5	91.0							16.5				16.5
72514 611101 1732	DEFLAKER, PM1 BROKE	1	3.5	33.0							3.5				3.5
72513 6012 32 2612	DECULATOR/CLEANER	1	5.0	248.7							5.0				5.0
72514 105134 1732	MACHINE SCREEN, PM 1	1	4.35	83.6							4.35				4.35
72512 014654 9262	PAPER MAKING MACHINE NO.1	1	1020.0	14925.3						1020.0	.				1020.0
72512 205691 4242	REWINDER, PAPER MACHINE NO.1	1	32.0	1262.6						32.0	.				32.0
72514 209665 2232	SAWEALL, PM 1	1	7.6	292.7							7.6				7.6
										1148.0	88.37				

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 604203 2732	REFINER, CHEMI-MECHANICAL STOCK	3	5.5	91.0							16.5				16.5
72514 611101 1732	DEFLAKER, PM 2 BROKE	1	3.5	33.0							3.5				3.5
72513 601232 2612	DECULATOR/CLEANER-PM 2	1	5.0	248.7							5.0				5.0
72514 105134 1732	MACHINE SCREEN, PM 2	1	4.35	83.6							4.35				4.35
72512 014654 9262	PAPER MAKING MACHINE NO. 2	1	1020.0	14925.3						1020.0					1020.0
72512 205691 4242	REWINDER, PAPER MACHINE NO 2	1	32.0	1262.6						32.0					32.0
72514 209665 2232	SAVEALL, PM 2	1	7.6	292.7							7.6				7.6
72514 107112 1712	VIBRATING SCREEN, STARCH PREPARAT.	2	0.4	2.0							0.8				0.8
72514 101112 1712	ALUM FILTER	2	0.4	11.3							0.8				0.8
72512 708101 1922	KICKER-PNEUMATIC FLOOR MOUNTED	1	3.0	7.3							3.0				3.0
72512 718101 1912	CUSHION ROLL STOP	1	1.0	15.4							1.0				1.0
72512 708101 1922	SCALE RETRACTABLE KICKER	1	3.0	7.3							3.0				3.0
72512 718101 1912	RETRACTABLE CUSHIONED ROLL STOP	1	1.0	11.37							1.0				1.0
72512 718101 1912	CUSHIONED ROLL STOP	6	1.0	11.37							6.0				6.0
										1052.0	52.55				

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72512 708101 1922	RETRACTABLE KICKER	1	3.0	7.3							3.0				3.0
72512 608101 0902	ROLL WRAPPER	1	-	421.6							-				-
72512 708101 1922	KICKER-PNEUMATIC FLOOR MOUNTED	1	3.0	7.3							3.0				3.0
72512 204171 4942	SALVAGE WINDER	1	33.0	576.2							33.0				33.0
72512 708101 1922	KICKER-PNEUMATIC FLOOR MOUNTED	4	3.0	7.3							12.0				12.0
72512 622000 1912	CORE CUTTER	1	3.0	15.3							3.0				3.0
72512 632001 3922	CORE WINDER	1	10.0	102.2							10.0				10.0
72512 303142 2222	SHEET CUTTER (1900 mm)	2	6.0	219.7							12.0				12.0
72512 303142 2222	SHEET CUTTER (1600 mm)	6	6.0	219.7							36.0				36.0
72512 603102 1922	REAM WRAPPER, AUTOMATIC	4	1.0	29.9							4.0				4.0
72512 603102 1922	REAM WRAPPER, SEMI AUTOMATIC	2	1.0	17.1							2.0				2.0
72512 614102 1922	PALLET STRAPPER	1	2.0	33.6							2.0				2.0

120.0

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 109233 2932	BLACK LIQUOR FILTER	1	6.0	20.0							6.0				6.0
72514 103143 1722	BROWN FILTER	1	2.1	20.0							2.1				2.1
72513 501335 1612	LIME SLAKER/CLASSIFIER	1	2.3	4.1							2.3				2.3
72514 104253 2722	LIME MUD FILTER	1	6.1	25.0							6.1				6.1
72514 554201 2232	ELECTROLYTIC CELLS, FOR Cl_2-NaOH PROD.	24	8.0	36.3							192.0				192.0
72514 551101 1912	ELECTROLYTIC CELLS, FOR SODIUM CHLORATE PRODUCTION	24	0.4	13.4							9.6				9.6
72514 101112 1712	CHLORATE CHLORIDE SOLUTION FILTER	1	0.3	14.9							0.3				0.3
72514 101112 1712	HCl FILTER	1	0.15	7.8							0.15				0.15
72513 601132 1612	CENTRIFUGAL CLEANERS, PULP STOCK	24	0.007	0.046							0.17				0.17
72514 107124 2722	PRESSURE SCREEN, PULP DRYER	1	5.0	104.4							5.0				5.0
72512 115411 8252	PULP DRYER	1	300.0	3082.0						300.0					300.0
72514 209665 2232	SAVEALL, PULP DRYER	1	7.6	292.7							7.6				7.6
										2596.0	1333.34		TOTAL :-		3929.34

300.0 2332

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (METAL DETECTORS AND MAGNETIC SEPARATORS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72831 313003 1912	METAL DETECTOR-SOFTWOOD SYSTEM	1	0.36	11.9							0.36				0.36
72831 313003 1932	MAGNETIC SEPARATOR, S'WOOD CHIP SCREEN	1	3.55	6.6							3.55				3.55
72831 311003 1932	MAGNETIC SEPARATOR, OF S'WOOD RECHIPPER AND BLOWER	1	3.0	5.9							3.0				3.0
72831 313003 1932	MAGNETIC SEPARATOR, ON S'WOOD ACCEPTS CONVEYOR TO CHIP SILO	1	3.55	6.6							3.55				3.55
72831 313003 1912	METAL DETECTOR-HARDWOOD SYSTEM	1	0.36	11.9							0.36				0.36
72831 313003 1932	MAGNETIC SEPARATOR, H'WOOD CHIP SCREEN	1	3.55	6.6							3.55				3.55
72831 311003 1932	MAGNETIC SEPARATOR, OF H'WOOD RECHIPPER AND BLOWER	1	3.0	5.9							3.0				3.0
72831 313003 1932	MAGNETIC SEPARATOR, ON HARDWOOD ACCEPTS CONVEYOR TO CHIP SILO	1	3.55	6.6							3.55				3.55
72831 313003 1932	MAGNETIC SEPARATOR, ON BELT CONVEYOR-CHIPS TO DIGESTER	1	3.55	6.6							3.55				3.55
72831 311002 1212	MAGNETIC SEPARATOR-BLOW TANK DISCHARGE	1	0.8	6.58							0.8				0.8
											25.27		TOTAL :-		25.27

TABLE NO. :

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EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : [illegible] PULP [illegible] PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72831 433001 2941	DISC CYCLONE, SOFT WOOD SYSTEM	1	5.0	9.2							5.0				5.0
74362 708100 1612	STRAINER- DIRTY HOT CONDENSATE	2	1.4	1.31							2.8				2.8
72831 431002 1912	LIQUID CYCLONE	1	0.6	3.3							0.6				0.6
72831 141001 2922	FOAM BREAKER	2	7.0	88.0							14.0				14.0
72831 121002 1911	CYCLONE, CHIP WASHING SYSTEM	1	0.2	0.4							0.2				0.2
74165 991122 1412	STARCH COOKER	2	1.0	12.0							2.0				2.0
74362 702100 1612	STARCH STRAINER	2	0.4	5.0							0.8				0.8
71111 004254 8321	POWER BOILER	1	440.0	4737.0							440.0				440.0
74342 004111 1222	SALT CAKE BLOWER	1	2.85	23.8							2.85				2.85
71111 004256 9321	RECOVERY BOILER	1	1144.0	3814.0							1144.0				1144.0
74163 121426 6211	LIME KILN	1	155.0	281.4							155.0				155.0
72832 021421 2231	LIMESTONE CRUSHER	1	8.0	49.7							8.0				8.0
72832 021312 1232	HOT LIME CRUSHER	1	2.5	31.8							2.5				2.5

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TABLE NO. :

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EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74121 001505 2942	SULPHUR BURNER AND COOLING CHAMBER	1	9.0	28.9							9.0				9.0
72831 222002 2642	BRINE FILTER	2	5.6	15.6							11.2				11.2
59243 041232 2111	DRY AIR RECEIVER	1	5.5	11.8							5.5.				5.5
74342 003123 1212	HYDROGEN BLOWER	1	1.2	5.1							1.2				1.2
74165 081224 1212	HCl COMBUSTION CHAMBER	1	0.4	1.26							0.4				0.4
											1805.05		TOTAL =		1805.05

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS—COOLER, CHILLER, HEAT EXCHANGERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74161 054235 1612	CONDENSER, BLOW HEAT RECOVERY SYS.	1	4.6	34.0							4.6				4.6
74161 012111 1612	HEAT EXCHANGER, ACCUMULATOR HOT WATER	1	2.0	8.28							2.0				2.0
74161 054141 1612	TURPENTINE CONDENSER	1	2.5	26.3							2.5				2.5
74161 015241 1612	HEAT EXCHANGER, REFINED CMP	1	1.7	52.6							1.7				1.7
74161 014141 1112	HEAT EXCHANGER, 50% STRONG BL.LIQ.	1	4.5	34.2							4.5				4.5
74161 102111 1612	PREHEATER, 50% ST.BLACK LIQUOR	1	2.0	7.9							2.0				2.0
74161 014141 1612	HEAT EXCHANGER, 62% ST.BL.LIQ.	1	2.5	26.3							2.5				2.5
74161 074247 2611	AIR HEATER, ECONOMIZER-RECOVERY BOILER	1	7.5	39.4							7.5				7.5
74161 072111 1112	GREEN LIQUOR HEATER/COOLER	1	1.5	8.8							1.5				1.5
74161 054141 1112	SURFACE CONDENSER, EVAPORATOR FLASH	1	2.5	26.3							2.5				2.5
74161 034141 1112	EVAPORATOR VAPOR PRE-COOLER	1	2.5	26.3							2.5				2.5
74161 032141 1612	CAUSTIC COOLER	1	1.0	4.99							1.0				1.0
74161 033131 1612	CHLORINE GAS COOLER	1	1.1	13.1							1.1				1.1
74161 032121 1612	H_2SO_4 COOLER	2	1.0	5.1							2.0				2.0

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS-COOLER, HEAT EXCHANGERS, CONDENSERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74161 032131 1612	ACID SEPARATOR AND COOLER	1	1.8	9.6							1.8				1.8
74161 043131 1212	CHLORINE LIQUIFIER	1	1.8	9.6							1.8				1.8
74161 072127 1112	AIR DRYER, COMPRESSOR	1	1.0	5.1							1.0				1.0
74161 093131 1612	CHLORINE VAPOURISER	2	3.2	17.0							6.4				6.4
74161 045005 3612	CHILLER, HYPOPLANT	2	12.0	67.0							24.0				24.0
74161 031111 1612	CHLORATE COOLER	1	0.25	1.3							0.25				0.25
74161 031111 1212	HYDROGEN WASHER AND COOLER	24	0.25	1.3							6.0				6.0
74161 022131 1612	ClO_2 EVAPORATOR REBOILER	1	1.8	35.3							1.8				1.8
74161 032131 1612	ClO_2 COOLER	1	1.8	35.3							1.8				1.8
74161 052131 1612	ClO_2 SURFACE CONDENSER	1	1.8	35.3							1.8				1.8
											84.55		TOTAL →		84.55

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1982

PULP AND PAPER MACHINERY (GENERAL ITEMS-EVAPORATORS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74162 014153 4612	EVAPORATOR, 5TH EFFECT	1	38.0	651.2							38.0				38.0
74162 014153 4612	EVAPORATOR, 4TH EFFECT	1	36.0	651.2							36.0				36.0
74162 014153 4612	EVAPORATOR, 3RD EFFECT	1	36.0	651.2							36.0				36.0
74162 014253 4612	EVAPORATOR, 2ND EFFECT	1	48.0	651.2							48.0				48.0
74162 014253 5612	EVAPORATOR, 1ST EFFECT	1	56.0	651.2							56.0				56.0
74162 012141 3612	1ST CONCENTRATOR	1	17.0	89.4							17.0				17.0
74162 012141 3612	2ND CONCENTRATOR	1	17.0	89.4							17.0				17.0
74162 011143 1611	CAUSTIC SODA EVAPORATOR	1	3.2	17.0							3.2				3.2
74162 012113 1612	ClO_2 EVAPORATOR	1	3.2	17.0							3.2				3.2
											254.4		TOTAL:-		254.4

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS-STRIPPING TOWER, SCRUBBER, ABSORBTION COLUMNS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74166 021142 1611	DISSOLVING TANK VENT SCRUBBER	1	0.9	5.0							0.9				0.9
74166 071141 1611	STRIPPING TOWER	1	4.0	22.1							4.0				4.0
74166 021142 1611	VENTURI SCRUBBER, LIME KILN	1	0.9	5.0							0.9				0.9
74166 031142 1611	SO_2 ABSORBTION TOWER	1	2.0	11.0							2.0				2.0
74166 031142 1611	Na_2SO_3 ABSORBTION TOWER	1	2.0	11.0							2.0				2.0
74166 991143 1612	ION EXCHANGER COLUMN	1	1.0	35.0							1.0				1.0
74166 031243 1611	CHLORINE DRYING TOWER	1	1.0	5.5							1.0				1.0
74166 021142 1611	VENT SCRUBBER, HYPO PLANT	1	0.9	5.0							0.9				0.9
74166 021142 1611	HYDROGEN SCRUBBER	1	0.26	6.3							0.26				0.26
74166 031241 1212	HCl COOLING/ABSORBTION CHAMBER	1	2.0	5.26							2.0				2.0
74166 021242 1111	TAILGAS SCRUBBER, HCl PLANT	1	1.2	22.9							1.2				1.2
74166 031142 1611	ClO_2 ABSORBTION TOWER	1	0.3	1.65							0.3				0.3
											16.46		TOTAL :-		16.46

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 026121 1712	DIGESTER LIQUOR CIRCULATION PUMP	4	0.79	10.9						3.16					3.16
74220 025241 1212	BLOW TANK DISCHARGE PUMP	2	1.9	12.7						3.8					3.8
74220 024221 1212	CONDENSER WATER PUMP	1	0.5	5.6						0.5					0.5
74220 024221 1212	HOT WATER PUMP TO ACCUMULATOR	1	1.3	3.0						1.3					1.3
74220 026221 1222	ACCUMULATOR RECIRCULATION PUMP	1	2.1	20.0						2.1					2.1
74220 023121 1212	TURPENTINE PUMP	1	0.22	3.3						0.22					0.22
74220 023121 1212	TURPENTINE CONDENSATE PUMP	1	0.22	3.3						0.22					0.22
74220 022121 1712	TURPENTINE PUMP	1	0.20	2.1						0.20					0.20
74220 025251 1712	WHITE LIQUOR PUMP TO DIGESTERS	2	0.53	6.7						1.06					1.06
74220 024241 4112	BLACK LIQUOR PUMP TO DIGESTERS	1	0.5	5.6						0.5					0.5
74220 023261 1212	KNOTS PUMP	1	0.53	5.7						0.53					0.53
74220 025221 1212	PUMP, FILTRATE TO NO 1 VAT DILUTION	1	1.4	11.2						1.4					1.4
74220 025221 1212	PUMP, FILTRATE TO BLOW TANKS DIL.	1	1.1	3.0						1.1					1.1
74220 024121 1212	PUMP, FILTRATE TO DIGESTERS	1	0.46	4.9						0.46					0.46

16.55

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total weigh. in tons

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $. 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
74220 024221 1212	PUMP, FILTRATE TO EVAPORATORS	1	0.46	4.9						0.46					0.46
74220 025221 1212	PUMP, FILTRATE NO 1 TO INTERMEDIATE REPULPER	1	1.4	11.2						1.4					1.4
74220 024221 1212	PUMP, FILTRATE NO 1 TO WASHER SHOWERS	1	0.46	4.9						0.46					0.46
74220 025221 1212	PUMP, FILTRATE NO 2 TO INTERMEDIATE REPULPER	1	1.4	11.2						1.4					1.4
74220 024221 1212	PUMP, FILTRATE NO 2 TO WASHER SHOWERS	1	0.46	4.9						0.46					0.46
74230 003261 1212	PUMP, SOAP FROM FOAM TANK TO STORAGE	1	0.2	1.4						0.2					0.2
74220 023121 1212	PUMP, LIQUOR TO BLACK LIQUOR TANK	1	0.18	2.1						0.18					0.18
74220 025211 1212	PUMP, TO PRIMARY SCREENS	2	1.3	6.6						2.6					2.6
74220 024211 1212	PUMP TO SECONDARY SCREEN	1	0.55	1.8						0.55					0.55
74220 025211 1212	PRIMARY CLEANERS FEED PUMP	1	1.1	3.0						1.1					1.1
74220 024211 1212	PUMP, FEED TO SECONDARY CLEANERS	1	0.35	3.5						0.35					0.35
74220 023211 1212	PUMP, REJECTS TO DIGESTERS	1	0.11	1.8						0.11					0.11
74220 024211 1212	WHITE WATER PUMP	2	1.05	2.6						2.1					2.1
74220 024161 1212	DUMP TANK PUMP-SCREENING PLANT	1	1.1	3.0						1.1					1.1

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024261 1212	THICK STOCK PUMP	1	1.1	3.0						1.1					1.1
74220 024161 1212	PUMP-STOCK TO CHLORINE/DIOXIDE CHLORINE (D/C) TOWER	2	1.1	3.0						2.2					2.2
74220 025261 1212	PUMP TO PRERETENTION TUBE	1	1.1	3.0						1.1					1.1
74220 023111 1212	PUMP, WATER TO Cl_2 INJECTOR	1	0.22	3.3						0.22					0.22
74220 026111 1712	PUMP, D/C STAGE FILTRATE TO D/C WASHER	1	1.5	18.9						1.5					1.5
74220 023111 1712	PUMP, D/C STAGE FILTRATE TO Cl_2 INJECTOR	1	0.22	4.7						0.22					0.22
74220 024211 1712	PUMP, DILUTION TO H.D. WASHED PULP TOWER	1	0.79	10.9						0.79					0.79
74220 023211 1212	PUMP, H.P. SEAL WATER TO THICK STOCK PUMPS	1	0.1	1.8						0.1					0.1
74220 024261 1212	THICK STOCK PUMP	1	1.1	3.0						1.1					1.1
74220 025161 1212	PUMP, STOCK CAUSTIC TOWER TO WASHER	1	1.3	6.6						1.3					1.3
74220 026111 1222	PUMP, CAUSTIC STAGE FILTRATE TO CAUSTIC WASHER	1	2.0	10.3						2.0					2.0
74220 024211 1212	PUMP, CAUSTIC STAGE FILTRATE TO CAUSTIC TOWER	1	0.5	5.47						0.5					0.5
74220 024211 1212	PUMP, CAUSTIC STAGE FILTRATE TO D/C WASHER	1	0.25	3.2						0.25					0.25
74220 024261 1212	THICK STOCK PUMP	1	1.1	3.0						1.1					1.1

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $, 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
74220 025161 1712	STOCK PUMP TO ClO_2 WASHER	1	1.3	14.9						1.3					1.3
74220 026111 1722	PUMP, ClO_2 STAGE FILTRATE TO ClO_2 WASHER INLET	1	2.0	31.9						2.0					2.0
74220 024211 1712	PUMP, ClO_2 STAGE FILTRATE TO ClO_2 TOWER DILUTION	1	0.5	5.2						0.5					0.5
74220 024211 1712	PUMP, ClO_2 STAGE FILTRATE TO CAUSTIC WASHER	1	0.25	2.7						0.25					0.25
74220 024261 1712	THICK STOCK PUMP	1	1.1	45.0						1.1					1.1
74220 023161 1212	DUMP TANK PUMP-BLEACHING AREA	1	1.3	3.0						1.3					1.3
74220 025111 1212	CHIP WASHER/SCREEN CIRCULATION PUMP	1	1.3	3.0						1.3					1.3
74220 024211 1212	CHIP WASHER/SYSTEM CLEANER PUMP	1	0.55	1.83						0.55					0.55
74220 022151 1712	SODIUM SULPHITE LIQUOR FEED PUMP	1	0.15	3.8						0.15					0.15
74220 023311 1212	PUMP, PRESSATE TO KRAFT MILL	1	0.18	2.0						0.18					0.18
74220 024161 1212	PUMP, 4% STOCK TO WASHER	1	1.1	3.0						1.1					1.1
74220 026121 1212	PUMP, STOCK TO WASHER AT 1% CONSISTENCY	1	1.6	10.9						1.6					1.6
74220 023221 1212	PUMP, FILTRATE TO CHIP WASHER AND IMPREGNATOR	2	0.46	4.9						0.92					0.92
74220 024121 1212	PUMP, FILTRATE TO HEAT EXCHANGER	2	0.5	5.7						1.0					1.0

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024121 1712	PUMP, HOT WATER TO MILL	2	0.46	4.3						0.92					0.92
74220 024161 1212	PUMP, 4% STOCK TO CLEANERS	1	1.05	2.6						1.05					1.05
74220 026111 1212	PUMP, UNBLEACHED STOCK TO CLEANERS 0.9 % CONSISTENCY	1	1.6	11.0						1.6					1.6
74220 024111 1712	PRIMARY REJECTS PUMP	1	0.95	9.3						0.95					0.95
74220 024111 1712	SECONDARY REJECT PUMP	1	0.35	3.5						0.35					0.35
74220 024111 1712	WHITEWATER PUMP	2	0.7	7.6						1.4					1.4
74220 024111 1712	PUMP TO BLEACH WASHER	1	0.79	10.8						0.79					0.79
74220 026111 1722	FILTRATE PUMP	1	2.0	31.9						2.0					2.0
74220 023261 1732	THICK STOCK PUMP -12%	1	3.0	20.0						3.0					3.0
74220 023161 1712	PUMP, SOFTWOOD STOCK 4%	1	0.53	6.7						0.53					0.53
74220 024161 1712	PUMP, HARDWOOD STOCK 4%	1	1.1	13.6						1.1					1.1
74220 023161 1712	PUMP, SOFTWOOD STOCK TO REFINERS	1	1.05	5.87						1.05					1.05
74220 024161 1712	PUMP, HARDWOOD STOCK TO REFINERS	1	1.1	13.6						1.1					1.1
74220 023161 1712	PUMP, S'WOOD REFINED TO PM 1 BLEND CHEST	1	0.53	6.7						0.53					0.53

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023161 1712	PUMP, S'WOOD REFINED TO PM 2 BLEND CHEST	1	0.53	6.7						0.53					0.53
74220 024161 1712	PUMP, H'WOOD REFINED TO PM 1 BLEND CHEST	1	1.1	13.6						1.1					1.1
74220 023161 1712	PUMP, H'WOOD REFINED TO PM 2 BLEND CHEST	1	0.53	6.7						0.53					0.53
74220 024161 1712	PUMP, REFINED STOCK TO MACHINE CHEST	1	1.1	13.6						1.1					1.1
74220 024261 1712	PUMP, STOCK TO CLEANING SYSTEM PM 1	1	1.1	13.6						1.1					1.1
74220 023161 1712	PUMP, BROKE TO PM 1	1	0.53	6.7						0.53					0.53
74220 024211 1712	STOCK CLEANING SYSTEM PRIMARY REJECT PUMP	1	0.46	4.4						0.46					0.46
74220 023211 1712	SECONDARY REJECT PUMP	1	0.3	3.3						0.3					0.3
74220 023111 1712	TERTIARY REJECT PUMP	1	0.11	1.2						0.11					0.11
74220 026211 1732	PRIMARY FAN PUMP	1	3.65	86.4						3.65					3.65
74220 024211 1712	SCREEN REJECT PUMP	1	0.25	2.7						0.25					0.25
74220 026211 1732	FAN PUMP	1	3.65	86.4						3.65					3.65
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.2	2.1						0.2					0.2
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.2	2.1						0.2					0.2

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN-ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.2						0.3					0.3
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.2						0.3					0.3
74220 023161 1212	PUMP, SUMP TO WASTE	2	0.53	5.7						1.06					1.06
74220 024211 1712	PUMP, WHITE WATER-PM 1	1	0.35	3.5						0.35					0.35
74220 113611 1712	PUMP, HIGH PRESSURE SHOWERS-PM 1	2	0.72	5.9						1.44					1.44
74220 026211 1712	PUMP, DILUTION	1	1.05	11.8						1.05					1.05
74220 024111 1712	PUMP, WHITE WATER TO SAVEALL-PM 1	1	0.51	4.7						0.51					0.51
74220 024211 1712	PUMP, CLARIFIED WATER	1	0.51	4.7						0.51					0.51
74220 024211 1712	PUMP, CLOUDY WATER	1	0.26	2.2						0.26					0.26
74220 024161 1712	PUMP, SAVEALL SWEETENER	1	0.53	6.7						0.53					0.53
74220 024161 1712	PUMP, (COUCH PIT) -PM 1	1	1.1	13.6						1.1					1.1
74220 023161 1712	PUMP, BROKE TO MACHINE CHEST -PM 1	1	0.53	6.7						0.53					0.53
74220 024161 1712	PUMP, BROKE FROM PULPER TO BROKE CHEST- PM 1	1	1.1	13.6						1.1					1.1
74220 023261 1712	PUMP, BROKE FROM PULPER TO BROKE CHEST-PM 1	1	0.53	6.7						0.53					0.53

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY - (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024161 1712	PUMP,(HARDWOOD)CHEMI MECH.STOCK 4%	1	1.1	13.6						1.1					1.1
74220 024161 1712	PUMP,CHEMI MECH.STOCK TO REFINERS	1	1.1	13.6						1.1					1.1
74220 024261 1712	PUMP,H'WOOD REFINED CMP TO BLEND CHEST	1	1.1	13.6						1.1					1.1
74220 024261 1712	PUMP,REFINED BLENDED STOCK TO MACHINE CHEST	1	1.1	13.6						1.1					1.1
74220 024261 1712	PUMP,H'WOOD REFINED BLENDED STOCK TO CLEANING SYSTEM-PM 2	1	1.1	13.6						1.1					1.1
74220 023161 1712	PUMP, BROKE TO PM 2	1	0.53	6.7						0.53					0.53
74220 024211 1712	STOCK CLEANING SYSTEM,PRIMARY REJECT PUMP	1	0.46	4.4						0.46					0.46
74220 023211 1712	SECONDARY REJECT PUMP	1	0.3	3.3						0.3					0.3
74220 023111 1712	TERTIARY REJECT PUMP	1	0.11	1.2						0.11					0.11
74220 026211 1732	PRIMARY FAN PUMP	1	3.65	86.4						3.65					3.65
74220 024211 1712	SCREEN REJECT PUMP	1	0.25	2.7						0.25					0.25
74220 026211 1732	FAN PUMP	1	3.65	86.4						3.65					3.65
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.2	2.1						0.2					0.2
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.2	2.1						0.2					0.2

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $. 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.2						0.3					0.3
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.2						0.3					0.3
74220 023161 1212	PUMP, SUMP TO WASTE	2	0.53	5.7						1.06					1.06
74220 024211 1712	PUMP, WHITE WATER- PM 2	1	0.35	3.5						0.35					0.35
74220 113611 1712	PUMP, HIGH PRESSURE SHOWERS-PM 2	2	0.72	5.9						1.44					1.44
74220 026211 1712	PUMP, DILUTION - PM 2	1	1.05	11.8						1.05					1.05
74220 024111 1712	PUMP, WHITE WATER TO SAVEALL	1	0.51	4.7						0.51					0.51
74220 024211 1712	PUMP, CLARIFIED WATER	1	0.51	4.7						0.51					0.51
74220 024211 1712	PUMP, CLOUDY WATER	1	0.26	2.2						0.26					0.26
74220 024161 1712	PUMP, SAVEALL SWEETENER	1	0.53	6.7						0.53					0.53
74220 024161 1712	PUMP, COUCH PIT - PM 2	1	1.1	13.6						1.1					1.1
74220 023161 1712	PUMP, BROKE TO MACHINE CHEST -PM2	1	0.53	6.7						0.53					0.53
74220 024161 1712	PUMP, BROKE FROM PULPER TO BROKE CHEST - PM 2	1	1.1	13.6						1.1					1.1
74220 023261 1712	PUMP, BROKE FROM PULPER TO BROKE CHEST - PM 2	1	0.53	6.7						0.53					0.53

