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AN ECONOMIC EVALUATION OF A TYPICAL 1000 T/D ROTARY KILN LIGHTWEIGHT AGGREGATE PLANT

by

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The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the United Nations Industrial Development Organization.

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I. Introduction

Many of you here today have been responsible for investments in new lightweight aggregate facilities or in the expansion of existing plants. Some of you are perhaps considering such investments right at this moment.

Anyone who has ever been faced with the task of investing cannot help be aware of the tremendous number of alternative uses we have for our business dollars. This fact, and the fact that we want to put our business dollars to the most lucrative use possible, make us want to know, with some accuracy and confidence, the return we will get from any investment we might make.

When we are considering an investment in production facilities - say for lightweight aggregate - we are immediately in an extremely difficult area of economic prediction and selection. The situation is very similar to the relatively simple problem of buying a car. I am sure that almost everyone here has tried at one time or another to predict the costs of owning and operating an automobile. Those who have, know very well the difficulty of doing so - especially when you have to try to predict accidents and breakdowns. Take another example: most of you men have at one time invested 2.00 in a marriage. How many of you still believe that two can live as cheaply as one? These two examples contain all of the elements of predicting the profitability of an investment in new production facilities. You can see from them, and I am sure you know from your own experience, that the task of predicting operating costs and profitability of an investment in new production facilities over, say 20 years, is a tremendously difficult one.

To analyse an investment possibility it is necessary - or at least desirable - to know three things: the initial capital investment required, the costs of operation over the life of the project, and the sales revenue over the life of the project. The first two of these - the prediction of capital investment and operating costs for a new plant or plant expansion - require a great deal of specialized technical knowledge. To undertake such a task requires having had experience in the design, the purchasing, the erecting, and the operating of the type of plant desired. Because of this, engineering and construction firms such as The M. W. Kellogg Company have come to offer economic studies - or feasibility studies as they are sometimes called - to the industries they serve.

This morning, I would like to take you through the process of making an economic study to show you what is involved, what information can be gained from them, and what use they might be for anyone of you in the future. I will illustrate my discussion with some figures from an economic study covering a typical lightweight aggregate plant and not necessarily a real life example. These figures are not to be taken literally but only representative of the type of information revealed by this type of study.

II. Feasibility Study for a New Lightweight Aggregate Plant - Conventional Method

Let's assume that one of you has gone to an engineering/construction firm with this problem: you are contemplating going into the lightweight aggregate business or building a new plant in a new territory. Either you are not sure it will be a good investment, or you want a more definite idea of the profitability of the venture for your own satisfaction and to help convince a bank that it should help you finance the project.

To make a realistic study of your proposed project, the engineering firm must begin with certain data. Let's assume you have made a market study and have decided on what the capacity of the plant will be, the selling price and the product requirements.

Let's assume further that you have chosen a plant site and have selected a raw material for processing. The versatile engineering/construction firm might perform any of these preliminary investigations for you, but for this discussion let's assume not!

Basically, there are three things you want to know from the economic study: the capital investment required to make the project successful, the operating costs of the plant and an analysis of the profitability of the project.

Now, those of you who operate lightweight aggregate plants know about what it will cost you to run your plant next year, because you know what it actually cost you last year, but the engineering/construction firm has no plant in this specific place, processing this specific raw material. The first thing then that the engineering/construction firm must do is to create the proposed plant. After all, we aren't magicians or crystal ball gazers so we have to create the plant - but we only create it on paper at very minimum cost.

From the laboratory raw material evaluations and pilot tests, we determine the process required to transform you shale or clay into lightweight aggregate. Using this information the engineering/construction firm begins to make flow sheet which will show all the processing steps and identify all major items of equipment which will be involved. Each piece of equipment is then sized to meet design capacity requirements. Utility requirements such as power or fuel consumption are noted.

Concurrently with the development of the flow sheet, a plot plan is prepared which fits the equipment of the flow sheet to the particular conditions of your site. All attendant non-processing facilities such as administration buildings, truck or rail weight scales, and waste disposal systems are also shown. This plot plan in no sense represents a final design of the plant. It does represent, however, the planning stages of design which are a necessary first step to any economical plant design. This is a preliminary layout which to a large extent represents a determination of the feasibility of the project from an engineering standpoint. Often this plot plan will be supplemented with detail drawings or elevations to show any particularly complicated equipment arrangements. The purpose thus far, is to create on paper a schematic outline of a plant which meets all of your needs and which could actually be built.

