

## World Metrology Day 2017

A message from Fluke Chief Corporate Metrologist Jeff Gust

On May 20 each year, we celebrate the history and the future of metrology, the science of measurement. The date commemorates the 1875 signing of the Meter Convention, which set the framework for global collaboration in measurement science.

The theme for World Metrology Day 2017 is Measurements for Transport, so we focus our thoughts on the many modes of transportation that depend on critical measurements to keep them up and running.

When we drive our cars, commute to work on a train or ferry, or travel for business or pleasure by airplane, we usually don't give a second thought to the millions of measurements that ensure our quality of life and get us where we need to go, safely, efficiently, and on time.

World Metrology Day 2017 provides an opportunity to look more closely at some of these measurements: how they are made, the history behind them, and the advances they enable.



For example, the second industrial revolution, known as the technological revolution, was enabled by developing methods for interchangeable parts. Henry Ford became one of the key players in this revolution by building automobiles on an assembly line. This would not have been possible without routine calibration. Here is an antique length standard used for calibrations during this time. It was manufactured by a joint venture between Ford and C.E. Johansen, the inventor of the gage block.

Fluke plays an important role in the automotive industry today, where a major automotive manufacturer uses our 6270A Pressure Calibrator to calibrate pressure transducers in their manufacturing and test processes. A major automotive manufacturing parts supplier uses our Metrology Wells to calibrate temperature probes in their parts manufacturing process. Moreover, nearly all vehicle manufacturers use our electrical calibrators to calibrate instrumentation associated with the increasing number of sensors in automobiles.

### Fluke Corporation

PO Box 9090 Everett WA 98206-9090 USA

### Telephone

425.347.6100

### Facsimile

425.356.5116

### Internet

[www.fluke.com](http://www.fluke.com)

### Fluke Corporation

PO Box 9090 Everett WA 98206-9090 USA

### Telephone

425.347.6100

### Facsimile

425.446.5116

### Internet

[www.fluke.com](http://www.fluke.com)

Rail systems have many transducers that convert mechanical quantities like acceleration, length and speed to electrical quantities. A large array of test and measuring equipment monitors these measurements.



Airplane altitude and speed are measured by converting air pressure measurements to elevation in meters or feet, and to speed in kilometers per hour, miles per hour or nautical miles per hour (knots). Almost every airplane that we fly on has its air data test sets calibrated by Fluke pressure standards.



The ferries in Washington State transport over 24 million people per year. They are propelled by 3.5 megawatt, 4160-volt motors. The maintenance staff uses a wide array of Fluke industrial test tools to measure the voltage, current and temperature of the propulsion system.

At Fluke, we are passionate about enabling technology advancement through the science of precision measurement. I invite you all to stop for a moment and appreciate all of the measurements – big and small – that enable us to go about our days with confidence so that we can trust our transportation systems.

And on behalf of Fluke Corporation, Happy World Metrology Day!

Jeff C. Gust  
Chief Corporate Metrologist

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