



STRUCTURES IN PRACTICE



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## ABOUT THE BOOK

This book is an outcome of extensive experience of the author in a design office as a consulting professional engineer.

The book deals with elements or systems which are significant parts of the “structure” as a whole and some stand-alone structures. Some cogent information or case studies related to the chapter are given as Annexes to the respective chapter.

Also included are several Design Aids and Appendices which the author found immensely useful; hopefully, the design engineer will be at an advantage with these handily available. Whereas most of the discussion in the book is related to RC (Reinforced Concrete) structures, some common and predominantly steel structures have been included viz. portal frames, Vierendeel girders, chimneys and parking structures.

For easy reading, the book is divided into self-contained chapters dealing with each topic. It contains useful tables of data and is profusely illustrated with diagrams and photographs to assist the reader. Fundamental concepts are lucidly presented and derived and empirical formulae given with clarity of underlying assumptions.

Some case histories have been included. One is design of a large span (84.0 m) portal frame. It gives the exact procedure that was followed while designing a large span portal frame, when posed with a peculiar problem during the professional practice. The aim in presenting this “case” is to acquaint the readers to almost all the aspects of such a structure, with emphasis not only on the design but also on execution. Almost all the salient parameters related to the design and execution are included. The second “case” is of another peculiar problem; making an opening for an additional flue duct in an existing 100 m high RC chimney. The salient information for planning and devising the scheme for execution is given. For both these cases, detailed drawings and the specific instruction sheets prepared for proper and fault free execution are included. These are meant for the students with inquisitive minds and the practicing engineers seeking guidance when faced with not so usual problems.

Some worked examples have been given in the book; these are given at the ends of the respective chapters. These should help the engineer in dealing with the problems during practice.

The book comprehensively covers the subject for degree courses (graduate and post-graduate) in engineering of all the Indian Universities and examinations of professional bodies. Written in a simple language, with illustrative references, it will be useful to students to grasp the subject and to the practicing engineers in designing of the structures.

## CONTENT

- 1 : CORBELS – BRACKETS AND SHEAR CONNECTORS
- 2 : GRID SYSTEMS
- 3 : PORTAL FRAMES
- ANNEX A3 : SHED FOR STORAGE OF LIGNITE – A CASE STUDY
- 4 : VIERENDEEL FRAMES
- 5 : STAIRS AND RAMPS
- 6 : FOOTINGS – FOUNDATIONS
- 7 : RETAINING WALLS
- 8 : TIEBACKS AND ANCHORS
- 9 : SHEAR WALLS – AN INTRODUCTION
- 10: CULVERTS
- 11: UNDERGROUND WATER TANKS  
(ALSO WATER TREATMENT & SEWAGE TREATMENT PLANT STRUCTURES AND R.C. PIPES)
- 12: OVERHEAD WATER TANKS
- ANNEX A12 : PROPERTIES OF SHELLS OF REVOLUTION
- 13: SWIMMING POOLS
- ANNEX A13 : HYGIENE, SANITATION AND FILTRATION IN SWIMMING POOLS
- 14: SILOS, BUNKERS AND HOPPERS
- 15: PARKING SHED STRUCTURES
- 16: CHIMNEYS
- ANNEX A16 : 4<sup>TH</sup> OPENING FOR FLUE IN EXISTING RCC CHIMNEY
- 17: MACHINE FOUNDATIONS
- 18: PRESTRESSED CONCRETE – AN INTRODUCTION
- 19: DELETERIOUS EFFECTS ON CONCRETE
- ANNEX A19-1: CONCRETE FOR HIGH TEMPERATURES
- ANNEX A19-2: DETERIORATION OF CONCRETE (IN A SWITCHYARD) – A CASE STUDY
- DESIGN AIDS
- APPENDICES
- REFERENCES
- INDEX

**Catalogue Checklist**

**STRUCTURES IN PRACTICE**  
**DETAILED CONTENTS**

**Chapter 1 CORBELS – BRACKETS AND SHEAR CONNECTORS**

- 1-1 General
- 1-2 Brackets or Corbels
- 1-2-1 Flexure
- 1-2-2 Bearing
- 1-2-3 Diagonal Tension
- 1-2-4 Splitting
- 1-2-5 Horizontal Movement
- 1-3 Detailing of Corbel
- 1-4 Shear Friction
- 1-5 American Method of Design
- 1-6 Anchorage of Tensile Reinforcement
- 1-7 Shear Connectors
- 1-8 Example 1-1

