Xianyang BOMCO Steel Tube & Wire Rope Co., Ltd

The most powerful manufacturer of wire rope for important purpose in china

Transportation advantage: Xianyang BOMCO Steel Tube& Wire Rope Co., ltd locates in the ancient capital Xianyang, nearby Longhai railway, about 20 Kilometers away to Xi' an Xianyang International Airport.

The advantage of background: Xianyang BOMCO Steel Tube& Wire Rope Co., ltd is a subsidiary company of China National Petroleum Corporation and a wholly-owned subsidiary of Baoji Oilfield Machinery Co., ltd.., the largest manufacturer of wire rope for oil field service, famous R&D base of wire rope for important purpose, be authorized to use the brand of "petroleum equipment made by CNPC"

The talents, capital and production capability advantage : it was founded in 1959, with total assets of 1.36 billion Yuan; production plant occupies total area of nearly 600,000 square meters, the annual production capacity is 125,000 tons. The company has 164 senior technical staff, more than 30 technicians and senior technicians. Because of the strong technical personnel, we accumulated abundant design and manufacture technology of wire rope and sling, product quality is up to top level in the world.

Technology advantage: For more than 50 years, we kept developing, researching and innovating design and manufacture technology of wire rope. Also we successfully introduced and mastered advanced design and manufacture technology from Japan, Germany, Italia, American and Britain etc, invited internationally renowned experts in wire rope industry for technical exchange, thus to identify the up-to-date status of the technology. We established five professional steel wire rope R&D groups; they are R&D group of wire rope for oilfield service, R&D group of port machinery, R&D group of engineering machinery, R&D group of wire rope for coal and mining service, R&D group of wire rope sling. This helps us to develop wire ropes and slings for different purpose, replace the imported wire ropes with our products in some industry, and the quality is accepted by the customers.

Market advantage: Our wire rope products are being used widely in domestic oil fields in China, the market share is more than 95% for 20 years; also the products are being widely used in high-end market such as port machinery, engineering machinery, coal and mining etc. Meanwhile, wire ropes are exported to American, Canada, Russia, South American, Africa, Middle East, Central Asia and Southeast Asia, the exported products totals 20% of the output. We established business relationship and keep business exchange with hundreds of companies in the world.

The advantage of tech and service: We have professional technology team consisting of hundreds of technicians, who periodically visit the customers in oil and gas fields, marine and port, coal and mining industry to carry out technical exchange, improve the products to well meet the customers' practical requirement better, ensure the products always satisfy different application demands of customers.

Production Strength

Heat treatment production line

Xianyang Bomco has six heat treatment production lines. Among them there are three imported completely, and the other three are transformed with overseas technology. Adopted the advanced technology of prefixed natural gas, the furnace is characterized with stable and well-distributed temperature, high level of sorbitizing, and best performance. The wire treated by it featured with little performance difference, thus result in superior quality roping wire. It can produce roping wire in different size and tensile strength with steel rod from D1.2 to 13.0mm.

Hot-dip galvanizing production line

Xianyang Bomco has two hot dip galvanizing line, one is imported and the other is transformed with advanced imported technology, both of them can produce steel wire with high strength and thick coating. The wire produced by it is featured with smooth surface, excellent comprehensive mechanical performance, and good uniformity of zinc coating. Presently it can meet following specification, coating at max 600g/ m2 /max. zinc coating of 600g/ m2 ,tensile strength at max 1900Mpa,manufacture size ranging from D1.18 to D6.5mm,which can coated both in pure zinc and in Galfan.

Steel wire production line

The semi-finished and finished wires of Xianygang BOMCO are all drawn with phosphate coating, the material for all finished wire drawing must be heat treated firstly. Most equipment are straight line wire drawing machines and dance wire drawing machine, others are wet wire drawing machines. The process of this production line featured by multi pass and small deformation. Thus the tensile strength of wire can be certainly attained and the plasticity can also be improved.

Stranding production line

This production line is mainly composed of tubular standers, planetary standers and double twister stranders. These stranders are various from 6 to 84 cradles, and the manufacture range is D1.25-62mm. on-line die drawing and rolling can be attained. So various compacted strand can also be produced by it for compacted wire rope.

Closing production line

The rope closing machines in Xianyang Bomco are mostly 6- cradle and 8- cradle type, supplemented by 18-cradle, 36-cradles and 84-cradles type. They are various from planetary type to rope skipping and to tubular type closer. In this process, plastic filling or coating can also be attained in line. It can produce steel wire ropes for important purpose ranging D5.5-203mm, tensile strength grade at max 2160 Mpa or more, unit wire rope weight less up to 160 Metric tons with different construction(ordinary strand, flatten strand, plastic-filled and covered strand, compacted strand, non-rotatory, ungalvanized or galvanized) .

WIRE ROPE FOR OILFIELD SERVICE

Products standards

API 9A is preferred products standards of wire rope for oilfield service.

GB8918 Wire rope for important purpose, GB/T20118 General purpose wire rope, GB/T20067 large diameter wire rope, YB/T5359 Compact strands wire rope, Q/SY1285 Compact wire rope, all these are general standards. We can perform another product standards and special design according to customer's requirement.

Construction and Characteristics

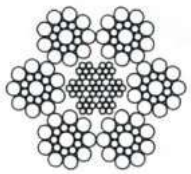
Main purpose: drilling line, workover line, swabbing line, sand line, wire rope for pumping unit, wire rope for offshore platform.

Drilling line

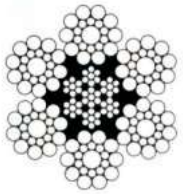
Including: Drilling line, Mast raising line

● Drilling line

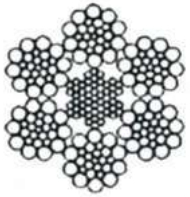
6×19 round strand wire rope



6×19S–IWRC



6×21S–IWRC

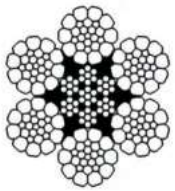


6×26WS–IWRC

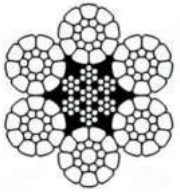
- Typical construction: 6×19S–IWRC、6×21S–IWRC、6×26WS–IWRC .

- Wire rope for oil drilling: stable structure, excellent anti–abrasion, anti–extrusion. Specification range: D29–48mm 6×19S (⩽ 38mm) , 6×26WS (⩾ 38mm) .

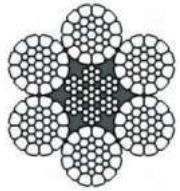
Compacted strand wire rope (new style drilling line)



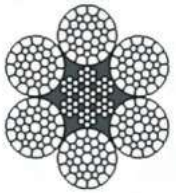
6×K26WS–IWRC



6×K19S–IWRC



6×K31WS–IWRC

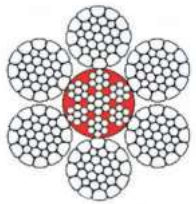


6×K36WS–IWRC

- Typical construction: 6× K26WS–IWRC, 6× K19S–IWRC(FC)、6× K25F–IWRC(FC)、6× K31WS–IWRC、6×K36WS–IWRC(FC)、6×K41WS–IWRC(FC).
- This kind of wire rope has higher tensile strength and better performance; smooth surface and larger contact area to reduce abrasion between pulleys and reel, showing excellent abrasion resistance and anti–crush, thus the ropes can work in rigorous environments.
- Specification range: D22–48mm.

Plastic filled wire rope

EP6×19S–IWRC



6×K31WS–EPIWRC

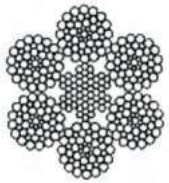
EP6×26WS–IWRC

- Typical construction: EP6×19S–IWRC、6×K31WS–EPIWRC、EP6×26WS–IWRC.
- High pressure inject the plastic polymer to form a cushion between strands, distribute internal pressure ; polymer can seal lubricant to keep the rope internal lubrication to prevent external impurities and dirt into wire rope ; steel core filled plastic polymer to reduce internal abrasion and distribute internal pressure; plastic polymer has a stable performance and do not soften or melt under the normal operating temperature and provide excellent abrasion resistance and anti–crush for the sake of being used in rigorous.
- conditions Specification range: D26–60mm

WIRE ROPE FOR OILFIELD SERVICE

● Mast raising line

6×36WS–IWRC



6×49SWS–IWRC

6×55SWS–IWRC

6×84 WSNS –IWRC

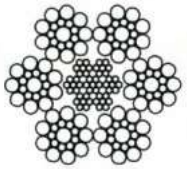
Typical construction:

- D26–45mm,6×36WS–IWRC(FC)
- D48–58mm,6×49SWS–IWRC(FC)
- D60–70mm,6×55SWS–IWRC(FC)、6×76WSNS–IWRC(FC)
- D71–86mm,6×84 WSNS –IWRC(FC)

Wire rope for workover

Including: Wire rope for workover, Swabbing line, Sand line

● Wire rope for workover

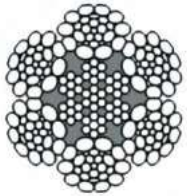


6×19S–IWRC

6×26WS–IWRC

6×19 class round strand wire rope

- Typical construction：6×19S–IWRC、6×26WS–IWRC.
- This kind of wire rope has excellent anti–crush and abrasion resistance performance to adapt to the rigorous working condition of tubing line, service life and performance can be improved through impregnated plastic ploymer or plastic coating.
- Specification range: D19–26mm.

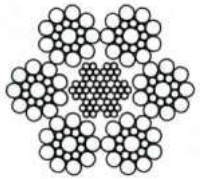


K6×26WS–IWRC

Compacted wire rope

- Typical construction：K6×26WS–IWRC.
- This kind wire rope improves fill factor of wire rope and increases tensile strength with smooth surface and lager contact area, have excellent anti–crush and anti–abrasion quality by rotating swage process.
- Specification range: D19–26mm.

● Swabbing line



6×19S– IWRC

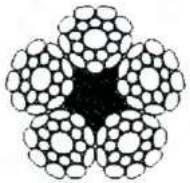
6×19 class round strand wire rope

- Typical construction：6×19S– IWRC.
- Better anti–crush performance and good anti–abrasion performance suitable to be used as swabbing line in normal vertical oil well.
- Specification range: D13–19mm.

