

Approval Date: 20 May 1998

Reviewed on : 23 October 2007

Version: 1

Purpose

The staff gauge is to be used for manual water level observation and for reference purposes in combination with AWLR or DWLR in rivers, lakes and reservoirs.

Conditions & Requirements

- The staff gauge shall be of such a design that it can be effectively used under the prevailing environmental conditions. It needs to be readable for all possible water levels at site.
- The staff gauge shall generally comply with IS 4080-1994.
- The staff gauge shall be of a sturdy construction
- The staff gauge shall be easy to operate and maintain.
- All materials on the staff gauge shall be non-corrosive.

Specifications

material	enamelled steel or stable FRP plate
colour	white background, deep blue graduations
sizes (prior to coating)	
width	100 to 200 mm
thickness	1.5 to 2.5 mm
length	1000, 1500 or 2000 mm
smallest graduation	0.01 m
accuracy of graduations	0.5 mm
distinction	cm, dm and m, index at 5 cm mark
temperature	0 to 60°C, the accuracy shall be maintained over the full temperature range

Remarks

- The staff gauge may be supported by a concrete or steel pole of sufficient length for stable installation on water banks and riverbeds.
- The pole shall have provisions to rigidly attach the staff gauges and a provision to adjust the staff gauges to the required elevation, tuning it to Datum.
 - ◇ The concrete pole shall have a square cross-section. The concrete pole shall have such solidity that it can permanently sustain partial and/or full immersion in water. The pole should have larger dimensions than the staff gauge width. Example: for a narrow staff gauge rectangular dimensions could be approximately 150 x 150 mm.
 - ◇ The steel pole may have a square or rectangular cross-section. The steel pole shall be epoxy paint coated. In saline water, the compatibility of the applied materials should be taken into account, to avoid excessive corrosion. The width of the pole should be larger than the staff gauge width. Example: for a narrow staff gauge rectangular dimensions could be approximately 100 x 40 x 3 mm (3 mm metal thickness).
- Complying with the above given graduation specifications, i.e. accuracy and smallest graduation, the staff gauge may also be painted on a well-established and stable structure, e.g. a bridge pier or similar. However, the location shall meet the hydraulic requirements for its application and shall therefore be chosen with care.

- For navigational purposes a painted staff gauge could be effective, for hydrological application it is recommended to install standard plate type staff gauges which comply with the above given specifications.
- The purchaser may execute his judicious discretion in the choice of configuration and options.

Civil Works

The staff gauge support shall be founded in cast concrete, alternatively, it may be supported by a concrete or steel pole firmly driven in the river bed/ banks. In case of wave-action, a stilling well shall be provided.

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