**Chapter 2 GRID SYSTEMS**

- 2-1 General
- 2-2 Types of Grids
- 2-3 Load Distribution in Grid Beams
- 2-3-1 Grid – Three × Three Panels
- 2-3-2 Grid – Five × Five Panels
- 2-4 Rankine-Grashoff Approximate Analysis Method
- 2-5 Plate Theory Analysis Method
- 2-6 Flexibility and Stiffness Methods
- 2-6-1 Flexibility Method
- 2-6-2 Stiffness Method
- 2-7 Stiffness Method of Structural Analysis
- 2-8 Finite Element Method (FEM)
- 2-9 Conclusion
- 2-10 Example 2-1

**Chapter 3 PORTAL FRAMES**

- 3-1 Introduction
- 3-2 Portal Frames
- 3-2-1 Behaviour
- 3-2-2 Types / Forms of Portal Frames
- 3-2-3 Design Considerations
- 3-2-4 Why Select Portal Frame as the Form of Structure?
- 3-3 Approximate Analysis for Lateral Loads
- 3-4 Hinges – RC Portal Frames
- 3-5 Portal Frames in Steel
- 3-5-1 Analysis of Steel Portal Frames
- 3-5-2 Rigid Frame Knees (or Haunches)
- 3-5-3 Summary
- 3-5-4 Advantages and Disadvantages of Open-Web Portal Frames
- 3-6 A Case Study
- 3-7 Photographs
- 3-8 Examples
- 3-8-1 Example 3-1
- 3-8-2 Example 3-2

**Annex A3 SHED FOR STORAGE OF LIGNITE – A CASE STUDY**

- A3-1 General
- A3-2 Stockpile Capacities
- A3-3 Need for Covering Stockpiles
- A3-4 Dimensions, Analysis and Design
- A3-4-1 Dimensions
- A3-4-2 Geometry – Inner Dimensions
- A3-4-3 Design Loads
- A3-4-4 Analysis
- A3-4-5 Design
- A3-4-6 Foundations
- A3-4-7 Structural Steel Quantities
- A3-5 Erection of Portal Frames
- A3-6 Additional Features
- A3-7 Figures

**Chapter 4 VIERENDEEL FRAME / TRUSS / GIRDER**

- 4-1 Introduction
- 4-2 Choice of Trusses or Rolled Sections
- 4-2-1 Use of Trusses in Buildings
- 4-2-2 Types of Trusses
- 4-2-2-1 Fink Truss
- 4-2-2-2 Howe Truss
- 4-2-2-3 Pratt Truss
- 4-2-2-4 Warren Truss
- 4-2-2-5 North Light Truss / Saw-Tooth Truss
- 4-3 Vierendeel Trusses or Frames
- 4-4 Analysis
- 4-5 Connections
- 4-6 Why a Vierendeel?
- 4-7 Cases of Vierendeel Application by Author
- 4-7-1 Photograph 4-1
- 4-7-2 Photograph 4-2
- 4-7-3 Photograph 4-3
- 4-8 Example 4-1

**Chapter 5 STAIRS AND RAMPS**

- 5-1 General
- 5-2 Forms of Stairs
- 5-2-1 Stair Spanning along the Flight – with Waist Slab
- 5-2-2 Stair Spanning along the Flight – with Beams at Ends of Flights
- 5-2-3 Stair with One Stringer Beam
- 5-2-4 Stair with Two Stringer Beams
- 5-2-5 Stair with Three Flights and Open Stair Well
- 5-2-6 Stand Alone Stairs
- 5-2-7 Stair on RC Pin
- 5-2-8 Spiral Stair
- 5-2-9 Trussed Stair
- 5-2-10 Slabless Tread-Riser Stair
- 5-2-10-1 Stiffness and Carry-over Factors
- 5-2-11 Helical Stairs
- 5-3 Ramp for Wheelchair Access
- 5-4 Cases of Stairs and Ramp by Author
- 5-4-1 Photograph 5-1
- 5-4-2 Photograph 5-2
- 5-4-3 Photograph 5-3
- 5-4-4 Photographs 5-4 and 5-5
- 5-5 Example 5-1