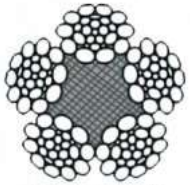
Steel Wire Rope

WIRE ROPE FOR OILFIELD SERVICE

Compacted wire rope



K5×19S–FC



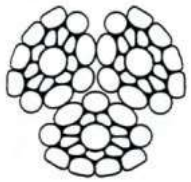
K5×26WS–FC

K5×25F–FC

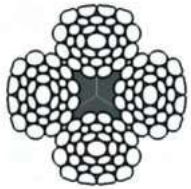
K6×7–FC

K6×25F–FC

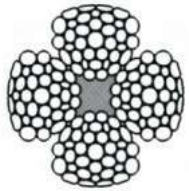
- This kind of wire rope improves fill factor and increases tension by rotary swaging process on the entire rope, with smooth surface and lager contact area to descend the abrasion between the rope and the pulley, drum and internal wall of oil well, so as to provide excellent anti–abrasion and anti–crush performance to adapt the working condition of swabbing line in normal vertical oil well.
- Specification range: D13–19mm.



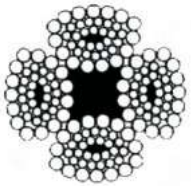
K3×19S



K4×31WS–FC



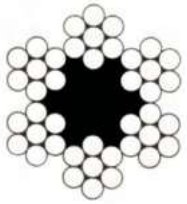
K4×36WS–FC



K4×39S–FC

- This kind of wire rope with special construction parameter not only has performance features of compacted wire rope but performance feature of anti–rotary wire rope, thus it is suitable for the rigorous working condition of bailing oil operation in inclined shaft and horizontal oil well.
- Specification range: D13–19mm.

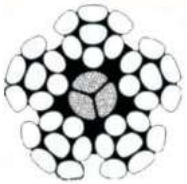
Sand line



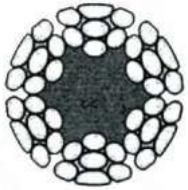
6×7–FC

6×7 round strand wire rope

- 6× 7–FC this kind wire rope has excellent anti–abrasion performance to meet hard working condition of oil bailing sand operation.
- Specification range: D13–19mm.



K5×7–FC



K6×7–FC

6×K7–FC

Compact wire rope

- Typical construction：K5× 7–FC、K6× 7–FC this kind of wire rope improves fill factor and increases tension by rotating forge process for the entire rope with smooth surface and lager contact area to descend wire rope abrasion among pulley, drum and internal wall of oil well to provide excellent anti–abrasion and anti–crush performance to adapt rigorous working condition .
- Specification range: D13–19mm.
- Typical construction：6× K7–FC, this kind of wire rope has higher tension and better performance with smooth surface and lager contact area to descend wire rope abrasion among pulley, drum and internal wall of oil well to provide excellent anti–abrasion and anti–crush performance to adapt rigorous working condition .
- Specification range: D13–19mm.

WIRE ROPE FOR OILFIELD SERVICE

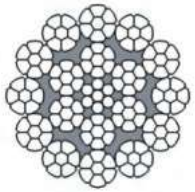
Horse-head pumping -unit wire rope

17×7-WSC

18×7-WSC

18×7 class wire rope

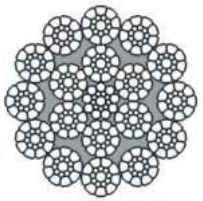
- Typical construction：17×7-FC、17×7-WSC、18×7-FC、18×7-WSC this kind wire rope has excellent anti-rotating performance to satisfy working condition of pumping-unit.
- Specification range: D20-38mm.



18×K7-WSC

Compacted strand wire rope

- Typical construction：18×K7-FC、18×K7-WSC、18×K19S-FC、18×K19S-WSC this kind wire rope has higher tension and better performance with smooth surface and lager contact area to improve anti-abrasion quality and well adapt to working condition of pumping -unit.
- Specification range: D20-38mm.



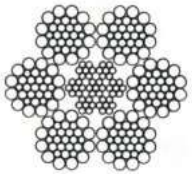
18×K19S-WSC

Wire rope for offshore platform

Including : Anchor cable, Mooring pendant , Guideline, Production string tension line

● Anchor cable , Mooring pendant

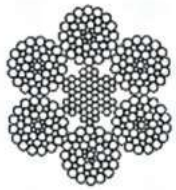
6×36 class round strand wire rope



6×31WS-IWRC

6×36WS-IWRC

6×41WS-IWRC

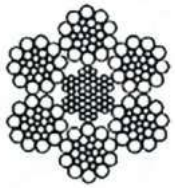


6×49SWS-IWRC

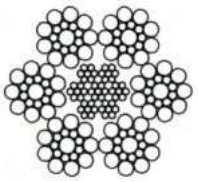
- Typical construction: 6×31WS-IWRC、6×36WS-IWRC、6×41WS-IWRC、6×49SWS-IWRC、6×84WSNS-IWRC,This kind of product has excellent fatigue performance. With increasing the number of wire of each strand, the anti-abrasion and anti-crush performance will enhanced and anti-fatigue performance will improved under the same diameter wire.
- Specification range: D12-84mm.

● Guideline

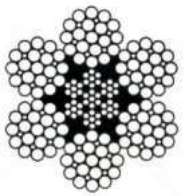
6×19 class round strand wire rope



6×26WS-IWRC



6X19S-IWRC

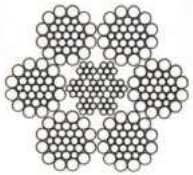


6X25F-IWRC

- Typical construction: 6×26WS-IWRC (FC) 、6X19S-IWRC (FC) 、6X25F-IWRC (FC) .
- This kind of wire rope has excellent anti-crush and anti-abrasion performance.
- Specification range: D8-48mm.

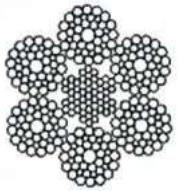
WIRE ROPE FOR OILFIELD SERVICE

Production string tension line



6×31WS–IWRC

6×36WS–IWRC

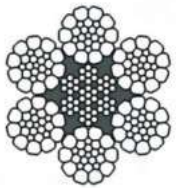


6×41WS–IWRC

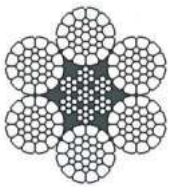
6×49SWS–IWRC

6×36 class wire rope

- Typical construction:6×31WS–IWRC、6× 36WS–IWRC、 6× 41WS–IWRC、6×49SWS–IWRC.
- Specification range: D12–60mm.



6×K26WS–IWRC



6×K31WS–IWRC

Compacted strand wire rope

- Typical construction: 6× K26WS–IWRC、6×K31WS–IWRC.
- Specification range: D10–56mm.

Steel Wire Rope

Products standards

JIS G 3525 "steel wire rope" is preferred for steel wire rope used in port machinery. JIS G 3546 shaped strand wire rope、GB8918 steel wire rope for important purpose、YB/T5359 compacted steel wire rope are normally used, other standard can also be adopted, furthermore we can also design and produce according to customers' special requirement.

Construction and Characteristics

Main purpose: container crane wire rope, and rail crane (Field Bridge) wire rope, and ship unloader wire rope and portal crane wire rope.

Container crane steel wire rope

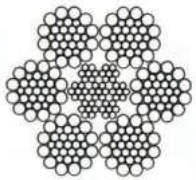
Main including: Steel wire rope used for main hoisting, Derrick rope and Trolley traction wire rope.

Hoisting wire rope

6 x 36 class

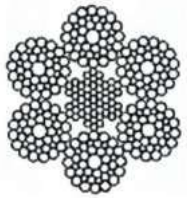
- Typical construction: 6 x 29F–IWRC、6 x 31WS–IWRC, 6x36WS–IWRC, 6x41WS–IWRC, 6x49SWS–IWRC.
- Specification range: D12–60mm.

6×29F–IWRC

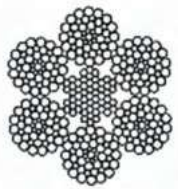


6×31WS–IWRC

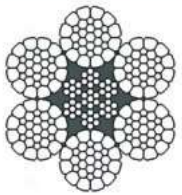
6×36WS–IWRC



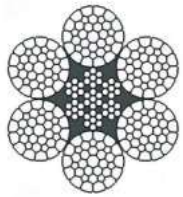
6×41WS–IWRC



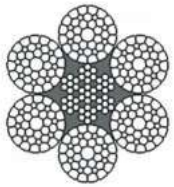
6×49SWS–IWRC



6×K31WS–IWRC



6×K36WS–IWRC



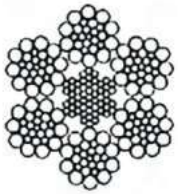
6×K41WS–IWRC

Compacted wire rope

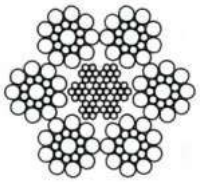
- Typical construction: 6x K31WS–IWRC, 6x K36WS–IWRC, 6x K41WS–IWRC, especially in high frequency bending application. The performance and service life of these specifications can be greatly improved by plastic impregnated in IWRC.
- Specification range: D16–60mm.

Derrick rope

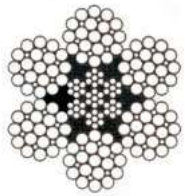
6 x 19 class



6×26WS–IWRC



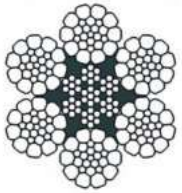
6×19S–IWRC

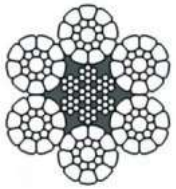


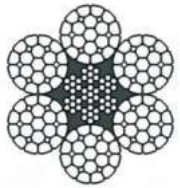
6×25F–IWRC

- Typical construction: 6x26WS–IWRC, 6x19S–IWRC、6x25F–IWRC.
- Specification range: D8–48mm.

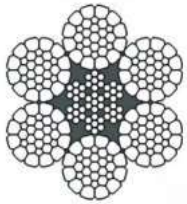
Compacted wire rope

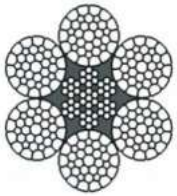

6×K26WS–IWRC


6×K19S–IWRC


6×K25F–IWRC

- Typical construction: 6×K26WS–IWRC ,6×K19S–IWRC、6×K25F–IWRC.
- Specification range: D8 –48mm.


6×K31WS–IWRC


6×K36WS–IWRC

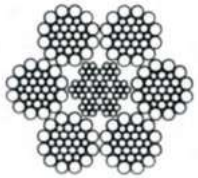

6×K41WS–IWRC

- Typical construction: 6×K31WS–IWRC，6×K36WS–IWRC、6×K41WS–IWRC.
- Specification range: D16–60mm.

