

(PREVIEW)

IS : 7326 (Part III) – 1976

Indian Standard

PENSTOCK AND TURBINE INLET BUTTERFLY VALVES FOR HYDROPOWER STATIONS AND SYSTEMS

PART III RECOMMENDATIONS FOR OPERATIONS AND MAINTENANCE

1. SCOPE

1.1 This standard (Part III) covers the instructions for operation and maintenance of the butterfly valves (see Fig. 1).

FOREWORD

0.1 This Indian Standard (Part III) was adopted by the Indian Standards-Institution on 30 September 1976, after the draft finalized by the Hydraulic Gates and valves Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 The butterfly valve is one of the types of shut-off devices most commonly employed in hydropower stations and systems. Its use is favoured because of its relatively low cost, compactness, light weight, reasonable water tightness and simplicity of operation.

0.2.1 Basically, butterfly valve (see Fig. 1) consists of a circular; lens shaped or open frame moving disc and body. The disc is pivoted in the body by two trunnions. When open the plane of symmetry of the disc lies parallel to the penstock axis.

0.3 It serves the following purposes:

- a) Stops the flow of water to the turbine when the latter is stopped to decrease water leakages and to protect the guide vanes against slit cavitation and erosion.
- b) Stops the flow of water in case of emergency, that is, non-closure of guide apparatus or in the event of low oil pressure in the system.
- c) Unit isolation in multi-unit plants where one penstock feeds more than one unit.

0.4 This standard is being published in parts. Part I deals with the structural and hydraulic aspects of design. Part II deals with the guidelines for design and selection of control equipment used in butterfly valves. Part III deals with the operation and maintenance of butterfly valves.

0.5 In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country.