

Water Leakage Test

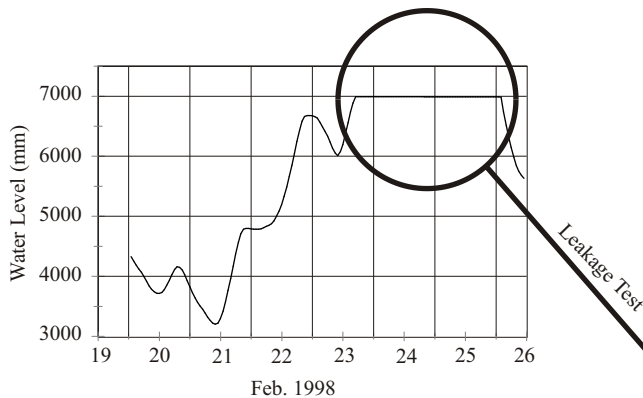
Tekron Services has developed a computerized test service to determine the rate of leakage of water tanks and reservoirs. The test produces an accurate measurement and can shorten the time required to complete a leakage test to a few hours. Coupled with the speed of test, its precision also enables comparison of various water levels within the tank to assist in establishing the probable horizon of leakage.

The method uses a sensitive water pressure gauge which produces signals read and recorded by a specialized computer system. The test equipment is simple to set up, consisting of an electrical box, housing the computer and where required, a modem and cellular phone. The pressure gauge is plugged into the electrical box and lowered into the tank where it is ready to monitor water levels.



Underwater pressure transducers

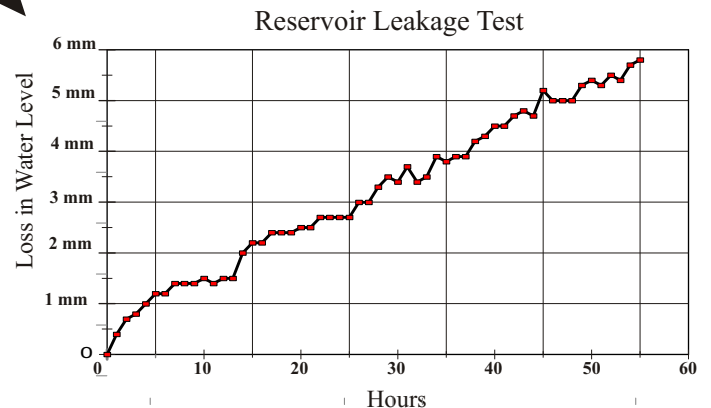
- Simple installation
- Accurate measurement
- Eliminates inaccuracies of water surface measurement
- Shorter duration of test
- Quickly test for leakage at various horizons
- Remote monitoring



Tank water level prior to and during water leakage test

Measuring water pressure takes into account the entire head of water and eliminates inaccuracies of other systems which typically measure the level of the water surface. It also simplifies measuring the leakage at various depths, since it is only a matter of shutting of the tank valves to evaluate any desired level. By using a computer system, continuous readings with interval averaging produces a stable and accurate account of the water leakage.

In the test shown, a 10 million gallon reservoir was remotely monitored over two days. A leakage rate of 2.3mm/day was recorded at the maximum reservoir water level of 7 meters. The sensitivity of each data point was approximately 0.2 mm.



Specialists in NDT and Computer Monitoring of Structures

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View inside a typical 10 million gallon reservoir



Water leakage through cracks in walls



Sampling leakage water



Leak test apparatus

NDT Techniques

Impact-echo

Ground Penetrating Radar

Schmidt Hammer

Standard
Pendulum

Boroscope

Corrosion mapping

-Half-cell
-3D half-cell
-Electrical resistance
-Rebar detection

Moisture and humidity detection

Dynamic measurement of physical properties

-Linear displacement transducers
-Telltale
-Demeg gauge
-Vibrating wire strain gauge
-Vibrating wire water pressure transducers
-Vibrating wire tilt meters
-Miniature single and multiple channel data loggers
including the following sensors:-

Temperature
Humidity
Light intensity
Voltage
Motor on/off vibration sensor
Motor on/off A/C sensor

Company Profile

Tekron Services is a Canadian company providing specialized inspection and testing of construction materials. Incorporated in 1987, the company offers a wide range of inspection and non-destructive testing services to evaluate structures and construction materials. Since the formation of the company our goal has been to incorporate emerging technology into tools and techniques for the construction industry.

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