Trolley traction wire rope

6×36 class


6×29F

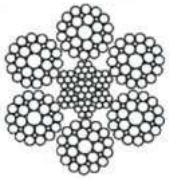

6×31WS


6×36WS

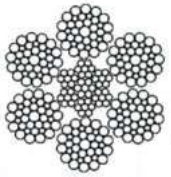
- Typical construction: 6×29F、6×31WS、6×36WS.
- Specification range: D12–28mm.

Rail crane (field bridge) wire rope

6×36 class

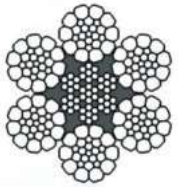

6×29F

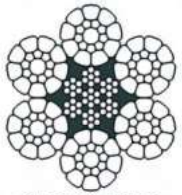

6×31WS

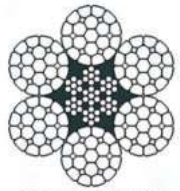

6×36WS

- Typical construction: 6× 29F、6×31WS、6×36WS.
- Specification range: D12–40mm.

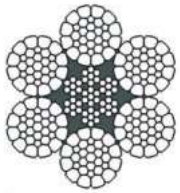
Compacted wire rope

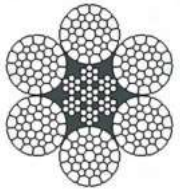

6×K26WS–IWRC

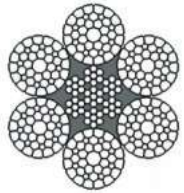

6×K19S–IWRC


6×K25F–IWRC

- Typical construction：6×K26WS–IWRC , 6×K19S–IWRC，6×K25F–IWRC.
- Specification range: D16–40mm.


6×K31WS–IWRC


6×K36WS–IWRC


6×K41WS–IWRC

- Typical construction：6×K31WS–IWRC，6×K36WS–IWRC、6×K41WS–IWRC.
- Specification range: D16–40mm.

WIRE ROPE FOR PORT MACHINERY

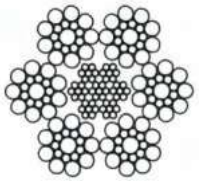
Ship unloader wire rope

Mainly including: Trolley traction wire rope, derricking rope and grab bucket control line.

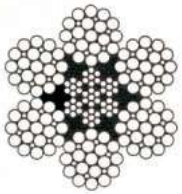
Trolley wire rope

6 × 19 class

6×26WS–IWRC



6×19S–IWRC



6×25F–IWRC

- Typical construction: 6×26WS–IWRC, 6×19S–IWRC、6×25F–IWRC.
- Specification range: D12–28mm.

6×29F–IWRC

6×31WS–IWRC

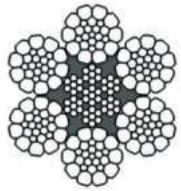
6×36WS–IWRC

6 × 36 class

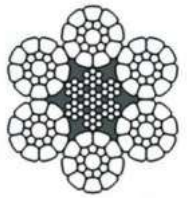
- Typical construction: 6×29F–IWRC、6×31WS–IWRC, 6×36WS–IWRC.
- Specification range: D12–28mm.

- Typical construction: 7×25F–EPIWRC.
- Specification range: D13–32mm.

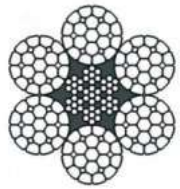
Compacted wire rope



6×K26WS–IWRC

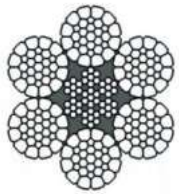


6×K19S–IWRC

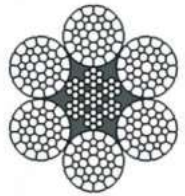


6×K25F–IWRC

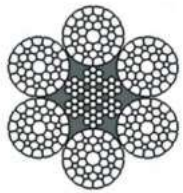
- Typical construction: 6×K26WS–IWRC、6×K19S–IWRC、6×K25F–IWRC.
- Specification range: D16–48mm.



6×K31WS–IWRC



6×K36WS–IWRC

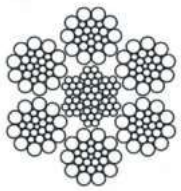


6×K41WS–IWRC

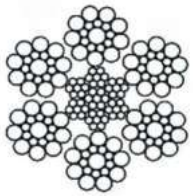
- Typical construction: 6×K31WS–IWRC、6×K36WS–IWRC、6×K41WS–IWRC、The performance and service life of these specifications can be greatly improved by plastic impregnated in IWRC.
- Specification range: D16–60mm.

Derricking rope

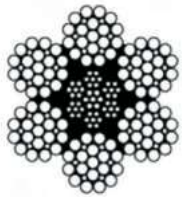
6 × 19 class



6×26WS–IWRC



6×19S–IWRC

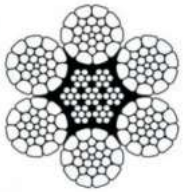


6×25F–IWRC

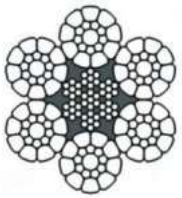
- Typical construction: 6×26WS–IWRC、6×19S–IWRC、6×25F–IWRC.
- Specification range: D16–48mm.

WIRE ROPE FOR PORT MACHINERY

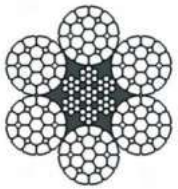
Compacted wire rope



6×K26WS–IWRC

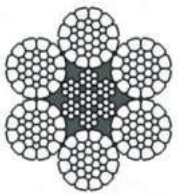


6×K19S–IWRC

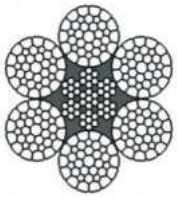


6×K25F–IWRC

- Typical construction：6×K26WS–IWRC、6×19KS–IWRC、6×K25F–IWRC.
- Specification range：D16–48mm.



6×K31WS–IWRC



6×K36WS–IWRC

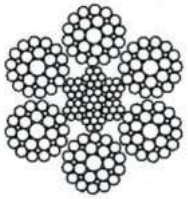
6×K41WS–IWRC

- Typical construction： 6× K31WS–IWRC、 6× K36WS–IWRC、 6× K41WS–IWRC,The performance and service life of these specifications can be greatly improved by plastic filling/impregnated in IWRC.
- Specification range：D16–60mm.

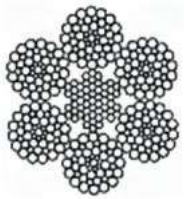
- **Grab bucket controlling wire rope**

6×36 class

6×36WS–IWRC



6×29F–IWRC



6×49SWS–IWRC

- Typical construction：6×36WS–IWRC、6×29F–IWRC、6×49SWS–IWRC.
- Specification range：D35–60mm.

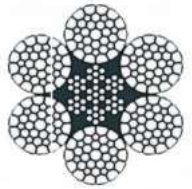
8×36 class

8×36WS–IWRC

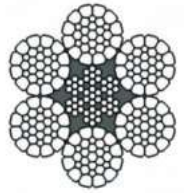
8×31WS–IWRC

- Typical construction：8×36WS–IWRC、8×31WS–IWRC.
- Specification range：D35–60mm.

Compacted wire rope

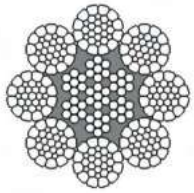


6×K36WS–IWRC

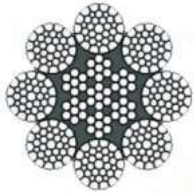


6×K31WS–IWRC

- Typical construction：6×K36WS–IWRC、6×K31WS–IWRC.
- Specification range：D35–60mm.



8×K31WS–IWRC



8×K36WS–IWRC

- Typical construction：8×K31WS–IWRC、8×K36WS–IWRC、The performance and service life of these specifications can be greatly improved by plastic impregnated in IWRC.
- Specification range：D35–60mm.

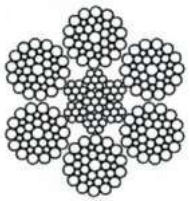
WIRE ROPE FOR PORT MACHINERY

Portal crane wire rope

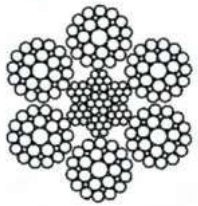
Main including: Main hoisting rope, auxiliary hoisting rope, derricking rope and guy rope

● Main hoisting rope

6×36 class



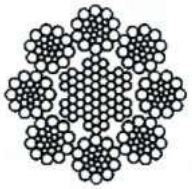
6×36WS–IWRC



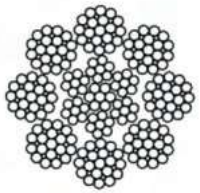
6×29F–IWRC

- Typical construction: 6× 36WS–IWRC、6×29F–IWRC.
- Specification range : D24–40mm.

8×19 class



8×26WS–IWRC

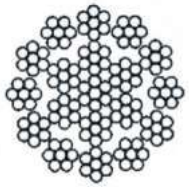


8×25F–IWRC

- Typical construction: 8× 26WS–IWRC、8× 25F–IWRC、The performance and service life of these specifications can be greatly improved by plastic impregnated in IWRC.
- Specification range: D24–40mm.

Rotation resistant wire rope

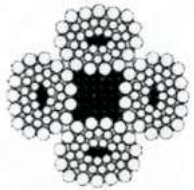
16×6:IWRC



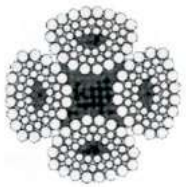
18×7–WSC

- Typical construction: 16× 6:IWRC、18× 7–WSC Rotation resistant wire rope.
- Specification range: D24–40mm.

Compacted wire rope



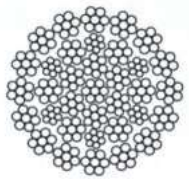
K4×48S



K4×39S

- Typical construction: K4× 48S、K4×39S.
- Specification range: D24–40mm.

● Auxiliary hoist rope



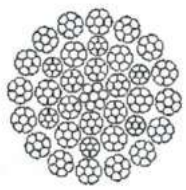
35(W)×7

27(W)×7

18×7–WSC

17×7–WSC

- Typical construction: 35(W)×7、27(W)×7、18×7–WSC、17×7–WSC Rotation resistant wire rope.



