

TECHNICAL SPECIFICATION OF WIRE ROPE SLINGS

1.0 SCOPE & APPLICATION

This specification covers in general the minimum requirement for procurement of Wire Rope Slings used for general lifting and material handling at drill site.

2.0 GENERAL FEATURES: **2.1** Manufacturer to possess valid IS or API license and supply Wire Rope Slings with IS or API mark/monogram, whichever is applicable.

2.2 Wire Rope Slings shall be new, not refurbished, unused & of recent manufacture (not more than one year as on date of delivery).

3.0 TECHNICAL FEATURES: **3.1 Codes and Standards** – All Wire Rope Slings shall comply with following standards as mentioned below:

a) Wire Rope Slings shall be designed, constructed and tested as per IS 2762.

b) The wire rope shall be designed, constructed and tested as per standard manufacturing practices, suitable for the intended service. Wire rope material, construction, dimensions and load capacity/breaking force: API Spec 9A/IS: 4521/ IS 2266 or latest.

c) Method of ferrule splicing: IS 5245(part 2)-1971(Reaffirmed 2001) or latest.

3.2 Technical Parameters –

3.2.1 The wire ropes shall be suitable for operation with the minimum & maximum ambient temperature of -60C to 550C and relative humidity upto 95%.

3.2.2 The finished wire rope shall be free from defects like loose wires in the strand and/or other visible irregularities. It shall be evenly laid and shall remain in condition when properly wound in or paying off a reel.

3.2.3 Entire rope shall have continuous diameter throughout its length without any joint.

3.2.4 Fibre core/Steel Core shall be free from salt and acid.

3.2.5 Following parameters are as per operational requirement:

Sr No.	MAT Code	Material Description	Required Quantity (NO)	Rope Dia (mm)	Length	UOM for Length	Construction	Tensile Strength / Grade (N/mm ²)	Item Description & End Connections
1	140331904	WIRE ROPE SLING 6MMX2MX0.25M IS 2266	24	6	2	M	Galvanized IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
2	140331906	WIRE ROPE SLING 6MMX3MX0.33M IS 2266	20	6	3	M	Galvanized IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
3	140331907	WIRE ROPE SLING 8MM X 2 MX 0.25M IS 2266	12	8	2	M	Galvanized IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
4	130000660	SLING 8MM X 2.5METER SINGLE WIRE ROPE S*	33	8	2.5	M	Galvanized IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	130000660	SLING 8MM X 2.5METER SINGLE WIRE ROPE S*	28	8	2.5	M	Galvanized IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	130000660	SLING 8MM X 2.5METER SINGLE WIRE ROPE S*	17	8	2.5	M	Galvanized IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
5	140331913	WIRE ROPE SLING 8MMX8MX0.33M IS 2266	8	8	8	M	Galvanized IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.

6	140331915	WIRE ROPE SLING 10MM X3MX0.33M IS 2266	2	10	3	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
7	130000653	SLING 1/2" X 2METER SINGLE WIRE ROPE SO*	33	12	2	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	130000653	SLING 1/2" X 2METER SINGLE WIRE ROPE SO*	31	12	2	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	130000653	SLING 1/2" X 2METER SINGLE WIRE ROPE SO*	11	12	2	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
8	140007036	SINGLE WIRE ROPE SLING 12MM 3M 6X37	21	12	3	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140007036	SINGLE WIRE ROPE SLING 12MM 3M 6X37	20	12	3	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
9	130000654	SLING 1/2" X 5METER SINGLE WIRE ROPE SO*	29	12	5	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	130000654	SLING 1/2" X 5METER SINGLE WIRE ROPE SO*	18	12	5	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	130000654	SLING 1/2" X 5METER SINGLE WIRE ROPE SO*	1	12	5	M	Galvanize d IWRC 6X19 $\underline{\underline{S}}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.

	130000654	SLING 1/2" X 5METER SINGLE WIRE ROPE SO*	8	12	5	M	Galvanized IWRC 6X19S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
10	130000715	SLING 12MM 6 MTR CHOKER SLING WIRE ROPE*	24	12	6	M	Galvanized IWRC 6X19S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled spliced with one end Soft Eye other end Thimble & Sliding (as per applicable standard)
	130000715	SLING 12MM 6 MTR CHOKER SLING WIRE ROPE*	12	12	6	M	Galvanized IWRC 6X19S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled spliced with one end Soft Eye other end Thimble & Sliding (as per applicable standard)
11	140334017	WIRE ROPE SLING 12 MMX (6X24)CORE 20'	20	12	20	Ft.	Galvanized IWRC 6X19S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140334017	WIRE ROPE SLING 12 MMX (6X24)CORE 20'	2	12	20	Ft.	Galvanized IWRC 6X19S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
12	143000414	W/R SLING 12MMX10'/3T/4WAY /EXTRA 4RING	14	12	10	Ft.	Galvanized IWRC 6X19S	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
13	140007898	WIRE ROPE SLING 10 FT LONG 5 TON CAP 4*	14	12	10	Ft.	Galvanized IWRC 6X19S	1770	Four way sling with one end ring & other End Thimble with D'shackle. SWL : 5 Ton
14	140010743	FOUR WAY SLING ONE END RING & OTHER END*	6	12	15	Ft.	Galvanized IWRC 6X19S	1770	Four way sling with one end ring & other End Thimble with D'shackle. SWL : 5 Ton

15	140331926	WIRE ROPE SLING 14MMX6MX0.50M IS 2266	6	14	6	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
16	143000405	W/R SLING 14MMX10' WITH HARD EYE	19	14	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
	143000405	W/R SLING 14MMX10' WITH HARD EYE	10	14	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
	143000405	W/R SLING 14MMX10' WITH HARD EYE	2	14	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
17	140010742	FOUR WAY SLING ONE END RING OTHER END T*	6	14	15	Ft.	Galvanize d IWRC 6X19 ₅	1770	Four way sling with one end ring & other End Thimble with D'shackle.
18	143000409	WIRE ROPE SLING 16MMX10FT	23	16	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	143000409	WIRE ROPE SLING 16MMX10FT	10	16	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
19	130000682	SLING 16MM X 10' SINGLE WIRE ROPE HARD *	23	16	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
20	143000402	W/R SLING 16MMX17' WITH HARD EYE	2	16	17	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.

