

Indian Standard

**CRITERIA FOR DESIGN OF ANCHOR BLOCKS
FOR PENSTOCKS WITH EXPANSION JOINTS**

(First Revision)

1. SCOPE

1.1 This standard covers criteria for design of anchor blocks for penstocks with expansion joints.

FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 30 November 1984, after the draft finalized by the Water Conductor Systems Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 Anchor blocks are required to hold pipe line at intervals along its length in order to:

- a) prevent the pipe line sliding down the hill,
- b) control the direction of expansion,
- c) resist the unbalanced hydrostatic forces at a change of direction of the pipe line, and
- d) prevent movement of the pipe line on account of vibration or water hammer pressures within permissible limits.

0.2.1 Design of anchor blocks require careful attention and judicious evaluation of various forces acting on the anchor block. This standard is prepared to help the designer in evaluating the forces acting on the anchor block and designing it for them.

0.3 This standard was first published in 1969. This revision has been made in view of the experience gained during the course of these years in use of this standard. Modifications made in this revision include the changes in the values of the sliding friction factor for stability analysis of anchor blocks and under seismic conditions some tension is allowed to make the design economical.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (revised).