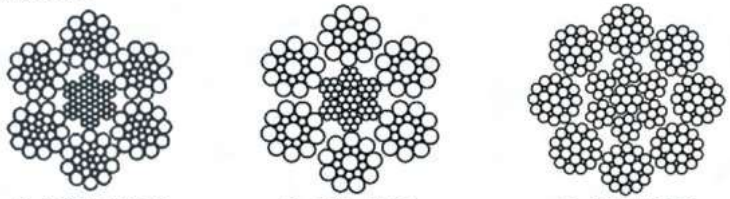
35(W)×K7

27(W)×K7

- Typical construction: 35(W)× K7、27(W)×K7.

Derricking rope

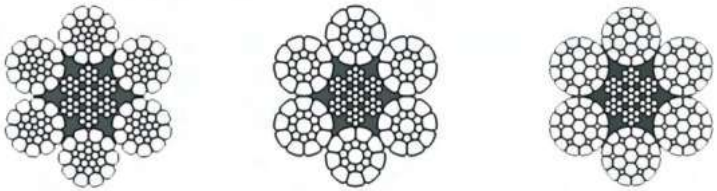
6×19 Class



6×26WS–IWRC　　6×19S–IWRC　　6×25F–IWRC

- Typical construction：6×26WS–IWRC、6×19S–IWRC、6×25F–IWRC.
- Specification range：D16–48mm.

Compacted wire rope



6×K26WS–IWRC　　6×K19S–IWRC　　6×K25F–IWRC

- Typical construction：6×K26WS–IWRC、6×K19S–IWRC、6×K25F–IWRC.
- Specification range：D16–48mm

6×K31WS–IWRC　　6×K36WS–IWRC　　6×K41WS–IWRC

- Typical construction：6×K31WS–IWRC、6×K36WS–IWRC、6×K41WS–IWRC,The performance and service life of these specifications can be greatly improved by plastic impregnated in IWRC.
- Specification range：D16–60mm

Guy rope

- Guy rope is actually distance line; it can be classified into wire rope sling. In order to adapt to the working condition and make customer' s use convenient, it is recommended to supply goods in the form of sling, which can be designed and manufactured both by xianyang BOMCO.

Products standards

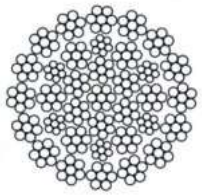
Main standards included: GB8918 "steel wire rope for important purpose" API 9A " specification of steel wire rope " YB/T5359" compacted steel wire rope" are normally used, other standard can also be adopted, furthermore we can also design and produce according to customers' special requirement.

Construction and characteristics

Main purpose: wire rope for rotary drilling rig , wire rope for crawler crane, wire rope for crane, wire rope for tower crane, wire rope for percussion drilling rig.

Wire rope for rotary drilling rig

35(W)×7 rotation-resistant wire rope

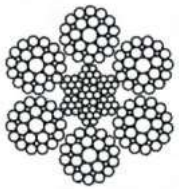


35(W)×7

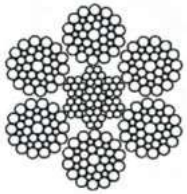
27(W)×7

- Typical construction: 35(W)× 7、27(W)×7.
- Specification range: D14–60mm.

6×36 class linear contact lay wire rope



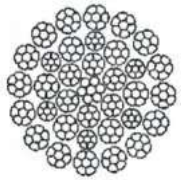
6×29F–IWRC



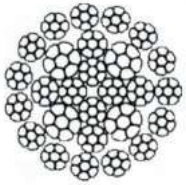
6×36WS–IWRC

- Typical construction: 6×29F–IWRC、6×36WS–IWRC.
- Specification range: D16–40mm.

Compacted strand wire rope

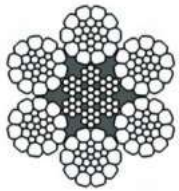


35(W)×K7



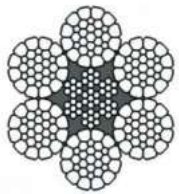
27(W)×K7

- Typical construction: 35(W)×K7、27(W)×K7 .
- Specification range: D14–42mm.



6×K26WS–IWRC

- Typical construction: 6×K26WS–IWRC.
- Specification range: D16–48mm.



6×K36WS–IWRC

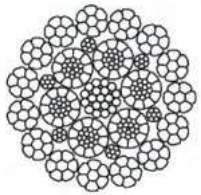
- Typical construction: 6×K36WS–IWRC, The performance and service life of these specifications can be greatly improved by plastic impregnated in IWRC.
- Specification range: D16–60mm.

Wire rope for crawler crane

Main including: main hoisting rope, auxiliary hoisting rope, derricking rope and guy rope

● Main hoisting rop

compacted wire rope



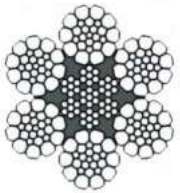
15×K7：IWRC(K)

- Typical construction：15×K7：IWRC(K).
- Specification range：D20–40mm.

35(W)×K7

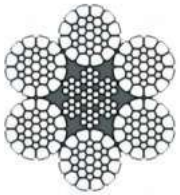
27(W)×K7

- Typical construction：35(W)×K7、27(W)×K7.
- Specification range：D14–40mm.

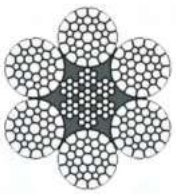


6×K26WS–IWRC

- Typical construction：6×K26WS–IWRC.
- Specification range：D16–32mm.



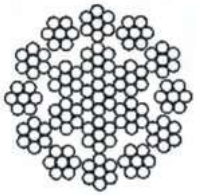
6×K31WS–IWRC



6×K36WS–IWRC

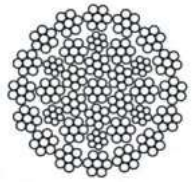
- Typical construction：6×K31WS–IWRC、6×K36WS–IWRC.
- Specification range：D16–60mm.

35(W)×7、18×7 rotation–resistant wire rope



18×7–WSC

- Typical construction：18×7–WSC(FC).
- Specification range：D10–40mm.

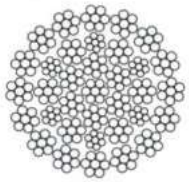


35(W)×7

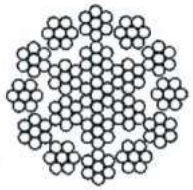
- Typical construction：35(W)×7.
- Specification range：D14–60mm.

● Auxiliary hoisting rope

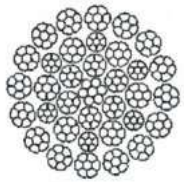
35(W)×7、18×7 rotation–resistant wire rope



35(W)×7



18×7–WSC

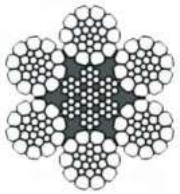


35(W)×K7

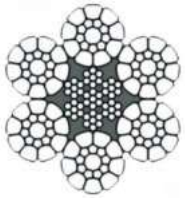
- Typical construction：35(W)×7、18×7–WSC、35(W)×K7.

Derricking rope

Compacted wire rope



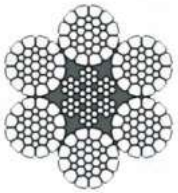
6×K26WS–IWRC



6×K19S–IWRC

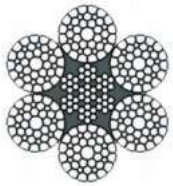
6×K25F–IWRC

- Typical construction：6×K26WS–IWRC、6×K19S–IWRC、6×K25F–IWRC.
- Specification range：D16–48mm.



6×K31WS–IWRC

6×K36WS–IWRC



6×K41WS–IWRC

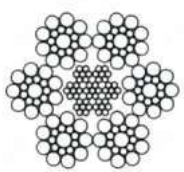
- Typical construction：6×K31WS–IWRC、6×K36WS–IWRC、6×K41WS–IWRC.The performance and service life of these specifications can be greatly improved by plastic impregnated in IWRC.
- Specification range：D16–60mm .

Special construction of compacted wire rope

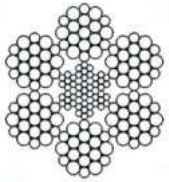
K6W(3×40SF/3×24F)–PWRC(3×7)

- Typical construction：K6W(3×40SF/3×24F)–PWRC(3×7), This rope has extra breaking force, better anti–abrasion and shock–resistance performance.
- Specification range：D24–40mm

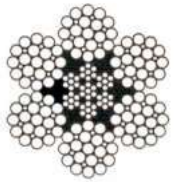
Six –strand linear contact wire rope



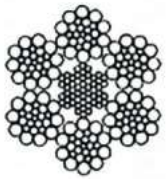
6×19S–IWRC



6X19W–IWRC



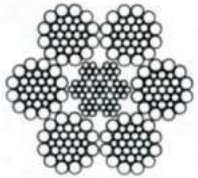
6X25F–IWRC



6X26WS–IWRC

- Typical construction：6X19S–IWRC、6X19W–IWRC、6X25F–IWRC、6X26WS–IWRC.
- Specification range：D8–48mm.

6×29F–IWRC



6×31WS–IWRC

6×36WS–IWRC

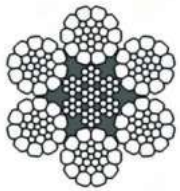
- Typical construction：6×29F–IWRC、6×31WS–IWRC、6×36WS–IWRC.
- Specification range：D12–60mm.

Wire rope for crane

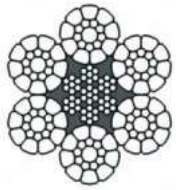
Main including: Main hoisting rope, Auxiliary hoisting rope

Main hoisting rope

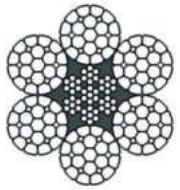
Compacted steel wire rope



6×K26WS–IWRC



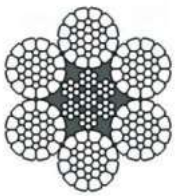
6×K19S–IWRC



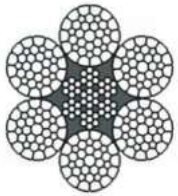
6×K25F–IWRC

- Typical construction：6×K26WS–IWRC、6×K19S–IWRC、6×K25F–IWRC.
- Specification range：D16–48mm.

WIRE ROPE FOR CONSTRUCTION MACHINERY



6×K31WS–IWRC



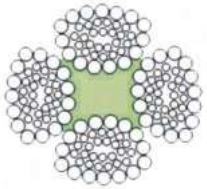
6×K36WS–IWRC

- Typical construction：6×K31WS–IWRC、6×K36WS–IWRC. The performance and service life of these specifications can be greatly improved by plastic impregnated in IWRC.
- Specification range：D16–60mm

35(W)×K7

27(W)×K7

- Typical construction：35(W)×K7、27(W)×K7.
- Specification range：D14–42mm .

