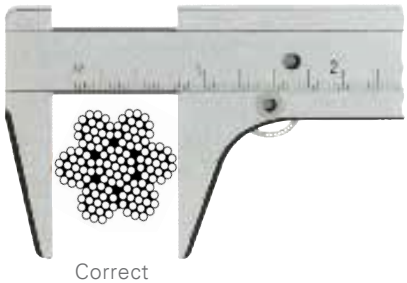
STEEL WIRE ROPE

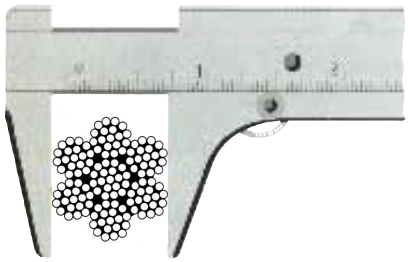
The wire ropes shown are suitable for a wide variety of applications including slings, winch and hoist ropes. Wire ropes are available from 1.6mm to 90mm in a wide range of constructions, grades of steel, core type and finish. Larger sizes are available on request.

How to measure the diameter of wire rope:

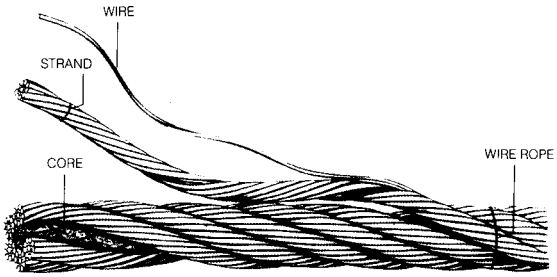
Measure the circle just touching the extreme outer limits (crown) of the strands.

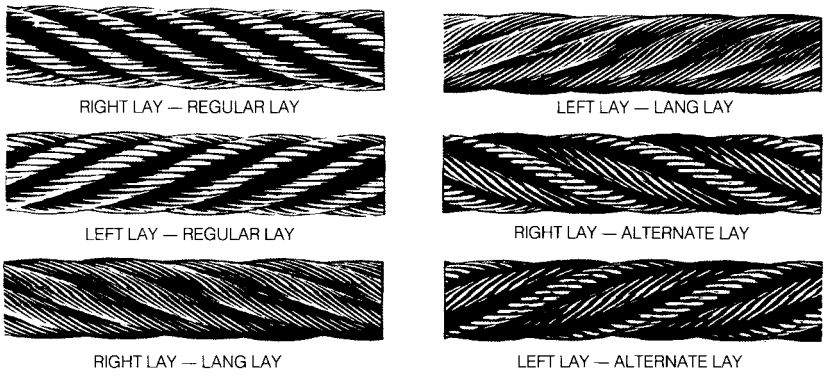


Correct



Incorrect





Wire Rope Lays

- Right Lay: Clockwise.
- Left Lay: Counter Clockwise.
- Regular Lay: Wires in strands are laid in the opposite direction of the strands and are parallel to the rope axis.
- Lang Lay: Wires are laid in the same direction as the strands of the rope and in an angle to the rope axis.

Longer lengths of the individual wires are exposed, creating greater resistance to wear and improve flexibility. Lang lay ropes should only be used where both rope ends are 'fixed' and therefore should not be used with a swivel type terminal.

Construction of Steel wire ropes

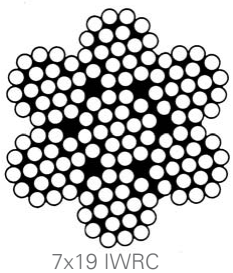
The design of a rope is determined by:

- Strand Construction
  -the number and arrangement of wires in each strand
- Rope Construction
  -the number and arrangement of strands in each rope
- The Core

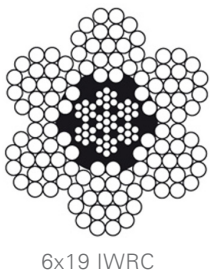
Factors that can affect Rope Life

- Load
- Cycles
- Sheave & Drum Diameter
- Environment
- Lubrication
- Sheave and Drum Groove
- Fleet Angles
- Machine Condition / Alignment

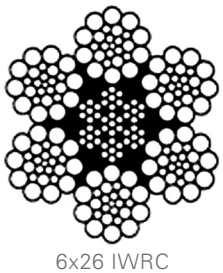
Common Round strand wire rope constructions can be found below:



