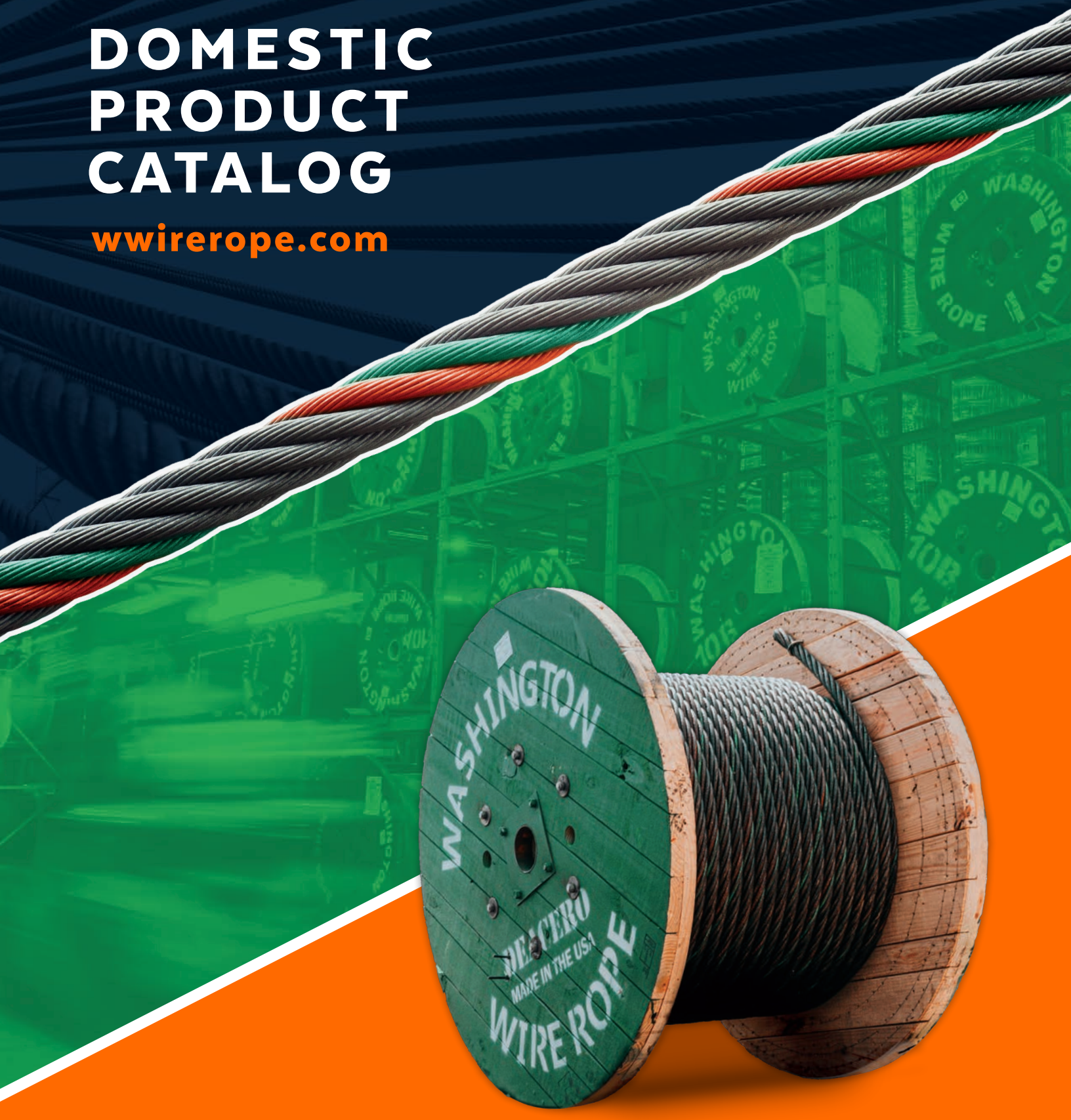
WWR®
WASHINGTON WIRE ROPE

DOMESTIC PRODUCT CATALOG

wwirerope.com



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WWR®
WASHINGTON WIRE ROPE

COMMITED TO QUALITY

Washington Wire Rope operates as a certified API / ISO wire rope mill located in Dayton, Texas. As part of **DEACERO USA**, we are a vertically integrated manufacturer, taking pride in producing, drawing, and rigorously testing our steel wire in **ISO-accredited steel mills.**

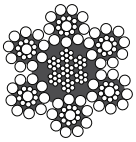
What truly sets us apart is our ability to manufacture our own raw materials, giving us the unique advantage of offering **full traceability** through Certificates of Conformance. This traceability extends from the initial steel pour through the final stages of wire rope stranding and closing.

