

CE-14 Engine room Operations in Port and at Anchor

Tank level monitoring

General

Reliable tank level monitoring system is crucial for any operating vessel. Whether it's a fuel tank, oil tank, or water storage tank, accurate monitoring of tank contents is essential. Functioning system ensures safe operations, efficient cargo/fuel management, protection of the environment and compliance with rules and regulations. Readings obtained from the system can be used for an optimal planning of refuelling activities or maintaining vessel's stability.

Purpose of this procedure

To ensure that the tank level monitoring or tank level gauging system used to determine the volume of the product is functioning properly and provides accurate figures.

Applicability

The application of this procedure is to verify the liquid level in:

- ballast tanks
- service tanks (used for carrying liquid such as: Dirty oil tanks, holding tanks, Settling tanks, Sewage tanks)
- fuel tanks, e.g., heavy fuel oil tanks (H.F.O), marine diesel oil tanks (MDO) and marine gas oil tanks (MGO)
- freshwater tanks
- sludge tanks

Actions and Responsibilities

The remote measurements shall be compared with back up remote measuring system or with manual soundings as to have the assessment of discrepancies.

The Chief Officer (cargo, ballast and freshwater tanks) and the Chief Engineer (fuel tanks) are in charge of the tank level monitoring. Tanks should be manually sounded in port at monthly intervals or whenever the vessel is in port in case of long cargo runs. Manual soundings should be compared with the Remote Tank Sounding (Gauging) system. Comparing remote monitoring systems (main and backup) should be carried out at the same intervals.

The officers in charge should ensure that proper density of cargo is entered in Remote Tanks sounding System, sounding tubes are not blocked and that sounding pipes are marked, indicating the tank served and are fitted with a cap.

Discrepancies between the two systems shall be recorded and records shall be maintained on board. A form with list of tanks shall be created on board each vessel. The difference between the two measuring systems shall be calculated. If the calculated difference exceeds 3 % the technical superintendent should be informed and appropriate actions taken, i.e., checking / cleaning the sensors, checking electrical connections, etc. (manufacturer recommendations to be followed).