Marine Safety Investigation Unit

Transport Malta

SAFETY INVESTIGATION REPORT

202109/004 REPORT NO.: 13/2022 September 2022

This safety investigation has been conducted with the assistance and cooperation of the *Capitaneria di Porto di Olbia*, Italy.

MY *SIEMPRE*
Fire on board,
whilst moored in the port of Olbia, Italy
06 September 2021

SUMMARY

In the early hours of 06 September 2021, whilst MY *Siempre* was moored at the port of Olbia, Italy, a fire broke out on the open aft deck.

The crew members, who were asleep in their cabins at the time, were woken up by the fire alarm. As the fire grew out of control within minutes, the crew members jumped into the water from the bow and were rescued by the crew members of a neighbouring yacht.

The safety investigation could not determine the cause of the fire but believes that it had either originated from a Lithium-ion battery stored in the vicinity, or due to a fault in the power socket of the water scooter, which was on the open aft deck.

The MSIU has issued two recommendations to the Company designed to ensure that yacht crew members are made aware of the hazards posed by Lithium-ion batteries and are guided on proper handling and disposal procedures for these batteries.


MY *Siempre*

FACTUAL INFORMATION

Vessel

Siempre was a 220 gt commercial yacht, owned by Black Pepper Yachting Partnership since 02 July 2020, and managed by Private Yacht Group Ltd., UK (the Company). The yacht was built by SRT *Deniz Araclari Imalati Sanayi ve Ticaret* Ltd. STI, Turkey, in 2010.

With a length overall of 34.75 m, a moulded breadth of 7.40 m and a moulded depth of 3.51 m, *Siempre* was certified for short voyages[1] and could carry up to 12 passengers and seven crew members.

Propulsive power was provided by two, V-12, four-stroke, high-speed Caterpillar C32 diesel engines, each of which produced 970 kW at 2100 rpm. Each of these engines drove a fixed-pitch propeller, enabling *Siempre* to reach an estimated speed of 12 knots.

Crew

The Minimum Safe Manning Certificate prescribed a crew of six. Around the time of the occurrence, the yacht was off-hire and had just four crew members on board – the chief engineer, one deckhand, a chef, and the chief stewardess.

The flag State Administration advised the safety investigation that a commercial yacht is required to comply with the requirements of the Minimum Safe Manning certificate during voyages. Therefore, the Minimum Safe Manning requirements were not strictly applicable when the yacht was at berth.

Except for the chief stewardess, who was Spanish, all members of the crew were British nationals. The safety investigation was informed that none of the crew members were smokers.

The first officer was 36 years old. He had 11 year of seafaring experience, six of which were served either in the rank of a master, or a chief officer on board yachts. He held STCW II/1 qualifications, limited to swerving as an officer of the watch on yachts of less than 3,000 gt. He held a Certificate of Competency issued by the UK Maritime & Coastguard Agency (MCA) in May 2021. He had joined *Siempre* on 29 June 2020 at Saint-Raphaël, France.

The chief engineer was about 28 years old. He had five years of seafaring experience, and this was his first contract of employment as a chief engineer. He was qualified to sail as a chief engineer on commercial yachts of less than 220 gt and not exceeding 1,500 kW propulsion power. He was issued with a Certificate of Competency by the UK's MCA, in February 2020. He had joined *Siempre* on 13 July 2020, at Saint-Raphaël, France.

The deckhand was 24 years old. She had three years of seafaring experience, two of which were served in the rank of a deckhand. She held a Yachtmaster® Offshore certificate of competence, issued by the Royal Yachting Association in February 2021. She, too, had joined *Siempre* on 13 July 2020 at Saint-Raphaël, France.

Siempre's leisure equipment

Siempre was provided with the following equipment for the entertainment of passengers on board:

- a 5.03 m-long, diesel-fuelled tender boat;
- a 9.42 m-long, petrol-fuelled RIB;
- a 4.02 m-long electric water scooter;
- two dinghy sailing boats;
- two electric surfboards;
- an electric hydrofoil surfboard;
- two electric underwater scooters;

[1] Voyages of up to 60 nautical miles (nm) from a safe haven.

- two electric scooters; and
- two electric bicycles.