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023171 1212	70% CLAY TRANSFER PUMP	1	0.53	5.7						0.53					0.53
74220 023171 1212	70% CLAY RECIRCULATION PUMP	1	0.46	4.9						0.46					0.46
74220 023171 1212	70% CLAY TRANSFER PUMP	1	0.53	5.7						0.53					0.53
74220 023171 1212	70% CLAY RECIRCULATION PUMP	1	0.46	4.9						0.46					0.46
74220 022271 1212	35% CLAY TRANSFER PUMP	2	0.35	3.5						0.70					0.70
74220 022271 1212	35% CLAY RECIRCULATION PUMP	2	0.35	3.5						0.70					0.70
74220 023161 1712	STARCH TRANSFER PUMP	2	0.9	9.3						1.8					1.8
74220 023161 1712	STARCH SUPPLY PUMP	2	1.2	18.3						2.4					2.4
74220 023161 1712	STARCH TRANSFER PUMP	2	0.9	9.3						1.8					1.8
74220 023261 1712	PUMP - STARCH TO SIZE PRESSES OF PM 1 AND PM 2	4	0.7	7.7						2.8					2.8
74210 203161 1212	DIAPHRAGM PUMP, RETENTION AID TRANSFER	1	0.6	11.7						0.6					0.6
74210 202261 1212	DIAPHRAGM SUPPLY PUMP POLYMER TO MACHINES	2	0.3	5.6						0.6					0.6
74220 023161 1712	ALUM PUMP	2	0.22	4.7						0.44					0.44
74220 022211 1712	PUMP, ALUM TO MACHINE	2	0.17	1.3						0.34					0.34

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 022211 1712	PUMP, DEFOAMER TO MACHINE	2	0.52	9.4						1.04					1.04
74230 191111 1712	METERING PUMP, SLIMICIDE	8	0.02	2.5						0.16					0.16
74230 102311 1712	CHEMICAL CLEANERS PUMP	2	0.52	9.4						1.04					1.04
74220 024221 1712	PUMP,WBL TO WEAK LIQUOR STORAGE	1	0.27	3.1						0.27					0.27
74220 024221 1712	PUMP,BLACK LIQUOR TO EVAPORATORS	2	0.27	3.1						0.54					0.54
74220 024221 1712	PUMP, BLACK LIQUOR TO NO 5 EFFECT TRANSFER	1	0.27	3.1						0.27					0.27
74220 024221 1712	PUMP,BLACK LIQUOR TO NO 2 EFFECT	1	0.27	3.1						0.27					0.27
74220 023121 1712	PUMP,TRANSFER TO NO 1 EFFECT	1	0.2	2.2						0.2					0.2
74220 023161 1712	PUMP,50% BL. TO STORAGE	2	0.22	4.7						0.44					0.44
74220 023161 1712	PUMP,50% BL.TO 1ST. CONCENTRATOR	2	0.22	4.7						0.44					0.44
74220 023161 1712	PUMP, BLACK LIQUOR TRANSFER TO 2ND.CONCENTRATOR	1	0.2	2.2						0.2					0.2
74220 023161 1712	PUMP,62% BLACK LIQUOR TO STORAGE	2	0.22	4.7						0.44					0.44
74220 023161 1712	PUMP,62% STRONG BLACK LIQUOR TO RECOVERY BOILER	2	0.22	4.7						0.44					0.44
74220 024121 1712	PUMP,BOIL OUT LIQUOR TO EVAPORATORS	1	1.4	19.5						1.4					1.4

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1968

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023161 1722	PUMP,STRONG BLACK LIQUOR	2	2.2	35.4						4.4					4.4
74220 023161 1712	PUMP, RETURN STRONG BLACK LIQUOR	2	0.22	4.7						0.44					0.44
74220 024261 1712	PUMP,AIR HEATER RECIRCULATION	2	0.25	2.7						0.50					0.50
74220 023161 1712	PUMP,SBL TO RECOVERY BOILER	1	0.22	4.7						0.22					0.22
74220 023261 1712	PUMP,GREEN LIQUOR TRANSFER	2	0.22	4.7						0.44					0.44
74220 023261 1712	PUMP,GREEN LIQUOR TO SLAKER	2	0.25	2.7						0.50					0.50
74220 022171 1712	PUMP, DREGS TO DREGS FILTER	2	0.17	1.4						0.34					0.34
74220 022121 1712	PUMP, DREGS FILTER FILTRATE	1	0.17	1.4						0.17					0.17
74220 024221 1712	PUMP,CONTAMINATED HOT WATER	2	0.3	3.3						0.6					0.6
74220 023251 1712	PUMP, TO ML. CLARIFIER	2	0.25	2.7						0.50					0.50
74220 023151 1712	PUMP,OVER FLOW WHITE LIQUOR CLARIFIER TO ML. STORAGE	2	0.25	2.7						0.50					0.50
74220 023151 1712	PUMP, UNDERFLOW WHITE LIQUOR CLARIFIER TO LIME MUD	2	0.2	2.2						0.4					0.4
74220 024151 1712	DUMP TANK PUMP -CAUSTICIZING AREA	1	0.53	6.7						0.53					0.53
74230 022361 1712	SOAP PUMP	1	0.25	6.9						0.25					0.25

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74230 002361 1712	PUMP, SOAP TO SOAP STORAGE TANK	1	0.25	6.0						0.25					0.25
74230 003361 1212	PUMP, SOAP TO TALL OIL REACTION VESSEL	1	0.50	5.5						0.50					0.50
74220 022121 1712	PUMP, TALL OIL TO STORAGE TANK	1	0.15	3.8						0.15					0.15
74220 022111 1712	PUMP, TALL-OIL TO SHIPPING	1	0.15	3.8						0.15					0.15
74220 023221 1712	PUMP, SALT CAKE (Na_2SO_4) TO RECOVERY SYSTEM	1	0.2	2.2						0.2					0.2
74220 023121 1212	PUMP, CONDENSER TO RECAUSTICIZING HOT WATER TANK	1	0.2	2.1						0.2					0.2
74220 023121 1212	PUMP, 5TH. EFFECT CONDENSATE TO RECAUSTICIZING HOT WATER TANK	1	0.26	3.3						0.26					0.26
74220 023121 1712	PUMP, RECEIVER TO PRECOOLER	1	0.2	1.4						0.2					0.2
74220 022121 1712	PUMP, RECEIVER TO CONTAMINATED CONDENSATE TANK	1	0.2	1.4						0.2					0.2
74220 022121 1712	PUMP, 5TH. EFFECT CONDENSATE TO CONTAM. COND. TANK	1	0.2	1.4						0.2					0.2
74220 023221 1712	PUMP, CONTAMINATED CONDENSATE TO STRIPPING SYSTEM	1	0.2	1.4						0.2					0.2
74220 023221 1712	PUMP, STRIPPED CONDENSATE TO STORAGE	1	0.2	1.4						0.2					0.2
74220 023221 1712	PUMP, STRIPPED COND. TO WASHER	1	0.3	3.2						0.3					0.3
74220 022121 1712	PUMP, COND. FROM 2ND. CONCENTRATOR TO STRIPPER	1	0.2	1.4						0.2					0.2

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D Of PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023121 1212	PUMP, CLEAN CONDENSATE TO COND. TANK	1	0.16	2.2						0.16					0.16
74220 023141 1712	PUMP, LIME MUD TO STORAGE	2	0.22	4.7						0.44					0.44
74220 023251 1712	PUMP, WEAK WHITE LIQUOR TO SMELT DISSOLVING TANK	2	0.2	2.1						0.4					0.4
74220 023141 1712	PUMP, LIME MUD STORAGE TO FILTER	2	0.22	4.7						0.44					0.44
74220 022151 1712	PUMP, ACID TO FILTER	1	0.1	1.1						0.1					0.1
74220 023141 1712	PUMP, FILTRATE	1	0.2	2.2						0.2					0.2
74220 024171 1712	PUMP, SLURRY TO SCRUBBER	2	0.46	4.4						0.92					0.92
74220 023121 1712	PUMP, FILTRATE TO DUST CHAMBER	1	0.18	1.4						0.18					0.18
74220 023171 1712	PUMP, SLURRY TO MUD MIX TANK	1	0.22	4.7						0.22					0.22
74220 023121 1212	PUMP, WATER TO SCRUBBER	1	0.50	5.5						0.50					0.50
74220 021141 1212	MOLTEN SULPHUR PUMP	1	0.15	2.6							0.15				0.15
74220 022111 1212	PUMP, SO_2 SOLUTION TO STORAGE	1	0.18	2.0							0.18				0.18
74220 022111 1212	PUMP, Na_2SO_3 SOLUTION TO STORAGE	1	0.18	2.0							0.18				0.18
74220 022111 1212	PUMP, Na_2SO_3 SOLUTION TO SOAKER (CHIP IMPREGNATOR)	1	0.18	2.0							0.18				0.18
										3.56	0.69				4.25

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 022111 1212	PUMP, SO_2 SOLUTION TO KRAFT BLEACHING PLANT	1	0.18	2.0							0.18				0.18
74220 023121 1212	BRINE RECIRCULATION PUMP	1	0.21	2.6							0.21				0.21
74220 023121 1212	RAW BRINE STORAGE TANK PUMP	2	0.21	2.6							0.42				0.42
74220 021111 1212	CARBONATE TANK PUMP	1	0.1	1.88							0.1				0.1
74220 023121 1212	CARBONATE REACTOR TANK PUMP	1	0.21	2.6							0.21				0.21
74220 023121 1212	NaOH REACTOR PUMP	1	0.21	2.6							0.21				0.21
74220 022141 1212	BRINE CLARIFIER SLUDGE PUMP	2	0.26	3.3							0.52				0.52
74220 022131 1212	BRINE SLUDGE TRANSFER PUMP	1	0.26	3.3							0.26				0.26
74210 201111 1712	COAGULANT METERING PUMP	1	0.025	5.3							0.025				0.025
74220 023121 1212	CLARIFIED BRINE PUMP	2	0.26	3.3							0.52				0.52
74220 023121 1212	BRINE FILTER PUMP	2	0.26	3.3							0.52				0.52
74210 201111 1712	HCl_2 METERING PUMP	1	0.025	5.3							0.025				0.025
74210 201111 1712	NaOH METERING PUMP	1	0.025	5.3							0.025				0.025
74220 021121 1212	ION REGENERATIVE PUMP	1	0.16	2.23							0.16				0.16

TABLE NO. :

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EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023121 1212	PURIFIED BRINE PUMP	2	0.26	3.3							0.52				0.52
74220 023121 1212	DEPLETED BRINE PUMP	2	0.18	2.0							0.36				0.36
74220 023121 1212	DECHLORINATED BRINE PUMP	2	0.18	2.0							0.36				0.36
74220 022121 1212	PUMP, 30% CAUSTIC FROM RECEIVER TANK	2	0.18	2.0							0.36				0.36
74220 022121 1212	30% CAUSTIC TRANSFER PUMP	2	0.16	2.23							0.32				0.32
74220 023111 1212	PUMP, 10% NaOH TO PROCESS	2	0.21	2.58							0.42				0.42
74220 022111 1712	PUMP, 50% NaOH TO STORAGE	2	0.15	3.8							0.30				0.30
74220 023111 1712	50% NaOH PUMP TO SHIPPING	1	0.2	4.7							0.2				0.2
74220 022121 1712	CONDENSATE PUMP	1	0.15	3.8							0.15				0.15
74220 022151 1712	98% H_2SO_4 PUMP	1	0.15	3.8							0.15				0.15
74220 022151 1712	H_2SO_4 RECIRCULATION PUMP	1	0.2	2.1							0.2				0.2
74220 022151 1712	H_2SO_4 RECIRCULATION PUMP	3	0.15	3.8							0.45				0.45
74220 021151 1712	PUMP, SPENT H_2SO_4 TO TALL OIL PLANT	1	0.1	1.3							0.1				0.1
74220 022121 1712	SCRUBBER CIRCULATION PUMP	1	0.1	1.06							0.1				0.1

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TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total weight in tons

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $. 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
74220 024211 1712	CHILLED WATER PUMP	2	0.27	3.0							0.54				0.54
74220 023111 1712	PUMP,HYPO TO STORAGE TANK	2	0.22	4.7							0.44				0.44
74220 023211 1712	HYPO TO PROCESS PUMP	2	0.22	4.7							0.44				0.44
74220 022111 1712	BRINE PUMP TO CHLORATE CELLS	1	0.1	1.0							0.1				0.1
74230 101111 1712	DICHROMATE FEED PUMP	1	0.15	5.3							0.15				0.15
74220 022111 1712	CELL LIQUOR CIRCULATION PUMP	2	0.1	1.0							0.2				0.2
74220 022111 1712	SCRUBBER CIRCULATION PUMP	1	0.1	1.0							0.1				0.1
74220 022111 1712	PUMP,SODIUM CHLORATE TO ClO_2 PLANT	2	0.1	1.0							0.2				0.2
74220 022111 1712	DUMP TANK PUMP	1	0.1	1.0							0.1				0.1
74220 022151 1712	33% HCl TRANSFER PUMP	1	0.1	1.0							0.1				0.1
74220 022151 1712	HCl TRANSFER PUMP	1	0.15	3.8							0.15				0.15
74220 021151 1712	HCl FEED PUMP	1	0.15	5.3							0.15				0.15
74220 023161 1712	PUMP, GENERATOR SLURRY CIRCULATING	2	0.22	4.7							0.44				0.44
74220 022121 1712	REBOILER CONDENSATE PUMP	1	0.15	3.8							0.15				0.15

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATURK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023251 1712	ClO_2 SOLUTION TRANSFER PUMP	2	0.25	2.7							0.50				0.50
74220 023351 1712	ClO_2 SUPPLY PUMP	2	0.25	2.7							0.50				0.50
74220 024161 1712	PUMP,S'WOOD STOCK TO PULP CHEST	1	1.1	13.6							1.1				1.1
74220 024161 1712	PUMP, CMP STOCK TO PULP CHEST	1	1.1	13.6							1.1				1.1
74220 024261 1712	PUMP,MIXED STOCK TO MACHINE CHEST	1	1.1	13.6							1.1				1.1
74220 024261 1712	PUMP,STOCK TO CLEANING SYSTEM	1	1.2	18.3							1.2				1.2
74220 024211 1712	PRIMARY REJECT PUMP	1	1.1	13.6							1.1				1.1
74220 023211 1712	SECONDARY REJECT PUMP	1	0.7	7.68							0.7				0.7
74220 023111 1712	TERTIARY REJECT PUMP	1	0.25	2.7							0.25				0.25
74220 026211 1732	FAN PUMP	1	3.65	86.3							3.65				3.65
74220 023211 1712	SCREEN REJECT PUMP	1	0.72	5.9							0.72				0.72
74220 023261 1712	PUMP, BROKE PULPER	1	0.53	6.74							0.53				0.53
74220 024261 1712	PUMP, BROKE PULPER	1	1.1	13.6							1.1				1.1
74220 023261 1712	PUMP, COUCH PIT	1	0.53	6.74							0.53				0.53

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PAPS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024261 1712	PUMP,COUCH PIT	1	1.1	13.6							1.1				1.1
74220 024261 1712	PUMP,BROKE TO MACHINE CHEST	1	0.79	10.8							0.79				0.79
74220 024211 1712	SWEETENER PUMP	1	0.26	2.2							0.26				0.26
74220 024111 1712	PUMP, WHITEWATER TO SAVEALL	1	0.51	4.7							0.51				0.51
74220 113611 1712	SHOWERS MULTISTAGE PUMP	2	0.72	5.9							1.44				1.44
74220 024111 1712	CLARIFIED WHITEWATER PUMP	1	0.51	4.7							0.51				0.51
74220 024211 1712	CLOUDY WHITEWATER PUMP	1	0.26	2.2							0.26				0.26
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.35	3.5							0.35				0.35
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.3							0.3				0.3
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.27	3.0							0.27				0.27
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.27	3.0							0.27				0.27
74220 026211 1722	WHITEWATER PUMP	1	2.4	48.9							2.4				2.4
74220 023111 1212	SUMP PUMP	1	0.35	3.5							0.35				0.35
										157.69	34.22		TOTAL :-		191.91

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TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (VACUUM PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74312 236111 2242	VACUUM PUMP, PAPER MACHINE NO.1	2	8.6	69.0							17.2				17.2
74312 236111 2242	VACUUM PUMP, PAPER MACHINE NO.2	2	8.6	69.0							17.2				17.2
74312 233111 1212	VACUUM PUMP, CLAY UNLOAD SYSTEM	1	1.7	73.4							1.7				1.7
74312 233111 1212	VACUUM PUMP, STARCH UNLOAD SYSTEM	1	1.7.	73.4							1.7				1.7
74312 113222 1712	VACUUM PUMP, DREGS FILTER	1	1.4	22.0							1.4				1.4
74312 113111 1222	VACUUM PUMP, VAPOR PRE-COOLER	1	2.85	105.8							2.85				2.85
74312 234212 1732	VACUUM PUMP, LIME MUD FILTER	1	3.0	105.8							3.0				3.0
74312 232111 1212	DE-CHLORINATION VACUUM PUMP	1	0.3	20.0							0.3				0.3
74312 236111 2242	VACUUM PUMP, PULP DRYER	2	7.0	58.0							14.0				14.0
													TOTAL:		
											59.35				59.35

TABLE NO. :

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EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 200 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS-FANS AND COMPRESSORS)

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74341 012522 1212	EXHAUST FAN FOR THREE WASHERS	3	0.8	22.3							2.4				2.4
74341 013624 1732	VENT FAN-SCRUBBER	1	3.0	35.7							3.0				3.0
74341 013512 1712	VENT FAN-LIME MUD FILTER	1	0.8	4.75							0.8				0.8
74341 013722 1222	INDUCED DRAFT FAN-LIME KILN	1	2.1	59.5							2.1				2.1
74341 013512 1712	PRIMARY AIR FAN-LIME KILN	1	0.8	8.1							0.8				0.8
74313 205121 1212	CHLORINE COMPRESSOR	2	1.7	106.5							3.4				3.4
74313 202311 1212	AIR COMPRESSOR	2	1.2	161.6							2.4				2.4
											14.90		TOTAL:-		14.90

TABLE NO. :

PAGE :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (LOADERS, FORKLIFTS, DOZERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74411 006200 4932	LOADER-FORK AND BUCKET	1	36	62.8						36					36
72341 201001 3932	CHIP DOZER (SOFTWOOD)	1	10.26	64.4						10.26					10.26
74411 006200 4932	FRONT END LOADER	1	36	62.8						36					36
72341 201001 3932	CHIP DOZER(HARDWOOD)	1	10.26	64.4						10.26					10.26
74411 004200 3932	TRUCK (CLAMP LIFT)-	3	16	38.8						48					48
74411 004200 3932	FORKLIFT TRUCK	3	16	38.8						48					48
										188.52			TOTAL :-		188.52

TABLE NO. :

PAGE :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CRANES AND HOISTS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74422 153312 4941	WOOD YARD PORTAL CRANE-SOFTWOOD	1	46	339.7					46						46
74422 212111 3932	MOBILE YARD CRANE	1	15.7	79.0					15.7						15.7
74422 022214 1912	KNUCKLE BOOM LOADER	1	1.3	26.0					1.3						1.3
74422 153312 4941	WOODYARD PORTAL CRANE-HARDWOOD	1	46	339.7					46						46
74422 132402 1921	HOIST (OVER DIGESTERS)	1	3	41.5					3						3
74422 144222 4931	OVERHEAD CRANE-WASHING PLANT	1	33	181.0					33						33
74422 153112 3931	GANTRY CRANE-PAPER MACHINE 1	1	18	153.4					18						18
74422 155302 6931	MACHINE ROOM CRANE-PM 1	1	124	873.3					124						124
74422 153212 2931	CRANE - DRIVE ALLEY -PM 1	1	7.5	115.0					7.5						7.5
74422 153112 3931	GANTRY CRANE-PAPER MACHINE 2	1	18	153.4					18						18
74422 155302 6931	MACHINE ROOM CRANE-PM 2	1	124	873.3					124						124
74422 153212 2931	CRANE-IRIVE ALLEY-PM 2	1	7.5	115.0					7.5						7.5
74422 024201 2922	LOWERATOR-FINISHING PLANT	1	5.2	36.8					5.2						5.2
74422 151112 1921	CRANE-FOR SHEETERS	4	3	56.9					12						12
									461.2				TOTAL :—		461.2

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 132501 8951	SOFTWOOD RECLAIM CHAIN CONVEYOR	2	450	75.4						900					900
74426 132301 5941	SORTING CHAIN CONVEYOR	1	55	38.1						55					55
74426 022301 3941	CHIPPER FEED BELT CONVEYOR	1	18	18.7						18					18
74426 312201 2931	CHIPPER FEED ROLL CASE CONVEYOR	1	8.5	25.3						8.5					8.5
74426 022301 4931	1st. BELT CONVEYOR TO SCREEN ROOM	1	35	90.0						35					35
74426 712301 1921	2-WAY DISC CHUTE	1	1	1.8						1					1
74426 712301 1921	2-WAY DISC CHUTE	1	1	1.8						1					1
74426 022301 3931	2nd. BELT CONVEYOR TO SCREEN ROOM	1	15	68.47						15					15
74426 022301 5931	SOFTWOOD CHIPS STACKOUT CONVEYOR	1	70	132.7						70					70
74426 111501 5931	CHIP RECLAIMER	1	75	99.0						75					75
74426 021301 4931	1st. RECLAIM CONVEYOR	1	40	121.9						40					40
74426 021301 4931	2nd. RECLAIM CONVEYOR	1	40	121.9						40					40
74426 021201 1911	OVERS CONVEYOR	1	4	8.5						4					4
74426 021201 1911	FINES CONVEYOR	1	4	9.37						4					4

1266.5

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 021201 2911	FINES CONVEYOR TO PILE	1	5	32.8						5					5
74426 022301 5931	ACCEPTS CONVEYOR TO SILO	1	50	103.1						50					50
74426 742001 1931	TABLE FEEDER	1	4.5	44.3						4.5					4.5
74426 022301 3941	CHIPPER FEED BELT CONVEYOR, H'WOOD	1	15	38.0						15					15
74426 312201 2931	ROLL CASE CONVEYOR	1	8.5	25.3						8.5					8.5
74426 712301 1921	2-WAY CHUTE-SCREEN ROOM TO H'WOOD PILE	1	1	1.8						1					1
74426 022301 3931	NO.1 BELT CONVEYOR TO PILE	1	15	68.47						15					15
74426 022301 5931	STACKOUT CONVEYOR	1	70	132.7						70					70
74426 111501 5931	CHIP PILE RECLAIMER	1	75	99.0						75					75
74426 021301 4931	1st. RECLAIM CONVEYOR	1	40	122.0						40					40
74426 021301 4931	2nd. RECLAIM CONVEYOR	1	40	122.0						40					40
74426 712301 2931	CHUTE	1	5	9.2						5					5
74426 021201 2911	OVERS CONVEYOR	1	5	8.5						5					5
74426 021201 1911	FINES CONVEYOR	1	4	9.38						4					4
										332.0					

TABLE NO. :

PAGE : 3

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 711201 1911	DISC CHUTE	1	1	1.8						1					1
74426 712301 1921	2-WAY CHUTE	1	1	1.8						1					1
74426 022301 5931	ACCEPTS CONVEYOR TO SILO	1	50	103.8						50					50
74426 742001 1931	TABLE FEEDER	1	4.5	47.5						4.5					4.5
74426 022301 5931	TRANSFER CONVEYOR TO C.M.P. SILO	1	50	103.0						50					50
74426 742001 1931	TABLE FEEDER	1	4.5	47.5						4.5					4.5
74426 712301 1921	DISC CHUTE	1	1	1.8						1					1
74426 022301 3931	SILO DISCHARGE CONVEYOR	1	20	23.4						20					20
74426 022301 5931	BELT CONVEYOR-CHIPS TO DIGESTER	1	50	103.0						50					50
74426 022301 4931	DIGESTER SHUTTLE CONVEYOR	1	25	30.0						25					25
74426 021301 4921	CHIPS BELT CONVEYOR	1	40	234.5						40					40
74426 021201 1921	BELT CONVEYOR(REJECTS)	1	3	32.8						3					3
74426 401201 1921	PRESS CONVEYOR	1	1.2	4.62						1.2					1.2
74426 401201 1911	FEED SCREW CONVEYOR TO PRESS	1	0.6	2.8						0.6					0.6

251.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 401201 1921	FEED CONVEYOR TO PRIMARY REFINER	1	1.5	5.6						1.5					1.5
74426 401201 1921	REPULPER CONVEYOR	1	1.5	5.6						1.5					1.5
74426 421101 1921	STARCH CONVEYOR(SCREW)	1	2	78.8						2					2
74426 121101 3912	STEEL SLAT CONVEYOR	1	10	59.8						10					10
74426 121101 2912	STEEL SLAT CONVEYOR	1	6	59.8						6					6
74426 121101 1912	STEEL SLAT CONVEYOR-REVERSABLE	1	2	46.7						2					2
74426 121102 2912	PALLET PILE CONVEYOR	1	6	10.4						6					6
74426 121102 2912	PALLET TRANSFER CONVEYOR	1	6	10.4						6					6
74426 761101 1212	ROTARY FEEDER FOR SALT CAKE TANK	1	1.3	16.2						1.3					1.3
74426 761101 1212	ROTARY FEEDER FOR SALT CAKE DAY TANK	1	1.3	16.2						1.3					1.3
74426 431101 1911	SCREW CONVEYOR-LIME MUD FROM FILTER TO KILN FEED CONVEYOR	1	2	11.0							2				2
74426 431101 1911	SCREW CONVEYOR-LIME MUD FEED TO KILN	1	2	11.0							2				2
74426 121201 2931	LIMESTONE CONVEYOR	1	8	37.5							8				8
74426 511101 3932	LIMESTONE BUCKET ELEVATOR	1	12	20.9							12				12

376 240

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 741101 1921	TABLE FEEDER-LIMESTONE STORAGE BIN TO LIME KILN	1	3	30.0							3				3
74426 121101 1931	BURNT LIME CONVEYOR	1	4	12.4							4				4
74426 511101 3932	BURNT LIME BUCKET ELEVATOR	1	12	23.7							12				12
74426 431101 1931	BURNT LIME SCREW CONVEYOR TO LIME SLAKER	1	4	12.4							4				4
74426 121101 1931	CONVEYOR (UNLOADING PURCHASED LIME)	1	4	12.4							4				4
74426 431101 1931	PURCHASED LIME SCREW CONVEYOR TO LIME SLAKER	1	4	12.4							4				4
74426 021201 1921	CONVEYOR-SALT TO DISSOLVING TANK	1	4	46.5							4				4
										1893.9	59.0		TOTAL→		1952.9

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TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SCALES)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74525 037521 1931	TRUCK SCALES-SOFTWOOD SYSTEM	1	3.0	0.76						3.0					3.0
74525 067021 1912	BELT SCALES-ON S'WOOD CHIPS TRANSFER CONVEYOR TO CHIP SILO	1	0.1	1.71						0.1					0.1
74525 037521 1931	TRUCK SCALES-HARDWOOD SYSTEM	1	3.0	0.76						3.0					3.0
74525 067021 1912	BELT SCALES, ON H'WOOD CHIPS TRANSFER CONVEYOR TO CHIP SILO	1	0.1	1.7						0.1					0.1
74525 067021 1912	BELT SCALES, ON CONVEYOR CHIPS TO DIGESTER	1	0.1	1.7						0.1					0.1
74525 014221 1922	ROLLS SCALES	1	2.0	58.1						2.0					2.0
74525 054221 1922	WEIGHING STATION, AUTOMATIC	1	2.0	12.0						2.0					2.0
										10.3			TOTAL :-		10.3

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 302437 2111	CHIP METERING BIN, SOFTWOOD	1	8.0	18.8							18.8				18.8
72513 305634 4111	CHIP SILO, SOFTWOOD	1	37.0	68.1							68.1				68.1
72513 305634 4111	CHIP SILO, HARDWOOD	1	37.0	68.1							68.1				68.1
72513 305634 4111	CHIP SILO, CHEMI MECHANICAL	1	37.0	68.1							68.1				68.1
72513 404525 6111	BLOW TANK	2	113.0	208.0							416.0				416.0
72513 404522 5111	ACCUMULATOR, HOT WATER	1	61.0	112.3							112.3				112.3
72513 401332 2111	HOT WATER TANK	1	5.0	9.2							9.2				9.2
72513 401332 2111	WARM WATER TANK	1	5.0	9.2							9.2				9.2
72513 401332 2111	TURPENTINE DECANTER	1	7.0	12.9							12.9				12.9
72513 403432 3111	TURPENTINE STORAGE TANK	1	24.0	44.2							44.2				44.2
72513 402432 3111	WHITE LIQUOR STORAGE TANK	1	10.0	18.4							18.4				18.4
72513 401332 2111	BLACK LIQUOR TANK	1	5.0	9.2							9.2				9.2
72513 402432 2111	KNOTS TANKS	1	9.0	16.6							16.6				16.6
72513 40[illegible]32 5111	TANK, FILTRATE NO.1	1	57.0	105.0							105.0				105.0
											976.1				976.1

