STANDARD **9329-1**

First edition
1989-07-15

Seamless steel tubes for pressure purposes — Technical delivery conditions —

Part 1 :
Unalloyed steels with specified room temperature properties

Tubes sans soudure en acier pour service sous pression — Conditions techniques de livraison —

Partie 1 : Aciers non alliés avec caractéristiques spécifiées à température ambiante

Reference number
ISO 9329-1 : 1989 (E)

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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 9329-1 was prepared by Technical Committee ISO/TC 17, *Steel.*

It cancels and replaces ISO 2604-2 : 1975, of which it constitutes a technical revision, together with parts 2, 3 and 4 of ISO 9329.

ISO 9329 consists of the following parts, under the general title *Seamless steel tubes for pressure purposes — Technical delivery conditions* :

— *Part 1 : Unalloyed steels with specified room temperature properties*

— *Part 2 : Unalloyed and alloyed steels with specified elevated temperature properties*

— *Part 3 : Unalloyed and alloyed steels with specified low temperature properties*

— *Part 4 : Austenitic stainless steels*

Annex A of this part of ISO 9329 is for information only.

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Seamless steel tubes for pressure purposes — Technical delivery conditions —

Part 1 : Unalloyed steels with specified room temperature properties

1 Scope

1.1 This part of ISO 9329 specifies the technical delivery conditions for seamless tubes of circular cross-section, made of unalloyed quality steel with specified room temperature properties.

These tubes are intended for pressure purposes including the transport of fluids under pressure.

Certain application standards and regulations permit the use of these tubes up to 350 °C (see annex A).

NOTE — The word "tube" is synonymous with "pipe".

1.2 For the general technical delivery requirements, see ISO 404.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 9329. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9329 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 377 : 1985, *Wrought steel — Selection and preparation of samples and test pieces.*

ISO 404 : 1981, *Steel and steel products — General technical delivery requirements.*

ISO 2566-1 : 1984, *Steel — Conversion of elongation values — Part 1 : Carbon and low-alloy steels.*

ISO 4200 : 1985, *Plain end steel tubes, welded and seamless — General tables of dimensions and masses per unit length.*

ISO 4948-1 : 1982, *Steels — Classification — Part 1 : Classification of steels into unalloyed and alloy steels based on chemical composition.*

ISO 5252 : 1977, *Steel tubes — Tolerance systems.*

ISO 6892 : 1984, *Metallic materials — Tensile testing.*

ISO 7438 : 1985, *Metallic materials — Bend test.*

ISO 8492 : 1986, *Metallic materials — Tube — Flattening test.*

ISO 8496 : 1986, *Metallic materials — Tube — Ring tensile test.*

ISO 9302 : —[1], *Seamless and welded (except submerged arc-welded) steel tubes for pressure purposes — Electromagnetic testing for verification of hydraulic leak-tightness.*

3 Symbols and denominations

3.1 Fundamental symbols

D = specified outside diameter
δ = specified wall thickness

3.2 Symbols for tolerances

See ISO 5252.

3.3 Symbols for tests

3.3.1 Tensile test

See ISO 6892.

3.3.2 Flattening test

H = distance between platens
C = constant factor of deformation

3.3.3 Hydraulic test

P = test pressure
S = stress which occurs in the metal during the test

1) To be published.