

## Metallic materials - Vickers hardness test - Part 1: Test method

---

Contents	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Symbols and designations	2
4.1 Symbols and designations used in this document	2
4.2 Designation of hardness number	3
5 Principle	3
6 Testing machine	4
6.1 Testing machine	4
6.2 Indenter	4
6.3 Diagonal measuring system	4
7 Test piece	5
7.1 Test surface	5
7.2 Preparation	5
7.3 Thickness	5
7.4 Tests on curved surfaces	5
7.5 Support of unstable test pieces	5
7.6 Metallic and other inorganic coatings	5
8 Procedure	6
8.1 Test temperature	6
8.2 Test force	6
8.3 Periodic verification	6
8.4 Test piece support and orientation	6
8.5 Focus on test surface	7
8.6 Test force application	7
8.7 Prevention of the effect of shock or vibration	7
8.8 Minimum distance between adjacent indentations	7
8.9 Measurement of the diagonal length	8
8.10 Calculation of hardness value	8
9 Uncertainty of the results	8
10 Test report	9
Annex A (normative) Minimum thickness of the test piece in relation to the test force and hardness	10
Annex B (normative) Tables of correction factors for use in tests made on curved surfaces	12
Annex C (normative) Procedure for periodic checking of the testing machine, diagonal measuring system and indenter by the user	16
Annex D (informative) Uncertainty of the measured hardness values	18
Annex E (informative) Vickers hardness measurement traceability	25
Annex F (informative) CCM — Working group on hardness	29
Annex G (informative) Adjustment of Köhler illumination systems	30
Annex H (normative) Determining the Vickers hardness of metallic and other inorganic coatings	31
Bibliography	35