
High yield strength flat steel products —

Part 2:

Products supplied in the normalized or controlled rolled condition

Produits plats en acier à haute limite d'élasticité

Part 2: Produits livrés à l'état normalisé ou de laminage contrôlé



Reference number
ISO 4950-2:1995(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 voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4950-2 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 3, *Steels for structural purposes*.

This second edition cancels and replaces the first edition (ISO 4950-2: 1981), which has been technically revised.

ISO 4950 consists of the following parts, under the general title *High yield strength flat steel products*:

- *Part 1: General requirements*
- *Part 2: Products supplied in the normalized or controlled rolled condition*
- *Part 3: Products supplied in the heat-treated (quenched + tempered) condition*

Annex A of this part of ISO 4950 is for information only.

© ISO 1995

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

High yield strength flat steel products —

Part 2:

Products supplied in the normalized or controlled rolled condition

1 Scope

This part of ISO 4950 specifies the chemical composition and the mechanical properties of high yield strength flat steel products supplied in the normalized or/equivalent condition. For the method of manufacture, acceptance conditions and marking of these products, see ISO 4950-1.

It applies to hot-rolled plates, wide strip in coils of width greater than or equal to 600 mm, and wide flats in the thickness range 3 mm to 150 mm, in steels supplied after normalizing or controlled rolling, having a minimum specified yield strength of 355 N/mm² to 460 N/mm² for thicknesses up to and including 16 mm.

This part of ISO 4950 does not apply to products covered by other standards, such as

- flat products from continuous mills (see ISO 4996),
- flat products for subsequent forming operations (see ISO 5951),
- plates for pressure vessels (see ISO 9328-4).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 4950. 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 4950 are encouraged to investigate the possibility of applying the most recent editions of

the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4950-1:1995, *High yield strength flat steel products — Part 1: General requirements*.

ISO 4996:1991, *Hot-rolled steel sheet of high yield stress structural quality*.

ISO 5951:1993, *Hot-rolled steel sheet of higher yield strength with improved formability*.

ISO 9328-4:1991, *Steel plates and strip for pressure purposes — Technical delivery conditions — Part 4: Weldable fine grain steels with high proof stress supplied in the normalized or quenched and tempered condition*.

3 Manufacture

3.1 Deoxidation process

All steels shall be from casts with added elements that are capable of producing a fine grain. In addition, steels of quality DD shall be supplied as non-rimming steel, while steels of quality E shall be supplied as fully killed steel.

3.2 Delivery condition

The products shall be delivered in the normalized or normalized and tempered condition or, unless otherwise agreed at the time of ordering, in an equivalent condition obtained by controlled rolling¹⁾.

¹⁾ Plates produced by controlled rolling may be subject to deterioration of their properties if they are subsequently hot formed.