ISO 17543-1:2020-03 (E)

Machine tools - Test conditions for universal spindle head s - Part 1: Accessory heads for machines with horizontal spindle (horizontal Z-a xis)

Contents

Page

Foreword ... iv

Introduction ... v

1 Scope ... 1

2 Normative references ... 1

3 Terms and definitions ... 2

4 Preliminary remarks ... 6
- 4.1 Measurement units ... 6
- 4.2 Reference to ISO 230 ... 6
- 4.3 Testing sequence ... 6
- 4.4 Tests to be performed ... 6
- 4.5 Measuring instruments ... 7
- 4.6 Software compensation ... 7
  - 4.6.1 Head offset compensation ... 7
  - 4.6.2 Machine geometric compensation ... 8
- 4.7 Diagrams ... 8
- 4.8 Measuring length ... 8
- 4.9 Tolerances ... 8

5 Common geometric tests for spindles of all types of heads ... 9

6 Geometric tests for all types of spindle heads ... 11

7 Angular positioning tests ... 27

Annex A (informative) **Supplementary geometric tests for 45° split continuous heads** ... 28

Annex B (informative) **Supplementary geometric tests for swivelling heads** ... 36

Annex C (informative) **Tests for checking the accuracy of spindle axes of rotation** ... 46

Bibliography ... 48