KAN
STRUCTURAL INNOVATION
Dedicated to Excellence

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In ASSOCIATION with
PTE Strand Company
USA

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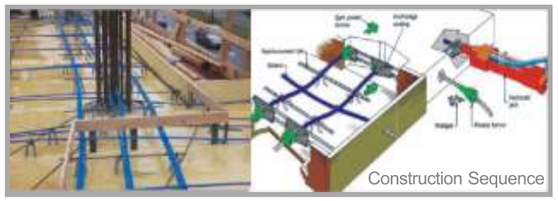
PT System Supply

KAN being a turnkey contractor for post tensioning system in your project will ensure timely supply of unbonded Post-Tensioning systems according to every specific need of the project.

KAN's involvement as a team member during all stages of the project will result in the optimal cost for the applied post-tensioning system. KAN will develop most advantageous solution in terms of material quantities, construction schedule, life-cycle cost and space utilization.

PT Installation Works



KAN provides full range of installation works for unbonded (monostrand) post-tensioning systems.

The PTI certified well-trained construction team will perform system installation and related works in a fast and timely manner according to your project's schedule. As a team member with the Contractor General we are flexible and efficient in co-ordination of construction schedules with other members of the team.

Our system installation works include:

- Live end anchor erection
- Pre-fabricated tendons installation
- Stressing
- Live end finishing

Technical Supervision

KAN maintains close communication and support with its client until the project is successfully completed. Our field services personnel provide project supervision assistance and respond quickly to any circumstances that may arise.

We provide to a Contractor General a full scope of technical supervision services for the post-tensioning system, which has been applied in the project. We provide advisory and technical supervision to the Contractor General as a complex solution for the post-tensioning system as part of the concrete reinforcement works.

About KAN

KAN Structural Innovation, a subsidiary organisation of CNS Infrastucture Ltd. is one of the Gujarat's leading Post-Tension, Project Management and Construction Company, using industrial best practices when working with clients to create high quality, sustainable property assets.

KAN specializes in Design & Installation of Long Span Slab & Long Span Beam for Un-bonded Post-Tensioning (PT) system by using its accessories & components.

KAN has an In-House Design Department Staffed by qualified engineers with experience in Post-Tensioned building design. This team is happy to assist clients, architects, engineers & contractors with:

- Structural Design
- Scheme Design
- Budget Estimate
- Detailed Design
- Vibration Analysis of Floor Plates
- Working Drawings

The company has constructed Gujarat's First private commercial building of 10,000 Sq. Ft. slab area with 2 intermediate columns spaced at 50 Feet spans. With the help of latest construction technology used by a company know as "Unbonded Post-Tension (PT) Slab Design" achieved a great sculpture named "Mangal Deep" in Surat (Gujarat), which ever constructed in Gujarat.

Company Profile

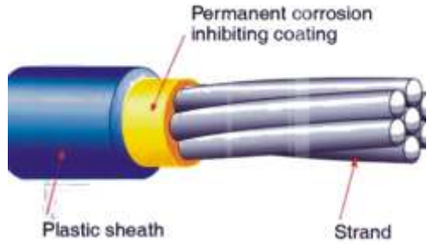
KAN Structural Innovation is immerged by the merger of three renounced structural engineer, two from Saurashtra zone and one from Gujarat zone with common goal of providing best & sustainable practices in the field of pre-stressed concrete (specifically unbounded post tensioned concrete design)

A team of dedicated professional is deployed along with latest software & our indigenous software for structural designing & detailing to explore new & innovative dimension in the world of construction.

We design, detail, supply & install unbounded PT system for floors, beams tanks, pipe, shaft bridge, column etc.

Our Projects in PT

Accessories & Components of Unbonded Post-Tensioning

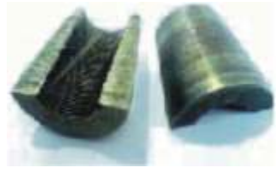


Standard PT Cable (High Tensile Cable with grease and PP Sheating)

Hydraulic Jack

Ductile Iron Anchor Plate

Locking arrangement
at the cable ends



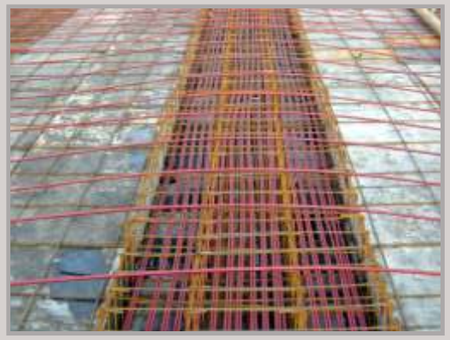
Wedges

Hydraulic Pump

Pocket Former

What is Post-Tensioning (PT) ?

