DIN EN ISO 14556:2023-08 (E)

Metallic materials - Charpy V-notch pendulum impact test - Instrumented test method (ISO 14556:2023)

Contents

Page

European foreword ... 3

Foreword ... 4

1 Scope ... 6

2 Normative references ... 6

3 Terms and definitions ... 6
3.1 Characteristic values of force (see Figure 2) ... 6
3.2 Characteristic values of displacement (see Figure 2) ... 7
3.3 Characteristic values of impact energy ... 7

4 Symbols and abbreviated terms ... 8

5 Principle ... 8

6 Apparatus ... 9
6.1 Testing machine ... 9
6.2 Instrumentation and calibration ... 9
6.2.1 Traceable measurement ... 9
6.2.2 Force measurement ... 9
6.2.3 Calibration ... 10
6.2.4 Displacement measurement ... 10
6.2.5 Recording apparatus ... 11
6.2.6 Calibration interval ... 11

7 Test piece ... 11

8 Test procedure ... 11

9 Expression of results ... 11
9.1 General ... 11
9.2 Evaluation of the force-displacement curve ... 12
9.3 Determination of the characteristic values of force ... 12
9.4 Determination of the characteristic values of displacement ... 12
9.5 Determination of the characteristic values of impact energy ... 14

10 Test report ... 14

Annex A (informative) **Examples of instrumented strikers** ... 16

Annex B (informative) **Example of support block for the calibration of a 2 mm striker** ... 17

Annex C (informative) **Formulae for the estimation of the proportion of ductile fracture surface** ... 18

Annex D (normative) **Instrumented Charpy V-notch pendulum impact testing of miniature test pieces** ... 19

Bibliography ... 24