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**TECHNICAL INVENTORY ON TURKISH
CAPACITIES AND CAPABILITIES
IN SELECTED SECTORS***

Prepared by

State Planning Organization
of the Republic of Turkey

* The views expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. Mention of company names and commercial products does not imply the endorsement of UNIDO. This document has not been edited.

ABBREVIATIONS AND NOTE

Co.	Company
Coop.	Cooperation
EC or EEC:	European Community or European Economic Community
fax.	Telefax
INC.	Incorporated
kg.	kilogram
km.	kilometer
Ltd.	Limited Company
m.	meter
n.a.	non-available
R & D	Research and Development
sq.	square
Tel.	Telephone
Tlx.	Telex
TUBITAK	Turkish Scientific and Technical Research Organistaion
U.A.E.	United Arablc Emirates
U.K.	United Kingdom
U.S.A.	United States of America
U.S.S.R.	Union of Soviet Socialist Republics (former)*
Techn.	Technology

* The paper was prepared before the USSR ceased to exist as a State entity.

Numbers in [] brackets refers to the rank of the company in the list of the 500 largest companies of Turkey 1988.
(Source: Istanbul Chamber of Industry)

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PREFACE

The acquisition of technology to accelerate social economic development is a central issue in the developing countries' programmes. Accumulation of knowledge related to the production of goods, services and technology has a crucial importance for a country's well-being in today's rapidly changing world.

The developing countries are now placing high priority on economic and technical co-operation among themselves to produce and share more suitable technologies. They seek to eliminate the constraints that hinder their full access to efficient use of modern technologies and to acquire those technologies at better financial terms.

Turkey has achieved considerable success in acquiring technological capabilities and adapting them to the country's own needs and resources. This has been quite an experience of long years. Today Turkey is willing and ready to share this technological capacity with other developing countries.

As a step to promote economic and technical co-operation, efforts are being made towards the availability and easy accessibility of comprehensive and reliable information on the existing technological capacity.

This volume constitutes another example of presenting information on certain sectors of Turkish manufacturing industry namely; food processing, textile, leather, cement, glass, agricultural implements and alternative sources of energy.

This volume presents information about companies and institutions in related sectors concerning their major products, technologies, past experiences and proposals for co-operation.

I would feel happy if the information could facilitate, even to a modest extent, the initiation and enhancement of co-operation between Turkey and other developing countries in the very important area of technology exchange and transfer.

Ilhan KESİCİ
Undersecretary

State Planning Organisation
Republic of Turkey

FACTS ABOUT TURKEY

Turkey is situated on a peninsula at the Western end of Asian and the Eastern end of European continent, a location which makes her a natural gateway between Asia and Europe. At the same time the straits (The Bosphorus and the Dardanelles) which connect the Black Sea to the Mediterranean and the larger seas form a natural passageway between North and South.

Turkey's area totals 780.576 sq.km., 759.953 sq.km. of which lie in Anatolia on the Asian continent and the rest on the European continent. With the exception of ex-U.S.S.R and Iran, Turkey is larger than any of her neighbors or the European countries in term of area.

Turkey is a land of mountains and high plateau. Turkey's average elevation above sea level is 1.330 meters, while the average elevation of Europe is 330 meters. This elevation rises gradually from West to East. The country's mountains extend parallel to the coast in the North and in the South and are concentrated in the Eastern Anatolian region.

Turkey's geographical location puts her in a moderate climatic zone. Owing to the seas surrounding the country and the effects of its topographical structure, climatic conditions in Turkey exhibit considerable variety. The wide range of climatic conditions makes it possible to raise a rich variety of agricultural products which provide both foodstuff to about 60 million inhabitants of the country and raw materials for the rapidly developing Turkish industry.

In recent years Turkey has become increasingly industrialized, has sought new markets abroad and has applied for full membership to the European Community.

Until the end of the Second World War, the European countries have been Turkey's most important trading partners. The role of the United States in Turkey's development effort began to increase considerably at a time when Turkey needed sound economic support for a development strategy based on market economy and parliamentary democracy. With the emergence of the Common Market in the 1960s, Turkey's economic relations with Europe once again became of the foremost importance.

Not until recent years however did important changes take place in the nature and context of foreign economic relations of Turkey. In the 1980s, it has been realized that co-operation between Turkey and the countries of Middle East, Africa and Asia could bring about important economic changes and political advantages for all parties. Considerable steps have already been taken in the adoption of a multidimensional policy in foreign economic relations. Moreover, these relations are gradually changing their nature and the relations other than those of trade, such as export of manpower, external financing, transportation, tourism and technical co-operation are gaining more importance.

Few nations lately have undergone such rapid change as Turkey, and few have shown more promise. Since the early 1980's, the nation's economy has changed from primary agriculture to industry. Turkey has eliminated bureaucratic red tape and has begun to dismantle the system of tariffs and subsidies, establishing some of the world's most liberal incentives to foreign investment. The country's economic planners have shifted their emphasis from discouraging imports to encouraging exports, expecting to achieve a phenomenal GNP growth rate of 10.3 percent during these years.

One glance at a modern map demonstrates Turkey's strategic importance with regard to East and West. Today's Turkish Republic positioned as it is between Asia and Europe, is a natural bridge to these worlds. That fact, more than any other tells much about Turkey's potential to expand its influence as it goes through a political and economic renaissance.

The key to Turkey's future is education and skills, since almost half of the population is under 20 years of age. Every year over a million children are added to the population at the primary school age. Although the schooling rate for primary schools is practically 82%, it is considerably lower for secondary and higher education. Turkey is rightly trying hard to make the swelling young population indeed a resource, not a problem. Today there are 29 universities in Turkey and over 600 thousands students, one-third women doing a four year university course; tens of thousands more are studying abroad. Turkey is well aware of the fact that this highly qualified and well trained young population is the country's most valuable asset and should be used for the well-being of the country and the humanity.

A BRIEF HISTORY OF TURKISH ECONOMY (1923 - 1990)

The Turkish Republic was founded on October 29, 1923. At that time agriculture was archaic and industry was practically non-existent. Against such a background of acute economic crisis confronting the early governments of the Republic, efforts were directed at the accumulation of private capital. The Izmir Economic Congress, convened in February 1923, even before the proclamation of the Republic, was to be the main axis for the economic policies of the period.

The congress, attended by the representatives of industry, trade and agriculture sectors and those of the workers, resolved on: (1) the protection of the producers; (2) promotion of exports; (3) strengthening of the national industry and (4) the development of the rail transportation. In line with the recommendations of the congress, the Industry Promotion Law and the Custom Law were legislated and Industry and Mining Bank was set up in 1925. But the protection of the infant industry would have to wait until the acquisition of the right to determine the custom tariffs.

The Industry Promotion Law, the most comprehensive economic text of the time, was stipulating capital assistance for important enterprises, tax exemptions, transport cost reductions, production premiums, price subsidisation for certain state enterprises and guaranteed purchase by the state of the output of the newly established firms.

Another significant venture of the time has been the establishment in 1924, of Türkiye İs Bankası with the contribution of the fledgling private enterprise. The bank was to operate and invest in coal and copper mining, sugar, glass, timber and textile production as well as in the insurance field.

The Years of Etatism (1929 - 1939)

By the year 1927, the dominance of small industry with agro-industries and mining was evident. The technological foundations of industry was still primitive. The industrial production was far from even meeting the demand for basic consumer goods.

The aim which vanguarded the War of the Independence failed in its efforts to generate a national industry in the years 1923- 1929 despite such offered benefits as abundant incentives, state partnership, internally and protective tariff walls and similar measures, externally. Moreover, the World Depression which started in late 1929 unfavorably affected the development of the Turkish economy. Hence, the search for alternative economic policies from 1929 on, ultimately led to the Etatisme which marked the years 1932-1939.

But there had also been practical reasons which pushed the new Turkish state to the experiment of economic Etatisme.

An important factor facilitating the transition to Etatisme has been the expiry in 1929 of the customs restrictions set forth in the 1923 Lausanne Trade Convention. Thus freed, the Government has lost no time in substituting a complete new set of tariffs and making the import of agricultural machinery totally exempt from duties. Furthermore, the Government armed itself with the necessary tools and means to deal with the growing recession due to two years' drought and with its capability of private enterprise. Besides all these, the Government was enforced to undertake initiative for a quick development of the economy in face of approaching danger of war in Europe.

The distinguishing feature of the period of Etatism is the State's entry to the manufacture and mining sectors as an investor and the drafting of two consecutive five-year plans for the centralized direction of its activities.

Within the period covered by the First Five Year Industrial Plan which came into force in 1933, a total of 16 factories were set up in the fields of metallurgy, weaving paper, ceramics and chemical industries. The priority was on the domestic production of goods formerly imported despite the local availability of raw materials. To help finance the industrialisation, such investing concerns as the State Industry Office, the Industrial Credits Bank, Sümerbank and Etibank were set up. These institutions oriented and directed the investment in industry and mining sectors and realised major investments. In addition, Türkiye İs Bankası carved itself a share as an investor in the rapid process of industrialization.

Successes attained within the first Plan period of 1933-37 led to the drafting of the Second Industrial Plan to cover the years 1938-43 whose implementation, however, was largely hampered by World War II.

Those outstanding economic hallmarks of the period of Etatism can be summarized as: (1) balanced-budget policies; (2) refrainment from monetary expansion; (3) downward trend of prices; (4) domestic financing of the development despite regular servicing of the Ottoman debt; and (5) steady strengthening of the national currency.

The War Years and Beyond (1940 - 1950)

Although the young Turkish Republic managed to preserve its precarious neutrality its economy was inevitably exposed to the damaging effects of the Second World War. Rigid implementation of the Etatiste policies, even a closer state control over private capital and the abrogation in 1941 of the Capital Investment Law were the basic economic characteristics of the war years.

The policies which the Government felt obliged to follow under the constant danger of getting drawn into the fighting heavily taxed the state's resources. A major portion of the working age population had to remain outside production because of the general mobilization which in turn, led to employment bottlenecks, particularly in the agriculture sector, and resulted in production shortfalls.

Rising budget expenditures compelled the Government to seek relief from the Central Bank, causing a marked expansion of the money supply. This, at a time of receding imports and production problems, pushed the Turkish Republic to be confronted for the first time with an acute inflation. The import difficulties particularly affected the purchase of industrial machinery and equipment with adverse results on investment.

Under such circumstances, industrialization, which has been the main axis of the policies of the preceding period, left its place to short term programmes designed basically to eliminate the commodity shortages and to keep the prices down in hopes of defeating the black market rates. With the adoption in 1940 of a National Security Act, the Government armed itself with powers to determine which commodities would be produced in which quantities, to keep the investments under control and to requisition industrial establishments if the need arose.

Another legislation with a strong impact on the war years has been the Wealth Tax Law of 1942. The aim was channeling to state treasury of at least a part of the fortunes amassed through inflation and black marketing.

National income dropped sharply during the war time. The agricultural and industrial sectors also displayed relative (and actual) losses within the same period. During the second half of the period, covering 1945 to 1950, the discontent with the rigid bureaucratic measures was strongly manifested. The current economic and financial policies were accused of turning an ever-larger portion of the working population into civil servants and thereby consolidating the hold of bureaucracy on the economy. They were also accused of undermining the

confidence of private enterprise and eroding its motivation for investments. Hence, urgent changes were required in the economic policies to curb state intervention in economy which was eventually leading to a complete transformation of the economic system.

In the meantime, there were other external factors necessitating policy changes. Turkey had entered a close co-operation with the USA to be eligible for assistance under the Marshall scheme. Turkey's membership of such international bodies as the World Bank, International Monetary Fund (IMF) and Organisation for Economic Cooperation and Development (OECD) had given momentum to liberal tendencies in the country.

The Decade of (1950-1960)

Turkey adopted a multi-party system in 1946 and four years later, the Democratic Party came to power on a platform of strong opposition to the Government's economic policies. Developments of the period can be examined by the following main indicators:

- The foreign trade was liberalised in 1950 and the import substitution strategy of the preceding period abandoned. The policy kept until 1953 widened the foreign trade gap and required short and long term external borrowing to finance the deficit. The country's foreign debt rose considerably during the period and the state finally became unable to service even the interest payments. Turkish Lira undergone a staggering 70 % devaluation in 1958.
- From 1950 to 1958, agricultural products accounted for about 70 % of the exports. Means of imports, on the other hand, were considerably limited.
- Foreign capital enjoyed considerable incentives throughout the period. Some laws for promoting foreign capital were legislated during the decade. These, however, were not sufficient for the materialization of the hopes of drawing foreign capital into the country.
- Considerable rises in the ratio of the investments to the GNP marked the period. The fixed capital stock had increased by an average 8 % every year. Despite these, however, development in the manufacturing industry remained insignificant.
- The liberalization of foreign trade from 1950 on emerged to be the main cause of adverse developments observed in later years. Overvalued exchange rates played a role in the emergence of foreign trade bottlenecks. The practice turned the economy into an import-oriented and dependent one, while at the same time fuelled the illegal trade in foreign currencies and the black market.

The liberation of trade, while making imports profitable, led to waste of resources and depletion of existing resources led to short-term external borrowing to pay for the imports. The difficulties encountered in servicing the debt led to new borrowing and the accumulation of debts obstructed the external trade.

Planned Development of Turkish Economy

After the military intervention of 1960, Turkey adopted a planned development strategy and put the First Five Year Development Plan into effect in 1963.

A common feature of all the four plans implemented between 1963-1983 has been the priority attached to industry in general and manufacturing industry in particular. The industry hence was becoming the driving sector of the economy.

Another common feature appears to be the definite option for import substitution as the industrialization strategy. Import substitution seems to have been sought first for the durable consumer goods, and then for intermediary and investment goods. All of the four plans aimed at the expansion of the domestic market in keeping with the rationale of import substitution.

Protective measures, incentives, and subsidies which are the main political means for developing an industry for import substitution were extensively used in this period. Apart from these common features, economic developments of the period can be summarized as follows:

- The agricultural sector's share in overall employment fell. In the meantime, the industry share steadily increased. A parallel trend was seen in the shares of industry and agriculture sectors in Gross Domestic Production.
- A particularly rapid progress was achieved in manufacturing industry between the years 1963 and 1976. Furthermore, this fast progress did not disturb very much the stability of prices.
- The developments during this period were considerable. But on the other hand, they were not adequate. This inadequacy manifested itself in the share of manufacturing industry in exports and imports. The share of industrial goods in total exports was 27 % in 1977. The same year, share of investment goods in total imports was 39 % and share of intermediary goods was 58 %.

Despite the great strides taken toward industrialization from 1930 to 1977, it is evident that desired levels could not be attained, particularly in the production of investment and intermediary goods. From this point of view, planned development and import substitution strategies failed to attain the desired levels of industrialization.

With the increasing effects of external factors from 1974 on (the oil price shock, US economic embargo), the adverse developments caused the emergence of an acute economic crisis after 1977. Gross National Product which had grown by an average 7 % in the years 1963-1977, expanded by only 0.6 between 1978 and 1980.

January 24, 1980 up to now

After the balance-of-payments crisis in 1977/78, it became evident that mainly inward-looking policies could no longer be followed and priority would have to be accorded to achieving sustainable balance in the external account by placing emphasis on export performance, and on optimal resource allocation through the free play of competitive market forces.

The January 24 Measures of 1980 symbolize a radical break with the nation's long standing tradition of semi-statism. The so-called import substitution policy that Turkey had followed for a quarter of a century was abandoned and a sweeping stabilization program, reorienting the economy towards greater reliance on market mechanism, was adopted.

The program was indeed revolutionary, including a set of measures to eliminate the controlled prices and rates in the goods, money and foreign exchange markets. State owned companies were restructured in order to operate commercially, with the ultimate goal of privatization. A radical tax reform and a vigorous export incentive scheme were introduced. Moreover, a set of new incentives were designed to attract more foreign investment.

In short, the program was a decisive attempt to restructure the economy in accordance with the basic rules of liberalism.

The measures introduced did not exert an immediate impact. Yet, performance improved in the following years. The acceleration of real GNP growth to an annual average of 5 percent was facilitated by a vigorous and broadly based upturn in domestic demand. Output growth in all major sectors accelerated. Industrial production, in particular, was boosted by strong growth of output in manufacturing and by an acceleration in the production of electricity. Capacity utilization in industry as a whole is estimated to have increased further and might have reached an upper limit in several branches of manufacturing industry. The growth of the industrial sector was mainly due to production increases in manufacturing industry. In addition, the import of intermediary goods was no longer a problem as a result of liberal economic policies in effect, and this in turn ensured an improvement in the capacity utilization ratio of the manufacturing industry.

As a result of improved competitiveness (export incentives and subdued domestic demand) exports increased sharply during the 1980's. Even more remarkable results have been achieved in the case of industrial exports, which led to a radical change in the structure of exports. Previously Turkish exports were contained mainly to agricultural products. By the late 1980's exports were dominated by manufactured goods. While the share of manufactured products in total exports was 27 percent in 1978, it increased to 79 percent in 1990.

In earlier years, the markets of the industrialized countries absorbed a very large share of Turkish exports. During the 1980's, the share of industrialized countries in Turkey export declined and the share of the Middle East and North Africa rose considerably. Such sharp shifts in the orientation of Turkish exports in a way proved the viability and flexibility of Turkish export companies which adapted themselves easily to radical changes in world markets.

Today, Turkey ranks amongst the top industrially developing countries and very near to many developed ones. Turkey is heading for new roles both in Europe and in the Middle East. With vigorous and dynamic people, Turkey has achieved a real success story in a decade and proved able to reach the further stages of economic and social development in the years to come.

SOME ISSUES IN THE TRANSFER OF TECHNOLOGY

Ways of Transfer of Technology

Modern technologies are principally acquired by purchase or lease from the trans-national corporations since they have been the major developers of technology.

Technology is transferred in a variety of ways:

1. A national enterprise can purchase the machinery and other capital goods from foreign suppliers and contract with foreign technicians and consultants on the organization of industrial production and distribution. This is a direct transfer and an importing enterprise can exercise a large degree of control.
2. Technology transfer through indirect methods involves some loss of control of the enterprise. Direct investment by transnational corporations is such a case. Transnational corporations provide from a single source various elements of technology packaged with critical industrial inputs like capital and managerial skills. Often the entire package must be accepted so the importer of this technology has fewer options.
3. Technology is also acquired by means of licensing and other contractual arrangements with foreign enterprises. What is important here are the terms of the contract, and the degree of control left to the developing countries depends on its economic strength and negotiating skills.

These ways are no mutually exclusive and technology transfer usually takes place as a combination of them. A foreign subsidiary in a developing country may have a contract with parent company to buy technology, or the foreign supplier of the technology may have minority ownership in the enterprise that imports the technology. The crucial aspect as far as control of the technology is concerned is the degree to which the technology acquired is tied to purchases or limiting conditions, in other words, the degree of packing.

The Main Problems involved in the Transfer of Technology

The problems arising from technology transfers are many. Some of them can be summarized as follows:

1. **Foreign exchange costs:**
The direct foreign exchange costs of the transfer of technology to the developing countries (payments for patents, licensing, know-how, trade marks and consultancy services) reach high amounts. Imported technology is generally expensive and increases the external debt of developing countries.
2. **Limitations of the use of technology:**
The contracts to supply technology often involve "tied purchases of imports of raw materials and intermediate inputs, plant and equipment, and spare parts". The cost of those inputs raise the unit costs of the items produced, thereby limiting exports and in general restraining the growth of the economies of the developing countries.
3. **Restrictions on exports:**
These restrictions are many including total prohibition of exports of the products concerned or restrictions concerning the countries to which exports may be allowed.
4. **Excessive reliance on foreign skills:**
Many of these limitations impose excessive reliance on expatriate skilled personnel, thus discouraging the formation of local skill and research & development capabilities, thereby undermining the possibilities of self reliance in development.

Inadequacy of Imported Technologies

There are several reasons why imported technologies are inadequate for developing countries:

1. **They are too automated and capital intensive;**
Technologies developed in the industrialized world where the cost of labour was high sought to reduce that expense through automation. Developing countries in general, have serious problems of unemployment and under employment and need simpler technologies that will employ more personnel.
2. **They require highly qualified labour:**
Technologies of the industrialized countries generally take into account levels of labour expertise that exist in those countries, and which are generally superior to the levels found in developing countries.
3. **They use synthetics:**
In industrialized countries where raw materials are lacking, technologies are developed that use synthetic substitutes. Developing countries, on the other hand, generally have sufficient raw materials.

4. They are aimed at higher production:
The technologies of the major industrialized nations were created to care for production scales significantly greater than could be justified by the relatively smaller consumer markets in the developing countries. The importation of such technology results in expensive and inefficient production.
5. They cost too much:
The cost of imported technology tends to be high since the developing countries have to negotiate with transnational corporations that usually have more resources to back up their negotiating efforts and thus achieve better terms for themselves in the contracts agreed upon.
6. They create continued dependence:
The installation of large industrial complexes that use imported machinery assures a continuing dependence on imported parts (and inputs) and a continuing drain on the balance of payments.

But the disadvantages stated above should not result in the non-use of technology transfer possibilities. Rather the questions should be how to implement it well.

Above all, technology transfer policies should not undermine the importance of domestic technical change activities and local technological capabilities in the successful industrialization of the developing countries.

Technology from Turkey

In the last decade, Turkish industry has recognized that technical change is determinant to the development and business success. In addition to the rapid acceleration of exports of industrial products, considerable technical change has taken place particularly in manufacturing industry.

Until recently, discussions within the framework of technology and development relations concentrated on issues such as selection of appropriate technology, opening up the technology package and reducing the direct costs of technology. But the recent research has brought about that the factor behind the acceleration of exports of industrial products from developing countries is the achievement in technical change.

Accumulation of technical knowledge and skills enabled these countries to produce qualitatively good products at competitive prices. Besides, these countries did not intend to innovate brand new products and production process, but successfully transferred the most suitable technologies, adapted them in accordance with their particular needs, solved the technical problems caused by local conditions and improved the technology by practical experiences.

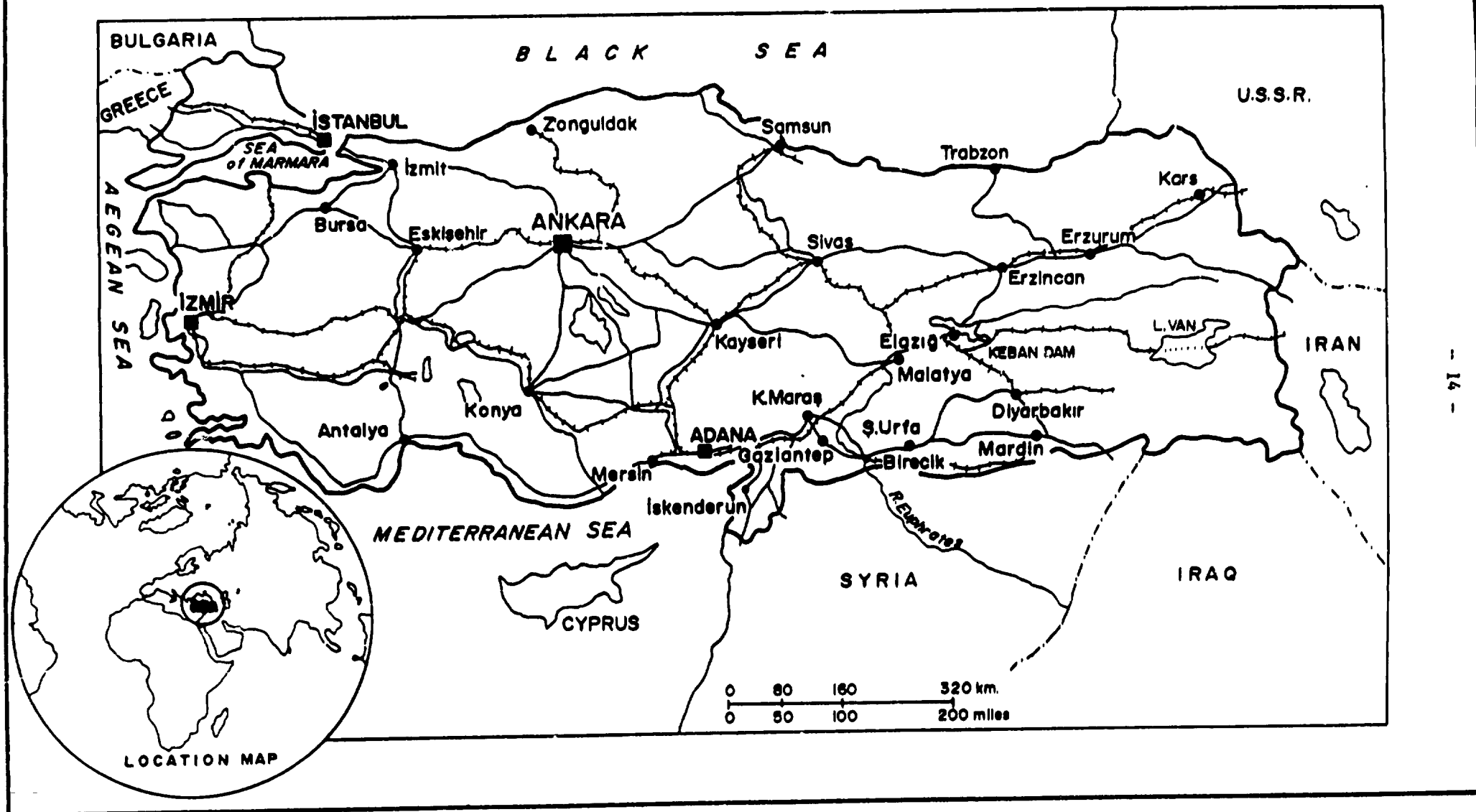
As a consequence of these technological efforts, Turkey succeeded to compete in the world markets of industrial products. Besides Turkish technology by itself became a marketable product.

Technological potential of Turkish industry is more meaningful for developing countries, since it is developed for rather smaller markets and uses more labor and natural raw materials in accordance with the country's available resources. It is not too sophisticated, thus requiring for less qualified personnel and limited expertise. Due to lower development costs and simplicity, Turkish technology is certainly easier to acquire. Moreover, Turkish companies will be more open to promote technical co-operation since they have just learned the lesson. They have very recently experienced the difficulties of technical problems and the advantages of co-operation in overcoming these problems.

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TURKEY AND HER NEIGHBOURS



The boundaries shown on this map do not imply official endorsement or acceptance by UNIDO .

CHAPTER I. FOOD PROCESSING

Despite all the uncertainty surrounding production and employment figures the food processing industry as a whole is one of the most important sectors of the Turkish industry alongside the textiles and leather industries, employing some three hundred thousand people and with an estimated export of about US\$ 1.2 billion in 1989.

The food processing industry accounted for about 10% of Turkish GNP in the late 1980s and for about 9% of Turkish export business. This industry represents about one fourth of all processing industry and more than half of the total output of the consumer goods subsector, though the trend is downward as a result of higher growth rates achieved in recent years in production and even more significantly in exports by other industries, in particular textiles and garments. Processed foodstuff reveals a good degree of diversification, and the industry produces for the large domestic market. Turkey with a population of 57 million, is a vast and varied market for the food and drink industry.

The scope of the food and drink industry includes all activities involved in the processing of agricultural products with the exclusion of farming. This industry transforms a growing share of agricultural production, and makes it available to the economy as a whole.

The main items of the food industry are meat and meat products, milk products, wheat flour and products, vegetable products and vegetable oils, tea, sugar processing and sugar products. Although foodstuff production and processing is largely directed towards the domestic market, a remarkable rise has been observed in the export of these products in recent years.

Turkey is self sufficient in the most products and, also generates a substantial export surplus from. Exports of unprocessed foodstuff are three to four times as greater as the corresponding imports, and in the case of processed products the export surplus is 40%. The most important markets for Turkish foodstuff exports in the '80s were the Middle East, members of the Common Market and other European countries, and U.S.A.

The share of the public sector in the food industry is almost limited to sugar, tea, meat and milk processing, and feed industry. Sugar industry, however, with its nearly 1.5 million tons of production in 1989. is totally owned and operated by the state.

Production in Food Processing Industry (1980-1990) (1000 tons)

Products	1980	1985	1989	1990 (Estimate)
Meat	442	443	491	506
Pasteurized and UHT Milk	70	97	160	186
Cheese	167	175	209	218
Tomato paste	53	150	290	250
Flour - Semolina	7196	8016	8690	8228
Macaroni	180	217	277	292
Biscuits	152	203	253	263
Frozen food	3	8	45	53
Fruit juice	36	41	58	62
Margarine	267	350	544	583
Olive Oil	70	80	55	50
Sunflower Oil	145	232	366	424
Refined cotton oil	18	22	25	18
Confectionery	100	105	108	115

Source : SPO, SIS.

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1

ABANT MAKİNA SANAYİ

Soğanpazarı Cad. No 22 Adapazarı - SAKARYA
Tel: (90) 261-44591 Fax: (90) 261-44590

Name of Company :	ABANT MACHINERY INDUSTRY CO.
Year of establishment and status:	1980. Private
Main products :	Vacuum packaging machines, butter packaging machines, Balkan cheese producing equipment, milk pumps and automatic filling machines
Production capacity :	n.a.
Number of employees :	20
Type of technology :	Adapted technology
Methods of acquirement :	Purchase of machinery, copying
Source of technology :	Turkey
Techn. improvement activities :	In-house R&D.. cooperation with other Turkish companies
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture, consultancy.

2

AKFA ŞİRKETLER GRUBU

Kantarcılar Sabunhane Sok. No:26/28 Akfa han, Eminönü- ISTANBUL
Tel: (90) 1-5118080 (7 lines) Tlx: 23615 Akfa tr Fax: (90) 1-5284697

Name of Company :	AKFA GROUP OF COMPANIES
Year of establishment and status :	1951. Private
Main products :	Tomato paste, tea
Production capacity :	80.000 tons of tomato pastes in 6 factories and 35.000 tons of processed tea in 10 factories
Number of employees :	-
Percentage of exports :	75 % of tomato paste
Main countries of export :	Japan, U.S.A., U.K., Tunisia
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, design and development
Source of technology :	Various foreign countries and Turkey
Techn. improvement activities :	Coop. with foreign companies, in-house R & D
Techn. transfer implementations :	None
Proposals on cooperation :	-

3

AKSEL MAKİNA SANAYİ VE TİCARET

Sarıyahi Mah. Sultan Selim Cad. No 183, 4. Levent - ISTANBUL
Tel: (90) 1-1785945 Fax: (90) 1-1785945

Name of Company :	AKSEL MACHINERY INDUSTRY AND TRADE CO.
Year of establishment and status:	1980. Private
Main products :	Vacuum Packaging machines
Production capacity :	30-35 machines a year.
Number of employees :	4
Percentage of exports :	80 %
Main countries of export :	Arab countries, U.K.
Type of technology :	Advanced Technology
Methods of acquirement :	Designed and developed in the firm
Source of technology :	Firm's own sources
Techn. improvement activities :	In-house R&D
Techn. transfer implementations :	Sale of machinery
Proposals on cooperation :	Provision of machinery and equipment

4

ANTALYA YAĞ SANAYİİ A.Ş.