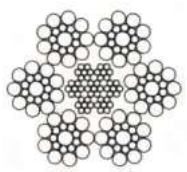


K4×39S–FC

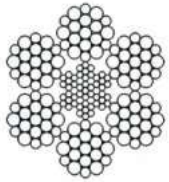
K4×48S–FC

- Typical construction：K4×39S–FC、K4×48S–FC，these structure wire rope is more flexible, abrasion–resistant, and with better resistance to rotation performance.
- Specification range：D12–40mm

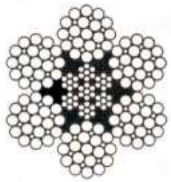
Six–strand linear contact wire rope



6×19S–IWRC



6X19W–IWRC

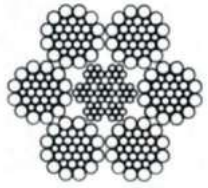


6X25F–IWRC

6X26WS–IWRC

- Typical construction：6X19S–IWRC、6X19W–IWRC、6X25F–IWRC、6X26WS–IWRC.
- Specification range：D8–48mm.

6×29F–IWRC

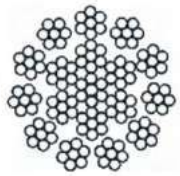


6×31WS–IWRC

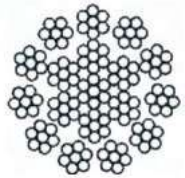
6×36WS–IWRC

- Typical construction：6×29F–IWRC、6×31WS–IWRC、6×36WS–IWRC.
- Specification range：D12–60mm.

35(W)×7、18×7 rotation resistance wire rope



17×7–WSC



18×7–WSC

- Typical construction：17×7–WSC、18×7–WSC.
- Specification range：D10–40mm.

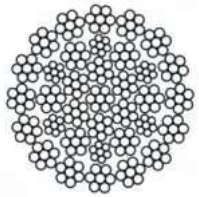
35(W)×7

27(W)×7

- Typical construction：35(W)×7、27(W)×7.
- Specification range：D14–60mm.

Steel Wire Rope

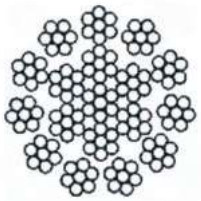
● Auxiliary hoisting rope



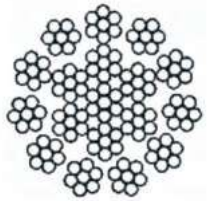
35(W)×7

27(W)×7

- Typical construction：35(W)×7、27(W)×7、18×7–WSC、17×7–WSC rotation resistant wire rope.



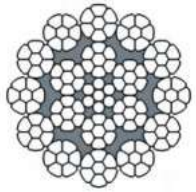
18×7–WSC



17×7–WSC

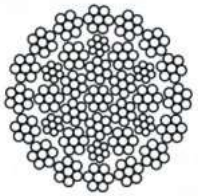
35(W)×K7

27(W)×K7



18×K7–WSC

- Typical construction：35(W)×K7、27(W)×K7、18×K7–WSC.



35(W)×7

27(W)×7

- Typical construction：35(W)×7、27(W)×7.

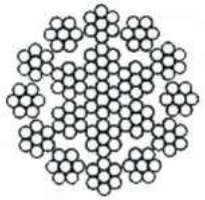
Wire rope for tower crane

Main including: hoisting wire rope and trolley wire rope

● Hoisting wire rope

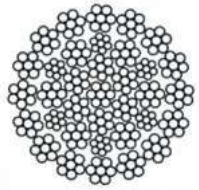
35(W)×7、18×7 rotation resistance wire rope

18×7–FC



18×7–WSC

- Typical construction：18×7–FC、18×7–WSC.
- Specification range：D16–50mm.

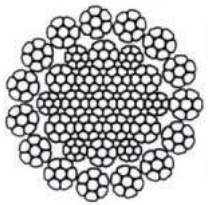


35(W)×7

27(W)×7

- Typical construction：35(W)×7、27(W)×7.
- Specification range：D14–60mm.

Compacted strand rotation resistant wire rope



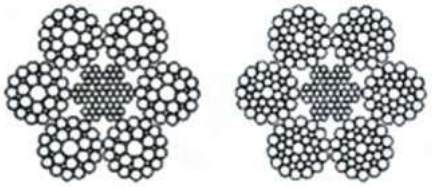
35(W)×K7

27(W)×K7

- Typical construction: 35(W)×K7、27(W)×K7.
- Specification range：D13–42mm.

Trolley traction wire rope

6×36 class linear contact steel core wire rope

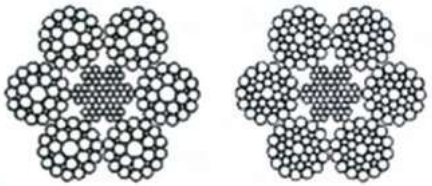


6×29F–IWRC　　6×36WS–IWRC

- Typical construction: 6× 29F–IWRC、6×36WS–IWRC.
- Specification range：D12–40mm.

Wire rope for percussion drilling rig

6×36 class linear contact steel core wire rope



6×29F–IWRC　　6×36WS–IWRC

- Typical construction: 6× 29F–IWRC、6×36WS–IWRC.
- Specification range：D12–40mm.

Special construction compact wire rope

K6W(3×40SF/3×24F)–PWRC(3×7)

- Typical construction: K6W(3×40SF/3×24F)–PWRC(3×7) these structure wire rope is more flexible, abrasion–resistant, and with better resistance to rotation performance.
- Specification range: D24–40mm.

MARINE ENGINEERING ROPE

Products standards

API 9A specification of steel wire rope and GB/T 20067 "large diameter wire rope" is preferred for steel wire rope standards. General standards include: GB8918" Wire rope for important purpose" , GB/T20118 "General purpose wire rope" , YB/T5359 "Compacted strands wire rope" , JISG325 steel wire rope. We can perform another product standards and special design according to customer' s requirement.

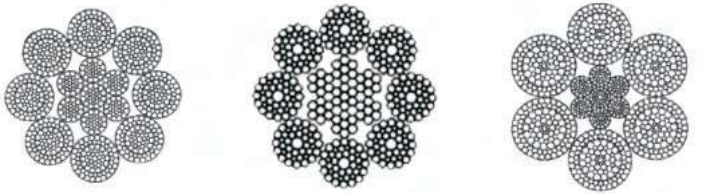
Construction and characteristics

Main purpose: towing rope for ship, anchor cable, floating crane, wire rope for engineering ship and tube layer.

Six strand and eight strand steel wire rope

6×36WS–IWRC　　6×41WS–IWRC　　6×84WSNS–IWRC

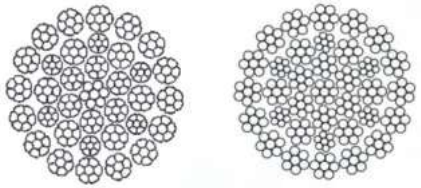
- Typical construction: 6×36WS–IWRC、6×41WS–IWRC、6×84WSNS–IWRC.
- Specification range: D50–203.



8×84WSNS–IWRC　　8×41WS–IWRC　　8×109WSNS–IWRC

- Typical construction: 8×84WSNS–IWRC、8×41WS–IWRC、8×109SWSNS –IWRC.
- Specification range: D50–203.

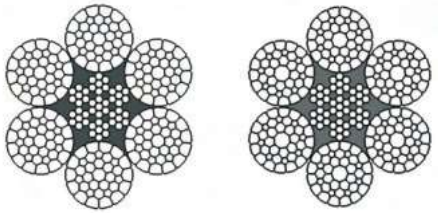
Rotation resistance wire rope



35(W)×K7　　35(W)×7

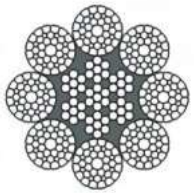
- Typical construction: 35(W)×K7、35(W)×7.
- Specification range: D14–60mm.

Compacted strand wire rope



6×K36WS–IWRC　　6×K41WS–IWRC

- Typical construction: 6×K36WS、6×K41WS.
- Specification range: D16–70mm.



8×K41WS–IWRC

- Typical construction: 8×K41WS.
- Specification range: D50–203mm.

Products standards

MT 716 "Delivery requirement of wire rope for mine hoisting", GB 8918 "wire rope for important purpose" is preferred standards for mining and coal. General standards include: API 9A " specification of steel wire rope" 、YB/T 5359" compacted strand wire rope" Also we can perform another product standards and design according to custom' s requirement.

Construction and characteristics

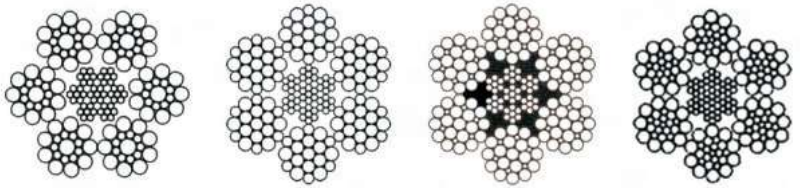
Main purpose: excavator wire rope 、shovel wire rope、shaft hoisting wire rope 、incline hoisting wire rope 、belt conveyor wire rope 、cableway wire rope.

Excavator wire rope

Main including: Hoisting wire rope、Dragline 、Trip line、Guy rope

Hoisting wire rope

Six- strand linear contact wire rope



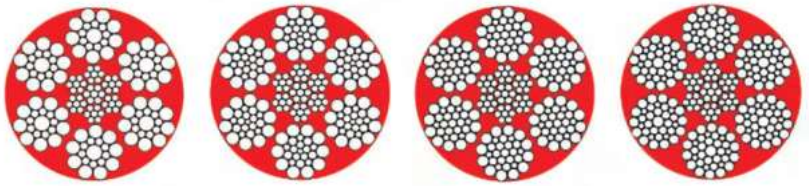
6×19S-IWRC　6X19W-IWRC　6X25F-IWRC　6×26WS-IWRC

- Typical construction: 6×19S-IWRC、6X19W-IWRC、6X25F-IWRC、6×26WS-IWRC.
- Specification range: D8-48mm。

6×29F-IWRC　6×31WS-IWRC　6×36WS-IWRC　6×41WS-IWRC　6×49SWS-IWRC

- Typical construction: 6×29F-IWRC、6×31WS-IWRC、6×36WS-IWRC、6×41WS-IWRC、6×49SWS-IWRC.
- Specification range: D12-60mm.

