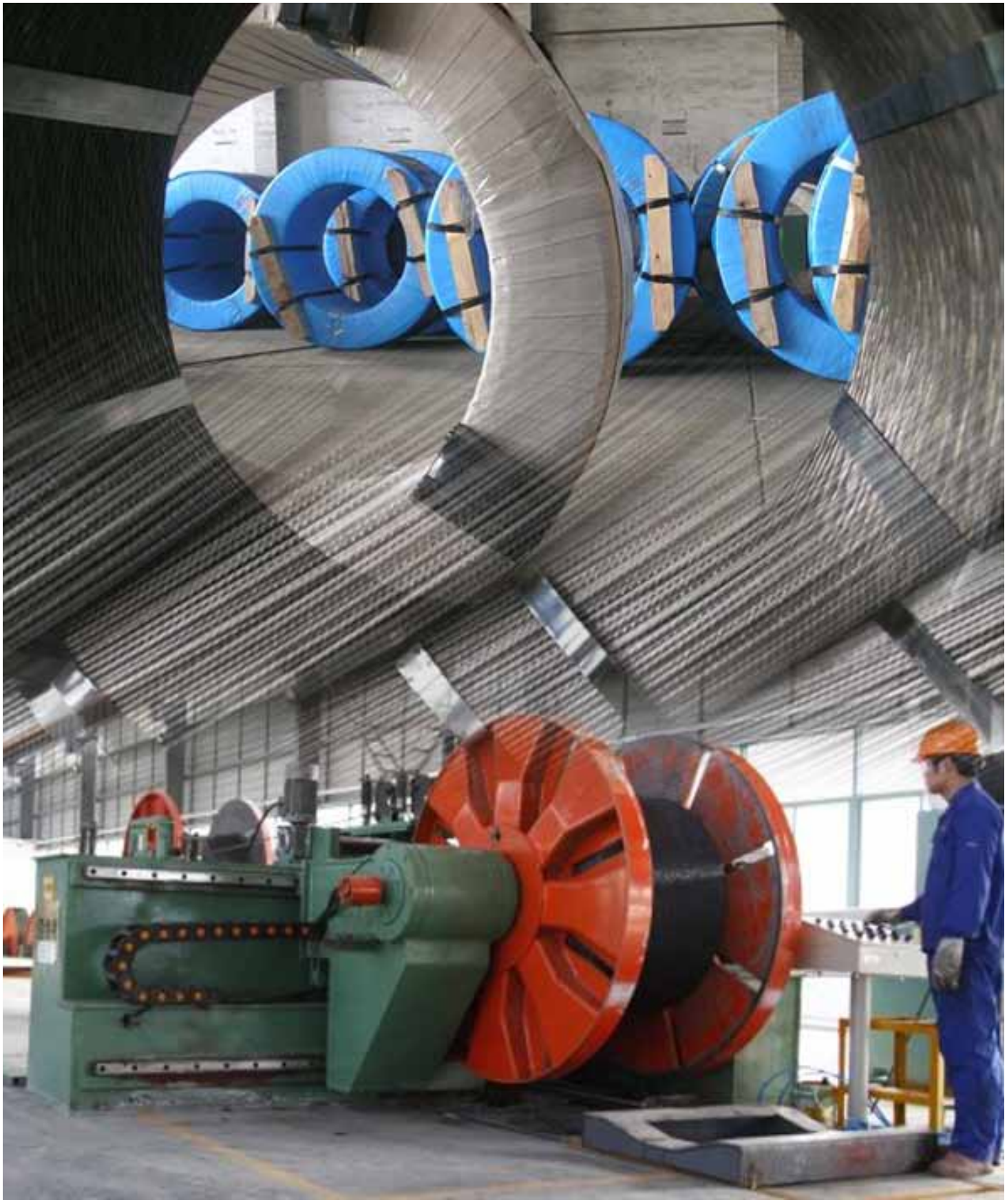
TMG



TMG PC Strands, Wire & Bar

Low Relaxation Strands

TMG 7-wire Low Relaxation Strands is renowned for its high quality and reliability. Our ability to meet numerous international standards like ASTM A416, BS 5896, JIS G3536, AS/NZS 4672.1, EN 10138 etc. has made us the preferred supplier among our competitors. Being an end user ourselves in post-tensioning work or stayed-cable projects, we definitely know what it takes to produce good quality strand to meet tomorrow's engineering challenges.