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 404732 4111	TANK, FILTRATE NO. 2	1	45.0	82.9							82.9				82.9
72513 404632 4111	TANK, FILTRATE NO. 3	1	39.0	71.8							71.8				71.8
72513 404532 4111	TANK, FOAM TOWER	1	30.0	55.2							55.2				55.2
72513 403435 3111	LOW DENSITY WASHED PULP STOR.TANK	1	17.0	31.3							31.3				31.3
72513 401335 1111	PRIMARY REJECTS TANK	1	3.0	5.5							5.5				5.5
72513 401335 1611	SECONDARY SCREEN ACCEPTS TANK	1	4.0	7.3							7.3				7.3
72513 401232 1111	PRIMARY CLEANER REJECTS TANK	1	0.7	1.3							1.3				1.3
72513 401235 1111	TERTIARY SCREEN REJECTS TANK	1	0.9	1.7							1.7				1.7
72513 404031 4111	DECKER WHITE WATER TANK	1	43.0	79.1							79.1				79.1
72513 403535 3611	BROWN STOCK AREA DUMP TANK	1	17.0	31.3							31.3				31.3
72513 405635 6111	HIGH DENSITY S'WOOD STORAGE TANK	1	122.0	224.6							224.6				224.6
72513 405635 6111	HIGH DENSITY H'WOOD STORAGE TANK	1	122.0	224.6							224.6				224.6
72513 402435 2111	LEVELLING CHEST,BLEACHING PLANT	1	9.0	16.6							16.6				16.6
72513 402232 2111	D/C STAGE PRE-RETENTION TUBE	1	9.0	16.6							16.6				16.6
											849.8				849.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total value in 1000 US$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401232 1111	HEAD TANK, D/C WASHER	1	0.6	1.1							1.1				1.1
72513 402332 0901	D/C WASHER SEAL TANK	1	-	13.1							13.1				13.1
72513 402332 0901	CAUSTIC WASHER SEAL TANK	1	-	6.5							6.5				6.5
72513 402232 3111	ClO_2 STAGE PRE-RETENTION TUBE	1	11.0	20.3							20.3				20.3
72513 402332 0901	CHLORINE DIOXIDE WASHER SEAL TANK	1	-	6.5							6.5				6.5
72513 406735 7111	TANK, H.D. STORAGE S'WOOD PULP	2	219.0	403.2							806.4				806.4
72513 407735 7111	TANK, H.D. STORAGE H'WOOD PULP	1	260.0	478.7							478.7				478.7
72513 403532 3111	DUMP TANK, BLEACH PLANT	1	17.0	31.3							31.3				31.3
72513 401007 1111	LIVE BOTTOM BIN, CMP PLANT	1	4.7	11.2							11.2				11.2
72513 403031 3111	FILTRATE CHEST FROM UNBLEACHED STOCK WASHER	1	14.0	25.7							25.7				25.7
72513 403031 3611	HOT WATER TANK	1	14.0	77.3							77.3				77.3
72513 403031 3611	DECKER WHITE WATER CHEST	1	14.0	77.3							77.3				77.3
72513 403031 3611	FILTRATE CHEST, FROM SEMI-BLEACHED STOCK WASHER	1	14.0	77.3							77.3				77.3
72513 407732 6111	TANK, HIGH DENSITY STORAGE-CMP	1	137.0	475.8							475.8				475.8
											2108.5				2108.5

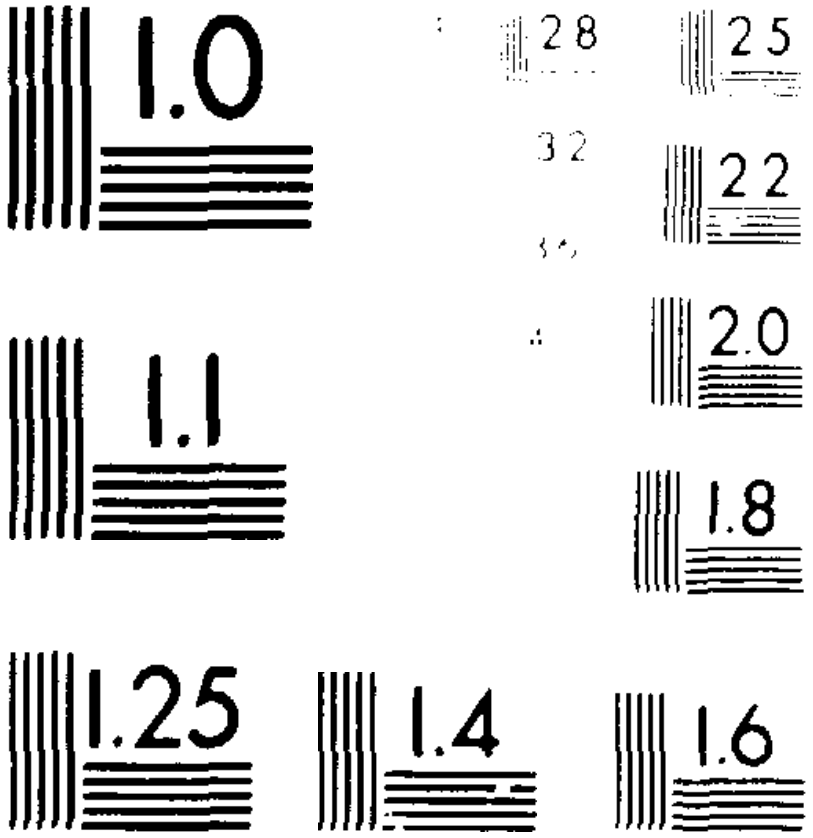

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS) Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401232 1111	HEAD TANK, D/C WASHER	1	0.6	1.1							1.1				1.1
72513 402332 0901	D/C WASHER SEAL TANK	1	-	13.1							13.1				13.1
72513 402332 0901	CAUSTIC WASHER SEAL TANK	1	-	6.5							6.5				6.5
72513 402232 3111	ClO_2 STAGE PRE-RETENTION TUBE	1	11.0	20.3							20.3				20.3
72513 402332 0901	CHLORINE DIOXIDE WASHER SEAL TANK	1	-	6.5							6.5				6.5
72513 406735 7111	TANK, H.D.STORAGE S'WOOD PULP	2	219.0	403.2							806.4				806.4
72513 407735 7111	TANK, H.D.STORAGE H'WOOD PULP	1	260.0	478.7							478.7				478.7
72513 403532 3111	DUMP TANK, BLEACH PLANT	1	17.0	31.3							31.3				31.3
72513 401007 1111	LIVE BOTTOM BIN, CMP PLANT	1	4.7	11.2							11.2				11.2
72513 403031 3111	FILTRATE CHEST FROM UNBLEACHED STOCK WASHER	1	14.0	25.7							25.7				25.7
72513 403031 3611	HOT WATER TANK	1	14.0	77.3							77.3				77.3
72513 403031 3611	DECKER WHITE WATER CHEST	1	14.0	77.3							77.3				77.3
72513 403031 3611	FILTRATE CHEST, FROM SEMI-BLEACHED STOCK WASHER	1	14.0	77.3							77.3				77.3
72513 407732 6111	TANK, HIGH DENSITY STORAGE-CMP	1	187.0	475.8							475.8				475.8
											2108.5				2108.5

TABLE NO. :

PAGE : 4

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
[illegible]13 402435 2611	BROKE CHEST, PM1	1	5.0	27.6							27.6				27.6
[illegible]13 402435 2611	BROKE CHEST, PM2	1	5.0	27.6							27.6				27.6
[illegible]13 402435 2611	70% CLAY MAKE TANK	1	5.7	31.5							31.5				31.5
[illegible]13 401332 1611	35 % CLAY TANK	2	1.0	5.5							11.0				11.0
[illegible]13 303334 2611	STARCH STORAGE SILO	1	5.0	9.2							9.2				9.2
[illegible]13 401335 1611	SLURRY MAKE UP TANK	2	0.7	3.9							7.8				7.8
72513 401232 1611	COOKED STARCH SURGE TANK	1	0.44	2.4							2.4				2.4
72513 401335 1611	COOKED STARCH STORAGE TANK	2	1.6	8.8							17.6				17.6
72513 401335 1611	STARCH DAY TANK	2	0.82	4.5							9.0				9.0
72513 401335 1611	POLYMER MIX TANK	1	0.7	3.9							3.9				3.9
72513 401335 1611	POLYMER STORAGE TANK	1	0.7	3.9							3.9				3.9
72513 401332 1611	ALUM DISSOLVING TANK	1	0.9	4.95							4.95				4.95
72513 401332 1611	ALUM HEAD TANK	1	1.6	8.8							8.8				8.8
72513 402432 1611	ALUM STORAGE TANK	1	3.8	21.0							21.0				21.0
											186.25				186.25

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401335 1611	DEFOAMER BATCH TANK	1	0.7	3.9							3.9				3.9
72513 401335 1611	FELT CLEANER TANK	1	0.7	3.9							3.9				3.9
72513 401335 1611	FABRIC CLEANER TANK	1	0.7	3.9							3.9				3.9
69211 075432 6111	MILL OIL STORAGE TANK	1	112.0	206.2							206.2				206.2
72513 401332 1111	SUMP TANK, WEAK BLACK LIQUOR	1	2.7	5.0							5.0				5.0
72513 404632 5111	WEAK BLACK LIQUOR TANK	2	58.0	106.8							213.6				213.6
72513 401222 1111	LIQUOR FLASH TANK	1	0.6	1.1							1.1				1.1
72513 404632 5111	50% BLACK LIQUOR STORAGE TANK	1	52.0	95.7							95.7				95.7
72513 401232 1111	LIQUOR SURGE TANK	1	0.4	0.7							0.7				0.7
72513 403532 3111	62% STRONG BLACK LIQUOR STOR. TANK	2	19.0	35.0							70.0				70.0
72513 403532 3111	BOIL OUT LIQUOR TANK	1	17.0	31.3							31.3				31.3
72513 303432 3111	SALT CAKE (Na_2SO_4) STORAGE SILO	1	22.0	40.5							40.5				40.5
72513 401332 1111	SALT CAKE DAY TANK	1	3.0	5.5							5.5				5.5
72513 402435 2611	SALT CAKE MIX TANK	1	5.0	27.6							27.6				27.6
											708.9				708.9

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS) Total value in 1000 U.S.$.

SITE CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401335 1611	SALT CAKE DISSOLVING TANK	1	3.0	16.6							16.6				16.6
72513 402535 3111	SMELT DISSOLVING TANK	1	23.0	42.3							42.3				42.3
72513 405732 5111	GREEN LIQUOR CLARIFIER AND STOR. TANK	1	80.0	147.3							147.3				147.3
72513 402432 2111	CONTAMINATED HOT WATER TANK	1	8.0	14.7							14.7				14.7
72513 402435 2111	CAUSTICIZERNO.1, TANK	1	8.0	14.7							14.7				14.7
72513 402435 2111	CAUSTICIZER NO.2, TANK	1	8.0	14.7							14.7				14.7
72513 402435 2111	CAUSTICIZER NO.3, TANK	1	8.0	14.7							14.7				14.7
72513 401232 1611	CAUSTICIZER SUMP TANK	1	0.5	2.8							2.8				2.8
72513 406732 6111	WHITE LIQ.CLARIFIER AND STOR.TANK	1	163.0	300.1							300.1				300.1
72513 403532 3611	CAUSTICIZING AREA DUMP TANK	1	16.0	29.4							29.4				29.4
72513 401232 1111	SOAP SUMP TANK	1	1.0	1.8							1.8				1.8
72513 403532 3111	SOAP SKIMMING TANK	1	18.0	35.5							35.5				35.5
72513 401232 1111	SOAP SUMP TANK	1	0.9	1.7							1.7				1.7
72513 403532 3111	SOAP STORAGE TANK	1	22.0	40.5							40.5				40.5
											676.8				676.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 403432 3111	TALL OIL REACTION VESSEL	1	13.0	23.9							23.9				23.9
72513 402432 2111	TALL OIL SETTLING VESSEL	1	7.0	12.9							12.9				12.9
72513 401332 1111	TALL OIL STORAGE TANK	1	2.0	3.7							3.7				3.7
72513 401232 1111	VACUUM PUMP RECEIVING TANK	1	0.3	0.55							0.55				0.55
72513 402332 2611	CONTAMINATED CONDENSATE TANK, EVAPORATORS	1	5.0	27.6							27.6				27.6
72513 402432 3611	STRIPPED CONDENSATE TANK	1	10.0	55.2							55.2				55.2
72513 401335 1111	MUD MIX TANK	1	2.0	3.7							3.7				3.7
72513 405732 5111	MUD WASHER AND WEAK WHITE LIQUOR STORAGE TANK	1	92.0	169.4							169.4				169.4
72513 403535 3111	LIME MUD STORAGE TANK	1	17.0	31.3							31.3				31.3
72513 401232 0901	ACID TANK	1	-	2.56							2.56				2.56
72513 401232 1111	SEAL TANK FOR DUST CHAMBER	1	0.4	0.7							0.7				0.7
72513 401332 1111	(LIME KILN) SUMP SEPARATOR-TANK	1	2.0	3.7							3.7				3.7
72513 402432 3111	LIME STONE STORAGE BIN	1	10.0	18.4							18.4				18.4
72513 401232 1111	COOLING WATER COLLECTION TANK	1	0.3	0.6							0.6				0.6
											354.21				354.21

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANK, SILOS AND BINS) Total value in 1000 U.S.S.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401332 2111	DAY OIL TANK, FOR LIME KILN	1	5.0	9.2							9.2				9.2
72513 402432 2111	BURNT LIME STORAGE BIN	1	8.0	14.7							14.7				14.7
72513 402432 3111	PURCHASED LIME STORAGE BIN	1	10.0	18.4							18.4				18.4
72513 401021 1111	SULPHUR MELTER	1	3.5	9.2						9.2					9.2
72513 402031 1611	SODIUM SULPHITE SOLUTION CHEST	2	3.7	20.4						40.8					40.8
72513 402031 1611	SO_2 SOLUTION CHEST	1	3.7	20.4						20.4					20.4
72513 402432 3611	BRINE DISSOLVING TANK WITH FILTER	1	11.5	63.5						63.5					63.5
72513 402432 1611	RAW BRINE STOR.TANK WITH HEATER	1	4.9	27.1						27.1					27.1
72513 401232 1611	CARBONATE MAKE UP TANK	2	0.6	3.3						6.6					6.6
72513 401232 1611	CARBONATE REACTOR- TANK	1	0.6	3.3						3.3					3.3
72513 401332 1611	CAUSTIC REACTOR-TANK	1	0.8	4.4						4.4					4.4
72513 404632 4611	BRINE CLARIFIER, WITH RAKE	1	29.0	184.1						184.1					184.1
72513 401031 1611	BRINE SLUDGE PIT	1	3.5	19.3						19.3					19.3
72513 401232 1111	COAGULANT MIXING TANK	1	0.45	0.8						0.8					0.8
										379.5	42.3				421.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANK, SILOS AND BINS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401332 1611	CLARIFIER OVER FLOW TANK	1	1.4	7.7						7.7					7.7
72513 401232 1611	SPENT REGENERATIVE TANK	1	0.45	2.5						2.5					2.5
72513 401332 1611	FINISHED BRINE TANK WITH HEATER FOR CHLORINE CELLS	1	3.0	16.6						16.6					16.6
72513 401332 1611	BRINE HEAD TANK	1	2.8	15.5						15.5					15.5
72513 401332 1611	DEPLETED BRINE STORAGE TANK	1	2.8	15.5						15.5					15.5
72513 401132 1611	DECHLORINATION TANK	1	0.4	2.2						2.2					2.2
72513 401232 1611	DEMINERALIZED WATER HEAD TANK	1	0.83	4.6						4.6					4.6
72513 401332 1111	CAUSTIC RECEIVER TANK	1	1.6	2.9						2.9					2.9
72513 403532 3111	30% CAUSTIC SODA STORAGE TANK	2	16.0	29.5						59.0					59.0
72513 403532 3111	10% CAUSTIC TANK	1	16.0	29.5						29.5					29.5
72513 402432 2611	50% CAUSTIC STORAGE TANK	1	5.3	29.2						29.2					29.2
72513 401332 1611	CONDENSATE TANK, 50% CAUSTIC EVAP.	1	1.4	7.7						7.7					7.7
72513 401332 2111	98% H_2SO_4 STORAGE TANK	1	6.0	11.0						11.0					11.0
72513 401232 1111	SPENT H_2SO_4 DUMP TANK	1	1.2	2.2						2.2					2.2
										206.1					206.1

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401132 1111	ACID DEMISTER	1	0.2	0.36						0.36					0.36
72513 402332 2611	LIQUID CHLORINE STORAGE TANK	4	8.8	48.6						194.4					194.4
72513 401232 1611	SODIUM HYPOCHLORITE TOWER	1	3.0	16.5						16.5					16.5
72513 401232 1611	SCRUBBER CIRCULATION TANK	1	0.8	4.4						4.4					4.4
72513 401332 1611	CHILLED WATER STORAGE TANK	1	0.8	4.4						4.4					4.4
72513 403532 3611	HYPO STORAGE TANK	2	15.0	82.8						165.6					165.6
72513 401332 2611	SALT DISSOLVING TANK	1	9.5	52.4						52.4					52.4
72513 401332 1611	REACTORS, SODIUM CHLORATE	6	3.2	17.7						106.2					106.2
72513 401232 1611	DICHROMATE MIX TANK	1	0.2	1.1						1.1					1.1
72513 401232 1611	CELL LIQUOR CIRCULATION TANK, SODIUM CHLORATE	1	0.4	2.2						2.2					2.2
72513 401332 1611	CHLORATE STORAGE TANK	2	3.6	19.9						39.8					39.8
72513 401332 1611	CHEMICAL PLANT DUMP TANK	1	2.2	12.2						12.2					12.2
72513 402432 2611	33% HCl STORAGE TANK	1	7.6	42.0						42.0					42.0
72513 401232 1611	CHLORATE/CHLORIDE SOLUTION HEAD TANK	1	0.2	1.1						1.1					1.1
										642.66					642.66

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (TANKS, SILOS AND BINS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401232 1611	HCl TANK	1	0.2	1.1						1.1					1.1
72513 401232 1611	ClO_2 GENERATOR	1	2.2	12.1						12.1					12.1
72513 401232 1611	CONDENSATE TANK, FROM REBOILER	1	0.2	1.1						1.1					1.1
72513 401232 1611	GENERATOR DUMP TANK	1	0.2	1.1						1.1					1.1
72513 403432 3611	ClO_2 SOLUTION STORAGE TANK	2	13.2	267.2						534.4					534.4
72513 403532 2611	PULP CHEST, FOR PULP DRYER	1	9.3	51.36						51.36					51.36
							TOTAL :-			1829.42	5902.86				7732.28

601.16 601.16

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 715605 1212	AGITATOR, BLOW TANK	2	1.25	10.0							20.0				20.0
72514 714505 1212	AGITATOR, KNOTS TANK	1	0.55	5.3							5.3				5.3
72514 715505 1212	AGITATOR, WASHED PULP STORAGE TANK	1	0.82	7.7							7.7				7.7
72514 712605 1212	AGITATOR, PRIMARY REJECTS TANK	1	0.28	3.7							3.7				3.7
72514 712605 1212	AGITATOR, SECONDARY SCREEN ACCEPTS TANK	1	0.28	3.7							3.7				3.7
72514 711605 1212	AGITATOR, TERTIARY SCREEN REJECTS TANK	1	0.2	3.1							3.1				3.1
72514 714605 1212	AGITATOR, BROWN STOCK AREA DUMP TANK	1	0.35	4.0							4.0				4.0
72514 716505 1212	AGITATOR, HIGH DENSITY TOWER, S'WOOD	1	1.4	12.8							12.8				12.8
72514 716505 1212	AGITATOR, HIGH DENSITY TOWER H'WOOD	1	1.4	12.8							12.8				12.8
72514 714505 1212	AGITATOR, LEVELLING CHEST	1	0.8	6.2							6.2				6.2
72514 713505 1212	AGITATOR, D/C BLEACH TOWER	2	0.3	3.9							7.8				7.8
72514 705201 1232	STEAM MIXER, CAUSTIC STAGE	1	3.5	7.5							7.5				7.5
72514 713505 1212	AGITATOR, CAUSTIC TOWER	1	0.35	4.0							4.0				4.0
72514 705201 1232	STEAM MIXER, ClO_2 STAGE	1	3.5	7.5							7.5				7.5
											106.1				106.1

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 707201 2232	ClO_2 MIXER	1	5.5	10.0							10.0				10.0
72514 713505 1212	AGITATOR, ClO_2 BLEACH TOWER	2	0.35	4.0							8.0				8.0
72514 716505 1212	AGITATOR, H.D.STOR.TANK-S'WOOD PULP	2	1.6	11.9							23.8				23.8
72514 716505 1222	AGITATOR, H.D.STOR. TANK-H'WOOD PULP	1	1.8	12.8							12.8				12.8
72514 714605 1212	AGITATOR, REFINED STOCK CHEST	1	0.5	4.7							4.7				4.7
72514 714605 1212	AGITATOR, UNBLEACHED STOCK CHEST	1	0.5	4.7							4.7				4.7
72514 704201 1232	STEAM AND HYPO MIXER	1	3.8	10.5							10.5				10.5
72514 713605 1212	AGITATOR, HYPO BLEACH TOWER	1	0.29	3.8							3.8				3.8
72514 716505 1212	AGITATOR, H.D.STORAGE TOWER-CMP	1	0.8	11.9							11.9				11.9
72514 714505 1212	AGITATOR, STORAGE CHEST-S'WOOD KRAFT STOCK	2	0.45	5.2							10.4				10.4
72514 714505 1212	AGITATOR, STORAGE CHEST-H'WOOD KRAFT STOCK	2	0.45	5.2							10.4				10.4
72514 714505 1212	AGITATOR, REFINED S'WOOD KRAFT CHEST	2	0.45	5.2							10.4				10.4
72514 714505 1212	AGITATOR, REFINED H'WOOD KRAFT CHEST	2	0.45	5.2							10.4				10.4
72514 714505 1212	AGITATOR, BLEND CHEST-GRADE 1	2	0.45	5.2							10.4				10.4
											142.2				142.2

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ...TÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 715505 1212	AGITATOR,MACHINE CHEST-PM 1	2	0.8	7.7							15.4				15.4
72514 714505 1212	AGITATOR,BROKE CHEST-PM 1	1	0.45	5.2							5.2				5.2
72514 717502 1222	ROTOR(PULPING)-COUCH PIT-PM 1	2	2.7	18.4							36.8				36.8
72514 717502 1222	ROTOR,BROKE PULPER-PM 1	2	2.7	18.4							36.8				36.8
72514 714505 1212	AGITATOR,STORAGE CHEST (H'WOOD) CHEMIMECHANICAL PULP	2	0.45	5.2							10.4				10.4
72514 714505 1212	AGITATOR,REFINED CHEST H'WOOD-CMP	2	0.45	5.2							10.4				10.4
72514 715505 1212	AGITATOR, BLEND CHEST GRADES 2 AND 3	2	0.8	7.6							15.2				15.2
72514 715505 1212	AGITATOR,MACHINE CHEST-PM 2	2	0.8	7.6							15.2				15.2
72514 714505 1212	AGITATOR,BROKE CHEST-PM 2	1	0.45	5.2							5.2				5.2
72514 717502 1222	ROTOR(PULPING)-COUCH PIT-PM 2	2	2.7	18.4							36.8				36.8
72514 717502 1222	ROTOR,BROKE PULPER-PM 2	2	2.7	18.4							36.8				36.8
72514 712301 1212	AGITATOR,70% CLAY MAKE TANK	1	0.28	3.66							3.66				3.66
72514 713301 1212	AGITATOR,70% CLAY STORAGE TANK	2	0.29	3.8							7.6				7.6
72514 712301 1212	AGITATOR,35% CLAY TANK	2	0.28	3.66							7.32				7.32
											242.78				242.78

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS)

Total value in 1000 U.S.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 711204 1212	AGITATOR,SLURRY MAKE TANK	2	0.4	4.3							8.6				8.6
72514 712205 1212	AGITATOR,COOKED STARCH STOR.TANK	2	0.4	4.9							9.8				9.8
72514 711205 1212	AGITATOR,STARCH DAY TANK	2	0.4	4.3							8.6				8.6
72514 711604 1212	AGITATOR,POLYMER MIX TANK	1	0.2	3.1							3.1				3.1
72514 711604 1212	AGITATOR,POLYMER STORAGE TANK	1	0.2	3.1							3.1				3.1
72514 711604 1212	AGITATOR,DEFOMER BATCH TANK	1	0.2	3.1							3.1				3.1
72514 711504 1212	AGITATOR,FELT CLEANER TANK	1	0.2	3.1							3.1				3.1
72514 711504 1212	AGITATOR,FABRIC CLEANER TANK	1	0.2	3.1							3.1				3.1
72514 712505 1212	AGITATOR,SALT CAKE MIX TANK	1	0.28	3.7							3.7				3.7
72514 714505 1212	AGITATOR,SALT CAKE DISSOLVING TANK	1	0.45	4.8							4.8				4.8
72514 712505 1212	AGITATOR,PRECIPITATOR MIX TANK	2	0.28	3.7							7.4				7.4
72514 713505 1212	AGITATOR,SMELT DISSOLVING TANK	1	0.29	3.8							3.8				3.8
72514 713605 1212	AGITATOR,LIME SLAKER/CLASSIFIER	1	0.29	3.8							3.8				3.8
72514 713605 1212	AGITATOR,CAUSTICIZER NO.1 TANK	1	0.35	4.0							4.0				4.0
											70.0				70.0

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATURK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 713605 1212	AGITATOR,CAUSTICIZER NO.2 TANK	1	0.35	4.0							4.0				4.0
72514 713605 1212	AGITATOR,CAUSTICIZER NO.3 TANK	1	0.35	4.0							4.0				4.0
72514 713605 1212	AGITATOR,MUD MIX TANK	1	0.3	3.9							3.9				3.9
72514 713605 1212	AGITATOR,LIME MUD STORAGE TANK	1	0.29	3.8							3.8				3.8
											15.7				15.7

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (AGITATORS AND MIXERS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 711503 1212	AGITATOR, CARBONATE MAKE UP TANK	2	0.05	2.4							4.8				4.8
72514 711503 1212	AGITATOR, CARBONATE REACTOR TANK	1	0.2	3.1							3.1				3.1
72514 711503 1212	AGITATOR, CAUSTIC REACTOR TANK	1	0.2	3.1							3.1				3.1
72514 711503 1212	AGITATOR, COAGULANT MIXING TANK	1	0.2	3.1							3.1				3.1
72514 711605 1212	AGITATOR, SALT DISSOLVING TANK SODIUM CHLORATE PRODUCTION	1	0.05	2.4							2.4				2.4
72514 711504 1212	AGITATOR, DICHROMATE MIX TANK	1	0.05	2.4							2.4				2.4
72514 714505 1212	AGITATOR, PULP CHEST FOR PULP DRYER	2	0.55	5.27							10.54				10.54
72514 714505 1212	AGITATOR, MACHINE CHEST-PULP DRYER	2	0.8	6.25							12.5				12.5
72514 716505 1222	AGITATOR(ROTOR), BROKE PULPER-PULP DRYER	2	2.3	14.7							29.4				29.4
72514 714505 1212	AGITATOR, BROKE CHEST-PULP DRYER	2	0.8	6.25							12.5				12.5
72514 716505 1222	AGITATOR, COUCH PIT-PULP DRYER	2	2.3	14.7							29.4				29.4
								TOTAL→			690.02				690.02

113.24 113.24

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS)

Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 022344 2112	LOG SPLITTER	1	8.0	12.3							12.3				12.3
72514 509155 3252	CHIPPER AND BLOWER, SOFT WOOD	1	22.0	182.0							182.0				182.0
72514 109206 2932	CHIP SCREEN, SOFTWOOD	1	5.5	29.6							29.6				29.6
72514 505135 2232	RECHIPPER AND BLOWER, SOFTWOOD	1	6.0	58.8							58.8				58.8
72514 509155 3252	CHIPPER AND BLOWER, HARDWOOD	1	22.0	182.0							182.0				182.0
72514 109206 2932	CHIP SCREEN, HARDWOOD	1	5.5	29.6							29.6				29.6
72514 505135 2222	RECHIPPER AND BLOWER, HARDWOOD	1	6.0	58.7							58.7				58.7
72513 103422 5231	DIGESTER	4	95.0	279.0							1116.0				1116.0
72514 107124 1722	PRESSURE KNOTTER	2	2.2	71.0							142.0				142.0
72514 307463 5262	BROWN STOCK WASHER, STAGE 1	1	51.0	227.0							227.0				227.0
72514 307463 4262	BROWN STOCK WASHER, STAGE 2	1	46.0	227.0							227.0				227.0
72514 307463 4262	BROWN STOCK WASHER, STAGE 3	1	40.0	227.0							227.0				227.0
72514 107124 2722	PRESSURE SCREEN, PRIMARY	2	5.0	104.4							208.8				208.8
72514 107124 2722	PRESSURE SCREEN, SECONDARY	1	5.0	93.5							93.5				93.5
											2794.3				2794.3

