PETCOKE MILL SETTING UP

CMP | BIO BIO CEMENTS | SAN JUAN | ARGENTINA

ENVIRONMENT

The intervention in the lime production plant in San Juan Argentina is aimed at reconversion of the limestone kiln for its alternative operation of both liquid fuel and pet-coke. In order to feed the furnace with solid fuel, a plant had to be set up for its conditioning and storage, since the dosing system is very demanding in terms of the granulometry and humidity conditions of the solid fuel.

To guarantee the safety of the operation of this plant, a CO monitoring system, explosion detection and nitrogen injection neutralization system were also installed.

EXECUTION	WEEKS	WORK TEAM	ENGINEER/TECHINICIAN	COMPOSITION	DETAIL
	16		6		70% Mano de Obra 30% Materiales

2007

SYSTEM DESCRIPTION

To maintain compatibility with the new furnace control system, it was defined the use of an Allen Bradley PLC Control Logix 1756-L61 with Ethernet and DeviceNet communication.

The command and control equipment used were TesysU power bases, Altivar 71 speed shifters on DeviceNet network, and AltiStart 48 soft starters on ModBus network. To monitor the electrical network, a Power Meter CM3350 unit with ModBus communication was installed.

To integrate the modbus network to the PLC, a LUFP9 gateway was used which communicates the ModBus and DeviceNet protocols. EtherNet network was used for communication between the PLC and the HMI. The HMI interface was developed under Wonderware's Intouch 10.0.

OUTCOME

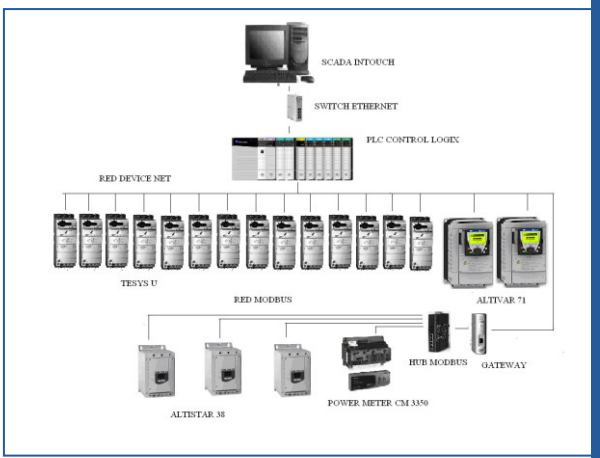
The automated system generates a suitable granulometry and humidity for its later combustion in the lime calcining kiln.

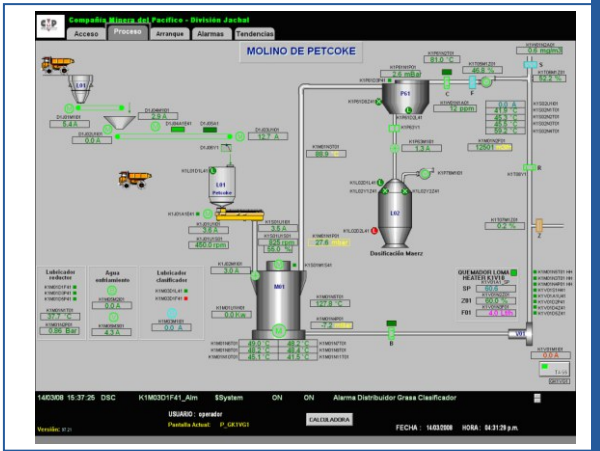
By managing the grinding process in automatic mode, many advantages are achieved, among which quality and productivity stand out, since a fine control of the temperature, pressure, flow and differential pressure parameters in the air circuit of the mill are obtained.

In addition, a production of 3 tons of coal was achieved with minimal intervention by the plant operators, which also allows an optimization of plant personnel and therefore a reduction in costs.

MAIN OBJECTIVE OF THE PROJECT

Implement a control system for a roller coal mill, which must meet the requirements of the equipment supplier company, in terms of operational safety. The system must be capable of generating 3 tons/hour of ground coal to feed the lime kiln. The product needs to be strictly adjusted to established humidity and granulometry conditions.





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