



EIE INSTRUMENTS PVT. LTD.
(An ISO 9001:2015 Certified Company)

ABRASION RESISTANCE OF CONCRETE - UNDER WATER METHOD - ASTM C1138



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GST TIN No. : 24AABCE4018L1ZU
I.T. PAN No. : AABCE 4018L
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TAN No. : AHME00572F



ASTM C1138 outlines a procedure to evaluate the abrasion resistance of concrete surfaces in an underwater environment. This method is particularly useful for assessing the wear characteristics of hydraulic structures, such as dams and canals, that are exposed to abrasive action due to waterborne materials.

Underwater Method : ASTM C1138

This test method covers a procedure for determining the relative resistance of concrete(including concrete overlays and impregnated concrete) to abrasion under water. This procedure simulates the abrasive action of waterborne particles (silt, sand, gravel, and other solids).

This test method is intended to qualitatively simulate the behavior of swirling water containing suspended and transported solid objects that produce abrasion of concrete and cause potholes and related effects such as the flow of water containing debris over spillways during monsoons. This test method will provide a relative evaluation of the resistance of concrete to such action. The results are expected to be useful in selection of materials, mixtures, and construction practices for use where such action is to be expected. The test method is not intended to provide a quantitative measurement of the length of service that may be expected from a specific concrete.

The equipment consists of the following replaceable parts:

1. Rotating Device - A motorized paddle or stirring apparatus capable of maintaining a constant rotation speed to ensure uniform abrasion action. A machine with a chuck capable of holding and rotating the agitation paddle under test condition at a speed of 1200 +100rpm.
2. Agitation Paddle
3. Test Container-A steel pipe,305 +6mm inside diameter, 450 + 25mm fitted with a watertight steel base is used. A six steel blocks is welded on the base plate to support the specimen
4. Abrasive Charges - 1" dia ball 10 nos, 0.75" dia ball 35 nos, 0.50" dia ball 25nos - 1 Set
5. Steel balls tumbling in a circular orbit in swirling water on the concrete specimen.
6. Suitable for operation on 220V, 50Hz, Single Phase, AC supply.

Drying Oven, Electronic weighing balance and mould to prepare the test sample available at extra cost

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