Washington Wire Rope is a valued member of the **AWRF** and shares its commitment to delivering products of the highest quality available worldwide. Our domestic products are manufactured in accordance with **API 9A standards**, ensuring exceptional manufacturing consistency and performance.

PRODUCT SPECIFICATIONS

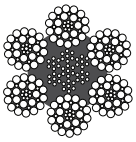
General Purpose

6x19 Class



This construction is the most widely used. With its combination of flexibility and wear resistance, rope in this class can be suited to the specific needs of diverse kinds of machinery and equipment.

6x37 Class

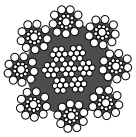


This construction is characterized by the relatively large number of wires used in each strand. Ropes of this class are among the most flexible available due to the greater number of wires per strand.

Specialty Applications

8x19 Class

Rotation Resistant

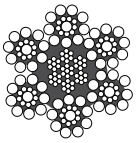


This construction contains rotation resistant ropes and is recommended for hoisting unguided loads with a single-part or multi-part line. The eight outer strands are manufactured in right lay, with the inner strands being left lay.

Oilfield Applications

6x19 Seale

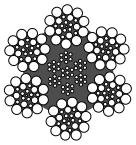
Drill Line



The 6x19 construction provides flexibility & wear resistance, and becomes an oilfield application wire rope once C-lube is applied.

6x26 Swaged
6x31 Swaged

Tubing Line

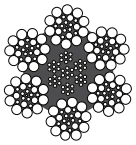


Swaged tubing lines are used for the transfer of fluids and gases in the Oil and Gas industry, including drilling operations, production facilities, and pipeline systems.

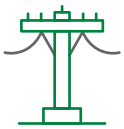
Logging Industry

6x26 Swaged
6x25 Swaged

Compacted



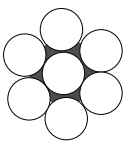
The logging industry uses swaged ropes with compacted strands due to their durability, strength, and resistance to abrasion.



Telecom & Utilities

Guy Strand

Galvanized

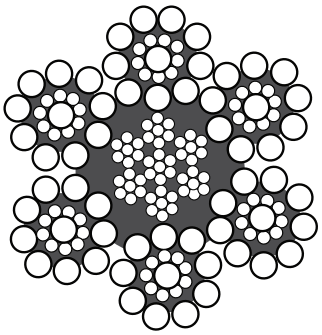


This 1x7 or 1x19 construction strand is used for creating tension in telecom and utility applications. These strands are not used for lifting.

6x19 Class

General Purpose

6x19S (9/9/1) | 6x26WS (10/5+5/5/1)



Provides a stable rope structure and achieves excellent bending fatigue results.

- Flexibility and wear resistance.
- Provides great ruggedness and resistance to abrasion and crushing.

Diameter (in)	Diameter (mm)	Weight (lb/ft)	Minimum Breaking Force (tons for 2000 lbs)	
			EIPS 1960	EEIPS* 2160
3/8	9.5	0.26	7.55	8.30
7/16	11.1	0.35	10.2	11.2
1/2	12.7	0.46	13.3	14.6
9/16	14.3	0.59	16.8	18.5
5/8	15.9	0.72	20.6	22.7
3/4	19.1	1.04	29.4	32.4
7/8	22.2	1.42	39.8	43.8
1	25.4	1.85	51.7	56.9
1 1/8	28.6	2.34	65.0	71.5
1 1/4	31.8	2.89	79.9	87.9
1 3/8	34.9	3.50	96.0	106
1 1/2	38.1	4.16	114	125
1 5/8	41.3	4.88	132	146
1 3/4	44.5	5.67	153	169
1 7/8	47.6	6.50	174	192
2	50.8	7.39	198	217
2 1/8	54.0	8.35	221	244
2 1/4	57.2	9.36	247	272
2 3/8	60.3	10.4	274	302
2 1/2	63.5	11.6	302	332

Available as Standard

Lay Type		
Regular	Lang	Alt
●		

Lay Direction	
Right	Left
●	

Finish	
BRT	GALV
●	

Grade	
EIPS	EEIPS
●	

*EEIPS made to order. Contact your local representative for availability.