Namık Kemal Bulvarı, Fikri Erten Cad. No 10. ANTALYA
Tel: (90) 31-152500 (4 lines) Tlx: 56183 Fax: (90) 31-156244

Name of Company :	ANTALYA OIL MANUFACTURING INC.
Year of establishment and status:	- Private
Main products :	Refined & vintorized sunflower oil, cotton oil, cotton and sunflower extraction.
Production capacity :	90.000 tons of cotton seed per year
Number of employees :	227
Percentage of exports :	3-4 %
Main countries of export :	Germany, U.S.A.
Type of technology :	Traditional technology
Methods of acquirement :	Purchase of machinery and equipment
Source of technology :	Germany, U.S.A., Sweden
Techn. improvement activities :	Improvement through on the job training
Techn. transfer implemen'tations :	None
Proposals on cooperation :	Feasibility studies, project appraisal, consultancy

5

ANKARA TAVUKÇULUK ARAŞTIRMA ENSTİTÜSÜ

İstanbul Caddesi, 6. km. PK.47 Yenimahalle, ANKARA
Tel: (90) 4-3156035, 3445990 Fax: (90) 4-3445991

Name of Institute:	ANKARA POULTRY RESEARCH INSTITUTE
Year of establishment and status:	1939, Public
Main products :	Eggs, Stud-farming in poultry, Rabbit raising
Production capacity :	30.000 stud-hen, 500 stud rabbit
Number of employees :	151
Type of technology :	Own technology
Methods of acquirement :	Developed by the institute
Source of technology :	Turkey
Techn. improvement activities :	In-house R&D, training, cooperation with other firms, universities and research institutions
Techn. transfer implementations :	None
Proposals on cooperation :	Technical consultancy, on the job training services.

6

BALIKSAN BALIK İŞLEME SANAYİİ TİCARET A.Ş.

Gerze-Sinop karayolu 5. km. Gerze - SİNOP
Tel: (90) 3768-1400

Name of company :	BALIKSAN FISH PROCESSING INDUSTRY & TRADE INC.
Year of establishment and status:	1976, Private
Main products :	Fish meal and fish oil
Production capacity :	60.000 tons of anchovy processing capacity
Number of employees :	146
Type of technology :	Traditional technology
Methods of acquirement :	Purchase of machinery, self design and development
Source of technology :	Turkey, Firm's own technical sources
Techn. improvement activities :	In-house R & D
Techn. transfer implementations :	None
Proposals on cooperation :	On the job training, feasibility study, consultancy

7 **BESAŞ BURSA EKMEK VE BESİN SANAYİ TİCARET A.Ş.**

Organize Sanayi Bölgesi, 16159 Nilüfer - BURSA

Tel: (90) 24-431410, 431411

Name of Company :	BESAŞ-BURSA BREAD AND FOOD INDUSTRY INC.
Year of establishment and status :	1979, Private (A Company of Bursa Municipality)
Main products :	Bread and bakery
Production capacity :	35.000.000 breads per year
Number of employees :	90
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery
Source of technology :	Germany
Techn. improvement activities :	Cooperation with foreign companies
Techn. transfer implementations :	None
Proposals on cooperation :	On-the-job training; provision of expertise and know-how

8

BOLU SÜT ÜRÜNLERİ A.Ş.

E-5 Karayolu, Civrili Köyü Girişi, BOLU

Tel: (90) 461 - 13775

Name of Company :	BOLU DAIRY PRODUCTS INC.
Year of establishment and status:	- . Private
Main products :	Yogurt, butter, Balkan cheese
Production capacity :	30.000 liters of milk processing capacity
Number of employees :	30
Type of technology :	Adapted technology
Methods of acquirement :	Purchase of machinery
Source of technology :	Turkey
Techn. improvement activities :	In-house R & D activities, training
Techn. transfer implementations :	None
Proposals on cooperation :	On the job training

9

ÇAĞDAŞ MAKİNA SANAYİİ

Talatpaşa Cad. Hayran Sok. No: 6, Gültepe - ISTANBUL

Tel: (90) 1-1694037

Name of Company :	ÇAĞDAŞ MACHINERY INDUSTRY CO.
Year of establishment and status:	1984, Private
Main products :	Shrink packaging machines for foodstuff
Production capacity :	24 machines per year
Number of employees :	3
Type of technology :	Adapted technology
Methods of acquirement :	Adaptation and development
Source of technology :	Turkey
Techn. improvement activities :	In-house research and development
Techn. transfer implementations :	None
Proposals on cooperation :	Provision of machinery, equipment and supplies

10

ÇAY İŞLETMELERİ GENEL MÜDÜRLÜĞÜ

Ekrem Orhon Mahallesi - RİZE

Tel: (90) 054-14180 (30 lines) Tlx: 83306 RCYKTR Fax: (90) 054-15195

Name of Company :	GENERAL DIRECTORATE OF TEA ENTERPRISES
Year of establishment and status :	- . Public (State Economic Enterprise)
Main products :	Black and green tea (in bulk and packaged)
Production capacity :	6070 tonnes tea processing capacity per day
Number of employees :	29.430 during the campaign (May-October) 7.960 during off-season (November-April)
Percentage of exports :	24.4 %
Main countries of export :	U.S.S.R., U.S.A., U.K., The Netherlands, Germany and France
Type of technology :	Adapted and developed within the Firm.
Methods of acquirement :	Purchase of machinery
Source of technology :	Turkey, Germany, U.K., India
Techn. improvement activities :	In-house R&D; technical training; cooperation with universities and TÜBİTAK
Techn. transfer implementations :	None
Proposals on cooperation :	Feasibility studies, project appraisal, training and technical consultancy

11

DAMLA SANAYİ VE TİCARET A.Ş.

Hekimsuyu Cad. No:13 Küçükköy, 34080 Gaziosmanpaşa - ISTANBUL

Tel: (90) 1-5380949, 50 Fax: (90) 1-5380840

Name of Company :	DAMLA INDUSTRY AND TRADE INC.
Year of establishment and status :	- . Private
Main products :	Milk cream machines, Complete installation of yogurt and cheese making facilities
Production capacity :	70 installations per year
Number of employees :	90
Percentage of exports :	30 %
Main countries of export :	Iran, Iraq, Syria
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, production under licence
Source of technology :	The Netherlands, Sweden
Techn. improvement activities :	Technical cooperation with foreign companies
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture, turnkey projects, provision of know-how and licence; provision of machinery and equipment (Complete installation of dairies)

12

DEMANTAŞ DEMİRCİOĞLU ENTEGRE AMBALAJ SAN. TİC. A.Ş.

Yoğurtçu Şükrü Sokak 49/1 Kadıköy - ISTANBUL

Tel: (90) 1-3454051 Tlx: 29177 Hidr tr Fax: (90) 1- 3386033

Name of Company:	DEMANTAŞ DEMİRCİOĞLU INTEGRATED PACKAGING INDUSTRY AND TRADE INC.
Year of establishment and status:	1980, Private
Main products:	All kinds of packages and packaging supplies made of wood, pallets, wired crates, etc.
Number of employees:	210
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery and know-how
Source of technology:	U.S.A.
Techn. improvement activities:	Technical training, cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture

13

DEREN KİMYA SANAYİ VE TİCARET LTD.

Kuşdili Cad. Uğursal İş Merkezi No: 53 K.2 Kadıköy-İSTANBUL
Tel: (90) 1-3493709 Fax: (90) 1-3370735

Name of company : DEREN CHEMICALS INDUSTRY AND TRADE LTD.
Year of establishment and status : 1990, Private
Main products : Water treatment units, chemical agents preventing corrosion and calcification
Production capacity : 30 tons per month
Number of employees : 7
Type of technology : Adapted technology
Methods of acquirement : Adaptation and improvement
Source of technology : Firm's own sources
Techn. improvement activities : In-house R & D, technical training, cooperation with foreign companies
Techn. transfer implementations : None
Proposals on cooperation : Joint venture; feasibility studies and project appraisal; technical consultancy and training; turnkey installation of drinking or industrial water treatment units

14

DOL-MAK DOLUM MAKİNALARI A.Ş.

Kışla Caddesi, İncirli Sokak No:15, Rami - İSTANBUL
Tel: (90) 1-5770621, 5766644 Fax: (90) 1-5778744

Name of Company : DOLMAK FILLING MACHINES INC.
Year of establishment and status: 1976, Private
Main products : Stainless steel filling machines, conveyors, mixers, processing reactors, filters
Production capacity : 300 pieces per year
Number of employees : 15
Percentage of exports : 5 %
Main countries of export : Libya, Syria.
Type of technology : Adapted technology
Methods of acquirement : Purchase of machinery
Source of technology : Turkey
Techn. improvement activities : In-house R&D activities
Techn. transfer implementations : Sale of filling machines and filters
Proposals on cooperation : Turn-key installation of facilities, joint venture, provision of machinery and equipment

15

EKMASAN A.Ş.

Ulu Caddesi No: 42/A, Osmangazi - BURSA
Tel: (90) 24-145931,147363 Tlx: 32219 Ekm tr Fax: (90) 24-156047

Name of company : EKMASAN INC.
Year of establishment and status: 1983, Private
Main products : Rotary rotary baking ovens (four different types)
Production capacity : 400 Ovens
Number of employees : 120
Percentage of exports : 12 %
Main countries of export : Saudi Arabia, Libya, Yugoslavia, Hungary
Type of technology : Adapted and developed in company
Methods of acquirement : Purchase of machinery
Source of technology : In-firm sources
Techn. improvement activities : R&D Activities, cooperation with foreign companies
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, feasibility study, project appraisal, provision of machinery and equipment

16

ERBAK-ULUDAĞ MEŞRUBAT VE GIDA SANAYİİ A.Ş.

Yeni Yalova yolu, 3. km. Osmangazi - BURSA
Tel: (90) 24-130900 Tlx: 32100 Nuri Tr Fax: (90) 24-149580

Name of Company :	ERBAK ULUDAG SOFT DRINKS AND FOOD MANUFACTURING INC.
Year of establishment and status:	1930. Private
Main products :	Carbonated soft drinks, fruit juices, mineral water
Production capacity :	2.500 bottles per hour
Number of employees :	750 during season, 400 during off-season
Percentage of exports :	n.a.
Main countries of export :	Middle East countries, Yugoslavia
Type of technology :	Adapted and improved technology
Methods of acquirement :	Purchase of machinery, adaptation and development
Source of technology :	EC countries
Techn. improvement activities :	In-house R & D, technical training, cooperation with foreign companies and universities
Techn. transfer implementations :	Sale of licence to a company in the Netherlands
Proposals on cooperation :	Provision of licence, know-how, consultancy and training on production techniques and quality control of non-alcoholic beverages

17

ET VE BALIK KURUMU GENEL MÜDÜRLÜĞÜ

Konya Devlet Yolu, Akköprü - ANKARA
Tel: (90) 4-3411100 Tlx: 44502 Etba tr Fax: (90) 4-3412212

Name of Company :	GENERAL DIRECTORATE OF MEAT AND FISH ESTABLISHMENTS
Year of establishment and status :	1952. Public [37] (State Economic Enterprise)
Main products :	Red and white fresh meat, fish, canned meat
Production capacity :	Red meat : 300.000 tons per year Poultry : 10.800 tons per year Fish products : 700 tons per year Canned meat : 6.000.000 cans per year
Number of employees :	5.733 including 160 veterinary doctors
Type of technology :	Traditional technology; Adapted and improved
Methods of acquirement :	Purchase of machinery; adaptation and development
Source of technology :	Turkey; Germany and Enterprise's own technical capacity
Techn. improvement activities :	In-house R & D, technical training
Techn. transfer implementations :	None
Proposals on cooperation :	Project appraisal and feasibility study, technical consultancy and provision of know how in meat processing and cold storage

18

ETİ GIDA SANAYİ VE TİCARET A.Ş.

İnönü Caddesi No:122 - ESKİŞEHİR

Tel: (90) 22153440 Tlx: 35145 Fax: (90) 22-53949

Name of Company : ETİ FOOD INDUSTRY AND TRADE INC.
Year of establishment and status : 1961, Private [307]
Main products : Biscuits, crackers, wafers, cakes, diet biscuits etc.
Production capacity : -
Number of employees : 1.000
Percentage of exports : 3-4 %
Main countries of export : Middle East countries
Type of technology : Traditional technology, adapted and improved
Methods of acquirement : Purchase of machinery, adaptation and development
Source of technology : -
Techn. improvement activities : In-house R&D; technical training
Techn. transfer implementations : None
Proposals on cooperation : Joint venture; turnkey projects; technical consultancy and engineering services; provision of know-how and licence; direct foreign investment, provision of machines for use in production of biscuits, cakes and crackers

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ETİ MAKİNA SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi - ESKİŞEHİR

Tel: (90) 22-160031 Fax: (90) 22-153949

Name of Company : ETİ MACHINES MANUFACTURING AND TRADING INC.
Year of establishment and status : 1971, Private
Main products : Machinery for biscuit and waffle plants; various machines for food (bakery & pastry) industry
Production capacity : -
Number of employees : -
Type of technology : Adapted technology
Methods of acquirement : Adaptation and development
Source of technology : Company's own technical capacity
Techn. improvement activities : In-house R & D; cooperation with Turkish companies
Techn. transfer implementations : Sale of machinery and equipment
Proposals on cooperation : Turnkey biscuit plants; turnkey waffle plants; on-the-job training in assembly, operation and maintenance of food manufacturing machinery

20

FİSAN FİSTİK SANAYİ A.Ş.

Yolçatu Mevkii, Toprakkale, Osmaniye - ADANA

Tel: (90) 731-11886 Tlx: 6269 Fsan tr

Name of company : FİSAN PEANUTS INDUSTRY INC.
Year of establishment and status : 1983, Private
Main products : Oil /dry roasted peanuts, crunchy peanut butter with cocoa, chocolate coated peanuts
Production capacity : 4.800 tons of unprocessed peanuts
Number of employees : 75
Type of technology : Adapted technology
Methods of acquirement : Purchase of machinery, adaptation and development
Source of technology : Germany, Turkey
Techn. improvement activities : In-house development, coop with foreign companies
Techn. transfer implementations : None
Proposals on cooperation : Joint venture

21

FRUKO TAMEK MEYVE SULARI SANAYİ A.Ş.

Yeni Londra Asfaltı, Merter, Bakırköy - İSTANBUL
Tel: (90) 1-5534520 Tlx: 28834 Fax: (90) 1-5540572

Name of Company : FRUKO-TAMEK FRUIT JUICES INDYSTRY INC.
Year of establishment and status : 1963, Private (489)
Main products : Carbonated soft drinks, fruit juices
Production capacity : 250 million liters per year
Number of employees : 236
Type of technology : Advanced technology
Methods of acquirement : Purchase of machinery
Source of technology : Germany, Italy, U.S.A.
Techn. improvement activities : In-house R & D; technical training; cooperation with foreign companies
Techn. transfer implementations : None
Proposals on cooperation : Technical consultancy, provision of know-how, training on non-alcoholic beverages production, marketing and maintenance of machines
Facilities available : Classroom, cafeteria, transportation

22

GIDA MADDELERİ İMALAT VE SATIŞ A.Ş.

Bostanlar Yolu No: 40, Kartal Maltepe - İSTANBUL
Tel: (90) 1-3520291 Tlx: 36668 Fax: (90) 1-3710548

Name of Company : FOOD PRODUCTS MANUFACTURE AND SALES INC.
Year of establishment and status : 1975, Private
Main products : Ready meals
Production capacity : 1.800.000 Table d'hote; 450 tons of yogurt per year
Number of employees : 82
Type of technology : Traditional technology
Methods of acquirement : Purchase of machinery & equipment
Source of technology : Turkey, Company's own technical capacity
Techn. improvement activities : In-house R & D; cooperation with foreign companies and universities & research institutes
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, technical consultancy and training; provision of expertise

23

GIDA TEKNOLOJİSİ ARAŞTIRMA ENSTİTÜSÜ

Eski Mudanya Yolu Üzeri, Rumi Caddesi, Nilüfer - BURSA
Tel: (90) 24-464720 Fax: (90) 24-461941

Name of Institution: FOOD TECHNOLOGY RESEARCH INSTITUTE
Year of establishment and status : 1961, Public
Main services : Research, development and training in food technology
Type of technology : Traditional + adapted + advanced technologies
Methods of acquirement : Purchase of equipment, adaptation and development
Source of technology : Various countries, Institute's own technical capacity
Techn. improvement activities : In-house R & D; technical and vocational training; cooperation with foreign and Turkish companies; cooperation with universities and research institutes
Techn. transfer implementations : Transfer of know how
Proposals on cooperation : Provision of know-how, technical expertise; consultancy and joint research projects on frozen foods, canned foods
Facilities available : Classrooms, R & D labs, accomodation, transportation

24

ILERİ MAKİNA SANAYİ VE TİCARET LTD.

Keresteciler Sitesi, Gürdalı Sok No: 4, 34010 Merter - İSTANBUL
Tel: (90) 1-5551583 - 5550821 Fax: (90) 1-5021401

Name of Company : ILERI MACHINES MANUFACTURING AND TRADING LTD.
Year of establishment and status: 1984 , Private
Main products : Shrink packaging & wrapping machines
Production capacity : 100-120 machines per year
Number of employees : 12
Type of technology : Designed and developed in firm
Methods of acquirement : Copying
Source of technology : Turkey
Techn. improvement activities : In-house R&D activities, technical training
Techn. transfer implementations : None
Proposals on cooperation : Provision of machinery, technical consultancy, feasibility studies, project appraisal, joint venture

25

İNOKSAN MUTFAK SANAYİ VE TİCARET A.Ş.

Fevzi Çakmak Cad. 39/B Osmangazi - BURSA
Tel: (90) 24-206010 (5 lines) Tlx: 32208 Inos Tr Fax: (90) 24-220206

Name of Company : INOKSAN STEELWARE MANUFACTURING AND TRADING INC.
Year of establishment and status: 1980, Private
Main products : Industry type kitchenwares, ovens, dishwashers, food preparation and cooking units.
Production capacity : 60 tons per month
Number of employees : 260
Percentage of exports : 10 %
Main countries of export : Saudi Arabia, Greece, Austria, Germany, U.S.S.R.
Type of technology : Adapted technology
Methods of acquirement : Adaptation and improvement
Source of technology : Firm's own sources and EC countries
Techn. improvement activities : In-house R & D, technical and vocational training and cooperation with foreign companies
Techn. transfer implementations : None
Proposals on cooperation : Feasibility studies, project design and appraisal, turn-key installation of industry-type kitchens, freezers and laundries.

26

KARSUSAN KARADENİZ SU ÜRÜNLERİ SANAYİ A.Ş

Sıramağazalar 96/2 - TRABZON
Tel: (90) 031-14144, 13769 Tlx: 83133 Tris tr

Name of Company : BLACKSEA SEA PRODUCTS INDUSTRY INC.
Year of establishment and status: 1976, Private
Main products : Canned anchovy fillets, fish meal, fish oil
Production capacity : Anchovy fillets: 800 tons; fish meal: 3.000 tons and fish oil: 2.000 tons per year
Number of employees : -
Percentage of exports : -
Main countries of export : Germany, Italy
Type of technology : Traditional technology
Methods of acquirement : Purchase of machinery, adaptation
Source of technology : Turkey, Company's own technical capacity
Techn. improvement activities : In-house R & D, technical and vocational training
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, technical consultancy

27

KAYALAR SANAYİ VE TİCARET KOLL. ŞTİ
Gümüşsuyu Caddesi, Litros Yolu, No 20, İSTANBUL
Tel: (90)1-5679489 Tlx: 23368 Fax: (90) 1-5679490

Name of Company : KAYALAR INDUSTRY AND TRADE CO.
Year of establishment and status: - . Private
Main products : Stainless Steel and plastic kitchenware
Production capacity : Plastics: 1.800 tonnes. Steel products: 750 tonnes
Number of employees : 73
Percentage of exports : -
Main countries of export : Poland, Arab countries
Type of technology : Adapted technology
Methods of acquirement : Designed and developed in the company
Source of technology : Company's own technical capacity
Techn. improvement activities : Research and development activities, training
Techn. transfer implementations : Sale of equipment.
Proposals on cooperation : Joint venture; feasibility study and project appraisal; provision of machinery and equipment

28

KEMSAN KAYSERİ ET ÜRÜNLERİ VE MARGARİN SANAYİ A.Ş.
PK. 48 38060 - KAYSERİ
Tel: (90) 35-183548 Fax:(90) 35-183548

Name of company : KEMSAN KAYSERİ MEAT PRODUCTS AND MARGARINE INDUSTRY INC.
Year of establishment and status: 1976, Private
Main products : Margarine, meat-bone flour, gelatine, industrial oil
Production capacity : 18.500 tons per year
Number of employees : 150
Type of technology : Adapted technology
Methods of acquirement : Purchase of machinery and adaptation
Source of technology : Germany, Turkey
Techn. improvement activities : In-house R & D; technical training
Techn. transfer implementations : None
Proposals on cooperation : On-the-job training; project appraisal, consultancy

29

KEREVİTAŞ GIDA SANAYİ VE TİCARET A.Ş
Halaskargazi Cad. No 367/3 80260 Şişli - İSTANBUL
Tel: (90) 1-5502550 (10 lines) Tlx: 28673 remz tr Fax: (90) 1-5501166

Name of Company : KEREVITAS FOOD INDUSTRY AND TRADE INC.
Year of establishment and status: 1972, Private [342]
Main products : Frozen sea food, frozen snail products, frozen fruits and vegetables
Production capacity : 10.000 tons per year
Number of employees : 400
Percentage of exports : 90 %
Main countries of export : European Countries, U.S.A., Japan
Type of technology : Adapted and improved in the firm
Methods of acquirement : Purchase of machinery
Source of technology : Turkey and European countries
Techn. improvement activities : In house R&D activities, technical cooperation with foreign companies
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, technical consultancy

30

KULP MAKİNE

İ.M.E.S. Sitesi C Blok 304 Sok. No: 11 Dudullu, Ümraniye - İSTANBUL
Tel: (90) 1-3643458 Fax: (90) 1-3680075

Name of Company : KULP MACHINERY CO.
Year of establishment and status: 1984. Private
Main products : Filling machines, Conveyor bands, mixers
Production capacity : 60 filling machines per year
Number of employees : 12
Percentage of exports : 8 %
Main countries of export : Tunj sia, Greece
Type of technology : Advanced technology
Methods of acquirement : Designed and developed in the Company
Source of technology : In-firm sources
Techn. improvement activities : In-house R&D activities, cooperation with technical universities and TUBITAK
Techn. transfer implementations : Sale of machinery
Proposals on cooperation : Provision of machinery, technical consultancy

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MARET MARMARA BESİCİLİK VE ET SANAYİ ve TİCARET A.Ş.

Tepeören Köyü, 81474 Pendik - İSTANBUL
Tel:(90) 1835-1100 (7 lines) Tlx: 34157 Mrtm tr Fax:(90) 1835-1077

Name of Company : MARET MARMARA STOCK BREEDING AND MEAT INDUSTRY and TRADE INC.
Year of establishment and status : 1987. Private [185]
Main products : Meat, meat product: sausages, salami etc.
Production capacity : 20.000 tons carcasse per year
Number of employees : 450
Percentage of exports : None
Main countries of export : -
Type of technology : Advanced technology
Methods of acquirement : Purchase of machinery
Source of technology : In-firm sources
Techn. improvement activities : In-house R & D
Techn. transfer implementations : None
Proposals on cooperation : Turnkey projects; technical consultancy on meat processing; provision of expertise
Facilities available : Cafeteria, transportation

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MARMARA YAĞ SANAYİ LTD.

Organize Sanayi Bölgesi, Mavi Cad. No: 21, 16159 Nilüfer - BURSA
Tel: (90) 24431455, 431456

Name of company : MARMARA OIL MANUFACTURING LTD.
Year of establishment and status: 1969. Private
Main products : Sunflower oil
Production capacity : 25.000 tons per year
Number of employees : 35
Type of technology : Traditional technology
Methods of acquirement : Purchase of machinery
Source of technology : Italy
Techn. improvement activities : Cooperation with foreign companies, training
Techn. transfer implementations : None
Proposals on cooperation : On the job training, project appraisal
Facilities Available: Classroom, cafeteria, transportation

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MERSU SU ÜRÜNLERİ SANAYİ VE TİCARET A.Ş.

Halaskargazi Cad. No 367/2 Şişli - İSTANBUL
Tel: (90) 1-5504416 Tlx: 28930 kere tr Fax: (90) 1-5502560

Name of Company :	MERSU SEA FOOD INDUSTRY AND TRADE INC.
Year of Establishment and status:	1974, Private
Main products :	Frozen fruits, vegetables, sea foods, snail products
Production capacity :	15.000 tons per year
Number of employees :	800
Percentage of exports :	90 %
Main countries of export :	European countries, U.S.A., Japan
Type of technology :	Adapted and improved in the firm
Methods of acquirement :	Purchase of machinery
Source of technology :	Turkey and European countries
Techn. improvement activities :	In-house R&D activities and technical cooperation with foreign companies
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture, technical consultancy

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NARENCİYE ARAŞTIRMA ENSTİTÜSÜ

Demircikara Mah. Paşakavakları Cad. 1434. Sokak, No 23 - ANTALYA
Tel: (90) 31-216797, 216948 Fax: (90) 31-211512

Name of Institution:	CITRUS FRUITS RESEARCH INSTITUTE
Year of establishment and status:	-, Public
Main products :	Orange juice, jams, syrup, concentrates and essences
Production capacity :	Juice: 2.5 tons per day, Jam: 25 tonnes per year, Concentrates: 1 ton/day, Syrup and essence: variable
Number of employees :	8 (annual average)
Type of technology :	Adapted and developed in the Institute
Methods of acquirement :	Purchase of machinery
Source of technology :	Turkey and Israel (through FAO)
Techn. improvement activities :	R&D activities, technical and vocational training, cooperation with universities
Techn. transfer implementations :	None
Proposals on cooperation :	Technical consultancy, training services on orange juice and jam producing technologies.

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ÖĞÜT ANTEP FISTIĞI ENTEGRE TESİSLERİ

E-24 Karayolu, Sanayi Sitesi Karşısı No 24, 27700-Nizip, GAZİANTEP
Tel: (90) 868-11261 Tlx: 69638 Fax: (90) 1-868-11687

Name of Company :	ÖĞÜT PISTACHIO INTEGRATED ESTABLISHMENT
Year of establishment and status:	-, Private
Main products :	Pistachio: green, peeled, salted, roasted etc.
Production capacity :	3.000 tonnes per year
Number of employees :	35
Percentage of exports :	25 %
Main countries of export :	Germany, Spain
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, Improvement at the firm
Source of technology :	United Kingdom, Turkey
Techn. improvement activities :	In-house R&D activities, Cooperation with higher educational institutions and TÜBİTAK
Techn. transfer implementations :	None
Proposals on cooperation :	Technical consultancy on pistachio processing

36

ÖNENTAŞ GIDA SANAYİ A.Ş.

İzmir Yolu 4. Km. ÇANAKKALE

Tel: (90) 196-15353 Tlx: 58193 onpa tr Fax: (90) 196-12469

Name of Company :	ÖNENTAŞ FOOD INDUSTRY INC. (DARDANEL)
Year of establishment and status:	- . Private
Main products :	Frozen fruits and vegetables, sea foods, canned food
Production capacity :	200 tons of frozen food and 40.000 canned food per day
Number of employees :	800-1.000
Percentage of exports :	85 %
Main countries of export :	All European countries and Japan
Type of technology :	Adapted technology
Methods of acquirement :	Purchase of machinery
Source of technology :	Italy, Spain and Firm's own technological sources
Techn. improvement activities :	In-house R & D, coop. with foreign companies, universities and research institutes
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture

37

ÖNERSAN MAKİNE

Kışla Cad. 3. Emintaş Sanayi Sitesi No 35 Topçular - İSTANBUL

Tel: (90) 1-5670479, 5446276 Tlx: 23489 Dusi tr Fax: (90) 1-5762359

Name of Company :	ÖNERSAN MACHINERY CO.
Year of establishment and status:	1964, Private
Main products :	Shrink packaging and wrapping machines
Production capacity :	150 machines per year
Number of employees :	10
Percentage of exports :	30 %
Main countries of export :	Italy, France, Germany, Syria, Jordan, Iraq
Type of technology :	Advanced Technology
Methods of acquirement :	Purchase of machinery and improvement
Source of technology :	Turkey
Techn. improvement activities :	In-house R&D activities and technical cooperation with foreign companies
Techn. transfer implementations :	Sale of machinery
Proposals on cooperation :	Joint venture, provision of machinery and equipment

38

ÖZARTAŞ MAKİNA SANAYİ LTD.

Çamlık Caddesi No: 29, Silahtar - İSTANBUL

Tel: (90) 1-1556182 Tlx: 24030 özrt tr Fax: (90) 1-1550768

Name of Company :	ÖZARTAŞ PACKAGING MACHINERY INDUSTRY INC.
Year of establishment and status :	19, Private
Main products :	Packaging machines for dry and liquid foodstuff
Production capacity :	120 machines per year
Number of employees :	50
Percentage of exports :	10 %
Main countries of export :	Iran, Syria, Pakistan, Saudi Arabia,
Type of technology :	Adapted and developed technology
Methods of acquirement :	Purchase of machinery, adaptation and development
Source of technology :	Italy, Company's own technical capacity
Techn. improvement activities :	In-house R & D, cooperation with Turkish companies
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture, provision of thermo-forming machines and bags filling machines and their know-how

39

ÖZKÖSEOĞLU ISI SANAYİ VE TİCARET A.Ş.

2.Taşocağı Caddesi No: 4 80300 Mecidiyeköy - İSTANBUL

Tel: (90) 1-1676698, 1672654 Tlx: 27103 Özko Tr Fax: (90) 1-1749163

Name of Company :	ÖZKÖSEOĞLU HEAT INDUSTRY AND TRADE INC.
Year of establishment and status:	- , Private
Main products :	Bread ovens, pastry and pizza ovens, dough kneading machines
Production capacity :	650 Bread ovens per year, 1250 dough kneading machines per year, 500 pastry ovens per year
Number of employees :	342
Percentage of exports :	-
Main countries of export :	Middle East Countries, Greece, Germany, U.K., Spain, Holland, Libya, South Africa, Kenya
Type of technology :	Traditional technology
Methods of acquirement :	Production under licence and improvement
Source of technology :	Germany
Techn. improvement activities :	In-house R&D activities; technical cooperation with foreign companies
Techn. transfer implementations :	Sale of bread ovens
Proposals on cooperation :	Provision of bread ovens, pastry and pizza ovens, dough kneading machines and supplies

40

ÖZMAK ÖZBABACAN İMALAT SANAYİ

Çetin Sokak, No 10, Seyrantepe, 4. Levent - İSTANBUL

Tel: (90) 1-1797243

Name of Company :	ÖZMAK ÖZBABACAN MANUFACTURING CO.
Year of establishment and status:	1979, Private
Main products :	Vacuum packaging machines, cutting cylinder
Production capacity :	48-50 machines per year
Number of employees :	6
Percentage of exports :	15 %
Main countries of export :	
Type of technology :	Adapted technology
Methods of acquirement :	Self design and development
Source of technology :	Company's own technical sources
Techn. improvement activities :	In-house Research and development activities
Techn. transfer implementations :	Sale of machinery
Proposals on cooperation :	Joint venture, provision of machinery and equipment

41

PAK-FORM AMBALAJ MAKİNE SANAYİ TİCARET LTD.