	143000402	W/R SLING 16MMX17' WITH HARD EYE	20	16	17	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
21	140334019	WIRE ROPE SLING 16MMX(6X24) CORE 20 FT	25	16	20	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140334019	WIRE ROPE SLING 16MMX(6X24) CORE 20 FT	12	16	20	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140334019	WIRE ROPE SLING 16MMX(6X24) CORE 20 FT	4	16	20	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140334019	WIRE ROPE SLING 16MMX(6X24) CORE 20 FT	2	16	20	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
22	130000708	SLING 16MM 7 METER SINGLE WIRE ROPE BOT*	20	16	7	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
23	140005623	WIRE ROPE SLING 16MM X 9M	20	16	9	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
24	140334031	4 WAY SLING 16MM X (6X24) CORE 10 FEET	19	16	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
	140334031	4 WAY SLING 16MM X (6X24) CORE 10 FEET	16	14	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end. SWL : 8 Ton

	140334031	4 WAY SLING 16MM X (6X24) CORE 10 FEET	2	16	10	Ft.	Galvanized IWRC 6X19 ₅	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
25	140334032	4 WAY SLING 18MM X(6X24) CORE 10 FEET	16	16	10	Ft.	Galvanized IWRC 6X19 ₅	1770	Four way sling with one end ring & other End Thimble with D'shackle. SWL : 10 Ton
26	130000704	SLING 16MM 5 METER 4 WAY WIRE ROPE MAIN*	21	16	5	M	Galvanized IWRC 6X19 ₅	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
27	140010741	FOUR WAY SLING ONE END RING OTHER THIMB*	6	16	15	Ft.	Galvanized IWRC 6X19 ₅	1770	Four way sling with one end ring & other End Thimble with D'shackle. SWL : 10 Ton
28	140010740	FOUR WAY SLING WITH ONE END RING OTHER *	6	18	15	Ft.	Galvanized IWRC 6X19 ₅	1770	Four way sling with one end ring & other End Thimble with D'shackle. SWL : 12 Ton
29	140334033	4WAY SLING 20MM X (6X24)CORE 10'FT	16	18	10	Ft.	Galvanized IWRC 6X19 ₅	1770	Four way sling with one end ring & other End Thimble with D'shackle. SWL : 12 Ton
30	130000659	SLING 19MM X 1METER SINGLE WIRE ROPE HA*	20	19	1	M	Galvanized IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
31	130000656	SLING 3/4" X 2METER SINGLE WIRE ROPE SO*	29	19	2	M	Galvanized IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.

	130000656	SLING 3/4" X 2METER SINGLE WIRE ROPE SO*	4	19	2	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
32	140011115	WIRE ROPE SLING DIA 19 MM X 2 *	10	19	2	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
33	130000692	SLING 19MM X 10' SINGLE WIRE ROPE HARD *	23	19	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
	130000692	SLING 19MM X 10' SINGLE WIRE ROPE HARD *	20	19	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
	130000692	SLING 19MM X 10' SINGLE WIRE ROPE HARD *	14	19	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends.
34	140332906	WIRE ROPE SLING 19MM X 25FT	61	19	25	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140332906	WIRE ROPE SLING 19MM X 25FT	10	19	25	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140332906	WIRE ROPE SLING 19MM X 25FT	6	19	25	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140332906	WIRE ROPE SLING 19MM X 25FT	6	19	25	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.

	140332906	WIRE ROPE SLING 19MM X 25FT	9	19	25	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
35	130000693	SLING 19MM X 30' SINGLE WIRE ROPE HARD *	24	19	30	Ft.	Galvanize d IWRC 6X19 ₅	1770	Wire Rope Sling, Mechanically ferruled, spliced with hard eye at ONE end
	130000693	SLING 19MM X 30' SINGLE WIRE ROPE HARD *	6	19	30	Ft.	Galvanize d IWRC 6X19 ₅	1770	Wire Rope Sling, Mechanically ferruled, spliced with hard eye at ONE end
36	143000331	WIRE ROPE SLING 19MMX41'	10	19	41	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	143000331	WIRE ROPE SLING 19MMX41'	20	19	41	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	143000331	WIRE ROPE SLING 19MMX41'	18	19	41	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
37	143000569	W/R SLING 19MMX11M WITH 12" SOFT EYES *	16	19	11	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling 11M , Mechanically aluminium ferruled, spliced with Soft Eye (12" loop) at Both ends.
38	140002505	WIRE ROPE SLING 19MMX22 MTR	16	19	22	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. SWL: 4 MT.
	140002505	WIRE ROPE SLING 19MMX22 MTR	2	19	22	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. SWL: 4 MT.

