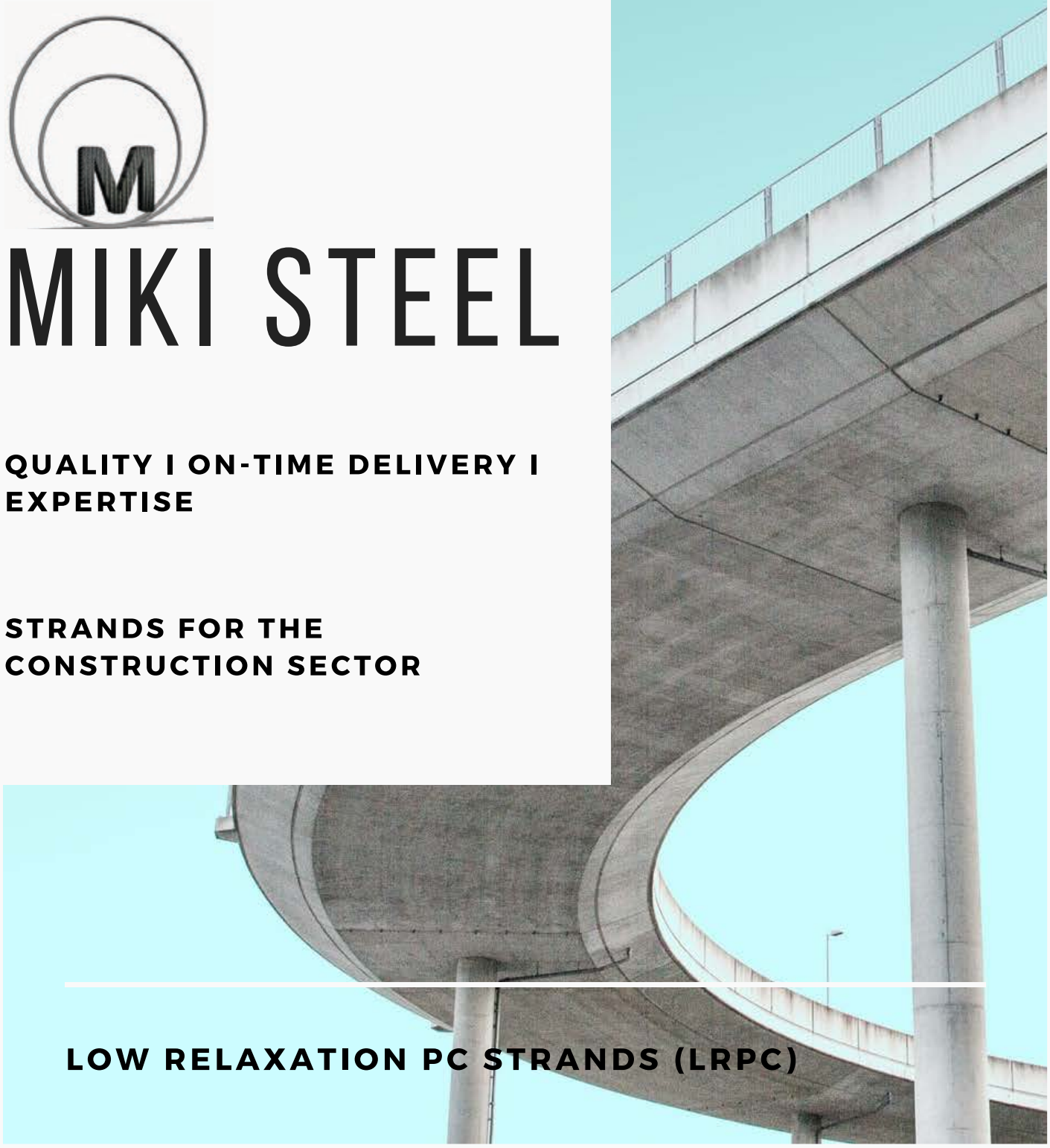
THE WIRE PEOPLE (SINCE 1976)

MIKI STEEL

QUALITY I ON-TIME DELIVERY I EXPERTISE

STRANDS FOR THE CONSTRUCTION SECTOR



LOW RELAXATION PC STRANDS (LRPC)

ABOUT

Miki Group, established in the year 1976 is one of the pioneering companies in offering reinforcement steel in precast technology in India. Our continuous investments in updating our technology and investments has enabled us in delivering the highest quality prestressing wire and strands to our customers consistently for over four decades.