TMG is also capable of producing galvanized strands, PE coated strands & epoxy-coated strands for various applications.

Technical data for TMG Low Relaxation PC Strands

Technical data of ASTM A 416-2012

Grade	Diameter	Diameter Tolerance	Cross Section Area	Weight	Minimum Breaking Strength	Minimum Yield Strength at 1% Extension	Minimum Elongation to Fracture on 600mm Gauge	Relaxation after 1000hrs	
								70% Breaking Load	80% Breaking Load
	mm	mm	mm2	kg/1000m	kN	kN	%	%	%
250	9.50	+/- 0.40	52.00	405	89	80.1	3.5	< 2.5	< 3.5
	11.10		69.70	548	120	108.1			
	12.70		92.90	730	160	144.1			
	15.20		139.00	1090	240	216.2			
270	9.53	+0.65 -0.15	55.00	430	102	92.1	3.5	< 2.5	< 3.5
	11.10		74.20	580	138	124.1			
	12.70		98.70	780	184	165.3			
	15.20		140.00	1100	261	234.6			
	15.70		150.00	1200	279	251.4			
	17.80		190.00	1500	353	318.0			

Technical data for TMG Low Relaxation PC Strands

Technical data of BS 5896-1980

Type	Diameter	Diameter Tolerance	Cross Section Area	Weight	Tensile Strength	Minimum Breaking Strength	Minimum Yield Strength at 1% Extension	Minimum Elongation to Fracture on 500mm Gauge	Relaxation after 1000hrs		
									60% Breaking Load	70% Breaking Load	80% Breaking Load
	mm	mm	mm²	kg/1000m	MPa	kN	kN	%	%	%	%
Standard	9.3	+0.30	52	408	1770	92	81	3.5	< 1.0	< 2.5	< 4.5
	11.0	-0.15	71	557	1770	125	110				
	12.5	+0.4	93	730	1770	164	144				
	15.2	-0.2	139	1094	1760	232	204				
Super	9.6	+0.30	55	432	1860	102	90	3.5	< 1.0	< 2.5	< 4.5
	11.3	-0.15	75	590	1860	139	122				
	12.9	+0.4	100	785	1860	186	163				
	15.7	-0.2	150	1180	1770	265	233				

Technical data of JIS G 3536-2008

Type	Diameter	Diameter Tolerance	Cross Section Area	Weight	Minimum Breaking strength	Minimum Yield Strength	Minimum Elongation to Fracture on 500mm Gauge	Relaxation after 1000hrs
								60% Breaking Load
	mm	mm	mm²	kg/1000m	kN	kN	%	%
SWPR7AL	9.3	+0.40	51.61	405	88.8	75.5	3.5	< 2.5
	10.8		69.68	546	120	102		
	12.4		92.90	729	160	136		
	15.2		138.70	1101	240	204		
SWPR7BL	9.5	-0.20	54.84	432	102	86.8	3.5	< 2.5
	11.1		74.19	580	138	118		
	12.7		98.71	774	183	156		
	15.2		138.70	1101	261	222		
SWPR19L	17.8	+0.60	208.40	1652	387	330	3.5	< 2.5
	12.8		312.90	2482	573	495		
	28.6	-0.25	532.40	4229	949	807		

Technical data of AS NZS 4672.1-2007

Type	Diameter	Diameter Tolerance	Cross Section Area	Weight	Nominal Tensile Strength	Minimum Breaking Strength	Minimum Yield Strength	Minimum Elongation to Fracture on 500mm Gauge	Relaxation after 1000hrs	
									70% Breaking Load	80% Breaking Load
	mm	mm	mm²	kg/1000m	MPa	kN	kN	%	%	%
Ordinary	9.5	-0.20	52.00	432	1850	102	85% of minimum breaking strength	3.5	< 2.5	< 3.5
	12.7		98.60	774	1870	184				
	15.2	+0.40	143.00	1122	1830	261				
	18.0		190.00	1492	1850	353				

