

SAFETY BULLETIN 01 OF 2024:

More lessons from another fire at sea. EMERGENCY ESCAPE BREATHING DEVICES (EEBD)

This safety Bulletin is issued as a result of an investigation by the Jersey Maritime Authority into a machinery space fire on a 26m Jersey Registered Motor Yacht whilst on passage. The rapid spread of smoke and flame led to the subsequent sinking of the vessel during fire-fighting operations.

The three crew members aboard were rescued.

Whilst publication of a full report into this accident, which was also investigated by the relevant Coastal State Authorities, is NOT considered necessary; this Safety Bulletin is being published to draw the attention of mariners to certain elements with respect to the difficulty of controlling a fire aboard relatively small vessels and in particular the safe use of Emergency Escape Breathing Devices (EEBD).



Vessel familiarisation & drills:

Especially on smaller vessels, where the role of each crew member is critical; it is very important that every crew member is fully familiarised with the vessel. This familiarisation should include the location of all controls that may be needed in an emergency situation as well as the operation of all equipment. The carrying out of an emergency drill in slow time prior to, or immediately following, departure is likely to be of benefit.

The spread of smoke through a small vessel can be very rapid and extensive use of plastics may well cause the smoke to be both toxic and very thick. Vessels frequently undergo modifications and the penetration of cables through decks and bulkheads may compromise fire boundaries and insulation.

Testing the effectiveness of smoke boundaries, using synthetic smoke generators that produce white non-toxic smoke that does not damage fixtures and fittings, may identify failures within the boundaries and with doors, hatches, and ventilators, which can then be addressed. The use of such equipment, especially immediately after a refit, may be useful.

Automatic and manual ventilation shutdowns should also be tested regularly because if the smoke boundaries of a space are not effectively sealed off, Fixed Fire Fighting Systems may be ineffective. Regular checking of running machinery and other areas in order to identify any issues promptly is also highly recommended.

Effective and realistic drills can also identify the optimum positioning of equipment that may be needed in an emergency and grab bags should be positioned close to entrances to the upper deck.

Actions on discovering a fire :

It is necessary for immediate action to be taken to identify the extent of a possible fire and to contain it. The priority must, however, be to raise the alarm before taking action; so that all crew are aware.

The initial assessment needs to be made quickly using all indications and alarms, where fitted, and can be carried out without particular protective equipment. An appropriate hand-held extinguisher applied early can frequently be all that is required.

Long-sleeved shirt and trousers made of natural fibre, together with suitable footwear, will provide a minimum level of protection. Care must be taken when opening the access to a compartment in which it is suspected that there might be a fire. Test the access for heat before opening, positioning yourself so the door or hatch gives protection, and be prepared to immediately seal off the compartment to contain the fire and smoke.

Good knowledge of how to seal off the ventilation to any compartment is required. This must be achieved and the machinery spaces effectively isolated before applying Fixed Fire Fighting Apparatus.

As soon as a fire has been confirmed, ensure that a distress (MAYDAY) or as a minimum an Urgency (PAN) message is broadcast using all available means. It is easier to subsequently downgrade a message once the situation has improved, than to find the situation is out of control and the appropriate message is sent too late.

Use of Emergency Escape Breathing Devices (EEBD) ;

Although over 24m in length, the vessel was built before the entry into force of the latest version of the REG yacht code. The vessel was therefore not required to carry the two Compressed Air Breathing Apparatus and two fire suits that a newly built vessel of the same type and carrying up to 12 passengers would now be required to carry. The use of CABA and fire suits safely requires both training and practice. This equipment is however designed to allow for safe controlled access for firefighting or rescue.

In addition, larger vessels may also carry EMERGENCY ESCAPE BREATHING DEVICES (EEBD) in order to facilitate escape from enclosed machinery spaces and accommodation to the open air. The required number and location of EEBDs is carefully considered and those on the vessel involved in this incident were initially located in a position suitable for their intended use.

Although designed to be both easy and instinctive to use EEBDs have a limited air/Oxygen capacity which is automatically activated when used. They MUST, therefore, only be used for escape from a smoke-filled compartment and NEVER to access such a space. Use of an EEBD to gain access rather than for escape may place both the user and those who made subsequently need to affect a rescue at risk.

(Requirements for this equipment can be seen below: See: IMO Circular MSC/Circular 849 https://imorules.com/MSCCIRC_849.html; & IMO Fire Safety Systems Code (FSS Code) Ch 2.2).

Summary:

The vessel sank during firefighting operations after the crew had been safely evacuated. This was the second Jersey registered pleasure vessel, and the third Jersey vessel in five years, that had to be evacuated after rapid spread of fire following a fire in the engine room; fortunately, in all cases the crews were evacuated safely. In addition to the guidance raised in Safety Bulletin 02 of 2021 the above guidance should help both prevent future incidents and enable any that occur to be handled as safely as possible.