



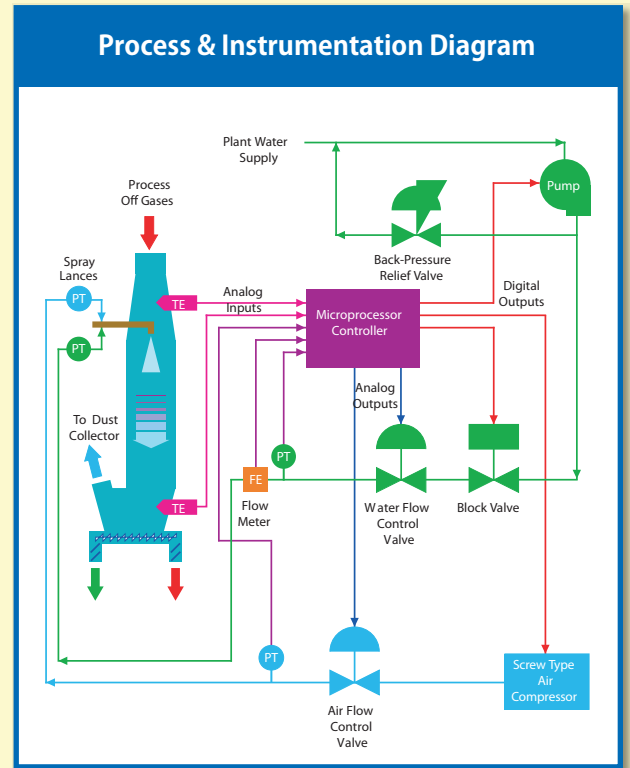
GAS COOLING SYSTEM

Flow Track Proportional to Temperature

Finely atomized water is sprayed into the gas stream to lower its temperature and raise the moisture content. This process alters particulate properties by raising surface conduction and increasing inter-particle coalescence. Resulting in a high turn down in process temperature and enabling efficient collection of waste by-products.

Process & Instrumentation Diagram

A typical Gas Cooling installation follows this schematic. The signals from the thermocouples are compared against a temperature setpoint, and a signal to increase or decrease the water flow is transmitted to the water flow control valve. The air flow control valve is then modulated to control the proper air-to-water ratio. Alarms and interlocks are utilized to prevent poor atomization of the injected water.



The system consists of one pumping skid located ground level and one regulating skid located at lance elevation. Pump skid is instrumented with multi-stage pump, pressure gauge, Programmable Logic Controller (PLC) for auto on/off. The regulating skid consist of air and water automatic regulating valves, compressed air dryer, manual valves, purge line etc. Lance nozzle tipe is constructed of Hastelloy C22 material to withstand the corrosive operating conditions.