We now wish to determine the cost of building this plant, and to do this we set up what is called a classification of accounts. This is nothing more than a bookkeeping system used to organize the pricing of the plant. At this stage, Engineering and Procurement Departments obtain quotes from equipment vendors or use their backlog of experience to determine the cost of all the equipment in the plant. The Construction Department visits the site, investigates physical limitations on construction, learns the local construction, learns the local construction codes, and checks the local labor market. On the basis of this information and the drawings already prepared, an estimate is made of the cost of bulk materials such as concrete, reinforcing steel and gravel for roads. Also estimates are made of the manhours, rental equipment and tools required to build the plant. When all of this data has been brought together, the cost of building the plant can be determined.

Plate I gives a summary of the capital investment required for our example case of a 1000 T/D lightweight aggregate plant. I have just described briefly how the engineering/construction firm you hypothetically hired to make an economic study would derive the cost of desgining, purchasing, and building your purposed plant.

This is represented by the figure of $2,400,000. This is not the total cost of your project however. Before the plant is designed, several preliminary investigations should be undertaken. These include: core drilling and quarry evaluation, raw material testing, a site survey, a soils investigation, and the economic study we are discussing. After the plant is built and and for the life of the plant, it is wise to have on hand a certain number of spare parts essential to smooth operation. These are mainly determined by the availability of such materials in the area where the plant is to be built. Finally, there will be costs associated with what we call commissioning the plant. Operators have to be trained, and some time and money is spent achieving smooth operation of the new equipment. The sum total of these items - $2,530,000 - represents the initial capital investment in your project.

In addition to this, a certain amount of working capital is required on hand to take up the slack in the first few months of operation when expenses run ahead of cash payments. This amount of $300,000, we assume will be recovered at the end of the project's economic life.

The example shown is for a 1000 T/D lightweight aggregate plant - actually it happens to be a rotary kiln plant. Here, total capital investment is again $2,330,000. I would like to note here that the Preliminary Investigations - including the economic study - amount to less than 4% of the total investment required. This small amount provides the basis for the planning stage of the project and actually controls both the initial and operating costs of the plant. It is truly the tail that wags the dog and should not be neglected or scrimped on.

Our next goal is to determine the operating costs of the proposed plant which has now been created on paper. With the planning of the plant largely done, the experienced engineering/construction firm is well on its way to knowing the economics of its operation. The operating characteristics are first determined in physical quantities such as tons of shale or clay per day, manhours per day, BTU's per day, and kilowatt hours per day. Using local cost conditions, these are then converted into dollar operating costs. All calculations are normally first made for the plant operating at design capacity.

Plate 2 gives a breakdown of the operating costs for our typical 1000 T/D plant. The first item - the cost of quarrying raw materials - is probably the most difficult to estimate and is often done by rule of thumb or experience in operation. Speaking of experience, it should be kept in mind that an engineering/construction firm has a depth and breadth of experience in plant operation that goes far beyond the average operating company. It, afterall, gains experience through its clients, its industry contacts, and its employees who have come from operating firms, equipment vendors or other engineering firms.

Using flow sheet and plot plan, the plant is staffed with the necessary operators and maintenance crew. This data is usually developed with you, the client, since you are the one who will eventually run the plant, and provides the basis for the manhour estimate and labor cost of operation.

Fuel costs for bloating the material are determined from raw material evaluations, pilot runs and the engineering/construction firm's experience - often aided by the experience of the equipment vendor that supplies the kiln or grate. Other fuel requirements, such as heating facilities, are also included to estimate the total fuel cost.

Power requirements are established on the basis of data from the flow sheet. Much of this information comes from equipment vendors who estimate the requirements of their products and will often be tempered by our experience in working with these people.

Miscellaneous supplies are minor items such as grease, oil, and gasoline, and are usually estimated by rule-of-thumb and experience. Replacement parts are a major cost item and are also estimated by experience with the type of equipment in the proposed plant aided by advice from the equipment vendor.

