

## BUREAU OF INDIAN STANDARDS

### Program of Work

#### WRD 16 : Hydraulic Structures Instrumentation

**Scope:** Standardization of criteria for selection, installation, usage and maintenance of instruments used for the measurement of displacement, strain, stress, temperature etc. in hydraulic structures.

**Liaison:**

### Published Standards

| S.No | IS No.                                       | TITLE  | Reaffirm M-Y | No. of Amds | Eqv.       |
|------|--|--|--------------|-------------|------------|
| 1    | IS 10334:1982<br>Reviewed In : 2025          | Code of practice for selection, splicing, installation and providing protection to the open ends of cables used for connecting resistance type measuring devices in concrete and masonry dams              | March, 2025  | -           | Indigenous |
| 2    | IS 10434 (Part 1):2003<br>Reviewed In : 2023 | Installation, maintenance and observation of deformation measuring devices in concrete and masonry dams - Guidelines: Part 1 resistance type jointmeters (First Revision)                                  | March, 2023  | -           | Indigenous |
| 3    | IS 10434 (Part 2):1996<br>Reviewed In : 2025 | Guidelines for installation, maintenance and observation of preformation measuring devices in concrete and mas - Onry dams: Part 2 vibrating, wire type jointmeter   | March, 2025  | 1           | Indigenous |
| 4    | IS 12949:2013<br>Reviewed In : 2023          | Installation, maintenance and observation of instruments for pore pressure measurements in earth and rockfill dams - Vibrating wire type electrical pore pressure cell - Code of practice (First Revision) | March, 2023  | -           | Indigenous |
| 5    | IS 13073 (Part 1):2002<br>Reviewed In : 2023 | Installation, maintenance and observation of displacement measuring devices in concrete and masonry dams - Code of practice: Part 1 deflection measurement using plumb lines (First Revision)              | March, 2023  | -           | Indigenous |
| 6    | IS 13073 (Part 2):2000<br>Reviewed In : 2025 | Code of practice for installation, maintenance and observation of displacement measuring devices for concrete and masonry dams: Part 2 geodetic observation - Crest collimation                            | March, 2025  | -           | Indigenous |
| 7    | IS 13232:1992                                | Installation, maintenance and  | March, 2023  | -           | Indigenous |

|    |   |   |             |   |            |
|----|---|---|-------------|---|------------|
|    | Reviewed In : 2023                          | observations of electrical strain measuring devices in concrete dams - Code of practice   |             |   |            |
| 8  | IS 14248:1995<br>Reviewed In : 2025         | Guidelines for instrumentation of barrages and weirs  | March, 2025 | - | Indigenous |
| 9  | IS 14278:1995<br>Reviewed In : 2025         | Stress measuring devlCes ln concrete and masonry dams - Installation, commissioning and observations - Code of practice   | March, 2025 | 1 | Indigenous |
| 10 | IS 14750:2014<br>Reviewed In : 2025         | Code of practice for installation, maintenance and observation of seepage measuring devices for concrete/masonry and earth/ rockfill dams (First Revision)                                      | March, 2025 | - | Indigenous |
| 11 | IS 14793:2013<br>Reviewed In : 2023         | Installation, maintenance and observation of the instruments for vibration studies other than earthquakes on hydraulic structures and machines - Code of practice (First Revision)              | March, 2023 | - | Indigenous |
| 12 | IS 17158:2019<br>Reviewed In : 2024         | Guide for type of measurement, choice of location and type of instruments for underground power house   | May, 2024   | - | Indigenous |
| 13 | IS 6524:1972<br>Reviewed In : 2023          | Code of practice for installation and observation of instruments for temperature measurements inside dams : resistance type thermometers  | March, 2023 | 1 | Indigenous |
| 14 | IS 6532:1972<br>Reviewed In : 2025          | Code of practice for design, installation, observation and maintenance of uplift pressure pipes for hydraulic structures on permeable foundations   | March, 2025 | - | Indigenous |
| 15 | IS 7356 (Part 1):2002<br>Reviewed In : 2021 | Code of practice for installation, maintenance and observation of instruments for pore pressure measurements in earth dams and rockfill dams - Part 1 : porous                                  | April, 2021 | 1 | Indigenous |
| 16 | IS 7356 (Part 2):2003<br>Reviewed In : 2023 | Installation, observation and maintenance of instruments for pore pressure measurements in earth and rockfill dams - Code of practice: Part 2 twin tube hydraulic piezometers (Second Revision) | March, 2023 | - | Indigenous |
| 17 | IS 7436 (Part 1):1993<br>Reviewed In : 2023 | Guide fort ypes of measurements for structures in river valley projekts and critbria for choice and location of measuring instruments: Part 1 for earth and rockfill dams (First Revision)      | March, 2023 | - | Indigenous |
| 18 | IS 7436 (Part 2):2019<br>Reviewed In : 2024 | Guide for types of measurements for structures in river valley projects and criteria for choice and location of measuring instrument: Part 2 concrete and masonry dams (Second Revision)        | July, 2024  | 1 | Indigenous |
| 19 | IS 7500:2000<br>Reviewed In : 2025          | Code of practice for installation and observation of cross arms for   | March, 2025 | - | Indigenous |

|    |   |   |                |   |            |
|----|---|---|----------------|---|------------|
|    |   | measurement of internal vertical movement in earth dams (First Revision)  |                |   |            |
| 20 | IS 8226:2017<br>Reviewed In : 2022          | Installation and observation of base plate apparatus for measurement of foundation settlement in embankments - Code of practice (First Revision)                        | December, 2022 | - | Indigenous |
| 21 | IS 8282 (Part 1):1976<br>Reviewed In : 2023 | Code of practice for installation, maintenance and observations of pore pressure measuring devices in concrete and masonry dams: Part 1 electrical resistance type cell | March, 2023    | - | Indigenous |
| 22 | IS 8282 (Part 2):1996<br>Reviewed In : 2025 | Installation, maintenance and observations of pore pressure measuring devices in concrete and masonry dams - Code of practice: Part 2 vibrating wire type cell          | March, 2025    | - | Indigenous |