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALISED ITEMS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 601134 1612	PRIMARY CLEANERS	18	0.12	6.5							117.0				117.0
72513 601134 1612	SECONDARY CLEANERS	7	0.12	6.5							45.5				45.5
72514 103114 1722	PRESSURE SCREEN, TERTIARY	1	3.7	6.5							6.5				6.5
72514 407463 5262	DECKER	1	51.0	227.0							227.0				227.0
72514 307463 4262	D/C WASHER	1	40.0	198.6							198.6				198.6
72514 307463 4262	CAUSTIC WASHER	1	40.0	198.6							198.6				198.6
72514 307463 4262	CHLORINE DIOXIDE WASHER	1	40.0	198.6							198.6				198.6
72514 106206 3932	CHIP WASHER/SCREEN	1	12.0	39.4							39.4				39.4
72513 112332 3111	CHIP IMPREGNATOR (SOAKER)	1	17.0	63.1							63.1				63.1
72514 607102 1732	SHREDDER	1	3.5	33.0							33.0				33.0
72514 408123 1232	SCREW THICKENER	1	4.5	36.8							36.8				36.8
72514 102113 1222	PRESSATE SCREEN	1	3.0	13.0							13.0				13.0
72514 604403 4262	PRIMARY REFINER (DISC)	2	48.0	1690.2						3380.4					3380.4
72514 306473 3242	REFINED STOCK WASHER	1	12.0	141.8							141.8				141.8
										3380.4	1318.3				4698.7

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS) Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 604403 4262	SECONDARY REFINER (DISC)	2	48.0	1690.2						3380.4					3380.4
72513 601132 1611	CENTRIFUGAL CLEANERS-3 STAGE SYSTEM	220	0.036	0.03							6.6				6.6
72514 406473 3242	DECKER-THICKENER	1	12.0	184.4							184.4				184.4
72514 102301 1722	HYPO FILTER	1	3.0	16.6							16.6				16.6
72514 306473 3242	SEMI-BLEACHED STOCK WASHER	1	12.0	184.4							184.4				184.4
72514 604203 2732	REFINER, SOFT WOOD STOCK	3	5.5	91.0							273.0				273.0
72514 604203 2732	REFINER, HARD WOOD STOCK	3	5.5	91.0							273.0				273.0
72514 611101 1732	DEFLAKER, PM 1 BROKE	1	3.5	33.0							33.6				33.6
72513 601232 2612	DECULATOR/CLEANER	1	5.0	248.7							248.7				248.7
72514 105134 1732	MACHINE SCREEN, PM 1	1	4.35	83.6							83.6				83.6
72512 014654 9262	PAPER MAKING MACHINE NO.1	1	1020.0	14925.3						14925.3					14925.3
72512 205691 4242	REWINDER, PAPER MACHINE NO.1	1	32.0	1262.6						1262.6					1262.6
72514 209665 2232	SAWEALL, PM 1	1	7.6	292.7							292.7				292.7
										19568.3	4596				24164.3

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATURK PULP AND PAPER PLANT

CAPACITY : 300 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS) Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 604203 2732	REFINER, CHEMI-MECHANICAL STOCK	3	5.5	91.0							273.0				273.0
72514 611101 1732	DEFLAKER, PM 2 BROKE	1	3.5	33.0							33.0				33.0
72513 601232 2612	DECULATOR/CLEANER-PM 2	1	5.0	248.7							248.7				248.7
72514 105134 1732	MACHINE SCREEN, PM 2	1	4.35	83.6							83.6				83.6
72512 014654 9262	PAPER MAKING MACHINE NO.2	1	1020.0	14925.3						14925.3					14925.3
72512 205691 4242	REWINDER, PAPER MACHINE NO.2	1	32.0	1262.6						1262.6					1262.6
72514 209665 2232	SAWEALL, PM 2	1	7.6	292.7							292.7				292.7
72514 107112 1712	VIBRATING SCREEN, STARCH PREPARAT.	2	0.4	2.0							4.0				4.0
72514 101112 1712	ALUM FILTER	2	0.4	11.3							22.6				22.6
72512 708101 1922	KICKER-PNEUMATIC FLOOR MOUNTED	1	3.0	7.3							7.3				7.3
72512 718101 1912	CUSHION ROLL STOP	1	1.0	15.4							15.4				15.4
72512 708101 1922	SCALE RETRACTABLE KICKER	1	3.0	7.3							7.3				7.3
72512 718101 1912	RETRACTABLE CUSHIONED ROLL STOP	1	1.0	11.37							11.37				11.37
72512 718101 1912	CUSHIONED ROLL STOP	6	1.0	11.37							68.22				68.22
										16187.9	1067.13				17255.09

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS) Total value in 1980 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72512 708101 1922	RETRACTABLE KICKER	1	3.0	7.3							7.3				7.3
72512 608101 0902	ROLL WRAPPER	1	-	421.6							421.6				421.6
72512 708101 1922	KICKER-PNEUMATIC FLOOR MOUNTED	1	3.0	7.3							7.3				7.3
72512 204171 4942	SALVAGE WINDER	1	33.0	576.2							576.2				576.2
72512 708101 1922	KICKER-PNEUMATIC FLOOR MOUNTED	4	3.0	7.3							29.2				29.2
72512 622000 1912	CORE CUTTER	1	3.0	15.3							15.3				15.3
72512 632001 3922	CORE WINDER	1	10.0	102.2							102.2				102.2
72512 303142 2222	SHEET CUTTER (1900 mm)	2	6.0	219.7							439.4				439.4
72512 303142 2222	SHEET CUTTER (1600 mm)	6	6.0	219.7							1318.2				1318.2
72512 603102 1922	REAM WRAPPER, AUTOMATIC	4	1.0	29.9							119.6				119.6
72512 603102 1922	REAM WRAPPER, SEMI AUTOMATIC	2	1.0	17.1							34.2				34.2
72512 614102 1922	PALLET STRAPPER	1	2.0	33.6							33.6				33.6

3104.1 3104.1

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATURK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS)

Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 109233 2932	BLACK LIQUOR FILTER	1	6.0	20.0							20.0				20.0
72514 103143 1722	IRECS FILTER	1	2.1	20.0							20.0				20.0
72513 501335 1612	LIME SLAKER/CLASSIFIER	1	2.3	4.1							4.1				4.1
72514 104253 2722	LIME MUD FILTER	1	6.1	25.0							25.0				25.0
72514 554201 2232	ELECTROLYTIC CELLS, FOR Cl_2-NaOH PROD.	24	8.0	36.3							871.2				871.2
72514 551101 1912	ELECTROLYTIC CELLS, FOR SODIUM CHLORATE PRODUCTION	24	0.4	13.4							321.6				321.6
72514 101112 1712	CHLORATE CHLORIDS SOLUTION FILTER	1	0.3	14.9							14.9				14.9
72514 101112 1712	NaCl FILTER	1	0.15	7.8							7.8				7.8
72513 601132 1612	CENTRIFUGAL CLEANERS, PULP STOCK	24	0.007	0.046							1.1				1.1
72514 107124 2722	PRESSURE SCREEN, PULP DRYER	1	5.0	104.4							104.4				104.4
72512 115411 8252	PULP DRYER	1	300.0	3082.0						3082.0					3082.0
72514 209865 2232	SAVEALL, PULP DRYER	1	7.6	292.7							292.7				292.7
								TOTAL	—	4218.6	4563.29				53781.89
										3082.0	4482.8				4764.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (METAL DETECTORS AND MAGNETIC SEPARATORS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72831 313003 1912	METAL DETECTOR-SOFTWOOD SYSTEM	1	0.36	11.9							11.9				11.9
72831 313003 1932	MAGNETIC SEPARATOR, S'WOOD CHIP SCREEN	1	3.55	6.6							6.6				6.6
72831 311003 1932	MAGNETIC SEPARATOR, OF S'WOOD RECHIPPER AND BLOWER	1	3.0	5.9							5.9				5.9
72831 313003 1932	MAGNETIC SEPARATOR, ON S'WOOD ACCEPTS CONVEYOR TO CHIP SILO	1	3.55	6.6							6.6				6.6
72831 313003 1912	METAL DETECTOR, HARDWOOD SYSTEM	1	0.36	11.9							11.9				11.9
72831 313003 1932	MAGNETIC SEPARATOR, H'WOOD CHIP SCREEN	1	3.55	6.6							6.6				6.6
72831 311003 1932	MAGNETIC SEPARATOR, OF H'WOOD RECHIPPER AND BLOWER	1	3.0	5.9							5.9				5.9
72831 313003 1932	MAGNETIC SEPARATOR, ON HARDWOOD ACCEPTS CONVEYOR TO CHIP SILO	1	3.55	6.6							6.6				6.6
72831 313003 1932	MAGNETIC SEPARATOR, ON BELT CONVEYOR-CHIPS TO DIGESTER	1	3.55	6.6							6.6				6.6
72831 311002 1212	MAGNETIC SEPARATOR-BLOW TANK DISCHARGE	1	0.8	6.58							6.58				6.58
								TOTAL :-			75.18				75.18

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72831 433001 2941	DISC CYCLONE, SOFT WOOD SYSTEM	1	5.0	9.2							9.2				9.2
74362 708100 1612	STRAINER-DIRTY HOT CONDENSATE	2	1.4	1.31							2.62				2.62
72831 431002 1912	LIQUID CYCLONE	1	0.6	3.3							3.3				3.3
72831 141001 2922	FOAM BREAKER	2	7.0	88.0							176.0				176.0
72831 121002 1911	CYCLONE, CHIP WASHING SYSTEM	1	0.2	0.4							0.4				0.4
74165 991122 1412	STARCH COOKER	2	1.0	12.0							24.0				24.0
74362 702100 1612	STARCH STRAINER	2	0.4	5.0							10.0				10.0
71111 004354 8321	POWER BOILER	1	440.0	4737.0							4737.0				4737.0
74342 004111 1222	SALT CAKE BLOWER	1	1.65	23.8							23.8				23.8
71111 004356 9321	RECOVERY BOILER	1	1144.0	3214.0							3214.0				3214.0
74103 121436 6211	LIME KILN	1	550.0	281.4							281.4				281.4
72831 021431 2231	LIMESTONE CRUSHER	1	1.6	49.7							49.7				49.7
72831 021312 2232	HOT LIME CRUSHER	1	2.5	31.8							31.8				31.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74121 001505 2942	SULPHUR BURNER AND COOLING CHAMBER	1	9.0	28.9							28.9				28.9
72831 222002 2642	BRINE FILTER	2	5.6	15.6							31.2				31.2
69243 041232 2111	DRY AIR RECEIVER	1	5.5	11.8							11.8				11.8
74342 003123 1212	HYDROGEN BLOWER	1	1.2	5.1							5.1				5.1
74165 081224 1212	HCl COMBUSTION CHAMBER	1	0.4	1.26							1.26				1.26
								TOTAL:-			8641.48				8641.48

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS-COOLER, CHILLER, HEAT EXCHANGERS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total '981-1990
74161 054235 1612	CONDENSER,BLOW HEAT RECOVERY SYS.	1	4.6	34.0							34.0				34.0
74161 012111 1612	HEAT EXCHANGER,ACCUMULATOR HOT WATER	1	2.0	8.28							8.28				8.28
74161 054141 1612	TURPENTINE CONDENSER	1	2.5	26.3							26.3				26.3
74161 015241 1612	HEAT EXCHANGER,REFINED CMP	1	1.7	52.6							52.6				52.6
74161 014141 1112	HEAT EXCHANGER,50% STRONG BL.LIQ.	1	4.5	34.2							34.2				34.2
74161 102111 1612	PREHEATER,50% ST.BLACK LIQUOR	1	2.0	7.9							7.9				7.9
74161 014141 1612	HEAT EXCHANGER,62% ST.BL.LIQ.	1	2.5	26.3							26.3				26.3
74161 074247 2611	AIR HEATER ,ECONOMIZER-RECOVERY BOILER	1	7.5	39.4							39.4				39.4
74161 072111 1112	GREEN LIQUOR HEATER/COOLER	1	1.5	8.8							8.8				8.8
74161 054141 1112	SURFACE CONDENSER,EVAPORATOR FLASH	1	2.5	26.3							26.3				26.3
74161 034141 1112	EVAPORATOR VAPOR PRE-COOLER	1	2.5	26.3							26.3				26.3
74161 032141 1612	CAUSTIC COOLER	1	1.0	4.99							4.99				4.99
74161 033131 1612	CHLORINE GAS COOLER	1	1.1	13.1							13.1				13.1
74161 032121 1612	H_2SO_4 COOLER	2	1.0	5.1							10.2				10.2

3/5 67

3/5 67

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1983

PULP AND PAPER MACHINERY (GENERAL ITEMS—COOLER, HEAT EXCHANGERS, CONDENSERS) Total value in 1000 U.S.$

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $. 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
74161 032131 1612	ACID SEPARATOR AND COOLER	1	1.8	9.6							9.6				9.6
74161 043131 1212	CHLORINE LIQUIFIER	1	1.8	9.6							9.6				9.6
74161 072127 1112	AIR DRYER, COMPRESSOR	1	1.0	5.1							5.1				5.1
74161 093131 1612	CHLORINE VAPOURISER	2	3.2	17.0							34.0				34.0
74161 045005 3612	CHILLER, HYPOPLANT	2	12.0	67.0							134.0				134.0
74161 031111 1612	CHLORATE COOLER	1	0.25	1.3							1.3				1.3
74161 031111 1212	HYDROGEN WASHER AND COOLER	24	0.25	1.3							31.2				31.2
74161 022131 1612	ClO_2 EVAPORATOR REBOILER	1	1.8	35.3							35.3				35.3
74161 032131 1612	ClO_2 COOLER	1	1.8	35.3							35.3				35.3
74161 052131 1612	ClO_2 SURFACE CONDENSER	1	1.8	35.3							35.3				35.3
								TOTAL :-			649.37				649.37

330.7 330.7

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS—EVAPORATORS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74162 014153 4612	EVAPORATOR, 5TH EFFECT	1	38.0	651.2							651.2				651.2
74162 014153 4612	EVAPORATOR, 4TH EFFECT	1	36.0	651.2							651.2				651.2
74162 014153 4612	EVAPORATOR, 3RD EFFECT	1	36.0	651.2							651.2				651.2
74162 014253 4612	EVAPORATOR, 2ND EFFECT	1	48.0	651.2							651.2				651.2
74162 014253 5612	EVAPORATOR, 1ST EFFECT	1	56.0	651.2							651.2				651.2
74162 012141 3612	1ST CONCENTRATOR	1	17.0	89.4							89.4				89.4
74162 012141 3612	2ND CONCENTRATOR	1	17.0	89.4							89.4				89.4
74162 011143 1611	CAUSTIC SODA EVAPORATOR	1	3.2	17.0							17.0				17.0
74162 012113 1612	ClO_2 EVAPORATOR	1	3.2	17.0							17.0				17.0
								TOTAL :—			3468.8				3468.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS—STRIPPING TOWER, SCRUBBER, ABSORBTION COLUMNS)

Total value in 1000 U.S.S.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74166 021142 1611	DISSOLVING TANK VENT SCRUBBER	1	0.9	5.0							5.0				5.0
74166 071141 1611	STRIPPING TOWER	1	4.0	22.1							22.1				22.1
74166 021142 1611	VENTURI SCRUBBER, LIME KILN	1	0.9	5.0							5.0				5.0
74166 031142 1611	SO_2 ABSORBTION TOWER	1	2.0	11.0							11.0				11.0
74166 031142 1611	Na_2SO_3 ABSORBTION TOWER	1	2.0	11.0							11.0				11.0
74166 991143 1612	ION EXCHANGER COLUMN	1	1.0	35.0							35.0				35.0
74166 031243 1611	CHLORINE DRYING TOWER	1	1.0	5.5							5.5				5.5
74166 021142 1611	VENT SCRUBBER, HYPO PLANT	1	0.9	5.0							5.0				5.0
74166 021142 1611	HYDROGEN SCRUBBER	1	0.26	6.3							6.3				6.3
74166 031241 1212	HCl COOLING/ABSORBTION CHAMBER	1	2.0	5.26							5.26				5.26
74166 021242 1111	TAILGAS SCRUBBER, HCl PLANT	1	1.2	22.9							22.9				22.9
74166 031142 1611	ClO_2 ABSORBTION TOWER	1	0.3	1.65							1.65				1.65
								TOTAL :-			135.71				135.71

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 026121 1712	DIGESTER LIQUOR CIRCULATION PUMP	4	0.79	10.9						43.6					43.6
74220 025241 1212	BLOW TANK DISCHARGE PUMP	2	1.9	12.7						25.4					25.4
74220 024221 1212	CONDENSER WATER PUMP	1	0.5	5.6						5.6					5.6
74220 024221 1212	HOT WATER PUMP TO ACCUMULATOR	1	1.3	3.0						3.0					3.0
74220 026221 1222	ACCUMULATOR RECIRCULATION PUMP	1	2.1	20.0						20.0					20.0
74220 023121 1212	TURPENTINE PUMP	1	0.22	3.3						3.3					3.3
74220 023121 1212	TURPENTINE CONDENSATE PUMP	1	0.22	3.3						3.3					3.3
74220 022121 1712	TURPENTINE PUMP	1	0.20	2.1						2.1					2.1
74220 025251 1712	WHITE LIQUOR PUMP TO DIGESTERS	2	0.53	6.7						13.4					13.4
74220 024241 4112	BLACK LIQUOR PUMP TO DIGESTERS	1	0.5	5.6						5.6					5.6
74220 023261 1212	KNOTS PUMP	1	0.53	5.7						5.7					5.7
74220 025221 1212	PUMP, FILTRATE TO NO 1 VAT DILUTION	1	1.4	11.2						11.2					11.2
74220 025221 1212	PUMP, FILTRATE TO BLOW TANKS DIL.	1	1.1	3.0						3.0					3.0
74220 024121 1212	PUMP, FILTRATE TO DIGESTERS	1	0.46	4.9						4.9					4.9
										150.1					150.1

TABLE NO. :

EQUIPMENT REQUIRMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024221 1212	PUMP, FILTRATE TO EVAPORATORS	1	0.46	4.9						4.9					4.9
74220 025221 1212	PUMP, FILTRATE NO 1 TO INTERMEDIATE REPULPER	1	1.4	11.2						11.2					11.2
74220 024221 1212	PUMP, FILTRATE NO 1 TO WASHER SHOWERS	1	0.46	4.9						4.9					4.9
74220 025221 1212	PUMP, FILTRATE NO 2 TO INTERMADIATE REPULPER	1	1.4	11.2						11.2					11.2
74220 024221 1212	PUMP, FILTRATE NO 2 TO WASHER SHOWERS	1	0.46	4.9						4.9					4.9
74230 003261 1212	PUMP, SOAP FROM FOAM TANK TO STORAGE	1	0.2	1.4						1.4					1.4
74220 023121 1212	PUMP, LIQUOR TO BLACK LIQUOR TANK	1	0.18	2.1						2.1					2.1
74220 025211 1212	PUMP, TO PRIMARY SCREENS	2	1.3	6.6						13.2					13.2
74220 024211 1212	PUMP TO SECONDARY SCREEN	1	0.55	1.8						1.8					1.8
74220 025211 1212	PRIMARY CLEANERS FEED PUMP	1	1.1	3.0						3.0					3.0
74220 024211 1212	PUMP, FEED TO SECONDARY CLEANERS	1	0.35	3.5						3.5					3.5
74220 023211 1212	PUMP, REJECTS TO DIGESTERS	1	0.11	1.8						1.8					1.8
74220 024211 1212	WHITE WATER PUMP	2	1.05	2.6						5.2					5.2
74220 024161 1212	DUMP TANK PUMP-SCREENING PLANT	1	1.1	3.0						3.0					3.0
										72.1					72.1

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 300 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024261 1212	THICK STOCK PUMP	1	1.1	3.0						3.0					3.0
74220 024161 1212	PUMP-STOCK TO CHLORINE/DIOXIDE CHLORINE (D/C) TOWER	2	1.1	3.0						6.0					6.0
74220 025261 1212	PUMP TO PRERETENTION TUBE	1	1.1	3.0						3.0					3.0
74220 023311 1212	PUMP, WATER TO Cl_2 INJECTOR	1	0.22	3.3						3.3					3.3
74220 026111 1712	PUMP, D/C STAGE FILTRATE TO D/C WASHER	1	1.5	18.9						18.9					18.9
74220 023311 1712	PUMP, D/C STAGE FILTRATE TO Cl_2 INJECTOR	1	0.22	4.7						4.7					4.7
74220 024211 1712	PUMP, DILUTION TO H.D. WASHED PULP TOWER	1	0.79	10.9						10.9					10.9
74220 023211 1212	PUMP, H.P.SEAL WATER TO THICK STOCK PUMPS	1	0.1	1.8						1.8					1.8
74220 024261 1212	THICK STOCK PUMP	1	1.1	3.0						3.0					3.0
74220 025161 1212	PUMP,STOCK CAUSTIC TOWER TO WASHER	1	1.3	6.6						6.6					6.6
74220 026111 1212	PUMP,CAUSTIC STAGE FILTRATE TO CAUSTIC WASHER	1	2.0	10.3						10.3					10.3
74220 024211 1212	PUMP, CAUSTIC STAGE FILTRATE TO CAUSTIC TOWER	1	0.5	5.47						5.47					5.47
74220 024211 1212	PUMP,CAUSTIC STAGE FILTRATE TO D/C WASHER	1	0.25	3.2						3.2					3.2
74220 024261 1212	THICK STOCK PUMP	1	1.1	3.0						3.0					3.0
										83.17					83.17

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 025161 1712	STOCK PUMP TO ClO_2 WASHER	1	1.3	14.9						14.9					14.9
74220 026111 1722	PUMP, ClO_2 STAGE FILTRATE TO ClO_2 WASHER INLET	1	2.0	31.9						31.9					31.9
74220 024211 1712	PUMP, ClO_2 STAGE FILTRATE TO ClO_2 TOWER DILUTION	1	0.5	5.2						5.2					5.2
74220 024211 1712	PUMP, ClO_2 STAGE FILTRATE TO CAUSTIC WASHER	1	0.25	2.7						2.7					2.7
74220 024261 1712	THICK STOCK PUMP	1	1.1	45.0						45.0					45.0
74220 023161 1212	DUMP TANK PUMP-BLEACHING AREA	1	1.3	3.0						3.0					3.0
74220 025111 1212	CHIP WASHER/SCREEN CIRCULATION PUMP	1	1.3	3.0						3.0					3.0
74220 024211 1212	CHIP WASHER/SYSTEM CLEANER PUMP	1	0.55	1.83						1.83					1.83
74220 022151 1712	SODIUM SULPHITE LIQUOR FEED PUMP	1	0.15	3.8						3.8					3.8
74220 023311 1212	PUMP, PRESSATE TO KRAFT MILL	1	0.18	2.0						2.0					2.0
74220 024161 1212	PUMP, 4% STOCK TO WASHER	1	1.1	3.0						3.0					3.0
74220 026121 1212	PUMP, STOCK TO WASHER AT 1 % CONSISTENCY	1	1.6	10.9						10.9					10.9
74220 023221 1212	PUMP, FILTRATE TO CHIP WASHER AND IMPREGNATOR	2	0.46	4.9						9.8					9.8
74220 024121 1212	PUMP, FILTRATE TO HEAT EXCHANGER	2	0.5	5.7						11.4					11.4
										148.43					148.43

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024121 1712	PUMP, HOT WATER TO MILL	2	0.46	4.3						8.6					8.6
74220 024161 1212	PUMP, 4% STOCK TO CLEANERS	1	1.05	2.6						2.6					2.6
74220 026111 1212	PUMP, UNBLEACHED STOCK TO CLEANERS 0.9% CONSISTENCY	1	1.6	11.0						11.0					11.0
74220 024111 1712	PRIMARY REJECTS PUMP	1	0.95	9.3						9.3					9.3
74220 024111 1712	SECONDARY REJECT PUMP	1	0.35	3.5						3.5					3.5
74220 024111 1712	WHITEWATER PUMP	2	0.7	7.6						15.2					15.2
74220 024111 1712	PUMP TO BLEACH WASHER	1	0.79	10.8						10.8					10.8
74220 026111 1722	FILTRATE PUMP	1	2.0	31.9						31.9					31.9
74220 023261 1732	THICK STOCK PUMP -12%	1	3.0	20.0						20.0					20.0
74220 023161 1712	PUMP, SOFTWOOD STOCK 4%	1	0.53	6.7						6.7					6.7
74220 024161 1712	PUMP, HARDWOOD STOCK 4%	1	1.1	13.6						13.6					13.6
74220 023161 1712	PUMP, SOFTWOOD STOCK TO REFINERS	1	1.05	5.87						5.87					5.87
74220 024161 1712	PUMP, HARDWOOD STOCK TO REFINERS	1	1.1	13.6						13.6					13.6
74220 023161 1712	PUMP, S'WOOD REFINED TO PM 1 BLEND CHEST	1	0.53	6.7						6.7					6.7
										153.37					153.37

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023161 1712	PUMP, S'WOOD REFINED TO PM 2 BLEND CHEST	1	0.53	6.7						6.7					6.7
74220 024161 1712	PUMP, H'WOOD REFINED TO PM 1 BLEND CHEST	1	1.1	13.6						13.6					13.6
74220 023161 1712	PUMP, H'WOOD REFINED TO PM 2 BLEND CHEST	1	0.53	6.7						6.7					6.7
74220 024161 1712	PUMP, REFINED STOCK TO MACHINE CHEST	1	1.1	13.6						13.6					13.6
74220 024261 1712	PUMP, STOCK TO CLEANING SYSTEM PM 1	1	1.1	13.6						13.6					13.6
74220 023161 1712	PUMP, BROKE TO PM 1	1	0.53	6.7						6.7					6.7
74220 024211 1712	STOCK CLEANING SYSTEM PRIMARY REJECT PUMP	1	0.46	4.4						4.4					4.4
74220 023211 1712	SECONDARY REJECT PUMP	1	0.3	3.3						3.3					3.3
74220 023111 1712	TERTIARY REJECT PUMP	1	0.11	1.2						1.2					1.2
74220 026211 1732	PRIMARY FAN PUMP	1	3.65	86.4						86.4					86.4
74220 024211 1712	SCREEN REJECT PUMP	1	0.25	2.7						2.7					2.7
74220 026211 1732	FAN PUMP	1	3.65	86.4						86.4					86.4
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.2	2.1						2.1					2.1
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.2	2.1						2.1					2.1
										249.5					249.5

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Regd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.2						3.2					3.2
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.2						3.2					3.2
74220 023161 1212	PUMP, SUMP TO WASTE	2	0.53	5.7						11.4					11.4
74220 024211 1712	PUMP, WHITE WATER-PM 1	1	0.35	3.5						3.5					3.5
74220 113611 1712	PUMP, HIGH PRESSURE SHOWERS-PM1	2	0.72	5.9						11.8					11.8
74220 026211 1712	PUMP, DILUTION	1	1.05	11.8						11.8					11.8
74220 024111 1712	PUMP, WHITE WATER TO SAVEALL-PM I	1	0.51	4.7						4.7					4.7
74220 024211 1712	PUMP, CLARIFIED WATER	1	0.51	4.7						4.7					4.7
74220 024211 1712	PUMP, CLOUDY WATER	1	0.26	2.2						2.2					2.2
74220 024161 1712	PUMP, SAVEALL SWEETENER	1	0.53	6.7						6.7					6.7
74220 024161 1712	PUMP, (COUCH PIT) -PM1	1	1.1	13.6						13.6					13.6
74220 023161 1712	PUMP, BROKE TO MACHINE CHEST-PM 1	1	0.53	6.7						6.7					6.7
74220 024161 1712	PUMP, BROKE FROM PULPER TO BROKE CHEST - PM 1	1	1.1	13.6						13.6					13.6
74220 023261 1712	PUMP, BROKE FROM PULPER TO BROKE CHEST - PM 1	1	0.53	6.7						6.7					6.7
										103.8					103.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATURK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024161 1712	PUMP,(HARDWOOD)CHEMI MECH.STOCK 4 %	1	1.1	13.6						13.6					13.6
74220 024161 1712	PUMP,CHEMI MECH.STOCK TO REFINERS	1	1.1	13.6						13.6					13.6
74220 024261 1712	PUMP,HARDWOOD REFINED CMP TO BLEND CHEST	1	1.1	13.6						13.6					13.6
74220 024261 1712	PUMP, REFINED BLENDED STOCK TO MACHINE CHEST	1	1.1	13.6						13.6					13.6
74220 024261 1712	PUMP, HARDWOOD REFINED BLENDED STOCK TO CLEANING SYSTEM-PM 2	1	1.1	13.6						13.6					13.6
74220 023161 1712	PUMP, BROKE TO PM 2	1	0.53	6.7						6.7					6.7
74220 024211 1712	STOCK CLEANING SYSTEM, PRIMARY REJECT PUMP	1	0.46	4.4						4.4					4.4
74220 023211 1712	SECONDARY REJECT PUMP	1	0.3	3.3						3.3					3.3
74220 023111 1712	TERTIARY REJECT PUMP	1	0.11	1.2						1.2					1.2
74220 026211 1732	PRIMARY FAN PUMP	1	3.65	86.4						86.4					86.4
74220 024211 1712	SCREEN REJECT PUMP	1	0.25	2.7						2.7					2.7
74220 026211 1732	FAN PUMP	1	3.65	86.4						86.4					86.4
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.2	2.1						2.1					2.1
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.2	2.1						2.1					2.1
										263.3					263.3