Our strategically located manufacturing units in Ranchi, Visakhapatnam, Nagpur and Bangalore have enabled us to effectively service clients pan-India; with exports accounting for a small percentage of our total output.

Our internal supply chain management has helped us reduce costs, which are then passed on to our customers.

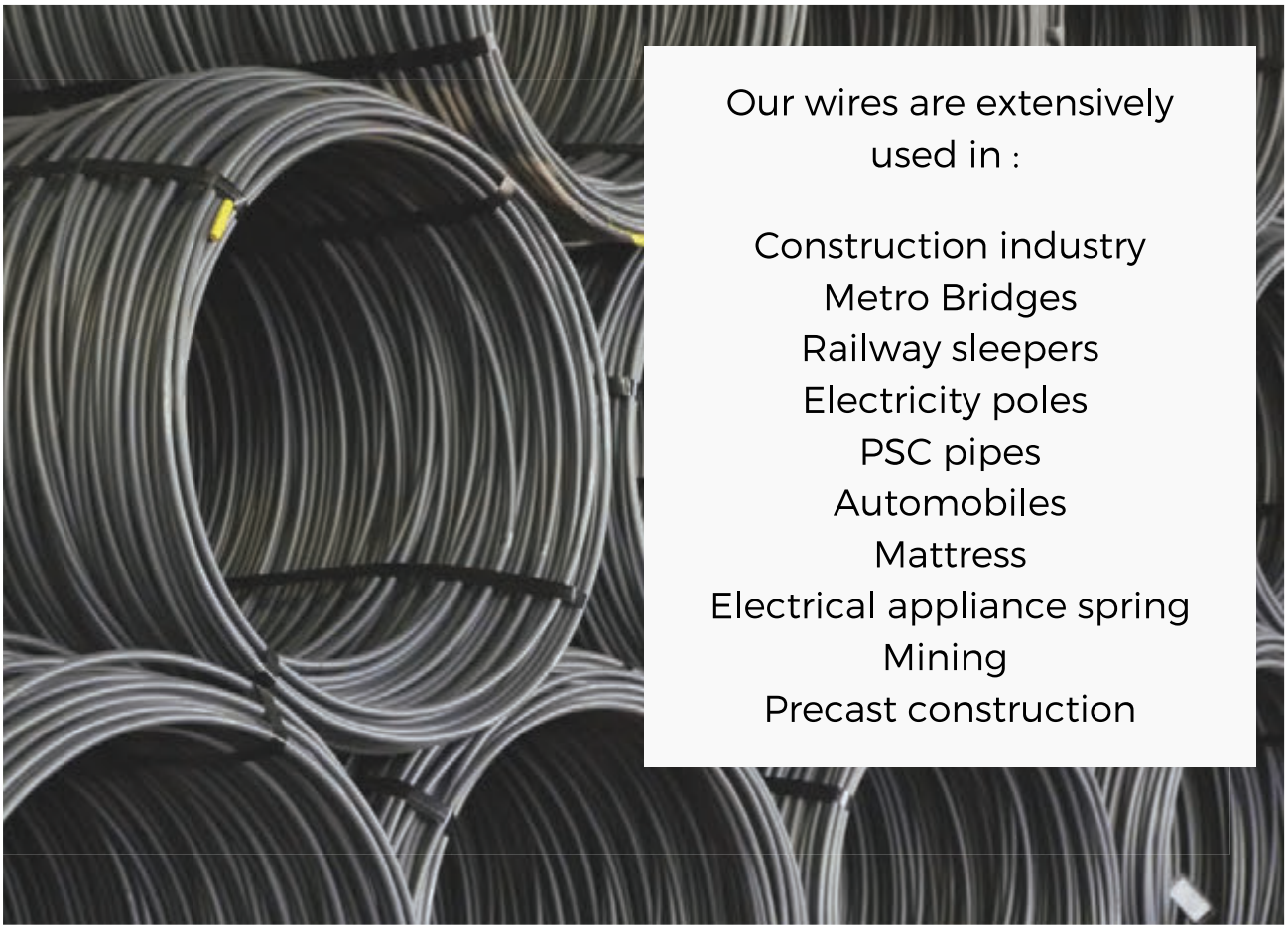
With a combined manufacturing capacity of over 100,000MT we have consistently grown and expect to further increase capacity in the coming years.

Quality - All our plants are ISO 9001 certified. But, it is with our constant attention to the quality of the raw material, process control, internal inspections and process optimisation that we have carved a prominent niche in the market.

