

Automated Testing of Helium Leak Detectors Using LabVIEW and TestStand

Customer

Varian, Inc. (Lexington, MA) develops vacuum systems, including helium mass spectrometer leak detectors which are used to locate and measure leak rates into or out of devices and containers.

Challenge

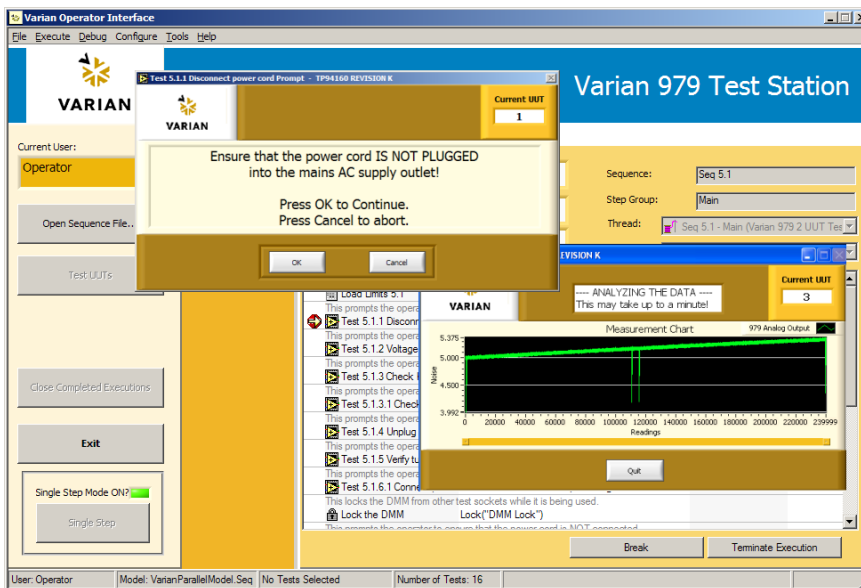
Replace manual testing procedures to increase functional test throughput of helium leak detectors.

Solution

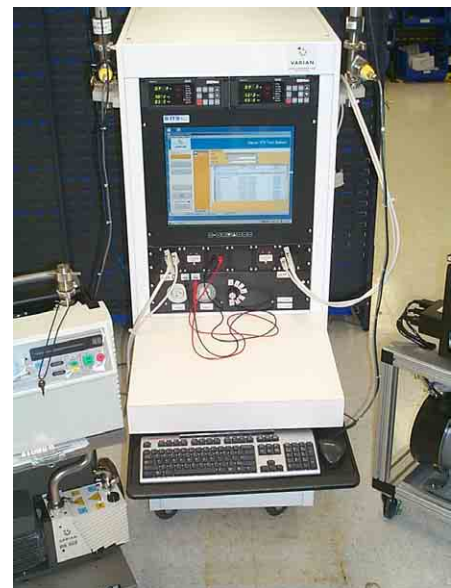
Create an automated test system that provides an intuitive operator interface, performs parallel testing on two units under test (UUTs), generates reports, and archives data to a database for analysis.

Key products used:

- National Instruments (NI) LabVIEW
- NI TestStand
- NI PCI-6527 digital I/O
- NI PCI-6032E multifunction DAQ
- NI PCI-232/4 4-port RS-232 interface
- Signametrics SM2042 6-1/2 digit PCI multimeter
- Varian SenTorr gauge controllers



TestStand executes the test sequence and prompts operator when action is required.



The automated test system performs parallel testing on two UUTs.

Benefits

By automating operator-intensive tasks, such as fine-tuning UUT operating parameters, evaluating chart recorder output data, manually interacting with the UUT, and recording test results by hand, the test system doubled throughput.

To achieve similar results, contact our office nearest you or visit www.bloomy.com.

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