



ENDRESS+HAUSER USA

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How Smart Devices are Transforming Process Instrumentation

Process automation is the lifeblood of many manufacturers. Having smart, connected process instrumentation is key to improving productivity, lowering maintenance costs, reducing paperwork, complying with legal requirements and more. Ashley David, Product Marketing Manager for Level and Pressure Equipment at Endress+Hauser USA, talked with The Journal's Executive Editor Theresa Houck about advancements in smart device technology, including transmitters, sensors and actuators, and why they matter.

Theresa: What are some key developments and trends in smart instrumentation?

Ashley: Smart instrumentation has advanced in leaps and bounds. Everything is about data — the quality of data, how much data can be pulled from a process, and how that data is presented in an easily understandable format. Real-time process data gives manufacturers control by allowing workers to make informed decisions

for optimized efficiency. The industrial Internet of Things (IIoT) is key, because systems need to be connected for companies to be competitive.

Smart devices provide data from inline processes so technicians can see how they're operating. For example, the newer radar instruments can detect if there's foam in the process, how much foam and how it's affecting the signal, which might trigger technicians to turn on defoaming agents. Or, they can detect build-up on the face of the radar, so users will know they need to perform preventive maintenance to clean the radar face and thus cut maintenance costs by enabling more efficient preventive maintenance.

Another significant development is that data can help users mitigate the impact of workforce changes as experienced employees pursue other endeavors or retire.

Theresa: Now, if a manufacturer is already using smart instrumentation, why would diagnostics, verification and monitoring be necessary?

Ashley: Diagnostics, verification and monitoring are complementary to other functions of smart devices. Instruments put information in the hands of technicians, so they know what's happening in real time and don't have to chase them down. They



Data provided from smart instrumentation helps users achieve increased efficiency, better maintenance planning, optimized cleaning cycles and less downtime.

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can take care of an instrumentation challenge immediately, enhancing efficiency.

Plus, it helps eliminate some physical activities, like the need to climb on top of a vessel, which could be 150 ft. in the air. That's a safety concern, especially depending on the weather. Instead, users can connect to the vessel's instrumentation from the safety and comfort of a control room. And again, this ties into how data can help with workforce challenges.

Theresa: Endress+Hauser's smart instrumentation includes your



Smart instrumentation lines from Endress+Hauser are equipped with smart diagnostic, verification and monitoring functionalities using Heartbeat Technology, providing in-depth process insights.

Heartbeat Technology. Tell me about that.

Ashley: Heartbeat Technology is an Endress+Hauser-branded term describing technology within our smart instrumentation. It's an intelligent, automated monitoring and control system that uses sensors and data analytics to provide reliable, in-depth sensor and process insights and optimize performance.

The data provided by smart instrumentation helps users achieve increased efficiency, better maintenance planning, optimized

cleaning cycles, less downtime and even higher confidence in the measured value.

Theresa: Do you have a key takeaway that's important to know about smart devices?

Ashley: I'd tell users who are unsure if smart instrumentation is for them, to keep in mind that it's really taking data and putting it in their hands. It's not taking the process out of their hands. The purpose is to help manufacturers achieve all the advantages I mentioned previously. ●

For more information about Endress+Hauser smart process automation solutions, visit www.us.endress.com.

