

Endress+Hauser's new Teqwave MW creates unique value proposition in monitoring of total solids in wastewater

BURLINGTON, ON – In municipal and industrial wastewater treatment plants, real-time measurement of total solids (TS) and not just total suspended solids (TSS) has become indispensable, helping operators capture a multitude of process efficiencies that flow to the bottom line. The microwave measurement technology employed by Endress+Hauser's new Proline Teqwave MW 300/500 TS inline meter as well as unique features of the meter itself take that value enhancement to an even higher level.

Teqwave MW's measurement data provides real-time intelligence about the state of all sludge treatment processes, so operators can be proactive, no longer having to depend solely on the delayed intelligence of laboratory sampling. Teqwave MW's online data drastically reduces the need for manual testing for process control purposes, so it can be done less frequently. (Laboratory values are still the standard and used to optimize the calibration of the Teqwave MW).

Sludge, what remains after wastewater treatment, undergoes multiple processes to remove as much water as possible to minimize the huge costs of transporting and disposing of the solid material off-site.

With Teqwave MW's real-time intelligence, operators can modulate flows and address anomalies as they emerge, to assure the highest TS content at each stage. For example, assuring consistently high TS content reduces the required heat in a digester and allows more biogas to be produced, lowering the plant's net energy expense. In subsequent stages, the volume of dewatering chemicals used can be reduced by up to 20%. Polymer dosing no longer is based on flow rates alone, but on the actual measured volume of TS solids thanks to Teqwave MW monitoring, a big step forward in improving process efficiency.

Teqwave MW provides continuous calculation of the load rate when combined with a flowmeter. It can control water and polymer intake, for higher dewatering efficiency and consistent TS levels in dewatered sludge. Optimizing process flows saves on energy and reduces wear and tear on pumps, extending their maintenance intervals and service life.

Teqwave MW, which also measures temperature and conductivity, joins the extensive portfolio of flow, level, analytical and pressure measurement devices from Endress+Hauser in widespread use in wastewater treatment plants across Canada. Its ProLine 300 or 500 transmitters are the same ones employed by many of those other instruments, so the manner in which data is accessed and displayed is immediately understood by technicians in the field or control booth.

The compact Proline 300 has an integrated web server for remote monitoring while the Proline 500 can be installed up to 300 metres from the sensor. Those are productivity and safety features, distancing staff from particularly insalubrious or hard-to-access areas. And getting each Teqwave MW up and running is made easier and faster through the use of menu guidance provided by setup wizards.

Teqwave MW features the same consistent measurement reliability of all Endress+Hauser meters with repeatability of up to ± 0.01 % TS (DIN 100-300) for TS and $\pm 0.5^{\circ}\text{C}$ for the fluid temperature.

Additional benefits flow from the Teqwave MW design and self-diagnostic capability. Its polished measuring tube allows for minimal buildup, lengthening cleaning intervals. The availability of Endress+Hauser's Heartbeat Technology provides device verification on an ongoing basis, so operators can have confidence in each unit's readings.

Last but not least, for the procurement folks, adding another Endress+Hauser meter can enhance the scale benefits and convenience of single-supplier sourcing.

About Endress+Hauser

Endress+Hauser is a global leader in measurement instrumentation, services and solutions for industrial process engineering. Our products – sensors, instruments, systems and services for level, flow, pressure and temperature measurement as well as analytics and data acquisition – set standards in quality and technology. The company further supports its customers with automation engineering, logistics and IT services and solutions. Founded in 1953 by Georg H Endress and Ludwig Hauser, the Endress+Hauser Group has been solely owned by the Endress family since 1975. Today, the Group is managed and coordinated by a holding company based in Reinach, Switzerland, employing over 16,532 personnel across the globe. In 2023, the Group generated net sales of 3.719 euros (C\$5.48 billion). Endress+Hauser's production centres in 12 countries meet customers' needs and requirements quickly and effectively, while its dedicated sales centres and strong partner network guarantee competent worldwide support.

Press Photo (see separate JPEG file attached)

Caption: Microwave measurement, the technology employed by Endress+Hauser's new Teqwave MW 300/500 TS inline meter, creates a unique value proposition in the measurement of total solids in wastewater sludge.

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