

(PREVIEW)

IS : 6522 - 1972

Indian Standard

CRITERIA FOR DESIGN OF SILT VANES FOR SEDIMENT CONTROL IN OFFTAKING CANALS

(Second Revision)

1 SCOPE

1.1 This standard covers criteria for design of silt vanes for sediment control in off taking canals.

FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 25 February 1972, after the draft finalized by the Canals and Canal Linings Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 The total sediment load carried in a channel flow can be divided into two parts; the bed load consisting of sediment particles essentially in contact with the bed and the suspended load consisting of sediment particles in suspension. The concentration of sediment in suspension is much greater near the bed than in the upper layers. The grade of these particles is coarser at the bottom than at the upper layers of water. Also, the upper layers in the main canal have considerably higher velocities than the Lower layers and have, therefore, considerably more momentum and consequently the bottom layers containing heavy sediment are deflected more easily from their course and can be drawn away from the offtaking canal more readily. As such if the bottom layers of flow are diverted without disturbing the natural distribution of sediment load, a large quantity of coarser sediment can be prevented from entering an offtaking canal.

0.3 Whereas the exclusion of the sediment load in the canal itself is achieved by providing silt ejector at suitable location, control of entry of sediment at the head of offtaking canal from a main canal is easily effected by providing skimming platforms and silt vanes. Silt vanes are one of the efficient devices to exclude or adjust entry of silt into an offtaking canal.

0.4 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.

0.5 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, 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 (*raised*).