Ibrahimağa Cad. 6/3, Bayrampaşa İSTANBUL

Tel: (90) 1-5658648, 5658896 Fax: (90) 1-5760377

Name of Company :	PAK-FORM PACKAGING MACHINES MANUFACTURING AND TRADING LTD.
Year of establishment and status:	1988, Private
Main products :	Fully Automatic Packaging Machines
Production capacity :	20 machines per year
Number of employees :	30
Percentage of exports :	-
Main countries of export :	U.S.S.R.
Type of technology :	Advanced technology
Methods of acquirement :	Designed and developed in the firm
Source of technology :	In-firm sources
Techn. improvement activities :	In-house R&D, technical coop. with foreign companies
Techn. transfer implementations :	Sale of machinery
Proposals on cooperation :	Provision of machinery, equipment and supplies

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PAKSAM MAKİNA SANAYİ LTD.

Mahmut Şevket Paşa Mah. Eren Sokak. No: 10 Kasımpaşa - İSTANBUL
Tel: (90) 1-1533036 Tlx: 28335 Opu tr. Fax: (90) 1-1495099

Name of Company : PAKSAM MACHINERY INDUSTRY LTD.
Year of establishment and status: 1986. Private
Main products : Fully automatic bag filling & packaging machines
Production capacity : 24 machines per year
Number of employees : 15
Percentage of exports : n.a.
Main countries of export : Yugoslavia
Type of technology : Adapted and improved in the firm
Methods of acquirement : Adaptation and improvement
Source of technology : Company's own technical sources
Techn. improvement activities : R & D, technical training, cooperation with other Turkish companies.
Techn. transfer implementations : Sale of machinery
Proposals on cooperation : Joint venture, turnkey installation, feasibility studies and project appraisal, technical consultancy, provision of machinery and equipment

43

PINAR ENTEGRE ET VE YEM SANAYİ A.Ş.

PK. 479 - İZMİR
Tel: (90) 548-11660 Tlx: 51807 pnet tr Fax: (90) 548-11669

Name of Company : PINAR INTEGRATED MEAT & FEED MANUFACTURING INC.
Year of establishment and status: 1985, Private [145]
Main products : Carcass beef, carcass sheep, meet products
Production capacity : Carcass meat: 20.000 tons per year
Meat products: 12.000 tons per year
Number of employees : 520
Percentage of exports : 1 %
Main countries of export : Saudi Arabia, Kuwait.
Type of technology : Advanced technology
Methods of acquirement : Purchase of machinery & equipment
Source of technology : Corporate's own technical sources
Techn. improvement activities : In-house R & D activities
Techn. transfer implementations : Sale of licence to a meat products manufacturer in an Arabic country
Proposals on cooperation : 1. Provision of licence and know how for meat products manufacturing
2. Turn key installation of slaughtering houses and meat products manufacturing facilities.

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PINAR SÜT MAMULLERİ SANAYİ A.Ş.

Kemalpaşa Asfaltı No:1 Kemalpaşa - İZMİR

Tel: (90) 51-182030 (10 lines) Tlx: 53163 pnar tr Fax: (90) 51-183497

Name of company : PINAR DAIRY PRODUCTS MANUFACTURING INC.
Year of establishment and status: 1975, Private [109]
Main products : Pasteurized milk; aromatized milk; cheese of all kinds; yogurt; milk-powder; creams; ice-creams; puddings etc.
Production capacity : 90.000 tons of milk processing capacity per year
Number of employees : 802
Percentage of exports : 8 - 10 % (40 % of Turkey 's total export of dairy products)
Main countries of export : Saudi Arabia, Middle East countries.
Type of technology : Advanced technology
Methods of acqurement : Purchase of machinery
Source of technology : West Europe, Company's own technical sources
Techn. improvement activities : In-house R & D; technical training; cooperation with foreign companies
Techn. transfer implementations : None
Proposals on cooperation : joint venture, turnkey projects

46

TAT KONSERVE SANAYİ A.Ş.

Mustafakemal Paşa - Bursa

Head Office: Istiklal Cad. 347, Merkez Han, Beyoğlu - İSTANBUL

Tel: (90) 1-1523600 Tlx: 24569 Fax: (90) 1-1455133

Name of company : TAT CANNING INDUSTRY INC.
Year of establishment and status: 1968, Private [183]
Main products : Tomato paste, various canned vegetables and fruits
Production capacity : Tomato paste: 70.000 tons (29 % of Turkey's total production); other canned foods: 15.000 tons per year
Number of employees : 1.000
Percentage of exports : 50 %
Main countries of export : Japan, U.S.A., Canada, Western European Countries
Type of technology : Advanced technology
Methods of acqurement : Purchase of machinery, adaptation and development
Source of technology : West European Countries
Techn. improvement activities : In-house R & D, cooperation with foreign companies, technical and vocational training
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, technical consultancy and training

47

TİKVEŞLİ SÜT VE SÜT MAMULLERİ A.Ş.
Kalaycibahçe, Taşkesen Sok. No:1 Hasköy - İSTANBUL
Tel: (90) 1-1502758 (2 lines) Fax: (90) 1-1530103

Name of Company : TİKVEŞLİ MILK AND DAIRY PRODUCTS INC.
Year of establishment and status : 1943, Private
Main products : Milk, yogurt, cheese, milk powder, butter etc.
Production capacity : 33.000 tons of milk processing capacity per year
Number of employees : 1.000
Type of technology : Advanced and adapted technology
Methods of acquirement : Purchase of machinery, adaptation and development
Source of technology : Company's own technical capacity
Techn. improvement activities : In-house R & D; technical training; cooperation with TUBITAK and universities
Techn. transfer implementations : Installation of 27 dairy facilities of various scales in Turkey
Proposals on cooperation : Consultancy; project appraisal and feasibility study; provision of machinery and equipment, turnkey projects

48

TOYA MAKİNA SANAYİ VE TİCARET A.Ş.
Alemdağ Caddesi, Site Yolu Toya Sokak No 1 Ümraniye - İSTANBUL
Tel: (90) 1-3354644, 3354654 Tlx: 29020 Peck tr Fax: (90) 1-3356210

Name of Company : TOYA MACHINES MANUFACTURING & TRADING INC.
Year of establishment and status : 1976, Private
Main products : Complete bread ovens and equipments
Production capacity : 1.000 tons of metal processing per year
Number of employees : 200
Percentage of exports : 12 %
Main countries of export : Yugoslavia, Germany, U.S.S.R., Saudi Arabia, Jordan
Type of technology : Adapted and improved technology
Methods of acquirement : Self design and development
Source of technology : Company's own technical capacity
Techn. improvement activities : In-house R & D; technical and vocational training; cooperation with universities and research institutions
Techn. transfer implementations : Sale of machinery and equipment
Proposals on cooperation : Joint ventures, turnkey installation of bread & pastry oven manufacturing facilities; provision of machinery and equipment; provision of expertise and know-how on bread making technology

49

TRAKYA YAĞ SANAYİ A.Ş.
Karaevli Köyü, Bağlar Mevkii-TEKİRDAĞ
Tel: (90) 1854-7400 Tlx: 24610 Fax: (90) 1854-5446

Name of Company : TRAKYA OIL MANUFACTURING INC.
Year of establishment and status : - , Private [365]
Main products : Refined, vintertized sunflower oil
Production capacity : 60.000 tons per year
Number of employees : 300
Percentage of exports : 10 %
Main countries of export : Israel, Jordan.
Type of technology : Advanced technology
Methods of acquirement : Purchase of machinery
Source of technology : U.S.A., EC Countries
Techn. improvement activities : In-house R & D activities; technical training
Proposals on cooperation : Feasibility studies, project appraisal, provision of licence and know-how arrangements

50

TÜRKİYE SÜT ENDÜSTRİSİ KURUMU

Akay Cad. No: 6, Bakanlıklar - ANKARA

Tel: (90) 4-1172246 Tlx: 42825 Fax: (90) 4-1258567

Name of Company :	DAIRY INDUSTRY ENTERPRISE OF TURKEY
Year of establishment and status :	1963, Public [132] (State Economic Enterprise)
Main products :	Pasteurized milk, cheese, butter, milk powder, etc.
Production capacity :	330.000 tons of dairy products per year in 33 facilities
Number of employees :	1.789
Type of technology :	Traditional technology, adapted and improved
Methods of acquirement :	Purchase of machinery, adaptation and development
Source of technology :	Turkey, Enterprise's own technical capacity
Techn. improvement activities :	In-house R & D; technical and vocational training; cooperation with universities and TUBITAK
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture, feasibility study and project appraisal; technical consultancy; provision of know-how; machinery and equipment; turnkey project

51

TÜRKİYE ŞEKER FABRİKALARI A.Ş. GENEL MÜDÜRLÜĞÜ

Mithatpaşa Cad., No 14, Kızılay - ANKARA

Tel: (90) 4-1317710 Tlx: 42422 Fax: (90) 4-1317225

Name of Company :	GENERAL DIRECTORATE OF SUGAR FACTORIES OF TURKEY INC.
Year of establishment and status :	1935, Public [11] (State Economic Enterprise)
Main products :	Sugar, ethyl alcohol, non-electrical machinery
Production capacity :	1.600.000 tons per year
Number of employees :	24.961
Type of technology :	Traditional technology, adapted and improved
Methods of acquirement :	Purchase of machinery, adaptation and development
Source of technology :	Turkey; Company's own technical capacity
Techn. improvement activities :	In-house R & D activities; cooperation with foreign and Turkish companies and universities
Techn. transfer implementations :	Training programs for foreigners on sugar production
Proposals on cooperation :	Feasibility study and project appraisal; technical consultancy and training services, provision of expertise and know-how; provision of machinery and equipment

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UĞUR GIDA SANAYİ VE TİCARET A.Ş.

Cendik Köyü P.K. 1, 15001 - BURDUR

Tel: (90) 3251-12187

Name of Company :	UGUR FOOD MANUFACTURING AND TRADING INC.
Year of establishment and status :	- , Private
Main products :	Macaroni and semolina
Production capacity :	100 tons per day
Number of employees :	60
Percentage of exports :	2 %
Main countries of export :	Germany, Jordan, U.S.A.
Type of technology :	Adapted technology
Methods of acquirement :	Adaptation and development
Source of technology :	Turkey
Techn. improvement activities :	In-house R & D activities, technical training
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture, provision machinery and equipment

ÜLKER GIDA SANAYİ TİCARET A.Ş.

Davutpaşa Caddesi No: 20 Topkapı - İSTANBUL
Tel:(90)1-5676800 (20 lines) Tlx: 22985 ugst tr Fax:(90)1-5777628

Name of Company : ÜLKER FOOD INDUSTRY AND TRADE INC.
Year of establishment and status: 1944, Private
Main products : Biscuits, crackers, cakes, wafers, chocolate, confectionery, chewing gums
Production capacity : 200 tons per day
Number of employees : 2.000
Percentage of exports : 20 %
Main countries of export : Saudi Arabia, Lebanon, Jordan, Italy, Spain
Type of technology : Traditional technology
Methods of acquirement : Purchase of machinery
Source of technology : U.K., Germany, Switzerland, Italy, U.S.A.
Techn. improvement activities : In-house R & D; technical training
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, provision of know-how, licence

54

YAZICI MAKİNA SANAYİİ

Yeşilce Mah. 100. Yıl Cad. No: 101, 4. Levent - İSTANBUL
Tel: (90) 1-1784389

Name of Company : YAZICI MACHINERY MANUFACTURING CO.
Year of establishment and status : 1988, Private
Main products : Shrink packaging machines
Production capacity : 100-120 machines per year
Number of employees : 10
Type of technology : Adapted technology
Methods of acquirement : Adaptation and development
Source of technology : Turkey
Techn. improvement activities : In-house R & D activities, cooperation with other Turkish firms and universities & research firms
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, provision of machinery and equipment

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YELKEN GIDA SANAYİİ TİCARET LTD.

Eşref Saat Sokak, No: 4 Üsküdar - İSTANBUL
Tel: (90) 1-3334854 Fax: (90) 1-3334854

Name of Company : YELKEN FOOD MANUFACTURING AND TRADE LTD.
Year of establishment and status : 1954, Private
Main products : Concentrated fruit juice
Production capacity : 5.000 kg. per day
Number of employees : 20
Type of technology : Adapted and improved technology
Methods of acquirement : Use of licence, adaptation and development
Source of technology : Company's own technical sources
Techn. improvement activities : In-house R & D activities; technical training
Techn. transfer implementations : None
Proposals on cooperation : Provision of licence and know-how

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ZEYTİNCİLİK ARAŞTIRMA ENSTİTÜSÜ

Üniversite Cad. No: 43, 35100 Bornova - İZMİR

Tel: (90) 51-161035 (3 lines) Tlx: 953639 ırob Fax: (90) 51-161375

Name of Institution:	OLIVES CULTIVATION RESEARCH INSTITUTE
Year of establishment and status:	- , Public
Main products :	Olive trees, green and black olives, olive oil
Production capacity :	Olive trees: 100.000 per year Black and green olives : 20 tons per year Olive oil : 10-20 tons per year
Number of employees :	35
Type of technology :	Adapted and improved technology
Methods of acquirement :	Adaptation and development
Source of technology :	Turkey
Techn. improvement activities :	R & D., training, cooperation with other Turkish firms, foreign research institutions and TUBİTAK
Techn. transfer implementations :	1. Olive nursery garden and cultivation development 2. Technical consultancy services for development of olive cultivation
Proposals on cooperation :	Technical consultancy and training services for development of olive cultivation and olive processing technology

CHAPTER II. TEXTILE INDUSTRY

Textile processing consists of preparation of natural and man-made fibres, (especially cotton and wool) the spinning and the weaving or knitting of these fibres, yarns and fabrics. The combination of different fibres and different stages of processing adds to the complexity of this industry. Performances can vary widely between different materials and processes.

The print, dye and finishing industry consists of the process to convert the woven and knitted fabric into products that can be used in the manufacture clothing or for other purposes. The knitted or woven crude fabric is the raw material of this industry. The woven or knitted fabric, is processed according to its characteristics through one, two or three of the printing dyeing and finishing operations.

The clothing industry refers to the companies engaged in the manufacture of clothing and clothing accessories of various flexible materials mainly of woven but also knitted fabrics. The clothing sector designs and produces all types of clothing.

The industry buys its basic material from the textile industry for whom it is thus the main customer since it buys about 50 % of the production of the cotton industry, 70 % of that of the wool industry and about 40 % of that of the silk industry.

The major structural characteristics of the clothing industry in general are as follows:

- The industry is labor intensive and the majority of its employees are women;
- Most companies are small or medium sized enterprise. Clothing industry is concentrated in very specific geographical region.

The textile and clothing industry is one of the most dynamic, adaptable and profitable industries in Turkey for at least the last three decades. Turkey has got its share in the '70s of the transition of world textile industry from developed countries to developing countries. While the imports of cotton yarns and textiles by EEC countries increased from 135 thousand tons to 300 thousand tons between 1967-1977, Turkey managed to gain a 46 % share of this market.

Cotton yarn and textile industry which was one of the first industries to be built in Turkey, has displayed a great development since late 1960s and has become, through the natural advantages in Turkey's favour, the greatest export industry.

After the incentive measures to develop to cotton yarn and textile industry, the production capacity rose from 135 thousand tons in 1967 to 450 thousand tons in 1988.

Meanwhile a quarter of the industry preserves its old, traditional condition. About 25.000 looms are located at sparse workshops which can not be qualified as plants, and the cotton mills with less than 400 looms add up to more than half of the total mills.

A gradually increasing trend is observed in cotton yarn, cotton textile and clothing exports, with approximately 60 % of still growing exports is for the EC member countries.

The Turkish clothing industry have, in recent years, produced a wide range of articles adapted to the costumers needs and tastes. Due to strong competition from other developing countries (especially from South East Asia) in European and North American markets the industry has moved up the market to develop high quality and fashionable articles. The industry has also responded to consumer demand for leisure and sports (casual) wear.

Production in Textile Industry (1984-1994)

GOODS	1984	1989	1994 (p)
Cotton yarns (ton)	357 595	525 000	625 900
Cotton textile (000 m.)	940 000	1 100 000	1 718 400
Synthetic yarns (ton)	65 000	69 500	89 620
Synthetic textile(000 m.)	100 000	135 000	236 105
Woollen yarns (ton)	75 000	92 000	119 158
Woollen textile (000 m.)	50 000	58 500	67 060
Carpets (handmade)(000 m2)	1 512	3 110	5 004
Carpets (machine-woven) (")	6 338	12 700	23 083
Knitted goods (ton)	22 500	103 000	172 299
Readymade garments (ton)	99 000	175 000	295 857

Source:SP0

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AKIN TEKSTİL A.Ş.

Çırpıcı Veli Efendi Yolu No: 49, 34730 Bakırköy - ISTANBUL
Tel: (90) 1-5702760 (6 lines) Tlx: 28712 Akın tr Fax: (90) 1-5835069

Name of Company:	AKIN TEXTILE INC.
Year of establishment and status:	1956, Private [162]
Main products:	Yarns (between 6 Ne-40 Ne); cotton, mixed fabrics, ready to wear clothing
Production capacity:	50.000 metres per day
Number of employees:	1.100
Percentage of exports:	50%
Main countries of export:	Germany, France, Italy, U.K., Switzerland, Holland
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Switzerland, Japan
Techn. improvement activities:	In-house R & D; cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Provision of know-how, consultancy.

58 **AKSU İPLİK, DOKUMA, BOYA, APRE FABRİKALARI A.Ş.**

Aksu Caddesi No:37, Osmaniye Bakırköy - ISTANBUL
Tel: (90) 1-5700050 (2 lines) Tlx: 28705 Fax: (90) 1-5702650

Name of Company:	AKSU YARNS, WEAVING, DYEING, FINISHING FACTORIES INC.
Year of establishment and status:	1952, Private, [75]
Main products:	Wool and synthetic yarns, fabrics, blankets
Production capacity:	n.a
Number of employees:	2.846
Percentage of exports:	25 %
Main countries of export:	U.S.A., European countries, Middle East countries
Type of technology:	Traditional technology improved in the Company
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	n.a.
Techn. improvement activities:	In-house R & D, technical coop. with foreign companies
Tech. transfer implementations:	None
Proposals on cooperation:	Joint venture; consultancy and training; provision of expertise and know how
Facilities available:	Classroom, cafeteria, accomodation

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AKTEKS TEKSTİL A.Ş.

Organize Sanayi Bölgesi, Yeşil Cad. No: 9, 16159 Nilüfer - BURSA
Tel: (90) 24-431396 431397

Name of Company:	AKTEKS TEXTILE INC.
Year of establishment and status:	1979, Private
Main products:	Fabric dyeing, printing and finishing
Production capacity:	2.500.000 metres per year
Number of employees:	100
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Turkey
Techn. improvement activities:	In-house R & D; training
Techn. transfer implementations:	None
Proposals on cooperation:	Provision of expertise; consultancy

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ALBA MAKİNA SANAYİİ

Türkeli Cad. No 134, Kumkapı - İSTANBUL
Tel: (90) 1-5169301- 5169281 Fax: (90) 1-5165658

Name of Company: ALBA MACHINERY MANUFACTURING CO.
Year of establishment and status: 1974, Private
Main products: All sorts of ironing equipment, steam generators, stain removing machines, interfacing fusing machinery
Production capacity: 100-120 Interfacing fusing machines ; 240-300 pressing equipment; 750-800 pascala ar. i tables; 2.000-2.500 steam hand irons per year
Number of employees: 35
Percentage of exports: 10 %
Main countries of export: Iraq, Saudi Arabia, Middle East countries
Type of technology: Adapted and improved technology
Methods of acquirement: Purchasing machinery, adaptation and development
Source of technology: Germany, U.K., Italy
Techn. improvement activities: In-house R & D, cooperation with other Turkish companies
Techn.transfer implementations: None
Proposals on cooperation: Turn-key installation; consultancy & training services; provision of machinery and equipment

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ALTINYILDIZ MENSUCAT VE KONFEKSİYON A.Ş

Yenibosna köyü, Köyaltı Mevkii 34530 Bakırköy - İSTANBUL
Tel: (90) 1-5523200 (32 lines) Tlx: 28824 Alın tr Fax: (90) 1-5523241

Name of Company: ALTINYILDIZ TEXTILE AND READY MADE CLOTHING INC.
Year of establishment and status: 1952, Private [108]
Main products: Yarns, fabrics and tops (mohair etc.)
Production capacity: 4.500.000 meters per year
Number of employees: 2.375
Percentage of exports: 40 %
Main countries of export: U.S.A., EC countries, Japan, U.S.S.R
Type of technology: Advanced technology
Methods of acquirement: Purchase of machinery; production under licence
Source of technology: EC countries
Techn. improvement activities: In-house R & D; cooperation with foreign companies
Techn.transfer implementations: None
Proposals on cooperation: Consultancy; on the job training; provision of expertise, know-how; provision of materials for ready made clothing
Facilities available: Classroom, cafeteria, transportation

62 **AR-BAĞ KUNDURA LEVAZIMI TEKSTİLİ SANAYİ A.Ş.**

Demirciler Çarşısı No : 49 Bayrampaşa . ISTANBUL
Tel : (90) 1-5676237 Fax : (90)1-5674871

Name of Company: AR-BAĞ SHOE MATERIALS TEXTILE INDUSTRY INC.
Year of establishment and status: - , Private
Main products: Shoe ties , cordons , knitting yarns, shoe fabrics
Production capacity: 40.000 kgs./year
Number of employees: 23
Percentage of exports: 35 %
Main countries of export: Iraq
Type of technology: Adapted technology
Methods of acquirement: Purchase of machinery & equipment, improvement
Source of technology: Italy , Company's own R&D facilities
Techn. improvement activities: In -house R&D activities
Proposals on cooperation: Joint venture

63 **AR ELYAF İPLİK MENSUCAT SANAYİ ve TİCARET A.Ş.**

Organize Sanayi Bölgesi, Sarı Cad. 1. Sokak No: 2 16159 Nilüfer - BURSA
Tel: (90) 24-431464, 65 Tlx: 32337 Ardi tr Fax: (90) 24-432220

Name of Company: ARELYAF FABRICS TEXTILE MANUFACTURING AND TRADING INC
Year of establishment and status: 1976, Private
Main products: Synthetics quilts, paddings and carpets
Production capacity: 30.000 quilts; 6.000.000 sq.m. of paddings and 1.000.000 sq.m of carpets
Number of employees: 130
Percentage of exports: 15 %
Main countries of export: Germany, U.K., France
Type of technology: Traditional technology
Methods of acquirement: Purchase of machinery
Source of technology: Germany
Techn. improvement activities: Cooperation with foreign companies; training
Techn.transfer implementations: None
Proposals on cooperation: Joint venture, provision of know-how, consultancy

64 **BALAT MENSUCAT SANAYİ VE TİCARET A.Ş.**

Nizip Cad. 27400 - Gaziantep
Tel: (90) 851-233814, 236090 Fax: (90) 851-233815

Name of Company: BALAT TEXTILE MANUFACTURING AND TRADE INC.
Year of establishment and status: 1961 . Private
Main products: Acrylic yarns for carpet, carpets, kilims, blankets and rugs.
Production capacity: Yarn production: 5 tons per day
Number of employees: 200
Type of technology: Adapted technology
Methods of acquirement: Purchase of machinery, adaptation
Source of technology: Turkey, Germany, Switzerland, France, Belgium
Techn. improvement activities: In-house R & D activities, technical training
Techn.transfer implementations: None
Proposals on cooperation: Technical consultancy, training, turn-key installations

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BARUT EBRU

Ishakpaşa Cad. No 8. Sultanahmet - ISTANBUL
Tel: (90) 1-5160357, 5176841 Fax: (90) 1-5162944

Name of Company :	BARUT MARBLING (EBRU) CO.
Year of establishment and status:	1981. Private
Main products :	Unique pieces of fabrics dyed by marbling techniques
Production capacity :	5.000 meters per month
Number of employees :	7
Percentage of exports :	75 %
Main countries of export :	U.S.A., Japan, Western European countries
Type of technology :	Traditional technology
Methods of acquirement :	Development within the Company
Source of technology :	Company's own sources
Techn. improvement activities :	In-house R & D. training
Techn. transfer implementations :	Training programmes in various European countries
Proposals on cooperation :	Provision of know-how, licence and patent, technical consultancy and training services

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BATICA TEKSTİL SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi, Mavi Cad. 7. Sok. No:4 16159 Nilüfer - BURSA
Tel: (90) 24-432156 - 432157

Name of Company:	BATICA TEXTILE MANUFACTURING AND TRADING INC.
Year of establishment and status:	1945. Private
Main products:	Silk fabrics; weaving, spinning, dyeing and finishing
Production capacity:	100.000 metres per year
Number of employees:	320
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery, self design and development
Source of technology:	Switzerland, Company's own technical capacity
Techn. improvement activities:	Cooperation with foreign companies, in-house R & D
Techn. transfer implementations:	None
Proposals on cooperation:	Consultancy and training in silk fabrics weaving, spinning, dyeing and finishing

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BERTEKS TEKSTİL SANAYİ VE TİCARET A.Ş.

Demirtaş Organize Sanayi Bölgesi , BURSA
Tel: (90) 24-141200 Tlx: 32059 Brt tr Fax: (90) 24-141200

Name of Company :	BERTEKS TEXTILE MANUFACTURING AND TRADE INC
Year of establishment and status:	- . Private
Main products :	Synthetic-made cloths
Production capacity :	2.265.408 meters per year
Number of employees :	65
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery & equipment
Source of technology :	Spain, Italy
Techn. improvement activities :	Improvement through technical training
Techn. transfer implementations :	None
Proposals on cooperation :	Consultancy and training on textile manufacturing

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BİRİNCİ GÜVEN JAKAR MAKİNALARI İMALAT VE TİCARET LTD.

Organize Sanayi Bölgesi, Sarı Cad. 1. Sokak No: 4 16159 Nilüfer - BURSA
Tel: (90) 24-431408, 431972 Fax: (90) 24-432608

Name of Company:	BİRİNCİ GÜVEN JACQUARD MACHINES MANUFACTURING AND TRADING INC.
Year of establishment and status:	1979, Private
Main products:	Jacquard machines
Production capacity:	250 machines per year
Number of employees:	48
Type of technology:	Adapted technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Germany, Italy, Company's self design and development
Techn. improvement activities:	In-house R & D; cooperation with foreign companies
Techn. transfer implementations:	Export of machinery and equipment
Proposals on cooperation:	Technical consultancy, provision of machinery and supplies

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BİRKO BİRLEŞİK KOYUNLULAR MENSUCAT SAN. ve TİC. A.Ş.

Bor Yolu, 8. km. P.K. 41 - NİĞDE
Tel: (90) 483-15000 (4 lines) Tlx: 44752-53 brk tr Fax: (90) 483-11917

Name of Company:	BİRKO BİRLEŞİK KOYUNLULAR TEXTILE MANUFACTURING AND TRADING INC.
Year of establishment and status:	1972, Private [116]
Main products:	Carded cotton, spun woolen yarn, combed cotton yarn, open-end cotton yarn, wool carpet
Production capacity:	Carded cotton yarns: 7000 tons per year Woolen yarns: 1500 tons per year Combed cotton yarns: 3000 tons per year Open-end cotton yarns: 2400 tons Knitted carpets: 800.000 m.sq.
Number of employees:	1700 workers and 115 engineers
Percentage of exports:	70 %
Main countries of export:	Italy, Germany, U.K., U.S.A.
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery and equipment
Source of technology:	European countries
Techn. improvement activities:	In house R & D activities, technical cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Consultancy; provision of yarns, fabrics and carpets

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BİSAŞ BURSA İPLİK SANAYİ A.Ş.

Organize Sanayi Bölgesi, Sarı Cadde No: 17 16159 Nilüfer - BURSA
Tel: (90) 24-431300 (10 lines) Tlx: 32133 Bisa tr Fax: (90) 24-433400

Name of Company:	BİSAŞ BURSA YARN INDUSTRY INC.
Year of establishment and status:	1968, Private [64]
Main products:	Cotton yarn, acrylic yarn, kamgarn yarn, knitted fabrics
Production capacity:	13.300 tons of cotton yarn; 4.700 tons of acrylic yarns; 1.800 tons of of kamgarn yarn and 1.850 tons of knitted fabrics per year
Number of employees:	2.350
Percentage of exports:	35 %
Main countries of export:	EC & other European countries; Middle East countries
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	U.S.A., Japan, Switzerland
Techn. improvement activities:	Cooperation with foreign companies and universities
Techn. transfer implementations:	None
Proposals on cooperation:	Consultancy & technical training in yarn preparation, spinning, knitting, dyeing and work management
Facilities available:	Classroom, cafeteria, transportation

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BOZKURT MENSUCAT SANAYİ A.Ş.

Koşuyolu , 34770 Zeytinburnu - İSTANBUL
Tel: (90) 1-5824210 (10 lines) Tlx: 30420 Bome tr Fax: (90) 1-5822080

Name of Company :	BOZKURT TEXTILE MANUFACTURING INC.
Year of establishment and status:	1954, Private [57]
Main products :	Fabrics and garments made from 100 % cotton; polyester/cotton; polyester/viscose; cotton/viscose and 100 % viscose
Production capacity :	31 million meters of fabrics per year
Number of employees :	1983
Percentage of exports :	75 %
Main countries of export :	U.S.A.; Western European countries;
Type of technology :	Traditional technology improved in the Company
Methods of acquirement :	Purchase of machinery, adaptation and improvement
Source of technology :	Western European countries, U.S.A.
Techn. improvement activities :	In-house R & D, technical training
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture; technical consultancy and training

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BRODERİ NARİN A.Ş.

Eski Londra Asfaltı No: 77, Güngören 34600 Bakırköy - ISTANBUL
Tel: (90) 1-5570900 (3 lines) Tlx: 22608 yesg tr Fax: (90) 1-5548761

Name of Company:	BRODERİ NARİN INC.
Year of establishment and status:	1926. Private
Main products:	Tergal voile weaving, embroideries of all kinds, laces and macrames
Production capacity:	Embroideries on polyester tulle: 538.000 m./year. embroideries on other fabrics: 27.600 m./year. laces and cuttings: 197.500 kg./year
Number of employees:	140
Percentage of exports:	25 %
Main countries of export:	Germany, Holland, Egypt, Middle East countries; South Africa, Australia, Japan
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Italy, Switzerland, Austria, Germany
Techn. improvement activities:	Cooperation with foreign companies
Proposals on cooperation:	Consultancy on manufacturing of curts

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CEMRE TEKSTİL VE HALICILIK A.Ş.

Organize Sanayi Bölgesi, Gri Cad. No: 14, 16159 Nilüfer - BURSA
Tel: (90) 24- 432447 Tlx: 32046 Eru tr Fax: (90) 24-149845

Name of Company:	CEMRE TEXTILE AND CARPET MANUFACTURING INC.
Year of establishment and status:	1987. Private
Main products:	Non-woven carpets
Production capacity:	435.000 sq. meters per year
Number of employees:	130
Type of technology:	Adapted technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Germany
Techn. improvement activities:	In-house R & D; cooperation with foreign companies
Proposals on cooperation:	Joint venture; consultancy; provision of material & supplies

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CEYTAŞ CEYHAN TEKSTİL SANAYİ A.Ş.

