



**AW-LAKE**  
PROCESS FLOW MEASUREMENT



## APPLICATION SPOTLIGHT

Ocean Exploration - Seawater testing



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### APPLICATION:

The customer's research vessel employs numerous environmental sensors to evaluate oceanic conditions. One of these sensors is the Thermosalinograph (TSG) which collects seawater, measures temperature and salt content, then distributes it to more sensors and test equipment. In front of the TSG are twin filters (one filter on line at a time). Their job is to remove large zooplankton; phytoplankton and other debris not removed by the seawater pump filter. This is to prevent the blockage of the TSG.

### SOLUTION:

The MX-9000 flow monitor was added to the system specifically for the seawater flowing through the TSG. The flow monitor serves two purposes: first the "on site" display reading tells if there is water flowing through the TSG. Second, it allows for the flow rate to be sent to the sensor data-gathering computer (SCS). The MX-9000 is also monitored in the SCS display on board the ship, which can be configured to alarm if the flow rate drops below a set flow rate.

### PRODUCT SUPPLIED:

- MX-9000

### CHALLENGE:

The ship has a meter on the seawater pump that tells if the seawater is flowing. There was nothing that tells if water is flowing through the TSG. There was an incidence in which the pump was running but the TSG filter was clogged. It was not until someone noticed that the salinity was steadily decreasing (normally the salinity number will fluctuate) and the temperatures was several degrees different from another temperature probe. Ambient temperatures, as well as exposure to the elements.