

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 2365 (1977): Steel Wire Suspension Ropes for Lifts, Elevators and Hoists [MED 10: Wire Ropes and Wire Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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## Indian Standard

SPECIFICATION FOR STEEL WIRE SUSPENSION ROPES FOR  
LIFTS, ELEVATORS AND HOISTS

( First Revision )

**1. Scope** — Covers steel wire ropes for use with lifts, elevators and hoists having cars or platforms carrying passengers or goods and working in guides. The following rope constructions and size ranges are covered:

Construction	Tensile Designation			Core		Size Range	Ref to Table
	1 230	1 420	1 570	Fibre	Steel		
						mm	
6×19 (12/6/1)	x	x	x	x	—	6 to 12	1
6×19 (9/9/1)	x	x	x	x	—	6 to 20	2
6×19 (12/6+6F/1)	x	x	x	x	—	6 to 20	3
8×19 (9/9/1)	x	x	x	x	—	8 to 20	4
8×19 (12/6+6F/1)	x	x	x	x	—	8 to 20	5

**1.1** This standard does not apply to ropes used for winding purposes in mines.

**2. Terminology** — Refer IS : 2363-1963 'Glossary of terms relating to wire ropes'.

**3. Rope Size and Tolerance** — The size of the rope, designated as 'nominal diameter' shall be one of those given in Tables 1 to 5. The actual diameter of the rope as supplied shall be within  $\pm 4$  percent of the nominal diameter.

**4. Minimum Breaking Load** — Shall be as given in Tables 1 to 5.

**5. General Requirements** — The wire ropes shall conform to IS:6594-1977 'Technical supply conditions for wire ropes and strands (first revision)' and shall also meet the following requirements.

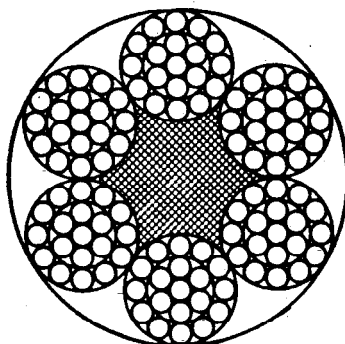
**5.1 Core** — The main core of the rope shall be of fibre only.

**5.2 Joints** — If jointing by tucking is required, it shall be in the case of wires 0.5 mm diameter and smaller.

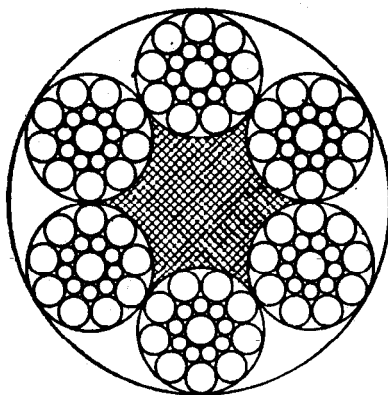
**5.3 Mass** — The mass of ropes given in Tables 1 to 5 are for fully greased ropes. The ropes which are not lubricated may be lighter.

**6. Marking** — Refer IS : 6594-1977.

**6.1 Certification Marking** — Details available with the Bureau of Indian Standards.

**TABLE 1 BREAKING LOAD AND MASS FOR 6×19 (12/6/1) CONSTRUCTION**

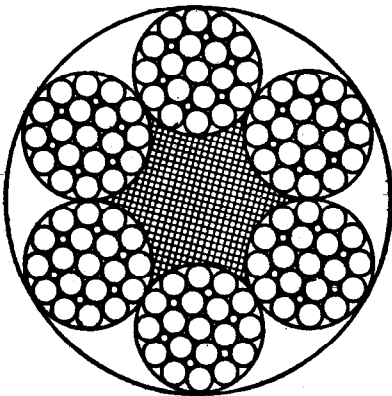
Nominal Diameter	Approximate Mass	Minimum Breaking Load Corresponding to Tensile Designation of Wires of		
		1 230	1 420	1 570
1	2	3	4	5
mm	kg/100 m	kN	kN	kN
6	12.5	13.6	15.7	17.4
7	17.0	18.5	21	24
8	22.1	24	28	31
9	28.0	31	35	39
10	34.6	38	44	48
11	41.9	46	53	58
12	49.8	54	63	69

