

HWE

RAW WATER METERS

FROM 80 TO 2000 MM DIAMETER



FOR MEASUREMENT OF RIVER AND POND WATER

HEAVY DUTY WATER WORKS PATTERN LOW MAINTENANCE RAW WATER METERS (Pat. Pending)

FOR MEASUREMENT OF RIVER AND POND WATER

Introduction

HWE Heavy duty, Water Works Pattern, Low Maintenance, Raw Water Meter is designed to meet the requirements of Public Water Supply Schemes and Industries, which draw water directly from rivers and ponds etc.

River or pond waters have very high turbidity during rains and floods etc. Even after the rainy season and floods, there is turbidity in the water for a very long time, till it settles. No conventional type of water meter is capable of handling water even having lower turbidities.

Due to the accumulation of solids, the conventional meters stop working after a very short period. The working parts are damaged due to erosion, throwing the meter completely out of service. Our Raw Water Meters are in service for more than 10 years.

Salient features

The salient features of this type of water meter are :

Low initial cost.

Practically no expenditure on regular maintenance.

No working part in the main stream of water except a rotor.

A small Shunt Meter of special design gives the discharge through the meter in proportion of flow. Integrates the quantity of Raw Water passed through it.

Shunt Meter can be taken out for cleaning, and flushing it without stopping the pump and can be fixed without any difficulty.

Isolating cocks provided to facilitate working of the line when the Shunt Meter is taken out due to any reason.

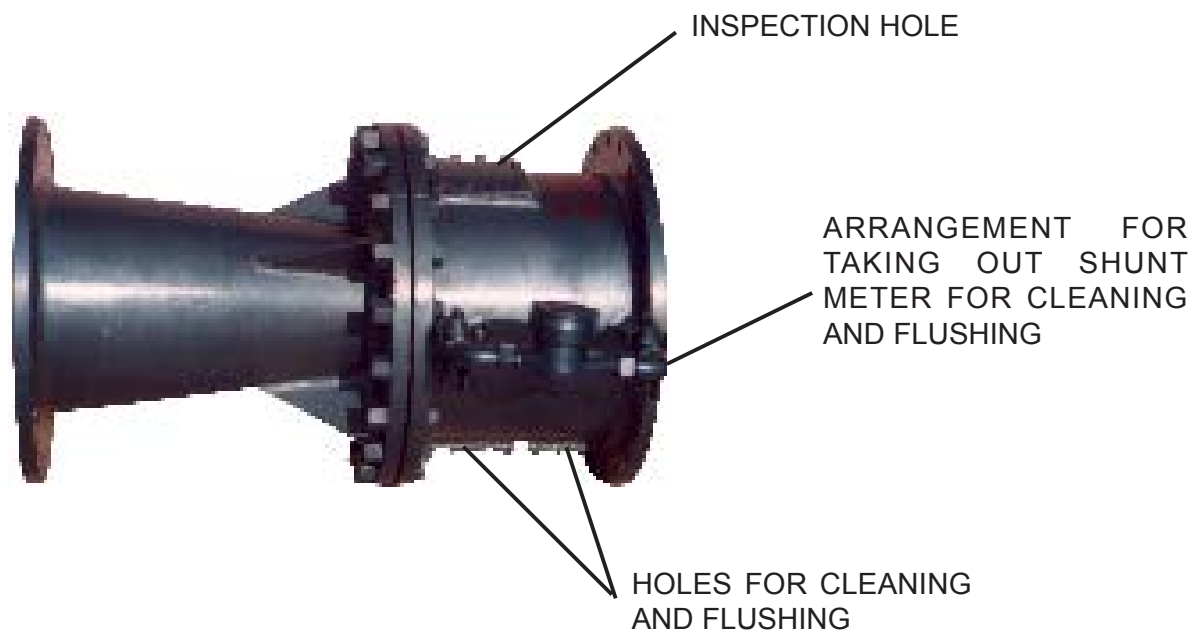
Due to the large aperture provided in the meter, solids up to 0.5% can pass through the meter without disturbing the working of the meter.

Facilities provided for cleaning and flushing the meter, when necessary (Fig - 2).

Description

The meter consists of a well designed Venturi which forms the permanent part of the pipe line. A small Shunt Meter of special design is provided in its bypass line to show the discharge of the main line. It gives a direct reading of the flow past and integrates the quantity of water.

For use in Raw Water, the Shunt Meter has no working part in the main stream of water except a rotor. Because of this, the meter does not stop every now and then and the maintenance is also reduced.



**PHOTOGRAPH SHOWING FACILITIES PROVIDED
FOR IN LINE CLEANING AND FLUSHING OF METER
(Fig. - 2)**

Construction

Construction of the meter is very robust and sturdy to withstand the severe working conditions usually met in the water supply industry. Heavy ribbing is provided on the body for additional strength. The meter withstands the shocks which normally occur in the Rising mains (Pumping mains). Flanges are drilled as per IS 2373:1981 but can also be drilled to customer's specifications.

Material

The Venturi and Isolating cocks are made out of high grade Cast Iron. The Shunt Meter used is of special design. Bypass line consists of heavy quality galvanised pipes and fittings. In larger sizes and for higher pressures, the Venturi is made out of Steel.

Testing

Every meter is hydraulically tested to withstand a pressure of 200 metres head of water and for accuracy as per the procedure laid down in IS 2373:1981.

Determination of flow rate

Flow rate can easily be obtained by timing the readings shown by the number wheels or the test hand of the clock work of the meter.

Loss of Head

Loss of head across the meter is very low. When passing the maximum of its rated capacity. It is about 1 Meter VV.G. only.

Sealing

After the meter is successfully tested, it is properly sealed.

Strainer

It is not feasible to provide strainers in Raw Water measurement.

Spare Parts

The main body of the meter never requires replacement. The spares of Shunt Meter and the bye-pass line are readily available.

Installation

The installation of these meters is very simple. They simply need bolting of flanges with the pipe flanges. The meter should always run under a positive head of atleast 0.15 kg/cm².

For fixing of meter in odd positions, reference should be made to the company:

PERFORMANCE DATA		
Nominal diameter mm	Max. continuous registration M ³ /hr	Minimum registration M ³ /hr
80	47	2.20
100	74	4
150	166	9
200	296	15.50
250	462	25
300	666	35
350	931	45
400	1184	62
450	1500	80
500	1851	97
600	2655	140

Accuracy limits	+2% at the maximum
	+3½% at 1/10th
	+5% at the minimum
	(1/15th of maximum)

- Notes: 1. Details of larger sizes and for meters for special applications can be given against specific enquiries.
2. Due to the regular R & D activities, the design and data are subject to change at any time.



A VIEW OF HWE WATER METER CALIBRATION AND TEST FACILITY CUM HYDRAULIC LABORATORY

Since 1959

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