INTERNATIONAL STANDARD

ISO 16143-3

Second edition
2014-05-15

Stainless steels for general purposes —

Part 3: **Wire**

Aciers inoxydables pour usage général —

Partie 3: Fil

Reference number
ISO 16143-3:2014(E)

© ISO 2014



COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **2**

4 Designation ... **2**

5 Information to be supplied by the purchaser ... **2**

6 Manufacturing conditions ... **3**
6.1 General ... 3
6.2 Treatment conditions ... 3
6.3 Surface finish ... 3

7 Requirements ... **4**
7.1 Manufacturing process ... 4
7.2 Delivery condition ... 4
7.3 Chemical analysis ... 4
7.4 Mechanical properties ... 4
7.5 Tolerances on dimensions ... 5

8 Inspection, testing, and conformance of products ... **5**
8.1 General ... 5
8.2 Inspection and testing procedures and types of inspection documents ... 5
8.3 Specific inspection and testing ... 6
8.4 Test methods ... 6
8.5 Retests ... 6

9 Packing and marking ... **6**

Annex A (informative) **Designations of the steels given in Table 1 and of comparable grades covered in ASTM, EN, JIS, and GB standards** ... **16**

Bibliography ... **19**

© ISO 2014 – All rights reserved

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 17, *Steel*, Subcommittee SC 4, *Heat treatable and alloy steels*.

This second edition cancels and replaces the first edition (ISO 16143-3:2005), which has been technically revised.

ISO 16143 consists of the following parts, under the general title *Stainless steels for general purposes*:

— *Part 1: Corrosion-resistant flat products*

— *Part 2: Corrosion-resistant semi-finished products, bars, rods and sections*

— *Part 3: Wire*

 © ISO 2014 – All rights reserved

Stainless steels for general purposes —

Part 3:
Wire

1 Scope

This part of ISO 16143 specifies requirements for stainless steel wire for common use for which no product standard exists. It includes round, flat, and shaped wire (such as square, hexagonal, or rectangular wire), made of the most commonly used types of stainless steels for general corrosion resistance and high-temperature service. The wire can be supplied in coils or in straightened and cut lengths.

NOTE Steel wire made of corrosion-resistant stainless steel is manufactured from steels mentioned in ISO 16143-2, and steel wire intended for high-temperature purposes is manufactured from steels mentioned in ISO 4955.

In addition to this part of ISO 16143, the general technical delivery requirements of ISO 404 are applicable.

Excluded from this part of ISO 16143 are

— wire for cold heading,

— welding wire, and

— any wire for which a specific product standard exists.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 4955, *Heat-resistant steels*

ISO 6892-1:2009, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 6929:2013, *Steel products — Vocabulary*

ISO 10474, *Steel and steel products — Inspection documents*

ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition*

ISO 15510, *Stainless steels — Chemical composition*

ISO 16143-2, *Stainless steels for general purposes — Part 2: Corrosion-resistant semi-finished products, bars, rods and sections*

ISO/TS 4949, *Steel names based on letter symbols*

ISO/TR 9769, *Steel and iron — Review of available methods of analysis*

© ISO 2014 – All rights reserved