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $. 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.2						3.2					3.2
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.2						3.2					3.2
74220 023161 1212	PUMP, SUMP TO WASTE	2	0.53	5.7						11.4					11.4
74220 024211 1712	PUMP, WHITE WATER - PM 2	1	0.35	3.5						3.5					3.5
74220 113611 1712	PUMP,HIGH PRESSURE SHOWERS-PM 2	2	0.72	5.9						11.8					11.8
74220 026211 1712	PUMP,DILUTION - PM 2	1	1.05	11.8						11.8					11.8
74220 024111 1712	PUMP, WHITE WATER TO SAVEALL	1	0.51	4.7						4.7					4.7
74220 024211 1712	PUMP, CLARIFIED WATER	1	0.51	4.7						4.7					4.7
74220 024211 1712	PUMP, CLOUDY WATER	1	0.26	2.2						2.2					2.2
74220 024161 1712	PUMP,SAVEALL SWEETENER	1	0.53	6.7						6.7					6.7
74220 024161 1712	PUMP,COUCH PIT - PM 2	1	1.1	13.6						13.6					13.6
74220 023161 1712	PUMP,BROKE TO MACHINE CHEST-PM 2	1	0.53	6.7						6.7					6.7
74220 024161 1712	PUMP,BROKE FROM PULPER TO BROKE CHEST - PM 2	1	1.1	13.6						13.6					13.6
74220 023261 1712	PUMP,BROKE FROM PULPER TO BROKE CHEST - PM 2	1	0.53	6.7						6.7					6.7
										103.8					103.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023171 1212	70 % CLAY TRANSFER PUMP	1	0.53	5.7						5.7					5.7
74220 023171 1212	70 % CLAY RECIRCULATION PUMP	1	0.46	4.9						4.9					4.9
74220 023171 1212	70 % CLAY TRANSFER PUMP	1	0.53	5.7						5.7					5.7
74220 023171 1212	70 % CLAY RECIRCULATION PUMP	1	0.46	4.9						4.9					4.9
74220 022271 1212	35 % CLAY TRANSFER PUMP	2	0.35	3.5						7.0					7.0
74220 022271 1212	35 % CLAY RECIRCULATION PUMP	2	0.35	3.5						7.0					7.0
74220 023161 1712	STARCH TRANSFER PUMP	2	0.9	9.3						18.6					18.6
74220 023161 1712	STARCH SUPPLY PUMP	2	1.2	18.3						36.6					36.6
74220 023161 1712	STARCH TRANSFER PUMP	2	0.9	9.3						18.6					18.6
74220 023261 1712	PUMP - STARCH TO SIZE PRESSES OF PM 1 AND PM 2	4	0.7	7.7						30.8					30.8
74210 203161 1212	DIAPHRAGM PUMP, RETENTION AID TRANSFER	1	0.6	11.7						11.7					11.7
74210 202261 1212	DIAPHRAGM SUPPLY PUMP-POLYMER TO MACHINES	2	0.3	5.6						11.2					11.2
74220 023161 1712	ALUM PUMP	2	0.22	4.7						9.4					9.4
74220 022211 1712	PUMP, ALUM TO MACHINE	2	0.17	1.3						2.6					2.6
										174.7					174.7

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 022211 1712	PUMP, DEFOAMER TO MACHINE	2	0.52	9.4						18.8					18.8
74230 101111 1712	METERING PUMP, SLIMICIDE	8	0.02	2.5						20.0					20.0
74230 102311 1712	CHEMICAL CLEANERS PUMP	2	0.52	9.4						18.8					18.8
74220 024221 1712	PUMP, WBL TO WEAK LIQUOR STORAGE	1	0.27	3.1						3.1					3.1
74220 024221 1712	PUMP, BLACK LIQUOR TO EVAPORATORS	2	0.27	3.1						6.2					6.2
74220 024221 1712	PUMP, BLACK LIQUOR TO NO 5 EFFECT TRANSFER	1	0.27	3.1						3.1					3.1
74220 024221 1712	PUMP, BLACK LIQUOR TO NO 2 EFFECT	1	0.27	3.1						3.1					3.1
74220 023121 1712	PUMP, TRANSFER TO NO 1 EFFECT	1	0.2	2.2						2.2					2.2
74220 023161 1712	PUMP, 50 % BL. TO STORAGE	2	0.22	4.7						9.4					9.4
74220 023161 1712	PUMP, 50% BL. TO 1ST. CONCENTRATOR	2	0.22	4.7						9.4					9.4
74220 023161 1712	PUMP, BLACK LIQUOR TRANSFER TO 2ND. CONCENTRATOR	1	0.2	2.2						2.2					2.2
74220 023161 1712	PUMP, 62% BLACK LIQUOR TO STORAGE	2	0.22	4.7						9.4					9.4
74220 023161 1712	PUMP, 62% STRONG BLACK LIQUOR TO RECOVERY BOILER	2	0.22	4.7						9.4					9.4
74220 024121 1712	PUMP, BOIL OUT LIQUOR TO EVAPORATORS	1	1.4	19.5						19.5					19.5
										134.6					134.6

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023161 1722	PUMP,STRONG BLACK LIQUOR	2	2.2	35.4						70.8					70.8
74220 023161 1712	PUMP,RETURN STRONG BLACK LIQUOR	2	0.22	4.7						9.4					9.4
74220 024261 1712	PUMP,AIR HEATER RECIRCULATION	2	0.25	2.7						5.4					5.4
74220 023161 1712	PUMP,SBL TO RECOVERY BOILER	1	0.22	4.7						4.7					4.7
74220 023261 1712	PUMP,GREEN LIQUOR TRANSFER	2	0.22	4.7						9.4					9.4
74220 023261 1712	PUMP,GREEN LIQUOR TO SLAKER	2	0.25	2.7						5.4					5.4
74220 022171 1712	PUMP,DREGS TO FILTER	2	0.17	1.4						2.8					2.8
74220 022121 1712	PUMP,DREGS FILTER FILTRATE	1	0.17	1.4						1.4					1.4
74220 024221 1712	PUMP,CONTAMINATED HOT WATER	2	0.3	3.3						6.6					6.6
74220 023251 1712	PUMP,TO WL.CLARIFIER	2	0.25	2.7						5.4					5.4
74220 023151 1712	PUMP,OVER FLOW WHITE LIQUOR CLARIFIER TO WL.STORAGE	2	0.25	2.7						5.4					5.4
74220 023151 1712	PUMP,UNDERFLOW WHITE LIQUOR CLARIFIER TO LIME MUD	2	0.2	2.2						4.4					4.4
74220 024151 1712	DUMP TANK PUMP-CAUSTICIZING AREA	1	0.53	6.7						6.7					6.7
74230 002361 1712	SOAP PUMP	1	0.25	6.0						6.0					6.0
										143.8					143.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $, 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
74230 002361 1712	PUMP, SOAP TO SOAP STORAGE TANK	1	0.25	6.0						6.0					6.0
74230 003361 1212	PUMP, SOAP TO TALL OIL REACTION VESSEL	1	0.50	5.5						5.5					5.5
74220 022121 1712	PUMP, TALL OIL TO STORAGE TANK	1	0.15	3.8						3.8					3.8
74220 022111 1712	PUMP, TALL-OIL TO SHIPPING	1	0.15	3.8						3.8					3.8
74220 023221 1712	PUMP, SALT CAKE (Na_2SO_4) TO RECOVERY SYSTEM	1	0.2	2.2						2.2					2.2
74220 023121 1212	PUMP, CONDENSER TO RECAUSTICIZING HOT WATER TANK	1	0.2	2.1						2.1					2.1
74220 023121 1212	PUMP, 5TH. EFFECT CONDENSATE TO RECAUSTICIZING HOT WATER TANK	1	0.26	3.3						3.3					3.3
74220 023121 1712	PUMP, RECEIVER TO PRECOOLER	1	0.2	1.4						1.4					1.4
74220 022121 1712	PUMP, RECEIVER TO CONTAMINATED CONDENSATE TANK	1	0.2	1.4						1.4					1.4
74220 022121 1712	PUMP, 5 TH. EFFECT CONDENSATE TO CONTAM.COND.TANK	1	0.2	1.4						1.4					1.4
74220 023221 1712	PUMP, CONTAMINATED CONDENSATE TO STRIPPING SYSTEM	1	0.2	1.4						1.4					1.4
74220 023221 1712	PUMP, STRIPPED CONDENSATE TO STORAGE	1	0.2	1.4						1.4					1.4
74220 023221 1712	PUMP, STRIPPED COND. TO WASHER	1	0.3	3.2						3.2					3.2
74220 022121 1712	PUMP, COND. FROM 2ND. CONCENTRATOR TO STRIPPER	1	0.2	1.4						1.4					1.4
										38.3					38.3

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023121 1212	PUMP,CLEAN CONDENSATE TO COND.TANK	1	0.16	2.2						2.2					2.2
74220 023141 1712	PUMP,LIME MUD TO STORAGE	2	0.22	4.7						9.4					9.4
74220 023251 1712	PUMP,WEAK WHITE LIQUOR TO SMELT DISSOLVING TANK	2	0.2	2.1						4.2					4.2
74220 023141 1712	PUMP,LIME MUD STORAGE TO FILTER	2	0.22	4.7						9.4					9.4
74220 022151 1712	PUMP, ACID TO FILTER	1	0.1	1.1						1.1					1.1
74220 023141 1712	PUMP, FILTRATE	1	0.2	2.2						2.2					2.2
74220 024171 1712	PUMP,SLURRY TO SCRUBBER	2	0.46	4.4						8.8					8.8
74220 023121 1712	PUMP,FILTRATE TO DUST CHAMBER	1	0.18	1.4						1.4					1.4
74220 023171 1712	PUMP,SLURRY TO MUD MIX TANK	1	0.22	4.7						4.7					4.7
74220 023121 1212	PUMP, WATER TO SCRUBBER	1	0.50	5.5						5.5					5.5
74220 021141 1212	MOLTEN SULPHUR PUMP	1	0.15	2.6							2.6				2.6
74220 022111 1212	PUMP,SO_2 SOLUTION TO STORAGE	1	0.18	2.0							2.0				2.0
74220 022111 1212	PUMP,Na_2SO_3 SOLUTION TO STORAGE	1	0.18	2.0							2.0				2.0
74220 022111 1212	PUMP,Na_2SO_3 SOLUTION TO SOAKER (CHIP IMPREGNATOR)	1	0.18	2.0							2.0				2.0
										48.3	8.6				57.5

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 022111 1212	PUMP, SO_2 SOLUTION TO KRAFT BLEACHING PLANT	1	0.18	2.0							2.0				2.0
74220 023121 1212	BRINE RECIRCULATION PUMP	1	0.21	2.6							2.6				2.6
74220 023121 1212	RAW BRINE STORAGE TANK PUMP	2	0.21	2.6							5.2				5.2
74220 021111 1212	CARBONATE TANK PUMP	1	0.1	1.88							1.88				1.88
74220 023121 1212	CARBONATE REACTOR TANK PUMP	1	0.21	2.6							2.6				2.6
74220 023121 1212	NaOH REACTOR PUMP	1	0.21	2.6							2.6				2.6
74220 022141 1212	BRINE CLARIFIER SLUDGE PUMP	2	0.26	3.3							6.6				6.6
74220 022131 1212	BRINE SLUDGE TRANSFER PUMP	1	0.26	3.3							3.3				3.3
74210 201111 1712	COAGULANT METERING PUMP	1	0.025	5.3							5.3				5.3
74220 023121 1212	CLARIFIED BRINE PUMP	2	0.26	3.3							6.6				6.6
74220 023121 1212	BRINE FILTER PUMP	2	0.26	3.3							6.6				6.6
74210 201111 1712	HCL METERING PUMP	1	0.025	5.3							5.3				5.3
74210 201111 1712	NaOH METERING PUMP	1	0.025	5.3							5.3				5.3
74220 021121 1212	ION REGENERATIVE PUMP	1	0.16	2.23							2.23				2.23

58.11 58.11

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023121 1212	PURIFIED BRINE PUMP	2	0.26	3.3							6.6				6.6
74220 023121 1212	DEPLETED BRINE PUMP	2	0.18	2.0							4.0				4.0
74220 023121 1212	DECHLORINATED BRINE PUMP	2	0.18	2.0							4.0				4.0
74220 022121 1212	PUMP, 30% CAUSTIC FROM RECEIVER TANK	2	0.18	2.0							4.0				4.0
74220 022121 1212	30% CAUSTIC TRANSFER PUMP	2	0.16	2.23							4.46				4.46
74220 023111 1212	PUMP, 10% NaOH TO PROCESS	2	0.21	2.58							5.16				5.16
74220 022111 1712	PUMP, 50% NaOH TO STORAGE	2	0.15	3.8							7.6				7.6
74220 023111 1712	50% NaOH PUMP TO SHIPPING	1	0.2	4.7							4.7				4.7
74220 022121 1712	CONDENSATE PUMP	1	0.15	3.8							3.8				3.8
74220 022151 1712	98 % H_2SO_4 PUMP	1	0.15	3.8							3.8				3.8
74220 022151 1712	H_2SO_4 RECIRCULATION PUMP	1	0.2	2.1							2.1				2.1
74220 022151 1712	H_2SO_4 RECIRCULATION PUMP	3	0.15	3.8							11.4				11.4
74220 021121 1712	PUMP, SPENT H_2SO_4 TO TALL OIL PLANT	1	0.1	1.3							1.3				1.3
74220 022121 1712	SCRUBBER CIRCULATION PUMP	1	0.1	1.06							1.06				1.06
											63.98				63.98

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024211 1712	CHILLED WATER PUMP	2	0.27	3.0							6.0				6.0
74220 023111 1712	PUMP,HYPO TO STORAGE TANK	2	0.22	4.7							9.4				9.4
74220 023211 1712	HYPO TO PROCESS PUMP	2	0.22	4.7							9.4				9.4
74220 022111 1712	BRINE PUMP TO CHLORATE CELLS	1	0.1	1.0							1.0				1.0
74230 101111 1712	DICHROMATE FEED PUMP	1	0.15	5.3							5.3				5.3
74220 022111 1712	CELL LIQUOR CIRCULATION PUMP	2	0.1	1.0							2.0				2.0
74220 022111 1712	SCRUBBER CIRCULATION PUMP	1	0.1	1.0							1.0				1.0
74220 022111 1712	PUMP,SODIUM CHLORATE TO ClO_2 PLANT	2	0.1	1.0							2.0				2.0
74220 022111 1712	DUMP TANK PUMP	1	0.1	1.0							1.0				1.0
74220 022151 1712	33% HCl TRANSFER PUMP	1	0.1	1.0							1.0				1.0
74220 022151 1712	HCl TRANSFER PUMP	1	0.15	3.8							3.8				3.8
74220 021151 1712	HCl FEED PUMP	1	0.15	5.3							5.3				5.3
74220 023161 1712	PUMP,GENERATOR SLURRY CIRCULATING	2	0.22	4.7							9.4				9.4
74220 022121 1712	REBOILER CONDENSATE PUMP	1	0.15	3.8							3.8				3.8
											60.4				60.4

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023251 1712	ClO_2 SOLUTION TRANSFER PUMP	2	0.25	2.7							5.4				5.4
74220 023351 1712	ClO_2 SUPPLY PUMP	2	0.25	2.7							5.4				5.4
74220 024161 1712	PUMP,S'WOOD STOCK TO PULP CHEST	1	1.1	13.6							13.6				13.6
74220 024161 1712	PUMP,CMP STOCK TO PULP CHEST	1	1.1	13.6							13.6				13.6
74220 024261 1712	PUMP,MIXED STOCK TO MACHINE CHEST	1	1.1	13.6							13.6				13.6
74220 024261 1712	PUMP,STOCK TO CLEANING SYSTEM	1	1.2	18.3							18.3				18.3
74220 024211 1712	PRIMARY REJECT PUMP	1	1.1	13.6							13.6				13.6
74220 023211 1712	SECONDARY REJECT PUMP	1	0.7	7.68							7.68				7.68
74220 023111 1712	TERTIARY REJECT PUMP	1	0.25	2.7							2.7				2.7
74220 026211 1732	FAN PUMP	1	3.65	86.3							86.3				86.3
74220 023211 1712	SCREEN REJECT PUMP	1	0.72	5.9							5.9				5.9
74220 023261 1712	PUMP,BROKE PULPER	1	0.53	6.74							6.74				6.74
74220 024261 1712	PUMP, BROKE PULPER	1	1.1	13.6							13.6				13.6
74220 023261 1712	PUMP, COUCH PIT	1	0.53	6.74							6.74				6.74
											213.16				213.16

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 024261 1712	PUMP, COUCH PIT	1	1.1	13.6							13.6				13.6
74220 024261 1712	PUMP, BROKE TO MACHINE CHEST	1	0.79	10.8							10.8				10.8
74220 024211 1712	SWEETENER PUMP	1	0.26	2.2							2.2				2.2
74220 024111 1712	PUMP, WHITEWATER TO SAVEALL	1	0.51	4.7							4.7				4.7
74220 113611 1712	SHOWERS MULTISTAGE PUMP	2	0.72	5.9							11.8				11.8
74220 024111 1712	CLARIFIED WHITEWATER PUMP	1	0.51	4.7							4.7				4.7
74220 024211 1712	CLOUDY WHITEWATER PUMP	1	0.26	2.2							2.2				2.2
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.35	3.5							3.5				3.5
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.3	3.3							3.3				3.3
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.27	3.0							3.0				3.0
74220 023111 1712	VACUUM SEPARATOR PUMP	1	0.27	3.0							3.0				3.0
74220 026211 1722	WHITEWATER PUMP	1	2.4	48.9							48.9				48.9
74220 023111 1212	SUMP PUMP	1	0.35	3.5							3.5				3.5
								TOTAL :-		1873.87	519.45				2393.32
											115.2				115.2

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (VACUUM PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74312 236111 2242	VACUUM PUMP,PAPER MACHINE NO.1	2	8.6	69.0							138.0				138.0
74312 236111 2242	VACUUM PUMP, PAPER MACHINE NO.2	2	8.6	69.0							138.0				138.0
74312 233111 1212	VACUUM PUMP,CLAY UNLOAD SYSTEM	1	1.7	73.4							73.4				73.4
74312 233111 1212	VACUUM PUMP,STARCH UNLOAD SYSTEM	1	1.7	73.4							73.4				73.4
74312 113222 1712	VACUUM PUMP, DREGS FILTER	1	1.4	22.0							22.0				22.0
74312 113111 1222	VACUUM PUMP, VAPOR PRE-COOLER	1	2.85	105.8							105.8				105.8
74312 234212 1732	VACUUM PUMP, LIME MUD FILTER	1	3.0	105.8							105.8				105.8
74312 232111 1212	DE-CHLORINATION VACUUM PUMP	1	0.3	20.0							20.0				20.0
74312 236111 2242	VACUUM PUMP, PULP DRYER	2	7.0	58.0							116.0				116.0
								TOTAL	-		792.4				792.40

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TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (GENERAL ITEMS—FANS AND COMPRESSORS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74341 012522 1212	EXHAUST FAN FOR THREE WASHERS	3	0.8	22.3							66.9				66.9
74341 013622 1732	VENT FAN-SCRUBBER	1	3.0	35.7							35.7				35.7
74341 013512 1712	VENT FAN-LIME MUD FILTER	1	0.8	4.75							4.75				4.75
74341 013722 1222	INDUCED DRAFT FAN-LIME KILN	1	2.1	59.5							59.5				59.5
74341 013512 1712	PRIMARY AIR FAN-LIME KILN	1	0.8	8.1							8.1				8.1
74313 205121 1222	CHLORINE COMPRESSOR	2	1.7	106.5							213.0				213.0
74313 202311 1212	AIR COMPRESSOR	2	1.2	161.6							323.2				323.2
								TOTAL:-			711.15				711.15

TABLE NO. :

PAGE :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (LOADERS, FORKLIFTS, DOZERS) Total value in 1000 U.S.$.

SITC CODE	*Basic Machine Name*	*Qty. Reqd. (Nos)*	*Unit Weight (Tons)*	*Unit cost in 1980 (US $. 1000)*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*Total 1981-1990*
74411 006200 4932	LOADER-FORK AND BUCKET	1	36	62.8						62.8					62.8
72341 201001 3932	CHIP DOZER (SOFTWOOD)	1	10.26	64.4						64.4					64.4
74411 006200 4932	FRONT END LOADER	1	36	62.8						62.8					62.8
72341 201001 3932	CHIP DOZER (HARDWOOD)	1	10.26	64.4						64.4					64.4
74411 004200 3932	TRUCK (CLAMP LIFT)	3	16	38.8						116.4					116.4
74411 004200 3932	FORKLIFT TRUCK	3	16	38.8						116.4					116.4
							TOTAL:			487.2					487.2

TABLE NO. :

PAGE :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CRANES AND HOISTS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74422 163312 4941	WOOD YARD PORTAL CRANE-SOFTWOOD	1	46	339.7					339.7						339.7
74422 212111 3932	MOBILE YARD CRANE	1	15.7	79.0					79.0						79.0
74422 022214 1912	KNUCKLE BOOM LOADER	1	1.3	26.0					26.0						26.0
74422 163312 4941	WOODYARD PORTAL CRANE-HARDWOOD	1	46	339.7					339.7						339.7
74422 132402 1921	HOIST (OVER DIGESTERS)	1	5	41.6					41.6						41.6
74422 144202 4921	OVERHEAD CRANE-FINISHING PLANT	1	21	161.0					161.0						161.0
74422 153112 3931	GANTRY CRANE-PAPER MACHINE 1	1	13	153.4					153.4						153.4
74422 155302 6931	MACHINE ROOM CRANE-PM 1	1	124	873.3					873.3						873.3
74422 153212 2931	CRANE-DRIVE ALLEY - PM 1	1	7.5	115.0					115.0						115.0
74422 153112 3931	GANTRY CRANE-PAPER MACHINE 2	1	13	153.4					153.4						153.4
74422 155302 6931	MACHINE ROOM CRANE-PM 2	1	124	873.3					873.3						873.3
74422 153212 2931	CRANE-DRIVE ALLEY - PM 2	1	7.5	115.0					115.0						115.0
74424 024201 2922	LOWERATOR-FINISHING PLANT	1	5.2	36.8					36.8						36.8
74422 151112 1921	CRANE-FOR SHEETERS	4	3	56.9					227.6						227.6
								TOTAL :-	3554.8						3554.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS) Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 132501 8951	SOFTWOOD RECLAIM CHAIN CONVEYOR	2	450	75.4						150.8					150.8
74426 132301 5941	SORTING CHAIN CONVEYOR	1	55	38.1						38.1					38.1
74426 022301 8941	CHIPPER FEED BELT CONVEYOR	1	18	18.7						18.7					18.7
74426 312201 2931	CHIPPER FEED ROLL CASE CONVEYOR	1	8.5	25.3						25.3					25.3
74426 022301 4931	1st. BELT CONVEYOR TO SCREEN ROOM	1	35	90.0						90.0					90.0
74426 [illegible]2301 1921	2-WAY DISC CHUTE	1	1	1.8						1.8					1.8
74426 [illegible]2301 1921	2-WAY DISC CHUTE	1	1	1.8						1.8					1.8
74426 022301 3931	2nd.BELT CONVEYOR TO SCREEN ROOM	1	25	68.47						68.47					68.47
74426 022301 5931	SOFTWOOD CHIPS STACKOUT CONVEYOR	1	50	132.7						132.7					132.7
74426 111501 5931	CHIP RECLAIMER	1	35	99.0						99.0					99.0
74426 021301 4931	1st. RECLAIM CONVEYOR	1	45	121.9						121.9					121.9
74426 021301 4931	2nd. RECLAIM CONVEYOR	1	45	121.9						121.9					121.9
74426 021201 1911	OVERS CONVEYOR	1	4	8.5						8.5					8.5
74426 021201 1911	FINES CONVEYOR	1	4	9.37						9.37					9.37
										866.14					888.34

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 021201 2911	FINES CONVEYOR TO PILE	1	5	32.8						32.8					32.8
74426 022301 5931	ACCEPTS CONVEYOR TO SILO	1	50	103.1						103.1					103.1
74426 742001 1931	TABLE FEEDER	1	4.5	44.3						44.3					44.3
74426 022301 3941	CHIPPER FEED BELT CONVEYOR, H'WOOD	1	15	38.0						38.0					38.0
74426 312201 2931	ROLL CASE CONVEYOR	1	8.5	25.3						25.3					25.3
74426 712301 1921	2-WAY CHUTE-SCREEN ROOM TO H'WOOD PILE	1	1	1.8						1.8					1.8
74426 022301 3931	NO.1 BELT CONVEYOR TO PILE	1	15	68.47						68.47					68.47
74426 022301 5931	STACKOUT CONVEYOR	1	70	132.7						132.7					132.7
74426 111501 5931	CHIP PILE RECLAIMER	1	75	99.0						99.0					99.0
74426 021301 4931	1st. RECLAIM CONVEYOR	1	40	122.0						122.0					122.0
74426 021301 4931	2nd. RECLAIM CONVEYOR	1	40	122.0						122.0					122.0
74426 712301 2931	CHUTE	1	5	9.2						9.2					9.2
74426 021201 2911	OVERS CONVEYOR	1	5	8.5						8.5					8.5
74426 021201 1911	FINES CONVEYOR	1	4	9.38						9.38					9.38
										816.55					816.55

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS) Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 711201 1911	DISC CHUTE	1	1	1.8						1.8					1.8
74426 712301 1921	2-WAY CHUTE	1	1	1.8						1.8					1.8
74426 022301 5931	ACCEPTS CONVEYOR TO SILO	1	50	103.0						103.0					103.0
74426 742001 1931	TABLE FEEDER	1	4.5	47.5						47.5					47.5
74426 022301 5931	TRANSFER CONVEYOR TO C.M.P.SILO	1	50	103.0						103.0					103.0
74426 742001 1931	TABLE FEEDER	1	4.5	47.5						47.5					47.5
74426 712301 1921	DISC CHUTE	1	1	1.8						1.8					1.8
74426 022301 3931	SILO DISCHARGE CONVEYOR	1	20	23.4						23.4					23.4
74426 022301 5931	BELT CONVEYOR-CHIPS TO DIGESTER	1	50	103.0						103.0					103.0
74426 022301 4931	DIGESTER SHUTTLE CONVEYOR	1	25	30.0						30.0					30.0
74426 021301 4921	CHIPS BELT CONVEYOR	1	40	234.5						234.5					234.5
74426 021201 1921	BELT CONVEYOR(REJECTS)	1	3	32.8						32.8					32.8
74426 401201 1921	PRESS CONVEYOR	1	1.2	4.62						4.62					4.62
74426 401201 1911	FEED SCREW CONVEYOR TO PRESS	1	0.6	2.8						2.8					2.8
										737.52					737.52