PRODUCING AND PROMOTING PRESTRESSING PRODUCTS OF A SUPERIOR QUALITY IS OUR PASSION

PRODUCT RANGE - WIRE DIVISION

PC Wire Strands	
	3 ply 7 ply 7.90mm to 15.20mm
PC Wire Plain & Indented	
	3.00mm to 10.00mm
Spring Steel Wire	
	1.20mm to 11:00mm
LRPC	
	9.50mm to 15.20mm
Rolling Shutter wire	
	5.30mm to 9.00mm
Mattress Wire	
	1.40mm to 4.00mm



Our wires are extensively used in :

Construction industry
Metro Bridges
Railway sleepers
Electricity poles
PSC pipes
Automobiles
Mattress
Electrical appliance spring
Mining
Precast construction

WHAT IS LRPC?

LRPC stands for Low Relaxation Pre-stressed steel strands is the concept of pre-stress steel strands loosing initially applied stress in mathematical proportion with the passage of time when embedded in concrete.

The utmost important factor attributing to this loss in stress is the stress relaxation property of the steel itself. By treating the steel through a thermo-mechanical process known as 'stabilising', the propensity of the steel to“Relax” under a stressed condition is controlled to a great extent. Low relaxation ensures that no noticeable loss of tension will occur in time, therefore a long lasting compressive force on concrete.Miki Steel prestressing steel guarantees a very low relaxation.

The use of Low Relaxation Strand is well-established in developed countries. However, its use in India was restricted till recently due to limited availability of strands.

Our state of the art stabilising process is in pursuant to the globally followed standards of testing LRPC. With this technology now available in India, design and construction engineers are reaping benefits of this critical material on a much wider scale.

WHY LRPC?

- Up to 10% reduction in steel and concrete consumption for projects can be achieved, resulting in reduced cost of project

- A significant reduction in the number of anchorages, ducts and wedges used for the projects

- Low relaxation ensures that no noticeable loss of tension will occur in time, therefore ensuring a long lasting compressive force on concrete.

- Lower relaxation loss, which is 2.5% max after 1000 hrs

- Hot Stretching process during manufacturing ensures almost straight strands, hence eliminating the extra post-straightening treatment

- Higher fatigue and corrosion resistance

- Uniform stress-strain relationship

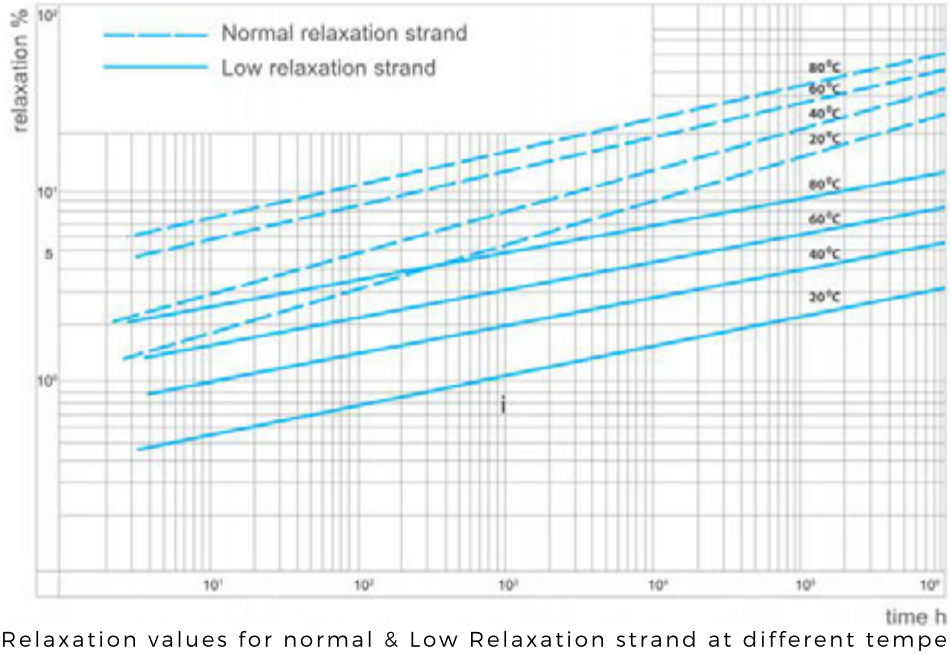
INDUSTRIAL APPLICATION OF LRPC

WHAT IS 'LOW RELAXATION'?

Pre-stressed steel strand, when stressed and embedded in concrete, loses the applied stress exponentially as time passes. The loss of stress is called 'Stress Relaxation' and is one of the most important factors in the design of pre-stressed concrete structures. If the assumed relaxation in stress can be reduced, then many advantages can be expected.