**Chapter 6 FOOTINGS – FOUNDATIONS**

- 6-1 Foundations
- 6-1-1 Distribution of Pressure
- 6-1-2 Bearing Capacity
- 6-1-3 Settlement
- 6-1-4 Uplift
- 6-1-5 Foundation Types
- 6-1-6 Piers and Caissons
- 6-2 Footings
- 6-2-1 Individual Footings
- 6-2-2 Bearing Capacity – Bearing Pressures and Settlement
- 6-2-3 Strip Footings
- 6-2-4 Isolated Spread Footings
- 6-2-5 Combined Footings
- 6-2-6 Split Footings
- 6-3 Raft Foundations
- 6-3-1 Types of Rafts
- 6-3-2 Stability and Settlement of Raft Foundations
- 6-3-3 Design of Rafts
- 6-3-3-1 Rigid Method
- 6-3-3-2 Elastic Plate Method
- 6-3-3-3 Finite Difference Method
- 6-3-3-4 Finite Element Method
- 6-3-3-5 General
- 6-4 Example 6-1

**STRUCTURES IN PRACTICE**  
**DETAILED CONTENTS**

**Chapter 7 RETAINING WALLS**

- 7-1 Introduction
- 7-2 Forces Acting on Earth Retaining Wall
- 7-3 Stability Considerations
- 7-4 Earth Pressures
  - 7-4-1 Earth Pressure Equations of Common Use
  - 7-4-2 Earth Pressure Coefficients
  - 7-4-3 Cohesive Soils
  - 7-4-4 Passive Earth Pressures
- 7-5 Drainage and Weep Holes
- 7-6 Hydraulic Pressure
- 7-7 Selection of Type of the Wall
- 7-8 Gravity Walls
- 7-9 Reinforced Concrete Walls
  - 7-9-1 Types of Reinforced Concrete Walls
  - 7-9-2 Pressure on Reinforced Concrete Walls
  - 7-9-3 Stability of Retaining Walls
  - 7-9-4 Base Width
  - 7-9-5 T-Shaped Retaining Walls
  - 7-9-6 Counterfort Type Retaining Walls
  - 7-9-7 Anchored Retaining Walls
  - 7-9-8 Anchorages (or Deadman)
  - 7-10 Example 7-1

**Chapter 8 TIEBACKS AND ANCHORS**

- 8-1 Introduction
- 8-2 Tiebacks
- 8-3 Anchors with Normal Pressure Grouts
- 8-4 High Pressure Grouts
- 8-5 Anchors with High Pressure Grouts
  - 8-5-1 Load Capacity of Anchors
- 8-6 Tendons
  - 8-6-1 Factor of Safety
  - 8-6-2 Testing
- 8-7 Creep and Cyclic Loading
- 8-8 Corrosion Protection
- 8-9 Uplift

**Chapter 9 SHEAR WALLS – AN INTRODUCTION**

- 9-1 General
  - 9-1-1 Advent of High Rise Buildings
  - 9-1-2 High Strength Materials
  - 9-1-3 New Design Concepts
  - 9-1-4 New Structural Systems
  - 9-1-5 Improved Construction Methods
- 9-2 Wind – Earthquakes – Serviceability
  - 9-2-1 Wind Forces
  - 9-2-2 Earthquake Effects
  - 9-2-3 Wind and Earthquake
  - 9-2-4 Serviceability Criteria
- 9-3 Buildings with Shear Walls
- 9-4 Coupled Shear Wall Structures
- 9-5 Frame – Shear Wall Structures
- 9-6 Analysis – Continuum Approach
- 9-7 Analysis for Lateral Loads
- 9-8 Proportioning of Shear Walls
- 9-9 Applications

**Chapter 10 CULVERTS**

- 10-1 General
- 10-2 Loading
- 10-3 Culverts with Slab-Beam Deck
- 10-4 Effective Width Method
- 10-5 Slabs Supported on Four Edges – Pigeaud's Coefficients
- 10-6 Westergaard's Method
- 10-7 Shear Force
- 10-8 Load Distribution in Beams

