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The new Enel Torrevaldaliga Nord power station runs with Hirschmann.

Power

Massive application of OZD Profi interfaces and control level network based on OpenRail

Enel, the second largest European power utility, awarded ABB for the automation revamp project of the power station situated at Torrevaldaliga Nord (Civitavecchia, close to Roma) in December 2005.
The new power station, operating since the end of 2008, is a major step in re-balancing the fuel mix of Enel power stations and replaces a previous oil-fired plant with 3 new "clean coal"-fired groups with a gross power of 1.980 MW overall.

The intensive use of the most advanced process and automation technologies has allowed an increase of efficiency from 39% to 45% and a dramatic reduction of environmental impact. The emission control has been ensured by high-efficiency packages: de-nitration and de-sulphurisation systems, bag filters to dampen the particulate, as well as completely closed-in coal unloading, transfer and storage systems.

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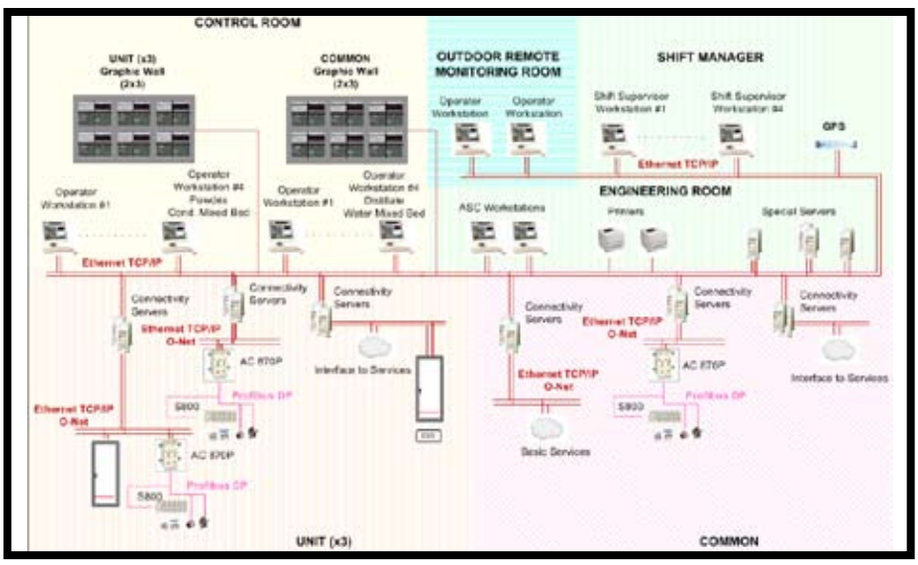


OZD Profi 12M G12


RS30-1602


MS30

Project details

The DCS, supplied by ABB Energy Automation, is based on „System 800xA" technology.
The project is in fact an ensemble of packages: the basic part for Enel included the automation of the power production and the ESD system based on Plantguard TMR technology. For Ansaldo Caldaie, ABB carried out the automation of super-critical boilers, burners, blowers, DeNOx and ammonia treatment systems. For Mitsubishi, ABB supplied the automation of DeSOx plant and for Magaldi the automation of the ash discharging system. Furthermore, ABB provided the temperature regulation, the gas pressure control station and several parts of the electrical system.

Project parameters

- 55,000 hardware I/Os
- 50,000 software I/Os
- 105 controllers AC870P
- 2.300 instruments (pressure, level, temperature and flow)
- 500 Profibus DP trunks
- 500 cabinets

Requirements

- Proven and reliable Profibus fiber interface technology
- ABB Industrial^{IT} approval for networking components
- Modular switches with high availability of fiber ports
- Openness and flexibility for future changes and expansions of the automation
- Intelligent network monitoring

Solution

- Network topology

The scope of supply provided by Hirschmann covers control and field levels networks.
Several redundant connectivity servers are the battery limits between the upper supervision network with a tree structure and the controller network based on Gigabit-ring structure. Optical Profibus trunks connect AC870P controllers with field instruments and actuators.

- Quantity structure

500	OZD Profi 12M G12
8	MS30-0802SAAE
20	MM3-4FXM2
16	MM2-4TX1
8	MM4-2TX/SFP
6	RS30-1602O6O6SDAE
8	RS30-2402O6O6SDAE
44	M-SFP-SX/LC
1	Industrial HiVision Operator Edition 100 nodes

- Scope of services

Network design and optimisation
Technical support for project team
Logistic management following project milestones

Why Hirschmann?

- Proven quality of fiber interface and networking technology with several references with ABB.
- Availability of qualified technical support for different project phases
- Effective assistance by local partner Sanval Electronic