International Standard ISO 8493

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

Metallic materials — Tube — Drift expanding test

Matériaux métalliques — Tubes — Essai d'évasement

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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 8493 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals.*

It cancels and replaces ISO Recommendations R 166-1960, R 195-1961 and R 953-1969, 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 — Drift expanding 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 (100 mm for light metals) and thickness not greater than 10 mm to undergo plastic deformation in drift expansion. The range of the outside diameter or thickness for which this International Standard is applicable may be more exactly specified in the relevant standard.

2 Principle

Expanding the end of a tube, or the end of a test piece cut from a tube, by means of a conical mandrel, until the maximum ouside diameter of the expanded tube reaches the value specified in the relevant standard (see the figure).

3 Symbols, designations and units

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

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
D_u	Maximum outside diameter after testing	mm
β	Angle of the mandrel	degree

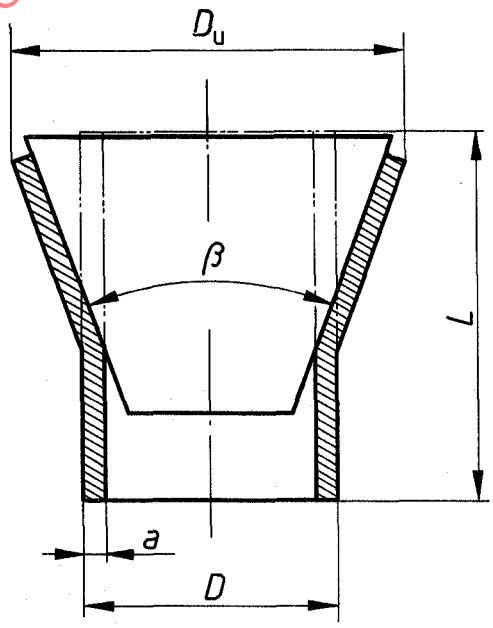

Figure — Symbols for drift expanding test