

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION R 87

SIMPLE BEND TESTING OF STEEL SHEET AND STRIP  
LESS THAN 3 mm THICK

1st EDITION

February 1959

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## BRIEF HISTORY

The ISO Recommendation R 87, *Simple Bend Testing of Steel Sheet and Strip Less than 3 mm Thick*, was drawn up by Technical Committee ISO/TC 17, *Steel*, the Secretariat of which is held by the British Standards Institution (B.S.I.).

The drawing up of an ISO Recommendation concerning this test was decided on at the second meeting of ISO/TC 17, held in New York, in June 1952. The Technical Committee instructed its Working Group No. 1, *Methods of Mechanical Testing for Steel*, to prepare a draft proposal which was circulated to the members of the Technical Committee in March 1954.

The comments of the Member Bodies were considered by the Working Group which submitted, in August 1954, a revised draft proposal to the members of ISO/TC 17. The revised draft proposal was discussed at the fourth plenary meeting of the Technical Committee, held in Stockholm, in June 1955, along with the comments of the Member Bodies, and was adopted, with a number of small amendments, as a Draft ISO Recommendation.

On 31 January 1957, the Draft ISO Recommendation (No. 152) was submitted to all the ISO Member Bodies and, subject to a few modifications, was approved by the following Member Bodies:

Austria	Hungary	Poland
*Bulgaria	*Ireland	Portugal
*Canada	Italy	Romania
Czechoslovakia	Japan	Spain
Denmark	Mexico	Sweden
Finland	*New Zealand	United Kingdom
Germany	Norway	U.S.S.R.
*Greece	Pakistan	

One Member Body opposed the approval of the Draft: France.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1959, to accept it as an ISO RECOMMENDATION.

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\* These Member Bodies stated that they had no objection to the Draft being approved.

## SIMPLE BEND TESTING OF STEEL SHEET AND STRIP LESS THAN 3 mm THICK

### 1. PRINCIPLE OF TEST

The test consists in submitting a straight test piece to plastic deformation by bending without reversing the direction of flexure during the test. The bending is carried out until one leg of the test piece makes, under load, a specified angle  $\alpha$  with the extension of the other (see Fig. 2 below). The axes of the two legs of the test piece remain in a plane perpendicular to the axis of bending. In the case of 180° bend, the two lateral surfaces may, depending on the requirements of the specification, lie flat against each other or be parallel at a specified distance; an intermediate piece may be used for the control of this distance (see Fig. 4, page 4).

### 2. SYMBOLS AND DESIGNATIONS

Number	Symbol	Designation
1	$a$	Thickness of test piece
2	$b$	Width of test piece
3	—	Distance between supports (see Fig. 1 and 2)
4	$\alpha$	Angle of bend
5	$R$	Radius of supports
6	$D$	Diameter of mandrel
7	$r$	Internal radius of bent portion of test piece after bending

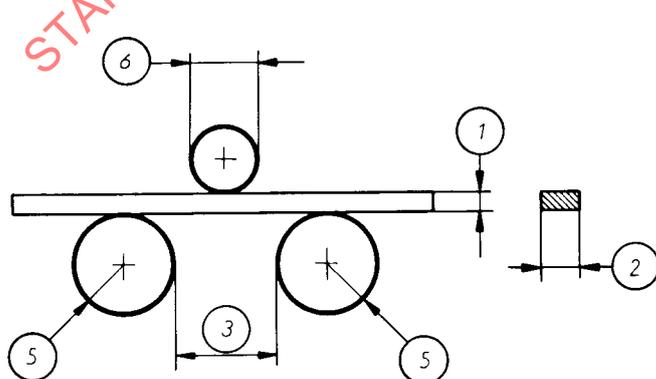


FIG. 1

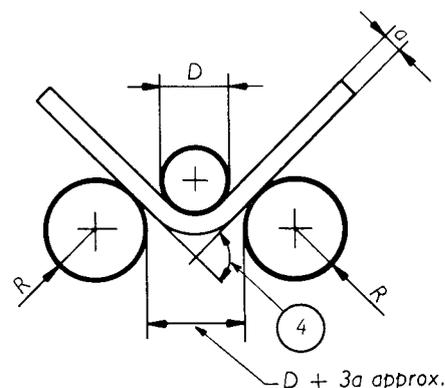


FIG. 2