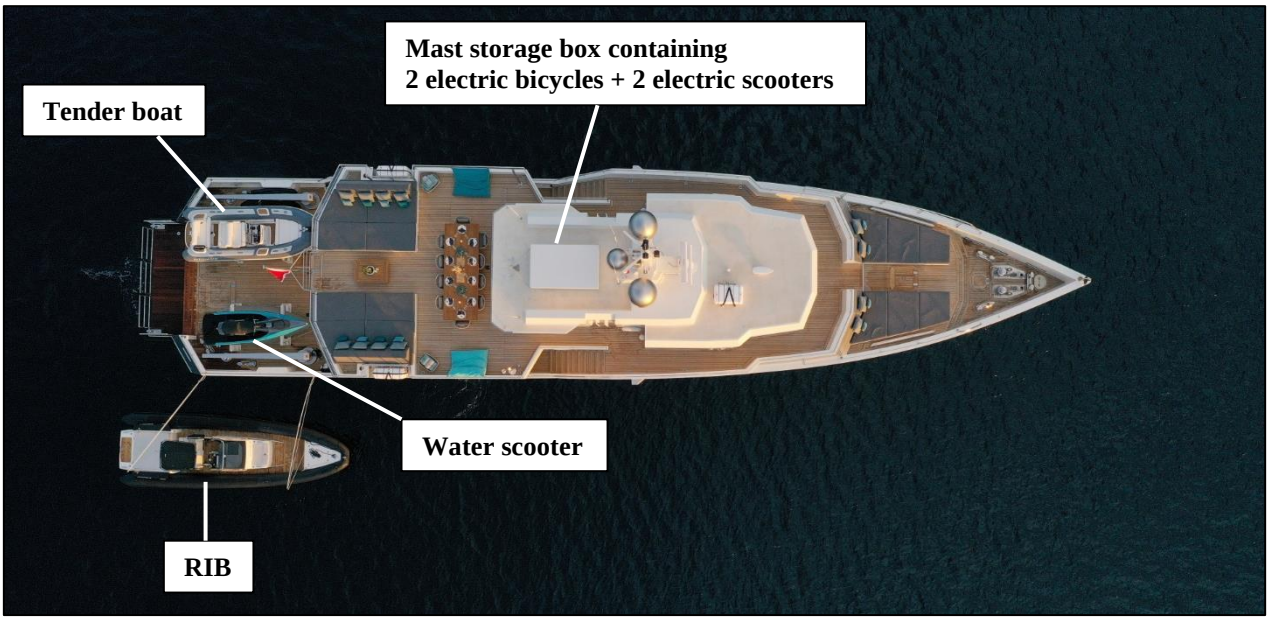

Figure 1: Location of some of the leisure equipment on *Siempre*

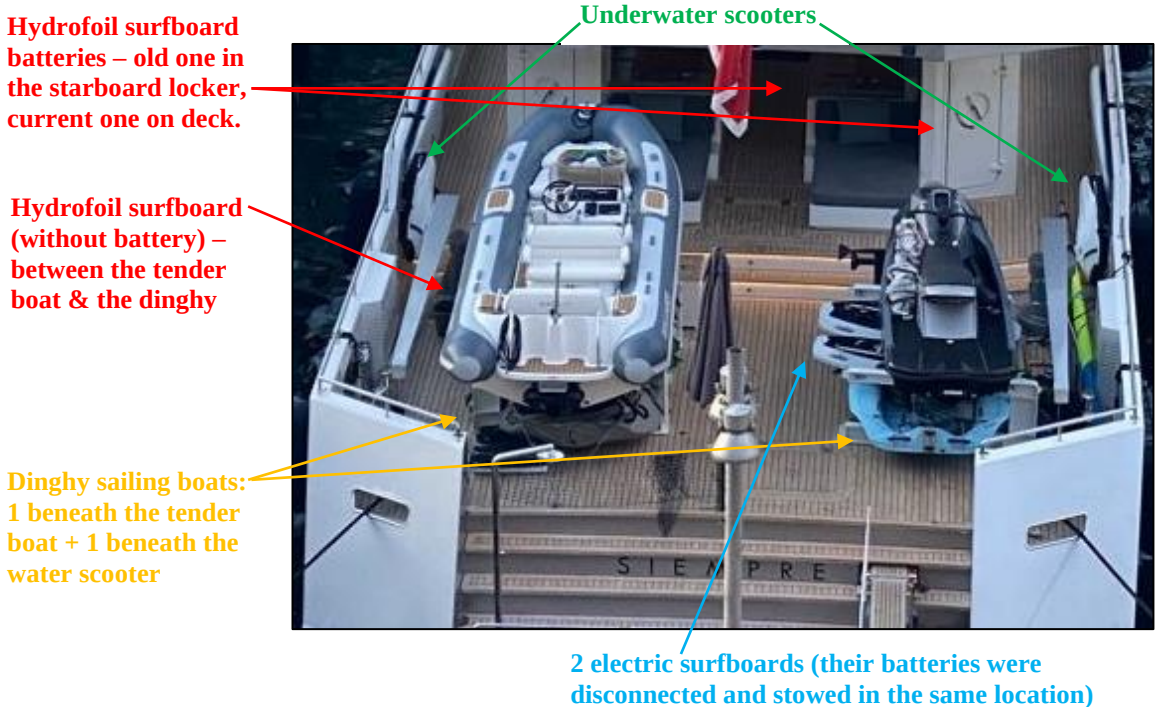

Figure 2: Location of the rest of the leisure equipment on *Siempre*'s aft deck

The stowage locations of the equipment can be seen in **Figures 1 and 2**.

Batteries for the leisure equipment

While most of the leisure equipment on board had integrated, rechargeable, Lithium ion (Li-ion) batteries, the hydrofoil surfboard and electric surfboards had removable, rechargeable Li-ion batteries. The electric surfboards' batteries were stowed in proximity of the surfboards, while an old (dead) battery of the hydrofoil surfboard was stowed in the starboard locker. The one in use was stowed on the deck in the cockpit area (**Figure 2**).

The water scooter was recharged through a 380 V - 400 V power socket, while the other equipment (or their removable batteries) was recharged through 220 V power sockets. The 220 V power sockets were fitted at various locations, around the aft deck of the yacht. The 380 V - 400 V power socket for the water scooter was fitted in June 2021. It was fitted on the starboard bulwark, near the water scooter (**Figure 3**). The wiring schematic diagram for this socket is shown in **Figure 4**.

Figure 3: Water scooter charging socket (fitted by the crew members in June 2021)

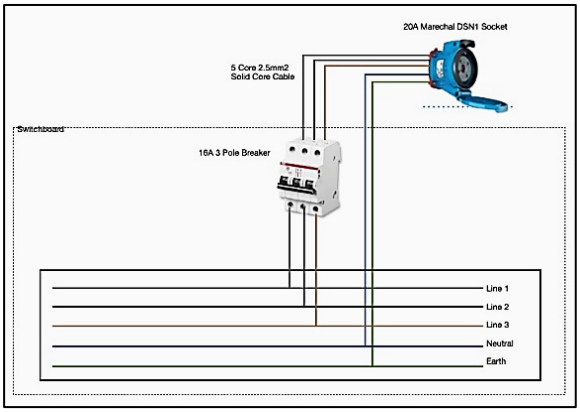

Figure 4: Wiring of the water scooter charging socket

