

**(PREVIEW)**

IS : 4880 ( Part IV )-1971

## ***Indian Standard***

# **CODE OF PRACTICE FOR DESIGN OF TUNNELS CONVEYING WATER**

## **PART IV STRUCTURAL DESIGN OF CONCRETE LINING IN ROCK**

### **1. SCOPE**

**1.1** This standard (Part IV) covers criteria for structural design of plain and reinforced concrete lining for tunnels and circular shafts in rock mainly for river valley projects.

**NOTE-** The provisions may, nevertheless, be used for design of any other type of tunnel, like railway or roadway tunnel, provided that all the factors peculiar to such projects which may affect the design are taken into account.

**1.2** This standard, however, does not cover the design of steel and prestressed concrete linings, tunnels in swelling and/or squeezing type of rocks, soils or clays and cut and cover sections

## **APPENDIX B**

**( Clause 7.4.2.1 )**

### **ROCK LOADS ON TUNNEL LINING**

#### **B-1. SCOPE**

**B-1.1** This appendix contains recommendations for evaluating rock loads on tunnel lining.

## **APPENDIX D**

**( Clause 7.5.1 )**

### **BASIC EQUATIONS FOR ANALYSIS OF TUNNEL LINING CONSIDERING IT AND THE SURROUNDING ROCK AS A COMPOSITE CYLINDER**

#### **D-1. SCOPE**

**D-1.1** This appendix contains basic equations for calculating radial and tangential stresses in concrete lining and the surrounding rock mass considering both as parts of a composite cylinder.