	140002505	WIRE ROPE SLING 19MMX22 MTR	4	19	22	M	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. SWL: 4 MT.
39	140011257	19MM TWO LEG SLING 5 TONE CAPACITY 1 ME*	4	19	1	M	Galvanize d IWRC 6X19 ₅	1770	Two Leg Wire Rope Sling, Mechanically aluminium ferruled, spliced with Hard Eye at Both ends with Self Latching Hook for Power Slip lifting with 5 Ton Capacity.
40	130000690	SLING 19MM X 30' 2 WAY WIRE ROPE HARD E*	12	19	30	Ft.	Galvanize d IWRC 6X19 ₅	1770	2 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
41	130000652	SLING 19MM X 12METER 2 WAY WIRE ROPE MA*	18	19	12	M	Galvanize d IWRC 6X19 ₅	1770	2 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
42	130000702	SLING 19MM 5 METER 4 WAY WIRE ROPE MAIN*	23	19	5	M	Galvanize d IWRC 6X19 ₅	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
	130000702	SLING 19MM 5 METER 4 WAY WIRE ROPE MAIN*	40	19	5	M	Galvanize d IWRC 6X19 ₅	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
43	140005000	WIRE ROPE SLING 22MM(6X24) 10FT 3.2T SA*	22	22	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
44	140007904	WIRE ROPE SLING 10 FT LONG 5TON CAP SAF*	14	22	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Mechanically ferruled wire rope sling with Hook one side and the other end loop(Ring with thimble) SWL : 5 Ton

45	130000710	SLING 22MM SINGLE 12FT WIRE ROPE STD PL*	5	22	12	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire rope sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. (SWL 6 ton)
46	140010746	SAFETY SLING WITH LIFTING WITH HOOK ONE*	4	22	15	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Mechanically ferruled wire rope sling with Hook one side and the other end loop (Ring with thimble) SWL : 5 Ton
47	140332907	WIRE ROPE SLING 22MM X 18FT	30	22	18	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140332907	WIRE ROPE SLING 22MM X 18FT	10	22	18	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140332907	WIRE ROPE SLING 22MM X 18FT	42	22	18	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140332907	WIRE ROPE SLING 22MM X 18FT	12	22	18	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140332907	WIRE ROPE SLING 22MM X 18FT	2	22	18	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
48	140334027	SAFETY SLING 22MM X(6X24)CORE 20'	6	22	20	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope sling, Mechanically ferruled wire rope sling with both ends hard eye (thimble).

49	140005624	WIRE ROPE SLING 22MM X 9M	2	22	9	M	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at One ends. (Tong Safety Line and Ezy Torque Line)
	140005624	WIRE ROPE SLING 22MM X 9M	12	22	9	M	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at One ends. (Tong Safety Line and Ezy Torque Line)
50	130000657	SLING 22MM X 10METER SINGLE WIRE ROPE S*	17	22	10	M	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	130000657	SLING 22MM X 10METER SINGLE WIRE ROPE S*	8	22	10	M	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
51	143000334	WIRE ROPE SLING 22MMX39.5'	12	22	39.5	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
52	130000706	SLING 22MM 5 METER 4 WAY WIRE ROPE MAIN*	13	22	5	M	Galvanize d IWRC 6X19 \underline{S}	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
	130000706	SLING 22MM 5 METER 4 WAY WIRE ROPE MAIN*	6	22	5	M	Galvanize d IWRC 6X19 \underline{S}	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end

53	130000545	SLING 7/8"X8 METER 4 WAY WITH MAIN AND *	16	22	8	M	Galvanize d IWRC 6X19 $\underline{5}$	1770	4 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
54	140007895	WIRE ROPE SLING 15 FT LONG 6 TON CAP ON*	6	24	15	Ft.	Galvanize d IWRC 6X19 $\underline{5}$	1770	Wire Rope Sling, Mechanically ferruled, spliced with hard eye at both end. SWL : 6 Ton
55	140331930	WIRE ROPE SLING 24X3MX0.60M IS 2266	6	24	3	M	Galvanize d IWRC 6X19 $\underline{5}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
56	140334090	WIRE ROPE SLINGS 1"X8MTR	21	24	8	M	Galvanize d IWRC 6X19 $\underline{5}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140334090	WIRE ROPE SLINGS 1"X8MTR	8	24	8	M	Galvanize d IWRC 6X19 $\underline{5}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140334090	WIRE ROPE SLINGS 1"X8MTR	18	24	8	M	Galvanize d IWRC 6X19 $\underline{5}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140334090	WIRE ROPE SLINGS 1"X8MTR	4	24	8	M	Galvanize d IWRC 6X19 $\underline{5}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	140334090	WIRE ROPE SLINGS 1"X8MTR	4	24	8	M	Galvanize d IWRC 6X19 $\underline{5}$	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.

57	130000650	SLING 1" X 6 METER 2 WAY WIRE ROPE MAST*	14	24	6	M	Galvanized IWRC 6X19S	1770	2 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
	130000650	SLING 1" X 6 METER 2 WAY WIRE ROPE MAST*	6	24	6	M	Galvanized IWRC 6X19S	1770	2 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
58	130000649	SLING 1" X 17METER 2 WAY WIRE ROPE MAST*	12	24	17	M	Galvanized IWRC 6X19S	1770	2 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
59	130000713	SLING 25MM 35FT SINGLE WIRE ROPE 1 END *	14	25	35	Ft.	Galvanized IWRC 6X19S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
	130000713	SLING 25MM 35FT SINGLE WIRE ROPE 1 END *	6	25	35	Ft.	Galvanized IWRC 6X19S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
60	143000337	WIRE ROPE SLING 26MMX26.3'	12	26	26.3	Ft.	Galvanized IWRC 6X19S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
61	080000067	G-HOOK SAFETY SLING 12.5 TON	16	28	10	Ft.	Galvanized IWRC 6X36SW	1770	G-hook safety sling, Mechanically ferruled spliced, with oblong master link (of alloy steel) at top with auto latch hook (as per applicable standard)

62	140334026	SAFETY SLING 22MMX(6X24)CORE 10'	4	28	10	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Mechanically ferruled wire rope sling with Hook one side and the other end loop (Ring with thimble) SWL : 8 Ton
63	140332442	WIRE ROPE SLINGS 30 MM	4	30	10	M	Galvanize d IWRC 6X19 \underline{S}	1770	2 Way Wire Rope Sling, Mechanically ferruled, Master Link at top & hard eye at both end
64	140007903	WIRE ROPE SLING 10 FT LONG 10 TON CA SA*	20	32	10	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Mechanically ferruled wire rope sling with Hook one side and the other end loop (Ring with thimble) SWL : 10 Ton
65	140005003	WIRE ROPE SLING 32MM(6X24)5MTR 10TON SA*	5	32	5	M	Galvanize d IWRC 6X19 \underline{S}	1770	Single wire rope sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. Diameter of Eye shall be 0.5 m with eyes crimped properly with Aluminium Ferrule.
66	140010739	SAFETY SLING WITH LIFTING ONE LEG WIRE *	6	32	15	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Wire Rope Sling, Mechanically ferruled, spliced with hard eye at both end. SWL : 10 Ton
67	140010745	SAFETY SLING WITH LIFTING HOOK ONE SIDE*	4	32	15	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Mechanically ferruled wire rope sling with Hook one side and the other end loop (Ring with thimble) SWL : 10 Ton
68	143000335	WIRE ROPE SLING 32MMX39.5'	12	32	39.5	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.