Standard Lubricants

LUBE - A I Our lightest standard lube for enhanced handling.

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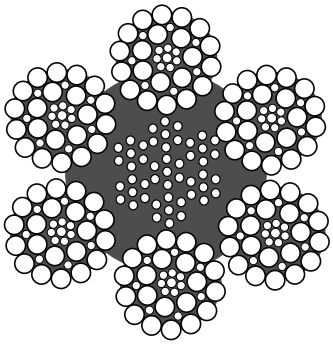
Creates heaviest standard coat available for elevated heat and winter conditions.

SPECIAL LUBES I Specialty lubes available upon request.

6x37 Class

General Purpose

6x31WS (12/6 & 6/6/1) | 6x36WS (14/7 & 7/7/1)



Ropes of this class provide greater flexiblity and resistance to abrasion while maintaning strength.

- Flexibility and wear resistance.
- Combination of larger and smaller outer wires helps extend service life in bending applications.

Diameter (in)	Diameter (mm)	Weight (lb/ft)	Minimum Breaking Force (tons for 2000 lbs)	
			EIPS 1960	EEIPS* 2160
3/8	9.5	0.26	7.55	8.30
7/16	11.1	0.35	10.2	11.2
1/2	12.7	0.46	13.3	14.6
9/16	14.3	0.59	16.8	18.5
5/8	15.9	0.72	20.6	22.7
3/4	19.1	1.04	29.4	32.4
7/8	22.2	1.42	39.8	43.8
1	25.4	1.85	51.7	56.9
1 1/8	28.6	2.34	65.0	71.5
1 1/4	31.8	2.89	79.9	87.9
1 3/8	34.9	3.50	96.0	106
1 1/2	38.1	4.16	114	125
1 5/8	41.3	4.88	132	146
1 3/4	44.5	5.67	153	169
1 7/8	47.6	6.50	174	192
2	50.8	7.39	198	217
2 1/8	54.0	8.35	221	244
2 1/4	57.2	9.36	247	272
2 3/8	60.3	10.4	274	302
2 1/2	63.5	11.6	302	332

Available as Standard

Lay Type		
Regular	Lang	Alt
●		

Lay Direction	
Right	Left
●	

Finish	
BRT	GALV
●	

Grade	
EIPS	EEIPS
●	

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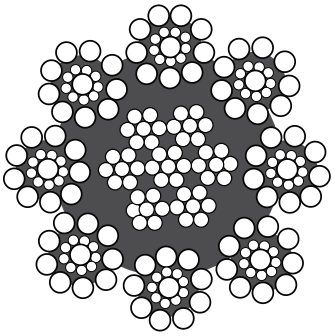
8x19 Class

General Purpose

ROTATION RESISTANT
8x19S (1/2" - 3/4") | 8x26WS (1/2" - 3/4")



The size relationship between strands and cores gives these ropes increased bendability over six strand ropes of the same diameter.

- Crush and rotation resistant rope.
- Increased bendability.
- Used as a hoist rope in elevator applications.

Diameter (in)	Diameter (mm)	Weight (lb/ft)	Minimum Breaking Force (tons for 2000 lbs)	
			EIPS 1960	EEIPS* 2160
1/2	12.7	0.47	10.1	11.6
9/16	14.3	0.60	12.8	14.7
5/8	15.9	0.73	15.7	18.1
3/4	19.1	1.06	22.5	25.9
7/8	22.2	1.44	30.5	35.0
1	25.4	1.88	39.6	45.5
1 1/8	28.6	2.39	49.8	57.3
1 1/4	31.8	2.94	61.3	70.5

Available as Standard

Lay Type	
Regular	Lang
●	

Lay Direction	
Right	Left
●	

Finish	
BRT	GALV
●	

Grade	
EIPS	EEIPS
●	

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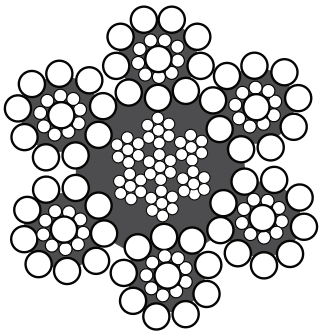
6x19 Seale

Oilfield Applications

DRILL LINE 6x19S (9/9/1)



Designed to provide excellent strength and resistance to abrasion, making it well-suited to be used as a rotary drill line.