These costs represent the variable costs of the plant - the costs which theoretically are proportional to the amount of product made in each year. In this case we see they amount to over 70% of the year's annual costs if the plant is run at full design capacity.

The fixed costs - those not dependent on the level of production - are next established. Sales, supervision and overhead are generally determined by the client. Depreciation is here determined by the initial investment of $2,530,000 spread over a 20 year period - the assumed life of the plant - on a straight line basis. Local taxes are principally property taxes determined by the local authorities.

Summing up the fixed and variable costs, we have the total operating costs for a year's production at design capacity, and we can calculate the production costs per ton of aggregate. This figure - here $3.94 per ton - will determine the minimum selling price you must have to break even.

The engineering/construction firm can put these figures to another use besides determining overall operating costs.

When you, as operators, calculate your costs at the end of your fiscal year, there is very little you can do to effect the total cost of operations. Here, however, the engineering/construction firm has the advantage that you plant is not built yet and areas of high cost can be spotted and corrected.

For example, the plant we see here is very low in labor costs due to a high degree of instrumentation and control and high in fuel costs due to lack of heat recuperation equipment. Should the client so desire, the engineering/construction firm can reduce operating costs by putting in this heat recuperation equipment if the extra capital is available or it can reduce the capital investment if the required amount of capital is not available and higher operating costs can be permitted.

On paper your plant has now been built and is now operating at design capacity - and you are selling that capacity. You now wish to know how good an investment you have made - that is, what is the profitability of your investment.

One of the simplest and most conventional methods of evaluating profitability is based on the assumption that all years of plant operation are identical from a sales, cost and profit standpoint.

Plate 3 illustrates this method for our typical 1000 T/D plant. We have assumed that your market analysis said that you can sell your aggregate for $6.50 a ton. I picked this figure because it is the nearest round number to the national average f.o.b. selling price for rotary kiln plants by a survey I made - though it is about 25¢ higher than the sinter grate plant average by the same survey. From this selling price a gross sales is calculated, a gross profit, income taxes, and a net progit. Merely dividing gross profit and net profit by the capital investment gives annual returns on your investment before and after taxes.

The annual return before taxes of 33% should be compared to the interest rate on your savings account, bond interest or stock dividend. Our typical plant shows a very favorable return and might be worth the risk involved in developing a new market in a new territory.

Normally, you would prefer not to put down all your own cash for a project such as this, since you can borrow money at a much lower interest rate than you are earning. Case 2 assumes you borrow half of the capital investment required, and profits are calculated after interest payments are deducted as expenses. Return on your invested capital - your equity - almost doubles and it will be good business to borrow if you can. I would remind you at this point that one of the purposes you are having this economic study made by an engineering/construction firm is so that you can approach a lending institution for financing. This is commonly done.

There are other indications besides return on investment that are commonly used to evaluate plant investments. Two of these are shown on Plate 4. The payback or payout period is used as an indication of how long your initial capital investment is in a risk situation. At the end of this period enough cash will have been earned by your project to return your initial capital investment and no profit. Net profit and depreciation are both accounting ways of paying yourself back for your investment so these are added together for a typical year of plant operation. Dividing this figure into your initial investment gives a figure of just under 5 years before you will have all of your money back from this project.

Up to now we have assumed that your plant has operated at design capacity and that all product was sold. Naturally, this will not always be true and you want to know how bad things can get before you begin to lose money.

This is a measure of the safety factor in the project against the big unknown - sales.

The operating level where there are zero profits and zero losses is called the break-even point. For our typical plant let's assume that - what we earlier called fixed costs remain fixed for the year regardless of the level of production - and to be conservative let's also assume that none of the laborers are fired or laid off in slack periods so that the labor cost is also a fixed cost. This gives us $455,000 per year of fixed cost and $2.57 per ton of variable costs proportional to the level of production. We also assume that all of the aggregate produced in a year is sold. On this basis simple algebraic calculations show that your plant need only produce at 35% of design capacity to break even. Any higher level of sales will make a profit - and God forbid, any lower level of sales will produce losses. As a safety factor the situation here is excellent due to the low level of overheads or fixed costs.

