

# ISO 4344:2022-12 (E)

## Steel wire ropes for lifts - Minimum requirements

---

<b>Contents</b>		<b>Page</b>
Foreword .....		v
Introduction .....		vi
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>4</b>	<b>Requirements .....</b>	<b>2</b>
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
<b>5</b>	<b>Verification of requirements and test methods .....</b>	<b>8</b>
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
<b>6</b>	<b>Sampling and acceptance criteria .....</b>	<b>9</b>
<b>7</b>	<b>Information for use .....</b>	<b>9</b>
7.1	Certificate .....	9
7.1.1	General .....	9

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