



SITRANS RD300

## Remote display for reliable monitoring in challenging environments



Products you buy in a store – where do they come from? How are they made? Taking several steps even further back, how are the tools that make these products created?

A casting and machining company in the US state of Ohio does just that, making metal castings in cylindrical shapes for pump, motor, and valve housings.

### **Around and around we go**

The company uses the centrifugal casting method, which involves rotating a mold at very high speeds while molten metal is poured into it. The centrifugal force hurls the molten metal to the edge

of the mold, where it then solidifies as it cools.

This process makes castings that are both cheaper and more robust. It increases the density of the metal and also uses 10–15% less material, providing a uniform metallurgical structure.

The centrifuge spins at high speeds, anywhere from 300 to 3,000 RPM. Local display of this fast moving centrifuge is crucial to equipment operators, who use the displays to monitor several process variables during the casting.

Monitoring these variables keeps the operators aware of how the equipment



The SITRANS RD300 remote display monitors the flow rate and total amount of cooling water used in the harsh steel plant environment.



Hot and dusty, the company's metal casting process is challenging for any type of local instrumentation.

is performing, improves their safety, and allows them to spot problems early.

During the casting process, there is constant dust and smoke in the air from the molten metal, so any instrumentation faces a challenge in this harsh environment.

The company previously tried several other remote displays, but none were robust enough to work consistently in this application. Each failed within a short amount of time and had to be replaced.

#### Local display to the rescue

Operators installed the new SITRANS RD300 remote display to give local indication of the speed of their centrifuge, air pressure, flow of the milling machines, and the flow rate and total of cooling water used.

The relays are used for alarms and safety overrides and the 4-20 mA output is used to retransmit information back to the control room. Operators installed the meters in NEMA 4X field enclosures at eye level in convenient locations.

With its NEMA 4X, IP67 enclosure, the remote display prevents the unit from problems related to the dust and smoke in the atmosphere. The bright red LEDs on the dual-line display make it easy for the operator to see the real-time flow rate of the cooling water and how much they have used by using the new totalizer feature.

For environmental monitoring, operators reset the total cooling water used for each job and they can easily see how much they have used with the display's new totalizer

feature. The operators use free downloadable MeterView Pro software to data log the cooling water use at the start of each day.

Since installing the SITRANS RD300, operators have not experienced any more problems with unit failures. The remote display provides reliable information that operators can depend on in this challenging environment.

As a result, the company will be upgrading the rest of their displays to the SITRANS RD300.

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