Iskenderun yolu üzeri, Ceyhan - ADANA
Tel: (90) 7321-19910 (5 lines) Tlx: 63858 Fax: (90) 7321-199900

Name of Company:	CEYTAS CEYHAN TEXTILE MANUFACTURING INC.
Year of establishment and status:	- . Private [248]
Main products:	Ne12/1, Ne 40/1 Single and double cotton yarn
Production capacity:	8500 tons per year (Ne 23)
Number of employees:	720
Percentage of exports:	70 %
Main countries of export:	European Community Countries
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery and equipment
Source of technology:	U.S.A., Italy, Switzerland
Techn. improvement activities:	In-house R & D activities, improvement through technical and vocational training
Techn.transfer implementations:	None
Proposals on cooperation:	Consultancy and technical training

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ÇETINKAYA NAKIŞ KONFEKSİYON SANAYİİ

Bomonti, Fırın Sokak, No: 75-77 K.2. Şişli - İSTANBUL

Tel: (90) 1-1406869 Fax: (90) 1-1343753

Name of Company:	ÇETINKAYA EMBROIDERIES AND CONFECTION INDUSTRY CO.
Year of establishment and status:	1975. Private
Main products:	Embroideries
Production capacity:	300.000 pieces per month
Number of employees:	12
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Japan
Techn. improvement activities:	Cooperation with foreign companies
Techn.transfer implementations:	None
Proposals on cooperation:	Consultancy in design and patterns

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DİNARSU İMALAT VE TİCARET T.A.Ş.

Fethi Çelebi Cad. No. 45 Eyüp - İSTANBUL

Tel: (90) 1-5326420 (10 lines) Tlx: 22743 Dnsu tr Fax: (90) 1-5239158

Name of Company:	DİNARSU MANUFACTURING AND TRADING INC.
Year of establishment and status:	1953. Private [104]
Main products:	Yarns, tufting carpets, blankets, non-woven carpets
Production capacity:	995.112 kg. of yarns; 2.106.000 metres of tufting carpets; 379.418 pieces of blankets 1.728.000 sq.m. of non-woven carpets
Number of employees:	1.200
Percentage of exports:	33 %
Main countries of export:	Syria, U.S.A., Germany, U.K.
Type of technology:	Adapted technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Italy, France, Germany
Techn. improvement activities:	In-house R & D activities; technical and vocational training
Techn.transfer implementations:	None
Proposals on cooperation:	Technical consultancy and training services

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DÖNÜŞ MAKİNA

Kazım Karabekir Mah. Karadut Sok. No: 13 - BURSA
Tel: (90) 24-620888

Name of Company:	DÖNÜŞ MACHINES CO.
Year of establishment and status:	1986. Private
Main products/services:	Upgrading and transformation of weaver's shuttles
Production capacity:	4 looms per month
Number of employees:	4
Type of technology:	Adapted and improved technology
Methods of acquirement:	Adaptation and development
Source of technology:	Company's own technical capacity
Techn. improvement activities:	In-house R & D.
Techn.transfer implementations:	None
Proposals on cooperation:	Joint venture

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EDİP İPLİK SANAYİ VE TİCARET A.Ş.

Halkalı Yolu, İkitelli Mevkii, Güneşliköy - ISTANBUL
Tel: (90) 1-5755740 (4 lines) Tlx 28808 Edfa tr Fax: (90) 1-5750123

Name of Company:	EDİP YARN MANUFACTURING AND TRADING INC.
Year of establishment and status:	1974. Private [273]
Main products:	Cotton, cotton blend, synthetic fiber and dyed yarns
Production capacity:	n.a.
Number of employees:	1.000
Percentage of exports:	80 %
Main countries of export:	U.S.A., European countries, Middle East countries
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany
Techn. improvement activities:	Cooperation with foreign companies, training
Techn.transfer implementations:	None
Proposals on cooperation:	

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EROL TÜRKÜN TEKSTİL SANAYİ

Organize Sanayi Bölgesi, Sarı Cadde No: 31, 16159 Nilüfer - BURSA
Tel: (90) 24-431630 Tlx: 32044 Er Tr Fax: (90) 24-432440

Name of Company:	EROL TÜRKÜN TEXTILE INDUSTRY CO.
Year of establishment and status:	1976. Private
Main products:	Fabrics for upholstery and curtains
Production capacity:	600.000 meters per year
Number of employees:	90
Type of technology:	Advanced & Adapted technology
Methods of acquirement:	Purchase of machinery, adaptation and improvement
Source of technology:	Italy
Techn. improvement activities:	Cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on the cooperation:	Joint venture; provision of expertise and know-how
Facilities available:	Cafetena, transportation

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ELIAR ELEKTRONİK SANAYİ A.Ş

Sülün Sokak No: 18, 1. Levent 80620 - ISTANBUL
Tel: (90) 1- 1802102 , 1802214 Fax: (90) 1-1649237

Name of Company:	ELIAR ELECTRONICS INDUSTRY INC.
Year of establishment and status:	1984, Private
Main products:	Semi-Automatic Textile Dyeing Controller (TBB 1000); Fully-Automatic Textile Dyeing Controller (TBB 2000/ 4000); Fully-Automatic Dyeing, Process Monitoring & Data Logging Software (TBB/SW 2.0); Microprocessor Based Data Logging and Process Control Systems Supervisory or Distributed Control Systems; Process Control Instruments & Devices; Electronic System Cards (in Eurocard standards) and standard racks for OEM's System and PC Softwares
Production capacity:	2.000 process controllers, 5.000 system cards
Number of employees:	15
Type of technology:	Advanced technology
Methods of acquirement:	Know-how, design and development within the firm
Source of technology:	Firm's own R & D sources; local sources
Techn. improvement activities:	In-house R & D activities, cooperation with local and foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture; technical consultancy and training; sale of patent, licence and know-how; provision of equipment, materials and supplies; project design and appraisal

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GÜNEY SANAYİ VE TİCARET A.Ş.

Denizli Mah. Dedekorkut Cad. No 16, 01059 - ADANA
Tel: (90) 71-156714-15 Tlx: 626856 sta tr Fax: (90) 71-156689

Name of Company:	GÜNEY MANUFACTURING AND TRADING INC.
Year of establishment and status:	1950, Private [61]
Main products:	Yarns, fabrics, woven cloth, ready made clothes.
Production capacity:	Yarns: 13.000 tons per year, weaving: 39.900 million knots per year, knitting: 3.486.000 metres per year
Number of employees:	4104
Percentage of exports:	25 %
Main countries of export:	Germany, U.K., Arab countries
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery and equipment
Source of technology:	European countries
Techn. improvement activities:	In house R & D. improvement through training
Techn.transfer implementations:	None
Proposals on cooperation:	Joint venture, feasibility studies, project appraisal

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GÜVEN ÇELİK MAKİNA SANAYİ TİCARET LTD.

Demirciler Sitesi, Altıncı yol, No 31 Zeytinburnu - İSTANBUL
Tel: (90) 1-5581229 Fax: (90) 1-5586711

Name of Company:	GÜVEN ÇELİK MACHINERY INDUSTRY & TRADE INC.
Year of establishment and status:	-, Private
Main products:	Cloth control metering machines, spreading tables
Production capacity:	7 machines and 8 tables per month
Number of employees:	21
Type of technology:	Adapted and improved in the firm
Methods of acquirement:	Adaptation and development
Source of technology:	Turkey, France, Germany
Techn. improvement activities:	In-house R & D activities
Techn.Transfer implementations:	None
Proposals on cooperation:	Provision of machinery and equipment

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HALIFLEKS SANAYİ VE TİCARET A.Ş.

Yeşil Cad. No: 15 Organize Sanayi Bölgesi - BURSA
Tel: (90) 24-431220 (5 lines) Tlx: 32130 Hffb tr Fax: (90) 24-431224

Name of Company:	HALIFLEKS MANUFACTURING AND TRADING INC.
Year of establishment and status:	1969, Private [484]
Main products:	Non-woven carpet, automotive textile products, moufflon
Production capacity:	12.500.000 meter sq. per year
Number of employees:	312
Percentage of exports:	26 %
Main countries of export:	Saudi Arabia, Jordan, Iraq, U.S.A., Syria
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany
Techn. improvement activities:	In-house Research & Development
Techn.Transfer Implementations:	None
Proposals on cooperation:	Technical consultancy, training services, provision of supplies and materials

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HALİL ÖZÜDOĞRU MAKİNA SANAYİİ

Sanayi Cad. Bilge Sokak No: 5, Yenibosna - ISTANBUL
Tel: (90) 1-5521300-01 Fax: (90) 1-5579744

Name of Company:	HALİL ÖZÜDOĞRU MACHINES MANUFACTURING CO.
Year of establishment and status:	1972 Private
Main products:	Textile machines (weaving, dyeing, finishing etc.) variators, reducers, pumps, mixers
Production capacity:	n.a.
Number of employees:	15
Type of technology:	Adapted and improved in the firm
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Turkey, Germany
Techn. improvement activities:	In-house R & D activities, coop. with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Turnkey installation of facilities, provision of machinery

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HATEKS HAVLU TEKSTİL SANAYİ TİCARET A.Ş.

Organize Sanayi Bölgesi, Beyaz Cad. No 4, 16159 Nilüfer - BURSA
Tel: (90) 24-433660 Tlx: 32008 havb tr

Name of Company:	HATEKS TOWEL TEXTILE INDUSTRY AND TRADE INC.
Year of establishment and status:	1982, Private
Main products:	Towels, bathrobes
Production capacity:	160.000 metres per year
Number of employees:	251
Percentage of exports:	70 %
Main countries of export:	U.S.A., Canada
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Italy
Techn. improvement activities:	Cooperation with foreign companies; training
Techn. transfer implementations:	None
Proposals on cooperation:	

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HATİBAŞ FANTAZİ İPLİK SANAYİİ A.Ş.

Organize Sanayi Bölgesi, Sarı Cad. 1. Sokak No:1 16159 Nilüfer - BURSA
Tel: (90) 24-432540 (3 lines) Tlx: 32169 Htb tr Fax: (90) 24- 432465

Name of Company:	HATİBAŞ FANCY YARN MANUFACTURING INC.
Year of establishment and status:	1982, Private
Main products:	Fancy yarns; sewing and embroidery threads
Production capacity:	1 ton per year
Number of employees:	88
Percentage of exports:	12 %
Main countries of export:	Italy, Libya, Iraq
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Switzerland
Techn. improvement activities:	In-house R & D, cooperation with foreign companies
Techn. Transfer Implementations:	None
Proposals on cooperation:	Consultancy and engineering services on fancy synthetic yarn manufacturing

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ILDIZ HALICILIK VE PAZARLAMA A.Ş.

Yeniçeriler Cad. Taşdirek Çeşme Sokak 12/A Çemberlitaş - İSTANBUL
Tel: (90) 1-5165076 (4 lines) Tlx: 30574 ild tr Fax: (90) 1-5165080

Name of company:	ILDIZ CARPET MANUFACTURING AND TRADE INC.
Year of establishment and status:	1965, Private
Main products:	Hand made carpets, kilims
Production capacity:	4.000 looms: producing 10.000 meters sq. of carpets and 30.000 meters sq. of kilims
Number of employees:	612
Percentage of exports:	60 %
Main countries of export:	U.K., Italy, Japan, U.S.A., France, Germany, Austria
Type of technology:	Traditional technology improved in the company
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Turkey
Techn. improvement activities:	In-house R & D activities, improvement through vocational training, cooperation with other Turkish companies
Techn.transfer implementations:	Sale of carpet looms
Proposals on cooperation:	Joint venture, feasibility studies, project appraisal, technical consultancy and training services.

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İPSAN TEKSTİL SANAYİ A.Ş.

Organize Sanayi Bölgesi, MaVi Cad. No 9, 16159 Nilüfer - BURSA
Tel: (90) 24-431210 (5 lines) Tlx: 23409 Ipsa tr Fax: (90) 24-431119

Name of Company:	İPSAN TEXTILE INDUSTRY INC.
Year of establishment and status:	1967, Private
Main products:	Woven fabrics, printed and dyed polyester fabrics
Production capacity:	3.000 tons per year
Number of employees:	455
Type of technology:	Traditional techn. (yarns); Advanced techn. (fabrics)
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Italy, Switzerland, Holland
Techn. improvement activities:	Training; cooperation with foreign companies
Proposals on cooperation:	Training and consultancy on textile treatment; printing and dyeing; provision of expertise and know-how
Facilities available:	Cafeteria, transportation

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İŞBİR SENTETİK DOKUMA SANAYİ A.Ş.

İzmir yolu üzeri, Çayrhisar mevkii, PK. 83 BALIKESİR
Tel: (90) 661-19570 (5 lines) Tlx: 58182 Sedo-tr Fax: (90) 661-19574

Name of Company: İŞBİR SYNTHETIC WEAVING INDUSTRY INC.
Year of establishment and status: 1969, Private [392]
Main products: All sorts of woven products, synthetic sacks, big bags made of polypropilen raw material.
Production capacity: 8.000 tons per year
Number of employees: 480
Percentage of exports: 35-40 %
Main countries of export: European Community Countries, U.S.A.
Type of technology: Advanced technology
Methods of acquirement: Purchase of machinery
Source of technology: Germany, Austria, Switzerland
Techn. improvement activities: In-house R & D activities
Techn. transfer implementations: None
Proposals on cooperation: Technical consultancy, feasibility study and project appraisal; provision of materials and supplies

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KARACA ÖRME SANAYİ TİCARET A.Ş.

Davutpaşa Kışla Cad. Yılanlı Ayazma Sokak No: 1 Topkapı - İSTANBUL
Tel: (90) 1-5675728 (4 lines) Tlx: 22167 Gey tr Fax: (90) 1-5678264

Name of Company: KARACA KNITTING INDUSTRY AND TRADE INC.
Year of establishment and status: 1917, Private [364]
Main products: Men's, ladies' pullovers made of wool, lambs'wool, angora and natural fancy yarns
Production capacity: n.a.
Number of employees: 409
Percentage of exports: 12 %
Main countries of export: U.S.A., U.K., Germany
Type of technology: Adapted and improved technology
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Germany, Switzerland, Turkey
Proposals on cooperation: -

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KONSAN MAKİNA SANAYİ VE TİCARET A.Ş.

6300 Sokak, No: 2, Şemikler - İZMİR
Tel: (90) 51-653521, 664135 Fax: (90) 51-630313

Name of company: KONSAN MACHINES MANUFACTURING AND TRADING INC.
Year of establishment and status: 1985, Private
Main products: Automatic cloth laying out and cutting machines, snap fastening machines, edge folding machines, presses
Production capacity: 200 machines per year
Number of employees: 24 workers and 12 engineers
Type of technology: Adapted and improved in the company
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Germany
Techn. improvement activities: In-house R & D activities, cooperation with Turkish and foreign companies, universities and TUBITAK
Techn. transfer implementations: None
Proposals on cooperation: Joint ventures; turnkey installation of facilities; provision of machinery and equipment

KORTEKS MENSUCAT SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi, Sarı Cad. No: 29 16159 Nilüfer - BURSA
Tel: (90) 24-432130 (5 lines) Tlx: 32052 Tul tr Fax: (90) 24-432130

Name of Company :	KORTEKS TEXTILE INDUSTRY AND TRADE INC.
Year of establishment and status:	1976. Private [397]
Main products :	Tulle curtain, laces for coverlets, table clothes, napkins
Production capacity :	Tulle curtain: 2.500.000 m ; laces: 1.500.000 metres per year
Number of employees :	182
Percentage of exports :	40 %
Main countries of export :	Germany, U.S.A., Middle East Countries
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery
Source of technology :	Germany
Techn. improvement activities :	Cooperation with foreign companies
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture, feasibility study, project appraisal, provision of know-how

KOZABİRLİK - BURSA KOZA TARIM SATIŞ KOOP. BİRLİĞİ

Sarı Cadde 19, Organize Sanayi Bölgesi, 16159 Nilüfer - BURSA
Tel: (90) 24-431355, 56 Tlx: 32254 Kop tr Fax: (90) 24-216219

Name of Company:	KOZABİRLİK - BURSA UNION OF COCOON TRADING COOPERATIVES-SILK PROCESSING ESTABLISHMENT
Year of establishment and status:	1980. Union of Cooperatives
Main products:	Raw silk, spun silk and silk cocoon products
Production capacity:	70 tons per year
Number of employees:	153
Main countries of export:	Italy, Japan
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Japan
Techn. improvement activities:	In-house R & D, cooperation with universities
Techn. transfer implementations:	None
Proposals on cooperation:	Feasibility studies, project appraisal, technical consultancy
Facilities available:	Classroom, cafeteria, transportation

KÖYTAŞ TEKSTİL SANAYİ VE TİCARET A.Ş.

PK.48 Nazilli - AYDIN
Tel: (90) 631-12038 Fax: (90) 631-14599

Name of Company:	KÖYTAŞ TEXTILE INDUSTRY AND TRADE INC.
Year of establishment and status:	1977. Private
Main products:	Cotton clothes: dyeing, printing and finishing
Production capacity:	20 000.000 meters per year
Number of employees:	340
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany
Techn. improvement activities:	In-house R & D, technical training
Techn. transfer implementations:	None
Proposals on cooperation:	On-the-job training, provision of expertise, know-how

95

KUŞAN TEKSTİL SANAYİ TİCARET A.Ş.

Organize Sanayi Bölgesi, Yeşil Cad. 7. Sokak No: 35 16159 Nilüfer - BURSA
Tel: (90) 24-432054 Fax: (90) 24-433306

Name of Company:	KUŞAN TEXTILE MANUFACTURING AND TRADING INC.
Year of establishment and status:	1983, Private
Main products:	Dyed and printed fancy cloths, fancy curtains
Production capacity:	650.000 metres per year
Number of employees:	34
Percentage of exports:	20 %
Main countries of export:	Germany, U.K.
Type of technology:	Traditional technology improved in the Company
Methods of acquirement:	Purchase of machinery
Source of technology:	Italy, Turkey
Techn. improvement activities:	Cooperation with foreign companies; training
Techn.transfer implementations:	None
Proposals on cooperation:	Consultancy, provision of material and supplies

96

LÜKS KADİFE TİCARET VE SANAYİ A.Ş.

Ankara Asfaltı, 13. km. Ambar Mevkii 38125 Melikgazi - KAYSERİ
Tel: (90) 351-160771 (3 lines) Tlx: 49537 Lüks tr Fax: (90) 351-160764

Name of Company:	LÜKS KADİFE TRADE AND INDUSTRY INC.
Year of establishment and status:	1975, Private
Main products:	Vowen velvet, dyeing and finishing
Production capacity:	2.150.000 metres per year
Number of employees:	218
Percentage of exports:	70 %
Main countries of export:	U.K., Holland, Germany, Italy, Saudi Arabia
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery
Source of technology:	EC countries
Techn. improvement activities:	Cooperation with foreign companies, training
Techn.transfer implementations:	None
Proposals on cooperation:	-

97

MALKAN MAKİNA SANAYİ VE TİCARET LTD.

I.M.Ç. 2. Blok, No: 2315, 34470 Unkapanı - İSTANBUL
Tel: (90) 1-5221080, 5132907 Tlx: 30341 mlkn tr Fax: (90) 1-5131243

Name of company:	MALKAN MACHINE MANUFACTURING & TRADING INC.
Year of establishment and status:	1971, Private
Main products:	160 different types of machinery for use in textile manufacturing; Fully automatic steam iron generators; dry cleaning & laundry machines; pneumatic pressing machines
Production capacity:	2.000 machines per year
Number of employees:	80
Percentage of exports:	20 %
Main countries of export:	Yugoslavia, Saudi Arabia, Iraq, Jordan, Yemen
Type of technology:	Designed and developed in the company
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Turkey, In-firm sources
Techn. improvement activities:	In-house R&D activities
Techn.transfer implementations:	Sale of machinery
Proposals on cooperation:	Joint venture; provision of machinery and equipment.

98

MAYDIN ÇORAPLARI TİCARET VE SANAYİ A.Ş.

Bezciler Sokak 18/B, 34430 Mağmutpaşa - İSTANBUL
Tel: (90) 1-5208755 - 5221921 Tlx: 31144 Mayd Tr Fax: (90) 1-5137860

Name of Company:	MAYDIN SOCKS MANUFACTURING AND TRADING INC.
Year of establishment and status:	1960 - Private
Main products:	Men's, ladies' and children's socks of all sorts
Production capacity:	10.000.000 pairs per year
Number of employees:	160
Percentage of exports:	75 %
Main countries of export:	Germany, Denmark, France, U.K., Holland, Belgium, U.S.S.R.
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	U.K., Italy, Germany, France
Techn. improvement activities:	Improvement by technical training
Techn.transfer implementations:	None
Proposals on cooperation:	Joint venture, provision of know-how

99

MENSUCAT SANTRAL A.Ş.

Demirhane Cad. No 90, 34770 Kazlıçeşme - ISTANBUL

Tel: (90) 1-5582558 (20 lines) Tlx: 22621 mesa tr Fax: (90) 1- 5822576

Name of Company:	MENSUCAT SANTRAL INC.
Year of establishment and status:	1929. Private [52]
Main products:	bed sheets, bed covers, dyed and printed lining, upholstery and curtain fabrics
Production capacity:	n.a.
Number of employees:	2.300
Percentage of exports:	40 %
Main countries of export:	U.S.A., West European countries, Middle East countries
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Italy, France
Techn. improvement activities:	In-house R & D; cooperation with foreign companies
Techn.transfer implementations:	None
Proposals on cooperation:	Training in sales and marketing of textile products; consultancy, provision of know-how
Facilities available:	Classroom, cafeteria, transportation

100

NASA TEKSTİL KONFEKSİYON SANAYİ VE TİCARET A.Ş.

Şair Eşref Bulvarı, 1371 Sok. Alkan İşhanı No: 5, K. 5-6, 35210 - İZMİR

Tel: (90) 51-199190, 196988 Tlx: 51129 nsaz tr Fax: (90) 51-195694

Name of Company:	NASA TEXTILE CLOTHING MANUFACTURING AND TRADING INC.
Year of establishment and status:	-, Private
Main products:	Cotton clothes
Production capacity:	1.536.000 pieces per year
Number of employees:	250
Percentage of exports:	65 %
Main countries of export:	Germany, U.S.A., U.K.
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany
Techn. improvement activities:	Technical training, coop. with other Turkish companies
Techn.transfer implementations:	None
Proposals on the cooperation:	Joint venture

101

NEGİŞ TEKSTİL İMALAT VE İHRACAT A.Ş.

Keresteciler Sitesi, Fatih Cad. Selvi Sokak 6 Merter - ISTANBUL

Tel: (90) 1-5542081 Fax: (90) 1-5563585

Name of Company: NEGİŞ TEXTILE MANUFACTURING AND EXPORT INC.
Year of establishment and status: 1981. Private
Main products: 100 % cotton denim children's clothes (apparel):
trousers, jackets, skirts, shirts, bib-braces
Production capacity: 25.000 pieces per month
Number of employees: 25-30
Percentage of exports: 95 %
Main countries of export: France, Germany
Type of technology: Traditional technology
Methods of acquirement: Purchase of machinery
Source of technology: Japan, Germany
Techn. improvement activities: Cooperation with foreign companies
Techn. transfer implementations: None
Proposals on cooperation: Joint venture, feasibility studies, technical consultancy
and training services

102

NERGİS TEKSTİL SANAYİ VE TİCARET A.Ş.

Sarı Caddesi 23. Organize Sanayi Bölgesi, Nilüfer - BURSA

Tel: (90) 24- 432350 - 51 Tlx: 32050 Nerg tr Fax: (90) 24- 431368

Name of Company: NERGİS TEXTILE MANUFACTURING AND TRADING
INC.
Year of establishment and status: 1977. Private
Main products: Polyester yarn, polyester chips and cotton fabrics
Production capacity: 18.150 tons of polyester chips and 10.500 tons of
polyester yarns per year
Number of employees: 1.300
Percentage of exports: 70 %
Main countries of export: EC countries, Middle East countries
Type of technology: Advanced technology
Methods of acquirement: Purchase of machinery
Source of technology: Germany
Techn. improvement activities: Cooperation with foreign companies and universities
Techn. transfer implementations: None
Proposals on cooperation: Joint venture, technical consultancy and training,
provision of equipment, materials and supplies
Facilities available: Cafeteria, classroom, transportation

103

NİLÜFER TEKSTİL SANAYİ VE TİCARET A.Ş.

Uluyol, Sezen Sokak No: 28 - BURSA

Tel: (90) 24-147990 Tlx: 32324 Fax: (90) 24-147991

Name of Company : NİLÜFER TEXTILE INDUSTRY AND TRADE INC.
Year of establishment and status: 1950, Private
Main products : Unflammable special fabrics, parachute clothes, automotive upholstery
Production capacity : 400.000 metres per year
Number of employees : 19
Type of technology : Advanced technology
Methods of acquirement : Purchase of machinery
Source of technology : Italy
Techn. improvement activities : Cooperation with a foreign company
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, technical consultancy and training; provision of machinery, equipment and material

104

ÖZDİLEK TEKSTİL SANAYİ ve PAZARLAMA A.Ş.

Yalova Yolu 4. km. - BURSA

Tel: (90) 24-146800 (4 lines) Tlx: 52152 Özdi-tr Fax: (90) 24-146804

Name of company: ÖZDİLEK TEXTILE MANUFACTURING AND MARKETING INC.
Year of establishment and status: 1972, Private
Main products: Bathrobes, towels
Production capacity: 1.000.000 pieces of bathrobes and 10.000.000 pieces of towels
Number of employees: 1.300
Percentage of exports: 80 %
Main countries of export: U.S.A., European countries, U.S.S.R., Arab countries
Type of technology: Advanced technology
Methods of acquirement: Purchase of machinery and improvement
Source of technology: EC countries
Techn. improvement activities: In-house R & D activities and technical training
Techn. transfer implementations: None
Proposals on cooperation: Joint venture; consultancy; feasibility study

105

ÖZKONTEKS A.Ş.

Keresteciler Sitesi, Fatih Cad. Karadal Sokak No 17 Merter - ISTANBUL

Tel: (90) 1-5564407, 5392733 Fax: (90) 1-5566057

Name of Company: ÖZKONTEKS INC.
Year of establishment and status: -, Private
Main products: Shorts, T shirts, Jogging suits, shirts.
Production capacity: 360.000 pieces per year
Number of employees: 100
Percentage of exports: 15 %
Main Countries of Export: Germany, U.K.
Type of technology: Traditional technology
Methods of acquirement: Purchase of machinery
Source of technology: Turkey
Techn. improvement Activities: Technical cooperation with other Turkish companies
Proposals on cooperation: Joint venture

106

POLİKAY KONVEYOR VE TRANSMİSYON KAYIŞLARI SANAYİ VE TİC. LTD.

Demiryolu Cad, Sütçüoğlu Sitesi No 25-C/1 BURSA

Tel: (90) 24- 138755 Fax: (90) 24-138311

Name of Company:	POLIKAY CONVEYOR AND TRANSMISSION BELTS MANUFACTURING AND TRADING LTD.
Year of establishment and status:	1984, Private
Main products:	Syntetic conveyor and transmission belts for textile industry
Production capacity:	20-25 sq. meter per day
Number of employees:	28
Percentage of exports:	2 %
Main countries of export:	Lebanon, Iran
Type of technology:	Adapted technology
Methods of acquirement:	Purchase of machinery and improvement
Source of technology:	Turkey, Switzerland
Techn. improvement activities:	Cooperation with foreign companies
Techn. Transfer Implementations:	None
Proposals on the cooperation:	Joint ventures

107

POLYLEN SENTETİK İPLİK SANAYİ A.Ş.

Organize Sanayi Bölgesi, Mavi Cad. No: 15 16159 Nilüfer - BURSA

Tel: (90) 24-431110 (4 lines) Tlx: 32134 Poly tr

Name of Company:	POLYLEN SYNTHETIC YARN MANUFACTURING INC.
Year of establishment and status:	1967, Private [229]
Main products:	Polyester yarns
Production capacity:	8.500 tons per year
Number of employees:	667
Percentage of exports:	5 %
Main countries of export:	Italy, Iraq, Iran
Type of technology:	Adapted technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany
Techn. improvement activities:	In-house R & D; cooperation with unversities
Techn. transfer implementations:	None
Proposals on the cooperation:	Consultancy and training services on synthetic yarn manufacturing; provision of expertise and know-how
Facilities available:	Classroom, cafeteria, transportation

108

REİSOĞLU İPLİK VE MENSUCAT SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi, Mavi Cad. 7. Sokak No: 2. 16159 Nilüfer - BURSA
Tel: (90) 24-433871, 431599 Tlx: 32090 Rmen tr Fax: (90) 24-433522

Name of Company:	REİSOĞLU YARNS AND TEXTILE MANUFACTURING AND TRADING INC.
Year of establishment and status:	1980. Private
Main products:	Synthetic net curtains; velvet curtains, upholstery, table clothes
Production capacity:	1.000.000 metres per year
Number of employees:	65
Percentage of exports:	5-8 %
Main countries of export:	Germany, France
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany
Techn. improvement activities:	Technical training; cooperation with foreign companies
Techn.transfer implementations:	None
Proposals on cooperation:	Joint venture, on-the-job training
Facilities available	Cafeteria, transportation

109

SANKO TEKSTİL SANAYİ VE TİCARET A.Ş.

Nizip Yolu Üzeri, PK. 83 - GAZİANTEP
Tel: (90) 851-50100 (7 lines) Tlx: 69160 Sko tr Fax: (90) 851-52854

Name of Company:	SANKO TEXTILE INDUSTRY AND TRADE INC.
Year of establishment and status:	1977. Private [71]
Main products:	Cotton yarns, flannel, cardet, open end cotton knitting textile
Production capacity:	n.a.
Number of employees:	2.282
Percentage of exports:	36 %
Main countries of export:	EC countries, Middle East countries
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Switzerland
Techn. improvement activities:	Cooperation with foreign companies
Techn.transfer implementations:	None
Proposals on cooperation:	.

110

SARAY HALI A.Ş.

İnönü Cad. Teknik Han, No 72 Gümüşsuyu - ISTANBUL

Tel: (90) 1-1515206 (5 lines) Tlx: 24759 Sray tr Fax: (90) 1-1496268

Name of Company: SARAY CARPETS INC.
Year of establishment and status: 1975. private [303]
Main products: Machine-made carpets of all sorts
Production capacity: 1.800.000 sq. meters per year
Number of employees: 1.300
Percentage of exports: 30 %
Main countries of export: Germany, U.K., France, Italy, Saudi Arabia, South Africa
Type of technology: Advanced technology
Methods of acquirement: Purchase of machinery
Source of technology: Belgium, Germany
Techn. improvement activities: In-house R & D activities, technical training and cooperation with foreign companies
Proposals on cooperation: Technical consultancy, training, provision of licence and know-how, provision of machinery and equipment

111

SASA SUNİ VE SENTETİK ELYAF SANAYİ A.Ş.