Post-Tensioning is a method of reinforcing concrete or other materials with high-strength steel strands or bars, typically referred to as tendons. Post-Tensioning systems require specialized knowledge and expertise to manufacture, fabricate, assemble and install.



Applications of Unbonded PT

- Shopping Centers
- Offices
- Apartment Buildings
- Car Parking Structures
- Industrial Buildings
- Hospitals
- Institutional Building
- Residential Flats Slabs

Advantages of Unbonded PT

The pre-stressing of concrete has several advantages as compared to traditional reinforced concrete (RC) without pre-stressing. A fully pre-stressed concrete member is usually subjected to compression during service life. This rectifies several deficiencies of concrete. The following text broadly mentions the advantages of a pre-stressed concrete member with respect to an equivalent RC member.

1.Section remains un-cracked, which means

a. Reduction in steel corrosion.
   i. Increase in durability.
b. Full section is utilized.
   i. Higher moment of inertia (higher stiffness)
c. Less deformation (improves service ability)
d. Increase in shear capacity.
e. Suitable for use in pressure vessels, liquid retaining structures.
   i. Improves performance (resilience) under dynamic & fatigue load

2. High span to depth ratio, which leads to...
   a. Larger spans possible with pre-stressing (bridge, buildings with large column-free spaces) both for beams & slabs, which has an advantage of...
      i. Reduction in self weight with improves seismic performance of building.
      ii. More esthetic appeal due to slender member.
      iii. More economical section.

3.Miscellaneous Advantage:-
   a. Rapid construction.
   b. Better quality control.
   c. Reduction in maintenance.
   d. Reduction in Form work.

Technology

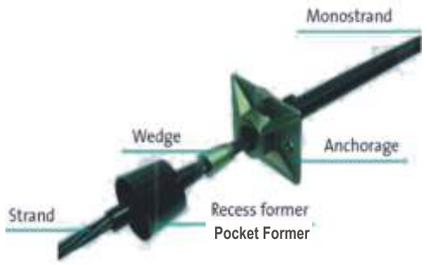
Post-Tensioning is chosen by many developers today in all over the world to achieve greater effectiveness and substantial economy of the construction, more specifically to achieve:

- Design flexibility
- Substantially Reduce Construction Cost Budget
- Educed construction materials consumption

Post-Tensioning is a construction method of reinforcing (strengthening) concrete materials with high strength steel strands or bars, typically referred to as tendons.

Post-Tensioning has the capacity to span greater distances with thinner slabs and beams, while providing structural strength and slenderness.

Unbonded Post-Tensioning Systems



An unbonded tendon is one in which the pre-stressing steel is not actually bonded to the concrete that surrounds it except at the anchorages. The most common unbonded systems are mono-strand (single strand) tendons. A mono-strand tendon consists of a seven-wire strand that is coated with a corrosion-inhibiting grease and encased in an extruded plastic protective sheathing. The anchorage consists of an iron casting and a conical, two-piece wedge which grips the strand.

Services

Recognised as a tailor-made turnkey professional solutions provider, designs, pre-fabricates, delivers and installs concrete post-tensioning systems and components for both new construction and the modification of existing structures, services and products provide optimal solutions and ensure the best value for the customers's needs.

Teams of skilled, dedicated professionals committed to industry involvement and technological advancement bring innovation to every project need as:

- Consulting
- Structural Design
- PT System Supply
- PT Installation Works
- Technical Supervision

Consulting

Because each project presents a unique opportunity, KAN teams with contractors, owners and engineers to evaluate projects and determine optimal solutions.

KAN specialists will evaluate the project and suggest the optimal solution in every project phase from planning and design to the supply of high quality systems and the execution of work on the construction site, including quality management and monitoring services.

Structural Design

Equipped by the qualified experienced engineering team, excellent theoretical basis and unique expertise, our company offers a professional level of design of the post tensioning concrete structures.

KAN effectively teams with the General Design Contractors, Architects and Engineers of the Project to develop the full technical design and working drawings. KAN will develop full design (from Sketch to Working drawings and Shop drawings) of the building Post-Tensioning system either as a subcontractor to General Designer or working directly with the Client.

We carry out complex calculation according to IS Code standards, prepare the necessary technical documentation for successful realization of the project. We design buildings of complicated configuration, working out and applying monolith post-tensioning technology.

We have all the necessary information data base - our work process is supported by accurate documentation on Post-Tensioning and the latest software applied all over the world.