Dessulfurização da Central Termoeléctrica de Sines
EDP – Refinaria de Sines, Portugal

Civil Works for Desulphurization Plant, at the Thermoelectric Power Plant, Sines
EDP Sines – Portugal

Work Carried Out

The desulphurisation project for the Sines Thermoelectric Power Station consists of implementation of four limestone/gypsum wet flue gas desulphurisation (wet FGD) units, one for each of the respective electricity generators. The desulphurisation process basically consists of removal of the SO2 from the combustion gases through reaction with an alkaline absorbent, obtaining gypsum as a sub-product.
The main components of the desulphurisation system are indicated hereunder, complete with the associated civils:

Combustion Gas System: construction of ventilator foundations and reinforced-concrete pipeline supports.

SO2 Absorption System: foundations of the absorbers, pumping wells, sundry foundations for equipment.

Limestone Storage System: very large foundation for two steel limestone tanks, three foundations for ball mills, well to house the limestone unloading system and conveyor belt for transport to the tanks, all the surrounding building and foundations for various items of equipment.

Gypsum Storage System: construction of a reinforced-concrete silo, diameter Ø24 m, height 40 m, capacity 9,000 m3.

Desulphurisation Liquid Effluent Treatment System: construction of 2 decantation tanks, 10 square tanks, sludge building, electrical building and sundry retention basins.

Ancillary Energy Systems: building for an ancillary boiler and sundry basins. Electrical and Central Command Building: construction of a building with basement to house the electrical switchboards, laboratory, command and control room, etc.

Compressed Air Systems: construction to four buildings next to the generators to provide compressed air to the desulphurisation system. To support the sundry pipework a Pipe Rack was build from the 4 units to what is known as the common zone.

Ancillary work included sundry drainage, landscaping and paving.

Major Quantities:

Excavation: 160,000 m3 / **Landfill:** 95,000 m3
Structural concrete C35/45: 25,000 m3
Lean concrete C12/15: 8,500 m3 / **Formwork:** 48.000m2
Construction rebar: 2,600,000 kg / **Sundry steel elements:** 400,000 kg

Resumo da Obra
Work Summary

Cliente	**Consórcio Hitachi - Coba**	*Client*
Tipo de contrato	**Valor Global** ***Lump Sum***	*Contract type*
Data de construção	**2005-2008**	*Construction period*
Custo	**EUR 14.000.000,00**	*Cost*

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