The crew members stated that, in accordance with on board procedures, no leisure equipment was left to recharge unattended and / or overnight. They also stated that all equipment had last been used by the yacht's last charter guests on 02 September 2021, following which, the deckhand and the chief stewardess recharged and unplugged them later that same evening. They confirmed that no equipment was being recharged during the night of the accident.

Events involving *Siempre*'s leisure equipment and fittings, prior to the accident

1) *The hydrofoil surfboard*

The complete set of the hydrofoil surfboard had been delivered to the yacht in August 2020. Several months later, the crew members observed an issue with its battery while it was being used. The hydrofoil surfboard was brought back to the yacht on low power. Upon opening the battery hatch, the crew members observed sparks and found a hot corner on the battery. They immediately removed the battery.

The crew members stated that, when they then tried to recharge the battery, the temperature increased to about

60 °C, before it failed. The dead battery was kept on deck for several days and later placed in the starboard locker, on the aft deck (**Figure 2**), where the yacht's fender hooks[2] were being stored.

A new battery was delivered to the yacht on 19 July 2021. However, the crew members experienced problems[3] with this new battery and reported the matter to the hydrofoil surfboard manufacturers. Based on the information provided by the crew members, the manufacturers advised that the described problems with the new battery was indicative of a pre-charge failure, which was possibly caused by a damaged / faulty electronic speed controller (ESC) fitted to the surfboard.

