Application story

Druck DPI620 Genii saves potential production loss of $750k

Druck business
Multifunction Calibration Instrumentation

Application
Simulating a level sensor 4-20 milliamp signal

Customer
Precision Cleanrooms

Product/service
DPI620G-IS-L Genii Intrinsically Safe Multifunction Calibrator

Benefits
World-class pressure measurement and generation

Short lead-time

ATEX and IECEx approval and is intrinsically safe for use in zone 1 and zone 2 classified hazardous areas

Druck's Customer

Druck design and manufacture pressure calibrators, controllers, indicators and pressure sensors. All these products begin with raw silicon which is processed in a state-of-the-art clean room. Druck's new clean room facility, installed and maintained by Precision Cleanrooms, is critical to Druck's manufacturing processes.

Precision Cleanrooms specialise in the design and construction of high quality clean rooms whilst providing ongoing support and maintenance of the facility, ensuring optimal production output for their customers.

Druck's Customer's Challenge

A clean room is a controlled environment that is designed to maintain extremely low levels of pollutants such as dust, airborne microbes, aerosol particles and chemical vapours.

Druck's clean room, creates silicon wafer that is cut into individual die, which is then fixed into modules. Once through this process, the modules are then integrated into finished products such as Druck's pressure sensors and test and calibration equipment, which include Portable Calibrators, Pressure Controllers and Air Data Test Sets.

Linked to Druck's clean room is a tank containing deionised water which feeds the process for creating die. Deionised water is required as part of the manufacturing processes to keep the clean room operating, enabling the silicon to be cleaned at each stage of the production process.

On the top of the tank is a t, which enables automated remote monitoring, collecting measurements and important data from within the tank. This data is transmitted back to the control room which ensures performance is maintained to the required specification.

A level sensor is fitted within the tank and is monitored by the telemetry system to detect the water level, ensuring specified minimum and maximum levels are not exceeded. The level sensors have a 4 to 20

milliamp current loop output signal and determine the water level by measuring the hydrostatic pressure of the water pushing down on the bottom of the tank.

An issue occurred where the tank's telemetry system alerted the Druck team of a water leak within the tank. Upon investigation the level sensor had failed and required a replacement sensor which had a 3-week lead time for delivery.

Druck's Solution and Added Value

Druck provided Precision Cleanrooms with a DPI 620G-IS-L Genii Intrinsically Safe Multifunction Calibrator, allowing them to simulate the 4-20 milliamp signal, the level sensor should have been providing.

Druck's DPI 620/G provides simultaneous measurement and source capabilities for the setup, testing and calibration of electrical, frequency, pressure and temperature devices in measurement and control applications.

Picture 1: DPI620G-IS-L Genii Intrinsically Safe Multifunction Calibrator

The DPI 620G was used to hold the value at a fixed output (simulating the role of the sensor) which meant the clean room could continue with daily operations, without risk of danger to personnel, equipment, silicon failures or loss of production.

This action saved Druck potential production losses amounting to $750,000.

For more information

To learn more about this product and Druck, please visit:

Datasheet: https://bit.ly/2LBk89L

Online: https://bit.ly/35ZxBSo

Linkedin: linkedin.com/company/druckcompany

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