BS 7882:2008

BRITISH STANDARD

Method for calibration and classification of torque measuring devices

ICS 17.100

British Standards

Publishing and copyright information

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The following BSI references relate to the work on this standard:
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Contents

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 25 and a back cover.

Foreword

This British Standard is published by BSI and came into effect on 31 January 2008. It was prepared by Technical Committee ISE/NFE/4, *Torque measurement and testing*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

BS 7882:2008 supersedes BS 7882:1997, which is withdrawn.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies requirements for the calibration and classification of torque measuring devices, including those used for the calibration of hand torque tools to BS EN ISO 6789.

It describes the method of calibration, calculation of calibration results and the classification of the torque measuring device in a static mode. The information to be given on the certificate of calibration is also listed.

2 Terms, definitions, abbreviations and symbols

For the purposes of this British Standard, the following terms, definitions, abbreviations and symbols apply.

NOTE Where applicable, this British Standard has been prepared using PD 6461-1.

2.1 calibration torque
torque with traceability derived from national standards of mass, length and time, and of specified uncertainty of measurement, which can be applied to the torque measuring device

2.2 deflection
d
algebraic difference between the indicator reading prior to the application of a torque and the indicator reading for each applied torque in a given measurement series

NOTE The deflection may be derived from either digital data output or visual data output.

2.3 data acquisition system
electronic module that has the ability to transfer, store, amplify and filter signals from a torque measuring device

NOTE Where analogue signals are acquired by the torque measuring device, and these are converted into a digital data stream using an analogue to digital converter, the stream of data may be digitally filtered, re-sampled and stored, or logged ready for analysis.

2.4 loading direction
direction of applied torque, either clockwise or anti-clockwise about the axis of rotation, when viewed from the end of the torque measuring device to which the calibration torque is applied

2.5 lower limit of calibration
T_{min}
lower value of torque at which a torque measuring device of a given class can be calibrated

2.6 reference standard
equipment used to generate or to measure the reference torque applied to the torque measuring device that is being calibrated

NOTE Torques may be generated by a power source monitored by the reference standard.