Noting that the previous battery had gone dead, the manufacturers also suggested that the previous battery may have been damaged around the same time when the damage / fault to the ESC occurred.

The manufacturers informed the crew members that they would replace the hydrofoil surfboard's 'eBox' (which housed the ESC). They also advised the crew members to monitor the first (damaged) battery, and place it in a secure, non-flammable location [*sic*].

The first officer informed the safety investigation that the eBox was eventually replaced, following which, the hydrofoil surfboard operated without any issues. The dead battery, however, remained in the starboard locker. The first officer stated that they were waiting for further instructions from the manufacturers on how to dispose of the damaged battery and whether any warranty claims could be triggered.

2) *Power socket near the tender boat*

Around two weeks prior to the accident, the crew members noticed that the power outlet fitted on the bulwark near the tender boat, was not functioning properly. On dismantling the unit, the chief engineer observed electrical damages inside (**Figure 5**).

The chief engineer trimmed off the damages parts of the wires and connected the unaffected parts of the wires using connector clips.

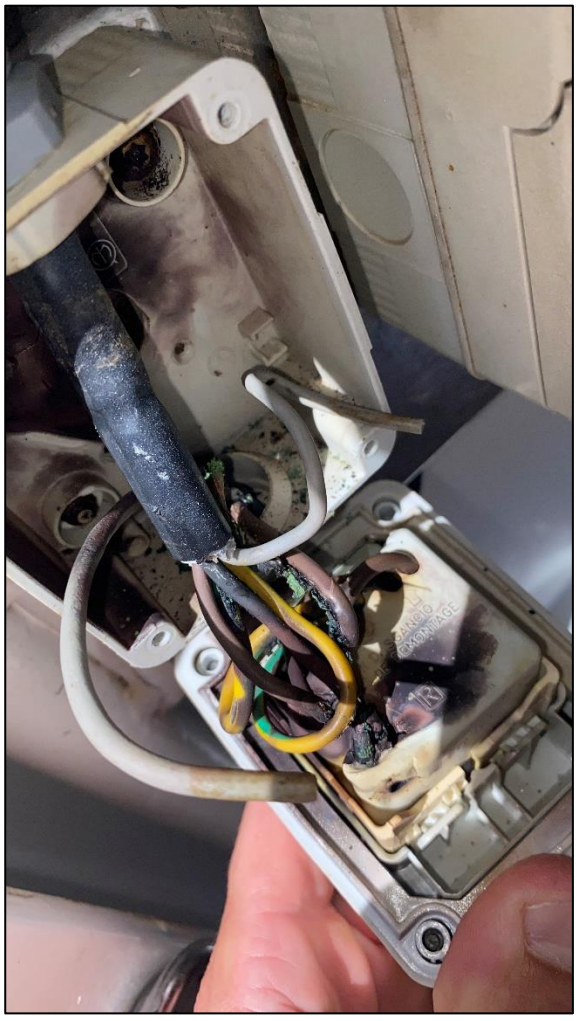

Figure 5: Damages within the power socket fitted near the tender boat

[2] The crew members stated that these fender hooks were last used on 01 September 2021.

[3] The controller could not be linked with the hydrofoil surfboard, and an unusual display of indicator lights were seen on the battery.

The safety investigation was informed that this power outlet contained two sets of wires, one of which was connected to the water scooter's charging socket.

Environment

Around the time of the occurrence, the sky was clear. The wind direction was Easterly with a speed of about two knots, and the sea was calm with no swell. The air and sea temperatures were both recorded as 20 °C.

Narrative[4]

Siempre departed from Bonifacio, Corse (France) on 30 August 2021 and proceeded to Olbia, Sardinia (Italy). The yacht was off hire at that time and the master had disembarked upon the yacht's arrival at Olbia. When the yacht was moored at Olbia (**Figure 6**), the first officer stayed at a hotel, ashore.

In the afternoon of 05 September, *Siempre*'s RIB was shifted to her starboard side to allow another yacht (yacht B) to moor on *Siempre*'s port side.

Figure 6: Still from the marina's CCTV footage, showing how *Siempre* was moored at Olbia (red arrow: *Siempre*, with her RIB moored to her port side)

On 06 September, at 0128, the CCTV camera captured smoke escaping from *Siempre*'s aft deck, soon followed by intermittent bright flashes, resembling open flames. This caught the attention of the crew members of a third neighbouring yacht (MY *Blue Vision*), who were on the dock at that time (**Figure 7**).