Reference Photos for TMG Low Relaxation PC Strands

Drawn Wire

Drawing Production Line

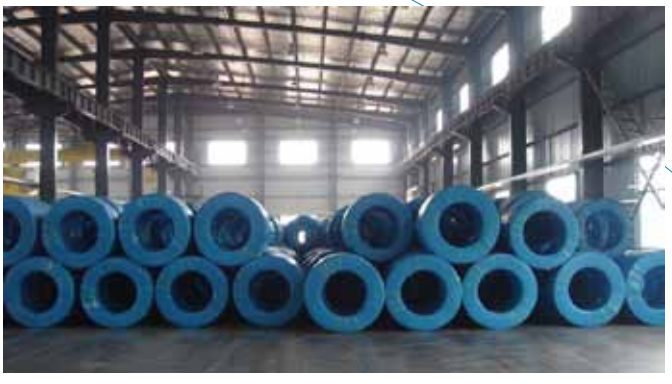
Stranding Production 01

Strand Production 02

Strand Production 03

Reeling

Packaging



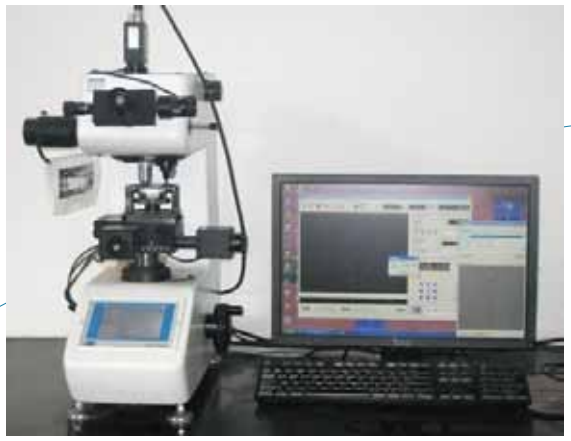
Warehouse

Reference Photos for TMG Low Relaxation PC Strands

PE Strands 01

PE Strands 02

Break Strength Test



Cross Section Magnification Test

Metallurgy Test

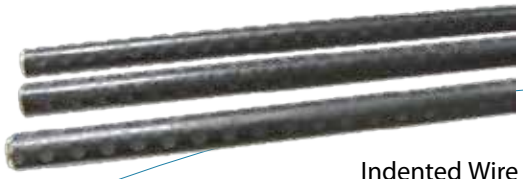
Relaxation Test

TMG High Tensile Strength Wire (Plain, Spiral & Indented)

TMG high tensile strength wire with plain, spiral or indented surfaces is widely used for many precast concrete products and stayed-cable projects. With the infrastructure boom in east Asia, concrete sleepers for railway tracks, concrete electrical poles, hollow-core floor boards for buildings, concrete pipes for water / sewage transportation etc. is driving up the demand for high tensile strength wires. TMG's ability to produce these wires with international standards like ASTM A881, ASTM A421, BS 5896, JIS G3536, AS1310, EN 10138 etc has made us the number one choice in our client's selection for reliable supplier.

TMG is also capable of producing galvanized wire.

Plain Wire



Indented Wire

Spiral Wire

Technical data of TMG High Tensile Strength Wire (Plain, Spiral & Indented)

