

---

---

**Test conditions for internal cylindrical  
grinding machines with horizontal  
spindle — Testing of accuracy**

*Conditions d'essai des machines à rectifier les surfaces de révolution  
intérieures à broche horizontale — Contrôle de la précision*



Contents	Page
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative reference</b> .....	<b>1</b>
<b>3 Machine configurations</b> .....	<b>1</b>
<b>3.1 Descriptions</b> .....	<b>1</b>
<b>3.2 Terminology and designation of axes</b> .....	<b>2</b>
<b>4 Preliminary remarks</b> .....	<b>4</b>
<b>4.1 Measuring units</b> .....	<b>4</b>
<b>4.2 Reference to ISO 230-1</b> .....	<b>4</b>
<b>4.3 Testing sequence</b> .....	<b>4</b>
<b>4.4 Tests to be performed</b> .....	<b>4</b>
<b>4.5 Measuring instruments</b> .....	<b>4</b>
<b>4.6 Machining tests</b> .....	<b>4</b>
<b>4.7 Minimum tolerance</b> .....	<b>5</b>
<b>4.8 Diagrams</b> .....	<b>5</b>
<b>5 Geometric tests</b> .....	<b>6</b>
<b>5.1 Linear axes motions</b> .....	<b>6</b>
<b>5.2 Work holding spindle</b> .....	<b>8</b>
<b>5.3 Wheel spindle</b> .....	<b>12</b>
<b>5.4 Facing wheelhead</b> .....	<b>15</b>
<b>6 Positioning test</b> .....	<b>19</b>
<b>7 Machining tests</b> .....	<b>20</b>
<b>Annex A (informative) Equivalent terms in German and Italian</b> .....	<b>22</b>
<b>Annex B (informative) Bibliography</b> .....	<b>23</b>

© ISO 1997

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization  
 Case postale 56 • CH-1211 Genève 20 • Switzerland  
 Internet central@iso.ch  
 X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

## 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. ISO 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 2407 was prepared by Technical Committee ISO/TC 39, *Machine tools*, Subcommittee SC 2, *Test conditions for metal cutting machine tools*.

This third edition cancels and replaces the second edition (ISO 2407:1984), which has been technically revised.

Annexes A and B of this International Standard are for information only.