III. Discounted Cash Flow Method of Economic Evaluation

The economic analysis to this point has been quite redimentary. As I said, it is really not realistic to assume that all years of the economic life of the plant will be identical. In addition, we have not taken advantage of the time value of money. I think it is obvious that money returned to you several years from now. This is because money returned to you now can be reinvested to earn more interest or profits. For this reason it is more realistic to include some consideration of the time value of money in analyzing the returns from your investment.

First of all, what do we mean by the returns from your investment? If you invest in new equipment you will have to make an initial cash investment and you will incur continual cash operating costs and taxes. At the same time, you will be receiving cash payments from sales. The money you are returned, with which to pay off your investment and make profits, is the difference between the incoming cash and the outgoing cash. This difference we call the cash flow. As we normally set up our accounting records for tax purposes, there is usually one non-cash item included in the cost of sales. This is depreciation. Hence, in order to find the cash flow into the business each year it is necessary to add the depreciation to the net profit. Plate 5 shows the justification for this.

Let's now take a more realistic picture of the lifetime of our project than the typical design capacity year we have studied up to now. Plate 6 shows an assumed sales curve over the economic lifetime of the plant. In the first year of start-up it is assumed that only about 1/3 of plant capacity is produced and sold. The following year about 1/2 and then about 3/4. A level of 90% or better is held for 11 years and then I have made it drop off to make the picture very conservative.

What we would like to do now is evaluate our investment under this somewhat pessimistic picture of plant economic life. Preferably, we would like some type of index number like return on total investment that will be comparable to figrues representing returns from other possible investments. The question is how to do this when we have a variety of annual incomes and a constantly changing outstanding investment. To complicate the situation more, you will probably want to depreciate the plant quicker than its estimated economic life and by some more advantageous method such as sum of the digits.

The only typical numbers left to calculate profitability seem to be rather gross averages over the life of the project, and these do not take into account the time value of money we discussed earlier.

Fortunately for both engineering firms and investors, bankers have long been faced with this same problem when evaluating mortgages. To the banker a mortgage is exactly like your investment in production facilities in than an initial investment is made and a series of cash flows is set up that pays back the principle with interest over a period of years. Each year a payment is made that pays off part of the principle and part of the interest on the outstanding balance due. A method has been devised to calculate the true rate of return on such an irregular flow of cash which takes into account the time value of money. This rate of return, based on the cash flow, is called the interest rate of return. Unfortunately, while not being complex algebraically, finding the interest rate of return involves a trial and error solution involving much tedious calculation. For this reason a computer is often used to make these calculations.

Let's return to the example on Plate 6 where we have set up what might be a realtively realistic situation. Our previous calculation of profitability which gave us a return of 15.9% after taxes have been based only on the 100% years and so we might expect that the sales pattern shown will greatly reduce the attractiveness of the investment.

Plate 7 is a printout sheet from our computer which makes the interest rate of return calcualtions for this case. The second column is the input of the production/sales data from Plate 6. Years -1 and -2 represent periods before plant start-up. Column 3 shows that the selling price per ton is again assumed to be \$6.50. The computer calculates the sales income in column 4. The costs of sales is given to the computer in column 5 calculated as previously for levels below design capacity. That is, labor and overheads are assumed and other costs proportional to the sales volume. The computer now calculates the gross income in column 6. Column 7 is input data representing the investments you make in this project. In the first year (-2) you spend \$100,000 for preliminary investigations as we discussed earlier. The next year (-1) you spend \$2,400,000 for design, procurement and construction of the plant. No production or sales are achieved this year but \$100,000 of overheads such as sales expenses, executive salaries, etc. are incurred as shown in column 5. Now the plant is commissioned and in the first year of operation the start-up costs, spare parts and working capital are invested. However, only 1/3 of plant capacity is achieved. There are no further investments and sales proceed as shown previously in Plate 6. We have decided that the economic and physical life of the plant will be 20 years, but for tax purposes let us assume you want to write off the plant in 12 years by the sum of the digits method. The computer makes these calculations and then computes the income tax, net income, cash flow, cash balance - the cumulative sum of the cash flows - the project return, and the investment balance. Of primary importance to you are the interest rate of return and the payout time which are also calculated. The interest rate of return, which again represents the true return on your investment over the life of the project the same way the interest on a mortgage does, is about 14%. Previously, we had calculated about 16% by the conventional method assuming sales and production at 100% of design capacity. This shows the tremendous importance of taking into account the time value of money which here has offset a sizeable difference in sales trends: constant 100% vs. the pattern chosen for this example. The payout time - the time required to get back your investment - is, however, increased to 6.8 years.

