AN 14-32-G020

Application-note

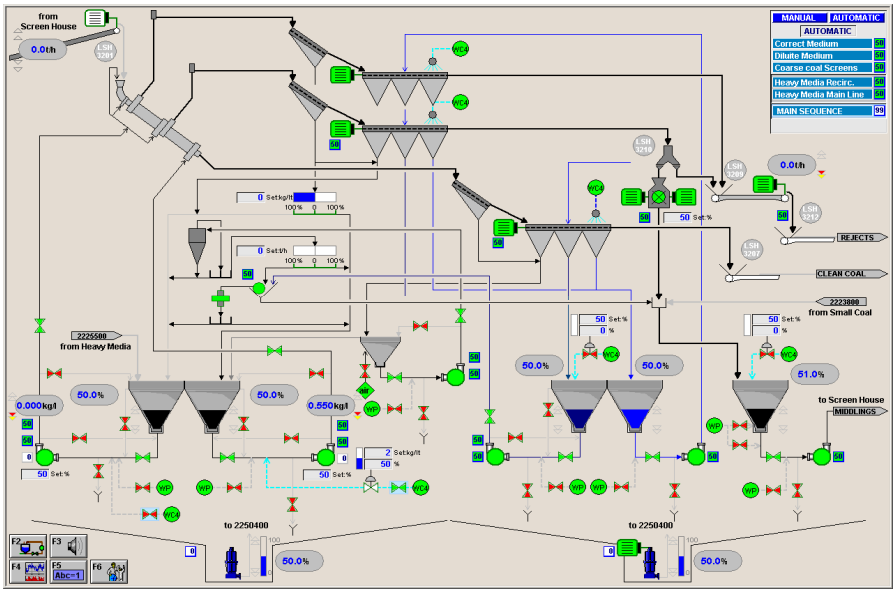
Electrical & Automation System for the Coal Handling and Treatment in TABAS Mining Plant

General View of the Coal Handling and Treatment plant

Tabas coal mine is located in a desert area, approximately 85 km south of the oasis town of Tabas, in the province of Yard in mid-eastern Iran. The extracted coal from the mine is transported, through a conveyor 3 Km long, to a stocking pile area. From here, through a series of belt conveyors (CHP Cal Handling Plant), the row coal is transported to the CPP (Coal Preparation Plant) where is cleaned, using an industrial water gravity treatment system, and enriched by the magnetite in order to increase its calorific value to be suitable for the use as fuel in steel plants and thermoelectric power plants. After the treatment, the clean coal is conveyed to stocking bins for trucks loading.

View of the main belt conveyors

SAET signed a contract with IRASCO (EPC Iranian Company) for the turnkey supply of the automation and control system of CHP and CPP plants. SAET supplied the electrical system composed of : MV boards, power center boards (for power distribution) and MCC board (for motor' control). The automation system is based on PLC (programmable logic controller) and remote I/O units distributed on the field and connected to the PLC with a Profibus network. PLC's controller communicates , through a fiber optic Ethernet communication network, with two redundant SCADA stations. A fiber optic connection for data exchange with mine controller is also foreseen.



SCADA system

Rinse water basin

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