

## New torque calibration machine at the Central Office of Measures

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Published by: Adam Żeberkiewicz

Torque measurements are being applied in many branches of economy such as automotive, electric power and aero industries. They are used mostly in research purposes (for instance in power tests of turbines and engines) and to provide required safety of structures and products (for instance when screwing in the vehicle wheel).

Over the last couple of years a distinct increase of demand for accurate calibrations of torque measuring devices has been noticed. These needs have been responded by development of the new measurement area at the Force and Pressure Laboratory of the Central Office of Measures (GUM) with the aim to provide innovative measurement methods, technical solutions and measurement traceability in Poland.

The first stage of this activity was the installation of the torque calibration machine which enables to calibrate the torque transducers and transfer torque wrenches in the measurement range from 1 N·m up to 5.000 N·m. The Calibration and Measurement Capability (CMC) depends on the type of the calibrated instrument and calibration range. It can amount 0,04% or 0,1% of the measured value.

The Force and Pressure Laboratory of GUM is going to start up the above mentioned calibrations in March 2016. For the coming years the further development of the torque measurement area will be considered. The next investments, such as the construction of new calibration machines with different measurement ranges and extended calibration possibilities will be planned.