MichCon Gas

LOCATION:
Milford Compression Station
Milford, MI

APPLICATION:
Pipeline Compression

ENGINE/COMPRESSOR:
Delaval/HVA-12

DISTRIBUTOR/REP:
Sulzer Turbo Services
Michael Porter

ALTRONIC PRODUCTS:
EPC-200C
DSG-1682DUPS
CPU-2000
AGV-5

OVERVIEW:
MichCon wanted a way to control the pilot gas pressure on their precombustion chambers. The pilot gas was being controlled off the ignition side of the EPC-200C. The problem was that there was no way to control the ignition timing other than manually changing it on the display. The DSG-1682DUPS with its built in microcontroller, allowed MichCon to read the incoming air manifold pressure on channel two and control the pilot gas pressure on channel one using the built in PID loop and the mapping control feature.

During installation Sulzer could not keep the DSG-1682DUPS gauge at zero when there was no pressure on the system. This required going into the calibration part of the gauge and tweaking the low side occasionally. When the gauge was turned on using channel 2, LO setpoint, non-latching, output switch to control the digital input switch, the 4-20mA would go to 12mA and over-pressure the pilot gas system. This was corrected by turning the PID control loop to the TRUE PID setting. Attempting to change the setting on the mapping setup caused the gauge to go to its default setting, requiring a reset. Also of note, when entering a setting for the P part of the PID loop, the setting would duplicate the setting that was entered in the D part.

Using the DSG-1682DUPS to control the pilot gas on the precombustion chambers, MichCon regained all of the benefits that the EPC-200C provides for controlling the ignition timing. They are now able to move the ignition timing around to help make more boost for the turbocharger and to reuce the timing to keep the engine out of detonation when the air-manifold temperature increases.

MichCon has four engines at this station, but currently only one has precombustion chambers. If this setup succeeds, it will be applicable to scores of engines in the field.

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