**Action Research Project Report**

**On**

**IS 7500 : 2000**

**CODE OF PRACTICE FOR INSTALLATION AND**

**OBSERVATION OF CROSS ARMS FOR MEASUREMENT**

**OF INTERNAL VERTICAL MOVEMENT IN EARTH DAMS**

**(First Revision)**

Sectional Committee No.: WRD 16

Title: (Hydraulic Structures Instrumentation Sectional Committee)

1. **OBJECTIVE OF THE STANDARD**

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Hydraulic Structures-Instrumentation Sectional Committee had been approved by the Water Resources Division Council.

Generally the more important field observations made on the behaviour of earth dams are those of settlement of embankment and measurements of internal pore pressure. These provide a record of field performance and furnish information that would enable future designs to be based on realistic conditions. Vertical movement devices provide a means of determining volume change within the embankment and settlement of foundations, and identify zones of excessive and uneven settlement which may lead to stabiIity problem and cracking. The cross arm installation especially permits the measurement of consolidation within any desired lift or lifts of embankment both during, and after construction. Consideration governing the choice and location of this instrument is given in IS 7436 (Part 1) ‘Guide for types of measurements for structures in river valley projects and criteria for choice and location of measuring instruments: Part 1 for earth and rock-fill dams’.

1. **SCOPE OF THE STANDARD**

This standard covers the requirements of installation and observation of cross arms of the mechanical and electrical types of measurement of internal vertical movement of earth dams. Vibrating wire settlement sensor which are being increasingly used now has not been covered here.

1. **ACTION RESEARCH METHODOLOGY AND RESEARCH**

The objective of this review is to study the standard and the latest developments, if any, so that an informed decision may be taken out of the 5 possible options that may chosen regarding the standard -

1. Reaffirm
2. Reaffirm with amendment
3. Reaffirm and Revise
4. Reaffirm and Archive
5. Withdraw
6. **NATIONAL AND INTERNATIONAL REFERENCES**

* IS 6935 : 1973 - Method for determination of water level in a bore hole.

1. **ACTION RESEARCH OUTPUT**

Pursuant to the above, the Standard still seems to be relevant and the expert members may be requested to give their inputs. It may be decided to reaffirm the standard without any change from the date of it being due, for a further period of five years. In case of any further developments, the committee may choose to take up the amendment / revision of the standard.

**Mr. Vaibhav Yadav**

Scientist-B

Water Resources Department