Liao-Yang petrochemical complex
Publication de 19xx ETHYLENE - TECHNIP - KTI - TECHNIPETROL

Buyer : China National Technical Import Corporation, CNTIC.

Location : Liao-Yang Liaoning area North East of Peking, People’s Republic of China.

Type : grass roots petrochemical complex including a nylon chain and a polyester chain with, in all, 21 different units.

Completion : 1978/1979

Capacities : 80,000 t/yr ethylene, 87,000 t/yr polyester and 46,000 t/yr of nylon using a petroleum feedstock.

Contract : Technip associated with Speichim. Both partner provide :
- complete design and engineering services
- equipment : 45,000 tons, 4400 equipment items.
- assistance to construction and start-up.
- training of 230 Chinese technicians on a worldwide basis.

A 2 BILLION FRANS CONTRACT

The contract with Technip in partnership with Speichim, signed with the China National Technical Import Corporation, CNTIC, is the biggest ever conclude between France and the People’s Republic of China. It covers studies and equipments for a grass roots complex planned to produce 87,000 t/yr of polyester and 46,000 t/yr of nylon from petroleum products. It also provides for technical assistance from both French companies in the construction and start-up of the facilities;

A key feature is the complete integration of the production chain from the base products to the finished products. The throughput fixed for the finished products determines the throughput of all the upstream units.

For this reason, the capacity of the upstream units (petroleum units) and the intermediate storage is relatively small. Inlet and outlet streams of the intermediate products are reduced as much as possible and the majority of the byproduct are used in the complex.

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Main sections : Process and Technologies

Catalytic reforming : IFP
Hydrogen production : Technip
Steam cracker : IFP / PW Furnaces
(Ethylene production)
Gasoline Hydrogenation : IFP
Ethylene oxide production : Chemische Werkes Hüls
Ethylene glycol production : Chemische Werkes Hüls
Aromatic extraction : IFP

Polyester chain :
Paraxylene production : Atlantic Richfield Engelhard
Dimethylteraphthalate : Dynamit Nobel
Polyester production : Rhône Poulenc Textiles

Nylon Chain :
Nitril Acid : Rhône Progil
Cylohexane : IFP
Cylohexanone : SUCRP
Adipic Acid : SUCRP
Adiponitril : SUCRP
Hexamethylenediamine : SUCRP
Nylon crystallization : SUCRP