**TABLE 2 BREAKING LOAD AND MASS FOR 6×19 (9/9/1) CONSTRUCTION**

Nominal Diameter	Approximate Mass	Minimum Breaking Load Corresponding to Tensile Designation of Wires of		
		1 230	1 420	1 570
1	2	3	4	5
mm	kg/100 m	kN	kN	kN
6	13.4	14.7	16.9	18.7
7	18.3	19.9	23	25
8	23.8	26	30	33
9	30.2	33	38	42
10	37.3	41	47	52
11	45.1	49	57	63
12	53.7	59	68	75
13	63.0	69	79	88
14	73.0	80	92	102
16	95.4	104	120	133
18	121	132	152	168
19	135	147	170	188
20	149	162	188	208

**Note** — The nominal diameter 19 mm is non-preferred.

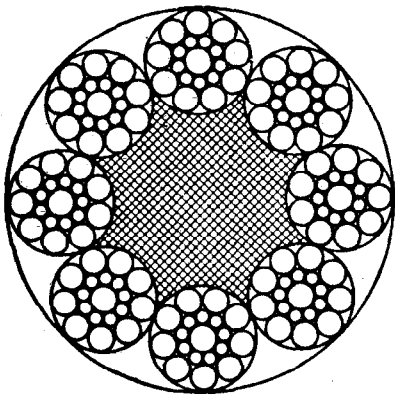
TABLE 3 BREAKING LOAD AND MASS FOR 6×19 (12/6+6F/1) CONSTRUCTION



Nominal Diameter	Approximate Mass	Minimum Breaking Load Corresponding to Tensile Designation of Wires of		
		1 230	1 420	1 570
1	2	3	4	5
mm	kg/100 m	kN	kN	kN
6	13·7	15·0	17·3	19·1
7	18·6	20·4	23	26
8	24·3	27	31	34
9	30·8	34	39	43
10	38·0	42	48	53
11	46·0	50	58	64
12	54·7	60	69	76
13	64·3	70	81	90
14	74·5	81	94	104
16	97·3	106	123	136
18	123	135	155	172
19	137	150	173	191
20	152	166	192	212

**Note —** The nominal diameter 19 mm is non-preferred.

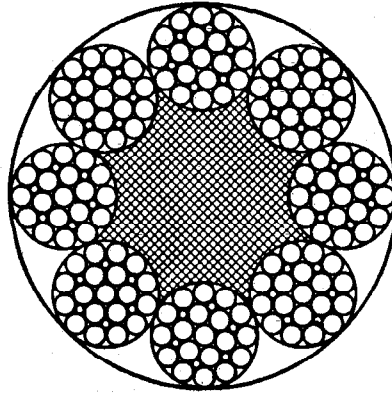
TABLE 4 BREAKING LOAD AND MASS FOR 8×19 (9/9/1) CONSTRUCTION



Nominal Diameter	Approximate Mass	Minimum Breaking Load Corresponding to Tensile Designation of Wires of		
		1 230	1 420	1 570
1	2	3	4	5
mm	kg/100 m	kN	kN	kN
8	22.3	23	26	29
9	28.2	29	33	37
10	34.8	35	41	45
11	42.2	43	49	55
12	50.2	51	59	65
13	58.9	60	69	76
14	68.3	69	80	88
16	89.2	90	104	115
18	113	114	132	146
19	126	127	147	163
20	139	141	163	180

**Note** — The nominal diameter 19 mm is non-preferred.

TABLE 5 BREAKING LOAD AND MASS FOR 8×19 (12/6+6F/1) CONSTRUCTION



Nominal Diameter	Approximate Mass	Minimum Breaking Load Corresponding to Tensile Designation of Wires of		
		1 230	1 420	1 570
1	2	3	4	5
mm	kg/100 m	kN	kN	kN
8	22.8	23	27	30
9	28.9	29	34	37
10	35.7	36	42	46
11	43.1	44	50	56
12	51.3	52	60	66
13	60.2	61	70	78
14	69.9	71	82	90
16	91.3	92	107	118
18	116	117	135	149
19	129	130	151	166
20	143	144	167	184

**Note** — The nominal diameter 19 mm is non-preferred.

### EXPLANATORY NOTE

This standard was first issued in 1963. The experience gained in the implementation of this standard has necessitated the revision of the standard. While revising this standard, 6×25 (12/12/△) triangular strand construction of wire rope has been deleted from the specification because of the limited use. Reference has been made to IS : 6594-1977, thereby deleting the requirements common to all types of wire ropes. Also the title of the standard has been slightly modified.