Title: Calibration Of Norbar Torque Wrench

Scope

Work Instruction for the internal calibration of a Norbar Torque Wrench. To be used in the absence of a manufacturers calibration instruction.

Preparation

Calibration must be carried out using Category A Master instruments as required.
Equipment required;-

1.1 Torque Wrench Analyser Model TWA 1000.

Method

2.1 All calibration results must be entered on the results sheets (see appendix A).

2.2 Note the lab. temperature / R.H. and enter onto the results sheet.

2.3 Note the type of torque wrench and class and enter on the results sheet.

2.4 Determine the torque wrench settings equivalent to 20% F.S, 60% F.S, 100% F.S. for each set of three calibration points, as applicable, and enter in the wrench setting column.
Note: At 20% calibration point minimum settings should not be below 15lb f.ft, 15Nm.

2.5 Carry out tests at each wrench setting and note the results.
(Ten tests are required for type 2, class C and F wrenches.

2.6 Check the results are within the tolerance:

Type 1:	Class A and D ± 6%, Class B, C and E ± 4%
Type 2:	Class A and B ± 4%, Class D and E ± 6%
	Class C ± 4%, Class F ± 6%

2.7 Complete the results sheet header and enter Pass / Fail.

- All records must be kept for audit purposes

References

Appendix A Calibration Results for Norbar Torque Wrench

Documents
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Appendix A

Calibration Results for Norbar Torque Wrench

Model ……Serial No ……..

Date ……..Result ……

Lab Temp / RH ……Operator ……

User Location ……Certificate No ……

Calibration accuracy specification is in accordance with BS EN 26789 : 1994 or to the manufacturer's specifications.

Test No	Torque Wrench Setting lbf.ft	Calibration Standard Readings lbf.ft					Result
1							Pass / Fail
2							Pass / Fail
3							Pass / Fail

Test No	Torque Wrench Setting Nm	Calibration Standard Readings Nm					Result
4							Pass / Fail
5							Pass / Fail
6							Pass / Fail

The UUT was calibrated using the following equipment:

1. Torque Wrench Analyser Model TWA 1000 S/N _____

The uncertainty of measurement is estimated not to exceed: 1%

The uncertainty limits quoted, which are derived from the arithmetic summation of the contributions, refer to the applied values only and do not relate to the stability of the UUT.

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