Wire rope, IWRC and plastic impregnate

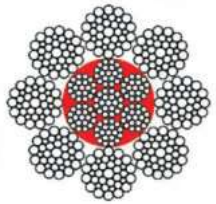


EP6×19S-IWRC　EP6×26WS-IWRC　EP6×31WS-IWRC　EP6×36WS-IWRC

- Typical construction: EP6×19S-IWRC、EP6×26WS-IWRC、EP6×31WS-IWRC、EP6×36WS-IWRC.
- Specification range:D8-60mm。

EP8×36WS-IWRC(6×25F-1×25F)

- Typical construction: EP8×36WS-IWRC (6×25F-1×25F).
- Specification range:D60-96mm.

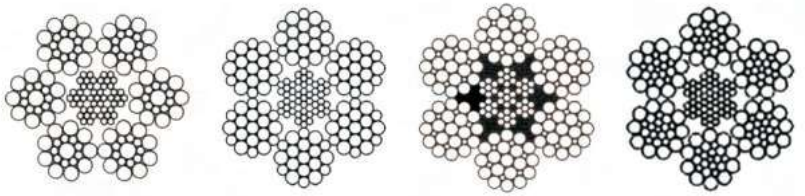


8×36WS-EPIWRC(6×25F-1×25F)

- Typical construction: 8×36WS-EPIWRC (6×25F-1×25F).
- Specification range:D60-127mm.

Dragline

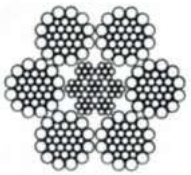
Six- strand linear contact wire rope



6×19S-IWRC　6X19W-IWRC　6X25F-IWRC　6×26WS-IWRC

- Typical construction:6×19S-IWRC、6X19W-IWRC、6X25F-IWRC、6×26WS-IWRC.
- Specification range:D8-48mm.

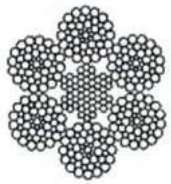
6×29F–IWRC



6×31WS–IWRC

6×36WS–IWRC

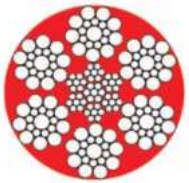
6×41WS–IWRC



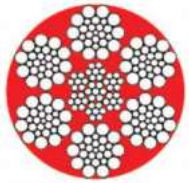
6×49SWS–IWRC

- Typical construction:6×29F–IWRC、6×31WS–IWRC、6×36WS–IWRC、6×41WS–IWRC、6×49SWS–IWRC.
- Specification range:D12–60mm.

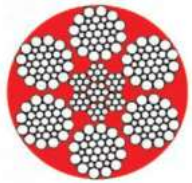
Wire rope, IWRC and plastic impregnate



EP6×19S–IWRC



EP6×26WS–IWRC



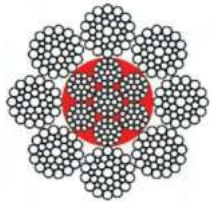
EP6×31WS–IWRC

EP6×36WS–IWRC

- Typical construction: EP6×19S–IWRC、EP6×26WS–IWRC、EP6×31WS–IWRC、EP6×36WS–IWRC.
- Specification range:D8–60mm.

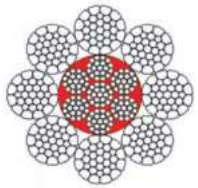
EP8×36WS–IWRC(6×25F–1×25F)

- Typical construction: EP8×36WS–IWRC (6×25F–1×25F).
- Specification range:D60–96mm.



8×36WS–EPIWRC(6×25F–1×25F)

- Typical construction:8×36WS–EPIWRC (6×25F–1×25F).
- Specification range:D60–127mm.

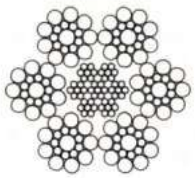


8×K31WS–EPIWRC(6×25F–1×25F)

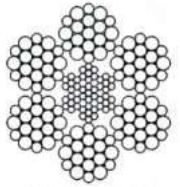
- Typical construction: 8×K31WS–EPIWRC(6×25F–1×25F) excellent fatigue resistance.
- Specification range: D73–96mm.

Trip line

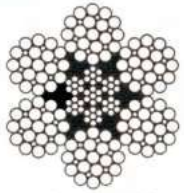
Six– strand linear contact wire rope



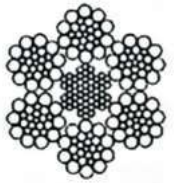
6×19S–IWRC



6X19W–IWRC



6X25F–IWRC



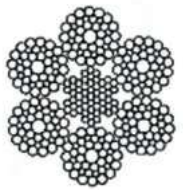
6×26WS–IWRC

- Typical construction: 6×19S–IWRC、6X19W–IWRC、6X25F–IWRC、6×26WS–IWRC.
- Specification range:D8–48mm.

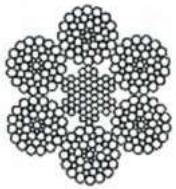
6×29F–IWRC

6×31WS–IWRC

6×36WS–IWRC



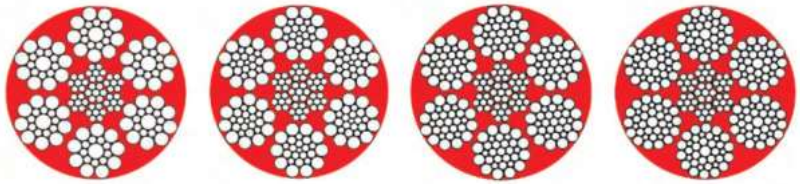
6×41WS–IWRC



6×49SWS–IWRC

- Typical construction: 6×29F–IWRC、6×31WS–IWRC、6×36WS–IWRC、6×41WS–IWRC、6×49SWS–IWRC.
- Specification range:D12–60mm.

Wire rope, IWRC and plastic impregnated

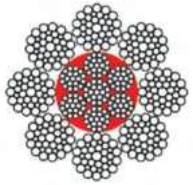


EP6×19S–IWRC　EP6×26WS–IWRC　EP6×31WS–IWRC　EP6×36WS–IWRC

- Typical construction: EP6×19S–IWRC、EP6×26WS–IWRC、EP6×31WS–IWRC、EP6×36WS–IWRC.
- Specification range:D8–60mm.

EP8×36WS–IWRC(6×25F–1×25F)

- Typical construction: EP8×36WS–IWRC (6×25F–1×25F).
- Specification range: D60–96mm.



8×36WS–EPIWRC(6×25F–1×25F)

- Typical construction: 8×36WS–EPIWRC (6×25F–1×25F).
- Specification range: D60–127mm.

Guy rope

- Guy rope is actually distance line; it can be classified into wire rope sling. In order to adapt to the working condition and make customer' s use convenient, it is recommended to supply goods in the form of sling, which can be designed and manufactured both by Xianyang BOMCO.

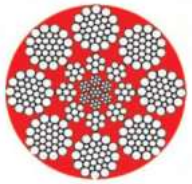
Shovel line Main including : Hoisting wire rope、Dragline 、Trip line、Guy rope

Main hoisting wire rope

EP8×31WS–IWRC(8×7–7×7)　EP8×36WS–IWRC(8×7–7×7)　EP8×36WS–IWRC(8×K7–7×7)

- The whole rope filled plastic wire ropeEP8× 31WS–IWRC(8× 7–7× 7)、EP8× 36WS–IWRC (8×7–7×7)、EP8×36WS–IWRC(8×K7–7×7).
- Specification range:D38–73mm.

Dragline

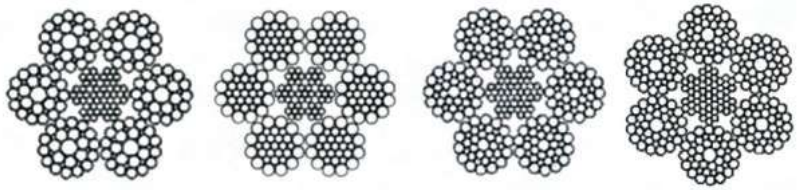


EP8×31WS–IWRC(8×7–7×7)

- Plastic coated wire ropeEP8×31WS–IWRC(8×7–7×7).
- Specification range: D38–73mm.

Trip line

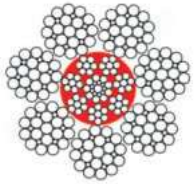
6×36 class linear contact wire rope



6×29F–IWRC　6×31WS–IWRC　6×36WS–IWRC　6×41WS–IWRC

6×49SWS–IWRC

- Typical construction: 6×29F–IWRC、6×31WS–IWRC、6×36WS–IWRC、6×41WS–IWRC、6×49SWS–IWRC.
- Specification range:D12–60mm.



7×25F–EPIWRC(7×7–1×19S)

- Typical construction:7×25F–EPIWRC(7×7–1×19S) .
- Specification range:D13–32mm.

Guy rope

- Guy rope is actually distance line; it can be classified into wire rope sling. In order to adapt to the working condition and make customer' s use convenient, it is recommended to supply goods in the form of sling, which can be designed and manufactured both by Xianyang BOMCO.

Shaft hoisting wire rope

Main including: Friction hoisting rope、Drum hoist rope、Balance tail tope 、Cage path rope

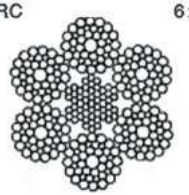
Friction hoisting rope

six- strand linear contact wire rope

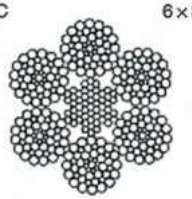
6×36WS-IWRC

6×29F-IWRC

6×31WS-IWRC



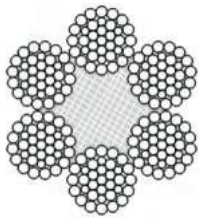
6×41WS-IWRC



6×49SWS-IWRC

- Typical construction: 6×36WS-IWRC、6×29F-IWRC、6×31WS-IWRC、6×41WS-IWRC、6×49SWS-IWRC.
- Specification range:D22-42mm.

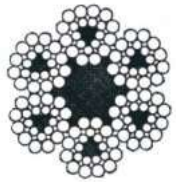
Warrington type steel wire rope



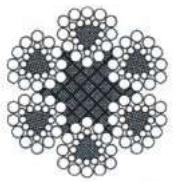
6×35WN-FC

- Typical construction: 6×35WN-FC.
- Specification range:D30-52mm.