Tarsus Yolu, PK. 371 - Adana

Tel: (90) 71-281076 Tlx: 63880 Fax: (90) 71-284315

Name of Company: SASA ARTIFICIAL AND SYNTHETIC YARNS MANUFACTURING INC.
Year of establishment and status: 1968. Private [19]
Main products: Polyester yarns, fabrics, PVC cips and bottles
Production capacity: 100.000 tons per year
Number of employees: 3.900
Percentage of exports: 52 %
Main countries of export: Italy, U.K., U.S.S.R., Syria, Egypt, France
Type of technology: Advanced technology + Traditional technology
Methods of acquirement: Purchase of machinery, use of licence
Source of technology: U.S.A., U.K., Germany
Techn. improvement activities: In-house R & D activities
Proposals on cooperation: Joint venture, technical consultancy and training services

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SAGEM

SÜMERBANK ARAŞTIRMA-GELİŞTİRME VE EĞİTİM İŞLETMESİ

Mudanya Caddesi, Merinos Karşısı 16372 - BURSA

Tel: (90) 24-355301 (5 lines) Tlx: 32260 beam tr Fax: (90) 24-355306

Name of Institution: SAGEM SÜMERBANK RESEARCH-DEVELOPMENT AND TRAINING ESTABLISHMENT
[Formerly: TEAM - Textile Training and Research Center (1972-1985)]

Year of establishment and status: 1972, Public

Main services: Product development; quality control; consultancy, training and documentation services for textile industry

Number of employees: 45 engineers and technicians, 32 workers

Techn. improvement activities: In-house research and development; technical and vocational training; cooperation with other Turkish and foreign companies, educational institutions and TUBITAK

Proposals on cooperation: Feasibility studies, project appraisal, technical consultancy and training services

Facilities available
Training : 1.two conference hall with 70-80 seats each
2. two classrooms with 70 seats each
3. Language laboratory
Library : More than 3.000 books mainly in textiles
Social facilities: 30 double bedrooms, dining hall for 125 people, sport halls

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SEVİL GİYİM SANAYİ VE TİCARET A.Ş.

1136 Sokak, No: 25, Zeytinlik - İZMİR

Tel: (90) 51-333553 (4 lines) Tlx: 53046 Sevi tr Fax: (90) 51-333577

Name of Company: SEVİL GARMENTS INDUSTRY AND TRADE INC.

Year of establishment and status: 1971, Private

Main products: Men's, ladies' and children's woven garments

Production capacity: 4.500.000 pieces per year

Number of employees: 1.600

Percentage of exports: 100 %

Main countries of export: U.S.A., U.K., Germany, France, Sweden

Type of technology: Advanced technology

Methods of acquirement: Purchase of machinery

Source of technology: Japan, Germany

Techn. improvement activities: Technical training, cooperation with foreign companies

Techn.transfer implementations: None

Proposals on cooperation: Joint venture, provision of know-how, on-the-job training in manufacture and production planning of ready-made clothing

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SİFAŞ SENTETİK İPLİK FABRİKALARI A.Ş.

Organize Sanayi Bölgesi, Mavi Cadde No: 17, 16159 Nilüfer - BURSA
Tel: (90) 24-431400 (4 lines) Tlx: 32126 Sıf tr Fax: (90) 24-431436

Name of Company:	SİFAŞ SYNTHETIC FİBRES FACTORIES INC
Year of establishment and status:	1962, Private [92]
Main products:	Synthetic, polyester, nylon fibres and yarns
Production capacity:	19.000 tons per year
Number of employees:	1.475
Percentage of exports:	20 %
Main countries of export:	Iraq, Iran, France, Italy, Germany
Type of technology:	Adapted technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany
Techn. improvement activities:	In-house R & D; cooperation with foreign companies
Techn.transfer implementations:	Consulting services
Proposals on cooperation:	On the job training; consultancy
Facilities available:	Classroom, cafeteria, sports hall, transportation

115

SÖKSA SİNOP ÖRME KONFEKSİYON SANAYİ VE TİCARET A.Ş.

Demirci Köyü Mevkii, PK.26 2934 SİNOP
Tel: (90) 3761-2933 Fax: (90) 3761-1894

Name of Company:	SÖKSA SİNOP KNITTING READY MADE GARMENTS INDUSTRY AND TRADE INC.
Year of establishment and status:	1974, Private
Main products:	Cotton T-shirts, undergarments of all kinds
Production capacity:	4.460.000 pieces per year
Number of employees:	545
Percentage of exports:	90 %
Main countries of export:	Germany, U.S.A.
Type of technology:	Traditional and adapted technology
Methods of acquirement:	Purchase of machinery and adaptation
Source of technology:	Germany, Japan, Turkey
Techn. improvement activities:	In-house R & D; cooperation with foreign companies
Techn.transfer implementations:	None
Proposals on cooperation:	On-the-job training, technical consultancy, know-how

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SÖNMEZ ASF İPLİK, DOKUMA ve BOYA SANAYİ A.Ş.

Yalova Yolu, 9.km. Demirtaş, Osmangazi - BURSA
Tel: (90) 24-145460 Tlx: 32114 Fax: (90) 24-146736

Name of Company:	SÖNMEZ ASF FİBRES, WEAVING AND DYEING INDUSTRY INC.
Year of establishment and status:	1975, Private [83]
Main products:	Yarns, yarn weaving and dyeing
Production capacity:	n.a.
Number of employees:	2.000
Percentage of exports:	60%
Main countries of export:	Italy, Germany.
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	EC countries
Techn. Improvement activities:	In-house R & D; training; coop. with foreign companies
Proposals on cooperation:	Consultancy and training services on weaving, knitting, design-printing, dyeing, provision of materials, supplies
Facilities available:	Classroom, cafeteria, transportation

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SÖNMEZ FİLAMENT A.Ş.

Organize Sanayi Bölgesi, Beyaz Cad. No: 1, 16159 Nilüfer - BURSA
Tel: (90) 24-431130 (4 lines) Tlx: 32140 fias tr

Name of Company:	SÖNMEZ FİLAMENT SYNTHETIC YARN INDUSTRY INC.
Year of establishment and status:	1972. Private [91]
Main products:	Polyester chips, fibres and yarn
Production capacity:	28.000 tons per year
Number of employees:	1.421
Percentage of exports:	28 %
Main countries of export:	EC Countries, Austria, Switzerland, Syria, Lebanon
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery, production under licence
Source of technology:	Germany
Techn. improvement activities:	In-house R & D; coop. with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	On-the-job training, feasibility study, project appraisal; provision of know-how; joint venture
Facilities available:	Classroom, cafeteria, transportation

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SUN-SAN TARIM TİCARET LTD.

Konur Sokak No 38/13 Kızılay - ANKARA
Tel: (90) 4-1171389 Tlx: 43406 sns tr

Name of Company:	SUNSAN AGRICULTURE AND TRADE LTD.
Year of establishment and status:	- Private
Main products:	Hand made carpets
Production capacity:	2.500 sq. metres
Number of employees:	25-30
Type of technology:	Traditional technology
Methods of acquirement:	Adaptation and development
Source of technology:	Turkey
Techn. improvement activities:	In-house R & D, technical and vocational training
Proposals on cooperation:	Consultancy and training; joint venture

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SÜMERBANK BAKIRKÖY KONYEKSIYON İŞLETMESİ

Yeni Mahalle - Bakırköy - İSTANBUL
Tel: (90) 1- 5720830 Tlx: 78702 Fax: (90) 1-5830898

Name of Company:	SÜMERBANK - BAKIRKÖY READY-MADE CLOTHING MANUFACTURING ESTABLISHMENT
Year of establishment and status:	1958. Public [434] (State Economic Enterprise)
Main products:	Wearing apparels, trousers, shirts, overcoats and suits
Production capacity:	100 million pieces/minutes per year
Number of employees:	700
Percentage of exports:	15 %
Main countries of export:	U.S.A., The Netherlands, Belgium, Italy
Type of technology:	Traditional technology improved in the Company
Methods of acquirement:	Purchase of machinery, adaptation and improvement
Source of technology:	Germany, Turkey
Techn. improvement activities:	In-house R & D, training
Techn. transfer implementations:	Training and consultancy services
Proposals on cooperation:	On the job training, consultancy; provision of expertise
Facilities available:	Classroom, cafeteria

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SÜMERBANK HEREKE HALI FABRİKASI

Yalı Caddesi, Hereke, Körfez - KOCAELİ
Tel: (90) 2161-2540 Fax: (90) 2161-2458

Name of Company:	SÜMERBANK HEREKE CARPETS FACTORY
Year of establishment and status:	1986, Public (State Economic Enterprise)
Main products:	Carpets and hand knotted silk carpets
Production capacity:	n.a.
Number of employees:	100
Percentage of exports:	15 %
Main countries of export:	U.S.A., Europe, Japan, Middle East countries
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Turkey
Techn. improvement activities:	In-house R & D; technical training
Techn. transfer implementations:	On the job training and provision of equipment, material and supplies
Proposals on cooperation:	On the job training, group training and consultancy in carpet weaving, provision of equipment and material

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SÜMERBANK MERİDOS YÜNLÜ SANAYİ İŞLETMESİ

Mudanya Caddesi No :34, Osmangazi - BURSA
Tel: (90) 24-145400 Tlx: 32123 Fax: (90) 24-145395

Name of Company:	SÜMERBANK MERINO WOOL INDUSTRIES
Year of establishment and status:	1938, Public [202] (State Economic Enterprise)
Main products:	Wool yarns, woollen fabrics, ready made garments
Production capacity:	13.000 pieces of ready made garments per month
Number of employees:	2.955
Percentage of exports:	1-2 %
Main countries of export:	U.S.A., Europe
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Germany, Turkey
Techn. improvement activities:	In-house R & D; technical training
Techn. transfer implementations:	Training and consultancy
Proposals on cooperation:	On the job training, group training and consultancy in wool yarns, fabrics, and ready-made clothing for men
Facilities available:	Classroom, accomodation, cafeteria

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ŞENİPEK TEKSTİL SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi, Sarı Cad., No: 12, 16159 Nilüfer - BURSA
Tel: (90) 24- 431158 Tlx: 32077 Mefa tr

Name of Company:	ŞENİPEK TEXTILE MANUFACTURING & TRADING INC.
Year of establishment and status:	1943, Private
Main products:	Yarns, fabrics, weaving and dyeing
Production capacity:	1.800 tons per year
Number of employees:	153
Percentage of exports:	4 %
Main countries of export:	Middle East countries, Germany, France
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Italy, Switzerland
Techn. improvement activities:	Cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture, consultancy, provision of expertise

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TAC KONFEKSİYON TESİSLERİ

Ankara Asfaltı, 25. km. Kemalpaşa - İZMİR
Tel: (90) 5481-1408 Tlx: 51816 Fax: (90) 5481-1928

Name of Company:	TAC READY-MADE GARMENTS ESTABLISHMENT CO.
Year of establishment and status:	1951, Private
Main products:	Blouses, shirts
Production capacity:	255.000 pieces per year
Number of employees:	223
Percentage of exports:	98 %
Main countries of export:	Germany, Italy
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Italy, Switzerland, Turkey
Techn. improvement activities:	Cooperation with foreign companies, training
Techn. transfer implementations:	None
Proposals on cooperation:	-

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TAFTEKS HALI SANAYİ VE TİCARET A.Ş.

Kızlar Söğüdü Mevkii, Çubuk - ANKARA
Tel: (90) 4518-3149 Tlx: 42955 Fax: (90) 4518-1015

Name of Company:	TAFTEKS CARPET MANUFACTURING AND TRADING INC.
Year of establishment and status:	- , Private [343]
Main products:	Acrylic yarns and Tufting carpets
Production capacity:	Acrylic yarns: 5.679.240 kg. per year Carpets: 3.421.440 sq. metres per year
Number of employees:	403
Percentage of exports:	16 %
Main countries of export:	Iraq, Saudi Arabia, Iran, U.K., Germany, U.S.A.
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	European countries
Techn. improvement activities:	Improvement through technical training
Proposals on cooperation:	Consultancy, training

125

TEKSTİPLİK SANAYİ VE TİCARET A.Ş.

Tayakadın Sazlıdere Mevkii, 22160 EDİRNE
Tel: (90) 181-12199 Tlx: 22677 ıdar Tr Fax: (90) 181-13502

Name of Company:	TEKSTİPLİK MANUFACTURING AND TRADING CO.
Year of establishment and status:	1975, Private [222]
Main products:	Polyamid 6 and 66 yarns
Production capacity:	8.000 tons per year
Number of employees:	600
Percentage of exports:	60 %
Main countries of export:	EC Countries, Canada, U.S.S.R.
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of technology
Source of technology:	Germany, U.K.
Techn. improvement activities:	In-house R & D., cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture, feasibility studies, project appraisal; technical consultancy and training services on yarn manufacturing and texturing processes.

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TESAN LTD.

Keresteciler Sitesi Şimşir Sokak No: 16 Merter , ISTANBUL
Tel: (90) 1-5545210 (2 lines) Tlx: 28801 Fax: (90) 1-5426031

Name of Company :	TESAN LTD. CO.
Year of establishment and status:	- , Private
Main products:	Machinery for ready-made garments
Production capacity:	n.a.
Number of employees:	10
Type of technology:	Adapted technology
Methods of acquirement:	Adaptation and improvement
Source of technology:	Japan
Techn. improvement activities:	In house R&D activities , Improvement through technical cooperation with foreign companies
Techn.transfer implementations:	None
Proposals on cooperation:	Provision of machinery and equipment , turnkey installation

127

TİSAŞ TEKSTİL SANAYİ A.Ş.

Organize Sanayi Bölgesi, Beyaz Cadde No: 2, 16159 Nilüfer - BURSA
Tel: (90) 24-431160 (3 lines) Tlx: 32244 Dite tr Fax: (90) 24- 431161

Name of Company:	TİSAŞ TEXTILE MANUFACTURING INC.
Year of establishment and status:	1970, Private
Main products:	Cotton, viscose and polyester fabrics
Production capacity:	3.250.000 meters per year
Number of employees:	100
Percentage of exports:	75 %
Main countries of export:	The Netherlands, Iraq, Libya
Type of technology:	Adapted technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Turkey
Techn. improvement activities:	Cooperation with other Turkish companies
Techn.transfer implementations:	None
Proposals on cooperation:	On-the-job training; consultancy in cotton, viscose and polyester fabrics manufacturing techniques
Facilities available:	Cafeteria, transportation

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TÜRKAY TEKSTİL SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi Sarı Cadde No 11, 16159 Nilüfer - BURSA
Tel: (90) 24-431187 (3 lines)

Name of Company:	TURKAY TEXTILE MANUFACTURING & TRADING INC.
Year of establishment and status:	1981, Private
Main products:	Fabric dyeing and treatment (cotton, polyester, viscose)
Production capacity:	2.000.000 metres per year
Number of employees:	68
Percentage of exports:	10 %
Main countries of export:	U.K.
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Italy, Switzerland
Techn. improvement activities:	In-house R & D; cooperation with foreign companies
Proposals on cooperation:	Training in treatment of printed fabrics, colour control, treatment of bleached yarns and mercerized yarns
Facilities available:	Cafeteria, transportation

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TÜRKKAN BOYA EMPRİME VE APRE SANAYİ TİCARET A.Ş

Organize Sanayi Bölgesi, Yeşil Cad. No: 10, 16159 Nilüfer - BURSA
Tel:(90) 24-431150 (4 lines) Tlx: 32275 Tuer tr Fax: (90) 24-431628

Name of Company:	TÜRKKAN DYEING, PRINTING, FINISHING INDUSTRY AND TRADE INC.
Year of establishment and status:	1977, Private
Main products:	Fabric dyeing, printing and finishing
Production capacity:	18 million meter of printing; 3 million kg. of dyeing
Number of employees:	215
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Italy, Switzerland
Techn. improvement activities:	Cooperation with foreign companies
Techn.transfer implementations:	None
Proposals on cooperation:	Group training on imprinting and dyeing processes
Facilities available:	Cafeteria, transportation

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ÜÇEL ELEM EK HAVLU SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi, Mavi Cad. No:3 16159 Nilüfer - BURSA
Tel: (90) 24-431120 (3 lines) Tlx: 32075

Name of Company:	ÜÇEL ELEM EK TOWEL INDUSTRY AND TRADE INC.
Year of establishment and status:	1977, Private
Main products:	Towels and bathrobes; weaving, printing and dyeing
Production capacity:	480.000 towels per year
Number of employees:	300
Percentage of exports:	50 %
Main countries of export:	U.S.A., Canada, Germany
Type of technology:	Traditional and adapted technology
Methods of acquirement:	Purchase of machinery and adaptation
Source of technology:	France, Italy and Turkey
Techn. improvement activities:	In-house R & D; technical training
Techn.transfer implementations:	None
Proposals on cooperation:	Joint venture, on-the-job training, consultancy
Facilities available:	Cafeteria, transportation

CHAPTER III. LEATHER TANNING AND LEATHER PRODUCTS

The Turkish tanning has successfully combined long standing traditional skills with technological progress, which together have converted the sector into a highly sophisticated industry, mobilizing large financial resources and accounting for a high degree of design and fashion.

Leather tanning and finishing consists of establishment engaged in tanning, currying, dyeing and finishing of raw hides and skins. The industry is therefore based on the use of an agricultural by-product linked to the production of meat, milk and wool. The fur industry, where the animal's body hair is preserved after tanning, is considered as a separate and distinct sector. However, woollen sheepskins (double-face) are included in the tanning sector.

The leather industry on a global basis is considered an international and trade active sector with a yearly international trade total figure of US \$ 23 billion. This is due to the extensive trade in raw materials, tanned leather and manufactured end products. The leather industry is therefore potentially strongly affected by international economic and financial development.

Industrialized countries account for the largest share of world trade of finished leather with about 80% of the world imports. The developing countries which until recently had to be contended with supplying raw materials for the leatherwear industry located in the developed countries, gradually started to make use of the vast capacity of raw material and cheap labour for their own production.

Turkey has a suitable background for the development of leatherwear with its labour force and raw material resources. Although this sector started growing and exporting certain leatherwears in the late 1960s, it was only in the 1980's that the producers increased the quality and quantity in order to keep pace with the changing demand.

While Turkey's leatherwear export increases by value, the share of exports to EC countries is also increased within total exports. Nearly 80% of Turkey's leatherwear exports has been to the EC countries. The organized leather industrial sites established in Istanbul and Izmir have increased the production capacity in the leather tanning and finishing. At the same time and in parallel with this development Turkey has increased leather processing machinery sector. Turkish firms are now constructing turnkey leatherwear factories outside of Turkey.

The footwear industry is very heterogeneous sector. Traditionally it is divided into four sub-sectors such as leather, synthetics, rubber and textile footwear, based on the material used.

The total production of footwear is not known, because a large part (appr. 80%) of the footwear production in Turkey takes place in small workshops scattered all over the country. The 1989 production is estimated to be 88 million pairs of footwear including 34.9 millions pairs of the leather shoes.

Footwear manufacturing in Turkey is done in four leather and shoe plants of Sümerbank (a State economic enterprise), in a few private sector plants and in small workshops with few workers. 80% of classical woman's and man's shoes, 75% of work shoes and 50% of sports shoes are manufactured in small workshops with very few workers.

The production costs in footwear industry depends very much on the manufacturing technique, the kind and quality of the raw material. The raw material share in the cost is quite high. It is closely related to the level of development of the by-product industry and mechanization which enables higher capacity utilization of the existing machinery. This, in return, reduces material loss and lowers production costs.

Due to product variety, to changing fashions, and to the manual labour intensive nature of the manufacturing process, the small and medium plants are more productive in the footwear industry.

Production of Leather and Leather Products (1984-1994)

Goods	1984	1989 (Estimated)	1994 (p)
Processed Sheepskin (m.Dm2)	1535.6	2147.8	4152
Calfskin (m.Dm2)	688.5	896.5	1546
Soul Leather (4000 tons)	6.1	7.1	9.5
Leather garments (million TL*)	583 532	895 012	1 760 100
Leather saddlery (million TL*)	86 297	117 600	229 400
Leather shoes (million pairs)	27.8	34.9	60.6

Source : SPO

(*) in 1988 prices.

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AKDAĞ DERİ SANAYİ VE TİCARET A.Ş.

Factory: Akçakuşla Köyü, Sarıkaya - YOZGAT

Tel: (90) 4738-1342 Fax: (90) 4738-1326

Head Office: Dibekli Cami Sokak, Aydın apt. No 27 K.1-2 Beyazıt ISTANBUL

Tel: (90) 1-5162226 Fax: (90) 1-5116334

Name of Company:	AKDAĞ LEATHER INDUSTRY AND TRADE INC.
Year of establishment and status:	1973, Private
Main products:	Raw to finish cow skins and cow split for shoe and leather garment market
Production capacity:	1.500-1.700 tons of raw hydes per year
Number of employees:	82
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery, self design and development
Source of technology:	Turkey, Company's own technical capacity
Techn. improvement activities:	Training; cooperation with Turkish companies
Techn.transfer implementations:	None
Proposals on the cooperation:	On the job training; joint venture; consultancy

132

ALBOY AYAKKABI SANAYİ VE TİCARET A.Ş.

Fazlıpaşa Cad. No: 8 Topkapı - ISTANBUL

Tel: (90) 1-5678864, 5678865

Name of company:	ALBOY FOOTWEAR INDUSTRY AND TRADE INC.
Year of establishment and status:	1978, Private
Production capacity:	n.a.
Number of employees:	n.a.
Main products:	Leather footwear and accesories
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, Italy, Turkey
Techn. improvement activities:	Cooperation with foreign companies, training
Techn.transfer implementations:	None
Proposals on cooperation:	Training and consultancy in footwear
Facilities available:	Classroom, cafeteria, transportation

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ALTINOK DERİ KONFEKSİYON LTD.

Mürselpaşa Bulvarı No 4/3 35230 - IZMIR

Tel: (90) 51-256311 Tlx: 53230 Alok tr Fax: (90) 51-258900

Name of company:	ALTINOK LEATHER GARMENTS LTD
Year of establishment and status:	1984, Private
Main products:	Leather garments of all kinds
Production capacity:	3.000-3.500 pieces per month
Number of employees:	n.a.
Percentage of exports:	60 %
Main countries of export:	EC countries, Canada, Switzerland
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Turkey
Techn. improvement activities:	Training, cooperation with Turkish companies
Techn.transfer implementations:	None
Proposals on cooperation:	-

134

ANADOLU DERİ KONFEKSİYON SANAYİ VE TİCARET A.Ş.

Ali Nihat Tarlan Cad. Ertaş Sokak No 6 İçerenköy - İSTANBUL

Tel: (90) 1-3625204

Name of company: ANADOLU READY MADE LEATHER CLOTHING
MANUFACTURING AND TRADING INC.
Year of establishment and status: 1987, Private
Main products: Ladies' jackets and skirts, mens' jackets
Proposals on cooperation: On the job training

135

ANTILOP DERİ A.Ş

2260 Sokak No 41 Konak - İZMİR

Tel: (90) 51-335732 Tlx: 53782 Fax:(90) 51-335742

Name of company: ANTILOP LEATHER INC.
Year of establishment and status: 1972, Private
Main products: Ready-made leather apparels
Production capacity: n.a.
Number of employees: n.a.
Type of technology: Adapted and improved technology
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Turkey
Techn. improvement activities: In-house R & D; cooperation with local and foreign companies
Techn.transfer implementations: Sale of machinery and equipment; know-how export; consultancy and engineering services for a Saudi Arabian company
Proposals on cooperation: Joint-venture, direct foreign investment, turnkey projects; consultancy and training services; provision of leather processing and related machinery

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APEKS DERİCİLİK SANAYİ VE TİCARET LTD.

Litros Yolu, Aile Bahçe Sok. Topkapı İşhanı K.2, No: 39-41, Topkapı,
Maltepe - İSTANBUL

Tel: (90) 1-5444112 Fax: (90) 1-5444113

Name of company: APEKS LEATHER MANUFACTURING AND TRADING LTD.
Year of establishment and status: 1980, Private
Main products: Leather goods, handbags, belts, saddlery, accessories
Production capacity: 3.000-3.500 pieces per month
Number of employees: n.a.
Percentage of exports: -
Main countries of export: EC countries, Canada, U.S.A.
Type of technology: Traditional technology
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Turkey
Techn. improvement activities: Design and development activities; cooperation with Turkish companies; training
Techn.transfer implementations: None
Proposals on cooperation:

137

AYMASAN AYAKKABI MALZEMELERİ SANAYİ VE TİCARET A.Ş.

Bomonti, Birahane Sokak No: 5/5 Şişli - İSTANBUL
Tel: (90) 1-1323900 Tlx: 39281 Fax: (90) 1-1411262

Name of Company: AYMASAN FOOTWEAR MATERIALS INDUSTRY AND TRADE INC.
Year of establishment and status: 1978, Private
Main products: Boots, shoes and slippers
Production capacity: n.a.
Number of employees: n.a.
Type of technology: Adapted and improved technology
Methods of acquirement: Purchase of machinery, adaptation
Source of technology: -
Techn. improvement activities: In-house design and development activities
Techn.transfer implementations: Provision of expertise; consultancy and engineering services; sale of equipment, material and supplies for a slipper manufacturing facility in U.A.E.
Proposals on cooperation: Consultancy and engineering services; joint venture; turnkey projects; provision of know-how, machinery, equipment and material

138

BODUROĞLU DERİ TİCARET VE SANAYİ A.Ş.

Kazlıçeşme Iskele Sok.No: 9, 34470 - İSTANBUL
Tel: (90) 1-5825387 Fax: (90) 1-5462297

Name of company: BODUROGLU LEATHER TRADING AND MANUFACTURING INC.
Year of establishment and status: 1942, Private
Main products: Leather garments of all kinds
Production capacity: 1.900 tons of hide for aniline leather and 480 tons of split suede per year
Number of employees: n.a.
Percentage of exports: -
Main countries of export: EC countries, U.S.A., Canada, Switzerland
Type of technology: Traditional technology
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Turkey
Techn. improvement activities: Training, cooperation with Turkish companies
Techn.transfer implementations: None
Proposals on cooperation: -

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BOZTAŞ DERİ SANAYİ VE TİCARET LTD.

1362. Sokak No:53 - İZMİR
Tel: (90) 51-257467 Tlx: 53430 Fax: (90) 51-138026

Name of company: BOZTAŞ LEATHER INDUSTRY AND TRADE INC.
Year of establishment and status: 1986, Private
Main products: Ready made clothing, leather jackets, skirts, trousers (leather apparel)
Production capacity: n.a.
Number of employees: n.a.
Type of technology: Adapted technology
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Turkey, Company's own technical capacity
Techn. improvement activities: In-house R & D
Techn.transfer implementations: None
Proposals on cooperation: Joint venture; direct investment in leather tanning and processing plant; provision of know-how

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CAMCIOĞLU-BİLDİREN LTD.

Kirişhane Caddesi, No:9 Kazlıçeşme-İSTANBUL
Tel: (90)1-5825010 Tlx: 23919 Fax: (90) 1-5823604

Name of Company:	CAMCIOĞLU-BİLDİREN LTD
Year of establishment and status:	1983, Private
Main products:	13 different types of machines for leather industry; Automatic leather tanning and dyeing machines; leather drying tunnel, dry drum etc.
Production capacity:	60-70 machines per year
Number of employees:	45
Percentage of exports:	20 %
Main countries of export:	Pakistan, Tunisia, Italy, Greece, Saudi Arabia, Iraq
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery and adaptation
Source of technology:	Italy, France, Spain
Techn. improvement activities:	In-house R & D activities, cooperation with foreign companies
Techn. transfer implementations:	Turn-key installation of a leather factory in Tunisia
Proposals on cooperation:	Joint venture; turnkey installation; provision of know-how; machinery, equipment and supplies

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DERBOY DERİ KİMYA ve TEKNİK DANIŞMANLIK A.Ş.

Demirhane Cad. No 26 Kazlıçeşme - İSTANBUL
Tel: (90) 1-5821769 Tlx: 26075 Parb tr Fax: (90) 1-1747609

Name of company:	DERBOY LEATHER CHEMICALS AND TECHNICAL CONSULTANCY INC.
Year of establishment and status:	1989, Private
Main products/services:	Dyestuff, fatliquors, retanning agents and auxiliaries; Technical consultancy on leather dyeing, laboratory and quality control services
Proposals on the cooperation:	Technical consultancy services; provision of materials and supplies; customer services in a modern fully equipped laboratory.

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DERİ MAKSAN LTD.

Metal İşleri Sanayi Sitesi 5. Sok. No 1-11, Kısıkköy - İZMİR
Tel: (90) 51-370340, 371044 Fax: (90) 51-372982

Name of Company:	DERİ MAKSAN LTD.
Year of establishment and status:	1988, Private
Main products:	Leather processing machinery of various kinds, and related equipment; Electronic skin surface area measuring machine, finiflex machine etc.
Production capacity:	120 machines per year
Number of employees:	60
Percentage of exports:	10 %
Main countries of export:	U.S.S.R., Pakistan
Type of technology:	Adapted and improved technology
Methods of acquirement:	Adaptation and development
Source of technology:	Turkey
Techn. improvement activities:	In-house R & D activities, cooperation with other Turkish and foreign companies
Techn. transfer implementations:	Sale of machinery
Proposals on the cooperation:	Turn key installation of leather manufacturing facilities, provision of machinery and equipment

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DERİSET DERİ SANAYİ VE TİCARET LTD

Eski Halkalı Cad. Albayrak İşhanı 18/3 Beşyol - İSTANBUL

Tel: (90) 1-5795136 Fax: (90) 1-5803497

Name of Company: DERİSET LEATHER MANUFACTURING AND TRADING LTD.
Year of establishment and status: 1985, Private
Main products: Leather brief cases; travelwares; accesories
Production capacity: n.a.
Number of employees: n.a.
Percentage of exports: 95 %
Main countries of export: EC countries, Middle East countries
Type of technology: Adapted and improved technology
Methods of acquirement: Adaptation and development
Source of technology: Turkey
Techn. improvement activities: In-house R & D activities, cooperation with other Turkish companies
Techn. transfer implementations: None

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DESA DERİ SANAYİ ve TİCARET A.Ş.

Halkalı Caddesi No: 208, 34620 Sefaköy - İSTANBUL

Tel: (90) 1- 5987419 Tlx: 21082 Desk tr Fax: (90) 1-5983392

Name of Company: DESA LEATHER MANUFACTURING AND TRADING INC.
Year of establishment and status: 1972, Private
Main products: Leather garments, bags, suitcases, leather footwear and accesories
Production capacity: n.a.
Number of employees: 1000
Percentage of exports: U.S.A.
Main countries of export: U.S.A.
Type of technology: Adapted and improved technology
Methods of acquirement: Adaptation and development
Source of technology: Turkey
Techn. improvement activities: In-house R & D activities, cooperation with other Turkish and foreign companies
Techn. transfer implementations: None
Proposals on cooperation: Project appraisal and feasibility study on integrated leather processing; consultancy for tannery work

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DOĞUMAK SANAYİ VE PAZARLAMA A.Ş.

Park Sokak Mo 33, Kat 3-5, Çağlayan - İSTANBUL

Tel: (90) 1-1461795, 1414745 Fax: (90) 11-1403209

Name of Company: DOGUMAK MANUFACTURING AND MERKETING INC
Year of establishment and status: 1988, Private
Main products: Leather bags, textile and sports bags and other leather goods
Production capacity: 4.000-5.000 leather bags; 8.000-10.000 sports bags; 5.000-7.000 other leather goods per month
Number of employees: n.a.
Percentage of exports: -
Main countries of export: U.K., Italy, Germany
Type of technology: Adapted and improved technology
Methods of acquirement: Adaptation and development
Source of technology: Turkey
Techn. improvement activities: In-house R & D activities, cooperation with other Turkish and foreign companies
Techn. transfer implementations: None
Proposals on cooperation:

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ESER MAKİNA MÜHENDİSLİK MÜŞAVİRLİK A.Ş.

