

La Plata Refinery Conversion Upgrading

Project

Client
YPF S.A.

Location
Ensenada,
Buenos Aires Province,
Argentina

Period
1982-1988

Participation
Skanska LA: 86.8%
JGC: 13.2%

La Plata Refinery produces 1,850,000 m³ of light products per year without varying the total crude oil quantity which until now has been processed in the refinery. The major production of light combustibles such as gasoline, fuel oil and liquid gases is performed through an elaborate fuel oil residual processing, because heavy industrial fuel is being replaced by the new availability of natural gas.

In order to produce this quantity of light combustibles using the existing installation and before constructing the new units, it would have been necessary to process more than 3,400,000 m³ of crude oil. This would have meant a 50% increase in National Crude Oil production. The other option would have been to import at an annual cost of approximately \$ 110,000,000.

In August 1988, the civil works and electromechanical installations were completed and thus the start up of the unit made this the largest YPF undertaking in recent years.

With the leadership of SADE, the works were carried out in association with JGC, the Japanese Engineering and Construction firm. Financing came from the World Bank, complemented by Exxin Bank of Japan as well as funds invested by YPF.

The project is integrated by six main processing units:

- 1) Vacuum Installation with the capacity to process 5,000 m³ per day.
- 2) Delayed Coking to obtain coke, gasoline, diesel oil and coke-coal.
- 3) Catalytic Cracking to obtain gasoline and Catalytic Fuel Oil as well as propane, butane and liquid gas.
- 4) Hydro-treatment of fuel oil aims to improve the characteristics of light diesel oil.
- 5) Treatment with Amines is a unit that separates hydrogen sulfur and carbon dioxide from combustible gases.
- 6) The Merox Unit is used to purify the flow of butane and propane gases.



Besides the formal process in the units, the project included the following service units.

Soda neutralizer is used to neutralize caustic residues.

In the fluid treatment plant, oils and hydrocarbons are separated from effluents, then, the phenols are eliminated and biologically treated.

Auxiliary services and units have a cooling tower with a 13,750 m³/hour treatment capacity. They are complemented with the flare to burn residual gases as well as to prevent emergencies. This 160 m tower is the highest of the complex.

The Interconnection Units consist of the interconnection of pipes between the new units and those of the existing facilities.

Common services Unit, with an electrical distribution system, is made up of the 3 (three) 13,8 kW substations and the computerized digital control system.

Scope of Work:

Detailed Engineering
Electromechanical Engineering
Civil Engineering
Electromechanical Erection
Consulting y and training
Assistance for the start up . □

Contact

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