- 19 to 26 wires per strand.
- Flexibility and wear resistance.
- Provides great ruggedness and resistance to abrasion and crushing.
- Special lubricant that works on all different environments.

Diameter (in)	Diameter (mm)	Weight (lb/ft)	Minimum Breaking Force (tons for 2000 lbs)	
			EIPS 1960	EEIPS* 2160
7/8	22.2	1.42	39.8	43.8
1	25.4	1.85	51.7	56.9
1 1/8	28.6	2.34	65.0	71.5
1 1/4	31.8	2.89	79.9	87.9
1 3/8	34.9	3.50	96.0	106
1 1/2	38.1	4.16	114	125
1 5/8	41.3	4.88	132	146
1 3/4	44.5	5.67	153	169
1 7/8	47.6	6.50	174	192
2	50.8	7.39	198	217

Available as Standard

Lay Type	
Regular	Lang
●	

Lay Direction	
Right	Left
●	

Finish	
BRT	GALV
●	

Grade	
EIPS	EEIPS
●	

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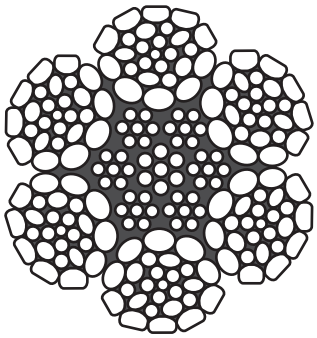
6x26 & 6x31 IWRC

TUBING LINES 6x26WS (10/5 & 5/5/1)



High performance lubrication for durability in the harshest enviornments.

- High resistance.
- Used as a hoist rope in elevator applications.

Diameter (in)	Construction	Weight (lb/ft)	Minimum Breaking Force (tons for 2000 lbs)	
			EIPS 1960	EEIPS* 2160
7/8	6x26 Swaged	1.7	47.8	52.6
7/8	6x31 Swaged	1.7	47.8	52.6
1	6x26 Swaged	2.22	62	68.2
1	6x31 Swaged	2.22	62	68.2
1 1/8	6x31 Swaged	2.66	79.3	87.2

Available as Standard

Lay Type	
Regular	Lang
●	

Lay Direction	
Right	Left
●	

Finish	
BRT	GALV
●	

Grade	
EIPS	EEIPS
●	

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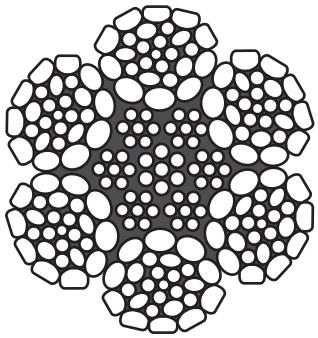
6x26 Swaged

Logging Industry

6x26WS (10/5 & 5/5/1)



Swaged wire ropes are commonly used in the logging industry for a variety of purposes due to their durability, strength, and resistance to abrasion.

- High-density construction.
- Abrasion resistance.
- Greater strength.

Diameter (in)	Weight (lb/ft)	Minimum Breaking Force (tons for 2000 lbs)
		EEIPS* 2160
7/8	1.70	47.4
1	2.22	62.0
1 1/8	2.80	73.5
1 1/4	3.40	90.0

Available as Standard

Lay Type		
Regular	Lang	Alt
●		

Lay Direction	
Right	Left
●	

Finish	
BRT	GALV
●	

Grade	
EIPS	EEIPS
●	

*EEIPS made to order.
Contact your local representative for availability.