- 10-9 Method of Distribution Coefficients
- 10-9-1 Longitudinal Moments
- 10-9-2 Transverse Moments
- 10-10 Box Culvert
  - 10-10-1 Loads on Box Culvert
- 10-11 Example 10-1

**Chapter 11 UNDERGROUND WATER TANKS (ALSO WATER TREATMENT & WASTE WATER TREATMENT PLANT STRUCTURES AND RC PIPES)**

- 11-1 General
- 11-2 Water Tightness
- 11-3 Concrete Quality and Curing
- 11-4 Joint Details and Placement
  - 11-4-1 Construction Joint
  - 11-4-2 Contraction Joint
  - 11-4-3 Expansion Joint
  - 11-4-4 Reinforcing for Shrinkage
- 11-5 Design Parameters / Design Considerations
  - 11-5-1 Loads
  - 11-5-2 Foundations
  - 11-5-3 Structural Design Parameters
- 11-6 Design of Circular Tanks
  - 11-6-1 Edge Conditions
  - 11-6-2 Side Walls – Shrinkage and Tension
- 11-7 Design of Rectangular Tanks
  - 11-7-1 Loads and Analysis of Walls
  - 11-7-2 Loadings and Analysis of Floors and Roofs
  - 11-7-3 Foundations
- 11-8 Some Underground Water Tanks – Constructed / Actual
- 11-9 Large Water Reservoirs
- 11-10 Water Treatment Plant and Waste Water Treatment Plant
  - 11-10-1 Water Treatment Plant
  - 11-10-2 Waste Water Treatment Plant
- 11-11 Appurtenant Structures
  - 11-11-1 Control Structures
  - 11-11-2 Pumping Stations
  - 11-11-3 Vibrations
  - 11-11-4 Corrosion Protection
  - 11-11-4-1 Chlorination
  - 11-11-4-2 Coatings
- 11-12 Reinforced Concrete (R.C.) Pipes
  - 11-12-1 Stresses in Pipe – Own Weight
  - 11-12-2 Stresses in Pipe – Water Inside
  - 11-12-3 Stresses in Pipe – Earth Fill over Haunches
  - 11-12-4 Stresses in Pipe – Uniformly Distributed Load on Top
  - 11-12-5 Stresses in Pipe – Uniform Pressure from Sides
  - 11-12-6 Stresses in Pipe – Varying Pressure from Sides
  - 11-12-7 Stresses in Pipe – Point Load at Crown
  - 11-12-8 Pipes Supported on Quarter Circumference
  - 11-12-9 Stresses in Pipes – Summary
  - 11-12-10 Reinforcement and Pipe Thickness
- 11-13 Examples
  - 11-13-1 Example 11-1
  - 11-13-2 Example 11-2

**Chapter 12 OVERHEAD WATER TANKS**

- 12-1 General
- 12-2 Components in Overhead Tanks
  - 12-2-1 Container
  - 12-2-2 Supporting Systems
  - 12-2-3 Foundations
- 12-3 Container
- 12-4 Circular Tanks
  - 12-4-1 Case 1 – Tank Open at Top and Monolithic / Rigid at Base
  - 12-4-2 Case 2 – Tank Wall Monolithic with Base and Roof