Körfez Sanayi Sitesi 1. Blok, No : 125 - KOCAELİ

Tel: (90) 211-16973, 22545

Name of Company:	ESER MACHINES, ENGINEERING, CONSULTANCY INC.
Year of establishment and status:	1976, Private
Main products:	Leather processing machineries of various kinds, and related equipment
Production capacity:	n.a.
Number of employees:	n.a.
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Italy, Turkey
Techn. improvement activities:	In-house R & D activities, cooperation with foreign companies
Techn. transfer implementations:	Sale of machinery
Proposals on the cooperation:	Feasibility study for leather processing plants; project appraisal, provision of machinery and equipment; turnkey installation of leather manufacturing facilities, supervision of operations

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GÜLERYÜZ MAKİNE SANAYİ

2260 Sokak, No: 47 Gürçeşme - İZMİR

Tel: (90) 51-335747 Fax: (90) 51-335747

Name of Company:	GÜLERYÜZ MACHINE MANUFACTURING CO.
Year of establishment and status:	1976, Private
Main products:	9 different types of machinery for leather industry; overhead conveyors for leather drying; Hydrauling fleshing machine; sulphiding machine for woolskins
Production capacity:	25-30 machines per year
Number of employees:	18
Percentage of exports:	15 %
Main countries of export:	Saudi Arabia, U.S.S.R.
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery and adaptation
Source of technology:	Turkey, Italy, Germany, France
Techn. improvement activities:	In-house R & D activities, technical training
Techn. transfer implementations:	Sale of machinery
Proposals on cooperation:	Joint venture, turnkey installation, feasibility study & project appraisal, technical consultancy, training services, provision of machinery and equipment

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HİSAR MAKİNE SANAYİ

2260 Sokak No: 47/A Gürçeşme - İZMİR

Tel: (90) 51 335737 Fax: (90) 51-335753

Name of Company:	HISAR MACHINE MANUFACTURING CO.
Year of establishment and status:	1950, Private
Main products:	Different types of machines for leather processing
Production capacity:	200 machines per year
Number of employees:	17
Percentage of exports:	20 %
Main countries of export:	Saudi Arabia
Type of technology:	Adapted and improved technology
Methods of acquirement:	Adaptation and development
Source of technology:	Italy, Germany
Techn. improvement activities:	In-house R & D activities, technical training
Techn. transfer implementations:	Sale of machinery
Proposals on cooperation:	Joint venture, feasibility studies, project appraisal, technical consultancy and on the job training provision of machinery and equipment

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MATRAŞ DERİ MAMULLERİ SANAYİ VE TİCARET A.Ş.

Numune bağı Cad. Rıhtım Sokak No:6 34160 Bayrampaşa - ISTANBUL
Tel: (90) 1-5670623 (3 lines) Tlx: 30353 Matr tr Fax: (90) 1- 5674813

Name of company: MATRAS LEATHER PRODUCTS MANUFACTURING AND TRADING INC.
Year of establishment and status: 1957, Private
Main products: Business accesories, travelware, gift items made of aniline dyed full grain cow and calf leather
Production capacity: n.a.
Number of employees: 650
Percentage of exports: 60 %
Main countries of export: Germany, U.K., France, U.S.A., Canada, Switzerland, Japan, Austria
Type of technology: Adapted technology
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Turkey
Techn. improvement activities: Design and development; training, cooperation with foreign companies
Techn.transfer implementations: None
Proposals on cooperation:

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MEB DERİ EŞYA SANAYİ VE TİCARET A.Ş.

Gümüştuyu C. Çiftehavuzlar, Site Sok. 38/1 34020 Bayrampaşa ISTANBUL
Tel: (90) 1-5762610 Fax: (90) 1-5762612

Name of company: MEB LEATHER GOODS MANUFACTURING AND TRADING INC.
Year of establishment and status: 1987, Private
Main products: Attache cases, brief cases, wallets, belts made of genuine leather
Production capacity: 3.000-3.500 pieces per month
Number of employees: n.a.
Percentage of exports: 70 %
Main countries of export: U.S.A., Canada, Germany, U.K., France, Saudi Arabia
Type of technology: Traditional technology improved in the Company
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Turkey
Techn. improvement activities: Training, cooperation with Turkish companies
Techn.transfer implementations: None
Proposals on cooperation:

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ORJİN DERİ SANAYİ A.Ş.

Cendere Yolu, No: 31, Kağıthane - ISTANBUL
Tel: (90) 1-1468648 Fax: (90) 1-1468731

Name of Company: ORJİN LEATHER INDUSTRY INC.
Year of establishment and status: 1976, Private
Main products: Leather processing and dyeing
Production capacity: n.a.
Number of employees: n.a.
Type of technology: Adapted and improved technology
Methods of acquirement: Adaptation and development
Source of technology: Turkey
Techn. improvement activities: In-house R & D activities, cooperation with other Turkish and foreign companies
Techn. transfer implementations: None
Proposals on cooperation: Turn key installation of leather processing plants and ready made leather garments manufacturing; provision of know-how, consultancy on leather processing technology

152

ÖZDERSAN DERİ MAKİNALARI SANAYİ VE TİCARET LTD.

298 Sokak NO 3-C Bornova - İZMİR
Tel: (90) 51-166442 Fax: (90) 51-168495

Name of Company: ÖZDERSAN LEATHER MACHINERY
MANUFACTURING AND TRADING LTD.
Year of establishment and status: 1982, Private
Main products: Hydraulic shaving, fleshing, rotary ironing, staking
and buffing machines
Production capacity: 100 machines per year
Number of employees: 40
Main countries of export: Iraq, Saudi Arabia, Tunisia, Iran, U.S.S.R.
Type of technology: Adapted technology
Methods of acquirement: Adaptation and development
Source of technology: France, Italy
Techn. improvement activities: In-house R & D, cooperation with foreign companies
Techn. transfer implementations: Sale of machinery
Proposals on the cooperation: Turn-key installation of leather manufacturing
facilities and provision of machinery and equipment

152

PEPKO PAZARLAMA ETÜD PROJE A.Ş.

Rami Kışla Cad. 100/A, 34140 - İSTANBUL
Tel: (90) 51-5656754 (4 lines) Tlx: 22787 Coat Fax: (90) 1-5774785

Name of company: PEPKO MARKETING STUDY PROJECT INC
Year of establishment and status: 1975, Private
Main products: Suede garments made of real leather, fur skins
Production capacity: 80.000 pieces
Number of employees: 148
Percentage of exports: 100 %
Main countries of export: Japan, Germany, U.S.A., Canada, Italy
Type of technology: Advanced technology
Methods of acquirement: Purchase of machinery
Source of technology: Turkey, European countries
Techn. improvement activities: Cooperation with foreign companies
Techn. transfer implementations: None
Proposals on cooperation: Joint venture, turn key installation and operation of
leather tanning facilities and leather apparel manu-
facturing plants; consultancy on leather processing

154

TERGAN DERİ ÜRÜNLERİ SANAYİ VE TİCARET LTD.

Uzun Çarşı Cad. Mercan İşhanı No:15-16, 34450 Mercan - İSTANBUL
Tel: (90) 1-5206849 - 5110849 Fax: (90) 1-5136243

Name of Company: TERGAN LEATHER PRUDUCTS MANUFACTURING
AND TRADING LTD.
Year of establishment and status: 1971, Private
Main products: Leather hand bags, briefcases, document cases,
belts, wallets
Production capacity: 20.000 pieces per month
Number of employees: 140
Percentage of exports: 40 %
Main countries of export: Germany, Australia, Austria, Finland, Sweden
Type of technology: Advanced technology
Methods of acquirement: Purchase of machinery
Source of technology: Turkey
Techn. improvement activities: In-house R & D, improvement through technical
training and cooperation with foreign companies
Techn. transfer implementations: None
Proposals on cooperation: Joint venture, feasibility studies, consultancy for
installation and operation, provision of know-how,
licence agreements

155

TUNCER MAKİNA TİCARET A.Ş.

Tatlıkuyu Hamam Sok. NO 18 Beyazıt - İSTANBUL

Tel: (90) 1-5173223 - 5173224

Name of company:	TUNCER MACHINERY TRADING INC.
Year of establishment and status:	- , Private
Main products:	Machines for saddlery and shoe making
Production capacity:	40-50 machines per month
Number of employees:	9
Type of technology:	Adapted and improved technology
Methods of acquirement:	Adaptation and development
Source of technology:	Italy
Techn. improvement activities:	In-house R&D activities, technical training
Techn.transfer implementations:	None
Proposals on cooperation:	Provision of machinery and of know-how, technical consultancy on shoes and saddlery manufacturing

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ÜMIT KÜRKÇÜLÜK TİCARET SANAYİ A.Ş.

İstiklal Cad. Müeyyet Sokak, No: 6 Beyoğlu-İSTANBUL

Tel: (90) 1-1449980, 1455429 Fax: (90) 1-1442039

Name of company:	ÜMIT FUR MANUFACTURING AND TRADING INC.
Year of establishment and status:	- , Private
Main products:	All sorts of fur garments
Production capacity:	10 fur overcoats per mont
Number of employees:	15
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany, U.K.
Techn. improvement activities:	In-house R & D activities
Techn.transfer implementations:	None
Proposals on cooperation:	Feasibility studies and project appraisal, technical consultancy and training on fur processing, provision of machinery, equipment and material

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VATIŞ MAKİNA SANAYİİ

Sancaktepe Mah. Tekin Sokak Altınış Hanı Güngören-İSTANBUL

Tel: (90) 1-5577032 Fax: (90) 1-5750675

Name of Company:	VATIŞ MACHINES MANUFACTURING CO.
Year of establishment and status:	1952, Private
Main products:	Snap fastener press, leather label printing machine
Production capacity:	200 machines of each per month
Number of employees:	15
Percentage of exports:	15 %
Main countries of export:	Yugoslavia, Iran
Type of technology:	Adapted and improved technology
Methods of acquirement:	Designed and developed in the firm
Source of technology:	Firm's own sources
Techn. improvement activities:	In-house R & D activities
Techn.transfer implementations:	Sale of machinery
Proposals on cooperation:	Joint venture; provision of patent, licence and/or know-how arrangements; provision of machinery

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YEŞİL KUNDURA SANAYİ A.Ş.

Yeni Londra Asfaltı 6/2, Topkapı - ISTANBUL

Tel: (90) 1-5679315 (5 lines) Tlx: 22635 ızın tr Fax: (90) 1-5776947

Name of company:	YEŞİL FOOTWEAR INDUSTRY INC.
Year of establishment and status:	- , Private
Main products:	Leather shoes, military boots, safety boots, sports shoes (leather-textile)
Production capacity:	4.500 pairs per day
Number of employees:	350
Percentage of exports:	30 %
Main countries of export:	EC countries, U.S.A.
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery
Source of technology:	European countries
Techn. improvement activities:	In house design & development; cooperation with foreign companies
Techn.transfer implementations:	None
Proposals on cooperation:	Feasibility study, project appraisal; consultancy

CHAPTER IV. CEMENT INDUSTRY

The cement industry started in Turkey around 1912. The public and private sectors are both active in the sector. 22 out of the 41 factories are owned by the State* and the remaining 18 are privately owned. 33 of these use dry production techniques, two hydraulic technique and the rest semi-dry technique. These factories meet the domestic demand. While the private sector investments are established mainly in Marmara, Aegean and Mediterranean regions with advanced economic growth and with transportation facilities, the public sector investments are in the less developed regions of the country.

The small number of the factories and the dominance of public sector in the industry, enables efficient control of the sector. Since public sector is an important consumer of cement, state is interested to determine rules related to price, distribution and exports.

Although the per capita consumption in Turkey is rather low, the production capacity has risen considerably in the 1980s. The capacity has risen from 2.4 million tons in the '60s to nearly 9 million tons in early '70s and to 22.6 million tons in 1988. By the end of Sixth Five Year Development Plan period (1990-1994) total capacity of Turkish cement industry is envisaged to reach 40 million tons per year.

Today, with the existing capacity Turkey ranks 12th amongst cement producing countries in the world and 5th in Europe. In terms of capacity growth rate Turkey is the first in the world.

There is no great problem of raw materials which is supplied domestically from sufficient reserves. 85 percent of the machinery and equipment (60% in terms of value) used in production is also locally supplied. But on the other hand, the foreign dependent or imported components such as fuel and energy make up 40% of unit cost.

So much effort is made in order to minimize the oil share in the cost by changing the present technology and by designing new ones for the newly built factories. Today, 33 out of the 40 cement factories in Turkey are operated by coal, and the rest uses fuel oil or coal plus fuel oil.

The elimination of price control in 1985, and acceleration of domestic demand increased the investments in cement industry towards adaptation of new technologies in order to reduce costs, increase productivity and protect the environment. Today, private sector leads the modernization efforts and privatized factories are expected to follow.

* 5 of these 22 factories were sold to Société Des Ciments Français, in 1989, under the privatization scheme.

In summary, Turkish cement industry of today can be defined as a sector of medium level technology, successfully adapting itself to new technological changes, continuously growing, and dynamic in nature.

Capacity & Production in Cement Industry (1980-1994) (1000 tons)

	1980	1984	1989 (e)	1994(e)
Capacity	19.830	21.900	26.400	40.000
Production	12.875	15.737	25.000	37.000
Exports		2.167	299	1.196

Source : SPO, SIS.

(e) = estimated

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ADANA ÇİMENTO SANAYİİ T.A.Ş.

Ceyhan Yolu 10.km. Yüreğir - ADANA

Tel: (90) 4- 2238433 Tlx: 44391 Fax: (90) 4-2135523

Name of company :	ADANA CEMENT INDUSTRY INC.
Year of establishment and status	1954, Public + Private [126]
Main products :	Cement, ready made concrete and clinkers
Production capacity :	1.400.000 tons per year
Number of employees :	908
Percentage of exports :	4 %
Main countries of export :	Egypt, Italy, Algeria, Spain Holland, Middle East
Type of technology :	Dry production technique (Improved technology)
Methods of acquirement :	Purchase of machinery
Source of technology :	-
Techn. improvement activities :	In-house R & D; training
Techn. transfer implementations :	None
Proposals on cooperation :	Consultancy on cement production

160

AKÇİMENTO A.Ş.

Mimar Sinan Mahallesi, Büyükçekmece - ISTANBUL

Tel: (90) 188-36830 Tlx: 23594 Fax: (90) 188-36841

Name of company :	AK CEMENT INC.
Year of establishment and status	1967, Private [76]
Main products :	Cement and ready-mixed concrete
Production capacity :	1.650.000 tons per year
Number of employees :	722
Type of technology :	Dry production technique (Improved technology)
Methods of acquirement :	Purchase of machinery, improvement
Source of technology :	-
Techn. improvement activities :	In-house R & D; training
Techn. transfer implementations :	Group training on cement technology
Proposals on cooperation :	Consultancy and training on cement production

161

ALAMSAŞ ALARKO AĞIR MAKİNA SANAYİİ A.Ş.

Kanlı Mandıra Mevkii, Tuzla - ISTANBUL

Tel: (90) 1-3951354 Tlx: 36004 Fax: (90) 1-3951959

Name of company :	ALAMSAŞ-ALARKO HEAVY INDUSTRY MACHINERY MANUFACTURING INC.
Year of establishment and status	1973, Private
Main products :	Equipment for cement industry, pressure tanks, cranes and heat exchangers
Production capacity :	10.000 tons per year
Number of employees :	350
Percentage of exports :	10 %
Main countries of export :	Iran, U.A.E., Jordan, Iraq, Nepal
Type of technology :	Adapted and improved technology
Methods of acquirement :	Licence, adaptation and development
Source of technology :	Germany
Techn. improvement activities :	In-house R & D activities
Techn. transfer implementations :	Sale of machinery & equipment
Proposals on cooperation :	Joint venture, turnkey installation of facilities, provision of equipment, materials and supplies

162

ASLAN ÇİMENTO A.Ş.

Darıca, Taşlımanı Mevkii, Gebze - KOCAELİ

Tel: (90) 1993-2990 (3 lines) Tlx: 34143 asfa tr Fax: (90)1993-3188

Name of Company : ASLAN CEMENT INC.
Year of establishment and status: 1912, Private [98] (The first cement factory in Turkey)
Main products : Cement
Production capacity : 1.000.000 tons per year
Number of employees : 654
Type of technology : Dry production technique (Improved technology)
Proposals on cooperation :

163

ASMAŞ AĞIR SANAYİ MAKİNALARI A.Ş.

Ankara Asfaltı, 25. km. Kemalpaşa - İZMİR

Tel: (90) 5481-1260 Tlx: 51818 Fax: (90) 5481-1976

Name of Company : ASMAŞ HEAVY INDUSTRY MACHINERY
MANUFACTURING INC.
Year of establishment and status: 1976, Private
Main products : Machinery and equipment for cement and marble
industry ; machinery for iron - steel and defence
industries
Type of technology : Adapted and improved technology
Methods of acquirement : Purchase of machinery, adaptation and development
Source of technology : -
Techn. improvement activities : In house R & D; training; cooperation with foreign
and Turkish companies
Techn. transfer implementations : Export of equipment for cement industry to Algeria
Proposals on cooperation : Provision of parts of rolling equipment used in
cement, paper and defence industries

164

BATIÇİM - BATI ANADOLU ÇİMENTO SANAYİİ A.Ş.

Ankara Asfaltı Naldöken Köyü 35050 - İZMİR

Tel: (90) 51-180060 , 181686

Name of Company : BATIÇİM-WEST ANATOLIA CEMENT INDUSTRY INC.
Year of establishment and status: 1966, Private [113]
Main products : Cement
Production capacity : 1.500.000 ton per year
Number of employees : 750
Type of technology : Dry production technique
Proposals on cooperation :

165

BURSA ÇİMENTO SANAYİİ A.Ş.

PK.10, 16371, Kestel - BURSA

Tel: (90) 24-721560 (7 lines) Tlx: 32407 bcf tr Fax: (90) 24-721660

Name of Company : BURSA CEMENT INDUSTRY INC.
Year of establishment and status: 1969, Private [194]
Main products : Cement, Ready made concrete
Production capacity : 1.200.000 ton per year
Number of employees : 496
Type of technology : Dry production technique
Proposals on cooperation :

166

ÇANAKKALE ÇİMENTO SANAYİİ A.Ş.

Karaköy Palas Kat 6 Karaköy - İSTANBUL

Tel: (90) 1-1522510 (4 lines) Tlx: 25171 Fax: (90) 1-1449048

Name of company : ÇANAKKALE CEMENT INDUSTRY INC.
Year of establishment and status 1980, Private [241]
Main products : Portland cement, Portland cement clinker
Production capacity : 2.000.000 tons cement per year
Number of employees : 530
Percentage of exports : 60 %
Main countries of export : Italy, Spain, U.S.A., Canada, Thailand, Australia
Type of technology : Advanced technology
Methods of acquirement : Purchase of machinery
Source of technology : U.S.A.
Techn. improvement activities : In-house R & D, improvement through technical training, cooperation with foreign companies
Techn. transfer implementations : None
Proposals on cooperation : Joint venture

167

ÇİMHOL- ÇİMENTO VE YAN MAMULLERİ SANAYİ A.Ş.

Kennedy Cad. Yalın Sok. No 3 Kavaklıdere - ANKARA

Tel: (90) 4-1174900 Fax: (90) 4-1189716

Name of company : ÇİMHOL-CEMENT AND BY-PRODUCTS
MANUFACTURING INC.
Year of establishment and status 1969, Private
Main products/services : Cement and various technical services for cement industry
Techn. transfer implementations : Consultancy
Proposals on cooperation : Consultancy and training on cement manufacturing, feasibility studies, project appraisal, assembly works

168

DOĞUSAN BORU SANAYİ VE TİCARET A.Ş.

Sivas Karayolu, 14. Km. PK. 74 - ERZİNCAN

Tel: (90) 231-6199, 6331 Tlx: 84018

Name of Company : DOĞUSAN PIPE INDUSTRY AND TRADE INC.
Year of establishment and status: 1974, Private
Main products : Fibre cement pipes and joints
Production capacity : 25.000 tons per year
Number of employees : 189
Type of technology : Adapted technology
Methods of acquirement : Purchase of machinery, adaptation and development
Techn. improvement activities: In-house R & D; training
Techn. transfer implementations: None
Proposals on cooperation :

169

ESTON - ESKİŞEHİR BETON SANAYİ VE TİCARET A.Ş.

Alpu Yolu Kavşağı - Eskişehir

Tel: (90) 22-172700 Tlx: 35142 Eson Tr Fax: (90) 22-172684

Name of company :	ESTON-ESKİŞEHİR CONCRETE MANUFACTURING AND TRADING INC.
Year of establishment and status	- , Private
Main products :	Prefabricated Concrete elements (Structural components and concrete poles)
Production capacity :	150.000 tons per year
Number of employees :	350
Type of technology :	Adapted and improved (advanced) technology
Methods of acquirement :	Purchasing machinery, patent and licencing
Source of technology :	Germany and Turkey
Techn. improvement activities :	In-house R & D activities and cooperation with foreign companies
Techn. transfer implementations :	Projects developed and offers were submitted to India, Iran and Gulf countries
Proposals on cooperation :	Joint venture, turn key projects, feasibility studies, project appraisal, technical consultancy and training services, sale of licence, know-how and machinery

170

ESKİŞEHİR ÇİMENTO FABRİKASI A.Ş.

Çukurhisar - ESKİŞEHİR

Tel: (90) 22-135110 Tlx: 35223 Fax: (90) 22-112060

Name of Company :	ESKİŞEHİR CEMENT FACTORY INC.
Year of establishment and status:	1957 , Private [349]
Main products :	Cement and cemery Clinkers
Production capacity :	500.000 tons per year
Number of employees :	328
Type of technology :	Dry production technique + Hydraulic system
Methods of acquirement :	Purchase of machinery
Source of technology :	-
Techn. improvement activities :	In-house R & D; training
Techn. transfer implementations :	On-the-job training for foreigners
Proposals on cooperation :	Training and consultancy services; provision of know-how and expertise on cement manufacturing

171

GÜRIŞ MAKİNA VE MONTAJ SANAYİ A.Ş.

Karaoğlan köyü, Konya Yolu 23. km. Gölbaşı - ANKARA

Tel: (90) 4-1841526 Tlx: 44799 Fax: (90) 4-1842677

Name of Company:	GÜRIŞ MACHINERY AND ASSEMBLY INDUSTRY INC.
Year of establishment and status:	1975, Private
Main products:	Manufacture and assembly of equipment for cement factories
Type of technology	Adapted and improved technology
Tech. improvement activities:	In-house R & D; training; cooperation with Turkish and foreign companies
Techn. transfer implementations:	Turnkey project of a cement factory in Iraq; exports of equipment for cement factories, cranes and conveyors to U.K. and Germany
Proposals on cooperation:	Turnkey projects for cement factories; provision of equipment for cement factories, industrial plants and hydroelectric and thermoelectric power plants; steam boilers, cranes, conveyors etc.

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KARS ÇİMENTO SANAYİ T.A.Ş.

KARS

Tel: (90) 021-11919 Tlx: 74185 Fax: (90) 021-5751

Name of company : KARS CEMENT INDUSTRY INC
Year of establishment and status : - . Public
Main products : Clinker and cement
Production capacity : Clinker: 265.000 tons per year,
Cement: 360.000 tons per year
Number of employees : 300
Type of technology : Traditional technology
Methods of acquirement : Purchase of machinery
Source of technology : Germany
Techn. improvement activities : Improvement through technical training
Techn. transfer implementations : None
Proposals on cooperation : Technical consultancy and training services on
cement manufacturing

173

KASTAŞ KARADENİZ ÇİMENTO ÜRÜNLERİ SAN. VE TİC.A.Ş.

Erzurum Yolu, 15.km. Esiroğlu (Maçka) - TRABZON

Tel: (90) 0433-1006, 1246 Fax: (90) 0375-1244

Name of company: KASTAŞ BLACK SEA CEMENT PRODUCTS
INDUSTRY AND TRADE INC.
Year of establishment and status: 1977, Private
Main products: Concrete electricity poles, fence poles, concrete pipes
and curbs
Production capacity: 12.000 electricity poles; 60.000 fence poles; 60.000
curbs and 40.000 concrete pipes per year
Number of employees: 200
Proposals on cooperation:

174 KUTLUTAŞ MAKİNA SANAYİ VE ÇELİK İMALAT A.Ş.

Ankara-Istanbul Devlet Karayolu, 30.km. Sarayönü 06530 - ANKARA

Tel: (90) 43122736, 3126638 Tlx: 44791 kmsc tr Fax: (90) 4-3122343

Name of Company : KUTLUTAŞ MACHINERY INDUSTRY AND STEEL
CONSTRUCTION INC.
Year of establishment and status: 1976 . Private [88]
Main products : Cement factories, industrial plants erection; all types
of steel construction; cranes, pressure tanks,
Production capacity : 24.000 tons per year
Number of employees : 350
Type of technology : Adapted technology
Methods of acquirement : Purchase of machinery, production under licence
Source of technology : Germany
Techn. improvement activities : In-house R & D; technical training; cooperation with
Turkish and foreign companies
Techn. transfer implementations : None
Proposals on cooperation : Turnkey projects, provision of know how and licence;
provision of machinery and equipment

175

SEZAI TÜRKES-FEVZİ AKKAYA İNŞAAT A.Ş.

Tophanelioğlu Caddesi, No 19 Altunizade - ISTANBUL

Tel: (90) 1-3398460 Tlx: 29465 Stfa tr Fax: (90) 1-3395579

Name of Company :	SEZAI TÜRKES FEVZİ AKKAYA CONSTRUCTION INC.
Year of establishment and status:	- , Private [88]
Main products /services:	Construction of all kinds of industrial plants, roads, harbours, bridges, tunnels etc. incl. cement factories
Production capacity :	-
Number of employees :	6.039
Type of technology :	Traditional techology + Advanced technology + Self developed technology
Methods of acquirement :	Purchase of machinery, licence agreements
Source of technology :	Hungary, Italy, Japan, France,U.S.S.R.
Techn. improvement activities :	In-house R & D; cooperation with foreign companies
Techn. transfer implementations :	None
Proposals on cooperation :	Joint venture; turnkey projects of factories; feasibility study and project appraisal; technical consultancy and training services; provision of know how in design, engineering and contacting for all kinds of constructions

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SUPERLİT ELYAFLI ÇİMENTO SANAYİ VE TİCARET A.Ş

Sanayi Caddesi, No: 5 Yunus, Kartal - ISTANBUL

Tel: (90) 1-3538296 (4 lines) Tlx:29274 elfa tr Fax: (90) 1-1314951

Name of Company :	SUPERLIT FIBRE CEMENT INDUSTRY AND TRADE INC.
Year of establishment and status:	1961, Private
Main products :	Fibre cement pressure and sewerage pipes, fibre cement corrugated and flat sheets and fittings
Production capacity :	85.000 tons of pipes and 44.000 tons of sheet product per year
Number of employees :	n.a.
Percentage of exports :	n.a.
Main countries of export :	Middle East and North African countries
Type of technology :	Traditional and advance technologies
Methods of acquirement :	Purchase of machinery
Source of technology :	-
Techn. improvement activities :	In-house R & D
Techn. transfer implementations :	None
Proposals on cooperation :	

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TÜRKİYE ÇİMENTO MÜSTAHSİLLERİ BİRLİĞİ
UNION OF CEMENT PRODUCERS OF TURKEY
Eskişehir Yolu, 9. km. No: 359 Çankaya - ANKARA
Tel: (90) 4-2873250 Tlx: 42759 Fax: (90) 4- 2137916

Established in 1957

Main Services

Standarts control for cement; equipment and materials for cement manufacturing
Resaerch and training

Technical cooperation experience

Provision of expertise for factory rehabilitation, quality control
Consultancy on quality control, research on raw materials
Organization of training
Consultancy and engineering services in Yemen, Tunusia, Pakistan and Madagascar

Proposals for cooperation

Training on cement manufacturing techniques
Consultancy on research & development
Organisation of training & quality control

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ÇİTOSAN
TÜRKİYE ÇİMENTO VE TOPRAK SANAYİİ T.A.Ş.

ÇİTOSAN
CEMENT AND SOIL INDUSTRY INC. OF TURKEY

Eskişehir Yolu, 7. Km. ANKARA
Tel: (90)4-2873200 (60 lines) Tlx: 42414 Cisa Tr Fax: (90)4-2230475

ÇİTOSAN was established in 1953 as a public corporation in order to meet the increasing demand of Turkish construction industry for cement. Today, ÇİTOSAN is a group of companies consists of 27 factories, including those five factories which were privatised in late 1989 and the joint companies. The total production capacity of ÇİTOSAN is 8.8 million tons of cement per year, which is about 37 % of Turkey's total cement production capacity.

ÇİTOSAN, contributes to the technical assistance programme organised by UNIDO and the The Union of Cement Producers of Turkey for engineers and technicians from developing countries by providing on-the job training services. During the last 9 years, over 300 engineers from 72 different countries were trained in ÇİTOSAN cement factories.

CHAPTER V. GLASS AND GLASSWARE

Glassmaking is a traditional industry whose products are present in many aspects of everyday lives: medicine and laboratories, electronics, motor vehicles, chemicals, pharmaceutical, cosmetics, tableware, furniture and optical products, foodstuff, textiles and the building industry.

Glass is an impermeable, inert, attractive, recyclable and quality product. Glass has also been able to remain a competitive packaging with a good quality-price ratio. Finally glass is the only packaging material that offers the choice between returnable and non-returnable goods, thus allowing it to respond appropriately to the characteristics of the distribution networks for which the product is designed.

In terms of environmental impact, glass is the only packaging material which has proved economically viable to recycle. As compared to diverting huge quantities of glass away from domestic refuse channel, recycling creates large savings in raw materials (1 ton of recycled glass replaces 1.2 tons of raw material).

Glass industry is one of the early built large industries in Turkey, which is established on sound foundations and which is now competing with international producers all over the world.

Production of glass in Turkey is concentrated heavily in the hands of Türkiye Sise Cam Fabrikaları A.S. which is one of the five largest glass producers of Europe and one of the ten largest of the world. The other companies in Turkey are medium or small size and are often traditional family firms. They usually produce glass houseware from scrap glass. There is no public company in glass industry in Turkey.

This structure seems quite reasonable, since the glass & glassware industries in the world are usually organized under the management of a few powerful institutions due to the economies of large scale.

The role and importance of glass industry in Turkish economy is striking. It alone consumes 6 % of total electricity and 2.5 % of fuel oil consumed in the country. Moreover, 7 % of total employment in Turkey is in the glass industry.

Turkey having a well-established glass industry for about 60 years has proven its expertise by producing quality products at competitive prices. Turkish glass industry is adapting and implementing the latest technologies and conducting R & D activities in order to improve its technology and the efficiency of its production.

The Sixth Five Year Development Plan also implies adaptation of new technologies to develop new products, to increase productivity and quality and to reduce cost.

Production in Glass Industry (1980-1994) (000 tons)

Products	1980	1984	1989	1994 (e)
Float glass	108	335	380	600
Glass containers	64	173	290	425
Glasswares	22	56	135	200
Total exports		261	337	642

Source: SPO

(e) : estimated.

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ANADOLU CAM SANAYİİ A.Ş.

Tekke Köyü Cıvanı, PK. 612 33004 - MERSİN

Tel: (90) 741-15720, 35050 Tlx: 67122 Acsm tr Fax: (90) 741-11185

Name of Company :	ANADOLU GLASS MANUFACTURING INC.
Year of establishment and status:	- , Private [99] (A company of Şişe Cam Group)
Main products :	Flat glass, glass containers (non-returnable bottles)
Production capacity :	85.000 tons of flat glass and 94.000 tons of glass containers per year
Number of employees :	1.498
Percentage of exports :	55 %
Main countries of export :	Various countries in Asia, Africa, Europe and America
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, production under licence
Source of technology :	U.S.A., U.K., Japan
Techn. improvement activities :	In-house R & D, cooperation with foreign companies
Techn. transfer implementations :	Training and technical consultancy
Proposals on cooperation :	Turnkey projects; feasibility studies; project appraisal; consultancy and training; provision of know-how; provision of equipment and material

180

BURSA OTO CAM SANAYİİ A.Ş.

