Wireless Applications

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Applications and Useful Features

- Introduction
- Wellhead Monitoring: Long battery life and Flexibility
- Tank Farms: Redundancy and Flexibility
- Gas Detection: Duo-Casting and Fast Update Rates
- Vibration: Gateway Client Interface
- Steam Trap: Broad application support
- Summary
• We know the system works based on some key features:
  – Backbone architecture
  – Transmitter routing flexibility
  – Longer battery life

• These features and functionality are what make the ISA100 system perform at a higher level

• Let’s look at some specific applications and how the features apply
Wireless Wellhead Monitoring

Combined Wells

Master Well
FDAP
RTU2020 with Wireless I/O

Well #1
Well #2
Well #3
2. Tank Farms- Challenges

Tank Farms offer multiple opportunities to incorporate wireless technology.

- Tank gauging
- Overfill alarming
- Process monitoring
- Floating roof monitoring
Tanks can be monitored using Honeywell Enraf Flexline Gauges or ISA100 Wireless Transmitters.

- A single system can accommodate different needs.
- Both FDAPs and transmitters can be Class1/ Div1 if required.
Tank Farms - Redundancy

- Wireless transmitters provide a truly redundant communication path that doesn’t share power, cable tray, or mounting location with the wired transmitter.
3. Gas Detection

- OneWireless Adapter can be used with HART enabled sensors like the Honeywell Analytics XNX.

- Any fixed or portable gas detection device with a 4-20 mA output can use a Universal I/O transmitter.
Gas Detection

- Duo-Casting and a strong mesh allow for redundant path creation and no lost alarms in the event of FDAP failure.
4. Vibration

• Rotating equipment failure is one of the main causes of plant downtime.

• As much as 90 percent of rotating assets in industrial plants are not instrumented due to the high cost of wiring vibration monitoring systems. Instead, these assets are checked manually.

• We have a solution that is cost effective, easy to deploy and provides timely assessments of rotating assets via regular equipment status reports. This solution is another enabler for our customers to install the OneWireless infrastructure.
ISA100 Wireless Compliant Vibration Solution

• The OneWireless Vibration Solution provides everything necessary to capture and analyze the condition of plant assets. It consists of following key components:
  – SKF Wireless Vibration Transmitter which is ISA 100 Wireless compliant
  – OneWireless infrastructure
  – SKF @ptitude Analyst software, and associated wireless and reliability services.

• Customers can improve asset availability thanks to real-time monitoring resulting in a 30%, or more, reduction in maintenance costs.
  – Wireless reduces workforce exposure to remote, hazardous, and tough-to-reach locations for gathering vibration data.
The tunneling feature allows the SKF software to provide full spectrum vibration data giving a much earlier indication of failure.
5. Wireless Steam Trap Monitoring

Spirax Sarco STAPS ISA100 Wireless

- Accurate and rapid leak detection
- Accurate diagnostic algorithm
  - Trap performance
  - Steam loss data
- Lower installation costs
- Long-life battery
- Robust construction
Summary

• Wireless technology as a whole is gaining momentum all the time.
• The more users realize that wireless is the way they want to go, the more important it is to understand why this is the best solution on the market.
• Understanding the features and functionality of the system is what puts above the rest and creates a solution not just hardware.
• The advantages of this system translate to particular verticals or exact applications and will solve specific problems or general monitoring needs.
Questions?