On approaching to have a closer look, they noticed a fire developing in the vicinity of *Siempre*'s water scooter, which was housed on the aft deck.

Figure 7: Still from the marina's CCTV footage from the afternoon of 05 September 2021. Blue circle: location of *Blue Vision*'s crew, when the fire started; blue arrow: MY *Blue Vision*; red arrow: MY *Siempre*

[4] Unless otherwise specified, all times in this safety investigation report are local (LT = UTC + 2). The times were noted from the marina's CCTV footage.

They stated that the fire soon spread across the aft deck and that they observed that within seconds, the flames reached a height of between 2.0 m and 2.5 m.

At 0130, one of *Blue Vision*'s crew members reported the fire to the master and chief officer. The chief officer rushed ashore and telephoned the emergency services of the port.

In the meantime, the crew of *Siempre*, who were asleep in the cabins, was alerted by the yacht's fire alarm. The chief engineer ran up the interior stairway to investigate and, on reaching the saloon on the main deck, he observed a large fire on the aft deck. He ran back to the crew's accommodation and instructed the rest of the crew members to vacate the accommodation area through the escape hatches on the yacht's bow.

The chief engineer then connected a fire hose and started the fire pump from the bridge to extinguish the fire.

At 0136, on seeing *Siempre*'s crew members on the bow, the master of *Blue Vision* instructed his chief officer and deckhand to take their tender boat to *Siempre*'s bow to assist in the evacuation of the crew members. The tender boat was by *Siempre*'s bow after three minutes and stood by for the evacuation.

During this time, the crew members of Yacht B were also alerted of the fire. They unmoored their yacht and immediately manoeuvred it away from *Siempre*. At 0139, the crew members of Yacht A started their fire pump and directed their fire hoses towards *Siempre*.

Meanwhile, while the chief engineer continued with his attempts to extinguish the fire, the fire raged on *Siempre*'s aft deck, also reaching the water scooter and tender boat. At around 0150, a shore fire brigade arrived and joined in the fire fighting. By this time, observers noticed that the fire had spread and reached the bridge deck. Moments later, all four crew members of *Siempre* jumped into the water from the bow. They were picked up by *Blue Vision*'s tender boat and brought safely to the pier beside *Blue Vision*, at 0155.

The crew members of *Blue Vision* recalled that *Siempre* was completely engulfed by the fire by 0230. At 0346, the flames were seen to be receding.

Post-accident events

The shore fire brigade continued to fight the remaining flames, using water and foam. Subsequently, *Siempre* started to develop a port list. At around 0730, while the shore fire brigade was still fighting the fire, *Siempre* listed over to its port side (**Figure 8**). However, for the following two days, several interventions were still required by the shore fire brigade to tackle emerging flames and smoke from parts of the yacht that were above the water level.

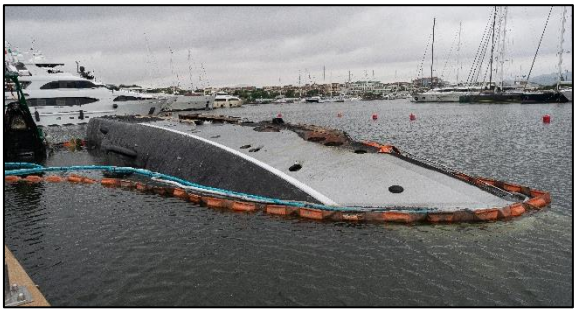

Figure 8: *Siempre* on the morning after the fire

Sustained damages

Siempre was declared a constructive total loss. The yacht was eventually re-floated on 02 November 2021 (**Figure 9**).

The partially submerged *Siempre* caused the temporary closure of sections of the marina, until the yacht was re-floated and towed to a shipyard. Information on the extent of pollution (if any) within the marina, due to the fire, the fire-fighting actions and / or the capsizing of the yacht, was not available to the safety investigation.

