



# **Prestressed Concrete**

Author: Ashish A. Yaligar

ISBN 13 078 02 86172 21 7

978-93-86173-31-7

ISBN 10 93-86173-31-X

E-ISBN 978-93-86173-31-7

Edition: First Pages: 420

Type of book : Paperback

Year: 2021

Language English

Publisher . Khanna Publishing

Price: Rs 299.25

Categories Civil Engineering , <u>UNIVERSITY RECOMMENDED</u>

: , Civil Engineering , Khanna Publishing House

Condition New Type:

Country Origin : India

## **Product Description**

Prestressed Concrete provides a comprehensive coverage of the theoretical and practical aspects of the subject and includes the latestlevelopments in the field of prestressed concrete construction. It incorporates the latest Indian Standard specifications and codes regulating prestressed concrete construction.

The book introduces the properties of the materials and prestressing systems used in the PSC construction. Topics discussed on analysis of PSC sections for flexure, deflection, shear and torsion. In addition to this, analysis and design of various prestress concrete elements such as continuous beams, composite sections, one way slabs, two way slabs, flat slabs, grid floors, compression members, tension members, pipes, piles and tankare discussed. Analysis and design of various PSC structures such as bridges, sleepers, pavements and poles are also covered.

Construction techniques are well illustrated through numerous figures and a number of illustrative examples. Objective questions illustrated are quite useful for those appearing for competative examinations. The content of this book serve the needs of both students and professionals.

#### Salient Features:

- Ø Presents a blend of theoretical and practical aspects
- Ø Incorporates the provisions of the latest code, IS: 1343, in prestressed concrete
- Ø Supports theory with illustrations and photographs
- Ø Reinforces theoretical concepts by providing solved examples, review questions, exerscise problems and objective questions
- Ø Pedagogy:
- o 274 Figures
- 106 Solved Examples
- o 191 Review Questions
- 93 Exercise Problems
- o 305 Objective Questions



## Table of Contents

Chapter 1: Introduction, Materials and Systems of Pre-stressing

Chapter 2: Analysis of Sections For Flexure

Chapter 3: Losses of Pre-stress

Chapter 4: Analysis and Design of Sections for Shear

Chapter 5: Deflection of Pre-stressed Concrete Member

Chapter 6: Ultimate Flexural Resistance

Chapter 7: Design of Pre-stress Concrete Sections For Flexure and Torsion

Chapter 8: End Blocks

Chapter 9: Analysis and Design of PSC Continuous Beams

Chapter 10: Analysis and Design of Composite Sections

Chapter 11: Design of PSC One Way, Two Way & Flat Slabs and Grid Floors

Chapter 12: Compression Members and Piles

Chapter 13: Tension Members, Pipes and Tanks

Chapter 14: Poles, Pavements & Sleepers

Chapter 15: Design of Pre-stressed Concrete Bridges

Index

### Author

#### Shrikant B. Vanakudre

Dr. Shrikant B. Vanakudre is presently working as Principal, S.D.M College of Engineering & Technology, Dharwad, Karnataka India. He has been Head of the Civil Engineering Department and Dean (IPD) at SDMCET Dharwad.Completed his B.E in Civil Engineering from University of Mysore, M.E. in Structures from Shivaji University and Ph.D in Structures from Visvesvaraya Technological University, Belagavi. He has around 30 years of teaching experience & worked as structural consultant as well and has 10 years of research experience. He has published and presented 40 research papers in National and International Journals & Conferences. He is guiding 3 research scholars under Doctoral Degree programme. His areas of interest are Concrete Technology, Reliability Analysis and Design of Structures etc.

#### Ashish A. Yaligar

Ashish A.Yaligar is presently pursuing Ph.D (Full Time) in Department of Civil Engineering under the guidance of Dr. Shrikant B. Vanakudre, Principal S.D.M College of Engineering & Technology, Dharwad, Karnataka, India, affiliated to Visvesvaraya Technological University, Belgavi.Completed his M.Tech. in Structural Engineering from Government Engineering College Haveri, Karnataka and B.E in Civil Engineering from P.D.A. College of Engineeering, Kalaburagi, Karnataka. He has 4 years of research experience and published 3 research papers in journals & 3 research papers in International Conferences. His areas of Interest are Concrete Technology, Analysis and Design of Structures etc.