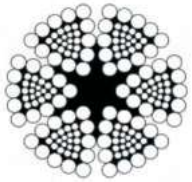
Flatten strand steel wire rope



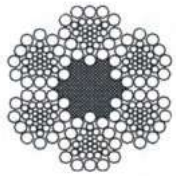
6V×21-FC



6V×24-FC



6V×30-FC

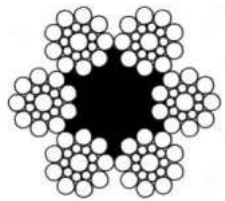


6V×34-FC

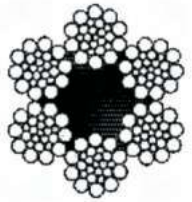
- Typical construction: 6V×21-FC、6V×24-FC、6V×30-FC、6V×34-FC.
- Specification range:D24-32mm.

Drum hoisting rope

Six-strand linear contact wire rope



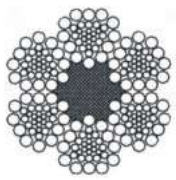
6×19S-FC



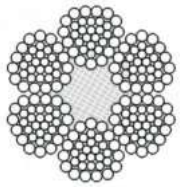
6×26WS-FC

- Typical construction: 6×19S-FC、6×26WS-FC.
- Specification range:D22-42mm.

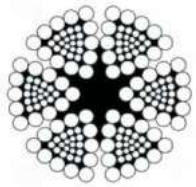
Flatten strand steel wire rope



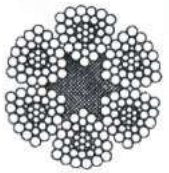
6V×34-FC



6V×33-FC



6V×30-FC

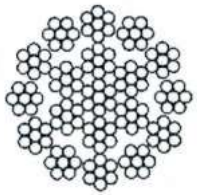


6V×37S-FC

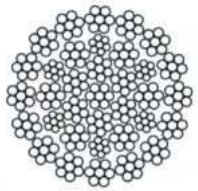
- Typical construction: 6V×34-FC、6V×33-FC、6V×30-FC、6V×37S-FC。
- Specification range:D30-52mm。

COAL AND MINING WIRE ROPE

Rotation resistant wire rope



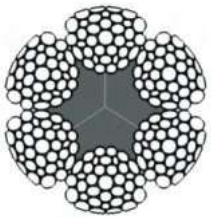
18×7–WSC



35(W)×7

- Typical construction:18× 7–WSC、35(W)×7.
- Specification range:D13–36mm.

Compacted steel wire rope

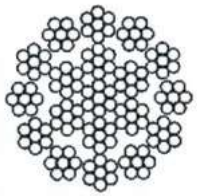


K6×36WS–FC

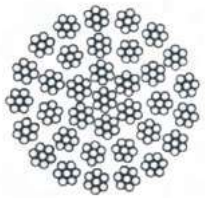
- Typical construction:K6×36WS–FC.
- Specification range:D22–42mm.

● Balance tail tope

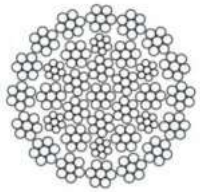
Rotation resistant wire rope



18×7–WSC



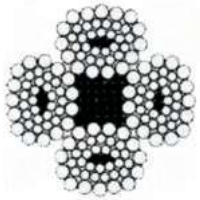
34×7–WSC



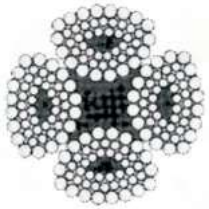
35(W)×7

- Typical construction: 18× 7–WSC、34× 7–WSC、35(W)× 7，the performance and service life of these specifications can be greatly improved by the plastic coating on the rope.
- Specification range:D26–51mm。

Compacted wire rope



K4×39S–FC

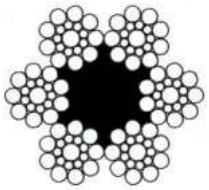


K4×48S–FC

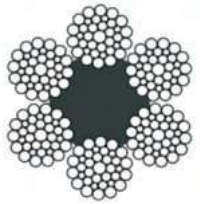
- Typical construction: K4×39S–FC、K4×48S–FC.
- Specification range:D16–40mm.

● Cage pass rope

Six–strands linear contact lay wire rope



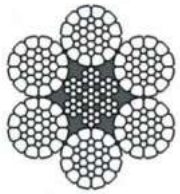
6X19S–FC



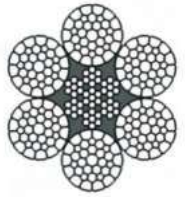
6X36WS–FC

- Typical construction: 6X19S–FC、6X36WS–FC . The performance and service life of these specifications can be greatly improved by the plastic coating on the rope.
- Specification range: D24–60mm.

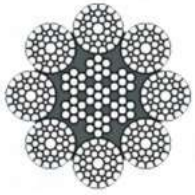
Compacted strands wire rope



6XK36WS–IWRC



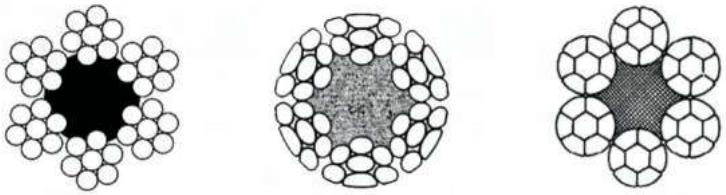
6XK31WS–IWRC



8XK36WS–IWRC

- Typical construction: 6XK36WS—IWRC、6XK31WS—IWRC、8XK36WS—IWRC. the performance and service life of these specifications can be greatly improved by the plastic coating on the rope.
- Specification range: D24–60mm

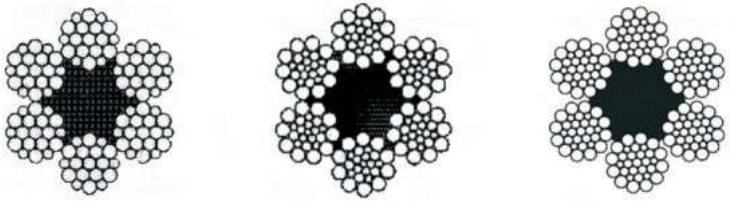
Inclined shaft hoisting line



6X7–FC　　K6X7–FC　　6XK7–FC

- Typical construction:6X7–FC、K6X7–FC、6XK7–FC，Specification range:D6–36mm.

Belt conveyor wire rope



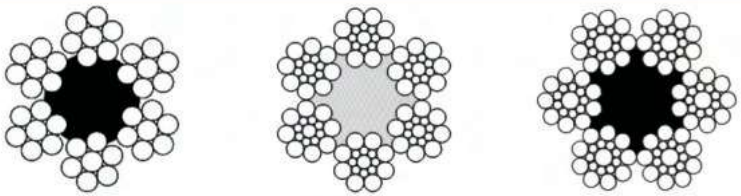
6X19W–FC　　6X26WS–FC　　6X31WS–FC

- Typical construction:6X19W–FC、6X26WS–FC、6X31WS–FC，Specification range:D31–44mm.

Cableway wire rope

Including: carrying cable, track rope, haulage cable, tension rope

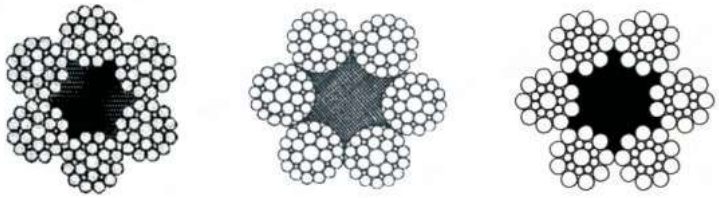
Carrying cable



6X7–FC　　6X17S–FC　　6X19S–FC

- Typical construction:6X7–FC、6X17S–FC、6X19S–FC,Specification range:D14–38mm.

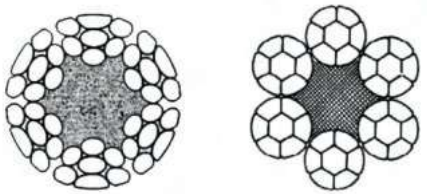
Haulage cable



6X25F–FC　　6X29F–FC　　6X19S–FC

- Typical construction:6X25F–FC、6X29F–FC、6X19S–FC.
- Specification range:D13–38mm.

Track rope



K6X7–FC　　6XK7–FC

- Typical construction:K6X7–FC、6XK7–FC.
- Specification range:D24–32mm.

Cableway wire rope

Including: carrying cable, track rope, haulage cable, tension rope

Tension rope

6X84WSNS–FC

- Typical construction:6X84WSNS–FC.
- Specification range:D22–72mm.

PROPERTIES AND CHOICE OF WIRE ROPE

To choose wire rope, it should be according to the core requirement dependent on the operation conditions of wire rope, at same time consider the basic features of the wire rope and then confirm the specification. Professional technicians from Xianyang BOMCO possess abundant experience and would like to help customers to do this work.

1.Strength

The breaking force given in the standard is the minimum one, only applicable to the new and unused wire rope. The wire rope should not work in a condition where the required force is equal or approaching to the Min. breaking force. The actual breaking force of a new rope must be large or equal to the minimum breaking force, during the effective service life, due to the abrasion on the surface and metal fatigue, the strength of the wire rope may decrease gradually. If not be used appropriately, the strength of the wire rope may vanish suddenly. For the breaking force of the ropes in same size, the rope with larger tensile strength is bigger than the one with lower tensile strength, rope with IWRC is bigger than the one with FC, linear contact lay rope is bigger than point contact lay rope, compacted wire rope is bigger than linear contact rope, double compacted is the biggest one.

2.Anti-fatigue

Anti-fatigue include the metal fatigue of the steel wire in the wire rope, to possess a better performance of anti-fatigue, the steel wire should possess the capability of bending repeatedly under tension. For the same size wire rope, the one which contains more small size steel wire has a better anti-fatigue performance than that which has relative less small size. To reduce the effect of the fatigue, keep it in mind that don't wound the steel wire on the pulley or spool which has a too small diameter. The anti-fatigue performance of 6x36WS class wire rope is better than 6x19 class ones, while 6x19 class is better than 6x7 class.

3.Anti-abrasion (resistant to metal loss and deformation)

Metal loss means the actual abrasion of the outer steel wire of the wire rope, this abrasion can decrease the tensile force of the steel wire; metal deformation means the shape change of the outer wire of wire rope, the change may decrease the anti-fatigue performance, then affect the move of steel wire when wire rope bends, also this may cause additional stress. For the same size wire rope, the ones which contains less outer steel wire and bigger size outer wire has a better abrasion-resistance than that which contains more outer steel wire and small size outer wire.

The compacted wire rope has relative more steel wires in one strand; it can improve the anti-fatigue performance and the anti-abrasion performance.

