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INDUSTRY STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

JTG 3362-2018

Replacing JTG D62-2004

Specifications for Design of Highway Reinforced Concrete and Prestressed Concrete Bridges and Culverts

公路钢筋混凝土及预应力混凝土桥涵设计规范

(English Translation)

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Preview: page 1 of 5 shown, 250 in the full document. Complete English PDF, instant download:
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Table of Contents

Foreword
1 General Provisions
2 Terms and Symbols
2.1 Terms
2.2 Symbols
3 Materials
3.1 Concrete
3.2 Reinforcement
4 Basis of Structural Design
4.1 General
4.2 Analysis of Slabs
4.3 Analysis of Beams
4.4 Analysis of Arches
4.5 Requirements for Durability Design
5 Design for Ultimate Limit State in Persistent Situations
5.1 General
5.2 Flexural Members
5.3 Compression Members
5.4 Tension Members
5.5 Torsion Members
5.6 Members Subjected to Punching Shear
5.7 Members Subjected to Local Compression
6 Design for Serviceability Limit State in Persistent Situations
6.1 General
6.2 Loss of Prestress
6.3 Check for Cracking Resistance
6.4 Check for Crack Width
6.5 Check for Deflection
7 Stress Analysis of Members in Persistent or Transient Situations
7.1 Stress Analysis for Prestressed Concrete Members in Persistent Situations
7.2 Stress Analysis of Members in Transient Situations
8 Requirements for Member Analysis

Preview: page 2 of 5 shown, 250 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jtg-3362-2018

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8.1 Composite Flexural Members

8.2 Post-tensioned Concrete Anchorage Zones

8.3 Diaphragms at Supports

8.4 Cap Beams on Piers and Abutments

8.5 Pile Caps

8.6 Hinges

8.7 Bearings

8.8 Deck Expansion Joints

9 Detailing Requirements

9.1 General

9.2 Slabs

9.3 Beams

9.4 Prestressed Concrete Superstructures

9.5 Arch Bridges

9.6 Columns, Piers and Abutments, Pile Caps

9.7 Bearings and Expansion Joints

9.8 Culverts, Lifting Loops and Hinges

Appendix A Practical Refined Analysis Models for Bridge Structures

Appendix B Analysis Method Using Strut-and-Tie Model

Appendix C Concrete Shrinkage Strain and Creep Coefficient Calculation, Ratio of Median to Ultimate Values of Prestress Loss due to Prestressing Steel Relaxation

Appendix D Calculation Formulas for Temperature Actions

Appendix E Simplified Calculation Formula for Effective Length of Compression Member

Appendix F Calculation for Compressive Resistance of an Eccentrically Loaded Reinforced Concrete Compression Member of Circular Cross-section with Longitudinal Reinforcement Evenly Distributed along the Perimeter

Appendix G Simplified Calculation for Loss of Prestress in Curved Tendons due to Anchorage Set, Reinforcement Retraction and Joint Compression after Considering Reverse Friction

Appendix H Simplified Calculation for Loss of Prestress Due to Elastic Shortening of Concrete in Post-tensioned Members

Appendix J Calculation for Depth of Compression Zone in Type B Prestressed Concrete Flexural Members Permitted to Crack

Wording Explanation for the Specifications

Background to Provisions

Technical Terms in Chinese and English

References

Preview: page 3 of 5 shown, 250 in the full document. Complete English PDF, instant download:
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Foreword

The revision of Code for Design of Highway Reinforced Concrete and Prestressed Concrete Bridges and Culverts (JTG D62-2004), pursuant to the "Notice of Planning for Compilation and Amendment Program of Highway Engineering Standards in 2011" (No. 115) issued by the Ministry of Transport of the People's Republic of China in 2006, was carried out by the chief editing organization, CCCC Highway Consultants Co., Ltd.

The revision has been approved and issued as Specifications for Design of Highway Reinforced Concrete and Prestressed Concrete Bridges and Culverts (JTG 3362-2018) for implementation.

During the revision, the editorial team conducted extensive special studies and research works, reviewed the updated technical development and design experience in China, and referred to relevant domestic and international standards. Upon the completion of the first draft of the Specifications, the drafted specification was circulated for comments from relevant experts and organizations involved in design, construction, maintenance and administration, based on which several rounds of discussion, consultation and updating were conducted before being finalized for approval.

The main revisions made in this version include the following contents: strength grades of reinforcement used in concrete bridges and culverts were updated; basic requirements for the design of bridge structures were added; design requirements for durability of concrete bridges and culverts were emphasized; requirements for checking of overturning resistance of concrete box girder bridges, practical refined analysis methods for complex bridges, design methods for bridges with external tendons, and design methods for disturbed regions of concrete bridges were supplemented; calculation methods for resistance on cross-sections of circular compression members were updated; calculation formulas for determining effective length factors of compression members with different boundary conditions were added; calculation methods for determining crack width in reinforced concrete structures or Type B prestressed concrete structures were adjusted; and requirements for detailing design were supplemented.

Feedback is welcome and will be taken into account in future editions. Please address it to the chief editing organization.

Chief editing organization: CCCC Highway Consultants Co., Ltd.

Associate editing organizations: Tongji University; Southeast University; Research Institute of Highway, Ministry of Transport; Dalian University of Technology; CCCC Highway Bridges National Engineering Research Center Co., Ltd.

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1 General Provisions

1.0.1
The Specifications is developed for regulating the design of reinforced and prestressed concrete highway bridges and culverts to ensure the quality of the projects.

1.0.2
The Specifications is applicable to the design of reinforced and prestressed concrete bridge and culvert structures to be built on classified highways, and is not applicable to the design of bridge and culvert structures made of special concrete.

1.0.3
The limit state design methodology, which is based on the probability theory and expressed with partial factors, is adopted in the Specifications for design purposes.

1.0.4
In addition to the Specifications, the design of reinforced and prestressed concrete bridge and culvert structures shall also comply with the provisions in current relevant national and industry standards.

2.1.1 Reinforcing steel

Non-prestressed reinforcement in concrete structural members.

2.1.2 Prestressing steel

Materials used for applying prestressing forces in concrete structural members, including steel wires, steel strands and steel bars.

2.1.3 Reinforced concrete structure

A concrete structure that contains load-carrying reinforcing steel.

2.1.4 Prestressed concrete structure

A concrete structure that contains prestressing steel that is used to develop prestressing forces by tensioning or other methods.

2.1.5 Limit state

A state beyond which a whole structure or a part of the structure no longer satisfies a certain functional requirement for which it was designed.

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