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Post Tensioning Methods

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Abstract: This review paper discusses post-tensioning, which is one of the major techniques in modern construction with respect to enhancing the performances of concrete structures by impounding compressive stress into the structure. It looks into the principles of post-tensioning, comparing this method with conventional reinforcement methods, and provides a discussion on its advantages including reduced material usage, increased load-bearing capacity, and improved crack resistance. The paper also reviews applications in various segments of structural engineering, such as bridges, high-rise buildings, and parking garages. Case studies of real applications are also presented. It discusses the implications of post-tensioning on structural design, construction efficiency, and sustainability, aiming to provide valuable insights to engineers and architects in the field.

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