Third edition 2004-02-01

Steel wire ropes for general purposes — Minimum requirements

Câbles en acier pour usages courants — Exigences minimales



Reference number ISO 2408:2004(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2004

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 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

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Requirements 4.1 Material 4.2 Rope manufacture 4.3 Designation and classification	2 3
 4.3 Designation and classification 4.4 Dimensions 4.5 Breaking force 	4
 5 Verification of requirements and test methods	7 7 7
6 Information for use 6.1 Certificate 6.2 Packaging and marking	9
Annex A (normative) Dimensional and mechanical properties of round wires (before ropemaking)	. 11
Annex B (normative) Sampling and acceptance criteria for type testing of ropes produced in series	. 14
Annex C (normative) Tables of minimum breaking forces for more common rope classes, sizes and grades	. 15
Annex D (normative) Calculation of minimum breaking force for ropes in the Tables of Annex C	. 30
Annex E (informative) Tests on wires taken from the rope	. 31
Annex F (informative) Comparison between metric and imperial rope sizes	
Annex G (informative) Rope grade equivalents	. 34
Bibliography	. 35

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 2408 was prepared by Technical Committee ISO/TC 105, Steel wire ropes.

This third edition cancels and replaces the second edition (ISO 2408:1985), which has been technically revised.

Introduction

This International Standard was developed in response to a worldwide demand for a specification giving minimum requirements for ropes for general purposes.

As in previous editions, this edition of ISO 2408 specifies metric sizes and grades of rope for the more common classes of rope. In addition, and for comparison, information is given in this edition on imperial rope sizes and grades in order to assist in the rope selection process and help to ensure that existing levels of safety are maintained on equipment originally designed to use such ropes. In these cases, it is recommended that the equipment designer or rope manufacturer (or other competent person) be consulted prior to ordering a substitute rope.

This International Standard does not restrict itself to those classes covered by the tables: other types, such as ropes with compacted strands and compacted (swaged) ropes, may also conform to it.

Complementing this International Standard is ISO 17893, which covers definitions, designation and classification.