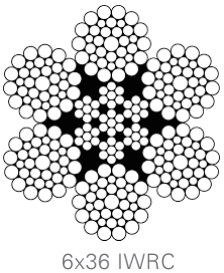
7x19 IWRC



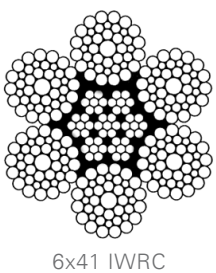
6x19 IWRC



6x26 IWRC

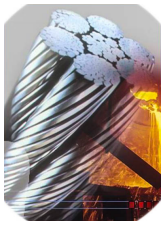


6x36 IWRC

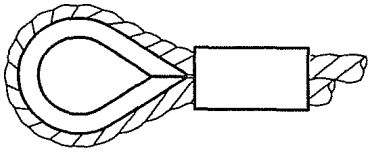


6x41 IWRC

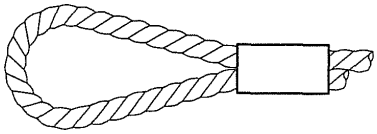
STEEL WIRE ROPE



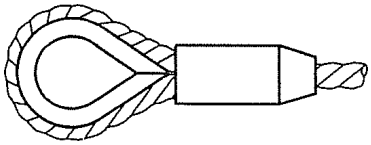
Wire Rope End Terminations



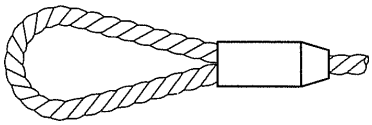
Talurit (Turnback) Swaged Thimble Eye



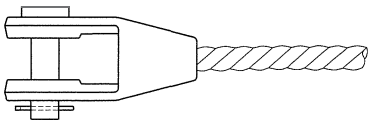
Talurit (Turnback) Swaged Soft Eye



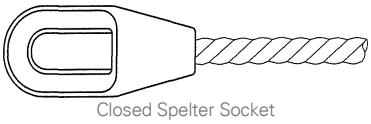
Flemish Swaged (Steel Ferrule) Thimble Eye



Flemish Swaged (Steel Ferrule) Soft Eye



Open Spelter Socket



Closed Spelter Socket

MBL Chart for 6 Strand Wire Rope

Nominal Dia (mm)	Weight Approx Kg/100m	Minimum Breaking Load/Nominal Strength				
		1770		1960 (EIPS)		2160 (EEIPS)
		kN	metric t	kN	metric t	metric t
8	25.5	40.2	4.09	44.7	4.5	5.0
9	32.2	51.1	5.20	56.5	5.75	6.34
10	39.8	63.1	6.43	69.8	7.1	7.83
11	48.2	76.3	7.77	84.4	8.6	9.48
12	57.3	90.8	9.25	100	10.1	11.3
13	67.3	107	10.9	118	12	13.2
14	78.0	124	12.6	137	13.9	15.3
16	102.0	161	16.4	179	18.2	20.0
18	129.0	204	20.7	226	23	25.3
19	144.0	227	23.1	262	26.7	28.3
20	159.0	252	25.6	279	28.4	31.3
22	193.0	305	31.0	354	36	37.9
24	229.0	363	37.0	402	40.9	45
26	269.0	426	43.4	478	48.7	53
28	312.0	494	50.3	555	56.5	61.4
32	408.0	646	65.8	715	72.8	80.2
36	516	817	83.2	904	92.45	101
38	575	909	92.6	1010	102.9	113
40	637	1010	102	1120	112	125
44	771	1220	124	1350	135	151.8
52	1080	1710	156	1890	180	212
57	1324	1980	201.8	2200	223	245
64	1630	2334	238	2688	274	300
71	2080	2795	285	3266	333	359.8
76	2360	3296	336	3816	389	421.8
83	2900	3816	389	4385	447	493
96	3670	4954	505	5738	585	640
103	4400	5581	569	6523	665	720

When choosing your Wire Rope, the more information you can provide the better we can help. The following is some information that will help us determine the best wire rope for you:

- The intended use or what application the wire is required
- Minimum Breaking Load Required
- Diameter: millimeters/inches etc.
- Length: metres, feet, yards etc.
- Construction: 6x36, 6x41, 7x19, 18x7 etc.
- Core: Fibrecore, In-dependent Wire Rope Core
- Grade: 1770, EIPS, EEIPS etc.
- Finish: black, galvanised
- Lay: RHOL, LHOL, RHLL, LHLL etc.
- Termination Requirements: Soft eye, Thimble eye etc.

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