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Steel wire ropes for the petroleum and natural gas industries — Minimum requirements and terms of acceptance

Câbles en acier pour les industries du pétrole et du gaz naturel — Exigences minimales et conditions de réception



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Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Requirements	2
4.1 Material.....	2
4.1.1 Wire.....	2
4.1.2 Core.....	2
4.1.3 Lubricant.....	3
4.2 Wire rope manufacture.....	3
4.2.1 General.....	3
4.2.2 Wire joints.....	3
4.2.3 Preformation and postformation.....	3
4.2.4 Construction.....	3
4.2.5 Rope grade.....	4
4.2.6 Wire finish.....	4
4.2.7 Direction and type of wire rope lay.....	4
4.2.8 Designation and classification.....	4
4.3 Diameter.....	5
4.3.1 General.....	5
4.3.2 Tolerance.....	5
4.3.3 Difference between diameter measurements.....	5
4.4 Lay length.....	6
4.5 Breaking force.....	6
4.5.1 Well-measuring wire.....	6
4.5.2 Well-servicing strand.....	6
4.5.3 Stranded ropes and spiral ropes.....	6
4.6 Length.....	8
5 Verification of requirements and test methods	9
5.1 Stranded ropes and spiral ropes.....	9
5.1.1 Materials.....	9
5.1.2 Wire rope manufacture.....	9
5.1.3 Test on wire rope for diameter.....	9
5.1.4 Test on wire rope for breaking force.....	9
5.1.5 Tests on wires from the wire rope.....	10
5.2 Tests on well-measuring wire.....	11
5.3 Tests on well-servicing strands.....	11
5.4 Facilities for witnessing tests.....	11
6 Information for use	11
6.1 Certificate.....	11
6.1.1 General.....	11
6.1.2 Test results.....	11
6.2 Packaging and marking.....	12
6.2.1 Packaging.....	12
6.2.2 Marking.....	12
Annex A (normative) Dimensional and mechanical properties of round wires (before wire rope fabrication)	13
Annex B (normative) Methods of wire testing for Levels 2, 3, 4 and 5	25
Annex C (normative) Tables of breaking forces for the more common classes, sizes and grades of stranded ropes up to and including 60 mm diameter	27

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Annex D (normative) Physical dimensions and mechanical properties of well-servicing strand	63
Annex E (normative) Requirements for bright or drawn coated well measuring wire	64
Annex F (informative) Large diameter wire ropes	66
Annex G (normative) Calculation of minimum breaking force for wire ropes in accordance with Annex C — Rope grades 1770, 1960 and 2160	68
Annex H (normative) Sampling and acceptance criteria for type testing of wire ropes produced in series	71
Annex I (normative) Determination of breaking force (Method 1)	73
Annex J (informative) Tests on wires from the wire rope (if specified by the purchaser)	75
Annex K (informative) Information with enquiry or order	78
Bibliography	79

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Foreword

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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 document 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).

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This document was prepared by Technical Committee ISO/TC 105, *Steel wire ropes*.

This second edition cancels and replaces the first edition (ISO 10425:2003), which has been technically revised.

The main changes are as follows:

- tolerance, difference of diameter measurements of compacted strands and compacted (swaged) ropes have been added (see [4.3](#));
- the breaking forces of the more common classes, sizes and grades of compacted strands and compacted (swaged) ropes have been added to the breaking force tables (see [Annex C](#));
- some sizes of well-measuring wire have been added to the diameter tables (see [Annex E](#)).

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Introduction

In recognition of equipment already in use and originally designed to accommodate rope sizes (nominal rope diameters) based on “Imperial” units, some of the more common “converted SI unit” sizes have also been included.

In addition, and in recognition of equipment already in use and designed to operate with ropes having specific rope grades (e.g. IPS), based on “US” wire levels, these grades have also been included in order to give prominence to the required minimum values of breaking force associated with these grades and help to ensure that existing design safety levels are maintained.

Having due regard to size and breaking force for a particular rope class or construction, in some cases it is possible to safely substitute a US customary size and grade with one based solely on SI units and grade, and vice-versa. To assist in this process, this document gives a size range for each nominal rope diameter and equivalent minimum breaking forces (converted from US customary units) for comparison, although it is recommended that the equipment designer or rope manufacturer (or other competent person) is consulted prior to ordering a substitute rope.