	143000335	WIRE ROPE SLING 32MMX39.5'	4	32	39.5	Ft.	Galvanize d IWRC 6X19 ₅	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
69	130001179	SLING 32MM,6M,18"LOOP DIA 2 WAYS 10TON *	6	32	6	M	Galvanize d IWRC 6X19 ₅	1770	Single wire rope sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. Diameter of Eye shall be 0.5 m with eyes crimped properly with Aluminium Ferrule.
70	140007902	WIRE ROPE SLING 10FT LONG 12TON CAP SAF*	8	34	10	Ft.	Galvanize d IWRC 6X19 ₅	1770	Mechanically ferruled wire rope sling with Hook one side and the other end loop (Ring with thimble) SWL : 12 Ton
71	140332912	WIRE ROPE SLING 35MM X 65FT	4	35	65	Ft.	Galvanize d IWRC 6X19 ₅	1960	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. Diameter of Eye shall be 0.5 m with eyes crimped properly with Aluminium Ferrule and tested to 25 tons
	140332912	WIRE ROPE SLING 35MM X 65FT	4	35	65	Ft.	Galvanize d IWRC 6X19 ₅	1960	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. Diameter of Eye shall be 0.5 m with eyes crimped properly with Aluminium Ferrule and tested to 25 tons
	140332912	WIRE ROPE SLING 35MM X 65FT	2	35	65	Ft.	Galvanize d IWRC 6X19 ₅	1960	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. Diameter of Eye shall be 0.5 m with eyes crimped properly with Aluminium Ferrule and tested to 25 tons

	140332912	WIRE ROPE SLING 35MM X 65FT	8	35	65	Ft.	Galvanize d IWRC 6X19 \underline{S}	1960	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. Diameter of Eye shall be 0.5 m with eyes crimped properly with Aluminium Ferrule and tested to 25 tons
	140332912	WIRE ROPE SLING 35MM X 65FT	4	35	65	Ft.	Galvanize d IWRC 6X19 \underline{S}	1960	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. Diameter of Eye shall be 0.5 m with eyes crimped properly with Aluminium Ferrule and tested to 25 tons
72	140334962	STEEL WIRE ROPE SLING 38MMX6FT	3	38	6	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire rope sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. (SWL 10 ton)
73	140007901	WIRE ROPE SLING 10 FT LONG 15TON CAP SA*	6	38	10	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Mechanically ferruled wire rope sling with Hook one side and the other end loop (Ring with thimble) SWL : 15 Ton
74	140334961	STEEL WIRE ROPE SLING 38MMX14FT	3	38	14	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire rope sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends. (SWL 10 ton)
75	140010744	SAFETY SLING WITH LIFTING HOOK ONE SIDE*	4	38	15	Ft.	Galvanize d IWRC 6X19 \underline{S}	1770	Mechanically ferruled wire rope sling with Hook one side and the other end loop (Ring with thimble) SWL : 15 Ton
76	130000711	SLING 40MM 5 METER SINGLE WIRE ROPE BOT*	16	40	5	M	Galvanize d IWRC 6X19 \underline{S}	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.

	130000711	SLING 40MM 5 METER SINGLE WIRE ROPE BOT*	4	40	5	M	Galvanize d IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
77	080000074	G-HOOK SAFETY SLING 20.0 TON	16	42	5	M	Galvanize d IWRC 6X36SW	1770	G-Hook Safety Sling, Mechanically ferruled spliced with oblong master link (of alloy steel) at top with auto latch hook (as per applicable standard)
78	140011114	WIRE ROPE SLING DIA 44 MM X 20*	14	44	20	M	Galvanize d IWRC 6X19 _S	1960	Mechanically ferruled wire rope sling with both ends hard eye (thimble). (BOP Hanging Line)
79	140332911	WIRE ROPE SLING 52MM X 65FT	19	52	65	Ft.	Galvanize d IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.
80	143000330	WIRE ROPE SLING 52MMX100'	10	52	100	Ft.	Galvanize d IWRC 6X19 _S	1770	Single Wire Rope Sling, Mechanically aluminium ferruled, spliced with Soft Eye at Both ends.

Diagram for Item S. No. 70

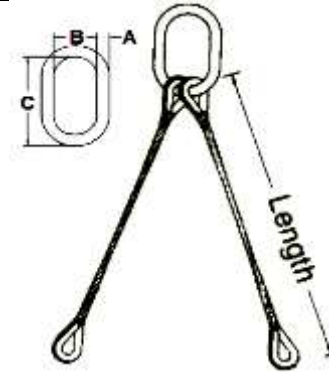
Daigram



Common for all the 2 Way Wire Rope Slings:

Detailed specs for Master Link Assembly:

- Alloy Steel — Quenched and Tempered.
- Individually Proof Tested to values shown, with certification
- Proof Tested with 60% inside width special fixtures sized to prevent localized point loading
- Forgings should have a Product Identification Code (PIC) for material traceability, along with the size, the name of manufacturer should also be there.
- Selected sizes should be designated with “W” in the size column and should have enlarged inside dimensions to allow additional room for sling hardware and crane hook.
- The master links should be 100% proof tested, MPI and impact tested. The test certification should be available upon request.
- Meets or exceeds all requirements of identification, ductility, design factor, proof load and temperature requirements. These links should meet other critical performance requirements including fatigue life, impact properties and material traceability.
- Dimensions for Master Link Assembly as per applicable API/IS standards.

