Druck’s PACE Tallis

Is it as good as we say it is?

In May 2024, Druck, a Baker Hughes business launched a new transfer standard calibrator, positioned to disrupt the traditional, digital standard technology.

PACE Tallis represents the pinnacle of Druck's pressure sensing technology. Utilising its market leading TERPS technology, customers that have tested the PACE Tallis have been impressed with the performance, but some potential users that have not tested it have questioned - is the performance as good as we say?

Read our open letter to find more details about the true performance of PACE Tallis

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Digital vs traditional standard

The benefits of a digital standard over more traditional approaches have largely been accepted for many years. They offer an efficiency improvement to metrological applications, through ease of use, speed of operation and being more forgiving of environmental conditions along with many other application specific benefits.

Digital standards are only as good as the sensing technology utilised, and this is where PACE Tallis truly excels. Druck's proprietary TERPS technology has excellent inherent precision and stability (low drift) making it suited for high accuracy, low uncertainty metrological applications, such as those required by primary and secondary calibration labs.

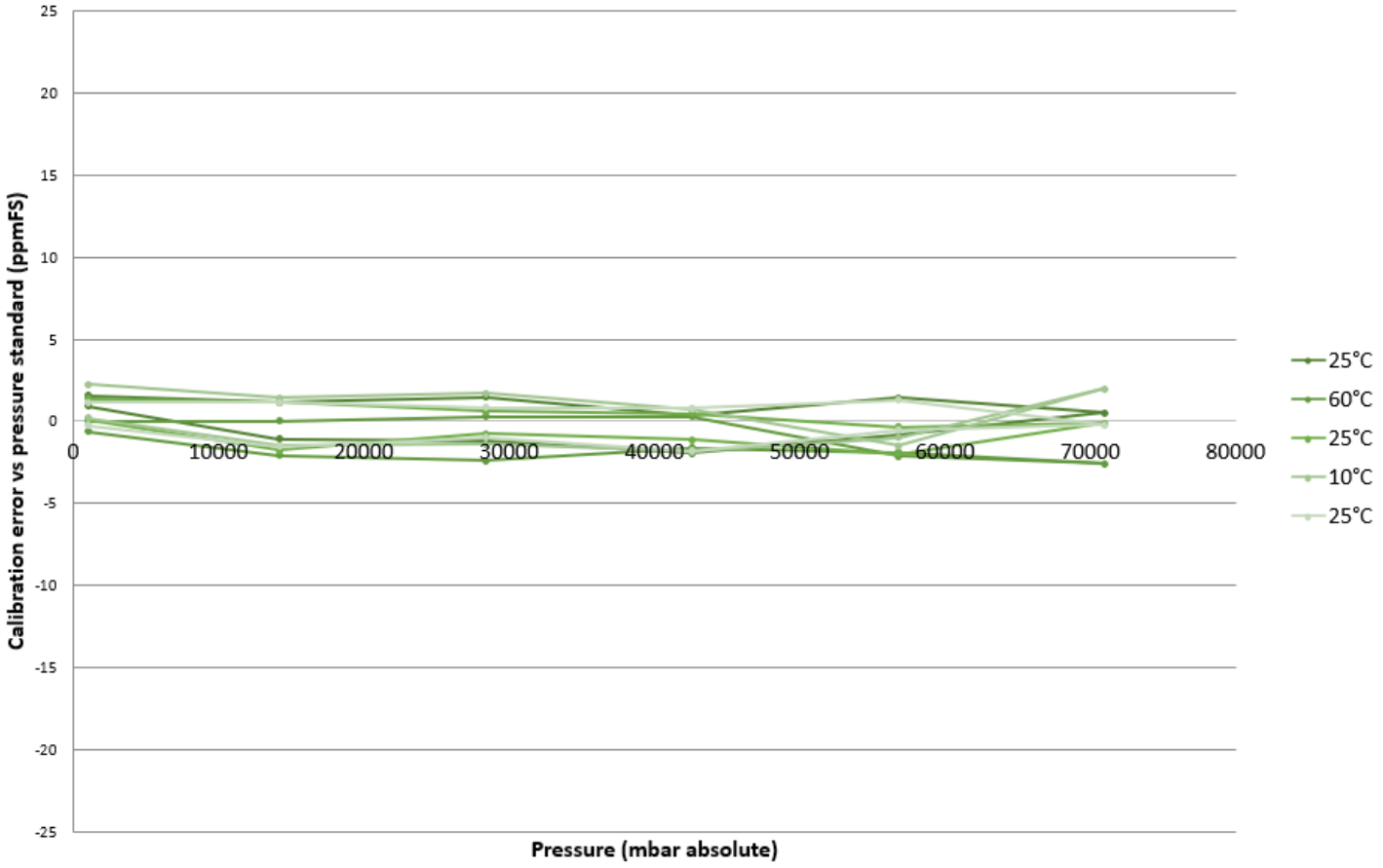

Figure 1: Typical PACE Tallis precision.

