

ISO 4344:2022-12 (E)

Steel wire ropes for lifts - Minimum requirements

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Requirements	2
4.1	Material	2
4.1.1	Wire	2
4.1.2	Core	2
4.1.3	Lubricant	3
4.2	Rope manufacture	3
4.2.1	General	3
4.2.2	Wire joints	4
4.2.3	Fibre core joints	4
4.2.4	Lubrication	4
4.2.5	Preformation and postformation	4
4.2.6	Prestretching load limit	4
4.2.7	Rope ends	4
4.2.8	Rope construction	4
4.2.9	Rope grade	5
4.2.10	Type and direction of lay	5
4.2.11	Lay length	6
4.3	Designation and classification	6
4.4	Dimensions	6
4.4.1	Diameter	6
4.4.2	Length	7
4.5	Minimum breaking force	7
4.6	Wire tensile strength	8
4.7	Rope stretch	8
5	Verification of requirements and test methods	8
5.1	Materials	8
5.2	Test on rope for diameter	8
5.2.1	Equipment	8
5.2.2	Measured diameter	8
5.2.3	Ovality	9
5.2.4	Variation	9
5.3	Test on rope for breaking force	9
5.4	Test on rope for lubricant content	9
5.5	Test on rope for wire tensile strength	9
5.6	Additional test	9
6	Sampling and acceptance criteria	9
7	Information for use	9
7.1	Certificate	9
7.1.1	General	9

7.1.2	Test results	10
7.2	Information for selection, installation, maintenance	10
7.3	Discard criteria	10
7.4	Marking	10
7.5	Information recommended to be provided for an enquiry or an order	10
Annex A (normative)	Determination of lubricant content: gravimetric method	11
Annex B (normative)	Tables of minimum breaking force values for the more common classes, diameters and grade of ropes	14
Annex C (normative)	Calculation of minimum breaking force	26
Annex D (informative)	Calculation of approximate rope length mass, nominal metallic cross- sectional area and approximate outer wire size	27
Annex E (informative)	Determination of construction stretch and elastic stretch	28
Annex F (informative)	Information for selection, storage, transportation, installation and maintenance for lift ropes	30
Annex G (normative)	Discard criteria for lift ropes	32
Annex H (informative)	Information recommended to be provided with an enquiry or order	34
Bibliography		35