DIN EN ISO 14577-1:2015-11 (E)

Metallic materials - Instrumented indentation test for hardness and materials parameters - Part 1: Test met hod (ISO 14577-1:2015)

Contents

Page

European foreword ... 3

Introduction ... 4

1 Scope ... 5

2 Normative references ... 5

3 Symbols and designations ... 6

4 Principle ... 8

5 Testing machine ... 8

6 Test piece ... 9

7 Procedure ... 9

8 Uncertainty of the results ... 12

9 Test report ... 13

Annex A (normative) **Materials parameters determined from the force/indentation depth data set** ... 15

Annex B (informative) **Types of control use for the indentation process** ... 28

Annex C (normative) **Machine compliance and indenter area function** ... 29

Annex D (informative) **Notes on diamond indenters** ... 31

Annex E (normative) **Influence of the test piece surface roughness on the accuracy of the results** ... 32

Annex F (informative) **Correlation of indentation hardness H_{IT} to Vickers hardness** ... 33

Annex G (normative) **Drift and creep rate determination** ... 35

Annex H (informative) **Estimation of uncertainty of the calculated values of hardness and materials parameters** ... 37

Annex I (normative) **Calculation of radial displacement correction** ... 47

Bibliography ... 49