

# API-Cecom Group *n'fo*

## Technical & Application Note C124

Application: Monitoring vacuum on pump motors  
Type Of company: Shallow water dredging  
Location: Virginia

**Problem:** The customer is an organization that does eco friendly shallow water dredging. This operation uses a “drag head” along the bottom and has suction pumps on both the port and starboard side. As the vessel dredges, excess water in the dredged materials is spilled off as the heavier solids (mainly sand) is filtered out and settles to the bottom of the hopper. This excess water is returned to the sea to reduce weight and increase the amount of solid material (or slurry) that can be carried in one load. When the hopper is filled with slurry, the dredger stops dredging and goes to a dump site and empties its hopper. To ensure proper operation the customer must monitor the vacuum on the pumps so that proper suction is maintained.

*Note: for additional information on this process see <http://en.wikipedia.org/wiki/Dredging>*

**Solution:** The customer purchased an DPG1000L30inHgVAC. The DPG1000L gives the customer both a visual indication and a 4-20 mA signal to send to an onboard PLC.



DPG1000 L

2-Wire Loop Powered Digital Pressure Transmitter



### **Benefits of API's solution:**

- Accurate monitoring of vacuum
- Re-transmission to controlling device
- Rugged operation
- Use a standard product

### **Cecom Unique Feature**



#### **Functional Test Pushbutton**

The Functional Test Pushbutton will, when pressed, output a test signal independent of the applied pressure/vacuum. This signal is adjustable from 0-100% of span by holding the Test button down and adjusting the Test potentiometer on the unit. This signal is typically preset to 50% at the factory. This feature allows the technician to temporarily inject a test or preset calibration signal into the output loop without manipulating the input signal. This signal can be used to check loop status, downstream display operation, downstream alarm operation, etc.

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