**STRUCTURES IN PRACTICE**  
**DETAILED CONTENTS**

|           |                                                                     |
|-----------|---------------------------------------------------------------------|
| 12-4-3    | Case 3 – Tank Wall Monolithic with Domatic or Conical Base and Roof |
| 12-4-4    | Reissener's Approximate Method                                      |
| 12-4-5    | Flat Bottoms of Circular Tanks                                      |
| 12-5      | Behaviour of Container Elements                                     |
| 12-5-1    | Membrane Analysis                                                   |
| 12-5-1-1  | Top Dome                                                            |
| 12-5-1-2  | Ring Beam AA                                                        |
| 12-5-1-3  | Tank Wall                                                           |
| 12-5-1-4  | Ring Beam CC and Conical Shell                                      |
| 12-5-1-5  | Bottom Dome and Ring Beam BB                                        |
| 12-5-2    | Secondary Analysis                                                  |
| 12-5-3    | Summary                                                             |
| 12-5-4    | Author's Observations                                               |
| 12-6      | Rectangular Tanks                                                   |
| 12-6-1    | Walls                                                               |
| 12-6-2    | Bottom Slab and Roof                                                |
| 12-7      | Supporting Systems for Tanks – Columns                              |
| 12-7-1    | Loads on Columns                                                    |
| 12-7-2    | Bending Moments in Columns                                          |
| 12-7-3    | Axial Forces due to Wind                                            |
| 12-8      | Supporting System for Tanks – Columns with Bracings                 |
| 12-8-1    | Analysis of Bracings                                                |
| 12-9      | Supporting System for Tanks – Shaft                                 |
| 12-10     | Foundations                                                         |
| 12-11     | Some Overhead Water Tanks – Constructed / Actual                    |
| 12-12     | Architectural Drawings                                              |
| 12-13     | Overhead Water Tanks – Some Possible Designs                        |
| 12-14     | Example 12-1                                                        |
| 12-14-1   | Container Conical Bottom                                            |
| 12-14-1-1 | Hoop Tension                                                        |
| 12-14-1-2 | Container Bottom – Compression                                      |
| 12-14-2   | Ring Beam at Bottom of the Conical Bottom                           |
| 12-14-3   | Calculation of Wind Loads and Estimation of Vertical Loads          |
| 12-14-3-1 | Wind Loads                                                          |
| 12-14-3-2 | Vertical Loads                                                      |
| 12-14-4   | Calculation of Loads due to Earthquake                              |
| 12-14-5   | Supporting Shaft                                                    |
| 12-14-5-1 | Section Properties of Shaft                                         |
| 12-14-5-2 | Checking Stresses in the Shaft                                      |
| 12-14-6   | Foundation Raft                                                     |
| 12-14-6-1 | Determining the Size                                                |
| 12-14-6-2 | Raft Analysis                                                       |

**Annex A12 PROPERTIES OF SHELLS OF REVOLUTION**

|       |                   |
|-------|-------------------|
| A12-1 | General           |
| A12-2 | Cylindrical Shell |
| A12-3 | Conical Shell     |
| A12-4 | Spherical Dome    |

**Chapter 13 SWIMMING POOLS**

|        |                                       |
|--------|---------------------------------------|
| 13-1   | General                               |
| 13-2   | Appurtenant / Ancillary Facilities    |
| 13-2-1 | Lockers                               |
| 13-2-2 | Showers                               |
| 13-2-3 | Strainers – Skimmers                  |
| 13-2-4 | Automated Pool Cleaners               |
| 13-2-5 | Water Pumps                           |
| 13-2-6 | Safety Features                       |
| 13-3   | Dimensions                            |
| 13-4   | Other Features                        |
| 13-5   | Walls and Floors                      |
| 13-6   | Diving Platforms                      |
| 13-7   | Architectural and Structural Drawings |
| 13-8   | Examples                              |
| 13-8-1 | Example 13-1                          |
| 13-8-2 | Example 13-2                          |

**Annex A13 HYGIENE, SANITATION AND FILTRATION IN SWIMMING POOLS**

|           |                                          |
|-----------|------------------------------------------|
| A13-1     | Hygiene – Contaminants and Disease       |
| A13-1-1   | Sanitation Methods                       |
| A13-1-2   | Prevention of Diseases in Swimming Pools |
| A13-1-3   | Disinfection Methods                     |
| A13-1-3-1 | Chlorine and Bromine Methods             |
| A13-1-3-2 | Copper Ion System                        |
| A13-1-3-3 | Other Systems                            |
| A13-2     | Filtration Units / Media                 |
| A13-2-1   | Sand                                     |
| A13-2-2   | Diatomaceous Earth                       |
| A13-2-3   | Cartridge Filters                        |
| A13-3     | Water Pumps and Consecutive Dilution     |