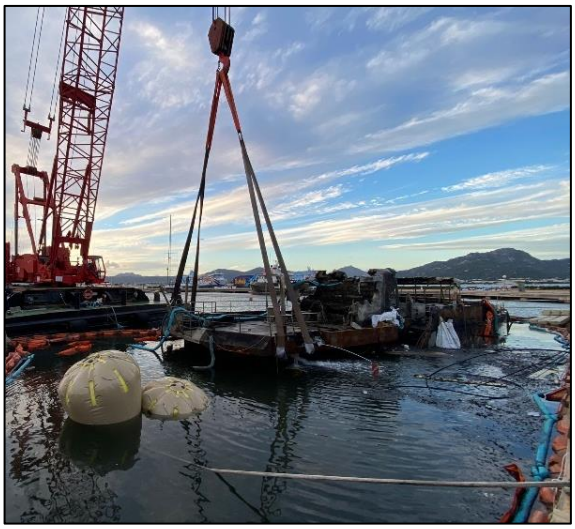

Figure 9: Re-floating of *Siempre* at Olbia

Fire detection and fire-fighting equipment around the aft deck

The main deck, where the fire started, was fitted with two smoke detectors, a heat detector, two portable fire extinguishers within the accommodation space, and two fire hose reels and a portable fire extinguisher on the external, starboard side of the accommodation (**Figure 10**).

Safety management manual

Although *Siempre* was not required to comply with the requirements of the ISM Code[5], the Company provided the yacht with a 'Mini ISM – Safety Management Manual' (SMM). The SMM was intended to guide the operation and safety management of the yacht.

The SMM documented various procedures, checklists, and contingency plans to guide the crew members through day-to-day operations and activities, safety and security-related matters, pollution prevention and emergency response.

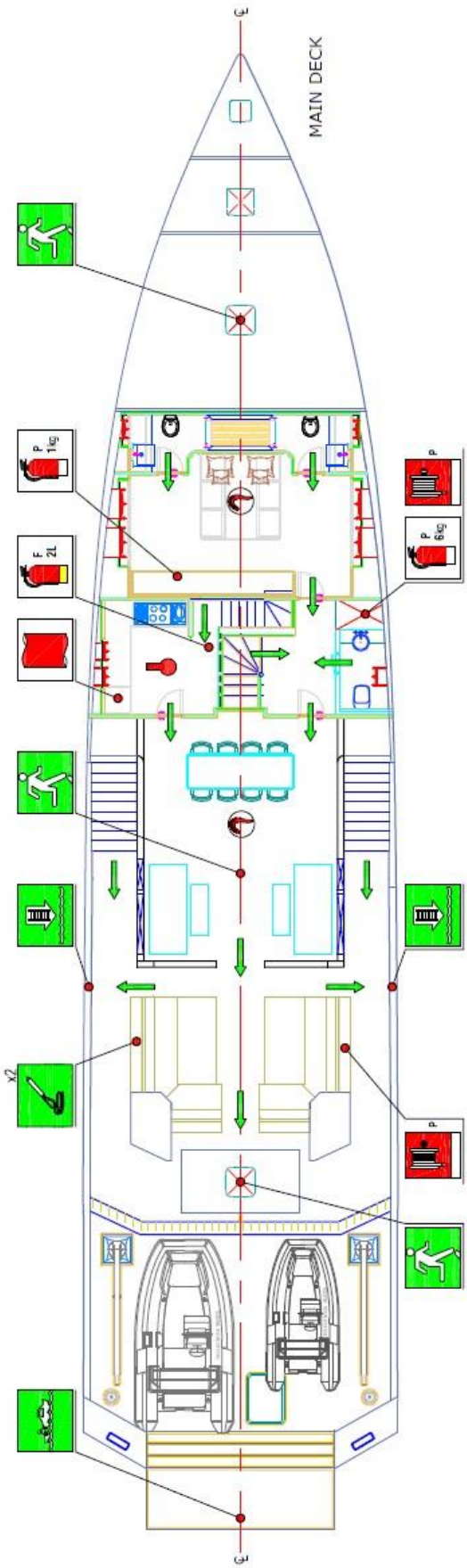

Figure 10: Extract of *Siempre*'s Fire Safety Plan

[5] IMO. (2018). *International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management Code)*. London: Author.

Fire hazards of Li-ion batteries

In view of the global inclination to shift from fossil-fuels to a cleaner (and cheaper) energy source, electric power is seen as the most effective solution. Vehicles conventionally powered by fuel, such as buses, cars, motorcycles, *etc*., or even physically driven vehicles, such as bicycles and scooters, are now available with an electric power source. Electrically powered surfboards and water scooters are now available on the market.

