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First Training Programme on the Production and  
Application of Synthetic Fibres

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PRESENT STATUS AND FUTURE PLANS OF THE  
DEVELOPMENT OF THE SYNTHETIC FIBRE INDUSTRY  
IN IRAN

by

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

The economic development of a country and the resulting increase in the standard of living usually leads to an increased consumption of synthetic textile fibers. This pattern is being followed in IRAN to-day.

As a result, the demand for synthetic textiles in Iran including those based on polyester and acrylic fibers, has grown rapidly and is now large enough to warrant local manufacture of these fibers.

In the period 1964 to 1970 the total fiber consumption in the world grew from 18 million tons to 21 million tons, i.e., an average of about 3% per year. In the same period, the total fiber consumption in Iran grew from 98,000 tons to 150,000 tons; i.e., an average of 7.5% per year.

It is estimated that future average growth in the world will be about 4% per year up to 1990, whereas the Iranian market may continue to grow as much as 7.5% per year. Such a growth rate in IRAN would mean a textile fiber consumption of about 216000 tons in 1975 and 310000 tons in 1980. The estimate for IRAN is based on extrapolation of historical data as to growth of the population and individual consumption as well as anticipated continued growth of real G.N.P.

The synthetic fibers consumption in Iran is as follows:

Year	Spun/MT <sup>3</sup>	Filament/MT <sup>3</sup>	Others/MT <sup>3</sup>	Total
1962	18700	2880	640	22220
1963	21000	3295	904	25199
1964	33400	5160	2014	40574
1965	38700	8644	1186	48530
1966	32800	15043	364	48207
1967	34103	15300	2078	51481
1968	44600	15180	9476	69256
1969	36000	17148	7481	60629
1970	42400	20228	4633	67261
1971	44000	22421	3072	70493
1972	58156	29300	6062	94518



Due to the fact that the Iranian market does not warrant initial fiber plants of the size existing in USA, Europe or Japan, and, the overall efficiency of what should be a highly sophisticated industry in Iran cannot be expected to reach equivalent efficiency in those mentioned countries during the initial years of operation, the Iranian government is always leading the private sector to erect manufacturing plants with a double capacity than the local market and export 50% of their production.

Production of synthetic fibers in Iran is at present not much advanced or even diversified.

On the Nylon fiber, at present we have only one plant manufacturing Nylon 6 filament. This plant started production in 1969 with a capacity of 3000 tons/year. Its capacity at present is 7000 tons and will be increased up to 10000 tons at the end of 1975. Originally the above plant was built by a joint venture between Iranian private sector - Industries and Mines Developing Bank of Iran and Allied Chemical of USA. Later on Allied transferred its shares to German Bayer. The joint venture is Aliaf Iran S.A.

Aliaf Iran S.A. (the joint venture between Iranian private sector, I.M.D.B.I. and Bayer of Germany) is to put another Nylon 6 manufacturing plant in Shiraz (950 km. from Teheran in South) with a capacity of 10000 tons. The total investment in this project is estimated to be 90 million US\$, and is expected to start production in the beginning of 1977. The shareholding of the German Bayer in the two Nylon plants in Teheran and Shiraz will be 34% of the total capital.

At present the Industrial Credit Bank of Iran is considering a feasibility study to erect another Nylon 6 manufacturing plant with the help of Iranian private sector and a suitable foreigner partner. The capacity of the plant will be 10000 tons/year. The Industries and Mines Development Bank of Iran is also considering putting up a plant with a capacity of 20000 tons/year of Nylon tyre cord.

On the Polyester and Acrylic fiber, the world growth rate on these fibers is 10-13% per year, the growth rate in developing countries being somewhat faster than that in the major consumers like the United States, Western Europe and Japan.

The forecast market demand in Iran on these fibers is as follows:

1000 tons	1975	1980	1985
Polyester Staple	11-15	20-27	32-43
Polyester Filament	4-6	10-13	17-23
Acrylic Staple	9-12	16-22	25-34

Accordingly a joint venture between the Iranian private sector, The Industrial Credit Bank of Iran, The Industries and Mines Development Bank of Iran, and, the E.I. Du Pont de Nemours and Co.

is formed for the erection of a plant to produce Polyester and Acrylic fibers in Iran with a capital of 200 million US\$. The location of this plant will be in Isfahan (450 km. South of Teheran) and is expected to start production as follows:-

3rd Quarter	1977	Polyester Staple
1st "	1978	Polyester Filament
3rd "	1978	Acrylic Staple

The capacity of this plant regarding the export programme of the company, and, the forecasted expansion in 1983 is as follows:

	Total Polymerisation Capacity/1000 Tons		Total Fiber Capacity/1000 Tons	
	Initial	1983	Initial	1983
Polyester staple	18600	37300	18600	37300
Polyester filament	16400	32700	8200	24500
Acrylic staple	25500	25500	19100	25500