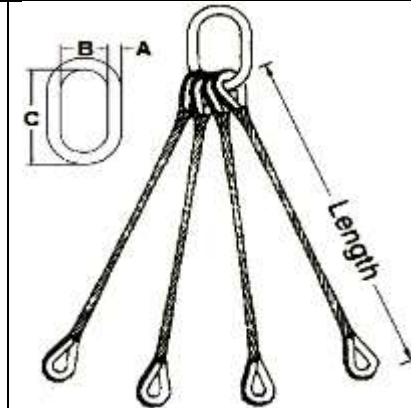


Inside diameter of bottom hard eye should be such a way that it should accommodate D-Shackle of working load 8 Ton.

Common for all the 4 Way Wire Rope Slings:

Detailed specs for Master Link Assembly:

- Alloy Steel — Quenched and Tempered.
- Individually Proof Tested to values shown, with certification
- Proof Tested with 60% inside width special fixtures sized to prevent localized point loading.
- Forgings should have a Product Identification Code (PIC) for material traceability, along with the size, the name of manufacturer should also be there.
- Selected sizes should be designated with “W” in the size column and should have enlarged inside dimensions to allow additional room for sling hardware and crane hook.
- The master links should be 100% proof tested, MPI and impact tested. The test certification should be available upon request.
- Engineered Flat for use with S-1325A coupler link.
- Should Meet or exceed all requirements of identification, ductility, design factor, proof load and temperature requirements. Importantly, these links should meet other critical performance requirements including fatigue life, impact properties and material traceability.
- Dimensions for Master Link Assembly as per applicable API/IS standards.



Inside diameter of bottom hard eye should be such a way that it should accommodate D-Shackle / Bow Shackle of working load 4.5 ton for 4 way sling of with more than 7 T SWL & 2 ton for 4 way sling of up to 7 T SWL.

3.4 Constructional Features:

3.4.1 Tolerances - For lengths and diameter of wire rope and wire strands shall be conforming to API Spec 9A/IS: 4521/ IS 2266 (whichever applicable).

3.4.2 Lubrication - Wire rope shall be lubricated and impregnated by a suitable compound during manufacturing process unless otherwise specified. This lubricant shall thoroughly protect the ropes both externally and internally to minimize rust, corrosion until the rope is put in service. The lubricant shall conform to the requirements of API Spec 9A/IS: 4521/ IS 2266 (whichever applicable). Lubrication of Wire ropes during manufacturing shall be as per latest version of IS: 9182 (Part 2) in case of Wire ropes conforming to IS 4521. The type of lubrication shall be bituminous.

3.4.3 Core Construction –

- a.** Fiber core for a given uniform diameter shall be conforming to API 9A/IS: 1804(whichever applicable).
- b.** Steel core for a given uniform diameter shall be conforming to API 9A/IS: 1835(whichever applicable).

3.4.4 Finish of Wire Rope: Bright finish of wire ropes shall be as per API Spec 9A/IS: 4521/ IS 2266 (whichever applicable) for Abrasion resistance, flexibility and resistance to crushing.

3.4.5 Tensile, Torsional and Reverse Bend Force: Tensile, torsional and reverse bend strength when tested as per the relevant standards shall meet the values conforming to API Spec 9A/IS: 4521/ IS 2266 (whichever applicable).

3.4.6 Mass and Breaking Load: The mass and breaking load/force for a given diameter shall be as per API Spec 9A/IS: 4521/ IS 2266 (whichever applicable).

3.5 Material: Vendor to ensure that material of construction offered for wire ropes shall be compatible with specified operating conditions & parameters and shall be suitable for the intended service.

4.0 NAME PLATE DETAILS: Following Information shall be legibly & securely stamped/stenciled on a metallic plate tagged on the face of the wire rope reel/coil:

4.1 Manufacturer's name/logo

4.2 IS/API monogram marking/certification number

4.3 Reel/coil number

4.4 Tensile designation of wire

4.5 Year of manufacture

4.6 Nominal diameter of wire rope (mm)

4.7. Length of wire rope (m)

4.8 Safe Working Load (TON)

4.9. ONGC's purchase order number & date

4.10 Breaking strength kN

5.1 Along with supply of the equipment/item/unit:

5.1.1 Documentation:

a. **Certificates:** Warranty & guarantee certificates, Performance test certificates/Reports, Material test certificates, Inspection etc.

b. Certificate that the wire rope Sling have been designed, manufactured & tested to meet the specified requirement.

5.1.2 Packing details: Packing details: A bundle of five Wire Rope Slings of a type to be protected in gunny bags to avoid damage during transit or as per manufacturer's standard practice.

5.1.3 Warrantee & Guarantee: As per BID Document

5.1.4 Inspection & Testing:

a. Inspection & Testing shall be carried out in conformance to various parameters of the specification, Tendered QAP and the relevant standard by the ONGC inspecting authority or ONGC authorized Inspection Agency.

