

## TECHNICAL CIRCULAR 182/2018

**To:** Owners, Technical Managers, Deputy Registrars, Fleet Managers, and Surveyors.

**Subject:** Life saving appliances (LSAs), Fire fighting equipment (FFEs) and detection systems.

**Applicability:** All commercial yachts, irrespective of the Gross Tonnage.

**Date:** 26<sup>th</sup> July 2018

### Summary:

Following a recent total loss of a commercial yacht flying Cook Islands Flag, and according to the results of the accident investigation (see the attached Summary of Investigation Findings), Maritime Cook Islands has drafted a number of recommendations on the following areas:

- *life saving appliances (LSAs);*
- *fire fighting equipment (FFEs);*
- *detection systems (smoke / fire ).*

The measures listed below are of recommendatory nature and they are to be read in conjunction with the relevant CI Yacht Codes regulations. The recommendations listed below from now on are to be considered part of the CI Yacht Codes

### 1. Life saving appliances (LSAs)

Item	Reference	Recommendatory measures
Life rafts	CI LYC 14.2.2 CI SYC 14.3	Not to be sited, as far as practicable, in a single location on-board the yacht.
Life rafts	CI LYC 14.2.2 CI SYC 14.3	To be transferrable in a longitudinal way, as far as practicable, in case they should be originally placed in way of a vertical high risk area (such as engine room).
Life rafts	CI LYC 14.2.2 CI SYC 14.3	In case a life raft should request a mean, such as a deck crane, in order to be transferred and/or launched, the subject crane is recommended to be powered by an emergency source (such as emergency generator, or batteries), or operating by gravity.
Life rafts	CI LYC 14.2.2 CI SYC 14.3	Passengers to be duly trained before any voyage starts,

		about the location of the muster station, and the safety procedures during an abandon ship to follow in order to be safely accommodate within the life rafts.
<b>Lifejackets</b>	<b>CI LYC 14.2.4 CI SYC 14.6</b>	Each individual life jacket to be placed within each cabin of both crew and passengers.
<b>Lifejackets</b>	<b>CI LYC 14.2.4 CI SYC 14.6</b>	Passengers to be duly trained before any voyage starts, about the location of their individual life jackets, how and when to wear them, in case of an abandon ship.
<b>Lifejackets</b>	<b>CI LYC 14.2.4 CI SYC 14.6</b>	Abandon ship drills to be carried out at least monthly to make sure seafarers are familiar about where individual lifejackets are stored and how to properly wear them.

## 2. Fire fighting equipment (FFEs)

<b>Item</b>	<b>Reference</b>	<b>Recommendatory measures</b>
<b>Emergency fire pump</b>	<b>CI LYC 16.1.2.2.2</b>	To be of a self-priming type or, if it is not self-priming, with the suction line already filled by sea water, in order to start automatically in case of fire.
<b>Emergency fire pump</b>	<b>CI LYC 16.1.2.2.2</b>	To be located in a low risk fire area, outside the machinery space.
<b>Emergency fire pump</b>	<b>CI LYC 16.1.2.2.2</b>	To be placed and clearly marked as per the "Fire and Control Plan".

## 3. Fire detection / heat detection

<b>Item</b>	<b>Reference</b>	<b>Recommendatory measures</b>
<b>Fire detection / Smoke detection system</b>	<b>CI LYC 15.3.10 CI SYC 15.1.7</b>	Both smoke and heat detectors to be regularly tested (at least monthly, better weekly) from the officer in charge of safety (Master /

		Chief mate).
<b>Fire detection / Smoke detection system</b>	<b>CI LYC 15.3.10</b> <b>CI SYC 15.1.7</b>	Control panel(s) to have visual and audible alarms in case of failure of the main source of power.
<b>Fire detection / Smoke detection system</b>	<b>CI LYC 15.3.10</b> <b>CI SYC 15.1.7</b>	Outside areas (which might be likely to be subject to a fire risk) that are not provided with smoke or heat detectors must be adequately covered by a suitable patrol system.

