

International Standard



8494

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Metallic materials — Tube — Flanging test

Matériaux métalliques — Tubes — Essai de rabattement de collerette

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8494 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*.

It cancels and replaces ISO Recommendation R 165-1960, of which it constitutes a technical revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Metallic materials – Tube – Flanging test

1 Scope and field of application

This International Standard specifies a method for determining the ability of metallic tubes of circular cross-section having an outside diameter not greater than 150 mm and wall thickness not greater than 10 mm to undergo plastic deformation during flange formation. The range of diameters or wall thicknesses for which this International Standard is applicable may be more exactly specified in the relevant standard.

2 Principle

Forming, on the end of a tube or on the end of a test piece cut from a tube, a flange in a plane perpendicular to the axis of the tube, until the external diameter of the flange reaches the value specified in the relevant standard.

3 Symbols, designations and units

Symbols, designations and units used for the flanging test of tubes are given in the table and the figure.

Table – Symbols, designations and units

Symbol	Designation	Unit
D	Original outside diameter of the tube	mm
a	Wall thickness of the tube	mm
L	Length of the test piece before the test	mm
R	Corner radius of the second forming tool	mm
D_u	Maximum outside diameter of the flange	mm
β	Angle of the first forming tool	degree

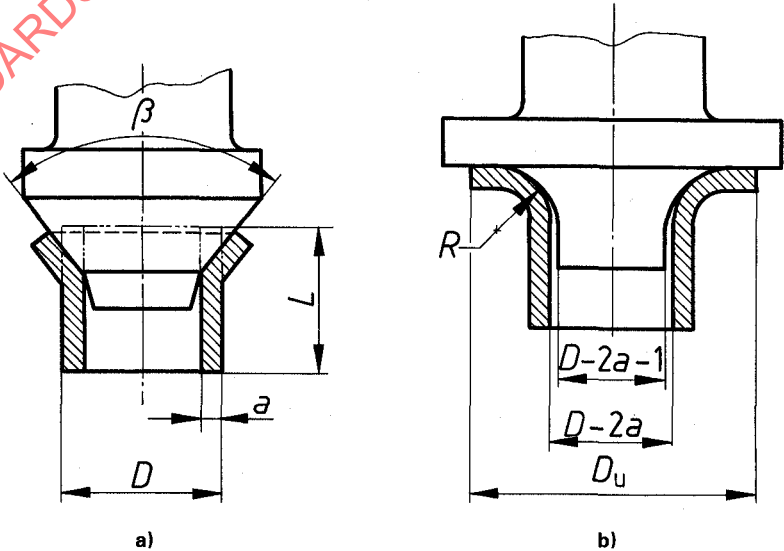


Figure – Symbols for flanging test