The trend towards Li-ion battery packs is due to their compact size and light weight (when compared to Ni-Cd batteries), their longer life span, and low maintenance requirements (when compared to lead-acid and alkaline batteries). This has resulted in the powering of most of the available electronic goods, from mobile phones to electric vehicles, by Li-ion batteries.

However, Li-ion batteries pose their own hazards, particularly fire hazards caused by either damaged or faulty batteries. In cases where the battery is either concealed within the equipment or stored in a box / compartment, the user / handler may not even be aware of the damages or the fault. The failure of a single cell within the battery can initiate thermal runaway[6], a phenomenon in which the Li-ion cell enters an uncontrollable, self-heating state[7].

Thermal runaway is an exothermic chemical reaction. Being exothermic, it generates more heat than is being dissipated[8] by the cell and can result in extremely high temperatures, violent cell venting, smoke and fire[9]. Once started, thermal runaway can easily spread to the adjacent cells within the battery.

MSIU's past safety investigation involving Li-ion battery fires

The MSIU has previously investigated a fire on board a yacht, where the most likely cause of the fire was believed to be a damaged Li-ion battery of an electric surfboard. The fire hazards of Li-ion batteries were elaborated upon in the safety investigation report[10].

Following the aforementioned safety investigation report, the MSIU was also notified of several fires on board Maltese-registered vessels, which started from Li-ion batteries. A safety investigation report[11] was also published on a fire involving Li-ion batteries, on board a container vessel. However, since the rest of the reported occurrences were relatively minor fires, a full safety investigation was not warranted into these occurrences.

Concerns with Li-ion fires are fairly recent. In fact, in December 2020, the MSIU had circulated a survey questionnaire through the Marine Accident Investigators' International Forum (MAIIF). The scope of the survey was to seek information on safety investigation experiences of other accident investigation bodies. The responses indicated that the respondents did not have significant data on Li-ion battery fires.

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6 Detailed information on thermal runaway in Li-ion batteries may be retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8333160/

7 Underwriters Laboratories (n.d.) *What is thermal runaway?* Retrieved from: https://ul.org/what-we-do/electrochemical-safety/getting-started-electrochemical-safety/what-thermal-runaway

8 Fire Industry Association (UK). (2020). *Guidance on Li Ion battery fires (Version 1)*. Retrieved from: https://www.fia.uk.com/resourceLibrary/guidance-document-on-li-ion-battery-fires-.html

9 Underwriters Laboratories (n.d.) *What causes thermal runaway?* Retrieved from https://ul.org/what-we-do/electrochemical-safety/getting-started-electrochemical-safety/what-causes-thermal

10 MSIU safety investigation report 16/2019.

11 MSIU safety investigation report 21/2021.

ANALYSIS

Aim

The purpose of a marine safety investigation is to determine the circumstances and safety factors of the accident as a basis for making recommendations, and to prevent further marine casualties or incidents from occurring in the future.

Cooperation

During this safety investigation, MSIU received the cooperation of the *Capitaneria di Porto di Olbia*, Italy, by means of the marina's CCTV footage.

Cause of the fire

Based on the information provided to the safety investigation and noting that the crew members of *Blue Vision* had noticed the fire developing in the vicinity of the water scooter, the MSIU hypothesized that the fire may have been caused either by the dead Li-ion battery of the electric hydrofoil surfboard, which was stored in the starboard locker, or by one / both electric surfboards' Li-ion batteries which were stored below the water scooter. In the case of the electric surfboards' batteries, it would have meant that one / both developed a fault during the last use, which had gone unnoticed by the crew members.

Since the exact seat of the fire could not be established, the safety investigation did not exclude a third possibility that the fire may have been caused by an electrical short circuit in the charging socket of *Siempre*'s water scooter. In its consideration, the MSIU considered that about two weeks prior to the fire, the power socket had malfunctioned.

Spread of the fire

The statements by *Siempre*'s crew members suggested that they heard the fire alarm at around 0130 *i.e.*, about two minutes after the fire had started on the aft deck. The closest fire detector was a smoke detector near the mid-length of the main deck (**Figure 10**). This indicated to the safety investigation that, within those two minutes, sufficient smoke had entered the accommodation area of the main deck, from the open aft deck, to reach the smoke detector and activate the fire alarm.

