API-Cecomp Group *n'fo*

Technical & Application Note A125

Application: Monitor and control the melt pressure in an extruder

Type of Company: Plastics Manufacturer

Location: Massachusetts

Problem: The company is using a Dynisco melt pressure transducer on a plastic extruder. The engineer wanted to locally monitor the melt pressure and control the melt pressure for product compliance. The melt pressure had to be recorded for product validation. For the recording and control functions the company selected an Allen-Bradley MicroLogix 1000 PLC. They also required that the PLC have a "system calibration" function.

Solution: API furnished the customer an API 4059 G M02. The API 4059 G M02 provides the excitation power to the melt pressure transducer and is fully field range able for the excitation supply, sensitivity (output from the transducer) and DC current output. The API 4059 G M02 uses state-of-the-art optical isolation, has NON-INTERACTIVE zero and span controls and has 20 V compliance (capable of driving 20 mA into 1000 ohms) so the output signal can be looped thru both the panel meter for local display and the PLC for control and recording. An added feature of the API 4059 G M02 is that it utilizes the pressure transducer's internal calibration resistor to unbalance the bridge to a specified value (typically 80% of full scale) when the functional test switch is in the CAL position, ensuring accurate system calibration.

API 4059 G M02

Strain Gauge/Bridge Pressure Transducer to DC Isolated Transmitter