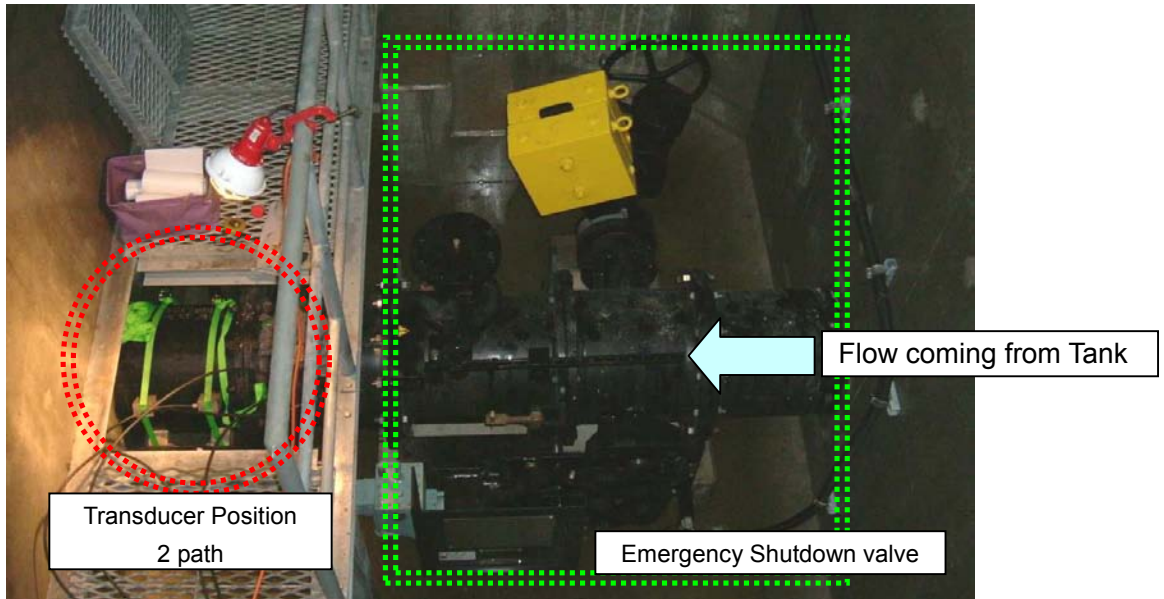


# Ultrasonic Flowmeter Application Report 25

## - Flow measurement with shutdown valve -



The UFL series stationary, clamp-on ultrasonic flowmeter with multi-path measurement capability incorporating up to 4 pairs of transducers placed on the outside of pipes provides stable instantaneous flow rate measurements.

At this particular site, the UFL series stationary flowmeter with multiple pairs of sensors measures the flow rate through 600mm diameter pipes, non-intrusively, from the outside with no interference of flow.

When disaster like earthquake may give enormous damage to pipe or distribution network, large volume of water could pour out in all directions from underground pipeline.

In such case, Emergency shut valve will be activated to achieve safety zone on the downstream side by shut the flow. After shutting the valve, it will be required to confirm "0-flow" by ultrasonic flowmeter.

UFL series realizes wide measurement range from -30m/s up to +30m/s including 0m/s with 1mm/s resolution. Because UFL can measure 0-flow, UFL is very suitable flowmeter as this application required.

The sensors are located downstream, near to the shut down valve and are clamped and fixed onto the pipe by wires. (Above photo shows pre-installation test, hence plastic band was used instead of stainless steel wires.)

Multi-path measurement is a feature of our UFL series stationary clamp-on ultrasonic flowmeter. By employing the UFL series stationary clamp-on ultrasonic flowmeter in combination with the appropriate sensor from the variety available and/or with the system's multi-path measurement capability you may be able to obtain high stable flow

measurements of pipes from 25mm up to 6000mm in nominal diameter under less than ideal conditions.

In addition, the all-in-one UFL main unit boasts 2 independent analog outputs, 4 varieties of contact outputs for totalizing or warnings, and 2 digital communication ports (RS-232C). The Windows-based graphical and user-friendly PC interface is easy to configure and set up.

### [ Pipe Specification]

Pipe DN : 600mm  
 Pipe material : Carbon Steel  
 Lining : Epoxy

### [ Installation Data ]

Main Unit : Stationary Ultrasonic Flowmeter UFL-30  
 Transducer : SE044040NC  
 Installation : V method / Multi-path

For more detailed information, please contact your local representative.

Representative in your Area