Organize Sanayi Bölgesi, Yeşil Cad. No: 8 16372 BURSA

Tel: (90) 24-431324 Tlx: 32039 Bcam tr Fax: (90) 24-432372

Name of Company :	BURSA AUTO GLASS MANUFACTURING INC.
Year of establishment and status:	1978, Private (A company of Şişe Cam Group)
Main products :	Flat and convex safety glass for automotive industry; printed and plain oven glass
Production capacity :	382.000 sq. meters
Number of employees :	115
Percentage of exports :	30 %
Main countries of export :	Syria, Italy
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery
Source of technology :	Germany
Techn. improvement activities :	In-house R & D activities
Techn. transfer implementations :	None
Proposals on cooperation :	Consultancy on safety glass manufacturing

181

CAM ELYAF SANAYİ A.Ş.

PK. 62. Çayırova 41401 Gebze - KOCAELİ
Tel: (90) 199-12796 Tlx: 22773 Pres tr Fax: (90) 199-31991

Name of Company :	GLASS FIBERS MANUFACTURING INC.
Year of establishment and status:	- , Private (A company of Şişe Cam Group)
Main products :	Continuous strand mats and roving; polyester; glass tissue; glass reinforced plastic (GRP) pipes, composites
Production capacity :	8.000 tons of continuous fibres; 8.500 sq. metres of non- continuous fibres; 3.000 tons of polyester and 90 tons of composites per year
Number of employees :	534
Percentage of exports :	30 %
Main countries of export :	EC Countries
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, production under licence
Source of technology :	U.S.A.
Techn. improvement activities :	In-house R & D; technical training; cooperation with foreign companies
Techn. transfer implementations :	None
Proposals on cooperation :	Training and consultancy in glass fibers manufacturing

182

CAM İŞLEME TESİSİ A.Ş.

Bayramoğlu sapağı, PK. 110 Çayırova 41400 Gebze - KOCAELİ
Tel: (90) 199-15070 Tlx: 34230 Tşcs tr Fax: (90) 199-12645

Name of Company :	GLASS PROCESSING FACILITY INC.
Year of establishment and status:	1989, Private (A Company of Şişe Cam Group)
Main products :	Mirrors, automotive safety glass, architectural and insulating glass, oven glass, enameled glass
Production capacity :	1.880.000 tons per year
Number of employees :	465
Percentage of exports :	28 %
Main countries of export :	Various countries in Asia, Africa and Europe
Type of technology :	Advanced & traditional techn. improved in the firm
Methods of acquirement :	Purchase of machinery, adaptation and development
Source of technology :	U.S.A., U.K., Japan
Techn. improvement activities :	In-house R & D; training; cooperation with foreign companies
Techn. transfer implementations :	Training and consultancy services
Proposals on cooperation :	Consultancy and on the job training in insulating glass manufacturing techniques, quality control and engineering services

183

CAMIŞ MAKİNA KALIP SANAYİ A.Ş.

Davutpaşa Kışla Cad. Fırın Yolu, No: 56 34020 Topkapı - İSTANBUL
Tel: (90) 1-5675792 Tlx: 30246 Mkf tr Fax: (90) 1-5769997

Name of Company :	CAMIŞ MACHINERY AND MOULD INDUSTRY INC.
Year of establishment and status:	1989, Private (A company of Şişe Cam Group)
Main products :	Moulds for glass containers and glass household- wares; various machines and spare parts
Number of employees :	528
Type of technology :	Traditional technology improved in the Company
Methods of acquirement :	Purchase of machinery
Source of technology :	U.S.A., U.K.
Techn. improvement activities :	In-house R & D; technical and vocational training
Proposals on cooperation :	Turnkey installation; technical consultancy; provision of expertise and know-how; provision of a wide range of machinery and equipment for use in the glass industry

184

ÇAYIROVA CAM SANAYİ A.Ş.

PK. 34 Çayırova, 41407 Gebze - KOCAELİ
Tel: (90) 199-32821 Tlx: 34153 Ccs tr Fax: (90) 199-34958

Name of Company :	ÇAYIROVA GLASS MANUFACTURING INC.
Year of establishment and status:	1957, Private [123] (A company of Şişe Cam Group)
Main products :	Flat glass; flint and tinted figured and wired glass; sandblasted glass
Production capacity :	130.000 tons per year
Number of employees :	1.340
Percentage of exports :	50 %
Main countries of export :	U.S.A., EC Countries
Type of technology :	Traditional technology improved in the Company
Methods of acquirement :	Purchase of machinery
Source of technology :	U.S.A., U.K.
Techn. improvement activities :	In-house R & D; training; cooperation with foreign companies
Techn. transfer implementations :	On-the-job training and consultancy
Proposals on cooperation :	Consultancy and training ; provision of expertise and know-how; provision of equipment and material

185

DENİZLİ CAM SANAYİ VE TİCARET A.Ş.

Şirinköy, PK. 118 20002 - DENİZLİ

Tel: (90) 621-24894 (5 lines) Tlx: 59548 Dcam tr Fax: (90) 621-18746

Name of Company : DENİZLİ GLASS MANUFACTURING&TRADING INC
Year of establishment and status: 1974, Private
Main products : Handmade and mechanical glasswares, glass bars
Production capacity : 1.200 tons of handmade glasswares and 600 tons of mechanical glasswares
Number of employees : 426
Percentage of exports : 50 % of glasswares
Main countries of export : Holland, U.S.A., Italy, Germany, U.K., Saudi Arabia.
Type of technology : Traditional technology
Methods of acquirement : Designed and developed in the Company
Source of technology : Company's own technical sources
Techn. improvement activities : In-house R & D activities
Techn. transfer implementations : None
Proposals on cooperation : Joint venture, provision of know-how, licence

186

ISTANBUL PORSELEN SANAYİ A.Ş.

Hatboyu Cad. 51, Tuzla - ISTANBUL

Tel: (90)1-3951102 Tlx: 36002 prme Fax: (90) 1-3952452

Name of Company: ISTANBUL PORCELAIN INDUSTRY INC.
Year of establishment and status: 1956, Private [355]
Main products: Porcelain tableware
Production capacity: 1.000 tons per year (15 million pieces)
Number of employees: 1.026
Percentage of exports: 20 %
Main countries of export: France, Italy
Type of technology: Traditional technology
Methods of acquirement: Purchase of machinery, adaptation and development
Source of technology: Germany, Company's own technological capacity
Techn. improvement activities: In-house R & D
Techn. transfer implementations: None
Proposals on cooperation: Feasibility study and project appraisal; technical consultancy and training; provision of know-how and expertise in general porcelain making technology (German Bavarian type feldspatic hard porcelain)

187

KIRKLARELİ CAM SANAYİİ A.Ş.

Büyükkarıştıran Mevkii, PK.40 39761 Lüleburgaz - KIRKLARELİ
Tel: (90) 183-14560 Tlx: 37263 Kcs tr Fax: (90) 183-14573

Name of Company :	KIRKLARELİ GLASS MANUFACTURING INC.
Year of establishment and status:	1984, Private [193] (A Company of Şişe Cam Group)
Main products :	Soda lime mechanical glass householdware
Production capacity :	80.000 tons per year
Number of employees :	823
Percentage of exports :	30 %
Main countries of export :	U.S.A., European countries, Middle East countries
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, production under licence
Source of technology :	U.S.A., U.K.
Techn. improvement activities :	In-house R & D, cooperation with foreign companies
Techn. transfer implementations :	None
Proposals on cooperation :	Feasibility study and project appraisal; provision of expertise and know-how in glass householdware design and manufacturing

188

PAŞABAĞÇE CAM SANAYİİ A.Ş.

Sahipmolla Cad. No: 56 81638 Paşabağçe - ISTANBUL
Tel: (90) 1-3221800 Tlx: 29464 Fax: (90) 1-3312772

Name of Company :	PAŞABAĞÇE GLASS MANUFACTURING INC.
Year of establishment and status:	1935, Private [72] (A Company of Şişe Cam Group)
Main products :	Soda lime and crystal glass mechanical and handmade householdware, lightingware, special glass containers, glass tiles and bricks, marbles, cosmetic bottles and decorative glassware
Production capacity :	46.000 tons per year
Number of employees :	3.449
Percentage of exports :	50 %
Main countries of export :	Almost all countries in Europe, Asia, Africa, America and Australia
Type of technology :	Advanced and traditional technology
Methods of acquirement :	Purchase of machinery, adaptation and development
Source of technology :	U.S.A., U.K., Japan, Turkey
Techn. improvement activities :	In-house R & D; technical and vocational training; cooperation with foreign and Turkish companies
Techn. transfer implementations :	Various initiatives for technical cooperation
Proposals on cooperation :	Turnkey projects, feasibility study, project appraisal, technical consultancy and training services; provision of machinery, equipment, material and supplies

189

SİNOP CAM SANAYİİ A.Ş.

PK. 83, 57001 SİNOP

Tel: (90) 3761-5409, 5450 Tlx: 82453 Scs tr Fax: (90) 3761-5400

Name of Company :	SİNOP GLASS MANUFACTURING INC.
Year of establishment and status:	1980, Private (A Company of Şişe Cam Group)
Main products :	Handmade sodalime glass and crystal householdware
Production capacity :	2.300 tons per year
Number of employees :	1.128
Percentage of exports :	35 %
Main countries of export :	Japan, Italy, Germany, U.S.A.
Type of technology :	Traditional technology improved in the Company
Methods of acquirement :	Purchase of machinery, adaptation and development
Source of technology :	In-firm sources
Techn. improvement activities :	In-house R & D; training; cooperation with other companies
Techn. transfer implementations :	None
Proposals on cooperation :	Technical training; provision of technical know-how

190

TEKNİK CAM SANAYİİ A.Ş.

Davutpaşa Cad., Cebe Ali Bey Sokak No 16 34020 Topkapı - ISTANBUL

Tel: (90) 1-5670365 Tlx: 23263 Ecam tr Fax: (90) 1-5779978

Name of Company :	TECHNICAL GLASS MANUFACTURING INC.
Year of establishment and status:	-, Private [336] (A Company of Şişe Cam Group)
Main products :	Heat resistant glass householdware, heat resistant laboratory equipment
Production capacity :	6.400 tons per year
Number of employees :	584
Percentage of exports :	25 %
Main countries of export :	EC countries, Middle East countries, Scandinavian countries, Algeria, Singapore, Malaysia
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, use of licence and patent
Source of technology :	U.K., U.S.A., Japan
Techn. improvement activities :	In-house R & D; training; cooperation with foreign companies
Techn. transfer implementations :	None
Proposals on cooperation :	Technical consultancy, provision of know-how

191

TOPKAPI ŞİŞE SANAYİİ A.Ş.

Davutpaşa Kışla Cad. Fırın Yolu No: 56 34020 Topkapı - İSTANBUL
Tel: (90) 1-5679300 Tlx: 22038 Tosi tr Fax: (90) 1-5763959

Name of Company :	TOPKAPI BOTTLE MANUFACTURING INC.
Year of establishment and status:	1969, Private [146] (A Company of Şişe Cam Group)
Main products :	Glass containers
Production capacity :	132.000 tons per year
Number of employees :	1.187
Percentage of exports :	18 %
Main countries of export :	-
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, adaptation and development
Source of technology :	-
Techn. improvement activities :	In house R & D; technical and vocational training
Techn. transfer implementations :	None
Proposals on cooperation :	On-the-job training and consultancy in glass containers manufacturing

192

TRAKYA CAM SANAYİİ A.Ş.

Büyükkarıştıran Mevkii, PK.98 39761 Lüleburgaz - KIRKLARELİ
Tel: (90) 183-14560 Tlx: 37261 Bkes tr Fax: (90) 183-13126

Name of Company :	TRAKYA GLASS MANUFACTURING INC.
Year of establishment and status:	1984 , Private [74] (A Company of Şişe Cam Group)
Main products :	Float glass
Production capacity :	400.000 tons per year
Number of employees :	976
Percentage of exports :	40 %
Main countries of export :	EC countries, Middle East, Africa
Type of technology :	Advanced technology
Methods of acquirement :	Purchase of machinery, production under licence
Source of technology :	U.K.
Techn. improvement activities :	In-house R & D; cooperation with foreign companies
Techn. transfer implementations :	None

193

TÜRKİYE ŞİŞE VE CAM FABRİKALARI A.Ş.

Barbaros Bulvanı, Camhan, No:125, 80706 Beşiktaş - İSTANBUL
Tel: (90) 1-1747200 (72 lines) Tlx: 26963 Pcam tr Fax: (90) 1- 1670418

Name of Company :	BOTTLE AND GLASSWARE FACTORIES OF TURKEY
Year of establishment and status:	1935, Private [143] (A Group of Companies)
Main products :	Float glass, flat glass, tinted figured and wired glass, sandblasted glass, glass containers, hand made and mechanical glasswares, crystal householdwares, laboratory devices and equipment, glass tubes and rods, heat-resistant glass householdware, glass fibre products, porcelain tableware, sodium silicat soda
Production capacity :	1.029.000 tons per year
Number of employees :	19.000
Percentage of exports :	40 %
Main countries of export :	Middle East, Asia, Australia, Africa, Europe, various countries in North and South America
Type of technology :	Advanced technology: Traditional technology: In-firm developed technology
Methods of acquirement :	Purchase of machinery; production under licence;
Source of technology :	U.K., U.S.A., Japan, Company's own technical sources
Techn. improvement activities :	In-house R & D; improvement through technical and vocational training; cooperation with foreign companies
Techn. transfer implementations :	Technical cooperation proposals from various countries of Middle East, Asia and Africa are evaluated and offers are made, although no concrete results have been achieved yet. A training program has been organised for a group of technicians and engineers from Nigeria in flat glass manufacturing.
Proposals on cooperation:	Transfer of technology and provision of know-how in flat glass (Fourcault and Pittsburgh), glass container mechanical and hand made glasswares, hand made crystal householdwares manufacturing and sodium silicat production, within a framework of a technical assistance agreement; Economic and technical feasibility studies; raw materials analysis; engineering, design and procurement services; provision of machinery and equipment; training; supervision of installment, assembly and operation of plants; technical consultancy; turnkey projects of glassware plants

194

YARIMCA PORSELEN SANAYİ T.A.Ş.

Körfez - KOCAELİ

Tel:(90) 21-181300 Tlx: 33163 Fax: (90) 21-184712

Name of Company :	YARIMCA PORCELAIN INDUSTRY INC.
Year of establishment and status:	1968, Public [422] (A Company of Citosan Group)
Main products :	Porcelain tableware
Production capacity :	4.000 tons per year
Number of employees :	1.200
Percentage of exports :	1-2 %
Main countries of export :	Iraq.
Type of technology :	Traditional technology
Methods of acquirement :	Purchase of machinery and adaptation
Source of technology :	Czechoslovakia, Company's own technical capacity
Techn. improvement activities :	In-house R & D; technical training
Techn. transfer implementations :	On-the-job training, group training, expertise and consultancy on ceramic ware manufacturing
Proposals on cooperation :	On-the-job training; group training; provision of expertise, know-how; consultancy on manufacturing technology of ceramic ware
Facilities available :	Classroom, accomodation, cafeteria

CHAPTER VI. AGRICULTURAL IMPLEMENTS

Turkey has been an important agricultural country for centuries. The rapid development of the industrial and service sectors in the last two decades did not remove the significant position of agricultural sector. On the contrary, the cultivated arable land was enlarged and use of modern inputs in agriculture as well as of producing for market increased considerably.

One of the main reasons for Turkey's significance as an agricultural country lies in its suitability as far as climate, land and water resources are concerned. Due to these advantages Turkey has become one of the few self-sufficient countries in basic food products.

Turkish agriculture has a dualist nature in its socio-economic and technological structure. Modernization and the household consumption which oriented the farming sector, are at different levels of development. The producers in these sectors have different sources and technological supplies, different organization of production, financing and marketing, and different aims. Tractors, ox-carts and plows which are the instruments of different development levels, can function in different sectors at the same time. Commercial farming sector largely benefits from technological changes and reaches a certain productivity level through intensive input usage.

Mechanization in farming provides standard quality and low cost of production. The tractor demand which was supplied by imports before the planned period, is now greatly supplied by domestic production. Consequently, production and usage of tractors have largely expanded, increasing the number of tractors per thousand hectares to 23, whereas the world average today is 17.

Agricultural mechanization has gained importance in recent years. As compared to 1983, the number of combined sowing machines has increased by 41 %, motopumps by 19 %, tractors by 27 %, atomizers by 15 %, and harvesting machines by 13 % in 1988. However, the term agricultural mechanization is generally associated with tractors, and not with other farming implements. The machine park in Turkish agriculture covering the other implements is very limited in comparison to tractors.

Production of Agricultural Implements (1984-1994)

	1984	1980	1989	1994
Agricultural Tractors	17 179	47 033	18 884	52 000
Combines	n.a.	180	1	75

Source: SPO.

195

AGROKİM

AGROKİM TARIM İLAÇLARI SANAYİ VE TİCARET A.Ş.

Bankalar Cad. Bozkurt İşhanı No: 19 K.2. Karaköy - İSTANBUL
Tel: (90) 1-1520700 (4 lines) Tlx: 24639 Anmık Tr Fax: (90) 1-1497468

Name of company:	AGROKİM AGRICULTURAL PRODUCTS MANUFACTURING AND TRADING INC.
Year of establishment and status:	1983 . Public
Main products:	Agricultural products, pesticides, fertilizers, household insecticides
Production capacity:	200 tons per year
Number of employees:	18
Percentage of exports:	1 %
Main countries of export:	
Type of technology:	Traditional technology improved in the company
Methods of acquirement:	Adaptation and development
Source of technology:	Turkey
Techn. improvement activities:	Technical training, cooperation with Turkish and foreign companies, universities and TUBITAK
Techn. transfer implementations:	None
Proposals on cooperation:	Provision of patent, licence and know-how: consultancy

196

ALARCO SANAYİ VE TİCARET A.Ş. - ALPOM

Yukan Dudullu Sanayi Bölgesi, Ümraniye - İSTANBUL
Tel: (90) 1-3641001 (4 lines) Fax: (90) 1-3644523

Name of company:	ALARCO INDUSTRY AND TRADE INC - ALPOM
Year of establishment and status:	1954, Private [102]
Main products:	Water pumps (submersible and circulation pumps) and burners
Production capacity:	60.000 pumps per year, 15.000 burners per year
Number of employees:	335
Percentage of exports:	1 %
Main countries of export:	France, Iran, Syria
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery, adaptation
Source of technology:	Western Europe
Techn. improvement activities:	In-house R & D, technical training, cooperation with universities and TUBITAK
Techn. transfer implementations:	None
Proposals on cooperation:	Joint ventures, provision of machinery & equipment, consultancy and training on manufacturing technologies of submersible pumps and circulation pumps
Facilities available:	Classroom, cafeteria, transportation

197

ARILI PLASTİK SANAYİ A.Ş.

Kartal Cad. No 47 Yakacık - İSTANBUL

Tel: (90) 1-3771090 (6 lines) Tlx: 36593 Arpl Tr Fax: (90) 1-3771097

Name of company:	ARILI PLASTICS MANUFACTURING INC.
Year of establishment and status:	- , Private
Main products:	Irrigation pipes, agricultural and packaging cords, ropes, coils, pipe and filling fibres
Production capacity:	5.000 tons per year
Number of employees:	120
Percentage of exports:	10 %
Main countries of export:	Saudi Arabia
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery and patent
Source of technology:	Turkey and EC countries
Techn. improvement activities:	Cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Provision of agricultural implements, material and supplies; consultancy and training on agricultural plastics manufacturing

198

BURSA VİTAMİNLİ YEM SANAYİ A.Ş.

Organize Sanayi Bölgesi, Yeşil Cadde No 25, 16159 Nilüfer - BURSA

Tel: (90) 24-431387 Tlx: 32315 bvit tr

Name of company:	BURSA VITAMINOUS FODDER INDUSTRY INC.
Year of establishment and status:	1968, Private
Main products:	Fodder for poultry and livestock
Production capacity:	72.000 tons per year
Number of employees:	70
Type of technology:	Advanced technology
Methods of acquirement:	Purchase of machinery, Transfer of technology through a Technical Assistance Project
Source of technology:	The Netherlands
Techn. improvement activities:	In-house R & D; cooperation with universities
Techn. transfer implementations:	None
Proposals on the cooperation:	Training and consultancy; provision of know-how

199

COŞKUNÖZ METAL FORM MAKİNA ENDÜSTRİSİ VE TİC. A.Ş.

Mavi Cad. 15, Organize Sanayi Bölgesi - 16140 Nilüfer - BURSA

Tel: (90) 24-431140 (6 lines) Tlx: 32222 Keho Tr Fax: (90) 24-431146

Name of company:	COŞKUNÖZ METAL FORMING & MACHINES MANUFACTURING AND TRADING INC.
Year of establishment and status:	1973, Private
Main products:	Hydraulic and eccentric presses, welding machines, various parts and moulds for tractors
Production capacity:	Parts and moulds: 50.000 pieces per year, Welding machines: 300 machines per year
Number of employees:	475
Percentage of exports:	20 %
Main countries of export:	U.K., Germany, South Africa, Syria, Iraq, Egypt
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery, self design and development, production under licence
Source of technology:	Germany, Turkey, U.K.
Techn. improvement activities:	Cooperation with foreign companies, in-house R & D activities, technical and vocational training
Techn. transfer implementations:	Sale of machinery and equipment
Proposals on cooperation:	Provision of machinery and equipment, training
Facilities available:	Classroom, cafeteria, transportation

200

ÇETİNEL TARIM MAKİNALARI VE ÇELİK DÖKÜM SANAYİ VE TİCARET A.Ş

Ceyhan Yolu, Girne Bulvarı 134 Yüreğir - ADANA

Tel: (90) 71-213451 Tlx: 62418 Fax: (90) 71-215246

Name of company:	ÇETİNEL AGRICULTURAL MACHINERY AND FORGED STEEL INDUSTRY AND TRADE INC.
Year of establishment and status:	1941. Private
Main products:	Threshers, hay movers and harvesters
Production capacity:	n.a
Number of employees:	n.a.
Type of technology:	Adapted and improved technology
Methods of acquirement:	Self design and development
Source of technology:	Company's own technical capacity
Techn. improvement activities:	In-house R & D; technical training; cooperation with Turkish companies
Techn.transfer implementations:	None
Proposals on the cooperation:	Consultancy: provision of machinery and equipment

201

EGE TARIMSAL ARAŞTIRMA ENSTİTÜSÜ

PK. 9 Menemen - İZMİR

Tel: (90) 51-149131 Tlx: 51293 aari-tr Fax: (90) 51-12792

Name of Institution:	EGEAN AGRICULTURAL RESEARCH INSTITUTE
Year of establishment and status:	1963. Public
Main services:	Research and training in agricultural technology, seed growing and seed improvement technology
Number of employees:	60 technical experts and 250 workers
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery and equipment
Source of technology:	Self design & development, Turkey and various countries
Techn. improvement activities:	In-house R & D activities, technical and vocational training, cooperation with Turkish and foreign companies, coop. with universities and TUBITAK
Proposals on cooperation:	Joint ventures, sale of know-how & licence, consultancy and training on agricultural technology
Facilities available:	Classroom, accomodation, cafeteria, transportation

202

GENEL MAKİNE SANAYİ LTD.

Halkalı Yolu No 5, Güneşli - Bakırköy - İSTANBUL

Tel: (90) 1-5504679, 1-1431885 Tlx: 24683 Tlx tr Fax: (90) 1-1519248

Name of company:	GENEL MACHINE MANUFACTURING LTD.
Year of establishment and status:	- , Private
Main products:	Pumps for all liquids and for all applications
Production capacity:	1.500 pumps per year
Number of employees:	45
Type of technology:	Adapted and improved technology
Methods of acquirement:	Self design and development
Source of technology:	Turkey and in-firm sources
Techn. improvement activities:	In-house R & D activities, technical training, cooperation with universities and TUBITAK
Proposals on cooperation:	Joint venture, provision of machinery and equipment

203

HEMA HİDROLİK MAKİNA SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi, 59501 Çerkezköy - TEKİRDAĞ
Tel: (90) 1856-1770 (4 lines) Tlx: 22013 Fax: (90) 1856-1652

Name of company: HEMA HYDRAULIC MACHINES MANUFACTURING AND TRADING INC.
Year of establishment and status: -, Private [314]
Main products: Hydraulic pumps, Hydraulic steering wheels, Hydraulic lifts, Hydraulic mine poles
Production capacity: 500.000 various units
Number of employees: 500
Percentage of exports: 22 %
Main countries of export: U.S.A., Canada, U.K., Germany, Belgium, Iran, Pakistan, Italy, France, Austria
Type of technology: Advanced technology
Methods of acquirement: Production under licence
Source of technology: U.K., Germany
Techn. improvement activities: In house R & D; cooperation with foreign companies
Techn.transfer implementations: 1. Manufacture of hydraulic pumps, hydraulic lifts and other spare parts for tractors in Pakistan
2. Manufacture of hydraulic pumps in Iran
Proposals on the cooperation: Joint venture, provision of patent, licence and know-how

204

İBRAHİM ÖRS TARIMSAL EKİPMANLAR VE ÇELİK DÖKÜM FABRİKALARI

Samsun Yolu 8.km. - KIRIKKALE
Tel: (90) 459-41235 (3 lines) Tlx: 42953 Orsk tr Fax: (90) 459 11101

Name of Company : İBRAHİM ÖRS AGRICULTURAL EQUIPMENTS AND STEEL CASTING FACTORIES
Year of establishment and status: -, Private
Main products : Trailers, water tanks, seedling-planting machines, rake reapers, forage trailer, cultivators, land levellers
Production capacity : n.a.
Number of employees : n.a.
Type of technology : Adapted and improved technology
Methods of acquirement : Adaptation and development
Source of technology : Turkey, Company's own technical capacity
Techn. improvement activities : In-house R & D; technical training
Techn. transfer implementations : Sale of machinery and equipment
Proposals on cooperation : On the job training; provision of equipment

205

İGSAŞ İSTANBUL GÜBRE SANAYİ A.Ş.

41784 Körfez - KOCAELİ
Tel: (90) 21-175471 (15 lines) Tlx: 33283 igsa tr Fax: (90) 21- 174692

Name of company: İGSAŞ İSTANBUL FERTILIZER INDUSTRIES INC.
Year of establishment and status: 1971, Public [41] (State Economic Enterprise)
Main products: Urea, Ammonia
Production capacity: Urea: 561.000 tons/ year, Ammonia: 380.000 tons/year
Number of employees: 710
Percentage of exports: 30 %
Main countries of export: Iran, Italy, France, Spain, Belgium, Greece
Type of technology: Advanced technology
Methods of acquirement: Production under licence
Source of technology: U.K., The Netherlands
Techn. improvement activities: Cooperation with foreign companies, technical and vocational training
Techn. transfer implementations: None
Proposals on cooperation: Joint venture, feasibility studies, project appraisal

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JANTAŞ JANT SANAYİ VE TİCARET A.Ş.

Akçay Caddesi, No 107, Gaziemir 35410 İZMİR

Tel: (90) 51-512855 Tlx: 53634 Jant tr Fax: (90) 51-510684

Name of Company: JANTAŞ WHEEL RIMS MANUFACTURING AND TRADING INC.

Year of establishment and status: 1968, Private

Main products: All sorts of conventional and tubless wheel rims

Production capacity: 300.000 wheel rims per year

Number of employees: 306

Percentage of exports: 50 %

Main countries of export: EC and East European countries, Middle East and Far East countries

Type of technology: Traditional technology developed in the firm

Methods of acquirement: Self design and development (the firm holds a number of patents on rim manufacturing) and purchase of machinery

Source of technology: In-firm sources, Turkey, Germany

Techn. improvement activities: In-house R & D activities

Techn. transfer Implementations: None

Proposals on cooperation: Turnkey installation of similar facilities; project appraisal and feasibility studies; technical consultancy and training; provision of patent, licence and know-how; provision of machinery, parts & moulds

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KALE BALATA SANAYİ VE TİCARET A.Ş.

Orhaniye Cad. Koçkaya İşhanı No 14 Sirkeci - İSTANBUL

Tel: (90) 1- 5208000 (5 lines) Tlx: 23634 Tkk-tr Fax: (90) 1-5190698

Name of company: KALE BRAKE LININGS MANUFACTURING AND TRADING INC.

Year of establishment and status: 1976, Private

Main products: Various types of brake linings

Production capacity: 500 tons per year

Number of employees: 42

Percentage of exports: 17 %

Main countries of export: U.K., Portugal, Iran, Jordan, Iraq, Saudi Arabia, Syria.

Type of technology: Advanced technology

Methods of acquirement: Purchase of machinery

Source of technology: Germany

Techn. improvement activities: In-house R & D, cooperation with foreign companies

Techn. transfer implementations: None

Proposals on cooperation: Joint venture; project appraisal; provision of material and supplies

208

KALE OTO RADYATÖR SANAYİ VE TİCARET A.Ş.

Orhaniye Cad. Koçkaya İşhanı No 14, Sirkeci - ISTANBUL
Tel: (90) 1-5208000 (5 lines) Tlx: 23634 Tkk-tr Fax: (90) 1-5190698

Name of Company: KALE AUTO RADIATORS MANUFACTURING AND TRADING INC.
Year of establishment and status: 1971 . Private
Main products: Radiators for cars and tractors
Production capacity: 300.000 pieces per year
Number of employees: 400
Percentage of exports: 10 %
Main countries of export: Pakistan, Jordan, Syria, Iraq, Greece.
Type of technology: Advanced technology
Methods of acquirement: Purchase of machinery, Self design & development
Source of technology: Turkey, in-firm sources
Techn. improvement activities: In-house R & D activities
Techn. transfer implementations: Provision of machinery and equipment
Proposals on cooperation: Joint venture, provision of machinery and equipment

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MEDAL ARAŞTIRMA, MÜHENDİSLİK, MALZEME, MAKİNA LTD.

Yetimhane Sokak No: 12, Altunizade, Üsküdar - ISTANBUL
Tel: (90) 1-3423801 Tlx: 29505 Fax: (90) 1-3422658

Name of company: MEDAL RESEARCH, ENGINEERING, MATERIALS, MACHINERY LTD
Year of establishment and status: 1962 . Private
Main products: Agricultural implements, metallurgical furnaces, windmills and cane sugar production units
Number of employees: 24
Percentage of exports: 90 %
Main countries of export: Somali, Iraq, Trinidad and Tobago, Venezuela
Type of technology: Appropriate technology, designed and developed by the Company
Methods of acquirement: Research, adaptation and development
Source of technology: Company's own technical capacity
Techn. improvement activities: In-house R & D, cooperation with foreign institutions
Techn. transfer implementations:
1. Technology for windmill and windpumps; cane sugar production unit, handpumps, agricultural implements
2. Training for machine shop operations: casting; welding; mechanical and electrical repair; machine design and drawing
3. Expertise on mechanical and electrical repair, machine design and manufacturing
4. Consultancy on foundry machine shop and welding shop rehabilitation
5. Provision of metallurgical furnaces (rotary cast iron, crucible copper, resistance)
Proposals on cooperation:
1. Training and consultancy on machine shop operations; foundry operations, welding, machine design, mechanical and electrical repair, ceramic kitchenware and sanitary ware production; cane sugar production machinery, metallurgical furnaces, windmills, hand pumps, agricultural implements and solar heaters manufacturing
2. Provision of metallurgical furnaces, windmills, hand pumps, cane sugar production units, solar heaters and agricultural implements

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PANCAR MOTOR SANAYİ VE TİCARET A.Ş.