6x25 & 6x26 Swaged Compacted

Diameter (in)	Weight (lb/ft)	Minimum Breaking Force (tons for 2000 lbs)
		EEIPS* 2160
1/2	0.65	18.6
9/16	0.81	23.5
5/8	0.95	28.8
3/4	1.43	40
7/8	1.92	52
1	2.37	68
1 1/8	2.96	85
1 1/4	3.51	102
1 3/8	4.12	120

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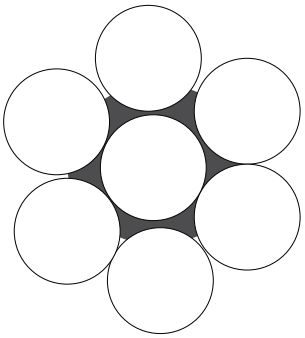
Guy Strand

Galvanized



For high-performance communications towers and other support structures, as an overhead ground wire.

- Available in 4 grades: Utility grade, Siemens–Martin, High Strength, and Extra High Strength.
- Can be produced with Class A, Class B (zinc coatings), and XTREME® (zinc aluminum).
- Meets ASTM A475 and A363.

Strand Diameter	Wires per Strand	Approx. Weight	Medium Breaking Strength				Min. Weight of Zinc Coating		
			Utility Grade	Siemens Martin Grade	High Strength Grade	Extra High Strength Grade	Class A	Class B	XTREME®
in		lb/1000ft	lbs	lbs	lbs	lbs	oz/ft²	oz/ft²	oz/ft²
1/8	7	23	-	-	1330	1830	0.40	0.80	-
3/16	7	73	-	-	2850	3990	0.50	1.00	-
1/4	7	121	-	3380	4750	6650	0.60	1.20	0.60
5/16	7	205	-	5350	8000	11200	0.80	1.60	0.80
5/16	7	225	6000	-	-	-	0.80	1.60	0.80
3/8	7	273	11500	6950	10800	15400	0.85	1.70	0.85
1/2	7	517	-	12100	18800	26900	0.90	-	-
1/2	7	504	-	12700	19100	26700	0.70	1.40	-
9/16	7	637	-	16100	24100	33700	0.80	-	-
9/16	19	671	-	-	24500	35000	1.00	-	-
5/8	19	813	-	-	29600	42400	1.00	1.60	-
5/8	19	796	-	18100	28100	40200	0.85	1.70	-
3/4	19	1155	-	26200	40800	58300	0.90	-	-

RUS APPROVED PROVIDER

USDA Rural Development

INSPECTION

All wire ropes will wear out eventually and gradually lose work capability throughout their service life. That's why periodic inspections are critical. Applicable industry standards such as **ASME b30.2** for overhead and gantry cranes or federal regulations such as **OSHA** refer to specific inspection guidelines for varied applications.

WHY INSPECT?

Regular inspection of wire rope and equipment should be performed because:

- It reveals the rope's condition and indicated the need for replacement should there be one.
- It can indicate if you're using the most suitable type of rope for the application.
- It makes possible the discovery and correction of faults in equipment or operation that can cause costly accelerated rope wear.

HOW OFTEN?

All wire ropes should be thoroughly inspected at regular intervals. The longer it has been in service or the more severe the service, the more thoroughly and frequently it should be inspected. Be sure to maintain records of each inspection.

WHO CAN INSPECT?

Inspections should be performed by a qualified person who, through specialized training or practical experience, understands what to look for and how to evaluate the significance of any abnormal conditions identified. It is the inspector's responsibility to obtain and follow the appropriate inspection criteria for each specific application.

THE “X” CHART

Abrasion Resistance VS Bending Fatigue Resistance

ABRASION RESISTANCE

Abrasion resistance refers to a rope's ability to withstand metal being worn away on the it's surface. Abrasion is one of the most destructive conditions that can occur to a wire rope - it usually takes place on drums or sheaves due to the rubbing against itself or other material. Abrasion causes the metal of the wire to bend into new shape, which impairs wire movement when the rope bends.

FATIGUE RESISTANCE

To hove high fatigue resistance, wires must be capable of bending repeatedly under stress - for example, a rope passing over a sheave. This is achieved by increasing the number of wires in the rope. Every rope is subject to fatigue from bending stress while in operation, hence the rope's strength gradually decreases as it's used.