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PACE Tallis performance

What sets Tallis apart from other digital standards is its low drift characteristics, which is a crucial characteristic impacting measurement reproducibility and overall accuracy.

Calibration indicates how good a sensor is at one point in time, but the drift characteristics of the sensor determine how long that calibration can be relied upon for. Sensor drift requires periodic re-calibration procedures to be performed, which are not only costly, but create a period of digital standard downtime.

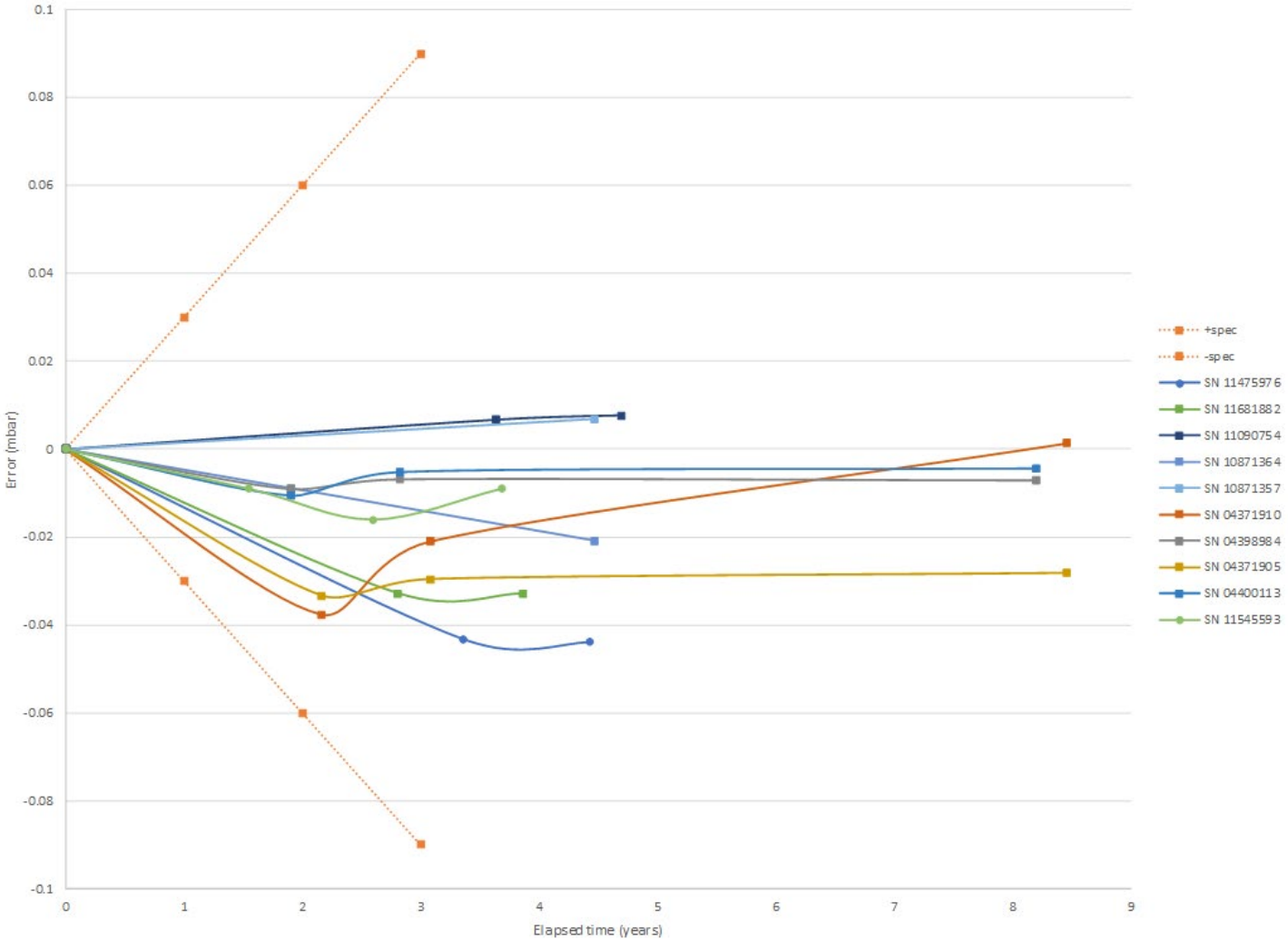

Figure 2: TERPS barometric pressure sensor zero drift.