Quality Assurance Plan (QAP) for Inspection by ONGC / Third Party Inspection Agency (TPIA)

For tendered Wire Rope Slings:

The specific scope of Inspection shall include the following but not limited to:

1. Vendor to Perform inspection/ quality surveillance at manufacturer's/ sub-vendor's works.
2. Vendor shall arrange for Inspection Agency to undertake inspection and witness such test (s) which are required to ensure that the procured Item (s) conform to specifications and relevant code (s)/ standard(s) as mentioned herein.
3. Inspection Agency shall stamp the items inspected for material identification, wherever required.
4. Inspection Agency shall issue final acceptance certificate along with release note on conformance to the technical specifications and other PO conditions.
5. The Inspection Agency shall deploy sufficient number of inspection engineers/ inspectors and vendor shall facilitate the same.
6. The Inspection Agency shall use calibrated measuring instruments and equipment at the manufacturer's/ sub vendor's works at the time of inspection. Vendor to facilitate and ensure availability of all such instruments.
7. The Inspection Agency shall verify:
 - a) Material Test Certificate and traceability records to ensure the use of correct material.
 - b) Manufacture's/ sub vendor's internal QC records
 - c) Compliance with process parameters as per the relevant standards mentioned in the tender Technical Specification and as mentioned herein.
 - d) Qualification record of equipment, process and personnel for special process like Hydro Testing, Welding, NDE, Painting etc.
 - e) Various type of Test Certificate or any special certificate called for in the PO / Standards.
 - f) The inspection agency shall endorse all verified certificates / documents with comments (Witnessed or Verified) as per applicable document. Vendor to facilitate and ensure availability of all such documents, resources required by the Inspection Agency for above mentioned verifications.
8. Inspection shall be treated as complete only when final inspection report '**for acceptance**' is issued after completing all stages of inspection.
9. The accepted items shall be identified with seal, wherever applicable and reference of seal shall be given in the Inspection Report (IR) by the Inspection Agency.

- 10.** After completion of inspection, the inspection agency shall issue report to the bidder/ manufacturer on the format provided along with records of inspection duly signed within 48 hours.
- 11.** Inspection Report (IR) shall essentially contain the following information:
- a) Purchase Order No.
 - b) Inspection Report No.
 - c) Name of bidder and/ or manufacturer
 - d) Date(s) of inspection
 - e) Date of completion of inspection
 - f) Description of items.
 - g) Purchase Order Sl. No. of items
 - h) Reference of Quality Plan and other applicable documents referred for inspection
 - i) Quantity offered, accepted, reworked, rejected, cumulative quantity accepted and consumed in testing, if any
 - j) Inspection / Sampling plan followed
 - k) Inspection checks / test carried out
 - l) Deviation / Concession, if any
 - m) Any other information

It shall be ensured that all records of verification and inspection are enclosed with Inspection Release Note (IRN). This QAP for inspection is only indicative and not exhaustive. Criteria for Inspection shall be conformance with specifications and test reports.

A) Wire Rope Slings:

Wire Rope			
Sl. No.	Activities of inspection	Remark	Scope of Work (TPIA / ONGC Inspector)
A)	General		
A.1	As per API 9A / IS 4521 / IS 2266 (as applicable): Registration No., date & its validity (including that of the sub-vendor, if any).	-----	R
A.2	Certificate of Authority to use the official API / IS Monogram: License No., date & its validity	-----	R
A.3	Calibration and verification of frequency of measuring instrument / equipment	API/IS Specification – API-9A/IS:4521/ IS:2266 (latest edition)	R
A.4	Inspection frequency for Wire Rope	As per API 9A/IS:4521/ IS:2266 (latest edition)	R
A.5	Testing Facility (Manufacturer’s own Testing Facility or any other nearby Testing Lab <u>Note: NABL accredited lab to be approached for testing. Any test which cannot be carried out at NABL accredited Lab to be done in Manufacturer’s/ Manufacturer’s authorized Labs subject to confirmation from NABL accredited lab that such test cannot be performed at their lab.</u>	NABL accreditation	R
B)	Incoming Material		

B.1	Chemical Composition Test Certificate – by supplier of steel wire rod.	As per API 9A/IS:4521/ IS:2266 (latest edition)	R
C)	Wire		
C.1	Diameter (mm) – one sample from every 10 th coil – Test by QA Dept. of manufacturer.	As per API 9A/IS:4521/ IS:2266 (latest edition)	R
C.2	Tensile – one sample from every 10 th coil – Test by QA Dept. of manufacturer.	As per API 9A/IS:4521/ IS:2266 (latest edition)	R
C.3	Torsion – one sample from every 10 th coil – Test by QA Dept. of manufacturer.	As per API 9A/IS:4521/ IS:2266 (latest edition)	R
D)	Closing		
D.1	Diameter of rope	As per API 9A/IS:4521/ IS:2266 (latest edition)	WR
D.2	Lay direction	As per API 9A/IS:4521/ IS:2266 (latest edition)	WR
D.3	Lay length	As per API 9A/IS: 4521/ IS: 2266 (latest edition).	WR
D.4	Lubrication (visual)	As per API 9A/IS:4521/ IS:2266 (latest edition)	WR
D.5	Core (visual)	As per API 9A/IS:4521/ IS:2266 (latest edition)	WR
D.6	Breaking Load – one sample from each schedule	As per API 9A/IS:4521/ IS:2266 (latest edition)	Witness
DD	Wire Rope Slings		
DD.1	Proof Load Test – one sample from each schedule	As per IS 2762	W
E)	Documentation	-----	R
F)	Identification and Packing	-----	100% visual

Legend / Abbreviation:

W:	100% Witness for compliance as per above QAP, Standards, Process, Procedures, Specifications, Scope, as per PO etc.
WR:	Witness Random for compliance as per above QAP, Standards, Process, Procedures, Specifications, Scope, as per PO etc. Sample size 10% or as per API, whichever is higher.
R:	100% Review for compliance as per above QAP, Standards, Process, Procedures, Specifications, Scope, as per PO etc.
QAP	Quality Assurance Plan for Inspection as detailed above

Technical Specifications for Wire Rope up to 14 MM

1.0 GENERAL FEATURES:

1.1 Manufacturer to possess valid API 9A/ IS 4521/ IS 2266 license and supply wire ropes with API 9A/ IS 4521/ IS 2266 (Latest Edition) monogram. Manufacture should submit the copy of valid certificate of 9A/ IS 4521/ IS 2266 (Latest Edition) along with the offer.

1.2. Material used for drawing wire shall be procured directly from Steel Mill and manufactured not beyond one year from the date of placement of NOA(Purchasing Documents along with all required Test Certificate shall be available at the time of Inspection).