'Low Relaxation' wire and strand exhibit a relaxation loss not greater than 2.5% after 1000hrs at around 20 degrees centigrade. when initially loaded to 70% of the specified minimum breaking strength, as compared to 5% for 'Normal Relaxation' of stress-relieved wire and strand. There are certain applications where Normal Relaxtion (NR) wires are more suitable. We supply the same as per prescribed specifications, if required by the customer.

TYPICAL RELAXATION CURVE



Relaxation values for normal & Low Relaxation strand at different temperatures.
(Initial stress = 0.70 X specified characteristic strength.

OUR QUALITY ASSURANCE

Adhering to our philosophy of 'customer first' We practise stringent quality management practices in our strand manufacturing unit

- Selection of wire rods of specified chemistry and quality
- Quality checks at every stage of production
- In-house relaxation testing facility
- Our strands are regularly tested at independent accredited laboratories for fatigue under dynamic loads and for tensile properties.

STANDARDS

INDIAN STANDARDS IS 14268:1995

Standard		Nominal Diameter	Diameter Tolerance	Nominal Area	Unit Weight	Weight Tolerance	Pitch	Minimum Breaking Load	Minimum Yield Load			Minimum Elongation	Straightness	1,000-hr. Relaxation (% Max.)		MOE
	Grade		mm	mm2	kg/ 1000m	%	Times of Diameter	kN	kN 0.1%	kN 0.2%	kN 1.0%	%		70%	80%	Gpa or kN/mm2
		9.5	+/-0.4	51.6	405	-	12-16	89	-	-	80.1	3.5		2.5	-	
	Class 1	11.1	+/-0.4	69.7	548	-	12-16	120.1	-	-	108.1	3.5		2.5	-	
		12.7	+/-0.4	92.9	730	-	12-16	160.1	-	-	144.1	3.5	Arc height	2.5	-	
IS		15.2	+/-0.4	139.4	1094	-	12-16	240.2	-	-	216.2	3.5	shall be no greater	2.5	-	185 - 205
14268 1995	Class 2	9.5	+/-0.4	54.8	432	-	12-16	102.3	-	-	92.1	3.5	than 25 mm for	2.5	-	
		11.1	+/-0.4	74.2	582	-	12-16	137.9	-	-	124.1	3.5	gauge length 1 m	2.5	-	
		12.7	+/-0.4	98.7	775	-	12-16	183.7	-	-	165.3	3.5		2.5	-	
		15.2	+/-0.4	140	1102	-	12-16	260.7	-	-	234.5	3.5		2.5	-	

AMERICAN STANDARD A416-2010

Standard		Nominal Diameter	Diameter Tolerance	Nominal Area	Unit Weight	Weight Tolerance	Pitch	Minimum Breaking Load	Minimum Yield Load			Minimum Elongation	Straightness	1,000-hr. Relaxation (% Max.)		MOE
	Grade		mm	mm2	kg/ 1000m	%	Times of Diameter	kN	kN 0.1%	kN 0.2%	kN 1.0%	%		70%	80%	Gpa or kN/mm2
		9.50	+/-0.4	51.60	405.0	-	12-16	89.0	-	-	80.1	3.5		-	3.5 (B)	
	1 725	11.10	+/-0.4	69.70	548.0	-	12-16	120.1	-	-	108.1	3.5		-	3.5 (B)	
		12.70	+/-0.4	92.90	730.0	-	12-16	160.1	-	-	144.1	3.5		-	3.5 (B)	
ASTM		15.20	+/-0.4	139.40	1094.0	-	12-16	240.2	-	-	216.2	3.5		-	3.5 (B)	
A416 - 2010		9.53	+0.65/-0.15	54.80	432.0	-	12-16	102.3	-	-	92.1	3.5		-	3.5 (B)	
(Round		11.11	+0.65/-0.15	74.20	582.0	-	12-16	137.9	-	-	124.1	3.5		-	3.5 (B)	
Strand)	1 860	12.70	+0.65/-0.15	98.70	775.0	-	12-16	183.7	-	-	165.3	3.5		-	3.5 (B)	
		15.24	+0.65/-0.15	140.00	1102.0	-	12-16	260.7	-	-	234.6	3.5		-	3.5 (B)	
		15.75	+0.65/-0.15	149.20	1173.0	-	12-16	277.4	-	-	249.7	3.5		-	3.5 (B)	

International Specification	Indian Specification
ASTM A 416	IS 14268 (Low Relaxation Strand)
BS 5896	IS 6006 (Normal Relaxation Strand)
JIS 3536	
AS 1311	
EN 10138:3:2000	

STANDARD VARIATIONS

We manufacture the strands as per the specifications required by the customer

WHY MIKI STEEL?

