DIN 50159-2:2022-06 (E)

Metallic materials - Hardness testing with the UCI method - Part 2: Verification and calibration of the testing devices

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 5

4 General conditions 5

5 Designation 5

6 Direct calibration 6

7 Indirect calibration 7
7.1 General 7
7.2 Procedure 7
7.3 Repeatability 8
7.4 Bias 8

8 Time intervals between calibrations 9

9 Requirements on the hardness reference blocks 9

10 Calibration certificate 9

Annex A (informative) Measurement uncertainty of the calibration results for the hardness testing device 11

A.1 General 11
A.2 Direct calibration of the test force 11
A.3 Indirect calibration of the hardness testing device 12
A.4 Measurement uncertainty budget 13

Bibliography 15

Tables Table 1 -- Permissible limit deviations for the test force and its repeatability 6

Table 2 -- Permissible repeatability and bias of the hardness testing device 8

Table 3 -- Direct calibration of hardness testing devices 9

Table A.1 -- Results of indirect calibration 13

Table A.2 -- Measurement uncertainty budget 13

Table A.3 -- Maximum limit deviation of the hardness testing device including uncertainty of measurement 14