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1. Product description

Pc strand is stranding by pre-stressing process using wires produced by cold drawing. While large gaps on structures are economically dealt with Prestressed Concrete Strand, at the same time, large areas can be gained as well with the reduction of concrete cross-section. Also the deformations occurring in the prefabricate systems exposed to dynamic loads can be improved with the drawability feature of the steel.

Bridge / Viaduct beams, Prefabricated Industrial structures, T beams, Concrete pipes and silos, Anchorage and Ground improvement are also used.

2. Normative references

- ASTM A416/A416M Standard Specification for Low-Relaxation, Seven-Wire Steel Strand for Prestressed Concrete

3. Mechanical Properties

Breaking Strength Requirements for Grade 270 (1860) ;

Nominal Diameter of Strand		Minimum Breaking Strength of Strand		Steel Area of Strand		Weight (Mass) of Strand	
in.	mm	lbf	kN	in.2	mm2	lb/1000 ft	kg/1000 m
0.375	9.53	23 000	102	0.085	55	290	430
0.438	11.10	31 000	138	0.115	74	390	580
0.500	12.70	41 300	184	0.153	99	520	780
0.520	13.20	45 000	200	0.167	108	570	840
0.563	14.30	51 700	230	0.192	124	650	970
0.600	15.20	58 600	261	0.217	140	740	1100
0.620	15.70	62 800	279	0.231	150	780	1200
0.700	17.80	79 400	353	0.294	190	1000	1500

Yield Strength Requirements for Grade 270 (1860) ;

Nominal Diameter of Strand		Initial Load		Minimum Load at 1.0 % Extension	
in.	mm	lbf	kN	lbf	kN
0.375	9.53	2 300	10.2	20 700	92.1
0.438	11.10	3 100	13.8	27 900	124.1
0.500	12.70	4 130	18.4	37 170	165.3
0.520	13.20	4 500	20.0	40 500	180.1
0.563	14.30	5 170	23.0	46 530	207.0
0.600	15.20	5 860	26.1	52 740	234.6
0.620	15.70	6 280	27.9	56 520	251.4
0.700	17.80	7 940	35.3	71 500	318.0

Relaxation Properties—Strand shall have relaxation losses of not more than 2.5 % when initially loaded to 70 % of specified minimum breaking strength or not more than 3.5 % when loaded to 80 % of specified minimum breaking strength of the strand after 1000 hours of testing.

4. Chemical Properties

The chemical properties of the supplied raw materials according to ASTM SAE J403 are given in the table.

Quality	(C %)	(Mn %)	(P %)	(S %)
SAE 1084	0,80-0,93	0,60-0,90	max. 0,030	max. 0,050

5. Packaging Forms

Package Specification	Coil Size
Inner Diameter (ID) (mm)	800 or 900
Traverse (mm)	750
Weight (kg)	2500-4000
Lay Direction	S or Z

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