Technical data of Spiral Wire

Diameter	Diameter Tolerance	Cross Section Area	Weight	Tensile Strength	Yield Strength	Minimum Elongation to Fracture on 200mm Gauge	Bending Test		Relaxation after 1000hrs
							Minimum Number of Times	Bending Radius	70% Breaking Load
mm	mm	mm²	g/m	MPa	MPa	%		mm	%
4.00	+/- 0.04	12.57	98.6				3	10	
4.80	+/- 0.05	18.10	142	1470	1290		4	15	
5.00	+/- 0.05	19.63	154	1570	1380		4	15	
5.25	+/- 0.05	21.65	170	1670	1470		4	15	
6.00	+/- 0.05	28.27	222	1770	1560		4	15	
6.25	+/- 0.05	30.68	241	1860	1640		4	20	
7.00	+/- 0.05	38.48	302				4	20	
7.50	+/- 0.05	44.18	347	1470 1570	1290 1380	3.5	4	20	2.5
8.00	+/- 0.06	50.26	394	1670 1770	1470 1560		4	20	
9.00	+/- 0.06	63.62	499	1470 1570	1290 1380		4	25	
9.50	+/- 0.06	70.88	556	1670	1470		4	25	
10.00	+/- 0.06	78.54	616	1470	1290		4	25	
12.00	+/- 0.06	113.10	888	1570	1380		4	30	

Technical data of TMG High Tensile Strength Wire (Plain, Spiral & Indented)

Technical data of Plane & indented Wire

Diameter	Diameter Tolerance	Cross Section Area	Weight	Tensile Strength	Yield Strength	Minimum Elongation to Fracture on 200mm Gauge	Bending Test		Relaxation after 1000hrs
							Minimum Number of Times	Bending Radius	70% Breaking Load
mm	mm	mm²	g/m	MPa	MPa	%		mm	%
4.00	+/- 0.04	12.57	98.6	1470	1290	3.5	3	10	2.5
5.00	+/- 0.05	19.63	154	1570	1380		4	15	
6.00	+/- 0.05	28.27	222	1670	1470		4	15	
7.00	+/- 0.05	38.48	302	1770 1860	1560 1640		4	20	
8.00	+/- 0.05	50.26	394	1470 1570	1290 1380		4	20	
9.00	+/- 0.05	63.62	499	1670	1470		4	25	
10.00	+/- 0.05	78.54	616	1470 1570	1290 1380		4	25	

Reference Photos of TMG High Tensile Strength Wire (Plain,Spiral & Indented)

Spiral Wire

Wire Production 01

Wire Production 02

Wire Production 03

Reference Photos of TMG High Tensile Strength Wire (Plain, Spiral & Indented)

Galvanized Wire 01

Galvanized Wire 02

Spiral Wire used in Concrete Railway Sleepers

Concrete Railway Sleepers

Hollow Core Slab

Water Pipe

TMG PC Bar

TMG produces PC bar under JIS G3137 standard and it is used mainly for the production of spun piles.

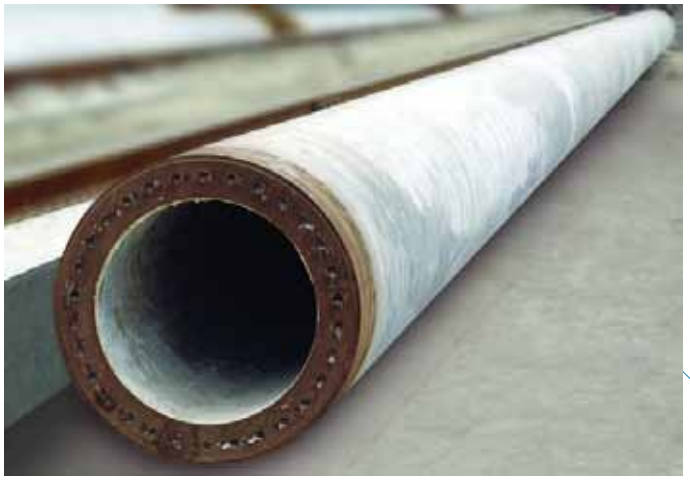
PC Bar

Technical data for TMG PC Bar

Technical data of JIS G 3137-1994

Type	Diameter	Cross Section Area	Weight	Tensile Strength	Yield Strength	Minimum Elongation to Fracture	Relaxation after 1000hrs
							70% Breaking Load
	mm	mm²	g/m	MPa	MPa	%	%
SBPDN	7.1	40	314	1080	930	5.0	4.0
	9.0	64	502	1230	1080		
SBPDL	10.7	90	706				2.5
	12.6	125	981	1420	1275		

PC Bar used in Concrete Spun Piles Production



Concrete Spun Pile

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