MARTEL ELECTRONICS

Application Note

What to Look for in a Documenting Calibrator

- ✓ **First, remember that the most important feature of a documenting calibrator is the calibrator part.** If it doesn't work well as a calibrator, it won't work well as a documenting calibrator. This means you need to look at:
  - o Functions, does it have all the functions you need, i.e. thermocouple, RTD, frequency, pressure, etc?
  - o Ease of use, is it easy to learn to use? If not, it likely won't be used.
  - o Reliability, there's nothing worse than getting to a remote instrument location and finding that your calibrator isn't working.
- ✓ **What do you really need in terms of documentation?**
  - o For a major installation, there may be a need for a lot of Information Technology (IT) support for the necessary software installation and maintenance.
  - o Conversely, if you don't have a large installation, you don't want a system that requires a high level of support. You need to be able to support it yourself or with minimal outside support.
- ✓ **Are you prepared to enter a lot of data to get your installation up and running?**
  - o Most installations require the advance entry of a lot of data for each instrument BEFORE it can be calibrated using the documentation system.
  - o An easier alternative would be a system that lets you create a database AD HOC while you are doing your normal calibration activity. The caveat to this approach is to insure that it will meet your needs for data management and reporting.
- ✓ **Will you need custom reports or forms?**
  - o Some software packages lock you in to a few "canned" reports. It may be costly to have custom reports written.
  - o Likewise, some packages keep data in a proprietary format so it cannot be accessed by other software. Note, this would be important if data security is a high value issue for you, i.e. pharmaceutical applications.
  - o There are systems that keep data in easy to access and customize formats like Excel spreadsheet files. If you need to create a custom report or form, it's easy to find someone who can do that in a spreadsheet.
- ✓ **What data do you need to collect?** Make sure your chosen system will meet all your data needs. In addition to the minimum requirements below, you may need a system that can calculate error as a percent of reading, for example.
  - o Basics: tag ID, instrument manufacturer, instrument model number, instrument serial number, instrument input type, instrument input range, instrument output type, instrument output range.
  - o Pre-Calibration: number of test points, test point values, accuracy criteria.
  - o Post-Calibration: As found/as left data for each test point, error for each test point, pass/fail status of instrument, date & time of calibration.
  - o Other: technician name or ID, ambient conditions, comments.

A documenting calibration system can be as simple as a single multi-function calibrator with an easy to use software package or it can be a more sophisticated system with extensive database software, custom reporting and multiple brands or types of calibrators. There is a lot of choice in the marketplace, so it's important to determine your needs and buy accordingly rather than having a system that dictates to you.