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT
CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 401201 1921	FEED CONVEYOR TO PRIMARY REFINER	1	1.5	5.6						5.6					5.6
74426 401201 1921	REPULPER CONVEYOR	1	1.5	5.6						5.6					5.6
74426 421101 1921	STARCH CONVEYOR (SCREW)	1	2	78.8						78.8					78.8
74426 121101 3912	STEEL SLAT CONVEYOR	1	10	59.8						59.8					59.8
74426 121101 2912	STEEL SLAT CONVEYOR	1	6	59.8						59.8					59.8
74426 121101 1912	STEEL SLAT CONVEYOR-REVERSABLE	1	2	46.7						46.7					46.7
74426 121102 2912	PALLET PILE CONVEYOR	1	6	10.4						10.4					10.4
74426 121102 2912	PALLET TRANSFER CONVEYOR	1	6	10.4						10.4					10.4
74426 761101 1212	ROTARY FEEDER FOR SALT CAKE TANK	1	1.3	16.2						16.2					16.2
74426 761101 1212	ROTARY FEEDER FOR SALT CAKE DAY TANK	1	1.3	16.2						16.2					16.2
74426 431101 1911	SCREW CONVEYOR-LIME MUD FROM FILTER TO KILN FEED CONVEYOR	1	2	11.0							11.0				11.0
74426 431101 1911	SCREW CONVEYOR-LIME MUD FEED TO KILN	1	2	11.0							11.0				11.0
74426 121201 2931	LIMESTONE CONVEYOR	1	8	37.5							37.5				37.5
74426 511101 3932	LIMESTONE BUCKET ELEVATOR	1	12	20.9							20.9				20.9
										309.5	80.4				389.90

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER
LOCATION : SAMSUN
ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (CONVEYORS AND FEEDERS) Total value in 1000 U.S.$

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (U.S $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 741101 1921	TABLE FEEDER-LIMESTONE STORAGE BIN TO LIME KILN	1	3	30.0							30.0				30.0
74426 121101 1931	BURNT LIME CONVEYOR	1	4	12.4							12.4				12.4
74426 511101 3932	BURNT LIME BUCKET ELEVATOR	1	12	23.7							23.7				23.7
74426 431101 1931	BURNT LIME SCREW CONVEYOR TO LIME SLAKER	1	4	12.4							12.4				12.4
74426 121101 1931	CONVEYOR (UNLOADING PURCHASED LIME)	1	4	12.4							12.4				12.4
74426 431101 1931	PURCHASED LIME SCREW CONVEYOR TO LIME SLAKER	1	4	12.4							12.4				12.4
74426 021101 1921	CONVEYOR-SALT TO DISSOLVING TANK	1	4	46.5							46.5				46.5
							TOTAL			2751.9	230.2				2982.1

149.8 149.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE NEW SAMSUN ATATÜRK PULP AND PAPER PLANT

CAPACITY : 390 T/D OF PAPER

LOCATION : SAMSUN

ANTICIPATED DATE OF COMMISSIONING : LATE 1988

PULP AND PAPER MACHINERY (SCALES)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74525 037521 1931	TRUCK SCALES-SOFTWOOD SYSTEM	1	3.0	0.76						0.76					0.76
74525 067021 1912	BELT SCALES ON S'WOOD CHIPS TRANSFER CONVEYOR TO CHIP SILO	1	0.1	1.71						1.71					1.71
74525 037521 1931	TRUCK SCALES-HARDWOOD SYSTEM	1	3.0	0.76						0.76					0.76
74525 067021 1912	BELT SCALES, ON H'WOOD CHIPS TRANSFER CONVEYOR TO CHIP SILO	1	0.1	1.7						1.7					1.7
74525 067021 1912	BELT SCALES, ON CONVEYOR CHIPS TO DIGESTER	1	0.1	1.7						1.7					1.7
74525 014221 1922	ROLL'S SCALES	1	2.0	58.1						58.1					58.1
74525 054221 1922	WEIGHING STATION, AUTOMATIC	1	2.0	12.0						12.0					12.0
							TOTAL →			76.73					76.73

UNIDO/SHKA/SPO
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM
EXISTING PLANT : AKSU-NEWSPRINT MILL

REHABILITATION

PRODUCTION ACTIVITY Code:

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Specif. Cap.	Major Spec.	Major Spec.	Type	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1980 Year Cost US$ (in Thousand) Unit	Constant 1980 Year Cost US$ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		FAN PUMP NO.1	4500m3/h	43 m	CCLC	HOR	7.5t	CIC	6.0t	IMP	1	$ 19.95	$ 19.95	55.0	55.0	1967	7 4 2 2 8 0 2 6 2 1 1 2 2 4 2
2		FAN PUMP NO.2	4500m3/h	23m	CCLC	HOR	6.0t	CIC	5.2t	IMP	1	$ 16.96	$ 16.96	46.7	46.7	1967	7 4 2 2 0 0 2 6 1 1 1 2 2 4 2
3		HIGH PRESSURE CENTRIFUGAL PUMP	13.5m3/h	560m	CCLC	HOR	0.75t	ASC	0.3t	IMP	3	$ 5.0	$ 15.0	5.9	17.7	1978	7 4 2 2 0 1 1 3 7 1 1 1 7 1 2
4		PUMP, BILL SCREEN STOCK TO PRIMARY SCREEN	780m3/h	27m	CCLC	HOR	2.5t	CIC	0.8t	IMP	1	DM 19.9	DM 19.9	11.0	11.0	1976	7 4 2 2 0 0 2 5 2 1 1 1 2 1 2
5		PUMP, HOLDING CHEST NO.1 TO HOLDING CHEST NO.2	270m3/h	20m	VISC	HOR	1.1t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	1979	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
6		PUMP, HOLDING CHEST NO.2 TO HOLDING CHEST NO.3	270m3/h	20m	VISC	HOR	1.1t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	1979	7 4 2 2 0 0 2 4 1 6 1 1 7 1 2
7		PUMP, REVISED REJECTS TO REJECTS SCREEN	198m3/h	25m	VISC	HOR	0.5t	CIC	0.35t	IMP	1	$ 1.7	$ 1.7	1.8	1.8	1979	7 4 2 2 0 0 2 4 2 6 1 1 2 1 2
8		PUMP, FEED TO PRIMARY CLEANERS	606m3/h	35m	CCLC	HOR	1.5t	ASC	0.8t	IMP	1	$ 17.5	$ 17.5	18.9	18.9	1979	7 4 2 2 0 0 2 5 2 1 1 1 7 1 2
9		PUMP, FEED TO SECONDARY CLEANERS	260m3/h	25m	CCLC	HOR	1.1t	ASC	0.6t	IMP	1	$ 12.6	$ 12.6	13.6	13.6	1979	7 4 2 2 0 0 2 4 2 1 1 1 7 1 2
10		PUMP, FEED TO TERTIARY CLEANERS	63m3/h	25m	CCLC	HOR	0.3t	ASC	0.16t	IMP	1	$ 2.8	$ 2.8	3.3	3.3	1978	7 4 2 2 0 0 2 3 2 1 1 1 7 1 2
11		PUMP, MIXTURE TO COOLING TOWER	630m3/h	30 m	CCLC	HOR	1.5t	ASC	0.8t	IMP	1	$ 17.5	$ 17.5	18.9	18.9	1979	7 4 2 2 0 0 2 5 2 2 1 1 7 1 2
12		PUMP, MIXTURE FROM COOLING TOWER TO PROCESS	630m3/h	30 m	CCLC	HOR	1.5t	ASC	0.8t	IMP	1	$ 17.5	$ 17.5	18.9	18.9	1979	7 4 2 2 0 0 2 5 2 1 1 1 7 1 2
13		PUMP, ALUM FEED TO GROUNDWOOD PULP	m3/h 0.06	30m	CCLC	HOR	0.03t	ASC	0.01t	IMP	1	DM 9.0	DM 9.0	5.3	5.3	1978	7 4 2 1 0 2 0 1 2 1 1 1 7 1 2
14		PUMP, 50% CAUSTIC SODA (NaOH)	12m3/h	10m	CCLC	HOR	0.2t	CIC	0.1t	IMP	1	DM 3.8	DM 3.8	2.2	2.2	1978	7 4 2 2 0 0 2 3 1 1 1 1 2 1 2
15		PUMP, 10% CAUSTIC SODA (NaOH)	m3/h 0.06	30m	CCLC	HOR	0.03t	ASC	0.01t	IMP	1	DM 9.0	DM 9.0	5.3	5.3	1978	7 4 2 1 0 2 0 1 2 1 1 1 7 1 2
16		50% H_2SO_4 STORAGE TANK POWER BOILER	40m3	3.6m	40°C	CYL	6.3t	N.S.	10mm	TUR	1	$ 882	$ 882	11.6	11.6	1980	7 2 5 1 3 4 0 1 3 3 2 2 1 1 1
17		50% NaOH STORAGE TANK POWER BOILER	25m3	2.2 m	30°C	CYL	3.0t	N.S.	6 mm	TUR	1	$ 420	$ 420	5.52	5.52	1980	7 2 5 1 3 4 0 1 3 3 2 1 1 1 1
18		FUEL OIL DAY TANK, POWER BOILER	30m3	2.0m	25°C	CYL	4.0t	N.S.	6mm	TUR	1	$ 560	$ 560	7.36	7.36	1980	6 9 2 1 1 0 7 1 1 3 2 1 1 1 1
19		50% NaOH STORAGE TANK-GROUNDWOOD MILL	38m3	3.5m	30°C	CYL	4.3t	N.S.	8mm	TUR	1	$ 690	$ 690	9.0	9.0	1980	7 2 5 1 3 4 0 1 3 3 2 1 1 1 1
20		50% NaOH TANK	38m3	3.5m	30°C	CYL	4.3t	N.S.	8mm	TUR	1	$ 690	$ 690	9.0	9.0	1980	7 2 5 1 3 4 0 1 3 3 2 1 1 1 1

UNIDO/SPO(ESKA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY WORK — REHABILITATION

EXISTING PLANT: ARKU-NEWSPRINT MILL

(GENERAL ITEMS)

PRODUCTION ACTIVITY Codes:

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Spec.	Major Spec. 1	Major Spec. 2	Type (Descr.)	Manuf. Charac. 1	Manuf. Charac. 2	Manuf. Charac. 3	Origin	Qty	Purchase Cost (in Thousands) And Currency Unit	Purchase Cost (in Thousands) And Currency Total	Constant 1980 Year Cost US $/(in Thousand) Unit	Constant 1980 Year Cost US $/(in Thousand) Total	Year of Purchase and Remarks	ISIC Code (Per Computer) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18													
1		LOG FEED DECK-WOOD HANDLING	9.0t/h	6000mm	-	BULK	62t	ST. TAB	5t	TUR	1	TL 920	TL 920	86.3	86.3	1976	7	4	4	8	6	1	3	3	5	0	8	5	9	4	1
2		PAPER MILL- 3 STAGE STOCK CLEANERS	0.04m3	0.3m	40°C	CONIC.	0.29t	MS (PVC lad)	2mm	IMP	51	$ 1.5	$ 76.5	4.1	209.1	1967	7	2	5	1	3	6	0	1	1	3	4	1	1	1	2
3		GROUNDWOOD MILL 3 STAGE STOCK CLEANER SYSTEM	0.09m3	0.18m	50°C	CONIC.	0.18t	SS	3mm	IMP	8	$ 1.67	$ 13.36	4.56	36.5	1967	7	2	5	1	3	6	0	1	1	3	4	3	6	1	2
4		POWER BOILER	65t/h	57kg/cm2	450°C	OIL FIRED	240t	BOILER STEEL	6mm	TUR	1	$ 587.7	$ 587.7	1607.36	1607.36	1967	7	1	1	1	1	0	0	3	2	5	4	7	3	1	1
5		PRESSURE SCREEN-PAPER MILL	0.07t/h 11	1.3m2	0.56m	PRESS.	5 t	ASC	1.6t	IMP	2	$ 21.360	$ 42.720	104.4	208.8	1979	7	2	5	1	4	1	0	6	1	3	4	2	7	2	2
6		AGITATOR, HOLDING CHESTS	115kw	1450RPM	-	SIDE ENTRY	1.8t	CIC	1 t	IMP	4	CAN $ 10.5	CAN $ 42.0	12.8	51.2	1977	7	2	5	1	4	7	1	6	6	0	5	1	2	2	2
7		GRINDER REJECTS SHREDDER	0.7t/h	0.8m2	-	SINGLE DISC	3.0t	ASC	25t	IMP	1	$ 10.9	$ 10.9	29.8	29.8	1967	7	2	5	1	4	6	0	1	2	0	2	1	7	3	2
8		REJECT REFINER	2t/h	2,4m2	-	SINGLE DISC	18.1t	ASC	10t	IMP	1	$ 114.5	$ 114.5	114.5	114.5	1980	7	2	5	1	4	6	0	2	4	0	2	3	7	5	2
9		DECKER	11.3t/h	20.4m2	3.81m	CYL	18.3t	SS	7 t	IMP	1	$ 82.1	$ 82.1	224.5	224.5	1967	7	2	5	1	4	4	0	6	2	6	3	3	7	4	2

UNIDO/SPO (SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM
EXISTING PLANT : DALAMAN

REHABILITATION

PRODUCTION ACTIVITY Code :

Sr No	Mark/ Model	Basic Machine Nomenclature	Major Spec. Cap.	Major Spec.	Major Spec.	Type Desc	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands) And Currency		Constant 1980 Year Cost US$ (in Thousand)		Year of Purchase and Remarks	SITC Code (For Computer)														
												Unit	Total	Unit	Total		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18														
1		WOOD FIBRE STORAGE BIN	65 m3	∅ 5m	25°C	VIBRAT.	6.0 t	MS	8 mm	TUR	1	TL. 840	TL. 840	11.0	11.0	80	7	2	5	1	3	3	0	2	4	3	7	2	1	1	1
2		WOOD FIBRE CYCLONE	2.5 t/h	N/A	-	DRY DRUM	0.5 t	MS	0.5 t	TUR	1	TL. 70	TL. 70	0.92	0.92	80	7	2	8	3	1	4	3	1	0	0	1	1	9	1	1
3		CYCLONE FOR KNOTS	1t/h	N/A	-	WET DRUM	0.3t	MS	0.3 t	TUR	1	TL. 42	TL. 42	0.55	0.55	80	7	2	8	3	1	4	3	1	0	0	2	1	9	1	1
4		WHITE LIQUOR CLARIFIER AND STORAGE TANK	352 m3	∅ 8 m.	70 °C	CYL	37.2 t	MS	14 mm	TUR	1	TL. 5210	TL. 5210	68.5	68.5	80	7	2	5	1	3	4	0	3	6	3	2	4	1	1	1
5		CENTRIFUGAL PUMP-BOARD MACHINE	6 m3/h	560 m.	CCLC	HOR	0.72 t	ASC	0.3 t	IMP	3	$ 5	$ 15	5.9	17.7	78	7	4	2	2	0	1	1	2	7	1	1	1	7	1	2
6		CENTRIFUGAL PUMP-PAPER MACHINE	9.6m3/h	560 m	CCLC	HOR	0.72 t	ASC	0.3 t	IMP	2	$ 5	$ 10	5.9	11.8	78	7	4	2	2	0	1	1	2	7	1	1	1	7	1	2
7		MUD PUMP-CAUSTICIZING AREA	12m3/h	15m	CORR	HOR	0.2 t	ASC	0.12t	IMP	1	$ 1.9	$ 1.9	2.2	2.2	78	7	4	2	2	0	0	2	3	1	5	1	1	7	1	2
8		BLOWER, KNOTS TO CHIP SURGE BIN AT KAMYR DIGESTER	10m3/min	0.5 kg/cm2	AIR	-	1 t	STC	0.6t	IMP	1	CAN $ 3.0	CAN $ 3.0	4.44	4.44	75	7	4	3	4	2	0	0	3	1	1	0	1	2	1	2

UNIDO/SPO (SEKA)

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

Existing Plant : AFYON

-REHABILITATION -

PRODUCTION ACTIVITY Code :

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Specif. Cap.	Major Specif. -1-	Major Specif. -2-	Type Descrip.	Manuf. Charac. 1 WT(Tons)	Manuf. Charac. 2 MATL	Manuf. Charac. 3	Origin	Qty	Purchase Cost (in Thousands And Currency) Unit	Purchase Cost (in Thousands And Currency) Total	Constant 1980 Year Cost US$(in Thousand) Unit	Constant 1980 Year Cost US$(in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		CROSS CONVEYOR FOR FEEDING REELS	5,5t/h	4000mm	-	BULK	32 t	ST.FAB.	3 t	TUR	4	TL 460	TL 1840	41.1	172.4	76	7 4 4 2 6 1 3 1 5 0 1 4 9 1 1
2		CUTTER FEED CONVEYOR	5,5 t/h	650mm	-	BULK	9.5t	ST.FAB.	2 t	TUR	4	TL 300	TL 1200	28.1	112.4	76	7 4 4 2 6 2 4 1 2 0 1 2 9 1 1
3		VIBRATING CHUTE	7.1t/h	750 mm	-	BULK	0.8t	ST.FAB.	0.8t	TUR	3	F 1.2	TL 336	1.47	4.41	80	7 4 4 2 6 7 5 1 2 0 1 1 9 1 1
4		AIRLOCK FEEDER	10.7t/h	900mm	-	BULK	1,5 t	ST.FAB.	1.0t	TUR	2	DM 10,12	DM 20,24	6.7	13.4	75	7 4 4 2 6 7 7 1 2 0 1 1 9 2 1
5		SUCTION FAN TO THE DIGESTER	27.8 m3/sec	WC 750mm	AIR	IND. DPT.	2.2 t	CIC	1.2 t	IMP	1	$ 50.0	$ 50.0	59.5	59.5	78	7 4 3 4 1 0 1 3 8 1 2 1 2 2 2
6		VACUUM PUMP-PULP MACHINE	120 m3/min	305mm	AIR	HOR	4.5t	CIC	4.0 t	IMP	1	TL 500	TL 500	51.0	51.0	75	7 4 3 1 2 2 3 5 2 1 1 1 2 3 2
7		VACUUM PUMP-PULP MACHINE	120 m3/min	532mm	AIR	HOR	4.5t	CIC	4.0 t	IMP	1	TL 500	TL 500	51.0	51.0	75	7 4 3 1 2 2 3 5 1 1 1 1 2 3 2
8		HIGH DENSITY PUMP-PULP MACHINE	15 m3/h	560m	CCLC	HOR	0.72t	SS	0.3t	IMP	1	$ 5.0	$ 5.0	5.9	5.9	78	7 4 2 2 0 1 1 3 7 1 1 1 7 1 2
9		REED SCREENS	7.1t/h	13m2	$ 1.4m	CIRCUL.	3.5 t	ST.FAB.	1.5t	IMP	3	DM 65.0	DM 195.0	38.2	114.6	75	7 2 5 1 4 1 0 5 2 3 2 1 9 2 2
10		DUST CYCLONE	11.3t/h	N/A	-	PRESS.	2.3 t	ST.FAB.	1.2t	TUR	2	TL 41.4	TL 82.8	4.24	8.48	75	7 2 8 3 1 1 2 1 0 0 2 1 9 2 1
11		ELECTRO MAGNET(MAGNETIC SEPARATOR)	11.3t/h	N/A	-	BELT	0.2t	ST.FAB.	0.2t	IMP	2	DM 22,3	DM 44.6	13.4	26.8	75	7 2 8 3 1 3 1 1 0 0 3 1 9 1 2
12		WEIGHTOMETER SCALE	11.3t/h	N/A	ELEC.	FIXED	8.1 t	ST.FAB.	0.05t	IMP	2	TL 130	TL 280	1.7	3.4	80	7 4 5 2 5 0 6 5 0 2 1 1 9 1 2
13		SLIME MILL SCREEN, OR DRUM FILTER FOR BLACK LIQUOR	7.9t/h	49m2	$ 3.0 m	CYL.	37 t	ST.FAB. (SS LNG)	1.1t	IMP	1	DM 245.0	DM 245.0	144.1	144.1	75	7 2 5 1 4 4 0 5 3 6 3 4 9 5 2
14		CYCLONE SEPARATOR FOR PULP STOCK FROM BLOW TANK TO NO 1 WASHER	7.9t/h	N/A	-	WET DRUM	0.9 t	SS	0.7t	IMP	1	$ 15.4	$ 15.4	19.76	19.76	77	7 2 8 3 1 4 3 1 0 0 2 1 7 1 2
15		CHLORINE VAPORIZER	80 m3	$ 0.5m	5 m	PST	3.2t	SS	4 mm	IMP	1	DM 32,62	DM 32,62	19.18	19.18	75	7 4 1 6 1 0 9 3 1 3 1 1 6 1 2

PLANT SURVEY WORK

MEETING PLANT : ÇAYCUMA

REHABILITATION

(Material Handling Equip. Conveyors)

UNIDO/SPO(TURKEA)
CAPITAL GOODS

PRODUCTION ACTIVITY Codes:

Sr. No.	Mark Model	Basic Machine Nomenclature	Major Speci. (Cap.)	Major Speci-1 (Optns)	Major Speci-2 (Opt.)	Type Descr.	Manuf. Char-1 WT(Tons)	Manuf. Charac-2 MAT'L	Manuf. Charac-3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands And Currency) Unit	Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Total	Year of Purchase and Remarks.	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		OVERS CHIP CONVEYOR	5 t/h	610mm	-	BULK	4t	MS	0.8 t	TUR	1	TL 91	TL 91	8.5	8.5	1976	7 4 4 2 6 0 2 1 2 0 1 1 9 1 1
2		FINES CONVEYOR	5 t/h	610 mm	-	BULK	4t	MS	0.8 t	TUR	1	TL 91	TL 91	8.5	8.5	1976	7 4 4 2 6 0 2 1 2 0 1 1 9 1 1
3		ACCEPTS CONVEYOR	23.6t/h	910mm	-	BULK	5t	MS	1 t	TUR	1	TL 115	TL 115	10.7	10.7	1976	7 4 4 2 6 0 2 1 2 0 1 2 9 2 1
4		FINES PNEUMATIC BLOWING SYSTEM FEEDER	5 t/h	-	-	BULK	1.2 t	GIC	0.8 t	IMP	1	$ 8.5	$ 8.5	12.8	12.8	1976	7 4 4 2 6 7 4 1 0 0 1 1 2 1 2
5		ROTARY FEEDER FOR SALT CAKE STORAGE TANK	2 t/h	250mm	-	BULK	0.9 t	GIC	0.5 t	IMP	1	$ 6.0	$ 6.0	9.8	9.8	1975	7 4 4 2 6 7 6 1 1 0 1 1 2 1 2
6		ROTARY FEEDER FOR SALT CAKE DAY TANK	2 t/h	250mm	-	BULK	0.9 t	GIC	0.5 t	IMP	1	$ 6.0	$ 6.0	9.8	9.8	1975	7 4 4 2 6 7 6 1 1 0 1 1 2 1 2
7		SCREW CONVEYOR-LIME MUD FROM FILTER TO KILN FEED	3.1t/h	Ø 400mm	-	BULK	2 t	MS	0.9 t	TUR	1	TL 840	TL 840	11.0	11.0	1980	7 4 4 2 6 4 3 1 1 0 1 1 9 1 1

UNIDO/SPO (SHKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

EXISTING PLANT : ÇAYCUMA
(TANKS)

REHABILITATION

PRODUCTION ACTIVITY Codes

Sr No	Mark/ Model	Basic Machine Nomenclature	Major Spec. (Cap.)	Major Spec.1 (Option)	Major Spec.2 (Opt.)	Type (Descr)	Manuf. Char. 1 WT(Tons)	Manuf. Charac. 2 MAT'L	Manuf. Charac. 3 WT(Tons)	Origin	Qty	Purchase Cost (in Thousands And Currency Unit	Purchase Cost (in Thousands And Currency Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18												
1		TANK, JUNK TRAP	9.4 m3	2.0m	70 °C	CYL	1.65t	MS	6mm	TUR	1	203	203	2.67	2.67	1980	7	2	5	1	3	4	0	1	3	3	2	1	1
2		FILTRATE TANK No.1	500 m3	10.3m	95 °C	CYL	27.7t	MS	8mm	TUR	1	3880	3880	51	51	1980	7	2	5	1	3	4	0	4	6	3	2	4	1
3		FILTRATE TANK No.3	373 m3	8.9m	95 °C	CYL	22.5t	MS	8mm	TUR	1	1150	1150	41.4	41.4	1980	7	2	5	1	3	4	0	3	6	3	2	3	1
4		FILTRATE TANK No.4	301 m3	8 m	95 °C	CYL	19.3t	MS	8mm	TUR	1	2700	2700	35.5	35.5	1980	7	2	5	1	3	4	0	3	6	3	2	3	1
5		SALT CAKE STORAGE SILO	20 m3	3.0m	37 °C	CYL	5.1t	MS	13mm	TUR	1	715	715	9.4	9.4	1980	7	2	5	1	3	3	0	1	3	3	2	2	1
6		SALT CAKE DAY TANK	20 m3	3.0m	30 °C	CYL	4.8t	MS	12mm	TUR	1	675	675	8.87	8.87	1980	7	2	5	1	3	4	0	1	3	3	2	1	1
7		SALT CAKE MIX TANK	5 m3	2.0m	30 °C	AGIT.	0.95t	316 SS	6mm	TUR	1	400	400	5.26	5.26	1980	7	2	5	1	3	4	0	1	3	3	5	1	6
8		SALT CAKE DISSOLVING TANK	20m3	3.0m	30 °C	AGIT.	2.4t	316 SS	6mm	TUR	1	1010	1010	13.28	13.28	1980	7	2	5	1	3	4	0	1	3	3	5	1	6
9		LIME STORAGE TANK	50m3	4 m	20 °C	CYL	7.3t	MS	10mm	TUR	1	1020	1020	13.4	13.4	1980	7	2	5	1	3	4	0	2	4	3	2	3	1
10		SMELT DISSOLVING TANK	50m3	5.0m	90 °C	AGIT.	15.2t	MS	20mm	TUR	1	2130	2130	28.0	28.0	1980	7	2	5	1	3	4	0	2	4	3	5	3	2
11		SLUDGE DISPOSAL TANK	95 m3	4.5m	70 °C	AGIT.	9 t	315 SS	8mm	TUR	1	3750	3750	49.7	49.7	1980	7	2	5	1	3	4	0	2	4	3	5	2	6

UNIDO/SPO (SEKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

EXISTING PLANT : ÇAYCUMA

(PUMPS)

- REHABILITATION -

PRODUCTION ACTIVITY Codes:

