

Combined Cycle Gas Turbine Plant in Mornaguia (Tunisia)

General information:

- ✓ Years: 2017-2018
- ✓ Customer: Ansaldo Energia
- ✓ End customer: Société Tunisienne de l'Electricité du Gaz
- ✓ Projected work value: € 22.000.000 euro
- ✓ Total value of the work: € 24.000.000 euro

Executive architectural and structural design of the main buildings of the power plant.

Structural design of the special foundations.

Design of surface systems and utilities. Workshop drawings.

Description of the plant

The Mornaguia combined cycle thermoelectric plant is located about 30 km southwest of the capital Tunis. It has a total gross electrical power of 600 MW and consists of 2 gas turbines of 300 MW each and a steam turbine. The plant will consist of two production cycles, one gas and one steam.

Main works

- Gas and steam turbine engine room of articulated shape with maximum planimetric dimensions of 45.6 x 84.3m for an engine room height of 21.7m
- Administrative Building 32x29 m high about 15m
- Technical building and control room 27x23 m about 15m high
- Atelier 42.3x25.8 h 10.8 m
- L-shaped electrical building with widest planimetric dimensions 18x30 m, 6.5m high

- Poste De Gaz L-shaped body with larger planimetric dimensions 20x16m high 8.1m
- Compressor building 18.5x5.2m 6.1m high
- Fire-fighting building 9.6x23.6m 9m high
- Pump building 8.5x9m high 5.8m
- Diesel pump building 15.6x8.6m 6.5m high

The following secondary works were also designed, such as:

- Pipe-rack metal structure and foundations
- Feed pump foundation
- Minor foundations in the pipe rack area
- Foundations Enclosure extractors pipe rack area
- Tunnels for passage of pipes/cables
- Piping/Cable Support Foundations (Saddles, supports, etc.) and minor foundations
- External areas (roads, squares, car parks and green areas)
- Underground Networks (Drainage, Lighting, Pipe Banks, Earth Network)



BIM model of the plant

Sidercad S.p.A.
Via B. Bosco 15 – First floor
16121 Genoa - Italy
phone +39 010 54481
fax +39 010 5448865
www.sidercad.it

BIM design

The structural design and the design of the plant underground took place in the Tekla environment.

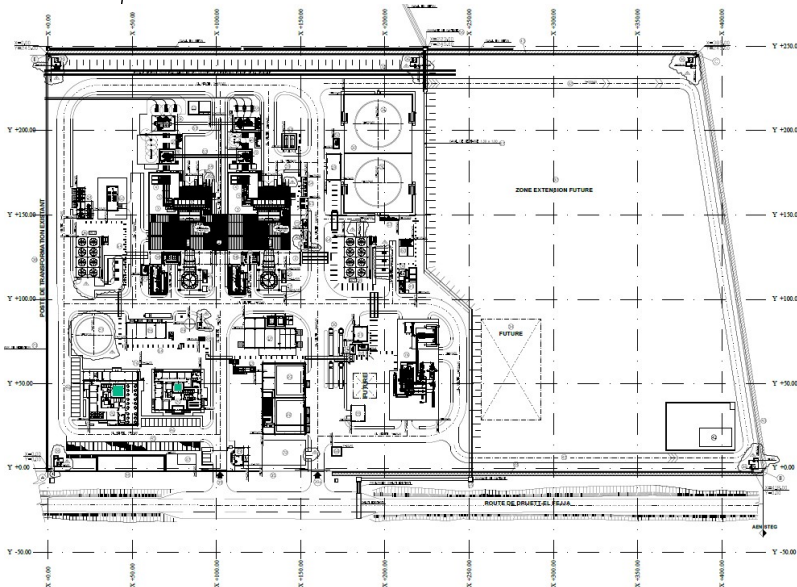
The architectural design of the Administrative Building and the Technical Building was done in Revit.

Implementation aspects

Based on the indications provided by the Customer (operating overloads, production requirements, layout of machinery and pipes, anchors, applied loads), the design of all the metallic structures in elevation and of all the foundations, including the underground networks, foreseen in the plant was carried out.



View of the plant from the main road



Plant layout