International Standard 65

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

Carbon steel tubes suitable for screwing in accordance with ISO 7/1

Tubes en acier au carbone filetables selon ISO 7/1

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

International Standard ISO 65 was developed by Technical Committee ISO/TC 5, *Metal pipes and fittings*, and was circulated by the member bodies in December 1979.

It has been approved by the member bodies of the following countries:

Austria	France	Norway
Belgium	Germany, F.R.	Poland
Brazil	Hungary	Romania
Bulgaria	India	South Africa, Rep. of
China	Israel	Spain
Czechoslovakia	Italy	Sweden
Denmark	Japan	Switzerland
Egypt, Arab Rep. of	Korea, Rep. of	USSR
Finland	Netherlands	

The member bodies of the following countries expressed disapproval of the document on technical grounds:

Australia
Canada
United Kingdom
USA

This second edition cancels and replaces the first edition (i.e. ISO 65-1973).

Printed in Switzerland

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1 Scope and field of application

This International Standard establishes the dimensions and characteristics of seamless and welded steel tubes for four separate series, namely :

a) Heavy series, for seamless and welded steel tubes;

b) Medium series, for seamless and welded steel tubes;

c) Light series 1, for seamless and welded steel tubes;

d) Light series 2, for welded steel tubes.

The National Committees may lay down the limits of application for these tubes in accordance with the regulations in force in their country.

2 References

ISO 7/1, *Pipe threads where pressure-tight joints are made on the threads — Part 1 : Designation, dimensions and tolerances.* [1)]

ISO 50, *Metal pipes — Steel sockets screwed according to ISO 7.*

ISO 404, *Steel and steel products — General technical delivery requirements.* [2)]

ISO 4200, *Plain end steel tubes, welded and seamless — General tables of dimensions and masses per unit length.*

3 Calculation of masses

The values for masses per unit length have been calculated on the basis of the mean of the maximum and minimum diameters given in table 3 and using the basis for calculation as given in ISO 4200 and have been modified for screwed and socketed tubes by an amount based on the mean mass of a socket and a length of 7 m.

4 General requirements

4.1 The tubes shall be made by a seamless or welded process.

4.2 The tubes shall be suitable for fabrication and shaping by normal techniques.

4.3 The tubes shall be weldable.

4.4 Mechanical tests on, and chemical analysis of, the finished product are not required.

5 Material

For guidance, the steel shall have the following properties on longitudinal test pieces cut from the tube outside the welded area.

Table 1 — Properties of the steel

Steel grade designation		Tensile strength	Minimum elongation after fracture	Chemical composition ladle analysis % max.	
Seamless	Welded	N/mm^2	%*	P	S
TS.O	TW.O	320 to 520	15	0,06	0,06

* on $L_o = 5{,}65\sqrt{S_o}$

where L_o is the original gauge length and S_o is the original cross-sectional area.

6 Appearance

6.1 The tubes shall have smooth external and internal surfaces, the degree of smoothness depending on the method of manufacture. Unless otherwise agreed in the order, the internal weld bead shall not be removed. The tubes shall have a workmanlike finish but small imperfections are permissible provided that the thickness remains within the lower tolerance limit.

1) At present at the stage of draft. (Revision ISO 7/1-1978.)

2) At present at the stage of draft. (Revision of ISO/R 404-1964.)