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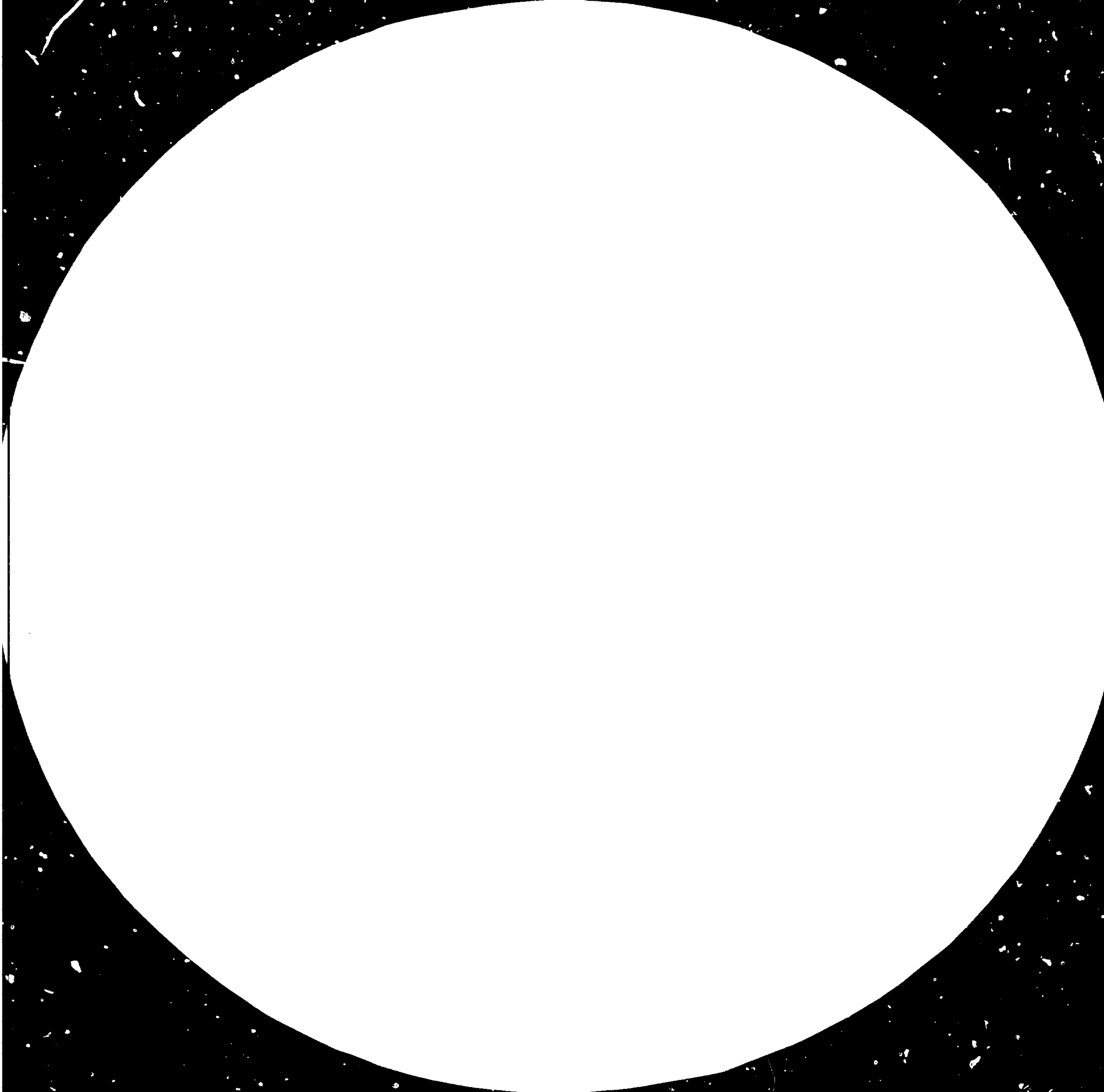

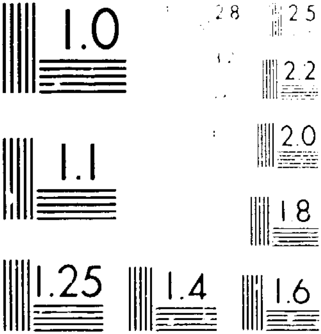
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THE PETROCHEMICAL AND POLYMER INDUSTRIES IN URUGUAY*

by

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Country and economy

Uruguay, with an area of 187,000 kilometers, has a population of some three million inhabitants with a high standard of literacy and consumer requirements.

It was formerly regarded as the Switzerland of South America with important Banking and Commercial facilities and a very conscious programme of social reform.

The economic policy carried out by the national authorities from 1974 on, is based in a model of liberalism and opening of the economy.

