ENHANCING SAFETY & EFFICIENCY IN HAZARDOUS AREAS WITH XP3I BLUETOOTH PRESSURE GAUGES



A Customer in Western Canada faced significant challenges when testing processes used in their production of hazardous chemicals. Their tests require technicians to adhere to strict safety protocols, often including wearing a full set of personal protective equipment (PPE), such as specialized protective clothing, respirators, and other gear. This suiting-up process can be time-consuming, especially when multiple test setups are required, involving repeated entries and exits from the hazardous area.

However, with the introduction of the XP3i digital pressure gauges—which feature Bluetooth capability and an IS safety rating—the customer was able to streamline their testing procedures significantly. This application note details how the XP3i gauges, with the CrystalConnect mobile application and Bluetooth technology, helped reduce operational downtime, enhance safety, and improve the overall efficiency of testing processes.

CUSTOMER CHALLENGE

In environments classified as IS areas, or those with dangerous chemicals, workers must adhere to strict safety protocols to mitigate risks associated with explosive or hazardous atmospheres. For this customer, the testing process required extensive PPE, including protective gear, to ensure compliance with safety standards. Their original testing setup involved using XP2i gauges to measure pressure levels across various applications. They were very happy with the gauges, but the process could improve. Each test involved the following time-consuming steps:



1. **Suiting up**: Workers had to don a complete set of PPE before entering the IS area.
2. **Setting up the gauge**: Inside the hazardous zone, they connected and configured the gauge for the specific test and started the recording run.
3. **Running the test**: After exiting the hazardous zone, they conducted the test while the gauge collected data.
4. **Re-entering the area for adjustments**: If changes were required (e.g., changing the gauge or adjusting the range), workers would have to re-enter the hazardous area, which meant suiting up again.
5. **Retrieving the gauge**: Once they completed the test, they had to suit up and re-enter the IS zone to stop the logging run, disconnect the gauge, and remove it from the area.

They repeated this cycle until they completed all testing procedures, consuming valuable time and creating additional risk with each re-entry into the IS area.

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SOLUTION: XP3I PRESSURE GAUGES WITH BLUETOOTH AND CRYSTAL CONNECT

The XP3i digital pressure gauges with Bluetooth technology offered an innovative solution. They are designed for use in hazardous environments and have an Intrinsically Safe (IS) rating. The Bluetooth function enables remote data collection and monitoring through the CrystalConnect app.

With the XP3i, the customer only needed to enter the hazardous zone once to set up the gauges. After the initial setup , the team could monitor the test, gather data, adjust parameters, and start and stop recording runs —all remotely—eliminating the need for repeated suit-ups. This significantly reduced time, labor, and safety risks.

BENEFITS REALIZED

The transition from XP2i to XP3i gauges offered the customer several key advantages:

1. **Time Efficiency**: The ability to collect data wirelessly with the Bluetooth function reduced the number of times the team needed to enter and exit the hazardous area. With only one initial entry required, the total testing time was significantly shortened.
2. **Enhanced Safety**: Each entry into a hazardous zone carries inherent risks. By reducing the number of entries, the XP3i gauge minimized exposure to potentially dangerous conditions, improving worker safety.
3. **Cost Savings**: Reduced time spent suiting up and entering the hazardous area translated to lower labor costs and less wear-and-tear on expensive PPE equipment.
4. **Increased Productivity**: With quicker setup times and fewer interruptions to testing, the customer completed tests more efficiently, allowing for faster data acquisition and decision-making.

CONCLUSION

The IS-rated XP3i digital pressure gauge with Bluetooth technology provides a game-changing solution for industries that operate in hazardous environments. By adopting the XP3i gauges, the customer in Western Canada was able to streamline their testing procedures, reduce safety risks, and save time by eliminating the need for repeated entries into hazardous zones and facilitating remote data collection with CrystalConnect. The XP3i proved to be the perfect tool for improving safety and efficiency in challenging environments.

This customer's experience underscores how the XP3i gauge perfectly suits hazardous applications where safety, efficiency, and accuracy are critical.

Remote pressure monitoring and data acquisition with the XP3i are not only possible but also safer and more effective than ever before.