

M2243

Posted on 20.05.2024 by Adam Parnell

Category: [Superyachts](#)

Report Title Explosion in the Engine Room

Initial Report

The incident occurred on a relatively small motor yacht (70ft) with just three crew members. After approximately six hours at anchor, the guests decided to head back to the marina. After stowing all the water sports equipment onboard and securing the aft platform, the master engaged the main engines.

With contacts on, the starboard engine exploded in the engine room, located aft, under the area where the guests were. By checking the CCTV, the master could see only misty air. None of the alarms were activated.

The master switched the contacts off, and the ventilation system was cut off automatically. The master went down and didn't know what to expect, as no alarms were raised. After looking through the viewing port, the door to the engine room was opened to ensure there was no fire, but the engine room was full of contaminated air. The door was closed immediately.

The guests were notified that a tow was requested to return the vessel to the marina.



Comment

A starting battery explosion is a regular occurrence on some superyachts, where the necessary knowledge of battery maintenance is lacking.

From a technical perspective, CHIRP highlights that the maintenance of the starting batteries requires a good knowledge of them to ensure that they are safe to operate and adequately charged. Venting hydrogen during any charging operation is vital to provide a safe atmosphere. There was a lack of knowledge or a lack of knowledgeable crew to check that the batteries were in good condition and safe to use.

From a crew resource perspective, a risk assessment based on assessing the hazards and threats to the vessel should be carried out to determine the number of crew members to employ to cover maintenance and emergencies safely.

There appears to be no minimum manning level for a yacht of 21 meters, and it is based on the owner's financial willingness to employ the minimum number of crew for the service being provided rather than being able to respond to an emergency.

CHIRP advocates that Flag States should have a say on the minimum manning level based on the

risks of the vessel's operations and the number of guests being carried.

Key Issues

Capability – The vessel did not have adequate inspection and maintenance schedules to ensure the batteries were safe. Does your motor yacht have a maintenance schedule for items of critical importance?

Culture – Organisational culture needs to change, and safety should be managed using a risk-based approach. How many crew members does your vessel carry compared to a similar-sized vessel?

Teamwork – With only three crew members, including the master, the feeling of teamwork can be challenging to achieve.