Sr. No.	Mark/ Model	Basic Machine Nomenclature	Major Specif. (Cap.)	Major Spec.1 Option	Major Spec.2 Option	Type Desc.	Manuf. Charac. 1 MT(Tons)	Manuf. Charac. 2 MAT'L	Manuf. Charac. 3 MT(Tons)	Origin	Qty	Purchase Cost (in Thousands And Currency) Unit	Purchase Cost (in Thousands And Currency) Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (for Computer) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18													
1		PUMP, TO BLACK LIQUOR STORAGE	93m3/h	27 m	HCLC	HOR	0.25t	CIC	0.13t	IMP	1	$ 2.11	$ 2.11	2.5	2.5	1979	7	4	2	2	0	0	2	3	2	2	1	1	2	1	2
2		PUMP, SCREEN DILUTION	726m3/h	29 m	HCLC	HOR	1.3 t	CIC	0.70t	IMP	1	$ 6.1	$ 6.1	6.6	6.6	1979	7	4	2	2	0	0	2	5	2	2	1	1	2	1	2
3		PUMP, TO BLOW TANK	156m3/h	40 m	HCLC	HOR	1.1 t	CIC	0.6t	IMP	1	$ 2.8	$ 2.8	3.0	3.0	1979	7	4	2	2	0	0	2	4	2	2	1	1	2	1	2
4		PUMP, TO MAYCO SHOWER	36m3/h	24 m	HCLC	HOR	0.22t	CIC	0.12t	IMP	1	DM 5.6	DM 5.6	3.3	3.3	1978	7	4	2	2	0	0	2	3	1	2	1	1	2	1	2
5		PUMP, TO SHOWER NO.1 WASHER	120m3/h	40 m	HCLC	HOR	0.46 t	CIC	0.24t	IMP	1	DM 8.4	DM 8.4	4.9	4.9	1978	7	4	2	2	0	0	2	4	2	2	1	1	2	1	2
6		THICK STOCK PUMP	125m3/h	30m	VISC	HOR	1.1 t	ASC	0.6t	IMP	1	$ 2.8	$ 2.8	3.0	3.0	1979	7	4	2	2	0	0	2	4	2	6	1	1	2	1	2
7		PUMP, RECIRCULATING AIR HEATER	90m3/h	25 m	VISC	HOR	0.25t	ASC	0.13t	IMP	2	$ 2.3	$ 5.5	2.7	5.4	1978	7	4	2	2	0	0	2	3	2	6	1	1	7	1	2
8		GREEN LIQUOR TRANSFER PUMP	90m3/h	34 m	VISC	HOR	0.22t	ASC	0.12t	IMP	3	DM 8.0	DM 24.0	4.7	14.1	1978	7	4	2	2	0	0	2	3	2	6	1	1	7	1	2
9		STRONG BLACK LIQUOR PUMP	54m3/h	21 m	VISC	HOR	0.22t	ASC	0.12t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	1978	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
10		PUMP, RETURN STRONG BLACK LIQUOR	54m3/h	21 m	VISC	HOR	0.22 t	ASC	0.12t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	1978	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
11		PUMP, STRONG BLACK LIQUOR TO RECOVERY BOILER	54m3/h	21 m	VISC	HOR	0.22 t	ASC	0.12t	IMP	1	DM 8.0	DM 8.0	4.7	4.7	1978	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
12		PUMP W.B.L. TO WEAK LIQUOR STORAGE TO	96 m3/h	38 m	HCLC	HOR	0.27t	ASC	0.145t	IMP	1	$ 2.6	$ 2.6	3.1	3.1	1978	7	4	2	2	0	0	2	3	2	2	1	1	7	1	2
13		PUMP, BLACK LIQUOR EVAPORATORS	42 m3/h	32 m	HCLC	HOR	0.27 t	ASC	0.145t	IMP	2	$ 2.6	$ 5.2	3.1	6.2	1978	7	4	2	2	0	0	2	3	2	2	1	1	7	1	2
14		PUMP, BL.LIQ. TO NO 5 EFFECT TRANSFER	42m3/h	32 m	HCLC	HOR	0.27 t	ASC	0.14t	IMP	1	$ 2.6	$ 2.6	3.1	3.1	1978	7	4	2	2	0	0	2	3	2	2	1	1	7	1	2
15		PUMP BL.LIQ. TO NO 2 EFFECT	42 m3/h	32 m	HCLC	HOR	0.27t	ASC	0.145t	IMP	1	$ 2.6	$ 2.6	3.1	3.1	1978	7	4	2	2	0	0	2	3	2	2	1	1	7	1	2
16		PUMP, TRANSFER TO NO.1 EFFECT	42 m3/h	32 m	HCLC	HOR	0.20t	ASC	0.113t	IMP	1	$ 1.9	$ 1.9	2.2	2.2	1978	7	4	2	2	0	0	2	3	2	2	1	1	7	1	2
17		PUMP- 50% B.L. TO STORAGE	42 m3/h	32 m	VISC	HOR	0.22t	ASC	0.12 t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	1978	7	4	2	2	0	0	2	3	2	6	1	1	7	1	2
18		PUMP, 50% BL.LIQ. TO 1st CONCENTRATOR	108m3/h	17 m	VISC	HOR	0.22t	ASC	0.12t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	1978	7	4	2	2	0	0	2	4	1	6	1	1	7	1	2
19		PUMP, BL. TRANSFER TO 2ND CONCENTRATOR	108m3/h	17m	VISC	HOR	0.2t	ASC	0.113t	IMP	1	$ 1.9	$ 1.9	2.2	2.2	1978	7	4	2	2	0	0	2	4	1	6	1	1	7	1	2
20		PUMP, 60% BL.LIQ. TO STORAGE	60m3/h	19 m	VISC	HOR	0.22t	ASC	0.12 t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	1978	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
21		PUMP, 60% STRONG BL.LIQUOR TO RECOVERY BOILER	60m3/h	19 m	VISC	HOR	0.22t	ASC	0.12t	IMP	2	DM 8.0	DM 16.0	4.7	9.4	1978	7	4	2	2	0	0	2	3	1	6	1	1	7	1	2
22		PUMP, BOIL OUT LIQUOR TO EVAPORATORS	60 m3/h	16 m	HCLC	HOR	1.4 t	ASC	0.75t	IMP	1	$ 16.5	$ 16.5	19.5	19.5	1978	7	4	2	2	0	0	2	3	1	2	1	1	7	1	2
23		VACUUM PUMP	45 m3/min	300mm	AIR	VER	2.85 t	ASC	1.5 t	IMP	1	$ 72.0	$ 72.0	105.8	105.8	1975	7	4	3	1	2	2	3	3	2	1	2	1	7	2	2
24		FILTRATE PUMP	30m3/h	20m	SEN	HOR	0.2 t	ASC	0.1 t	IMP	1	$ 1.8	$ 1.8	2.2	2.2	1978	7	4	2	2	0	0	2	3	1	4	1	1	7	1	2
25		SLUDGE DISPOSAL PUMP	36m3/h	24 m	ABR	HOR	0.22 t	ASC	0.12t	IMP	1	DM 8.0	DM 8.0	4.7	4.7	1978	7	4	2	2	0	0	2	3	1	7	1	1	7	1	2

UNIDO/SPO(SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY WORK
Existing Plant : ÇAYCUMA
(General Items)

REHABILITATON

PRODUCTION ACTIVITY Code:

Sr. No	Mark/ Model	Basic Machine Nomenclature	Major Spec. (Cap.)	Major Spec.1 (Option)	Major Spec.2 (Opt.)	Type (Descr)	Manuf. Char. 1 MT(Tons)	Manuf. Charac. 2 MAT'L	Manuf. Charac. 3 MT(Tons)	Origin	Qty	Purchase Cost (In Thousands and Currency) Unit	Purchase Cost (In Thousands and Currency) Total	Constant 1980 Year Cost ($ ₺ (in Thousand)) Unit	Constant 1980 Year Cost ($ ₺ (in Thousand)) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1		CHIPPER DETACTOR	38t/h	N/A	-	BELT	0.35t	ST FAB	0.3t	IMP	1	DM 21.6	DM 21.6	11.9	11.9	1977	7 2 8 3 1 3 1 2 0 0 3 1 9 1 2
2		BELT SCALES	38t/h	N/A	ELEC	FIXED	0.1t	ST FAB	0.05t	IMP	1	TL 130	TL 130	1.71	1.71	1980	7 4 5 2 5 0 6 5 0 2 1 1 9 1 2
3		CHIP DISCHARGE CYCLONE	5t/h	N/A	-	DRY DUST	0.9t	MS	0.9 t	TUR	1	TL 130	TL 130	1.71	1.71	1980	7 2 8 3 1 4 3 1 0 0 1 1 9 1 1
4		ELECTRO MAGNET	38t/h	N/A	-	BELT	2t	ST FAB	1.2t	IMP	1	$ 3	$ 3	3.52	3.52	1978	7 2 8 3 1 3 1 2 0 0 3 1 9 2 2
5		FINES PNEUMATIC BLOWING SYSTEM BLOWER	-	-	-	-	-	-	-	IMP	1	-	-	-	-	-	7 4 3 4 2 0 0 0 0 0 0 0 0 0 2
6		FINES PNEUMATIC BLOWING SYSTEM CYCLONE	5t/h	N/A	-	DRY DUST	1.5t	ST FAB	1.5t	TUR	1	TL 210	TL 210	2.76	2.76	1980	7 2 8 3 1 4 3 1 0 0 1 1 9 2 1
7		RECOVERY BOILER	40t/h	54kg/cm2	450°C	S'LPHR. LIQ.	460t	BOILER STEEL	Avg. 25mm	TUR	1	DM 2217	DM 2217	1273	1273	1976	7 1 1 1 1 0 0 2 2 5 6 8 3 2 1
8		BLOWER(SALT CAKE)	17m3/mn	1 kg/cm2	AIR	STRAIGHT BLADES	1.5t	GIC	0.5t	IMP	1	$ 15	$ 15	17.8	17.8	1978	7 4 3 4 2 0 0 3 1 1 1 1 2 1 2
9		DISSOLVING TANK VENT SCRUBBER	1.06m3	3 Atm	150°C	PKD MATL	0.9t	SS	4mm	TUR	1	TL 380	TL 380	5.0	5.0	1980	7 4 1 6 6 0 2 1 1 4 2 1 6 1 1
10		DISSOLVING TANK VENT FAN	60m3/min	300mm	DIV. GASES	IND DFT	3t	4SC	3t	IMP	1	$ 30	$ 30	35.7	35.7	1978	7 4 3 4 1 0 1 3 6 2 2 1 7 3 2
11		EVAPORATOR 5TH EFFECT	900m2	$ 2m	9m	LTV	24t	SS	11mm	IMP	1	$ 230	$ 230	332.8	332.8	1975	7 4 1 6 2 0 1 3 1 6 3 3 6 1 2
12		EVAPORATOR 4TH EFFECT	925m2	$ 2m	9m	LTV	22t	SS	12mm	IMP	1	$ 235	$ 235	340.0	340.0	1975	7 4 1 6 2 0 1 3 1 6 3 3 6 1 2
13		EVAPORATOR 3RD EFFECT	925m2	$ 2m	9m	LTV	22t	SS	12mm	IMP	1	$ 235	$ 235	340.0	340.0	1975	7 4 1 6 2 0 1 3 1 6 3 3 6 1 2
14		EVAPORATOR 2ND EFFECT	950m2	$ 2m	9m	LTV	24t	SS	13mm	IMP	1	$ 240	$ 240	347.3	347.3	1975	7 4 1 6 2 0 1 3 1 6 3 3 6 1 2
15		EVAPORATOR 1ST EFFECT	962m2	$ 2m	9m	LTV	28t	SS	14mm	IMP	1	$ 240	$ 240	347.3	347.3	1975	7 4 1 6 2 0 1 3 1 6 3 4 6 1 2
16		1ST CONCENTRATOR	145m2	$ 1.1m	5m	FORCED CIRCN.	7.5t	SS	10mm	IMP	1	TL 3400	TL 3400	44.7	44.7	1980	7 4 1 6 2 0 1 2 1 2 1 2 6 1 2
17		2ND CONCENTRATOR	145m2	$ 1.1m	5m	FORCED CIRCN.	7.5t	SS	10mm	IMP	1	TL 3400	TL 3400	44.7	44.7	1980	7 4 1 6 2 0 1 2 1 2 1 2 6 1 2
18		CONDENSER	115m2	$ 1.0m	4m	PST	2.0t	MS	10mm	IMP	1	TL 2000	TL 2000	26.3	26.3	1980	7 4 1 6 1 0 5 4 2 3 1 1 1 1 2

UNIDO/SPO(SSKA)
CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

PLANT SURVEY FORM

EXISTING PLANT: ÇAYCUMA
(Special Machines)

REHABILITATION

PRODUCTION ACTIVITY Code :

Sr. No	Mark/ Model	Basic Machine Nomenclature	Major Spec. (Cap.)	Major Spec.1 (Option)	Major Spec.2 (Opt.)	Type (Descr.)	Manuf. Char. 1 WT (Tons)	Manuf. Charac. 2 MAT'L	Manuf. Charac. 3 WT (Tons)	Origin	Qty	Purchase Cost (In Thousands And Currency) Unit	Purchase Cost (In Thousands And Currency) Total	Constant 1980 Year Cost US $ (in Thousand) Unit	Constant 1980 Year Cost US $ (in Thousand) Total	Year of Purchase and Remarks	SITC Code (For Computer) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18													
1		RE-CHIPPER AND BLOWER	5 t/h	1.1m2	$ 1.2m	DISC	6 t	GIC	2 t	IMP	1	$ 50	$ 50	58.7	58.7	1978	7	2	5	1	4	5	2	4	1	3	2	2	3	2
2		CHIP SCREEN	70 t/h	11.2m2	-	CHIP	3.6t	ST FAB	0.8 t	IMP	1	DM 53.9	DM 53.9	29.6	29.6	1980	7	2	5	1	4	1	0	9	2	0	6	1	9	1	2
3		FIBRILLIZER	ODT/h 10.4	1.0m2	-	-	1.2t	GIC SS	0.8t	IMP	1	S.Kr. 150	S.Kr. 150	52.2	52.2	1975	7	2	5	1	4	6	4	7	9	0	0	1	2	1	2
4		BROWN STOCK WASHER	ODT/h 10.4	35 m2	$ 2.5m	CYL	24 t	GIC	5 t	IMP	1	CAN $ 100	CAN $ 100	141.87	141.87	1975	7	2	5	1	4	3	0	6	3	5	3	3	2	4	2
5		SALT CAKE MIX TANK AGITATOR	7.5 kW	750rpm	-	SIDE ENTRY	0.28t	GIC	0.16t	IMP	1	CAN $ 3.0	CAN $ 3.0	3.7	3.7	1977	7	2	5	1	4	7	1	2	4	0	5	1	2	1	2
6		SALT CAKE DISSOLVING TANK AGIT.	30 kW	750rpm	-	SIDE ENTRY	0.45t	GIC	0.25t	IMP	1	CAN $ 3.9	CAN $ 3.9	4.8	4.8	1977	7	2	5	1	4	7	1	4	4	0	5	1	2	1	2
7		SMELT DISSOLVING TANK AGITATOR	11 kW	750rpm	-	SIDE ENTRY	0.29t	GIC	0.17t	IMP	1	CAN $ 3.1	CAN $ 3.1	3.8	3.8	1977	7	2	5	1	4	7	1	3	4	0	5	1	2	1	2
8		PRECIPITATOR MIX TANK AGITATOR	7.5kW	750rpm	-	SIDE ENTRY	0.28t	GIC	0.16t	IMP	2	CAN $ 3.0	CAN $ 6.0	3.7	7.4	1977	7	2	5	1	4	7	1	2	4	0	5	1	2	1	2
9		LIME MUD FILTER	3.1t/h	12.4m2	$ 1.8m	CYL	4 t	SS	1.2t	IMP	1	$ 16	$ 18	18	18	1980	7	2	5	1	4	1	0	3	2	4	3	1	7	2	2
10		SLUDGE DISPOSAL TANK AGITATOR	3.5kW	1500rpm	-	SIDE ENTRY	0.2t	GIC	0.1t	IMP	1	CAN $ 2.5	CAN $ 2.5	3.1	3.1	1977	7	2	5	1	4	7	1	1	7	0	5	1	2	1	2
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TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AKSU PULP AND PAPER PLANT

CAPACITY : 303 T/D of NEWSPRINT PAPER

LOCATION : GIRESUN

ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (TANKS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401332 2111	60% H_2SO_4 STORAGE TANK-POWER BOILER	1	6.3	11.6					6.3						6.3
72513 401332 1111	50% NaOH STORAGE TANK-POWER BOILER	1	3.0	5.5					3.0						3.0
69211 071132 1111	FUEL-OIL DAY TANK -POWER BOILER	1	4.0	7.4					4.0						4.0
72513 401332 1111	50% NaOH STORAGE TANK-GROUNDWOOD MILL	1	4.9	9.0					4.9						4.9
72513 401332 1111	10% NaOH TANK	1	4.9	9.0					4.9						4.9

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AKSU PULP AND PAPER PLANT

CAPACITY : 303 T/D of NEWSPRINT PAPER
LOCATION : GUIRESUN
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 026211 2242	FAN PUMP NO.1	1	7.5	55.0					7.5						7.5
74220 026111 2242	FAN PUMP NO.2	1	6.0	46.7					6.0						6.0
74220 113711 1712	HIGH PRESSURE CENTRIFUGAL PUMP	3	0.75	5.9					2.25						2.25
74220 025211 1212	PUMP, BULL SCREEN STOCK TO PRIMARY SCREEN	1	1.5	11.0					1.5						1.5
74220 024161 1712	PUMP, HOLDING CHEST NO.1 TO HOLDING CHEST NO. 2	1	1.1	13.6					1.1						1.1
74220 024161 1712	PUMP HOLDING CHEST NO.2 TO HOLDING CHEST NO.3	1	1.1	13.6					1.1						1.1
74220 024261 1212	PUMP, REFINED REJECTS TO REJECTS SCREEN	1	0.6	1.8					0.6						0.6
74220 025211 1712	PUMP, FEED TO PRIMARY CLEANERS	1	1.5	18.9					1.5						1.5
74220 024211 1712	PUMP, FEED TO SECONDARY CLEANERS	1	1.1	13.6					1.1						1.1
74220 023211 1712	PUMP, FEED TO TERTIARY CLEANERS	1	0.3	3.3					0.3						0.3

22.35

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AKSU PULP AND PAPER PLANT

CAPACITY : 303 T/D of NEWSPRINT PAPER
LOCATION : GIRESUN
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 025221 1712	PUMP, WHITEWATER TO COOLING TOWER	1	1.5	18.9					1.5						1.5
74220 025211 1712	PUMP, WHITEWATER FROM COOLING TOWER TO PROCESS	1	1.5	18.9					1.5						1.5
74210 201211 1712	PUMP, ALUM FEED TO GROUNDWOOD PULP	1	0.03	5.3					0.03						0.03
74220 023111 1212	PUMP, 50% CAUSTIC SODA (NaOH)	1	0.2	2.2					0.2						0.2
74210 201211 1712	PUMP, 10% CAUSTIC SODA (NaOH)	1	0.03	5.3					0.03						0.03

3.24

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AKSU PULP AND PAPER PLANT

CAPACITY : 303 T/D of NEWSPRINT PAPER
LOCATION : GİRESUN
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (GENERAL ITEMS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 131501 5941	LOG FEED DECK- WOOD HANDLING	1	62.0	86.3					62.0						62.0
72513 601134 1112	PAPER MILL-3 STAGE STOCK CLEANERS	51	0.29	4.1					14.8						14.8
72513 601134 1612	GROUNDWOOD MILL- 3 STAGE STOCK CLEANER SYSTEM	8	0.18	4.56					1.44						1.44
71111 003254 7311	POWER BOILER	1	240.0	1607.4					240.0						240.0
72514 106124 2722	PRESSURE SCREEN- PAPER MILL	2	5.0	104.4					10.0						10.0
72514 716605 1222	AGITATOR, HOLDING CHESTS	4	1.8	12.8					7.2						7.2
72514 601202 1732	GRINDER REJECTS SHREDDER	1	3.0	29.8					3.0						3.0
72514 602402 3752	REJECT REFINER	1	18.1	334.5					18.1						18.1
72514 406263 3742	DECKER	1	18.3	224.5					18.3						18.3
							TOTAL:-		424.45						424.45

374.84

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING DALAMAN PULP AND PAPER PLANT

CAPACITY : 110 T/D OF PAPER, 125 T/D OF BOARD
LOCATION : DALAMAN/MUĞLA
ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (TANKS AND GENERAL ITEMS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 302437 2111	WOOD FINES STORAGE BIN	1	6.0	11.0				6.0							6.0
72831 431001 1911	WOOD FINES CYCLONE	1	0.5	0.92				0.5							0.5
72831 431002 1911	CYCLONE FOR KNOTS	1	0.3	0.55				0.3							0.3
72513 403632 4111	WHITE LIQUOR CLARIFIER AND STORAGE TANK	1	37.2	68.5				37.2							37.2
74342 003110 1212	BLOWER, KNOTS TO CHIP SURGE BIN AT KAMYR DIGESTER	1	1.0	4.44				1.0							1.0

45.0 45.0

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING DALAMAN PULP AND PAPER PLANT

CAPACITY : 110 T/D OF PAPER, 125 T/D OF BOARD
LOCATION : DALAMAN/MUĞLA
ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 112711 1712	CENTRIFUGAL PUMP-BOARD MACHINE	3	0.72	5.9				2.16							2.16
74220 112711 1712	CENTRIFUGAL PUMP-PAPER MACHINE	2	0.72	5.9				1.44							1.44
74220 023151 1712	MUD PUMP-CAUSTICIZING AREA	1	0.2	2.2				0.2							0.2
						TOTAL :-		48.8							48.8

3.80 3.80

TABLE NO. :

PAGE : 8

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AFYON PULP AND PAPER PLANT

CAPACITY : 167 T/D OF REED/STRAW PULP

LOCATION : ÇAY/AFYON

ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 105232 1922	REED SCREENS	3	3.5	38.2				10.5							10.5
72831 121002 1921	DUST CYCLONE	2	2.3	4.24				4.6							4.6
72831 311003 1912	ELECTRO MAGNET	2	0.2	13.4				0.4							0.4
74525 065021 1912	WEIGHTOMETER SCALE	2	0.1	1.7				0.2							0.2
72514 405363 4952	SIDE HILL SCREEN, OR DRUM FILTER FOR BLACK LIQUOR	1	37.0	144.1				37.0							37.0
72831 431002 1712	CYCLONE SEPARATOR FOR PULP STOCK FROM BLOW TANK TO NO 1 WASHER	1	0.9	19.8				0.9							0.9
74161 093131 1612	CHLORINE VAPORIZER	1	3.2	19.2				3.2							3.2
	56.8														56.8

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AFTON PULP AND PAPER PLANT

CAPACITY : 167 T/D OF REED/STRAW PULP
LOCATION : ÇAY/AFTON
ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (PUMPS, VACUUM PUMPS, FANS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74341 013812 1222	SUCTION FAN TO THE DIGESTER	1	2.2	59.5				2.2							2.2.
74312 235211 1232	VACUUM PUMP-PULP MACHINE	1	4.5	51.0				4.5							4.5
74312 235111 1232	VACUUM PUMP-PULP MACHINE	1	4.5	51.0				4.5							4.5
74220 113711 1712	HIGH DENSITYPUMP-PULP MACHINE	1	0.72	5.9				0.72							0.72

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ....AFYON..... PULP ~~AND PAPER~~ PLANT

CAPACITY :167 T/D OF REED/STRAW PULP
LOCATION :ÇAY/AFYON
ANTICIPATED DATE OF COMMISSIONING :1985

PULP AND PAPER MACHINERY (MATERIAL HANDLING EQUIPMENT)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 131501 4931	CROSS CONVEYOR FOR FEEDING REEDS	4	32.0	43.1				128.0							128.0
74426 241201 2931	CUTTER FEED CONVEYOR	4	9.5	28.1				38.0							38.0
74426 751201 1911	VIBRATING CHUTE	3	0.8	1.47				2.4							2.4
74426 771201 1921	AIRLOCK FEEDER	2	1.5	6.7				3.0							3.0
						TOTAL →		240.12							240.12

121.4

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (TANKS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401332 1111	TANK, JUNK TRAP	1	1.45	2.7					1.45						1.45
72513 404632 4111	FILTRATE TANK NO.1	1	27.7	51.0					27.7						27.7
72513 403632 3111	FILTRATE TANK NO.3	1	22.5	41.4					22.5						22.5
72513 403632 3111	FILTRATE TANK NO.4	1	19.3	35.5					19.3						19.3
72513 301332 2111	SALT CAKE STORAGE SILO	1	5.1	9.4					5.1						5.1
72513 401332 1111	SALT CAKE DAY TANK	1	4.8	8.9					4.8						4.8
72513 401335 1611	SALT CAKE MIX TANK	1	0.95	5.3					0.95						0.95
72513 401335 1611	SALT CAKE DISSOLVING TANK	1	2.4	13.3					2.4						2.4
72513 402432 2111	LIME STORAGE TANK	1	7.3	13.4					7.3						7.3
72513 402435 3121	SMELT DISSOLVING TANK	1	15.2	28.0					15.2						15.2
72513 402435 2611	SLUDGE DISPOSAL TANK	1	9.0	49.7					9.0						9.0
									115.70						115.70

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TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (SPECIAL MACHINERY)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 504135 2232	RE-CHIPPER AND BLOWER	1	6.0	58.7					6.0						6.0
72514 109206 1912	CHIP SCREEN	1	3.6	29.6					3.6						3.6
72514 647900 1212	FIBRILLIZER	1	1.2	52.2					1.2						1.2
72514 306353 3242	BROWN STOCK WASHER	1	24.0	141.9					24.0						24.0
72514 712405 1212	AGITATOR, SALT CAKE MIX TANK	1	0.28	3.7					0.28						0.28
72514 714465 1212	AGITATOR, SALT CAKE DISSOLV. TANK	1	0.45	4.8					0.45						0.45
72514 713405 1212	AGITATOR, SMELT DISSOLVING TANK	1	0.29	3.8					0.29						0.29
72514 712405 1212	AGITATOR, PRECIPITATOR MIX TANK	2	0.28	3.7					0.56						0.56
72514 103243 1722	LIME MUD FILTER	1	4.0	18.0					4.0						4.0
72514 711705 1212	AGITATOR, SLUDGE DISPOSAL TANK	1	0.2	3.1					0.2						0.2
									40.58						40.58

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (GENERAL ITEMS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72831 312003 1912	CHIPPER DETECTOR	1	0.35	11.9					0.35						0.35
74525 065021 1912	BELT SCALES	1	0.1	1.71					0.1						0.1
72831 431001 1911	CHIP DISCHARGE CYCLONE	1	0.9	1.71					0.9						0.9
72831 312003 1922	ELECTRO MAGNET	1	2.0	3.52					2.0						2.0
74342 000000 0002	FINES PNEUMATIC BLOWING SYSTEM BLOWER	1	-	-					-						-
72831 431001 1921	FINES PNEUMATIC BLOWING SYSTEM CYCLONE	1	1.5	2.76					1.5						1.5
71111 002256 8321	RECOVERY BOILER	1	460.0	1273.0					460.0						460.0
74342 003111 1212	BLOWER (SALT CAKE)	1	1.5	17.8					1.5						1.5
74166 021142 1611	DISSOLVING TANK VENT SCRUBBER	1	0.9	5.0					0.9						0.9
74341 013622 1732	DISSOLVING TANK VENT FAN	1	3.0	35.7					3.0						3.0
									470.25						470.25

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (GENERAL ITEMS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74162 013163 3612	EVAPORATOR,5TH EFFECT	1	24.0	332.8					24.0						24.0
74162 013163 3612	EVAPORATOR, 4TH EFFECT	1	22.0	340.0					22.0						22.0
74162 013163 3612	EVAPORATOR, 3RD EFFECT	1	22.0	340.0					22.0						22.0
74162 013163 3612	EVAPORATOR, 2ND EFFECT	1	24.0	347.3					24.0						24.0
74162 013163 4612	EVAPORATOR, 1ST EFFECT	1	28.0	347.3					28.0						28.0
74162 012121 2612	1ST CONCENTRATOR	1	7.5	44.7					7.5						7.5
74162 012121 2612	2ND CONCENTRATOR	1	7.5	44.7					7.5						7.5
74161 054231 1112	CONDENSER	1	2.0	26.3					2.0						2.0
									137.0						137.0

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023221 1212	PUMP,TO BLACK LIQUOR STORAGE	1	0.25	2.5					0.25						0.25
74220 025221 1212	PUMP,SCREEN DILUTION	1	1.3	6.6					1.3						1.3
74220 024221 1212	PUMP, TO BLOW TANK	1	1.1	3.0					1.1						1.1
74220 023221 1212	PUMP, TO WAYCO SHOWER	1	0.22	3.3					0.22						0.22
74220 024221 1212	PUMP, TO SHOWER NO.1 WASHER	1	0.46	4.9					0.46						0.46
74220 024261 1212	THICK STOCK PUMP	1	1.1	3.0					1.1						1.1
74220 023261 1712	PUMP,RECIRCULATING AIR HEATER	2	0.25	2.7					0.50						0.50
74220 023261 1712	GREEN LIQUOR TRANSFER PUMP	3	0.22	4.7					0.66						0.66
74220 023161 1712	STRONG BLACK LIQUOR PUMP	2	0.22	4.7					0.44						0.44
74220 023161 1712	PUMP,RETURN STRONG BLACK LIQUOR	2	0.22	4.7					0.44						0.44
74220 023161 1712	PUMP,STRONG BLACK LIQUOR TO RECOVERY BOILER	1	0.22	4.7					0.22						0.22
74220 023221 1712	PUMP,W.B.L. TO WEAK LIQUOR STORAGE	1	0.27	3.2					0.27						0.27
74220 023221 1712	PUMP,BLACK LIQUOR TO EVAPORATORS	2	0.27	3.1					0.54						0.54
74220 023221 1712	PUMP,BL. LIQ. TO NO.5 EFFECT TRANSFER	1	0.27	3.1					027						0.27

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER

LOCATION : ÇAYCUMA/ZONGULDAK

ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (PUMPS)

Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023221 1712	PUMP, BL.LIQ. TO NO.2 EFFECT	1	0.27	3.1					0.27						0.27
74220 023221 1712	PUMP, TRANSFER TO NO. 1 EFFECT	1	0.20	2.2					0.20						0.20
74220 023261 1712	PUMP,50% BL. LIQ. TO STORAGE	2	0.22	4.7					0.44						0.44
74220 024161 1712	PUMP,50% BL. LIQ. TO 1ST. CONCENTRATOR	2	0.22	4.7					0.44						0.44
74220 024161 1712	PUMP, BL. LIQ. TRANSFER TO 2ND. CONCENTRATOR	1	0.2	2.2					0.2						0.2
74220 023161 1712	PUMP, 62% BL.LIQ.TO STORAGE	2	0.22	4.7					0.44						0.44
74220 023161 1712	PUMP,62% STRONG BL. LIQUOR TO RECOVERY BOILER	2	0.22	4.7					0.44						0.44
74220 023121 1712	PUMP,BOIL OUT LIQ. TO EVAPORATORS	1	1.4	19.5					1.4						1.4
74312 233212 1722	VACUUM PUMP	1	2.85	105.8					2.85						2.85
74220 023141 1712	FILTRATE PUMP	1	0.2	2.2					0.2						0.2
74220 023171 1712	SLUDGE DISPOSAL PUMP	1	0.22	4.7					0.22						0.22
									14.87						14.87