To make more clear the distinction between the two methods of analysis I have presented - the rate of return on original investment and the rate of return by discounted cash flow - let us look at Plate 8. Here are examples of three different investments, all with identical initial investments, all with identical initial investments but different cash flows. Project A gets its returns early, Project B has uniform returns and Project C gets its returns late in the project life. The average annual cash flows are identical and the average net increases are the same. Hence, the returns as calculated by the first method I used to analyse the 1000 T/D lime plant are the same. The true rate of return, however, - the rate of return by discounted cash flow - vary widely. All cases show a higher rate of return than by the conventional method. Also, we see that the sooner the returns are gained the higher the rate of return is. This is the effect of the time value of money.

So much for discounted cash flow. It is not necessary for the average businessman or investor to know how to make the tedious computations to calculate interest rate of return; however, it is essential that the well-informed investor be aware of its existance and the fact that most other forms of analysis can be extremely misleading.

IV. Conclusion - Economic Studies are a Valuable Service Provided by Engineering Firms

What I have tried to show today is not how to make an economic analysis, but that these analyses are available from engineering/construction firms like The M. W. Kellog Company. I have also tried to show that there are different methods of making these economic analyses from a very simple, unsophisticated method commonly used to a newer method which has been accepted and used by banks and large corporations. This newer method represents a truer evaluation of any project you might be interested in.

I have tried to impress upon you also, that these studies require a great deal of specialized talent and experience that only engineering/construction firms have. Each of you could perform any of the individual tasks involved in a feasibility study; however, only firms that are staffed for engineering, procurement, and construction are in a position to make these studies quickly and economically. Firms like ours have the necessary staff and ability to make these economic feasibility studies. We offer this very valuable serivce to you and you are encouraged to take advantage of it.

TYPICAL CAPITAL INVESTMENT FOR A

1000 T/D LWA PLANT

		% of Total
Preliminary Investigations	$ 100,000	3.9
Design, Procurement and Construction	2,400,000	95.0
Spare Parts	6,000	0.2
Plant Start-up and Training of Operators	24,000	0.9
	$2,530,000	100%

Working Capital	300,000
Total Cash Requirements	$2,830,000

TYPICAL OPERATING COSTS - 1000 T/D [illegible] PLANT

Variable Costs	$/Yr.	$/T	% of Total
Raw Material	$155,000	$0.47	11.9
Labour	80,000	0.24	6.1
Fuel	352,000	1.07	27.2
Power	204,000	0.62	15.8
Miscellaneous Supplies	20,000	0.06	1.5
Replacement Parts	115,000	0.35	8.9
	$926,000	$2.81	71.4%
Fixed Costs			
Sales, Supervision, Overhead	$176,000	$0.53	13.4
Depreciation	127,000	0.38	9.6
Local Taxes	72,000	0.22	5.6
	$375,000	$1.13	28.6%
Grand Total	$1301,000	$3.94	100%

TYPICAL ECONOMIC EVALUATION OF A 1000 T/D LMA PLANT

Summary of Economic Data

Capital Investment	$2,530,000
Total Operating Costs/Yr.	$1,301,000 = $3.94/T

Calculation of Profitability

Assumed Selling Price: $6.50/T

Case 1: Assuming no borrowed capital

	$/Yr.	$/T
Gross Sales @ $6.50/T	$2,140,000	$6.50
Gross Profit	839,000	2.56
Less 52% Corporate Taxes	436,000	1.33
Net Profit	$ 403,000	$1.23

Annual Return on Investment before Taxes:	33.2%
Annual Return on Investment after Taxes:	15.9%

Case 2: Assuming 50% Borrowed Capital Investment at 6%:

Interest	$ 76,000	$0.23
Gross Profit	763,000	2.33
Less 52%	396,000	1.20
Net Profit	$367,000	$1.13

Annual Return on Equity before Taxes:	60.4%
Annual Return on Equity after Taxes:	29.0%

TYPICAL ECONOMIC EVALUATION OF A 1000 T/D [illegible] PLANT
(Continued)

Calculation of Payback Period

Assuming No Borrowed Capital:

Net Profit	$403,000
+ depreciation	127,000
Cash Flow	$530,000

Payback Period = $\frac{2,530,000}{530,000}$ = 4.8 years

Calculation of Break-Even Point

Let X be the number of tons of product produced and sold per year.