Eski Londra Asfaltı, Kartaltepe Mah. No: 33 Bayrampaşa - İSTANBUL
Tel: (90) 1-5454650 (10 lines) Tlx: 30067 Pamo tr Fax: (90) 1-5780341

Name of company:	PANCAR MOTOR MANUFACTURING AND TRADING INC.
Year of establishment and status:	-, Private
Main products:	Diesel motor pumps, diesel generators, spare parts
Production capacity:	30.000 motors per year
Number of employees:	471
Percentage of exports:	6 %
Main countries of export:	Tun ista
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery
Source of technology:	Germany
Techn. improvement activities:	Cooperation with foreign company
Techn. transfer implementations:	None
Proposals on cooperation:	Provision of equipment, material and supplies

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TARAL TARIM MAKİNA-ALETLERİ SANAYİ A.Ş.

Gümüşsuyu Caddesi, Hastane Yolu, 34020 Maltepe, Topkapı - İSTANBUL
Tel: (90) 1-5679550 (10 hat) Tlx: 22357 tr tr

Name of company:	TARAL AGRICULTURAL MACHINERY AND EQUIPMENT MANUFACTURING INC.
Year of establishment and status:	1969, Private
Main products:	Garden sprayer, mistblower, hand tractor, tractor mounted sprayer
Production capacity:	20.000 sprayers and 500 tractors per year
Number of employees:	100
Percentage of exports:	10 %
Main countries of export:	U.A.E., Egypt, Pakistan, Iran
Type of technology:	Adapted technology
Methods of acquirement:	Production under licence, purchase of machinery
Source of technology:	Italy, Germany
Techn. improvement activities:	In-house R & D; cooperation with other companies
Techn. transfer implementations:	Sale of agricultural machinery and equipment
Proposals on the cooperation:	Joint venture, provision of agricultural implements

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TARIM ALET VE MAKİNALARI TEST MERKEZİ MÜDÜRLÜĞÜ

Tarım Sitesi, İstanbul Yolu 5. km. Yenimahalle - ANKARA
Tel: (90) 4-3156574

Name of Institution:	DIRECTORATE OF AGRICULTURAL MACHINERY AND EQUIPMENT TEST CENTER
Year of establishment and status:	1978, Public
Main services:	Test and control of agricultural machinery and equipment
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of equipment, self design and development
Source of technology:	Various countries and Turkey
Techn. improvement activities:	In-house R & D; cooperation with Turkish companies and research institutes
Techn. transfer implementations:	None
Proposals on the cooperation:	Feasibility study, project appraisal, training

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TULSAN MOTOPOMP SANAYİ VE TİCARET A.Ş.

Necatibey Cad. No: 102 80030 Karaköy - İSTANBUL

Tel: (90) 1-1443023, 1437061 Fax: (90)1-1450391

Name of Company: TULSAN MOTOPUMP MANUFACTURING AND TRADING INC.
Year of establishment and status: - , Private
Main products: Centrifugal pumps, rubber hoses, rubber roller linings
Production capacity: 2.000 centrifugal pumps, 150.000 metres hoses per year
Number of employees: 60
Type of technology: Traditional technology
Methods of acquirement: Purchase of machinery
Source of technology: Turkey and EC countries
Techn. improvement activities: In-house R & D, technical training, coop. with foreign companies, technical universities and TUBITAK
Techn. transfer implementations: None
Proposals on cooperation: Joint venture, turnkey projects, consultancy

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TÜMOSAN-TÜRK MOTOR SANAYİ VE TİCARET A.Ş.

Ankara Yolu, 12. Km. KONYA

Tel: (90) 33-182002 (4 lines) Tlx: 48160 sems tr Fax: (90) 33-182006

Name of company: TÜMOSAN - TURKISH ENGINES MANUFACTURING AND TRADING INC.
Year of establishment and status: 1976, Public [212] (State Economic Enterprise)
Main products: Tractors and diesel engines
Production capacity: n.a.
Number of employees: 626
Type of technology: Adapted and improved technology
Methods of acquirement: Production under licence, purchase of machinery
Source of technology: Italy
Techn. improvement activities: In-house R & D; technical training; cooperation with foreign and Turkish companies
Techn. transfer implementations: None
Proposals on the cooperation: Turnkey projects; feasibility study, project appraisal; installation, layout and start up of engine and tractor factories; consultancy and training services on engine and tractor assembly works; manufacturing and testing; provision of know-how, expertise; provision of machinery, equipment and materials
Facilities available : Classroom, cafeteria, accomodation, transportation

TÜRKİYE ZİRAİ DONATIM KURUMU

Fatih Caddesi. No 33 Dışkapı 06043 ANKARA

Tel: (90) 4-3170220 (20 lines) Tlx: 44245 Zdgm tr Fax: (90) 4-3470320

Name of Institution:	AGRICULTURAL SUPPLY ORGANISATION OF TURKEY
Year of establishment and status:	1944. Public [208] (State Economic Enterprise)
Main products:	11 different types of tractors, over 200 types of agricultural machinery and equipment
Production capacity:	15.000 Tractors and 60.000 agricultural machinery & equipment per year
Number of employees:	2.685
Percentage of exports:	10 %
Main countries of export:	Austria, Iran, Kenya, Nigeria
Type of technology:	Adapted technology
Methods of acquirement:	Production under licence
Source of technology:	Various European countries
Techn. improvement activities:	In-house R & D; cooperation with foreign companies
Techn. transfer implementations:	Sale of machinery and equipment
Proposals on cooperation:	Provision of licence and know-how; provision of machinery

UZEL MAKİNE SANAYİ A.Ş.

Kışla Cad. No 5 Rami - ISTANBUL

Tel: (90) 1-5670841 Tlx: 23416 Fax: (90) 1-5764595

Name of company:	UZEL MACHINES MANUFACTURING INC.
Year of establishment and status:	1953, Private [25]
Main products:	Tractors and diesel engines, leaf and helical springs, wheel rims, brakes
Production capacity:	5.300 tractors
Number of employees:	2.250
Percentage of exports:	-
Main countries of export:	Middle East countries, Sudan
Type of technology:	Adapted and improved technology
Methods of acquirement:	Production under licence; purchase of machinery
Source of technology:	U.K.
Techn. improvement activities:	Cooperation with a foreign company; In-house R&D; technical and vocational training
Techn. transfer implementations:	Sale of tractors and engines
Proposals on the cooperation:	Provision of machinery, equipment and supplies

YEM SANAYİ TÜRK A.Ş.

Eskişehir Yolu 8. km. ANKARA

Tel: (90) 4-2872635 (4 lines) Tlx: 44456 Yems tr Fax: (90) 4-2872639

Name of Company:	TURKISH FEED INDUSTRY INC.
Year of establishment and status:	- Public [55] (State Economic Enterprise)
Main products:	All kinds of mixed feeds
Production capacity:	700.000 tons per year
Number of employees:	1620
Type of technology:	Advanced technology and adapted technology
Methods of acquirement:	Purchase of machinery, design & development
Source of technology:	Germany, U.K., Switzerland, Turkey, Firm's own sources
Techn. improvement activities:	In-house R & D, improvement through technical training, cooperation with universities and TUBITAK
Proposals on cooperation:	Joint venture; provision of licence, know-how; technical consultancy and training services
Facilities available:	Classrooms, accomodation, cafeteria, transportation

CHAPTER VII. ENERGY AND ALTERNATIVE SOURCES OF ENERGY

Developing countries in their effort of industrialization have always felt the need for safe and reliable supply and efficient energy technology in order to build their industries and to improve the economic structure and life standard of their people. Thus, they have over the past few decades devoted enormous resources to establishing electric power system. The results were impressive as reflected in engineering achievements and a rapid growth in the electricity production. But they also encompassed environmental destruction, the migration of people and increasing foreign debt.

Today, it is widely accepted that developing countries need to carve out their own electrification programmes based on their needs and resources rather than on Western models. These must be based on a clear vision of the future and a realistic assessment of the financial and physical resources available.

Due to recognition of these facts, research and practice on alternative energy widespread recently in most developing countries. Hydropower, biomass energy, wind power and solar energy were some of the options. Since early 1980s, substantial efforts have been made to develop new approaches to power production based on local skills and materials.

The main sources of electricity production in Turkey are thermic and hydraulic. The thermic-hydraulic power plants balance is in favour of hydraulic power plants. While more than 50% of the power was supplied by thermal power plants in the 1940s, this has dropped to nearly 50% during the '80s and the hydraulic electricity production share grew to 60% in 1988. Oil was largely used in thermic electricity production during the '70s, but oil share has been reduced in the '80s and lignite share has been increased. Turkey has large sources of lignite and bituminous schist, being among the first ten lignite rich countries.

Turkey seems to have quite a large potential of geothermal energy, a renewable energy source, especially in the West Anatolien regions. According to rough estimates, the 3500 megawatt potential can be used for the production of 31 billion KWh annually. Geothermal energy can also be used in heating towns and greenhouses. Rather cheaper electricity can be produced by this source as compared to other sources.

Solar energy is a hopeful potential for Turkey. Turkey's climate is suitable for this kind of energy, with 2500 hours of annual sunlight. When the technical and economic problems related to obtaining solar energy are solved, it is estimated that an average of 36 million tons coal equivalent energy can be obtained annually.

References:

- Flavin, C., Electrifying the Developing World, Economic Impact, 1987/3
Dünya, Ekonomi-Politika, Turkey in the 2000's. Istanbul, 1989.
Dünya, Ekonomi-Politika, Turkey in the 2000's. Istanbul, 1987

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AYGAZ A.Ş.

Büyükdere Cad. Aygaz Han 145/1 Zincirlikuyu 80300 ISTANBUL
Tel: (90) 1-1664400 Fax: (90) 1-1664400

Name of Company:	AYGAZ INC.
Year of establishment and status:	1963 . Private [62]
Fields of operation:	Solar energy systems, LPG and chemicals
Main products:	Sunlight collectors
Production capacity:	15.000 collectors per year
Number of employees:	756 (including LPG and chemicals manufacturing)
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Denmark, France, Firm's own R & D sources
Techn. improvement activities:	In-house R & D, cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture; turnkey projects; feasibility studies and project appraisal; technical consultancy and training; provision of machinery, equipment and supplies

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DESA DEMİR KAZAN VE MAKİNA SANAYİ A.Ş.

Kartal Durağı, 35410 Gaziemir - İZMİR
Tel: (90) 51- 513000 Tlx: 53202 ddkm tr Fax: (90) 51- 513000

Name of Company:	DESA IRON BOILERS AND MACHINERY MANUFACTURING INC.
Year of establishment and status:	1960, Private [482]
Main products:	Flame and water-tube boilers, stainless steel tanks, pressure tanks, industrial facilities' equipment
Production capacity:	25 tons of stainless steel and 1250 tons of sheet iron per year
Number of employees:	262
Percentage of exports:	n.a.
Main countries of export:	Iraq, Pakistan, Sudan, Iran, Tunisia.
Type of technology:	Advanced technology
Methods of acquirement:	Production under licence
Source of technology:	Germany, U.K.
Techn. improvement activities:	Technical cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Provision of licence, know-how; consultancy and training; provision of machines, equipment, material

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DISSAN A.Ş.

Uzuntarla -İZMİR

Tel: (90) 2179-1361, 1362 Fax: (90) 2179- 1322

Name of Company:	DISSAN INC.
Year of establishment and status:	-, Private
Main products:	O.G. Switch devices, Sf 6 circuit switchers
Production capacity:	1.000 switchers per year
Number of employees:	80
Type of technology:	Adapted technology developed in the Company
Methods of acquirement:	Design and development in the firm
Source of technology:	Firm's own R & D sources
Techn. improvement activities:	In-house R & D activities.
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture, provision of patent, licence, know-how, provision of equipment, material and supplies

TÜRKİYE GÜNEŞ ENERJİSİ VAKFI
TURKISH FOUNDATION OF SOLAR ENERGY

Mıvakkıt Sokak No 28-30, Ortaköy - İSTANBUL

Tel: (90) 1-1605354

The Foundation was established in 1978 to promote use of alternative energy resources and solar energy in particular. The Foundation organizes various seminars and publishes books and booklets in order to explain the advantages, techniques and standards of solar energy systems. Annual International congresses are also organized by the Foundation for this purpose, and proceedings of these congresses created a collection of valuable scholarly contributions to the field of solar energy

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EKA ELEKTRONİK KONTROL ALETLERİ A.Ş.

Büyükdere Cad. 3. Yol, No 19, 80670 Ayazağa - İSTANBUL

Tel: (90) 1-1765750 (5 lines) Tlx: 28182 Ekak tr Fax: (90) 1-1761342

Name of Company:	EKA ELECTRONIC CONTROL EQUIPEMENTS MANUFACTURING AND TRADING INC.
Year of establishment and status:	1977, Private
Main products:	Uninterruptable Power Supply (UPS) Sytems, AC/DC Motor Control (MC) systems, factory automation systems
Production capacity:	10.000 kVA
Number of employees:	150
Percentage of exports:	30 %
Main country of export:	U.K.
Type of technology:	Advanced technology
Methods of acquirement:	Production under licence, Firm's own know-how
Source of technology:	U.K., U.S.A.
Techn. improvement activities:	In-house R & D activities; technical training; cooperation with foreign companies
Techn. transfer implementations:	Transfer of know-how
Proposals on cooperation:	Joint venture; turnkey projects; feasibility studies and project appraisal; technical consultancy and training services; provision of machinery, equipment, supplies; provision of know-how

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ELBA BASINÇLI DÖKÜM SANAYİ A.Ş.

Mareşal Fevzi Çakmak Caddesi 39 Kartal Maltepe 81540 - ISTANBUL
Tel: (90) 1-3991519 Tlx: 36668 Fax: (90) 1-3521239

Name of Company:	ELBA DIE CASTING INDUSTRY INC.
Year of establishment and status:	1971 . Private
Main products:	Low and high pressure die casting of aluminium; oil and water pumps for engines; thermostats for cars and refrigerators, plastic injection moulds
Production capacity:	15.000 tons per year
Number of employees:	300
Percentage of exports:	5 %
Main countries of export:	Germany
Type of technology:	Traditional technology improved in the Company
Methods of acquirement:	Purchase of machinery, production under licence
Source of technology:	Firm's own technological sources
Techn. improvement activities:	In-house R & D activities, cooperation with foreign companies
Techn. transfer implementations:	Provision of equipment and supplies
Proposals on cooperation:	Joint venture; turnkey projects; provision of patent, licence and know how on aluminium die casting technology; moulds manufacturing technology; provision of machines, equipment, material & supplies

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ELEKTRİK İŞLERİ ETÜD İDARESİ GENEL MÜDÜRLÜĞÜ

Eskişehir Yolu 7. km. No: 187 Ankara
Tel: (90) 4-2873380 Tlx: 44104 Fax: (90) 4-2228112

Name of Institution:	GENERAL DIRECTORATE OF ADMINISTRATION OF STUDIES ON ELECTRICITY
Year of establishment and status:	1935, Public
Main services:	Project design and engineering services in hydro-electrical energy; energy saving projects; research and planning of alternative energy resources; R & D on geothermal energy
Proposals on cooperation:	Training and consultancy services; provision of expertise

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ELSEL GAZ ARMATÜRLERİ SANAYİ VE TİCARET A.Ş.

Çavuşoğlu Mah. Yalnız Selvi Yolu No 9, Kartal - ISTANBUL
Tel: (90) 1-3539610 (4 lines) Tlx: 36561 else tr Fax: (90) 1-3745153

Name of Company:	ELSEL GAS FITTINGS MANUFACTURING AND TRADING INC.
Year of establishment and status:	1970 . Private
Main products:	Industrial gas fittings, spherical valves, water and gas meters
Production capacity:	15.260 tons per year
Number of employees:	260
Percentage of exports:	30 %
Main countries of export:	Algeria, Jordan, Germany
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery and patents, production under licence
Source of technology:	Italy, Germany
Techn. improvement activities:	In-house R & D activities, cooperation with foreign companies
Techn. transfer implementations:	Provision of equipment and supplies
Proposals on cooperation:	Joint venture, provision of machinery and equipment, consultancy & training on valves manufacturing and

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ESEM ELEKTRİK SAYAÇLARI & ELEKTRİK MALZEMELERİ A.Ş.

İnönü Cad. No: 156, Sefaköy - İSTANBUL

Tel: (90) 1-5791852-5973554 Tlx: 21108 yol-tr Fax: (90) 1-5790035

Name of Company:	ESEM ELECTRIC METERS AND ELECTRICAL SUPPLIES MANUFACTURING AND TRADING INC.
Year of establishment and status:	- , Private
Main products:	Electric meters, automatic fuses, switches
Production capacity:	500.000 meters, 1.800.000 fuses and 1.200.000 switches per year
Number of employees:	530
Type of technology:	Adapted and improved technology
Methods of acquirement:	Production under licence and adaptation
Source of technology:	Italy, Germany
Techn. improvement activities:	In-house R & D activities, cooperation with foreign companies and universities & research institutions
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture, provision of licence and know-how

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ETİ KONCAR LTD.

Halkalı Cad. No: 247 34630 Sefaköy - İSTANBUL

Tel: (90) 1-5989695 (4 lines) Tlx: 21005 Cire tr Fax: (90) 1- 5791849

Name of Company:	ETİ KONCAR LTD.
Year of establishment and status:	- , Private
Main products:	Cam switches
Production capacity:	140.000 switches per year
Number of employees:	18
Percentage of exports:	20 % (planned)
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery, production under licence
Source of technology:	Yugoslavia
Techn. improvement activities:	Cooperation with foreign company
Techn. transfer implementations:	None
Proposals on cooperation:	Provision of switches, materials and supplies

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EZİNÇ GÜNEŞ ENERJİSİ SİSTEMLERİ SANAYİ A.Ş.

Okçu Musa Cad. Tezgül İşhanı Kat 5, Şişhane - İSTANBUL

Tel: (90) 1-1539108 Fax: (90) 1-1502381

Name of Company:	EZİNÇ SOLAR ENERGY SYSTEMS INDUSTRY INC.
Year of establishment and status:	1988, Private
Main products:	Water heating systems, sunlight collectors, panels
Production capacity:	1.000 collectors per month
Number of employees:	75
Type of technology:	Adapted and improved technology
Methods of acquirement:	Production under licence, adaptation
Source of technology:	Turkey, Company's own technical capacity
Techn. improvement activities:	In-house R & D
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture, project design and appraisal, provision of equipment, material and supplies

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GÖKÇE BRÜLÖR VE ISI SANAYİ VE TİCARET A.Ş.

Davutpaşa Cad. Serçekale Sokak No 11 Topkapı-İSTANBUL

Tel: (90) 1-1524400, 1-5672007 Tlx: 25231 nego tr Fax: (90) 1-1433782

Name of Company:	GÖKÇE BURNER AND HEAT INDUSTRY TRADE INC.
Year of establishment and status:	1970, Private
Main products:	Heavy and light oil burners, natural gas burners
Production capacity:	15.200 oil and gas burners per year
Number of employees:	120
Type of technology:	Traditional technology
Methods of acquirement:	Purchase of machinery and improvement
Source of technology:	Germany, France and Firm's own sources
Techn. improvement activities:	Cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Technical consultancy and training services, provision of equipment and supplies

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İNÇİ AKÜ SANAYİ VE TİCARET A.Ş.

Organize Sanayi Bölgesi - MANİSA

Tel: (90) 551-32510 (3 lines) Tlx: 54072 İnkı tr Fax: (90) 551-32513

Name of Company:	İNÇİ BATTERY MANUFACTURING AND TRADING INC.
Year of establishment and status:	1985, Private
Main products:	Starter batteries from 12V-36 Ah to 12V-200 Ah
Production capacity:	250.000 batteries per year
Number of employees:	120
Percentage of exports:	15 %
Main countries of export:	Middle East and some European countries
Type of technology:	Advanced technology
Methods of acquirement:	Purchased and self designed machinery
Source of technology:	Austria, Turkey
Techn. improvement activities:	In-house R & D activities
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture, project appraisal and feasibility studies, technical consultancy, provision of machinery, parts and moulds

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İSTANBUL TEKNİK ÜNİVERSİTESİ NÜKLEER ENERJİ ENSTİTÜSÜ

Ayazağa Kampüsü 80626 Maslak - İSTANBUL

Tel: (90) 1-1761741, 1763937 Fax: (90) 1-1761734

Name of Institution:	İSTANBUL TECHNICAL UNIVERSITY - INSTITUTE FOR NUCLEAR ENERGY
Year of establishment and status:	1961, Public
Main services:	Educational services, research, testing services
Number of employees:	13 professors, 9 research fellows and 25 administrative staff
Type of technology:	Traditional technology (adapted and improved)
Methods of acquirement:	Education and research & development
Source of technology:	World of science and technology
Techn. improvement activities:	Improvement through training and R & D
Techn. transfer implementations:	Training and consultancy
Proposals on cooperation:	Training and consultancy on nuclear energy, applications and non-destructive testing
Facilities available:	Classroom, R & D labs, cafeteria, transportation

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İŞBİR ELEKTRİK SANAYİ A.Ş

Yeni İzmir yolu, Çayırhisar Mevkii, PK. 146, 10050 BALIKESİR
Tel: (90) 661-19870 (3 lines) Tlx: 58189 isge tr Fax: (90) 661-17120

Name of Company:	İŞBİR ELECTRICITY INDUSTRY INC.
Year of establishment and status:	1969, Private
Main products:	Diesel electrogen groups and mobile electrogen groups in 3 to 1500 kVA power: alternators; turbines; generator groups; frequency converters; lighting systems
Production capacity:	1332 Diesel generators; 223 frequency converters; 180 lighting sets; 515 other generators per year
Number of employees:	138
Percentage of exports:	1-2 %
Main countries of export:	Libya, Middle East countries
Type of technology:	Traditional technology adapted and improved in the Company
Methods of acquirement:	Production under licence
Source of technology:	Austria, Firm's own R & D activities
Techn. improvement activities:	In-house R & D; technical training; cooperation with foreign companies and universities
Techn. transfer implementations:	Sale of equipments and supplies
Proposals on cooperation:	Joint venture; feasibility study and project appraisal; technical consultancy and training services; provision of material, equipment and supplies; provision of patent, licence and know-how

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KALEPORSELEN ELEKTROTEKNİK SANAYİ A.Ş

Halkalı Cad. No 170 Sefaköy - İSTANBUL
Tel: (90) 1-5989580 (12 lines) Tlx: 21030 Kase tr Fax: (90) 1-5808382

Name of Company:	KALEPORSELEN ELECTROTECHNIC INDUSTRY INC
Year of establishment and status:	- , Private (483)
Main products:	D-fuses, NH fuses automatic fuses, sockets, wall-plugs, switches, contactors and relays
Production capacity:	3.500 tons per year
Number of employees:	460
Percentage of exports:	10 %
Main countries of export:	Greece, Egypt, Iran, Pakistan, Thailand, Indonesia and Morocco
Type of technology:	Adapted and improved technology
Methods of acquirement:	Purchase of machinery and production under licence
Source of technology:	Germany, Company's own R & D facilities
Techn. improvement activities:	In-house R & D activities; improvement through technical training; coop. with foreign companies and Turkish research institutions and universities
Techn. transfer implementations:	Provision of know-how and licence to a state company in Egypt
Proposals on cooperation:	Provision of machinery, equipment and supplies, provision of know-how, licence and patent agreements, technical consultancy and training services, feasibility study and project appraisal in electrotechnics

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KONDAŞ KONDANSATÖR SANAYİ VE TİCARET A.Ş.

Mumhane Cad. Emek İşhanı No 31/1 Karaköy - İSTANBUL
Tel: (90) 1-1440150, 1-1457879 Tlx: 25782 konk tr Fax: (90) 1-1440004

Name of Company:	KONDAŞ CONDENSOR MANUFACTURING AND TRADING INC.
Year of establishment and status:	1974, Private
Main products:	Condensor
Production capacity:	1200 MVAR/year, 5 million tube condensors
Number of employees:	120
Percentage of exports:	50 %
Main countries of export:	Iraq, Pakistan, Germany, T. R. of N. Cyprus
Type of technology:	Advanced technology developed in the Company
Methods of acquirement:	Production under licence
Source of technology:	Italy, Company's own R & D facilities
Techn. improvement activities:	In-house R & D, cooperation with universities
Techn. transfer implementations:	Turn key installation of condensor manufacturing facilities in Pakistan and Syria
Proposals on cooperation:	Joint venture; turnkey projects; feasibility study and project appraisal; technical consultancy and training services; provision of patent, know-how and licence arrangements; provision of machinery, equipment and supplies

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MAKSAN MALATYA MAKİNA SANAYİ A.Ş.

Elaziğ Karayolu, 9. km. PK.67 MALATYA
Tel: (90) 821-12846 Tlx: 66136 Mmks tr

Name of Company:	MAKSAN MALATYA MACHINES MANUFACTURING INC
Year of establishment and status:	1974, Private
Main products:	Transformers
Production capacity:	2.700 transformers per year
Number of employees:	82
Type of technology:	Adapted technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Germany, Turkey
Techn. improvement activities:	In house R & D; technical and vocational training
Techn. transfer implementations:	None
Proposals on cooperation:	Provision of know-how, on the job training

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MUTLU AKÜ VE MALZEMELERİ SANAYİ A.Ş.

Yunus, Meşeli Ayazma Mevkii, Pendik Cad. No: 11, Kartal - ISTANBUL
Tel: (90) 1-3895980 Tlx: 36552 muin tr Fax: (90) 1-3599547

Name of Company: MUTLU AKÜ - BATTERIES AND MATERIALS MANUFACTURING INC.
Year of establishment and status: 1947, Private [323]
Main products: Starter batteries; stationary and traction batteries; miner's cap lamp; PVC seperators, plates, containers; antimony, lead, red lead
Production capacity: 576.000 Starter batteries per year
Number of employees: 676
Percentage of exports: 32 %
Main countries of export: U.S.S.R., Middle East Countries,
Type of technology: Adapted technology developed in the Company
Methods of acquirement: Purchase of machinery
Source of technology: Company's own sources
Techn. improvement activities: In-house R & D; cooperation with foreign companies.
Proposals on cooperation: Joint venture; consultancy; provision of equipment, material and supplies

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PROSEN PROFİLO ENERJİ SİSTEMLERİ SANAYİ A.Ş.

2. Taşocağı Sokak No 26/28 Mecidiyeköy - ISTANBUL
Tel:(90) 1-1743300 (25 lines) Tlx: 26171 Prof tr Fax: (90) 1-1676512

Name of Company: PROSEN PROFİLO ENERGY SYSTEMS MANUFACTURING INC.
Year of establishment and status: 1979, Private
Main products: Parabolic solar heaters, Sunlight collectors
Production capacity: 2.000 Solar heaters and 4.000 collectors per year
Number of employees: 22
Type of technology: Advanced technology developed in the Company
Methods of acquirement: Adaptation and development
Source of technology: Germany
Techn. improvement activities: In-house R & D; cooperation with foreign companies, universities and research institutes
Techn. transfer implementations: None
Proposals on cooperation: Feasibility studies; consultancy and training; provision of equipment, materials and supplies

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SELNİKEL ISITMA KLİMA CİHAZLARI SANAYİ A.Ş.

Tunus Cad. No: 5 Kavaklıdere - ANKARA
Tel: (90) 4-3668547 Tlx: 44432 Fax: (90) 4-3668563

Name of Company : SELNİKEL HEATING AND AIR CONDITIONING DEVICES MANUFACTURING INC.
Year of establishment and status: 1955, Private.
Main products : Boilers, pressure tanks, heating systems, burners, air conditioning systems, industrial fans
Production capacity : n.a.
Number of employees : n.a.
Type of technology : Adapted and improved technology
Methods of acquirement : Adaptation and development
Source of technology : Company's own technical sources
Techn. improvement activities : In-house R & D, coop. with other Turkish companies
Proposals on cooperation : Feasibility study, project design and appraisal, technical consultancy, provision of know-how, provision of material, equipment and supplies

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SERVOSAN SERVO ELEKTRONİK SANAYİİ

Fatih Sanayi Sitesi, B Blok No 19, Ümraniye, 81250 - İSTANBUL

Tel: (90) 1-3292135 Fax : (90) 1- 3359814

Name of Company:	SERVOSAN SERVO ELECTRONICS INDUSTRY CO.
Year of establishment and status:	1988, Private
Main products:	Power electronics, AC-DC engine speed control devices
Production capacity:	2.000 devices per year
Number of employees:	12
Percentage of exports:	5 %
Main countries of export:	Egypt, Jordan, South Africa
Type of technology:	Advanced technology developed in the Company
Methods of acquirement:	Adaptation and development
Source of technology:	U.S.A.
Techn. improvement activities:	In-house R & D activities
Techn. transfer implementations:	Sale of devices
Proposals on cooperation:	Joint venture; provision of licence, patent, know-how; arrangements: provision of equipment and supplies

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SHRAMA DANIŞMANLIK

Barbaros Bulvarı 75-77/1 Beşiktaş - 80690 İSTANBUL

Tel: (90) 1-1583851 Tlx: 39599 rrama tr Fax: (90) 1-1580682

Name of Company:	SHRAMA (Human Energy) CONSULTANCY
Year of establishment and status:	- , Private
Main products:	Plastic insulation balls, Infrared thermometres
Production capacity:	5.000.000 insulation balls per year
Number of employees:	12
Type of technology:	Traditional technology improved in the Company
Methods of acquirement:	Purchase of machinery
Source of technology:	Turkey, U.K.
Techn. improvement activities:	In-house R & D activities
Techn. transfer implementations:	None
Proposals on cooperation:	Transfer of technology of energy saving implementations in industry. Consultancy and training services, provision of licence and know how arrangements; provision of equipment, material and supplies

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TUNÇMATİK JENERATÖR VE ELEKTRİK MOTORLARI TİCARET SAN. LTD.

İsüklaf Mah. Reşitpaşa Cad. Dadaloğlu Sok. No 2, Ümraniye-İSTANBUL

Tel: (90)1-3350132, 3350312 Tlx: 29335 trntj tr Fax: (90)1-3353023

Name of Company:	TUNÇMATİK GENERATORS AND ELECTRICAL MOTORS MANUFACTURING AND TRADING LTD
Year of establishment and status:	- , Private
Main products:	Alternators, generators and DC motors
Production capacity:	1.500 alternators and 3.000 DC motors per year
Number of employees:	60
Percentage of exports:	1 %
Main countries of export:	Syria,
Type of technology:	Adapted and in-house developed technology
Methods of acquirement:	Purchase of machinery, adaptation and development
Source of technology:	Universal
Techn. improvement activities:	In-house R & D; technical and vocational training; cooperation with foreign companies
Techn. transfer implementations:	None
Proposals on cooperation:	Joint venture, turnkey projects; provision of material and supplies, provision of know-how and licence for alternator and DC motor manufacturing