2.0 TECHNICAL FEATURES:

2.1 Codes and Standards -The wire rope shall be designed, constructed and tested as per 9A/ IS 4521/ IS 2266 standard (Latest edition) manufacturing practices, suitable for the intended service. Conforming Codes & Standards (latest version).

2.2 Technical Parameters –

2.2.1 The wire ropes shall be suitable for operation with the minimum & maximum ambient temperature of - 6° C to 55° C and relative humidity up to 95%.

2.2.2 The finished wire rope shall be free from defects like loose wires in the strand and/or other visible irregularities. It shall be evenly laid and shall remain in condition when properly wound in or paying off a reel.

2.2.3 Entire rope shall have continuous diameter throughout its length without any joint.

2.2.4 Fibre core shall be free from salt and acid

2.2.5 Parameter:

S.no	Material	Material Description	Size (mm)	Strength	UoM	Core	Strand	Finish of Wire rope	Formation	Applicable Standard
1	062111003	STEEL WIRE ROPE 6MM DIA 6/19 CONSTRUCTI	6	1770 N/mm2	M	Fibre RHRL	6x7	Bright - Ungalvanized	Preformed	API 9A / IS 4521/ IS 2266
2	140334016	STEEL WIRE ROPE 8MM DIA 6/19 CONSTRUCTI	8	1770 N/mm2	M	Steel core RHRL	6X19F	Galvanized	Preformed	API 9A / IS 4521/ IS 2266
3	140334919	WIRE ROPE 10 MM	10	1770 N/mm2	M	Fibre RHRL	6X7	Bright - Ungalvanized	Preformed	API 9A / IS 4521/ IS 2266
4	062102105	WIRE ROPE 10MM GLV	10	1770 N/mm2	M	Fibre RHRL	6X19F	Galvanized	Preformed	API 9A / IS 4521/ IS 2266
5	140331529	WIRE ROPE 1/2"	12	1770 N/mm2	M	Fibre RHRL	6X31 WS	Bright - Ungalvanized	Preformed	API 9A / IS 4521/ IS 2266
6	140334067	WIRE ROPE GALVANISED 1/2" DIA, 6X19 CLAS	12	1770 N/mm2	M	Steel core RHRL	6x19F	Galvanized	Preformed	API 9A / IS 4521/ IS 2266
7	062111063	13MM 6X19 GLV WIRE ROPE	13	1770 N/mm2	M	Fibre RHRL	6x19 S	Bright - Ungalvanized	Preformed	API 9A / IS 4521/ IS 2266
8	062102104	WIRE ROPE 14MM	14	1770 N/mm2	M	Fibre RHRL	6X31 WS	Bright - Ungalvanized	Preformed	API 9A / IS 4521/ IS 2266

2.3 Constructional Features:

2.3.1 Tolerances - for lengths and diameter of wire rope and wire strands shall be conforming to API 9A/ IS 4521/ IS 2266 (Latest edition), as applicable.

2.3.2 Lubrication - Wire rope shall be lubricated and impregnated by a suitable compound during manufacturing process. This lubricant shall thoroughly protect the ropes both externally and internally to minimize rust, corrosion until the rope is put in service. The lubricant shall conform to the requirements of API 9A/ IS 4521/ IS 2266 (Latest edition).

2.3.3 Core Construction –

a. Fiber core for a given uniform diameter shall be conforming to API 9A/ IS 4521/ IS 2266 (Latest Edition)(whichever applicable).

2.3.4 Finish of Wire Rope: Bright-un galvanized finish of wire ropes shall be as per API 9A/ IS 4521/ IS 2266 (Latest edition) for Abrasion resistance, flexibility and resistance to crushing.

2.3.5 Tensile, Torsional and Reverse Bend Force: Tensile, torsional and reverse bend strength (if applicable) when tested shall meet the values conforming to API 9A/ IS 4521/ IS 2266 (Latest edition).

2.3.6 Mass and Breaking Load: The mass and breaking load/force for a given diameter and construction shall be as per API 9A/ IS 4521/ IS 2266 (Latest edition) . Test of Minimum Breaking Force shall be as per API 9A/ IS 4521/ IS 2266 (Latest edition)

3.0 NAME PLATE DETAILS: Following Information shall be legibly & securely stamped on a metallic plate tagged on the face of the Wire Rope reel:

3.1 Manufacturer's name/logo

3.2 API monogram marking/certification number

3.3 Reel/coil number

3.4 Tensile designation of wire

3.5 Year of manufacture

3.6 Nominal diameter of wire rope (MM)

3.7. Length of wire rope (m)

3.8. Type of construction

3.9. Type of core

3.10 Lay of the rope

3.11 Coating

3.12 ONGC's purchase order number & date

4.0 MISCELLANEOUS: Literature, manual, drawing etc.

4.1 Following documents shall be submitted along with the supply of material:

a. Certificates: Warranty & guarantee certificates, Performance test certificate / Reports, Material test certificates.

b. Certificate that the wire ropes have been designed, manufactured & tested to meet the specified requirement.

c Manufacturer to provide a certificate of material which has been put into use in course of job completion.

5.0 Dispatch & Packing details:

Finished wire rope shall be dispatched on substantial round head reel for wire ropes. Reels on which wire rope are to be dispatched should have:

- 1) The wire rope shall be suitably protected by a water resistant covering of built up material such as tar paper, burlap or similar material and finally by some suitable protection like wooden planks on the circumference of the reel to avoid any damage to the wire ropes.
- 2) When the reel is full of rope, there should be a clearance of not less than 51 mm (2") between the full reel and the outside diameter of the flange. Flanges should be bolted (Minimum Four) together through the drum for the reinforcement.

6.0 Warranty & Guarantee: Manufacturer shall submit Warranty & Guarantee certificate for a period of 12 months along with the material as per ONGC Standard tender conditions.

