Vibrating Wire Settlement System

Applications

The Vibrating Wire Settlement System is designed specifically for monitoring settlement in RCC and rock-filled dams. Its heavy-duty construction allows the system to withstand extreme loads.

Overview of Operation

The main components of the system are a reservoir, liquid-filled tubing protected by flexible, stainless steel pipe, and a pressure transducer attached to a hydraulic anchor.

The system is shipped full assembled, ready to install downhole. The anchor is activated to fix the transducer at the proper elevation. Then the reservoir is properly seated and signal cable is routed to the readout station. The liquid-filled tube runs from the reservoir down to the transducer.

The transducer monitors the pressure created by the column of liquid in the tubing. As the reservoir settles with the surrounding material, the height of the column decreases, and the transducer measures lower pressure. Settlements are calculated by converting the change in pressure to millimeters of liquid head.

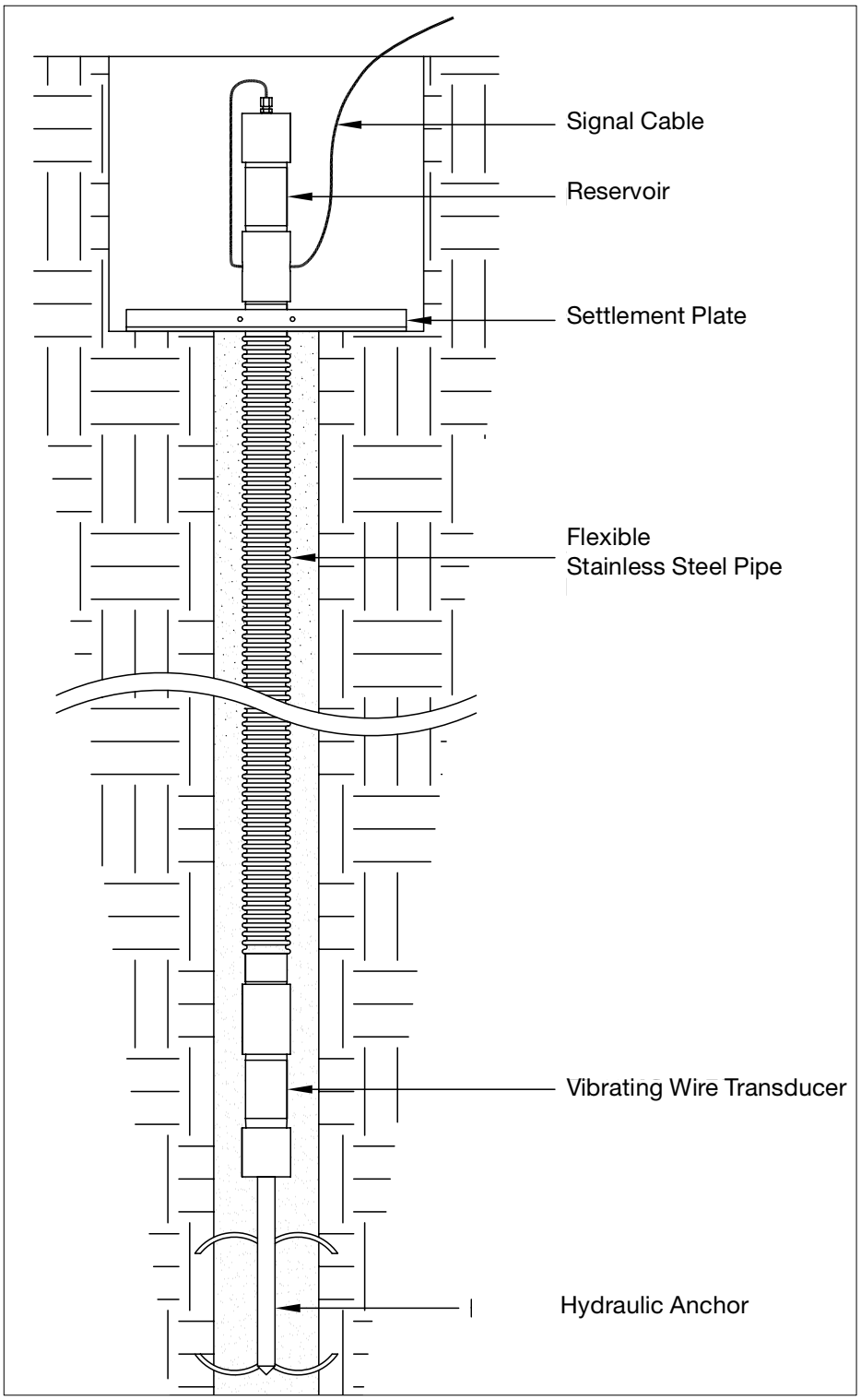
The system is capable of measuring settlements up to 15% of its length and is available in 15 and 30 meter lengths. To monitor settlement over longer spans, multiple systems can be installed, each each in its own borehole, at different elevations.

Advantages

Designed for the Application: The VW Settlement System withstands pressures up to 22 MPa (3200 psi).

Wide Range: The 15 m system can measure settlements up to 2.25 m, and the 30 m system can measure settlements up to 4.5 m.

Ready to Install: The system is shipped fully assembled for ease of installation.



VW SETTLEMENT SYSTEM

15 m System 52612425
30 m System 52612455

Sensor Type: Vibrating Wire.

Measurement Range, 15m System: 2.25 m.

Measurement Range, 30 m System: 4.5 m.

Resolution: 0.025% FS (FS = 152 or 345 kPa).

Calibration Accuracy: ± 0.1% FS.

Repeatability: ± 35mm.

Temperature Range: -20 to 80°C.

Pressure Rating: 22 MPa (3200 psi).

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