

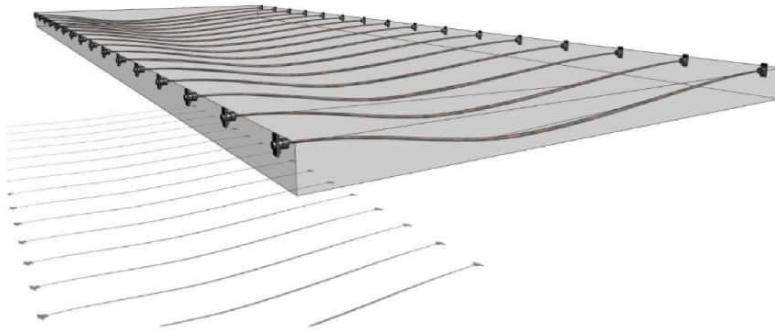
BUILD BETTER

WITH STRANDS PT



WHAT IS A PT SLAB?

A PT Slab is a concrete slab stressed by the post-tensioning method, which means the steel is being tensioned and the concrete is being compressed.



Post tensioning improves the performance of a structure and brings forward stronger and efficient structural elements. In this technique, the steel is stressed or tensioned before the concrete has to support service loads. Post tensioning overcomes the weakness of concrete in tension and makes better use of its strength in compression. For this, high tensile steel tendons/cables are placed along with the reinforcement, before casting of concrete. The tendons are then pulled and held in tension when the concrete reaches its desired strength, using specially designed anchorages fixed at each end of the tendon.

HOW IS A PT SLAB CONSTRUCTED?



Step 1: Laying Tendons through conduits

Step 2: Concreting of slab

Step 3: Tension is applied on tendons on the live end to achieve required tension

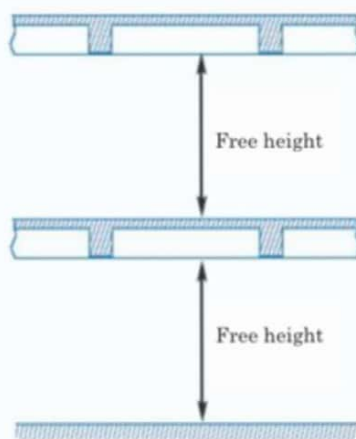
Step 4: Tendons are fixed and protected in the conduits by pressure grouting

ADVANTAGES OF A PT SLAB

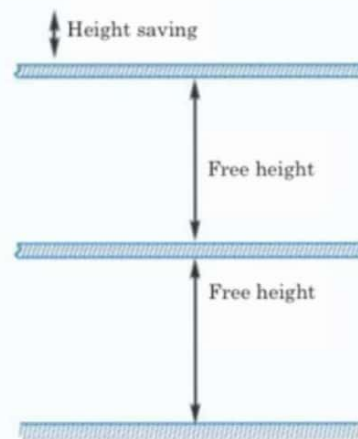
- ▲ Post tensioning optimises installation, saving materials and resources
- ▲ A very viable alternative for large span structures
- ▲ In spans or grids above 9m PT slabs become economical compared to conventional flat slab design by over 20%
- ▲ Planning the construction work to reduce the life cycle costs of the structure
- ▲ Thinner and longer span structural members are achieved by post tensioning
- ▲ Gives greater flexibility in floor layouts with fewer columns
- ▲ Post tensioned members shows reduced deflection, vibration, improved crack control and waterproofing properties.
- ▲ Demands lower maintenance

The PT Slab method allows designers to reduce building heights or to increase free heights between floors.

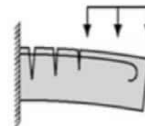
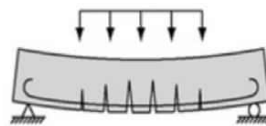
Traditional Design



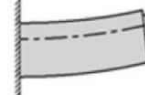
PT Slab Design



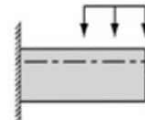
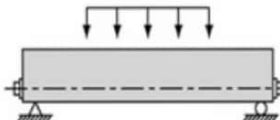
Reinforced concrete cracks under load



Post-tensioned concrete before loading



Post-tensioned concrete after loading



Simply Supported Beam

Cantilever Beam



STRANDS POST TENSION
#69, Nivya Road,
Kaloor, Kochin
t: +91 8606 002 266
e: mail@strandspt.in