

*Withdrawn**Replaced by ISO 9328-1 : 1991*

Steel products for pressure purposes — Quality requirements —

Part 7 : Carbon steel plate (thicknesses over 100 to 250 mm)

Produits en acier pour appareils à pression — Spécifications de qualité — Partie 7 : Tôles en aciers au carbone (épaisseur supérieure à 100 mm et inférieure ou égale à 250 mm)

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The main task of ISO technical committees is to prepare International Standards. In exceptional circumstances a technical committee may propose the publication of a technical report of one of the following types :

- type 1, when the necessary support within the technical committee cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development requiring wider exposure;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical reports are accepted for publication directly by ISO Council. Technical reports types 1 and 2 are subject to review within three years of publication, to decide if they can be transformed into International Standards. Technical reports type 3 do not necessarily have to be reviewed until the data they provide is considered no longer valid or useful.

ISO/TR 2604/7 was prepared by Technical Committee ISO/TC 17, *Steel*.

The reasons which led to the decision to publish this document in the form of a technical report type 2 are explained in the Introduction.

0 Introduction

Plates with thicknesses of up to 250 mm are manufactured by only a few companies. Therefore, international standardization of these products seemed more appropriate than their national standardization. This was the reason why in 1969 ISO/TC 17/SC 10 agreed to prepare an International Standard for plates for pressure purposes with thicknesses of over 100 to 250 mm manufactured from carbon steels, in addition to the International Standard for plates for pressure purposes with thicknesses up to 100 mm (ISO 2604/4). The

subject had been discussed in four meetings and by correspondence. However, the discussions proved difficult, in particular because in certain areas of the world, grades with relatively low carbon and higher manganese contents are used, while in other areas those with higher carbon and lower manganese contents are used. But in 1984, a Draft International Standard, ISO/DIS 2604/7, could be prepared. However, intensive objections were expressed on this draft by several member bodies, and therefore certain doubts were recognized as to the advisability of publishing it as an International Standard.

After the agreement of ISO/TC 17/SC 10 to extend the scope of ISO 2604/4 to plates with thickness up to 150 mm, the scope of ISO 2604/7 will be limited to plates with thickness over 150 mm, which are only manufactured by a limited number of companies in a small amount. It was also foreseen that most of the steel types, particularly the grades with specified maximum Al content of 0,010 %, would be deleted at the time of revision of ISO 2604/4.

There also existed different views on the replacement of the normalizing treatment by controlled rolling and specific inspections; especially inspection on elevated temperature properties.

Some of those members who brought forward these objections indicated, however, that they were not against publication of the document as a Technical Report of type 2. It is expected that by such a publication a larger number of manufacturers and customers of thick plates will be incited to contribute ideas and data for the amendment of the specifications for these products.

1 Scope and field of application

This part of ISO 2604, ISO/TR 2604/7, specifies the quality requirements for plates for pressure purposes of thicknesses over 100 to 250 mm manufactured from the steel types listed in table 1.

NOTE — International Standards ISO 2604/4 and 2604/8 cover quality requirements for plates for pressure purposes of thicknesses up to or under 100 mm manufactured from other types of steel than those given in table 1. It is intended to combine these International Standards into one at a later date.

2 References

ISO 83, *Steel — Charpy impact test (U-notch)*.

ISO 148, *Steel — Charpy impact test (V-notch)*.

ISO 377, *Selection and preparation of samples and test pieces for wrought steel*.

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

ISO 643, *Steel — Micrographic determination of the ferritic or austenitic grain size*.

ISO/R 783, *Mechanical testing of steel at elevated temperatures — Determination of lower yield stress and proof stress and proving test*.

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

ISO 2604/4, *Steel products for pressure purposes — Quality requirements — Part 4 : Plates*.¹⁾

ISO 2604/8, *Steel products for pressure purposes — Quality requirements — Part 8 : Plates of weldable fine grain steels with high proof stress supplied in the normalized or quenched and tempered condition (thicknesses from 3 to 70 mm)*.

ISO 2605/1, *Steel products for pressure purposes — Derivation and verification of elevated temperature properties — Part 1 : Yield or proof stress of carbon and low alloy steel products*.

ISO 2605/3, *Steel products for pressure purposes — Derivation and verification of elevated temperature properties — Part 3 : An alternative procedure for deriving the elevated temperature yield and proof stress properties when data are limited*.

ISO 6892, *Metallic materials — Tensile testing*.

ISO/TR 7468, *Summary of average stress rupture properties of wrought steels for boilers and pressure vessels*.

1) At present at the stage of draft. (Revision of ISO 2604/4-1975.)