Chemical Process Control

Requirement

Process requires injection of a gas into a catalyst reaction chamber.

A second gas is injected to scavenge excess primary gas.

Existing controls were hardware based and operated independently.

Inability to cascade control functions resulted in excess gas consumption.

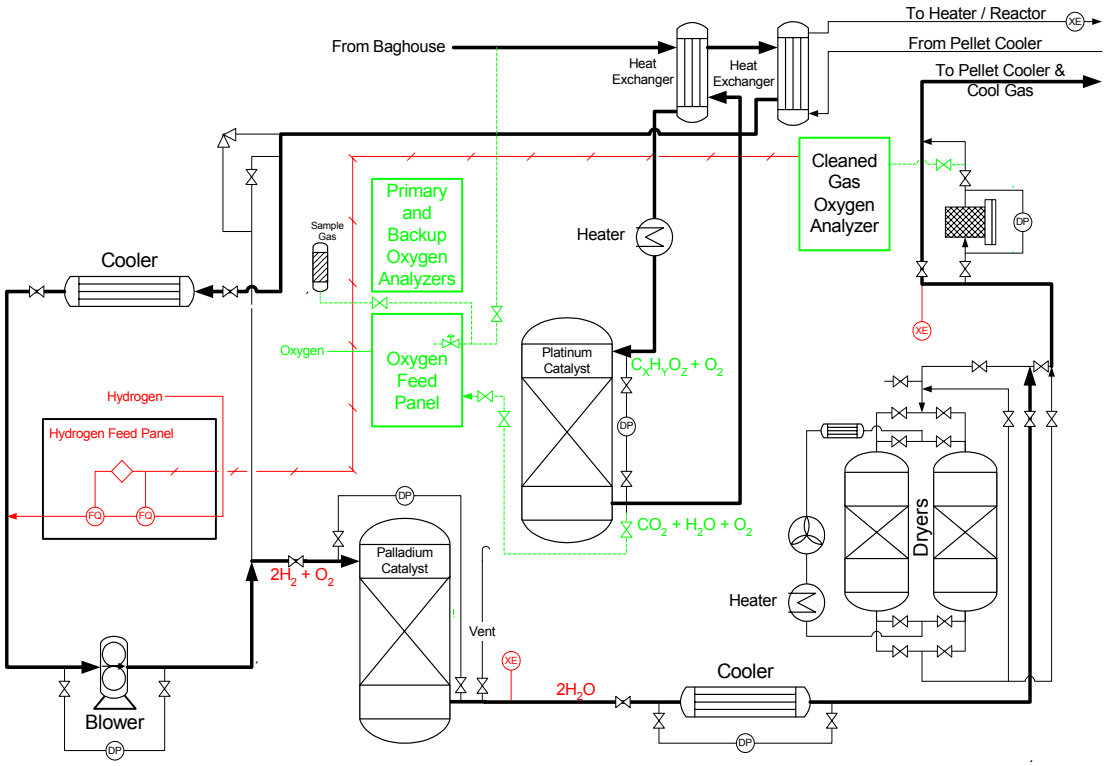
Existing control hardware was obsolete and expensive to replace.

Solution

Existing concentration controllers and sensors were removed.

Sensors were upgraded to include coriolis flow transducers and current technology gas concentration sensors.

Flow control of gases is implemented in PLC as a cascade loop. Scavenge gas flow is now based on actual flow of the primary gas as well as the final gas concentration.

Gas usage is reduced.

Operating cost of sensors is reduced.