**Chapter 14 SILOS, BUNKERS AND HOPPERS**

|          |                                                         |
|----------|---------------------------------------------------------|
| 14-1     | Bins – Silos and Bunkers                                |
| 14-2     | Design Parameters – Material Properties                 |
| 14-3     | Loadings                                                |
| 14-3-1   | Bin Loads – IS:4995                                     |
| 14-4     | Airy's Theory                                           |
| 14-4-1   | Shallow Bins or Bunkers                                 |
| 14-4-2   | Deep Bins or Silos                                      |
| 14-5     | Janssen's Theory                                        |
| 14-6     | Sloping Bottom – Cylindrical Silos                      |
| 14-6-1   | Ring Beam                                               |
| 14-6-2   | Secondary Stresses                                      |
| 14-7     | Rectangular Bunkers                                     |
| 14-7-1   | Rectangular Bunkers with High Side Walls                |
| 14-7-2   | Battery of Bunkers with High Side Walls                 |
| 14-7-3   | Battery of Bunkers with Low Side Walls                  |
| 14-7-4   | Rectangular Bunkers with Sloping Bottom                 |
| 14-8     | Discussion – Maximum Pressures, Flow and Safety         |
| 14-8-1   | Maximum Pressures in Silos                              |
| 14-8-1-1 | Pressure Reducing Devices                               |
| 14-8-2   | Modes of Flow in Bins and Silos of Symmetrical Geometry |
| 14-8-3   | Safety                                                  |
| 14-9     | Minimum Thickness of Bin Walls                          |
| 14-10    | Large Storage in Bulk                                   |
| 14-11    | Pyramidal Hopper Bottoms                                |
| 14-11-1  | Pressure Normal to Slab / Plate                         |
| 14-11-2  | Bending Moments and Direct Forces                       |
| 14-11-3  | Horizontal Reinforcement                                |
| 14-11-4  | Transverse Reinforcement                                |
| 14-11-5  | Vertical Reinforcement                                  |
| 14-12    | Examples                                                |
| 14-12-1  | Example 14                                              |
| 14-12-2  | Example 14                                              |

**Chapter 15 PARKING SHED STRUCTURES**

|        |                                           |
|--------|-------------------------------------------|
| 15-1   | General                                   |
| 15-2   | Parking Sheds                             |
| 15-2-1 | Space Requirement                         |
| 15-3   | Some Parking Sheds – Constructed / Actual |
| 15-4   | Parking Sheds – Some Possible Designs     |
| 15-5   | Parking Structures                        |
| 15-5-1 | Structural Aspects                        |
| 15-5-2 | Automated and Automatic Parking           |
| 15-5-3 | Modular Car Parking                       |
| 15-6   | Example 15                                |

**Chapter 16 CHIMNEYS**

|        |                         |
|--------|-------------------------|
| 16-1   | General                 |
| 16-2   | Proportioning           |
| 16-2-1 | Height                  |
| 16-2-2 | Diameter                |
| 16-2-3 | Thickness               |
| 16-3   | Chimney Lining / Liners |



**STRUCTURES IN PRACTICE**  
**DETAILED CONTENTS**

|          |                                                       |       |                                                                       |
|----------|-------------------------------------------------------|-------|-----------------------------------------------------------------------|
| 19-4     | Exposure to Injurious Gases in Atmosphere             | DA 2B | Coefficients for B.M., T.M. and S.F. for Beams Curved in Plan – UDL   |
| 19-5     | Corrosion of Reinforcing Steel                        |       |                                                                       |
| 19-6     | Alkali – Aggregate Reaction                           | DA 3A | Coefficients for Fixed End Moments – Point Loads and Partial UDL      |
| 19-7     | Exposure to Sea Water                                 |       |                                                                       |
| 19-8     | Exposure to Excessive Heat                            | DA 3B | Fixed End Moments – Different Loads                                   |
| 19-8-1   | Fire Resistance                                       | DA 4  | S.F., B.M. and Deflection for Single Span Beams – For Different Loads |
| 19-8-2   | Fire Endurance                                        |       |                                                                       |
| 19-8-3   | Fire Resistance Rating                                | DA 5  | Permissible Stresses in Concrete and Steel                            |
| 19-8-4   | Change of Properties at High Temperature              | DA 6  | Deflection and Slenderness Criteria – for Slabs / Beams and Columns   |
| 19-8-4-1 | Concrete                                              |       |                                                                       |
| 19-8-4-2 | Steel – Structural and Reinforcing                    | DA 7  | Slenderness Limits, “T” and “L” and Reinforcements – For Beams        |
| 19-9     | Behaviour of Slab / Beams under Fire                  |       |                                                                       |
| 19-10    | Change of Colour of Concrete – At Higher Temperatures | DA 8  | Shear, Torsion and Development Lengths                                |
| 19-11    | Effect on Bond Strength                               | DA 9  | Permissible Shear Stress and Shear Reinforcement – Limit State        |
| 19-12    | High Alumina Cement                                   |       |                                                                       |
| 19-13    | Fire Resistance as per IS:456                         | DA 10 | Permissible Shear Stress and Shear Reinforcement – WSM                |

