TATA STEEL LIMITED, GLOBAL WIRES

TECHNICAL DELIVERY CONDITION, LRPC Strands

TDC No.	LRPC / 2	Revision	2	Date:	22-Feb-23

Quality Code	7636
Product description	Uncoated stress relieved low relaxation seven-wire (ply) strand for pre-stressed concrete.
Standards referred	IS 14268-2022
Application	Low Relaxation PC Strands are used in pre-stressed concrete girders for road, river & railway bridges and flyovers, pre-stressed atomic reactor domes, slabs, silos, hangars, aqueducts, high rise buildings etc.
Form of Supply	In random wound coil form.

Strand designation and dimensions

Strand designation, diameter and cross section area

Strand Designation	Nominal diameter, mm	Cross Section Area, mm	Remarks
9.3 - 1860 - P	9.3	52	P refers to **Plain (unindented) strand.** 1860 refers to nominal tensile strength of 1860 Mpa
9.6 - 1860 - P	9.6	55	
12.5 - 1860 - P	12.5	93	
12.9 - 1860 - P	12.9	100	
15.2 - 1860 - P	15.2	139	
15.7 - 1860 - P	15.7	150	

Remarks: The seven wire strand will have the central wire at least 1.5% greater in diameter than the surrounding wires.

Strand physical properties

Strand physical properties

Nominal diameter	Min. Break Load	Load-1% extension / 0.2% proof load	Min. Elongation (600 GL)	Lay Length, mm		Unit Weight, g/m	
mm	KN	KN	%	Min	Max	Nominal (± 2%)	Range
9.3	96.7	85.1	3.5	112	149	406	398-414
9.6	102	89.8	3.5	115	154	430	421-438
12.5	173	152	3.5	150	200	726	712-741
12.9	186	164	3.5	155	206	781	765-797
15.2	259	228	3.5	182	243	1086	1064-1108
15.7	279	246	3.5	188	251	1172	1149-1195

Strand straightness: The bow height (indicating strand straightness) shall not be greater than 25 mm, checked as per guidelines in IS 14268-2022.

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Strand relaxation properties

Max relaxation loss (as per test conditions mentioned in IS 14268-2022)	Testing time	Initial testing load	Relaxation loss
	(hours)	%	%
	100	70% of min specified break load	< = 1.8 %
	1000		< = 2.5 %

Coil Characteristics

	Coil dimensions, mm		**Coil Weight, kg**			
	Min inner dia	Max outer dia	**Small**		**Big**	
			Min	Max	Min.	Max.
Coil weight and dimensions	740	1250	500	2000	2001	4000
	740	1250	500	2000	2001	4000
	740	1250	500	2000	2001	4000
	740	1250	500	2000	2001	4000

Product Supplies

Packaging:	**UNOILED: Rusto paper, HDPE Sheet, HDPE Roll, Strapping, Palletizing on wooden platform.** **OILED: HDPE Roll, Stretch film, Strapping, Palletizing on wooden platform.**
Certification:	ISI emblem with valid CML number of BIS license, cast number, chemical composition, strand diameter, cross-section area, break load, 0.2% proof load (or load at 1 % extension), % Elongation, E value, unit weight and lay length.
Labeling:	TATA Wiron Tag with name of manufacture, diameter, weight, batch number, coil number, material code, heat number, ISI emblem with valid CML number of BIS license.
Product Storage / Handling	Coils should be stored in dry place with minimum moisture levels. For prolonged storage, it is advised to keep coils at elevated level, above ground, using timber support. Coils must be stored in "Eye-to-Sky" condition only.

Tata Steel Limited		**Customer**
Issued by, Wire Technology Group:	Approved by, Quality Assurance	(Signature of approving authority, below)