We are a passionate and experienced group with over four decades of experience in the manufacturing of pre-cast wire industry with a cumulative turnover exceeding INR 500crores.

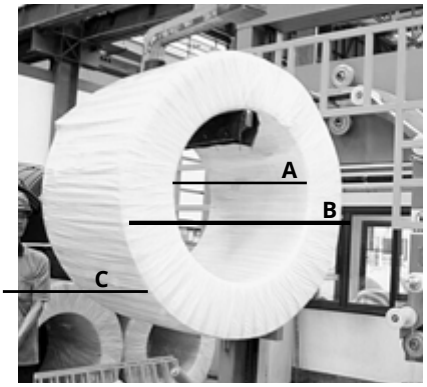
- We currently hold **BIS licenses** for the manufacturing and sale of LRPC strand (IS 14268:2005)
- We are one of the first few companies in India which are approved by the **Delhi Metro Rail Corporation Ltd.** for the supply of High Tensile Steel Strands & LRPC Strands for all the metro projects undertaken by them.
- Our state of the art Italian LRPC plant is the only licensed LRPC manufacturer located in the **Southern state of India**.
- We have a current manufacturing capacity of over **100,000MT per annum** and we capture approximately 25% market share in the Indian Railway PSC Sleeper Reinforcement Wire supply.

"OUR PROMISE: QUALITY, ON-TIME DELIVERY & TECHNICAL EXPERTISE ."

- With our manufacturing units located in **Jharkhand, Maharashtra, Andhra Pradesh & Karnataka** we have truly adopted the concept of 'buying local'.
- Our national network enables us to drastically **reduce the cost impact of transportation** to the end customer.
- We adhere to the highest domestic and international standards for our product and our manufacturing facility. Our unit is **certified with a ISO 9001:2015** for quality management.
- Our **continuous investment** in technology, manpower training and equipment helps us consistently maintain the highest quality standards for all our products.

Proud to make in India

ABOUT OUR PACKAGING



7 WIRE STRANDS
IS 14268
KG 2000 TO 3500

A 900MM
B 1000-1300MM
C 750MM

PACKAGING

The Miki Steel strands are packed in reel-less coils. With strapping in six places & one circumferential high tensile strap around the coil.
The starting of the strand is separately identified and can be easily located on the coil.

WRAPPING

Miki Steel coils are first wrapped with stretch wrap or VCI. Another layer of HDPE laminate wrapping for protecting the coil through transportation. Standard colour orange.

OILING

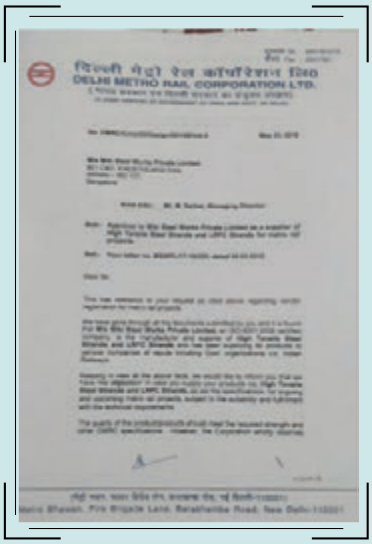
If required by the client, the coils are coated with a water soluble coating. This increases the storage life of the coils and can we washed off by spraying water on to the coils.

SIZE & USAGE

The coils can be made to weights of 2MT to 3.5MT as per the customers requirement & specification, Each coil comes with a secured MIKI STEEL tag which states the weight & serial number of the coil.

LICENSES

CERTIFICATES



CLIENT TESTIMONIALS

OUR CLIENTS

Freyssinet

BSBK

KEF INFRA

UTRACON
YOUR TRUSTED PROJECT PARTNER

CICON
CICON Engineers Pvt. Ltd.

PRECA™
PRE-STRESSED CONCRETE SOLUTIONS

SIMPLEX
INFRASTRUCTURES

KATERRA
BREAK NEW GROUND

supertech
Yours for Life

SHIV FORCE GROUP

inventaa

BBR (INDIA) PVT. LTD
AN ISO-9001 CERTIFIED COMPANY

SYCONINFRA

VH PT SYSTEM
PT Contractors And Suppliers
ISO 9001:2015 (QMS) AND 45001:2018 (BSCIC)

KPC

THE WIRE PEOPLE (SINCE 1976)

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