

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 202

FLATTENING TEST ON STEEL TUBES

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June 1961

ISO 8492

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BRIEF HISTORY

The ISO Recommendation R 202, *Flattening Test on Steel Tubes*, was drawn up by Technical Committee ISO/TC 17, *Steel*, the Secretariat of which is held by the British Standards Institution (B.S.I.).

At the fourth meeting of the Technical Committee ISO/TC 17, in Stockholm, in June 1955, a draft proposal for a flattening test on steel tubes was first submitted. It was, however, suggested at that meeting that the draft should be submitted to the Technical Committee ISO/TC 5 "Pipes and Fittings" for comment, and that these comments, together with those of the Members of Technical Committee ISO/TC 17, should be considered by Working Group No. 1, with a view to establishing a revised draft proposal.

At the fifth meeting of the Technical Committee, held in London, in March 1957, it was pointed out that this test, together with four others for steel tubes, was still under consideration by Working Group No. 1.

At the sixth plenary meeting, in Harrogate, in June 1958, a new draft proposal was placed before Technical Committee ISO/TC 17 for consideration and, with one or two minor editorial amendments, was accepted as suitable for circulation to the members of Technical Committee for postal approval.

As a result of that circulation, certain other minor amendments were made, and a revised draft was sent to the General Secretariat as a Draft ISO Recommendation.

On 24 July 1959, the Draft ISO Recommendation (No. 291) was distributed to all the ISO Member Bodies and was approved by the following Member Bodies:

Australia	Germany	Norway
Austria	Greece	Poland
Belgium	Hungary	Portugal
Bulgaria	India	Romania
Burma	Israel	Spain
Chile	Italy	Sweden
Czechoslovakia	Japan	Switzerland
Denmark	Mexico	United Kingdom
Finland	Netherlands	U.S.S.R.
France	New Zealand	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in June 1961, to accept it as an ISO RECOMMENDATION.

FLATTENING TEST ON STEEL TUBES

1. SCOPE

This ISO Recommendation applies to steel tubes having an external diameter not greater than 400 mm and a thickness not greater than 15 per cent of the external diameter. However, individual specifications for the material may specify the maximum diameter and thickness of tube to which this test is to be applied in particular circumstances.

2. PRINCIPLE OF TEST

The test consists in flattening the end of a tube or a test piece cut from a tube in a direction perpendicular to the longitudinal axis of the tube.

When the test is carried out so that, after the test, the internal surfaces are in contact over at least half of the internal length of the flattened test piece, the test is called "close-flattened".

In other cases, the test is carried out until the distance between platens, measured under load in the direction of flattening, reaches a value fixed by the relevant material specification.

3. SYMBOLS AND DESIGNATIONS

Number	Symbol	Designation
1	D	External diameter of test piece
2	a	Thickness of wall of test piece
3	d	Internal diameter of test piece
4	L	Length of test piece
5	z	Distance between platens measured under load

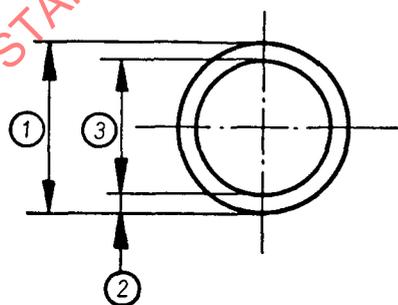


FIG. 1. - Test piece

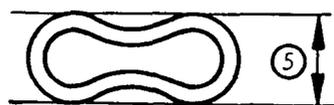


FIG. 2. - Distance between platens measured under load

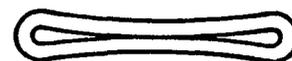


FIG. 3. - Close-flattened