INTERNATIONAL STANDARD

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Machine tools — Test conditions for horizontal spindle turret and single spindle automatic lathes — Testing of the accuracy

Machines-outils — Conditions d'essai des tours à tourelle revolver à broche horizontale et des tours automatiques monobroche — Contrôle de la précision



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. CO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75% of the member bodies casting a vote.

International Standard ISO 55 was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 2, *Test conditions for metal cutting machine tools*.

This first edition of ISO 6155 canders and replaces ISO 6155-1:1981 and ISO 6155-2:1986 which have been combined in this technicated vision.

Annex A of this International Standard is for information only.

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Introduction

ISO/TC 39/SC 2 recognized the fact that machines described in this International Standard represent obsolescent technology. Nevertheless, there is no Standard available for machines that represent current technology. Therefore, ISO/TC 39/SC2 responded to the request for revision of

represent current technology. Nevertheless, there is no Standard available for machines that represent current technology. Nevertheless, there is no Standard available for machines that represent current technology. Therefore, ISOTC 39/SC2 responded to the request for revision of this Standard by combine ISO 6155 parts 1 and 2 into a single standard and adding positioning tests.

Machine tools — Test conditions for horizontal spindle turret and single spindle automatic lathes — Testing of the accuracy

1 Scope

This International Standard describes, with reference to ISO 230-1 and ISO 230-2, geometric tests, machining tests and tests for accuracy and repeatability of numerically-controlled positioning axes on general purpose and normal accuracy turret and single spindle automatic lathes. It also specifies the applicable tolerances corresponding to the above-mentioned tests.

This International Standard applies only to lathes with a multi-tool turret. This turret can be manually indexed, semi-automatically indexed by motion of the turret slide or automatically indexed by an independent control including numerical control. Lathes with sliding headstock are excluded from the scope, but lathes with numerical control are included as far as the contents of this International Standard are applicable.

This International Standard deals only with the verification of accuracy of the machine. It does not apply to the operational testing of the machine (vibration, abnormal noise, stick-slip motion of components, etc.) nor to machine characteristics (such as speeds, feeds, etc.) as such checks are generally carried out before testing the accuracy.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 68-1:—¹⁾, ISO general purpose screw threads — Basic profile Part 1: Metric screw threads.

ISO 230-1:1996, Test code for machine tools — Part 1: Geometric accuracy of machines operating under no-load or finishing conditions.

ISO 230-2:1997, Test code for machine tools — Part 2: Determination of accuracy and repeatability of positioning of numerically controlled axes.

ISO 1101:—²⁾, Geometrical Product Specifications (GPS) — Geometrical tolerancing — Generalities, definitions, symbols, indication on drawings.

ISO 3442:1991, Self-centring chucks for machine tools with two-piece jaws (tongue and groove type) — Sizes for interchangeability and acceptance test specifications.

¹⁾ To be published. (Partial revision of ISO 68:1973)

²⁾ To be published. (Revision of ISO 1101:1983)