If you have any comments or if you need assistance, don't hesitate to contact the Technical Department at [technical@maritimecookislands.com](mailto:technical@maritimecookislands.com)

## *Summary of Investigation Findings*



**June 2018**

## **Synopsis**

In September 2017, a Cook Islands flagged yacht was sailing about 3 miles off the coast with a crew of 7 persons on board. At about 0630 hours, a fire was detected on the external areas of the aft bridge deck. Despite efforts to extinguish the fire using portable extinguishers, it quickly spread out of control and the crew was mustered forward. At about 0640 the Master broadcasted a “Mayday” and soon afterwards, because the crew could not access any firefighting or lifesaving equipment, fenders were gathered from their stowage on the bow and the captain instructed the crew to abandon ship and jump directly in to the water. The crew remained in the sea for about 45 minutes before being rescued by a commercial pleasure vessel. The fire was later extinguished by shore-based rescue vessel and soon after, at about 16:30 hours, the Cook Islands flagged yacht sank. No casualties or injuries occurred.

## **Findings**

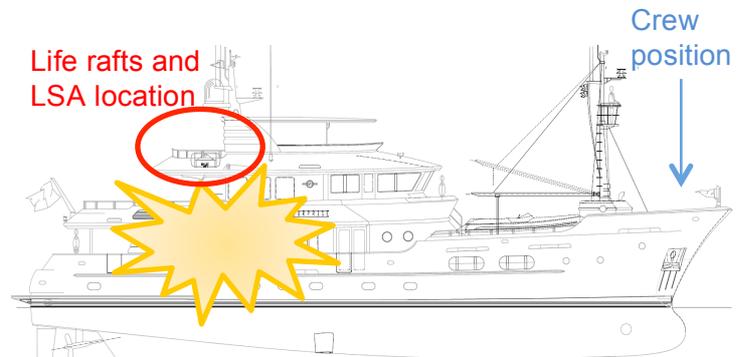
The investigation identified that:

- The fire was probably caused by a short circuit to the underdeck lights in the aft lounge on the main deck.
- The spread of the fire was assisted by the airflow over the deck.
- The fire detection system did not start, probably due to the fact that the outside areas of the aft main deck were not provided with smoke or heat detectors.
- No water was applied to the fire because the fixed fire pumps could not be started and the emergency fire pump was impossible to prime.
- The crew could not access any collective LSA as they were all already engulfed by the fire that quickly spread from aft to forward of the superstructure.
- During the abandoning, the crew did not wear individual LSAs as no lifejacket were located in crew/guest cabins.
- The fire was extinguished by a fire-rescue boat which reached the Cook Islands flagged yacht about four (4) hours after the fire was detected.
- The yacht foundered as a result of the large amount of water that accumulated in her hull during the fire-fighting effort.

## Safety Issues

### ➤ Effectiveness of the individual and collective LSAs

During the abandonment, both of the life rafts carried were not accessible due to the spread of the fire. The crew's impossibility to access the life rafts demonstrates **the disadvantages of siting all life rafts in a single location**, which is common practice for yacht of this size.



No crewmember was wearing individual lifesaving equipment, as all were located in the safety locker located at the aft end of the bridge deck close to the life rafts, which was already interested by the fire. No lifejackets were reportedly located in crew/guests cabins.

The lack of availability of collective and individual life-saving appliances, in different environmental conditions (the casualty occurred in the Mediterranean at the end of the summer season, with sea average temperature comfortable for a long time in the water) or with guests onboard, might have led to more serious consequences for the people onboard.

### ➤ Effectiveness of fire-fighting systems

Regarding the effectiveness of the fire-fighting system, the main fire pumps could not be started, as the only controls to start the fire pumps were located in the bridge and lazaret, both of which were engulfed by smoke and flame.

The emergency portable fire pump was found to be useless, as it could only be started from the swimming platform, as it was the only deck close enough to the waterline for the pump to prime the suction.