### Standards under Development

#### Projects Approved

| SI. No.          | Doc No. | Title |
|------------------|---------|-------|
| No Records Found |         |       |

#### Preliminary Draft Standards

| SI. No. | Doc No.                                   | Title   |
|---------|---|---|
| 1       | WRD 16 (27379)                            | Surveillance and Performance Monitoring of Hydraulic Structures - Guidelines  |
| 2       | WRD 16 (27510) Revision of: IS 6532:1972  | DESIGN INSTALLATION OBSERVATION AND MAINTENANCE OF UPLIFT PRESSURE PIPES FOR HYDRAULIC STRUCTURES ON PERMEABLE FOUNDATIONS CODE OF PRACTICE   |
| 3       | WRD 16 (27511) Revision of: IS 7436:1993  | TYPES OF MEASUREMENTS FOR STRUCTURES IN RIVER VALLEY PROJECTS AND CRITERIA FOR CHOICE AND LOCATION OF MEASURING INSTRUMENTS GUIDELINES PART 1 FOR EARTH AND ROCKFILL DAMS               |
| 4       | WRD 16 (27512) Revision of: IS 8282:1976  | INSTALLATION MAINTENANCE AND OBSERVATIONS OF PORE PRESSURE MEASURING DEVICES IN CONCRETE AND MASONRY DAMS CODE OF PRACTICE PART I ELECTRICAL RESISTANCE TYPE CELL                       |
| 5       | WRD 16 (27513) Revision of: IS 8282:1996  | INSTALLATION MAINTENANCE AND OBSERVATIONS OF PORE PRESSURE MEASURING DEVICES IN CONCRETE AND MASONRY DAMS CODE OF PRACTICE PART 2 VIBRATING WIRE TYPE CELL                              |
| 6       | WRD 16 (27514) Revision of: IS 10334:1982 | SELECTION SPLICING INSTALLATION AND PROVIDING PROTECTION TO THE OPEN ENDS OF CABLES USED FOR CONNECTING RESISTANCE TYPE MEASURING DEVICES IN CONCRETE AND MASONRY DAMS CODE OF PRACTICE |
| 7       | WRD 16 (27515) Revision of: IS 10434:1996 | INSTALLATION MAINTENANCE AND OBSERVATION OF DEFORMATION MEASURING DEVICES IN CONCRETE AND MASONRY DAMS GUIDELINES PART 2 VIBRATING WIRE TYPE JOINTMETER                                 |
| 8       | WRD 16 (27516) Revision of: IS 13232:1992 | INSTALLATION MAINTENANCE AND OBSERVATION OF ELECTRICAL STRAIN MEASURING DEVICES IN CONCRETE DAMS CODE OF PRACTICE   |
| 9       | WRD 16 (27517) Revision of: IS 14248:1995 | INSTRUMENTATION OF BARRAGES AND WEIRS GUIDELINES  |
| 10      | WRD 16 (27518) Revision of: IS 14278:1995 | INSTALLATION COMMISSIONING AND OBSERVATIONS OF STRESS MEASURING DEVICES IN CONCRETE AND MASONRY DAMS CODE OF PRACTICE   |

#### Drafts Standards in WC Stage

| SI. No. | Doc No. | Title |
|---------|---------|-------|
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| No Records Found |
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| Draft Standards Completed WC Stage |                |  |
|------------------------------------|----------------|--|
| Sl. No.                            | Doc No.        | Title  |
| 1                                  | WRD 16 (27508) | INSTALLATION AND OBSERVATION OF INSTRUMENTS FOR TEMPERATURE MEASUREMENTS INSIDE DAMS - CODE OF PRACTICE RESISTANCE TYPE THERMOMETERS |

| Finalized Draft Indian Standard |         |       |
|---------------------------------|---------|-------|
| Sl. No.                         | Doc No. | Title |
| No Records Found                |         |       |

| Finalized Draft Indian Standards under Print |         |       |
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| Sl. No.                                      | Doc No. | Title |
| No Records Found                             |         |       |

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| Total Published Standards:22    Total Standards Under development:11 |
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| Aspect Wise Report        |
|---------------------------|
| Product : 0               |
| Code of Practices : 21    |
| Methods of Test : 0       |
| Terminology : 0           |
| Dimensions : 0            |
| System Standard : 0       |
| Safety Standard : 0       |
| Others : 0                |
| Service Specification : 0 |
| Process Specification : 0 |
| Unclassified : 0          |

| Annexure-I :List of Indian Standards Withdrawn/Superseded |               |       |
|---|---------------|-------|
| Sl. No.   | IS No. & Year | Title |
| No Records Found  |               |       |

| Annexure-II :List of Indian Product Standards |               |       |
|---|---------------|-------|
| Sl. No.                                       | IS No. & Year | Title |
| No Records Found                              |               |       |