Gross Sales = 6.50 X

Variable Costs = $2.57 X	(excluding labor)
Fixed Costs = $455,000	(including labor)

Gross Profit = 6.50 X - 2.57 X - 455,000 = 3.93 x - 455,000

Net Profit = 48%[3.93 X - 455,000] = 1.89 X - 218,000

Break-Even Point: X = $\frac{218,000}{1.89}$ = 115,000 T/Yr.

$\frac{115,000}{330,000}$ = 35% of total plant capacity

TYPICAL OPERATING STATEMENT AND CASH FLOW FOR A 1000 T/D LWA PLANT

Gross Sales		$2,140,000 (cash)
Cost of Sales		
Raw Material	$155,000 (cash)	
Labor	80,000 (cash)	
Fuel	352,000 (cash)	
Power	204,000 (cash)	
Miscellaneous Supplies	20,000 (cash)	
Replacement Parts	115,000 (cash)	
Sales, Supervision, Overhead	176,000 (cash)	
Depreciation	127,000 (non-cash)	
Local Taxes	72,000 (cash)	$1,301,000
Gross Profit		$ 839,000
Federal Income Taxes		$ 436,000 (cash)
Net Profit		$ 403,000

Net Profit + Depreciation = Cash Flow
$403,000 + 127,000 = $530,000

1000.0
Plate 6
1/6/64
R.S.H.

1000 T/D LWA PLANT

SALES CURVE

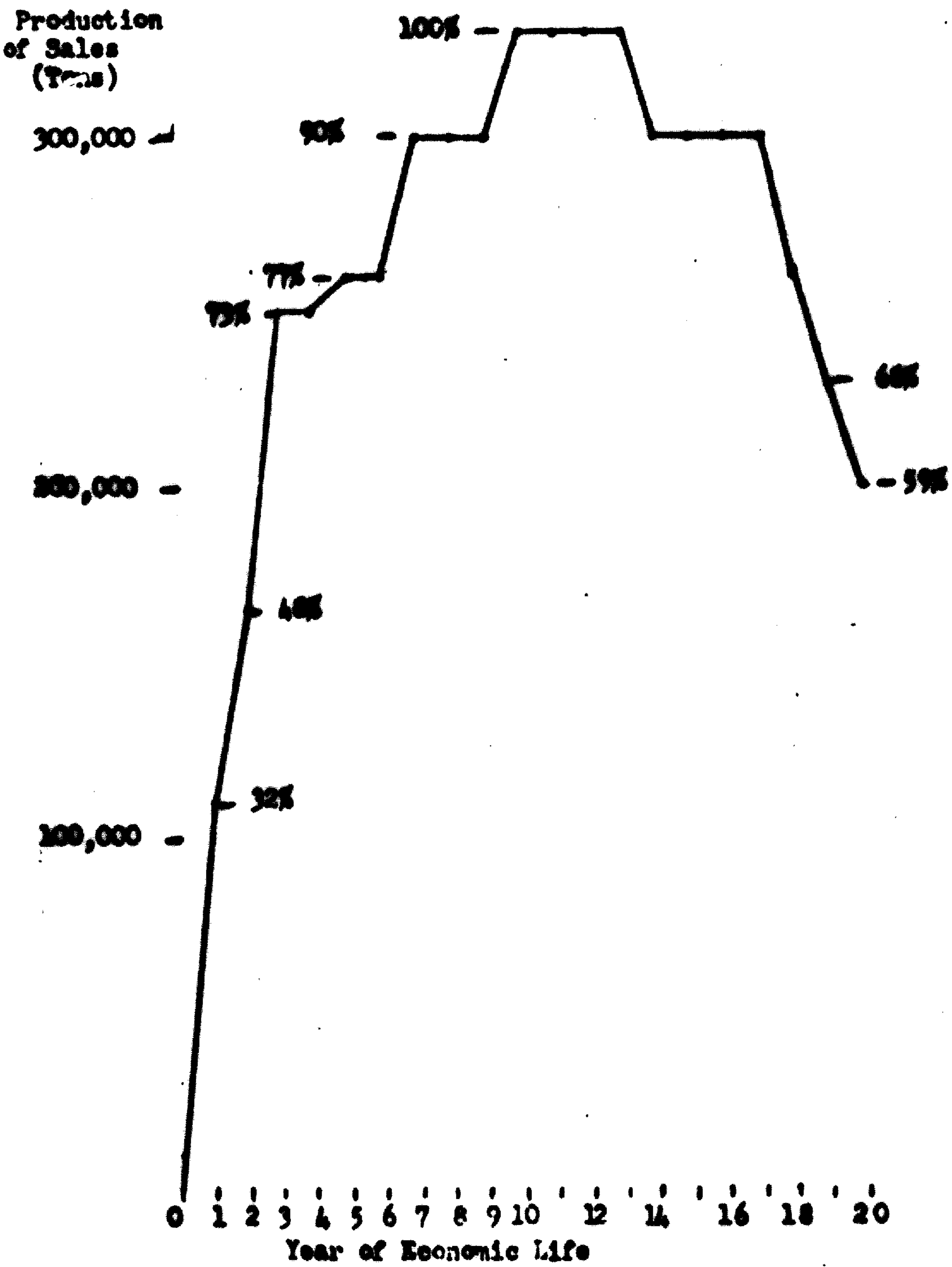

Plate 7

CUSTOMER -TYPICAL PRODUCTS-LWA LOCATION-U.S.

PROCESS - HIGH EFFICIENCY CAP-1000T/D STUDY NUMBER-1000.0 DATE-1/6/64 BY-R.S. HARWELL

DESCRIPTION PAGE 1

YEAR	SALES RATE 1000S	PRICE PER TON	SALES INCOME 1000S	COST OF SALES	GROSS INCOME	INV. + SPEC.	CODE	DEPR. SUM DIG.	INCOME TAX 52.0PC	NET INCOME	NET CASH INFLOW	NET CASH BAL.	PROJECT RETURN	INVESTMENT BAL.
