WATER SUPPLIES DEPARTMENT
STANDARD SPECIFICATION E-86-41
SUBMERSIBLE LEVEL TRANSMITTERS

1.   GENERAL

Submersible level transmitters are used to measure water levels of water tanks and service reservoirs.   By converting the water pressure exerted on its measuring element into electrical signals, a submersible type level transmitter, together with signal cables and transmission network, is able to facilitate monitoring of the varying water levels from local and remote installations.

2   DESIGN

The equipment shall meet the following design requirements :-

2.1   Submersible Level Transmitter

Transducer	:	Strain gauge technology
Accuracy	:	Better than ±0.3% of calibrated span, including combined effects of linearity, hysteresis and repeatability
Temperature effect	:	< 0.1% of calibrated span per °C
Input range	:	Water pressure of range specified in the Particular Specification
Output signal	:	4 – 20 mA d.c. proportional to the water pressure / 4-20 mA HART / fieldbus as specified in Particular Specification
Overpressure	:	150% of nominal immersion range
Operating temperature	:	-10 to 60 °C
Enclosure protection	:	IP68 to IEC 60529
Power supply	:	24V d.c.

2.2   Power Supply Unit

The power supply unit for the submersible level transmitter shall comply with WSD Standard Specification E-86-03.

3.   <u>CONSTRUCTION</u>

The casing of the submersible level transmitter shall be made of stainless steel grade 316, or equivalent, for fresh water and Hastelloy C, or equivalent, for salt water applications.

The cable insulation material for connecting the transmitter to other interfacing equipment shall be up to the standard that is suitable for both fresh water and salt water applications, particularly in terms of electrical insulation property and conductivity, mechanical strength, water proof degree and corrosion resistance. The cable shall have an adequate length for placing the transmitter at the bottom of the water tank and service reservoir.

-    End of this Specification   -