Several stages can be distinguished during the financial reform, each of which is corresponded to a main objective and a certain instrumentation.

To simplify, two important periods can be considered: a financial and promotional one, oriented to the external market, with higher inflationary levels, lowering actual salary, great credit facilities, and an adjustement in the rate of exchange closer to the levels of internal inflation. The second period intents the neutrality, looking for the permanence of competitive groups, acceleration of the liberality of the prices, customs duties reduction, lagging of the rate of exchange compared to internal inflation.

The reduction of the inflation levels and a relative stability of consumption prices seem to be evident results of the financial reform.

Concerning the productive areas of the economy the following can be observed:

a) Agriculture and cattle: An unfavorable rate of prices and a relative consumption prices stability have compromised the cattle rentability.

b) Industry: This group, mainly the export one, received a promotional treatment in the first period. Consequently, there was an important growth and a good increase in profit. This promotional plan, however, was modified in 1978 when the custom duty reform began.

The advancement of the economic reform, including the rate of exchange policy and the customs duties programme, reduces the extent of the promotion and industry, besides, suffers from the strong competition of the import.

The industry of construction which underwent an important growth, favored by the State being a public investor, by Argentinian capitals and the financial facilities given by the Banco Hipotecario del Uruguay, has presently lost most of its dynamism.

To conclude, the industrial economic policy tries to accelerate the process of enterprises selection, looking for the development of the efficient ones.

<u>Petrochemical and polymer industry</u>

Uruguay does not have petrochemical industry; it only refines crude oil imported from Venezuela, Mexico, Ecuador, Nigeria, Middle East.

The search for petroleum underground hasn't been successful so far although its existence is not discarded.

A project of connection with Argentina to make use of the natural gas of that country is being studied.

The use of natural gas as fuel in the industry and especially by U.T.E., the national energy organism, would allow saving important amount of fuel oil. Hence, A.N.C.A.P., the national entity of fuels might convert the excess of fuel in destillates and thus increase the production of "fuel gas".

In spite of this the possibilities for a petrochemical industry seem to be remote.

Ethylene, produced as a subproduct along with hydrogen and other types of light hydrocarbons in the process of catalytic desintegration, is used by A.N.C.A.P. as fuel ("fuel gas").

Even if prices for ethylene and even propylene in the market seem to be nowadays attractive, the possibilities of recovering these gases and using them as raw material in the petrochemical industry are very low in the present circumstances: 100% of petroleum is imported, small domestic market, and difficult position to reach the external market competitively.

The present production of ethylene by A.N.C.A.P. is of about 6000 TPA, which is not enough to justify a project for transforming it.

Plastics industry

There are in Uruguay about 80 plastics processors, working in a wide range of transforming techniques. The equipment is usually modern; the old equipment still existing will probably be replaced by up-to-date ones.

There is a small local production of thermostable resins (phenol formaldehyde and urea formaldehyde) and of some plasticisers (DIOP, etc.) which are used in the production of PVC compounds.

However, most of the resins are imported, being their amount about 30,000 TPA, including PE, PP, PS, PVC, Nylon and Acrylic.

The uruguayan market which has develped in the last 30 years is characterised for having a high consumption per capita specially for polyolefines and PVC.

The plastics industry has been limited in the possibilities of achieving an ordered, efficient and quick expansion. Among the elements that have influenced in this situation are the lack of trained personnel, the lack of equipment for quality control and test and insufficient practice for the usage of new technology. Due to a small domestic market, the plastics industry has turned to exportation.

In the present circumstances, however, the possibilities of reaching the export market have been reduced by the gap in the present rate of exchange and due to the economic problems existing in Argentine and Brasil, the main buyers.

In addition, within the domestic market, the plastics industry called "industry for industries", is suffering the consequences of an important retraction by the industrial groups to whom it provides (constructions, car assemblers, agriculture, etc.) and of the customs duties reduction programme, which has eased the entrance of competitive goods.

We give thereunder the figures of importations and exportations corresponding to 1979, 1980 and 1981:

Imported resins/year:	1979	1980	1981	
PE	16,800	14,000	11,000	tons.
PP	1,600	1,400	1,600	"
PVC	7,100	5,000	4,300	"
PS	2,600	2,500	2,200	"
Nylon	1,300	2,500	1,900	"
Acrylic	400	300	500	"
TOTAL	29,800	25,700	21,500	tons.

Plastic manufacture exportation/year:		1979	1980
To Brasil	u$s	12,900.000	13.200.000
Argentine		6.600.000	7.000.000
Paraguay		330.000	510.000
Others		80.000	150.000
TOTAL	u$s	19.910.000	20.860.000

ANCAP Government Refinery: Flow chart and annual production