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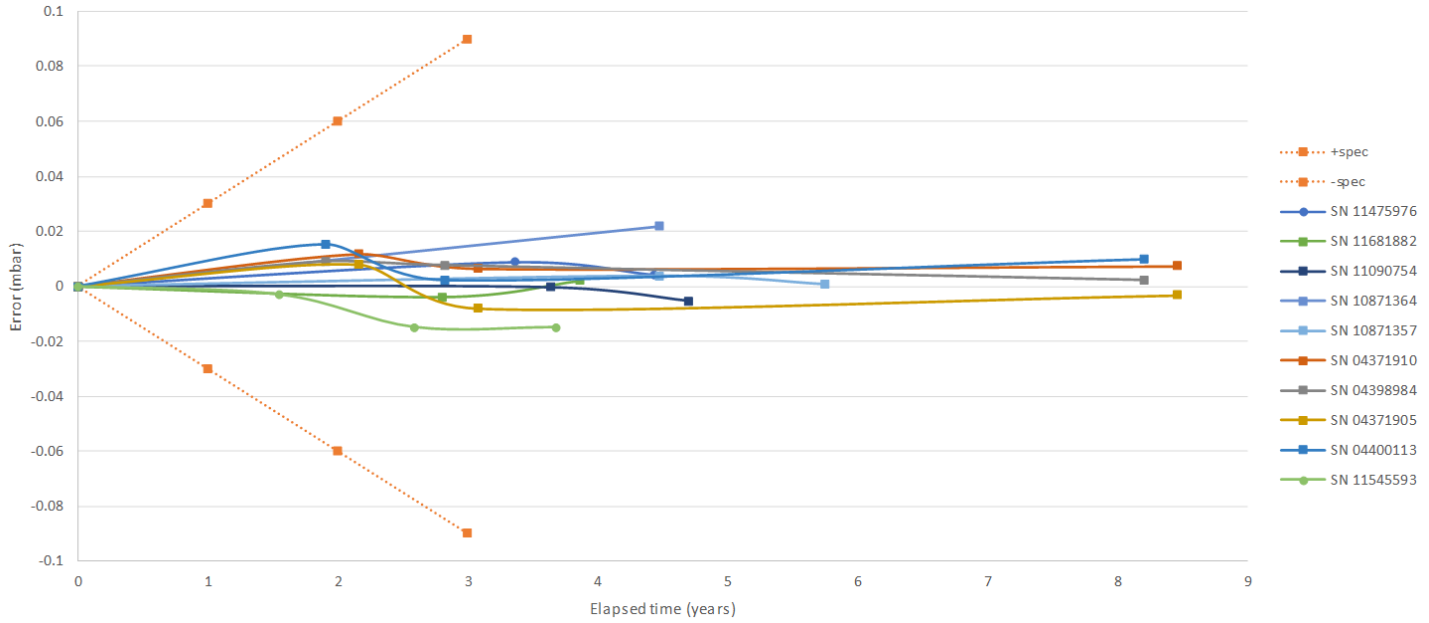

Figure 3: TERPS barometric pressure sensor span drift.

Figures 2 and 3 show long term drift data for Druck TERPS sensors. This data comes from field instruments over several years and is not just from laboratory data.

Key conclusions include:

- The foundation of PACE Tallis performance is built upon the inherently stable barometer, which is used to eliminate any small zero drift errors observed on the higher-pressure range PACE Tallis devices (=>8 Bara).
- The initial PACE Tallis specification is extremely accurate, but after a period of 2-3 years the small levels of drift can reduce to less than 1Pa per year. This allows for longer calibration intervals to be considered and therefore even further cost savings versus traditional standards.
- Some devices have shown to drift less than 1Pa in total over a period of 5 years showing further potential improvements to the PACE Tallis technology but also ensuring you can trust the specification offered with a Druck TERPS device.

It is as good as we say it is

Druck has over a decade of experience designing, manufacturing, and testing of TERPS sensors to ensure performance is validated over long calibration intervals. Based in Leicester, UK, we are one of the few pressure instrument providers that design and build our own sensors specifically for our instruments, to our own exacting requirements. That means we are in control of all aspects of performance of our sensor technology across all the applications in which they are deployed and can select the best of the best to go into the PACE Tallis product line.

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Druck's TERPS technology is also integrated into our T&C portfolio, including the Air Data Test Sets (ADTS) as standard, as well as the market leading PACE pressure indicator and controller portfolio.

This vast array of applications and operating environments means we fully understand the behaviour of the sensors we build, even under the harshest conditions and not just in controlled laboratory environments. This expertise means Druck can be confident that PACE Tallis meets the specifications outlined in our datasheets, without caveats, or time-consuming calibration checks being performed.

We don't just claim it is as good as it is, we know it is!

Contact and support

Don't just take our word for it though, if you want to experience the true performance of PACE Tallis for yourself then please reach out for one of our demonstrators.

For all enquiries please visit Druck.com/Contact or find out more at Druck.com/PACE-Tallis.

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