7.0 Inspection & Testing: The Wire Rope shall be subjected to breaking test, tensile test, torsional test, reverse bend test(if applicable), pre-forming test , wrapping test (if applicable) confirming to latest applicable API 9A/ IS 4521/ IS 2266 standards(Latest edition) besides the other tests mentioned therein & also in the approved QAP.

Quality Assurance Plan (QAP) for Inspection by ONGC / ONGC Nominated Third Party Inspection Agency (TPIA)

For Wire Rope:

The specific scope of Inspection shall include the following but not limited to:

12. Inspection Agency shall perform inspection/ quality surveillance at manufacturer's/ sub-vendor's works.
13. Vendor shall arrange for Inspection Agency to undertake inspection and witness such test (s) which are required to ensure that the procured Item (s) conform to specifications and relevant code (s)/ standard(s) as mentioned herein.
14. Inspection Agency shall stamp the items inspected for material identification, wherever required.
15. Inspection Agency shall issue final acceptance certificate along with release note on conformance to the technical specifications and other PO conditions.
16. The Inspection Agency shall deploy sufficient number of inspection engineers/ inspectors and vendor shall facilitate the same.
17. The Inspection Agency shall use calibrated measuring instruments and equipment at the manufacturer's/ sub vendor's works at the time of inspection. Vendor to facilitate and ensure availability of all such instruments.
18. The Inspection Agency shall verify:
 - g) Material Test Certificate and traceability records to ensure the use of correct material.
 - h) Manufacture's/ sub vendor's internal QC records
 - i) Compliance with process parameters as per the relevant standards mentioned in the tender Technical Specification and as mentioned herein.
 - j) Qualification record of equipment, process and personnel for special process like Hydro Testing, Welding, NDE, Painting etc.
 - k) Various type of Test Certificate or any special certificate called for in the PO / Standards.
 - l) The inspection agency shall endorse all verified certificates / documents with comments (Witnessed or Verified) as per applicable document. Vendor to facilitate and ensure availability of all such documents, resources required by the Inspection Agency for above mentioned verifications.
19. Inspection shall be treated as complete only when final inspection report '**for acceptance**' is issued after completing all stages of inspection.
20. The accepted items shall be identified with seal, wherever applicable and reference of seal shall be given in the Inspection Report (IR) by the Inspection Agency.
21. After completion of inspection, the inspection agency shall issue report to the bidder/ manufacturer on the format provided along with records of inspection duly signed within 48 hours.

22. Inspection Report (IR) shall essentially contain the following information:

- n) Purchase Order No.
- o) Inspection Report No.
- p) Name of bidder and/ or manufacturer
- q) Date(s) of inspection
- r) Date of completion of inspection
- s) Description of items.
- t) Purchase Order Sl. No. of items
- u) Reference of Quality Plan and other applicable documents referred for inspection
- v) Quantity offered, accepted, reworked, rejected, cumulative quantity accepted and consumed in testing, if any
- w) Inspection / Sampling plan followed
- x) Inspection checks / test carried out
- y) Deviation / Concession, if any
- z) Any other information

It shall be ensured that all records of verification and inspection are enclosed with Inspection Release Note (IRN). This QAP for inspection is only indicative and not exhaustive. Criteria for Inspection shall be conformance with specifications and test reports.

A) Wire Rope:

Wire Rope			
Sl. No.	Activities of inspection	Remark	Scope of Work (TPIA / ONGC Inspector)
A)	General		
A.1	As per API 9A / IS 4521 / IS 2266 (as applicable): Registration No., date & its validity (including that of the sub-vendor, if any)	-----	R

A.2	Certificate of Authority to use the official API / IS Monogram: License No., date & its validity	-----	R
A.3	Calibration and verification of frequency of measuring instrument / equipment	As per API 9A / IS 4521 / IS 2266 (latest edition)	R
A.4	Inspection frequency for Wire Rope	As per API 9A / IS 4521 / IS 2266 (latest edition)	R
B)	Incoming Material		
B.1	Chemical Composition Test Certificate – by supplier of steel wire rod.	As per API 9A / IS 4521 / IS 2266 (latest edition)	R
C)	Wire		
C.1	Diameter (mm) – one sample from every 10 th coil – Test by QA Dept. of manufacturer.	As per API 9A / IS 4521 / IS 2266 (latest edition)	R
C.2	Tensile – one sample from every 10 th coil – Test by QA Dept. of manufacturer.	As per API 9A / IS 4521 / IS 2266 (latest edition)	R
C.3	Torsion– one sample from every 10 th coil – Test by QA Dept. of manufacturer.	As per API 9A / IS 4521 / IS 2266 (latest edition)	R
D)	Closing		
D.1	Diameter of rope	As per API 9A / IS 4521 / IS 2266 (latest edition)	WR
D.2	Lay direction	As per API 9A / IS 4521 / IS 2266 (latest edition)	WR
D.3	Lay length	As per API 9A / IS 4521 / IS 2266 (latest edition)	WR

D.4	Lubrication (visual)	As per API 9A / IS 4521 / IS 2266 (latest edition)	WR
D.5	Core (visual)	As per API 9A / IS 4521 / IS 2266 (latest edition)	WR
D.6	Breaking Load – one sample from each schedule	As per API 9A / IS 4521 / IS 2266 (latest edition)	Witness
E)	Documentation	-----	R
F)	Identification and Packing	-----	100% visual

Legend / Abbreviation:

W:	100% Witness for compliance as per above QAP, Standards, Process, Procedures, Specifications, Scope, as per PO etc.
WR:	Witness Random for compliance as per above QAP, Standards, Process, Procedures, Specifications, Scope, as per PO etc. Sample size 10% or as per API, whichever is higher.
R:	100% Review for compliance as per above QAP, Standards, Process, Procedures, Specifications, Scope, as per PO etc.
QAP	Quality Assurance Plan for Inspection as detailed above
