State-Of-The-Art Level Monitoring with Existing Instrumentation

James Powell, Siemens AG
Business Development, Peterborough, (Ont.) Canada
Tel: +1 (705) 740-7020 • Email: james.powell@siemens.com • Web: www.siemens.com/SITRANSRD500

Newalta, a North American resource recovery and environmental services provider, collects, consolidates, and processes industrial waste from across Canada and bordering American states. The company's Toronto location manages treatment and disposal of non-hazardous industrial waste such as oil- and metals-contaminated wastewater, bulk containerised materials, and consolidated small-quantity lab wastes called "lab packs." All incoming waste is analysed in a state-of-the-art on-site laboratory, verified to confirm its contents, and then consolidated, processed, recycled, or shipped off site for reuse or disposal, depending on the type of material. Storage of waste oil is a very important part of the recycling process and requires constant level monitoring of intake tanks at all times.

Newalta measures the level of oil in 19 recycling tanks with 18 Echomax XPS-30 transducers connected to three Sitrans LU10s.

Newalta measures the level of oily water in 19 recycling tanks with three Sitrans LU10s connected to 18 Echomax XPS-30 transducers. The Sitrans LU10 is an ultrasonic non-contacting long-range level controller for liquids or solids. It is capable of monitoring up to 10 points of level units in one controller. The Echomax XPS-30 transducer is for long ranges and higher temperatures. Echomax Transducers can be fully immersed, are resistant to steam and corrosive chemicals, and can be installed without flanges. During operation, the Echomax transducers emit acoustic pulses in a narrow beam. The level monitor measures the propagation time between pulse emission and its reflection (echo) to calculate the distance.

In 2003 Newalta resolved to find a better way to obtain level readings from the Sitrans LU10, so the company installed a graphical HMI (Human Machine Interface) to monitor oil levels. The HMI was connected to the Sitrans LU10 controllers via Modbus communications, and it displayed tank levels in a graphical format. This was a significant investment, but at the time it offered the most cost-effective solution.

Newalta was pleased with its HMI solution, but in recent years became concerned about the possibility for potential computer system failures. The company considered upgrading their current system, but this would be expensive and there were numerous risks involved. For example, when the HMI code is upgraded to the new

Echomax XPS-10

system, the integrator could run into time-consuming problems that would add to the expense of the upgrade. The integrator would also have to install new software on the computer, thereby adding yet another risk.

Solution

Advancements in technology over the past eight years have created better options for reporting tank levels. Newalta installed a Sitrans RD500 remote monitor from Siemens to replace its outdated HMI monitoring system, while continuing to use its current instrumentation. This monitor was chosen for its advanced networking capabilities and low cost of ownership. It provides remote tank level data via the web and it includes data capturing and event alarming. By typing their IP address into any web browser, clients can easily access level readings from the SITRANS RD500.

Sitrans RD500

Benefits

In the old system, the HMI was located in the lab. Therefore, when operators were working on the tanks, they would have to call the lab and get the technician to report the level readings, an inefficient difficult process. With the Sitrans RD500, operators simply log on to view level readings. In addition, this remote monitor logs inventory and usage every hour, which plant managers can easily download anytime from the web.
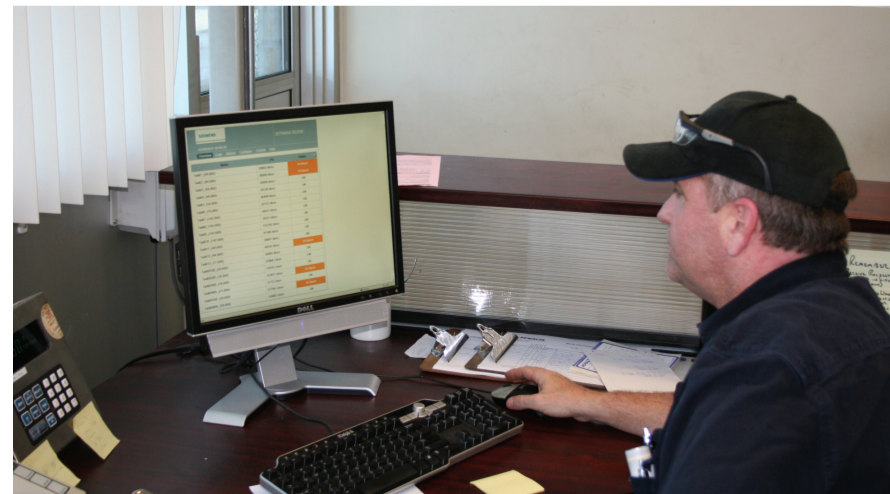

Sitrans LU10

Newalta operators have been very impressed with the Sitrans RD500's ease of use, and the substantial cost savings offered.

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