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**Destructive tests on welds in metallic  
materials — Impact tests — Test  
specimen location, notch orientation  
and examination**

*Essais destructifs des soudures sur matériaux métalliques — Essai  
de flexion par choc — Position de l'éprouvette, orientation de  
l'entaille et examen*



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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 9016 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 5, *Testing and inspection of welds*.

This second edition cancels and replaces the first edition (ISO 9016:2001), which has been technically revised.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 5 via your national standards body. A complete listing of these bodies can be found at [www.iso.org](http://www.iso.org).

# Destructive tests on welds in metallic materials — Impact tests — Test specimen location, notch orientation and examination

## 1 Scope

This International Standard specifies mainly the method to be used when describing test specimen location and notch orientation for the testing and reporting of impact tests on welded butt joints.

This International Standard applies to impact tests on metallic materials in all forms of product made by any fusion welding process.

It is used in addition to ISO 148 (all parts) and includes test specimen denomination and additional reporting requirements.

## 2 Normative reference

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

## 3 Principle

Impact testing shall be in accordance with ISO 148-1. The test temperature, location, type and size of test specimen, and notch orientation shall be in accordance with the relevant application standard.

In addition to the requirements of ISO 148-1, the notch position may be located by macroetching.

## 4 Method of denomination

### 4.1 Lettering system

The denomination is based on a lettering system to describe the type, location and notch orientation and a numbering system to show the distance (in millimetres) of the notch from reference lines (RL). The method of denomination is shown in Tables 1 and 2. The test specimen shall be taken from the welded joint such that its longitudinal axes are at right angles to the weld length.

### 4.2 Characters

The denomination comprises the following characters:

- 1st character      U: Charpy U- notch.  
                             V: Charpy V-notch.
- 2nd character      W: notch in the weld metal; the reference line is the centre line of the weld at the position of the test specimen.  
                             H: notch in the heat affected zone; the reference line is the fusion or the joint line (notch will include HAZ).