

# ISO 148-1:2016-10 (E)

## Metallic materials - Charpy pendulum impact test - Part 1: Test method

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>3.1</b>	<b>Definitions pertaining to energy .....</b>	<b>1</b>
<b>3.2</b>	<b>Definitions pertaining to test piece .....</b>	<b>2</b>
<b>4</b>	<b>Symbols and abbreviated terms .....</b>	<b>2</b>
<b>5</b>	<b>Principles of the test .....</b>	<b>3</b>
<b>6</b>	<b>Test pieces .....</b>	<b>3</b>
<b>6.1</b>	<b>General .....</b>	<b>3</b>
<b>6.2</b>	<b>Notch geometry .....</b>	<b>4</b>
<b>6.2.1</b>	<b>V-notch .....</b>	<b>4</b>
<b>6.2.2</b>	<b>U-notch .....</b>	<b>4</b>
<b>6.3</b>	<b>Tolerance of the test pieces .....</b>	<b>4</b>
<b>6.4</b>	<b>Preparation of the test pieces .....</b>	<b>4</b>
<b>6.5</b>	<b>Marking of the test pieces .....</b>	<b>4</b>
<b>7</b>	<b>Test equipment .....</b>	<b>4</b>
<b>7.1</b>	<b>General .....</b>	<b>4</b>
<b>7.2</b>	<b>Installation and verification .....</b>	<b>5</b>
<b>7.3</b>	<b>Striker .....</b>	<b>5</b>
<b>8</b>	<b>Test procedure .....</b>	<b>5</b>
<b>8.1</b>	<b>General .....</b>	<b>5</b>
<b>8.2</b>	<b>Friction measurement .....</b>	<b>5</b>
<b>8.3</b>	<b>Test temperature .....</b>	<b>6</b>
<b>8.4</b>	<b>Specimen transfer .....</b>	<b>7</b>
<b>8.5</b>	<b>Exceeding machine capacity .....</b>	<b>7</b>
<b>8.6</b>	<b>Incomplete fracture .....</b>	<b>7</b>
<b>8.7</b>	<b>Test piece jamming .....</b>	<b>8</b>
<b>8.8</b>	<b>Post-fracture inspection .....</b>	<b>8</b>
<b>9</b>	<b>Test report .....</b>	<b>8</b>
<b>9.1</b>	<b>Mandatory information .....</b>	<b>8</b>
<b>9.2</b>	<b>Optional information .....</b>	<b>8</b>
	<b>Annex A (informative) Self-centring tongs .....</b>	<b>12</b>
	<b>Annex B (informative) Lateral expansion .....</b>	<b>13</b>
	<b>Annex C (informative) Fracture appearance .....</b>	<b>16</b>
	<b>Annex D (informative) Absorbed energy vs. temperature curve and the transition temperature .....</b>	<b>19</b>
	<b>Annex E (informative) Measurement uncertainty of an absorbed energy value, K .....</b>	<b>21</b>
	<b>Bibliography .....</b>	<b>29</b>