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (MATERIAL HANDLING EQUIPMENT-CONVEYORS) Total weight in tons

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 021201 1911	OVERS CHIP CONVEYOR	1	4.0	8.5					4.0						4.0
74426 021201 1911	FINES CONVEYOR	1	4.0	8.5					4.0						4.0
74426 021201 2921	ACCEPTS CONVEYOR	1	5.0	10.7					5.0						5.0
74426 741001 1212	FINES PNEUMATIC BLOWING SYSTEM FEEDER	1	1.2	12.8					1.2						1.2
74426 761101 1212	ROTARY FEEDER FOR SALT CAKE STORAGE TANK	1	0.9	9.8					0.9						0.9
74426 761101 1212	ROTARY FEEDER FOR SALT CAKE DAY TANK	1	0.9	9.8					0.9						0.9
74426 431101 1911	SCREW CONVEYOR-LIME MUD FROM FILTER TO KILN FEED	1	2.0	11.0					2.0						2.0
						TOTAL :-			796.4						796.4
									18.0						18.0

TABLE NO. :

PAGE : 1

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AKSU PULP AND PAPER PLANT

CAPACITY : 303 T/D of NEWSPRINT PAPER
LOCATION : GIRESUN
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (TANKS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401332 2111	60% H_2SO_4 STORAGE TANK-POWER BOILER	1	6.3	11.6					11.6						11.6
72513 401332 1111	50% NaOH STORAGE TANK-POWER BOILER	1	3.0	5.5					5.5						5.5
69211 071132 1111	FUEL-OIL DAY TANK-POWER BOILER	1	4.0	7.4					7.4						7.4
72513 401332 1111	50% NaOH STORAGE TANK-GROUNDWOOD MILL	1	4.9	9.0					9.0						9.0
72513 401332 1111	10% NaOH TANK	1	4.9	9.0					9.0						9.0
									42.5						42.5
									42.5						42.5

TABLE NO. :

PAGE : 2

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AKSU PULP AND PAPER PLANT
CAPACITY : 303 T/D of NEWSPRINT PAPER
LOCATION : GIRESUN
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $, 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 026211 2242	FAN PUMP NO.1	1	7.5	55.0					55.0						55.0
74220 026111 2242	FAN PUMP NO.2	1	6.0	46.7					46.7						46.7
74220 113711 1712	HIGH PRESSURE CENTRIFUGAL PUMP	3	0.75	5.9					17.7						17.7
74220 025211 1212	PUMP,BULL SCREEN STOCK TO PRIMARY SCREEN	1	1.5	11.0					11.0						11.0
74220 024161 1712	PUMP,HOLDING CHEST NO.1 TO HOLDING CHEST NO.2	1	1.1	13.6					13.6						13.6
74220 024161 1712	PUMP,HOLDING CHEST NO.2 TO HOLDING CHEST NO.3	1	1.1	13.6					13.6						13.6
74220 024261 1212	PUMP,REFINED REJECTS TO REJECTS SCREEN	1	0.6	1.8					1.8						1.8
74220 025211 1712	PUMP,FEED TO PRIMARY CLEANERS	1	1.5	18.9					18.9						18.9
74220 024211 1712	PUMP,FEED TO SECONDARY CLEANERS	1	1.1	13.6					13.6						13.6
74220 023211 1712	PUMP,FEED TO TERTIARY CLEANERS	1	0.3	3.3					3.3						3.3
									195.2						195.2

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AKSU PULP AND PAPER PLANT

CAPACITY : 303 T/D of NEWSPRINT PAPER
LOCATION : GİRESUN
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 025221 1712	PUMP, WHITEWATER TO COOLING TOWER	1	1.5	18.9					18.9						18.9
74220 025211 1712	PUMP, WHITEWATER FROM COOLING TOWER TO PROCESS	1	1.5	18.9					18.9						18.9
74210 201211 1712	PUMP, ALUM FEED TO GROUNDWOOD PULP	1	0.03	5.3					5.3						5.3
74220 023111 1212	PUMP, 50% CAUSTIC SODA (NaOH)	1	0.2	2.2					2.2						2.2
74210 201211 1712	PUMP, 10% CAUSTIC SODA (NaOH)	1	0.03	5.3					5.3						5.3
									50.6						50.6

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AKSU ..... PULP AND PAPER PLANT

CAPACITY : 303 T/D NEWSPRINT PAPER
LOCATION : GIRESUN
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (GENERAL ITEMS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 131501 5941	LOG FEED DECK-WOOD HANDLING	1	62.0	86.3					86.3						86.3
72513 601134 1112	PAPER MILL- 3 STAGE STOCK CLEANERS	51	0.29	4.1					209.1						209.1
72513 601134 1612	GROUNDWOOD MILL- 3 STAGE STOCK CLEANER SYSTEM	8	0.18	4.56					36.5						36.5
71111 003254 7311	POWER BOILER	1	240.0	1607.4					1607.4						1607.4
72514 106124 2722	PRESSURE SCREEN-PAPER MILL	2	5.0	104.4					208.8						208.8
72514 716605 1222	AGITATOR, HOLDING CHESTS	4	1.8	12.8					51.2						51.2
72514 601202 1732	GRINDER REJECTS SHREDDER	1	3.0	29.8					29.8						29.8
72514 602402 3752	REJECT REFINER	1	18.1	334.5					334.5						334.5
72514 406263 3742	DECKER	1	18.3	224.5					224.5						224.5
							TOTAL:-		3076.4						3076.4

2788.1

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING DALAMAN PULP AND PAPER PLANT

CAPACITY : 110 T/D OF PAPER, 125 T/D OF BOARD
LOCATION : DALAMAN/MUĞLA
ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (TANKS AND GENERAL ITEMS) Total value in 1000 US$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 302437 2111	WOOD FINES STORAGE BIN	1	6.0	11.0				11.0							11.0
72831 431001 1911	WOOD FINES CYCLONE	1	0.5	0.92				0.92							0.92
72831 431002 1911	CYCLONE FOR KNOTS	1	0.3	0.55				0.55							0.55
72513 403632 4111	WHITE LIQUOR CLARIFIER AND STORAGE TANK	1	37.2	68.5				68.5							68.5
74342 003110 1212	BLOWER, KNOTS TO CHIP SURGE BIN AT KAMYR DIGESTER	1	1.0	4.44				4.44							4.44

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING DALAMAN PULP AND PAPER PLANT

CAPACITY : 110 T/D OF PAPER, 125 T/D OF BOARD
LOCATION : DALAMAN/MUĞLA
ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (PUMPS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 112711 1712	CENTRIFUGAL PUMP-BOARD MACHINE	3	0.72	5.9				17.7							17.7
74220 112711 1712	CENTRIFUGAL PUMP-PAPER MACHINE	2	0.72	5.9				11.8							11.8
74220 023151 1712	MUD PUMP-CAUSTICISING AREA	1	0.2	2.2				2.2							2.2
						TOTAL :-		117.1							117.1

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TABLE NO. :

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EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AFTON PULP ~~AND PAPER~~ PLANT
CAPACITY : 167 T/D OF REED/STRAW PULP
LOCATION : CAY/AFTON
ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (SPECIALIZED ITEMS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 185232 1922	REED SCREENS	3	3.5	38.2				114.6							114.6
72831 121002 1921	DUST CYCLONE	2	2.3	4.24				8.5							8.5
72831 311003 1912	ELECTRO MAGNET	2	0.2	13.4				26.8							26.8
74525 065021 1912	WEIGHT METER SCALE	2	0.1	1.7				3.4							3.4
72514 405363 4952	SIDE HILL SCREEN, OR DRUM FILTER FOR BLACK LIQUOR	1	37.0	144.1				144.1							144.1
72831 431002 1912	CYCLONE SEPARATOR FOR PULP STOCK FROM BLOW TANK TO NO 1 WASHER	1	0.9	19.76				19.8							19.8
74161 093131 1612	CHLORINE VAPORIZER	1	3.2	19.2				19.2							19.2

316.4

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AFYON PULP ~~AND PAPER~~ PLANT

CAPACITY : 167 T/D OF REED/STRAW PULP
LOCATION : ÇAY/AFYON
ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (PUMPS, VACUUM PUMPS, FANS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74341 01 3812 1222	SUCTION FAN TO THE DIGESTER	1	2.2	59.5				59.5							59.5
74312 235211 1232	VACUUM PUMP-PULP MACHINE	1	4.5	51.0				51.0							51.0
74312 235111 1232	VACUUM PUMP-PULP MACHINE	1	4.5	51.0				51.0							51.0
74220 113711 1712	HIGH DENSITY PUMP-PULP MACHINE	1	0.72	5.9				5.9							5.9

TAPLE NO. :

PAGE : 23

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING AFYON ..... PULP ~~AND PAPER PLANT~~

CAPACITY : 167 T/D OF REED/STRAW PULP

LOCATION : ÇAY/AFYON

ANTICIPATED DATE OF COMMISSIONING : 1985

PULP AND PAPER MACHINERY (MATERIAL HANDLING EQUIPMENT)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 131501 4931	CROSS CONVEYOR FOR FEEDING REEDS	4	32.0	43.1				172.4							172.4
74426 241201 2931	CUTTER FEED CONVEYOR	4	9.5	28.1				112.4							112.4
74426 751201 1911	VIBRATING CHUTE	3	0.8	1.47				4.4							4.4
74426 771201 1921	AIRLOCK FEEDER	2	1.5	6.7				13.4							13.4
						TOTAL	—	806.4							806.4

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302.6

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (TANKS)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72513 401332 1111	TANK, JUNK TRAP	1	1.45	2.7					2.7						2.7
72513 404632 4111	FILTRATE TANK NO.1	1	27.7	51.0					51.0						51.0
72513 403632 3111	FILTRATE TANK NO.3	1	22.5	41.4					41.4						41.4
72513 403632 3111	FILTRATE TANK NO.4	1	19.3	35.5					35.5						35.5
72513 301332 2111	SALT CAKE STORAGE SILO	1	5.1	9.4					9.4						9.4
72513 401332 1111	SALT CAKE DAY TANK	1	4.8	8.9					8.9						8.9
72513 401335 1611	SALT CAKE MIX TANK	1	0.95	5.3					5.3						5.3
72513 401335 1611	SALT CAKE DISSOLVING TANK	1	2.4	13.3					13.3						13.3
72513 402432 2111	LIME STORAGE TANK	1	7.3	13.4					13.4						13.4
72513 402435 3121	SMELT DISSOLVING TANK	1	15.2	28.0					28.0						28.0
72513 402435 2611	SLUDGE DISPOSAL TANK	1	9.0	49.7					49.7						49.7

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA ..... PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (SPECIAL MACHINERY)

Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72514 504135 2232	RE-CHIPPER AND BLOWER	1	6.0	58.7					58.7						58.7
72514 109206 1912	CHIP SCREEN	1	3.6	29.6					29.6						29.6
72514 647900 1212	FIBRILLIZER	1	1.2	52.2					52.2						52.2
72514 306353 3242	BROWN STOCK WASHER	1	24.0	141.9					141.9						141.9
72514 712405 1212	AGITATOR, SALT CAKE MIX TANK	1	0.28	3.7					3.7						3.7
72514 714405 1212	AGITATOR, SALT CAKE DISSOLV. TANK	1	0.45	4.8					4.8						4.8
72514 713405 1212	AGITATOR, SMELT DISSOLVING TANK	1	0.29	3.8					3.8						3.8
72514 712405 1212	AGITATOR, PRECIPITATOR MIX TANK	2	0.28	3.7					7.4						7.4
72514 103243 1722	LIME MUD FILTER	1	4.0	18.0					18.0						18.0
72514 711705 1212	AGITATOR, SLUDGE DISPOSAL TANK	1	0.2	3.1					3.1						3.1

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TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYGUMA ..... PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYGUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (GENERAL ITEMS) Total value in 1000 U.S.S.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
72831 312003 1912	CHIPPER DETECTOR	1	0.35	11.9					11.9						11.9
74525 065021 1912	BELT SCALES	1	0.1	1.71					1.71						1.71
72831 431001 1911	CHIP DISCHARGE CYCLONE	1	0.9	1.71					1.71						1.71
72831 312003 1922	ELECTRO MAGNET	1	2.0	3.52					3.52						3.52
74342 000000 0002	FINES PNEUMATIC BLOWING SYSTEM BLOWER	1	-	-					-						-
72831 431001 1921	FINES PNEUMATIC BLOWING SYSTEM CYCLONE	1	1.5	2.76					2.76						2.76
71111 002256 8321	RECOVERY BOILER	1	46000	1273.0					1273.0						1273.0
74342 003111 1212	BLOWER (SALT CAKE)	1	1.5	17.8					17.8						17.8
74166 021142 1611	DISSOLVING TANK VENT SCRUBBER	1	0.9	5.0					5.0						5.0
74341 013622 1732	DISSOLVING TANK VENT FAN	1	3.0	35.7					35.7						35.7

1353 I

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA ..... PULP AND PAPER PLANT

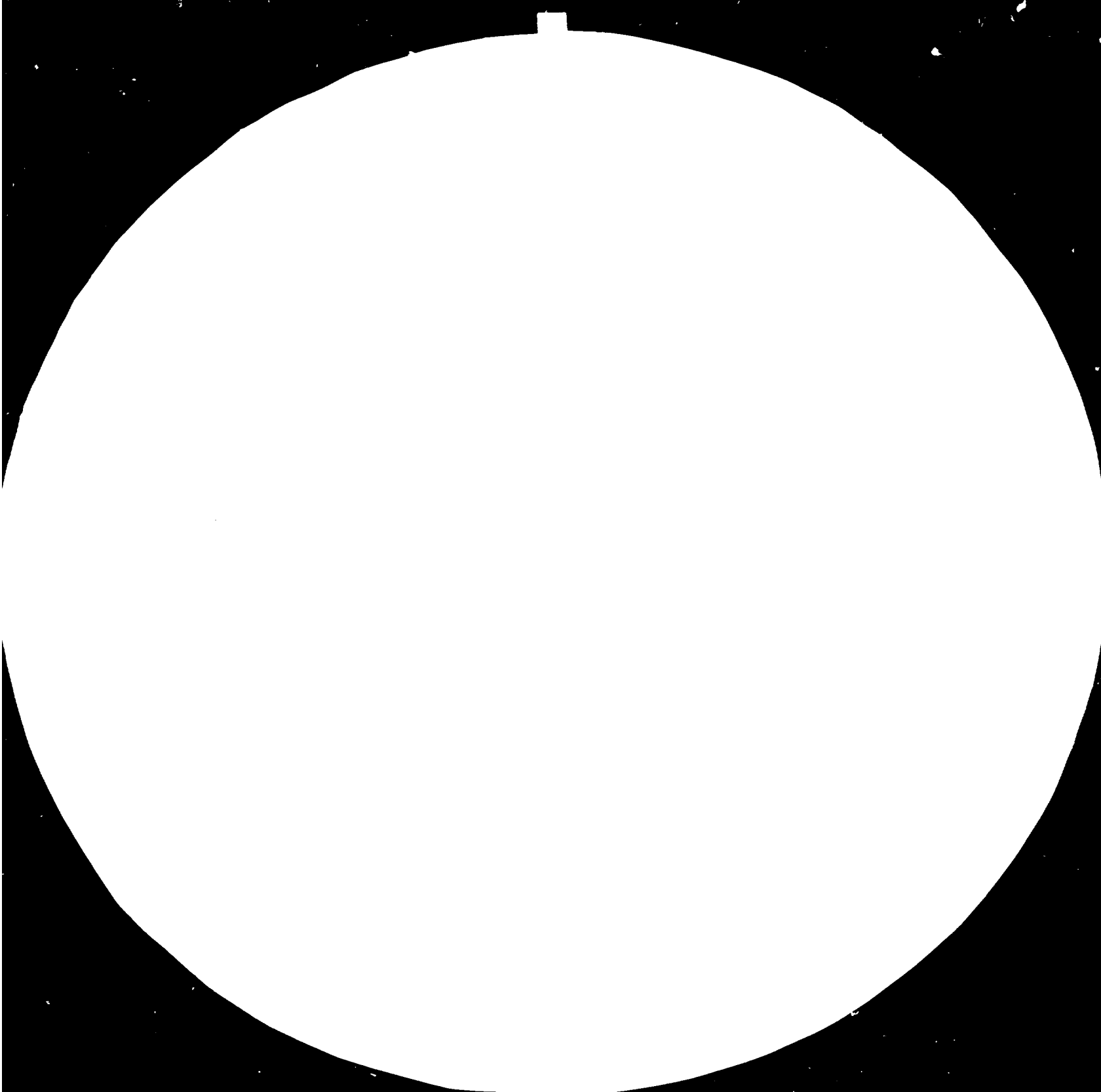
CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (GENERAL ITEMS)

Total value in 1000 U.S.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74162 013163 3612	EVAPORATOR, 5TH EFFECT	1	24.0	332.8					332.8						332.8
74162 013163 3612	EVAPORATOR, 4TH EFFECT	1	22.0	340.0					340.0						340.0
74162 013163 3612	EVAPORATOR, 3RD EFFECT	1	22.0	340.0					340.0						340.0
74162 013163 3612	EVAPORATOR, 2ND EFFECT	1	24.0	347.3					347.3						347.3
74162 013163 4612	EVAPORATOR, 1ST EFFECT	1	28.0	347.3					347.3						347.3
74162 012121 2612	1ST CONCENTRATOR	1	7.5	44.7					44.7						44.7
74162 012121 2612	2ND CONCENTRATOR	1	7.5	44.7					44.7						44.7
74161 054231 1112	CONDENSER	1	2.0	26.3					26.3						26.3

1823.1



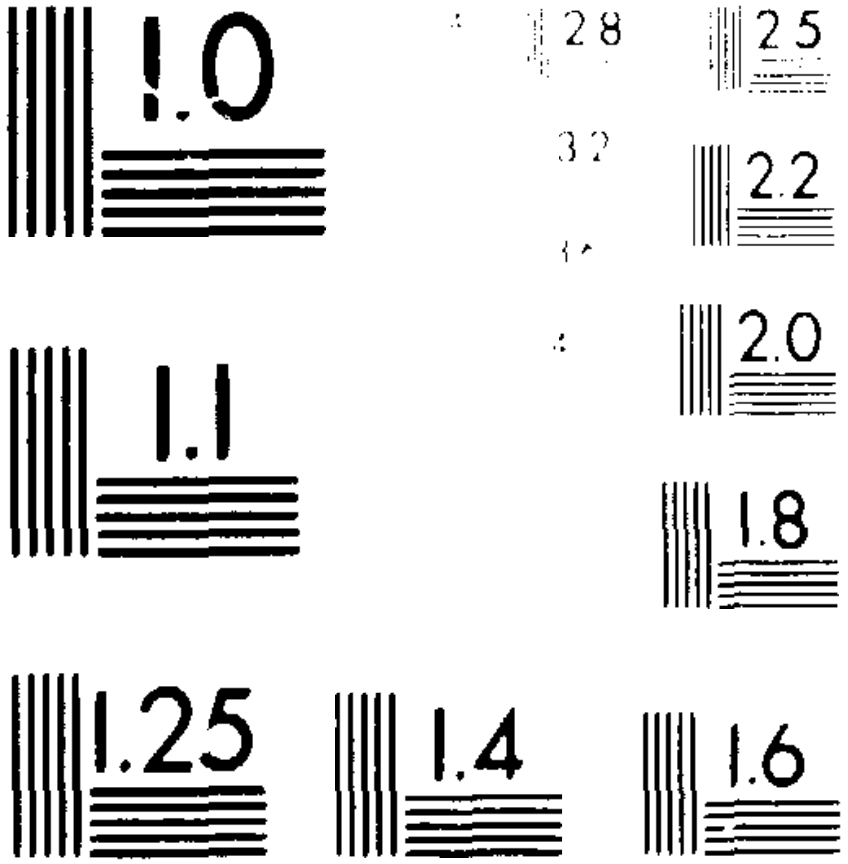


TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT
CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (PUMPS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023221 1212	PUMP, TO BLACK LIQUOR STORAGE	1	0.25	2.5					2.5						2.5
74220 025221 1212	PUMP, SCREEN DILUTION	1	1.3	6.6					6.6						6.6
74220 024221 1212	PUMP, TO BLOW TANK	1	1.1	3.0					3.0						3.0
74220 023121 1212	PUMP, TO WAYCO SHOWER	1	0.22	3.3					3.3						3.3
74220 024221 1212	PUMP, TO SHOWER NO.1 WASHER	1	0.46	4.9					4.9						4.9
74220 024231 1212	THICK STOCK PUMP	1	1.1	3.0					3.0						3.0
74220 023261 1712	PUMP, RECIRCULATING AIR HEATER	2	0.25	2.7					5.4						5.4
74220 023261 1712	GREEN LIQUOR TRANSFER UPMP	3	0.22	4.7					14.1						14.1
74220 023161 1712	STRONG BLACK LIQUOR PUMP	2	0.22	4.7					9.4						9.4
74220 023161 1712	PUMP, RETURN STRONG BLACK LIQUOR	2	0.22	4.7					9.4						9.4
74220 023161 1712	PUMP, STRONG BLACK LIQUOR TO RECOVERY BOILER	1	0.22	4.7					4.7						4.7
74220 023221 1712	PUMP, W.B.L. TO WEAK LIQUOR STORAGE	1	0.27	3.1					3.1						3.1
74220 023221 1712	PUMP, BLACK LIQUOR TO EVAPORATORS	2	0.27	3.1					6.2						6.2
74220 023221 1712	PUMP,BL.LIQ. TO NO.5 EFFECT TRANSFER	1	0.27	3.1					3.1						3.1

TABLE NO. :

EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA ..... PULP AND PAPER PLANT
CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA /ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (PUMPS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74220 023221 1712	PUMP, BL.LIQ. TO NO.2 EFFECT	1	0.27	3.1					3.1						3.1
74220 023221 1712	PUMP, TRANSFER TO NO.1 EFFECT	1	0.20	2.2					2.2						2.2
74220 023261 1712	PUMP, 50% BL.LIQ. TO STORAGE	2	0.22	4.7					9.4						9.4
74220 024161 1712	PUMP, 50% BL.LIQ. TO 1ST. CONCENTRATOR	2	0.22	4.7					9.4						9.4
74220 024161 1712	PUMP, BL.LIQ. TRANSFER TO 2ND CONCENTRATOR	1	0.2	2.2					2.2						2.2
74220 023161 1712	PUMP, 62% BL.LIQ.TO STORAGE	2	0.22	4.7					9.4						9.4
74220 023161 1712	PUMP, 62% STRONG BL. LIQUOR TO RECOVERY BOILER	2	0.22	4.7					9.4						9.4
74220 023121 1712	PUMP, BOIL OUT LIQ. TO EVAPORATORS	1	1.4	19.5					19.5						19.5
74312 233212 1722	VACUUM PUMP	1	2.85	105.8					105.8						105.8
74220 023141 1712	FILTRATE PUMP	1	0.2	2.2					2.2						2.2
74220 023171 1712	SLUDGE DISPOSAL PUMP	1	0.22	4.7					4.7						4.7

256.0

TABLE NO. :

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EQUIPMENT REQUIREMENTS FOR THE REHABILITATION OF THE EXISTING ÇAYCUMA PULP AND PAPER PLANT

CAPACITY : 227 T/D OF KRAFT SACK PAPER
LOCATION : ÇAYCUMA/ZONGULDAK
ANTICIPATED DATE OF COMMISSIONING : 1986

PULP AND PAPER MACHINERY (MATERIAL HANDLING EQUIPMENT-CONVEYORS) Total value in 1000 U.S.$.

SITC CODE	Basic Machine Name	Qty. Reqd. (Nos)	Unit Weight (Tons)	Unit cost in 1980 (US $. 1000)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Total 1981-1990
74426 021201 1911	OVERS CHIP CONVEYOR	1	4.0	8.5					8 5						8.5
74426 021201 1911	FINES CONVEYOR	1	4.0	8.5					8.5						8.5
74426 021201 2921	ACCEPTS CONVEYOR	1	5.0	10.7					10.7						10.7
74426 741001 1212	FINES PNEUMATIC BLOWING SYSTEM FEEDER	1	1.2	12.8					12.8						12.8
74426 761101 1212	ROTARY FEEDER FOR SALT CAKE STORAGE TANK	1	0.9	9.8					9.8						9.8
74426 761101 1212	ROTARY FEEDER FOR SALT CAKE DAY TANK	1	0.9	9.8					9.8						9.8
74426 431101 1911	SCREW CONVEYOR-LIME MUD FROM FILTER TO KILN FEED	1	2.0	11.0					11.0						11.0
							TOTAL :-		4085.1						4085.1

TURKISH PROJECTION OF PAPER-CARTON CONSUMPTION (1980-1992)

YEARS	CONSUMPTION/TON	INCREASE OF CONSUMPTION/TON	CONSUMPTION PER PERSON Kg.
1980	546.843		12,15
1981	568.715	21.872	12,36
1982	591.463	22.748	12,57
1983	615.119	23.656	12.01
1984	639.723	24.604	13,05
1985	665.311	25.588	13,30
1986	691.923	26.612	13.56
1987	719.599	27.679	13,83
1988	755.579	35.980	14,25
1989	793.359	37.780	14,69
1990	833.029	39.670	15,14
1991	874.679	41.650	15,61
1992	918.414	43.735	16,11

P.S.: GSMH is taken as 4% till 1987;
and as 5% between 1987-1992.

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

TURKISH PROJECTION OF PAPER-CARTON IMPORT AND EXPORT FOR

1981-1982

YEARS	DEMAND	CAPACITY	IMPORT	EXPORT
1981	722,8	705	17,8	-
1982	780,9	760	20,9	-
1983	845,75	803	42,75	-
1984	917,1	900	17,1	-
1985	995,1	960	35,1	-
1986	1.069,6	986	83,5	-
1987	1.140,9	1.086	54,9	-
1988	1.220,25	1.124	96,25	-
1989	1.311	1.193	118	-
1990	1.405,1	1.201	204,1	
1991	1.507,9	1.442	65,9	
1992	1.612,6	1.567	45,6	-

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

CAPACITY USAGE OF TURKISH PAPER INDUSTRY

YEARS	CAPACITY/TON	PRODUCTION/TON	CAPACITY USAGE
1974	399.783	363.334	%91
1975	401.336	371.086	%92
1976	429.619	387.086	%90
1977	481.820	458.595	%95
1978	485.636	426.998	%88
1979	540.000	442.218	%82
1980	580.000	455.503	%79

CAPITAL GOODS DEVELOPMENT PROJECT IN TURKEY

DEMAND OF TURKISH PAPER-CARTON

1981-1993

YEARS	DEMAND LOW HIGH	UNIT TON
1981	722.800 - 802.300	
1982	780.900 - 872.950	
1983	845.750 - 953.250	
1984	917.180 - 1.042.200	
1985	995.100 - 1.134.900	
1986	1.069.600 - 1.218.700	
1987	1.140.900 - 1.306.000	
1988	1.220.250 - 1.408.650	
1989	1.311.000 - 1.512.000	
1990	1.405.100 - 1.627.700	
1991	1.507.900 - 1.740.000	
1992	1.612.600 - 1.883.600	
1993	1.724.500 - 2.013.203	

PAPER-CARTON PRODUCTION CAPACITIES OF WORKING, UNDER ONCSTRUCTION AND UNDER PROJECT PHASE OF SEKA ESTABLISHMENTS BETWEEN 1981-1992

ESTABLISHMENT		YEARS											
		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
PLANTS CONSTRUCTED	IZMIT	150	150	150	150	150	150	150	150	150	150	150	150
	CAYCUMA	75	75	75	75	75	75	75	75	75	75	75	75
	AKSU	82,5	82,5	82,5	82,5	82,5	82,5	82,5	82,5	2,5	82,5	82,5	82,5
	DALAMAN	75	75	75	75	75	75	75	75	75	75	75	75
	BALIKESIR	50	70	100	100	100	100	100	100	100	100	100	100
PLANTS UNDER CONSTRUCTION	SILIFKE	-	-	57,6	57,9	63,7	70	77	84	93,2	102,6	112,3	124,1
	KASTAMONU	-	-	4,25	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0	5,0
	ORTA KARADENIZ	-	-	-	-	-	65	90	130	130	130	130	130

UNITED NATIONS BUILDING, 191 ATATÜRK BULVARI, P.O. BOX 407 ANKARA, TURKEY