**Annex A19-1 CONCRETE FOR HIGH TEMPERATURES**

|           |                                                         |       |                                                              |
|-----------|---------------------------------------------------------|-------|--------------------------------------------------------------|
| A19-1-1   | General                                                 | DA 11 | Weights, Areas etc. for Reinforcement Bars and Group of Bars |
| A19-1-2   | Classification Systems for High Temperature Concretes   | DA 12 | Approximate Reinforcement / Steel in RC Members              |
| A19-1-2-1 | Classification According to Fire Resistance             | DA 13 | Suggested Cambers for Long Span Members                      |
| A19-1-2-2 | Classification According to Type of Binding Agents      | DA 14 | Spacings of Expansion Joints in Long Concrete Buildings      |
| A19-1-2-3 | Classification According to Aggregate Type              | DA 15 | Permissible Stresses in Welds, Bolts and RSJ's               |
| A19-1-3   | Peculiarity of Refractory Concrete                      | DA 16 | Typical Splice Details for “T” Sections                      |
| A19-1-4   | Properties of Hardened Concrete                         | DA 17 | Typical Splice Details for Channel Sections                  |
| A19-1-5   | Alteration (in Concrete) due to Heat – Portland Cements | DA 18 | Typical Splice Details for Angle Sections                    |
| A19-1-6   | Applications of Concrete for High Temperatures          | DA 19 | Approximate Steel in Factories / Warehouses / Godowns        |
| A19-1-7   | Advantages of Use of Concrete for High Temperatures     | DA 20 | Permissible Stresses in Axial Compression                    |

**ANNEX A19-2 DETERIORATION OF CONCRETE (IN A SWITCHYARD) – A CASE STUDY**

|           |                                         |
|-----------|-----------------------------------------|
| A19-2-1   | Introduction                            |
| A19-2-2   | Scope of Investigations and Study       |
| A19-2-3   | Study and Investigations                |
| A19-2-4   | Observations                            |
| A19-2-4-1 | Visual Studies – Switchyard             |
| A19-2-4-2 | Visual Observations – Culvert Structure |
| A19-2-5   | NDT – Rebound Hammer Tests              |
| A19-2-6   | Flue Gas Composition                    |
| A19-2-7   | Hot Water Composition                   |
| A19-2-8   | Conclusions                             |
| A19-2-8-1 | Switchyard Structures                   |
| A19-2-8-2 | Culvert Structures                      |
| A19-2-9   | Remedies and Recommendations            |

**DESIGN AIDS**

|       |                                                                     |
|-------|---------------------------------------------------------------------|
| DA 1  | Coefficients for S.F. and B.M. – Continuous Beams                   |
| DA 2A | Coefficients for B.M., T.M. and S.F. for Beams Curved in Plan – UDL |

**APPENDICES**

|             |                                                                                   |
|-------------|-----------------------------------------------------------------------------------|
| Appendix 1  | Note Based on IS:456                                                              |
| Appendix 2  | Note on Storage of Cement                                                         |
| Appendix 3  | Note on Tests of Materials                                                        |
| Appendix 4  | Site Supervision – RCC Works                                                      |
| Appendix 5  | Site Supervision – Structural Steel Works                                         |
| Appendix 6  | Settlements of Structures – A Note                                                |
| Appendix 7  | Soil Bearing Capacities, Properties of Granular and Cohesive Materials            |
| Appendix 8  | Angles of Internal Friction, Unit Weights and Liquidity Factors of Some Materials |
| Appendix 9  | Metric Conversions                                                                |
| Appendix 10 | British and Metric Equivalents                                                    |
| Appendix 11 | SI Units, Greek Alphabets and Roman Numerals                                      |
| Appendix 12 | Some Relevant Codes and Specifications (of BIS and IRC)                           |

**REFERENCES**

**INDEX**