CONVERSION FACTORS & TABLES

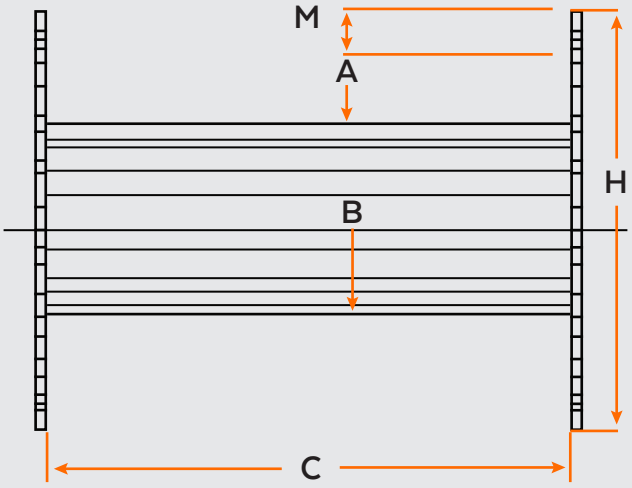
Temperatures

Fahrenheit	Celsius
806	430
608	320
212	100
100	38
86	30
75	24
68	20
59	15
50	10
41	5

Fahrenheit	Celsius
-250	-418
-50	-58
-40	-40
-22	-30
-4	-20
14	-10
32	0

CAPACITY OF DRUM OR REEL

The following formula may be used for computing the rope capacity (L) in feet for any size drum or reel. This formula is based on uniform rope winding and will not give correct results if rope is wound non-uniformly on the reel. **The dimensions shown in figure below are to be taken in inches.**



L = (A+B) x A x C x K; where:
L = Rope, Length in Feet
A = Depth of Rope Layer in inches = J-B/s - M
C = Width between Reel Flangs in inches
M = Desired Clearance
K = Contact as shown in table below.

Nominal Rope Diameter (in)	K	Nominal Rope Diameter (in)	K	Nominal Rope Diameter (in)	K
1/32	.270	3/4	.466	3	.029
3/64	.119	13/16	.397	3 1/8	.027
1/16	67.2	7/8	.342	3 1/4	.025
5/64	43.0	1	.262	3 3/8	.023
3/32	29.8	1 1/8	.207	3 1/2	.021
7/64	21.8	1 1/4	.168	3 5/8	.020
1/8	16.8	1 3/8	.139	3 3/4	.019
5/32	10.7	1 1/2	.116	3 7/8	.017
3/16	7.44	1 5/8	.099	4	.016
7/32	5.48	1 3/4	.086	4 1/8	.0154
1/4	4.19	1 7/8	.075	4 1/4	.015
9/32	3.31	2	.066	4 3/8	.014
5/16	2.68	2 1/8	.058	4 1/2	.013
3/8	1.86	2 1/4	.052	4 5/8	.012
7/16	1.37	1 3/8	.046	4 3/4	.0116
1/2	1.05	2 1/2	.042	4 7/8	.011
9/16	.828	2 5/8	.038	5	.010
5/8	.671	2 3/4	.035		
11/16	.554	2 7/8	.032		

WARRANTY

Any warranty, express or implied, as to the quality, performance, or fitness for use of Washington Wire Rope products is always premised on the condition that the published strengths apply only to new, unused products; that the mechanical equipment on which such products are used is properly designed and maintained; and that such products are properly stored, handled, used, maintained, and regularly inspected during the period of use.

WARNING

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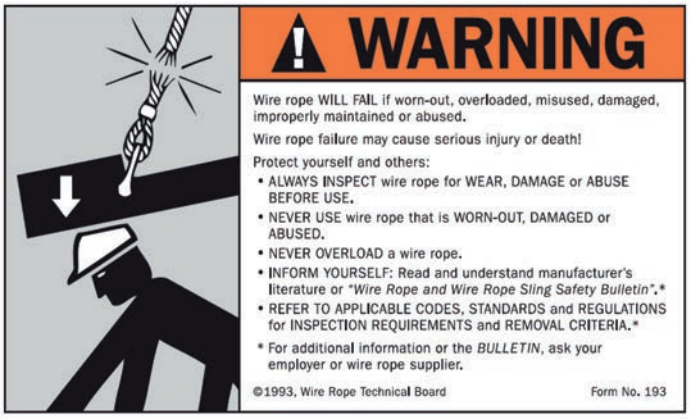

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