-2	0	6.500	0	0	0	100	CPCO	0	-52	-48	-48	-48	0	48
-1	0	6.500	0	100	-100	2400	PL&P	0	-52	-48	-2448	-2495	0	2495
1	110	6.500	715	611	104	330	WOCA	369	-138	-127	-88	-2584	381	2965
2	165	6.500	1073	752	321	0		338	-9	-9	330	-2254	420	3056
3	250	6.500	1625	971	654	0		308	180	166	474	-1780	423	3005
4	250	6.500	1625	971	654	0		277	196	181	458	-1322	417	2964
5	262	6.500	1703	1003	700	0		246	236	218	464	-858	410	2911
6	262	6.500	1703	1003	700	0		215	252	233	448	-410	403	2866
7	300	6.500	1950	1099	851	0		185	347	320	504	94	392	2754
8	300	6.500	1950	1099	851	0		154	363	335	472	583	377	2642
9	300	6.500	1950	1099	851	0		123	379	349	472	1055	361	2531
10	330	6.500	2145	1174	971	0		92	457	422	514	1569	341	2359
11	330	6.500	2145	1174	971	0		62	473	437	498	2067	317	2177
12	330	6.500	2145	1174	971	0		31	489	451	482	2549	291	1985
13	330	6.500	2145	1174	971	0		0	505	466	466	3015	263	1783
14	300	6.500	1950	1099	851	0		0	443	408	408	3424	237	1612
15	300	6.500	1950	1099	851	0		0	443	408	408	3832	211	1415
16	300	6.500	1950	1099	851	0		0	443	408	408	4241	182	1188
17	300	6.500	1950	1099	851	0		0	443	408	408	4649	148	927
18	262	6.500	1703	1003	700	0		0	364	336	336	4985	114	705
19	230	6.500	1495	919	576	0		0	300	276	276	5262	95	513
20	200	6.500	1300	843	457	0		0	238	219	549	5811	36	-0
			TOTALS		14607			2400		5809			5809	

TERMINAL BOOK VAL. -0 PAYOUT TIME 6.8 YRS. INTEREST RATE OF RETURN 13.97PC

30. 8. 74