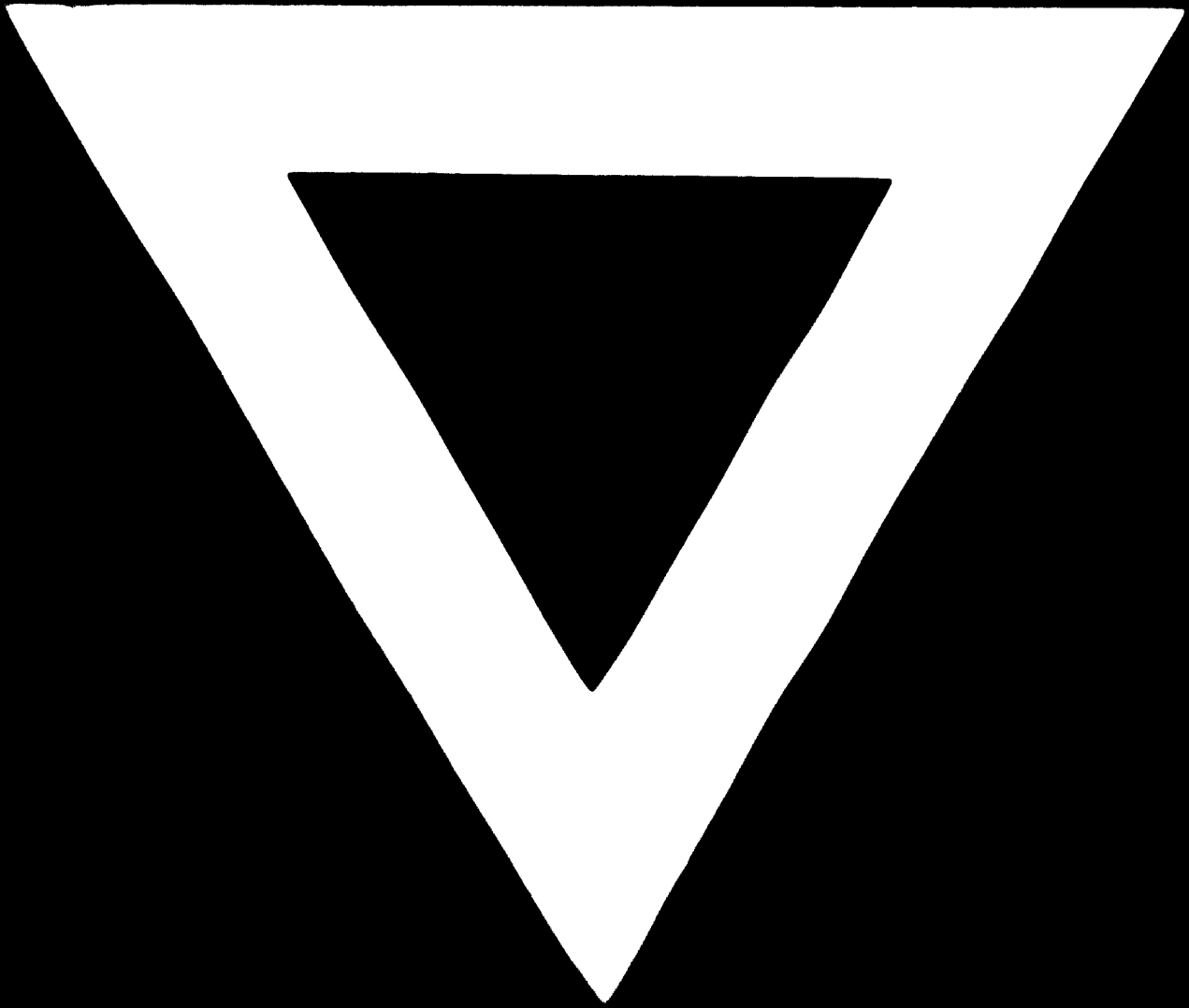
As all the major intermediates and raw materials for the production of the synthetic fibers are derived from the crude oil and/or refined petroleum products, the Iranian National Petro-chemical Company is considering the production of

Caprolactum, DMT, Ethylene Glycol and Acrylonitrile, which will be required for the above mentioned Nylon, Polyester and Acrylic plants. The joint venture of manufacturing DMT with the German Dynamit Nobel for a capacity of 60000 tons/year has been approved by the two shareholders.

For the production of Caprolactum, a joint venture for a plant of 100000 tons/year capacity between the Iranian National Petro-chemical company and the Swiss Inventa and German Bayer has been considered. The final approval will be made in due course. Since these materials are not yet manufactured in Iran, as raw materials for these plants, they can be imported from abroad. Finally the textile industry in Iran is growing very fast. The situation for to-day and the forecasted expansion of these industries for the year 1977 is as follows:

Type of Production	1974	1977
Cotton and man made fabrics	1000000 spindels 20000 Looms 500 million meters	1600000 spindel 32000 Looms 960 million meters
Woolen fabrics	60000 spindels 1400 Looms 13 million m.	130000 spindel 3000 Looms 31 million m.
Acrylic spinning	50000 spindels 6000 million m.	140000 spindels 15000 million m.
Knitting (total)	2000 unite 6000 "	33000 tons 96000 "
Hosiery	123 million pairs	250 million pairs





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