

Temperature + Level Alarm

Monitoring the temperature of liquid chemicals is not something commonly done, but for a ship voyaging in the arctic, it becomes necessary.

Marine Exhaust Solutions Inc. (MES) specializes in managing engine rooms for marine vessels, including the treatment of the exhaust fumes. Sodium hydroxide and D.E.F. solutions used to treat engine exhaust are stored in IBC tote tanks. If the temperature in the engine room drops low enough during arctic voyages, the sodium hydroxide will crystallize and consequently the dosing of chemical will stop.

To address this, an alarm was needed that would sound if either the temperature dropped, or if the liquid level ran low. Space is precious on a ship, so the unit had to be compact.

It made sense to combine the instrumentation to save space, cost, and complexity.

An additional challenge was dealing with the near-zero headroom above the IBC tanks. After considering several proposals from Gizmo Engineering, MES settled on a solution where the alarm and suction pipe extended only 25mm above the top of the IBC lid. The key to this unconventional approach was to locate the stabilizing drum plug

underneath the lid. This meant locating the

electronics in a wall-mounted panel box, connected to the IBC probes by communications cable. The panel box contained the temperature display, a temperature alarm, and a liquid level alarm. - Each alarm is indicated by a separate beacon light.

After one year in service, the equipment has been performing without incident.



WALL-MOUNT PANEL BOX



LOW HEADROOM IBC LID



DRUM PLUG UNDERNEATH