The anti-abrasion performance of 6x36WS class wire rope is better than 6x19 class ones, while 6x19 class is better than 6x7 class; performance of anti-abrasion of the compacted wire rope is batter than that of ordinary round wire rope.

4.Anti-extrusion

Extrusion is caused by outside pressure on the wire rope, the pressure can cause deformation of the cross section , strand and the core, also can damage the wire rope when it is serious. If the wire rope is damaged by the pressure, the steel wires, strand, core can't move easily when in operation, thus additional stress is produced. Wire ropes with IWRC core have better anti-extrusion performance than the ropes with fiber core; regular lay wire ropes have better extrusion-resistance than lang lay wire ropes. 6 strand wire ropes have better extrusion-resistance than 8 strand and 19 strand wire ropes, compacted wire rope is better than round wire rope, double compacted wire rope has the best performance of anti-extrusion.

5.Stability

This is to describe the maneuverability and the performance. There is no definite measure method. For example, the wire rope which can be wound and can be paid off on the smooth spool, or there is no twist when being used in a assembly winding system, should be considered as a stable one. The construction of wire rope and construction is important to the stability of wire rope, regular lay wire rope is more stable than lang lay wire rope, wire rope containing 7 wire strands is more stable than these ropes which strands has more steel wires and has more complex construction.

6.Flexibility

Flexibility means the wire rope 's capability of bending to arc.

Small size wire rope bends easily than big size wire rope, wire ropes with fiber core bend easily than the ones with IWRC core, bright wire rope bend easily than galvanized wire rope, point contact wire rope bends easily than linear contact wire rope, linear contact wire rope bends easily than compacted wire rope. As a universal criterion, for same size wire rope, wire ropes composed of more small size steel wires have better flexibility than these composed of fewer big size steel wires.

7.Rotation-resistance

Wire ropes tends to rotate around the axis under the load, rotation-resistance means the capability of rotation-resistance When rotation of the clog is forbidden during the lifting operation with wire rope, then rotation-resistant wire rope should be chosen. The rotation-resistance of 35Wx7 class wire rope is better that of 18x7 class ones, 18x7 class wire rope is better than compacted 4 strand wire ropes, 4 strand wire ropes is better than 6 strand wire rope.

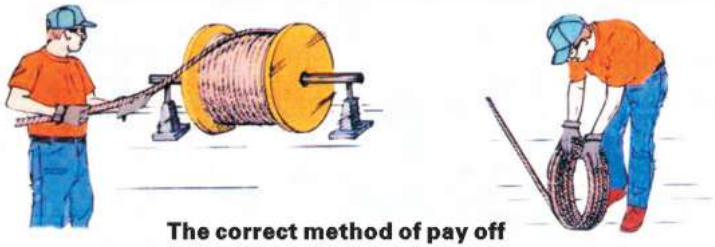
8.Corrosion-resistance

Corrosion-resistance of galvanized wire rope is better than that of bright wire rope, galvanized steel wire rope with impregnated plastic has best corrosion-resistance.

Pay off

For wire rope with reel, place the reel on a stand which allows the reel rotate, control the rotation speed of the reel, pull the wire rope slowly.

For wire rope without reel, pull the wire rope in the direction reverse to the end of wire rope.



The correct method of pay off

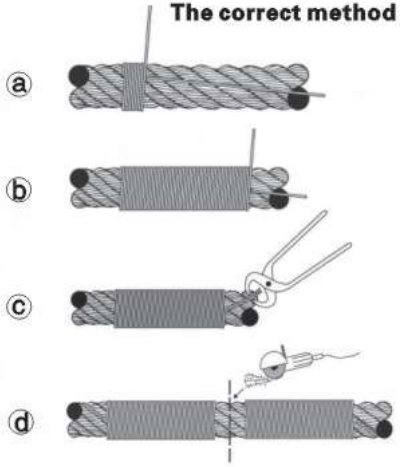
End treatment

Sizing: Iron wire is recommended to be used to seize the wire rope, at the location where the wire rope will be cut, put one end of the iron wire along the wire rope axis, and leave a length of 4 times diameter of wire rope; begin to wind the iron wire on the wire rope closely from the other side of iron wire at the cutting position, the winding length should be about 3 times of rope diameter, then strain the ends of the iron and screw it closely, the screw length should equals the diameter of the wire rope then the screwed section should be set between the groove of the strands.

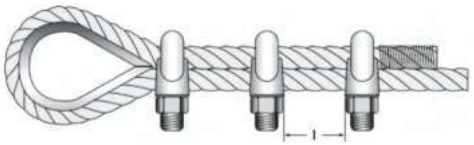
Rope clamp: Steel wire ropes are bended to a ring, fixed with wire, and then using double-saddle bolts clamping.

Fuse end of wire rope: using special electric heating equipment of steel wire rope, under half melting state, through the chunk rotating wire rope and then the rope of all steel wire welding together forming conical end of wire rope.

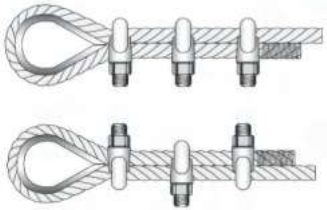
The correct method of colligation



Fuse end of wire rope



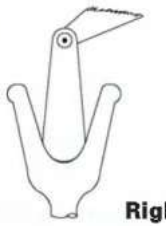
The right installation of rope clamp



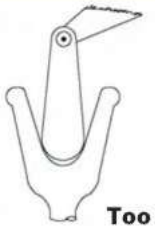
The wrong installation of rope clamp

Check pulley groove

Before install the new wire rope, check the pulley groove carefully, the groove must be smooth, the rope groove radius should be large than the wire rope radius by 7.5%. Use the special radius gauge to measure groove radius.



Right

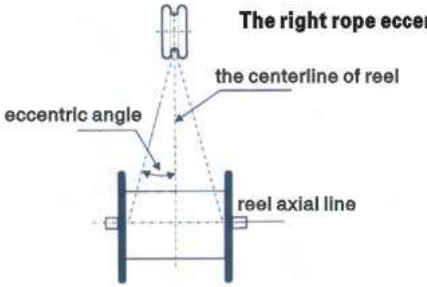


Too small

Check fleet angle

Before install new wire rope, must check and measure the fleet angle. Fleet angle means the included angle between the centerline of the rope and perpendicular line of pulley axes, which is measured when wind the rope till the edge of the drum. No matter it is groove drum or plain drum, the angle should not be more than 1° 30"

The right rope eccentric angle



Installation

When wind the rope on the drum in multi-layers, must coil the bottom wire rope closely under tension, otherwise the wire ropes in upper layer will wedge into the lower layer and cause damage by extrusion. After the wire rope is installed, it should be run for some time under medium load with a low speed. After the wire rope adapt to the application conditions, then gradually increase the operation speed and increase the loading. Forbid to use the wire rope under heavy load in high speed as soon as it is installed.

Note: the new and unused wire rope is more likely to be extruded than the used wire rope.

Frequency and item of checking

API RP54 suggests, inspect all the lifting rope being used visually everyday, and perform a thorough examination every month and make a monthly examination record.

Following should be inspected periodically: diameter of wire rope, lay pitch, numbers of broken wires, surface damage of wire rope.

Type of broken wire

Wire breaking is one of the signs of deterioration of wire rope. According to the location of the broken wire in wire rope, it can be classified into 2 types; one is broken wire in the crown of strand and broken wires in the dent location between strands. The broken wires in the running rope is the wires in the crown of strands, locates in the abrasion position of wire rope surface. Broken wires in standing rope often take place in the dent between strands, present at the fixed ends or other location where the rope is restricted, steel wires in such location are damaged by the energy released by damping vibration .

How to find out broken wires

Remove the wire rope from the pulley and put it at plain and steady position, clean the surface of the wire rope, thus can find the breaks in the crown of strands.

Bend the wire rope, can expose the breaks hiding in the dents between strands.

Breaks in the wire rope need to be examined more carefully then it can be found.

location of examination

Drum

When the wire rope is coiled on the drum, it may rub with the rope of upper lays at the overlap point, thus the edge of the wire rope will be rubbed and damaged. When wire rope fall into the dent between the 2 sections ropes, then frictions happen. Also when there is a fleet angle between adjacent wire ropes, then friction may take place. when wire rope traverse the upper layer, for there is only one contacting point, so it is easy to be extrude. This extrusion may increase the pressure, and this pressure may deform the cross section of wire ropes, strands and core, thus damage the wire rope. Extrusion may happen at the exchange point of the layer, and the out edge of the drum where the wire rope wedge in. New wire rope is easily to be extruded and damaged, if the wire rope in former 2 layers or 3 layers is not tensed, then outer wire rope may wedge into the inner layer and can cause serious damage. Compared with grooved drum, when single layer wire rope is coiled in plain drum, the wire rope and drum will be worn more quickly.

Pulley

Wire rope groove will become less and less during the application, the groove which is too small may hoop and shrink wire rope, increase the abrasion, also it will restrict the slide of the strand and steel wire thus cause additional stress; a groove which is too big may stave the wire rope. Above 2 statuses can decrease the service life of wire rope.

End accessories

Movement of wire rope near to the end accessories is limited, when the damping vibration happen on one section of the wire rope, then this section will be fatigued.

Contact point

The contact point is to hoist to in each ascending initial load, steel wire rope and drum or pulley contact area. These areas will soon appear internal and external wear for two reasons: one is the steel wire rope runtime acceleration greater load; The second is rope will load the diameter in transfer to block or on the web. In the point of contact areas that need to be key observation wire diameter decreases, broken wire, steel wire rope wear and deformation.

Replacement of wire rope

Running rope

For 6 stand and 8 strand wire rope, if find 6 broken steel wires distributed randomly in one lay pitch, or in one strand find 3 broken steel wires, then replace the wire rope.

For rotation–resistant wire rope, find 2 broken steel wires distributed randomly within the length of 6 times diameter of wire rope, or find 4 broken steel wires within 30 times of diameter of wire rope, and then replace the wire rope.

Standing rope (guy line, life line, hang line)

In one lay pitch find 3 broken steel wires, or at the end find more than one broken wires, or find broken wire in the dent between strands, then replace the wire rope.

Replace the wire rope in other necessary conditions

- Corrosion cause wire rope sunken
- Find corroded steel wire in the end joints
- End joints was corroded, damaged, bent or worn or be used in wrong manners
- There is kink, extrusion, cut or wire knot or stretched core
- 1/3 the worn location is over than the 1/3 of the original diameter of the wire rope
- The diameter of wire rope decrease greatly ,There is evidence show that the wire rope is stroke and damaged
- The lay pitch increase obviously