GE
Measurement & Control

TOP Calibration TRENDS

Countless dollars and man-hours traditionally go into calibration processes and management, which have recently come under increased return on investment scrutiny. With the growing trend of metrics-based results, identifying the right opportunities to improve measurement efficiency is key to success.

For ROI watchdogs expecting a bigger bang for the buck and technicians dreaming of a simpler and smarter calibration solution, the future is now. Remote web calibration will surely be the name of the game tomorrow, but how can you deal with today's challenges?

Do you need to streamline your calibration processes, reduce calibration management time, and automate calibration data collection and archiving? Here are four trends you should keep your eyes on.

1. Demographic and skills gap

The industry faces a massive shortage of qualified instrument engineers and technicians. The aging technician workforce in North America and Europe has created a market to bridge the skills gap and counterbalance the shrinking workforce with smart and powerful instruments.

With the smartest instruments ever being available now, simplified calibration and maintenance processes are not just a promise any longer. One technician can do today as much as three technicians in the past. The instruments are easier to use and provide complete solutions such as intuitive hand-held calibration with modularity, HART® communication, and Fieldbus functionality, web-based calibration management systems, integrated data with high-end ERP software and much more.

Today's integrated calibration management software for example, enables automated planning, decision-making, resource allocation, task execution, documentation and analysis helping engineers to do more with less resources.

2. Instruments with computing power are essential

While a surprising number of organizations still use pen and paper to record calibration results, they've also become increasingly aware of efficiency and accuracy losses. An instrument engineer using the traditional method of documenting calibration information can spend as much as 50% of his time off crucial tasks. Paper-based recording is not only time-consuming; it is also prone to transcription mistakes.

In this fast-changing industry environment, companies need to adopt solutions enabling them to deliver quick results without jeopardizing quality.

Today's advanced portable calibrators help engineers deliver smarter and faster calibration: they can store vast amounts of data and provide seamless and paperless documentation of calibration and maintenance tasks. These calibrators put all the device standards, manuals, data sheets and internet access at engineers' fingertips. With the latest web-based technology, calibration management software can be installed on a company's server and accessed through a PC and web browser from anywhere in the world.

3. Outsourcing is falling from favor

Outsourcing off-site calibration as well as equipment servicing and calibrating have almost become the norm, with many enterprises hiring specialized teams to tap into skills lacking internally and cut costs.

However, the outsourcing tide has begun to ebb when more and more companies have started bringing calibration and maintenance processes back in-house for the very same reason: cost savings. Sounds paradoxical, right?

Many organizations are moving away from outsourcing calibration processes because instruments more user-friendly and results that previously required entire specialized teams can now be achieved by adopting the right technology. Moreover, software enables engineers and technicians to know exactly when to calibrate and where to calibrate, thus gaining control and flexibility at lower costs. Today's calibration management software can analyze calibration data and determine the optimum calibration frequency for each instrument on the basis of a set of programmable operating scenarios and safety margins.

4.Less maintenance for longer life of the plant

Naturally, calibration is an important aspect of maintenance and if calibration data is analyzed correctly, it can help maintain and improve compliance, efficiency, quality and safety. However, managing the calibration of thousands of plant instruments and then analyzing all the data to a level required for trend evaluation is not a simple task.

Today's laboratory calibration equipment offers easy communication with software and can provide 100% automated calibration of pressure transducers and transmitters. However, this is not a perfect solution because instruments, like many electrical and mechanical devices, often do not respond kindly to being dismantled. The result sometimes is a fall-off in performance after reassembly.

An obvious answer to this is to calibrate more frequently, but this entails increased time and cost, both in lost production and in calibration resource. Fortunately, today's calibration management software can analyze collected calibration data and determine the optimum calibration frequency for each instrument or measuring device, based on a set of programmable operating scenarios and safety margins.

Consequently, for all these reasons, the aim must be to carry out less maintenance, while maintaining accuracy of calibration to ensure quality of product and productivity of plant and to comply with regulations.

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