Additionally, *Blue Vision*'s crew members stated that they saw the fire spread quickly over *Siempre*'s aft deck area and that the flames reached a height of about 2.5 m within a few seconds. Through the CCTV footage, the safety investigation observed how quickly the fire had intensified. The safety investigation noticed that, since the fire originated on *Siempre*'s open, aft deck, there was nothing that could be done to suppress the air, necessary to feed the fire. Moreover, the presence of several Li-ion batteries (the removable ones as well as those integrated within the leisure equipment) in proximity to the fire, by virtue of their inherent hazards, would have allowed the fire to intensify and spread even more rapidly.

Once the fire had intensified and spread to the leisure equipment, fitted with combustible components, it did not take long for the various flammable fittings, fabrics, wood panels, *etc*. to contribute to the fire spread through most of the yacht and before the fire could be brought under control.

Storage of Li-ion batteries on board *Siempre*

Commercial yachts are almost always equipped with leisure equipment for the entertainment of guests that charter the yacht. The Maltese flag State Administration's *Commercial Yacht Code*[12] requires battery-powered equipment on commercial yachts to be stored either on an open deck, or within an

[12] Merchant Shipping Directorate. (2020). *Commercial Yacht Code*. Lija: Transport Malta. Retrieved from: https://www.transport.gov.mt/CYC-2020.pdf-f5742

enclosed space / garage that meets the prescribed fire protection requirements.

As seen in **Figures 1** and **2**, *Siempre* was equipped with several leisure equipment, most of which were electrical and powered by Li-ion batteries. Except for the electrical bicycles and scooters, which were stored in the mast box, all the other leisure equipment was stored on the open aft deck.

However, there was only space for the removable rechargeable Li-ion batteries to be stored on the aft deck. Thus, even if these Li-ion batteries remained intact, they would still be susceptible to hazards, such as a fire originating elsewhere in its vicinity. Furthermore, considering that the crew members were advised to store the dead battery in a safe location (and since the disposal or the transportation of a faulty Li-ion battery requires certified professional services), the crew members did not have a choice, but to place it in the starboard locker.

Crew awareness on Li-ion battery hazards

The Company's SMM did not contain any information on Li-ion batteries, and the safety investigation was unable to ascertain whether the manuals for the leisure equipment, and the safety data sheets of the batteries were available on board the yacht. Nonetheless, the crew members tried to ensure that the dead battery was stowed safely, following the advice received from the manufacturers. They also stated that the recharging of the batteries and the leisure equipment was always monitored. These actions suggested that the crew members were aware of the hazards that a Li-ion battery may pose.

However, considering that the disposal of the dead battery had not been completed over the two months since the replacement battery was received on board, the safety investigation did not exclude that the crew members may have not been fully aware of the hazards, especially those related to a faulty battery.

Fire-fighting actions

Crew members recalled that fire-fighting actions were initiated shortly after 0130. At 0139, crew members of Yacht A also directed their fire hoses towards *Siempre* and at 0150, the shore fire brigade arrived and joined in the fire-fighting efforts. Almost six hours later, the yacht listed completely to its side, most probably due to a loss of stability caused by the water used to fight the fire. Nonetheless, the fire brigade's intermittent interventions were still required to douse emerging flames and smoke in parts of the yacht that were not submerged.

The amount of time spent to fight the fire, and the flames and smoke that continued to emerge over the following couple of days (even with the yacht partially submerged) could have been likely due to the thermal runaway process and subsequent reignition of the several Li-ion batteries on board *Siempre*.

Fighting Li-ion battery fires

Li-ion battery fires are not easy to extinguish with conventional fire-fighting media. Large amounts of media and time are required to suppress such fires[13]. Since thermal runaway is an exothermic chemical reaction which is irreversible at a cell level, it would be essential to extinguish the fire in the cell where it originated and cool down the adjacent cells, which would have been heated up during the initial fire[14]. Cooling as many

[13] Bisschop R., Willstrand O., Rosengren M. (2020). *Handling Lithium-Ion Batteries in Electric Vehicles: Preventing and Recovering from Hazardous Events*. Retrieved from: https://link.springer.com/article/10.1007/s10694-020-01038-1

[14] CFPA Europe. (2020). *An extinguishing agent specifically developed for Lithium-ion battery fires.* Retrieved from: https://cfpa-e.eu/an-extinguishing-agent-specifically-developed-for-lithium-ion-battery-fires/

cells as possible can prevent thermal propagation through the cells, and thus minimizes the chances of reignition of the battery.

There is ongoing research[15] on the most suitable fire-fighting media for Li-ion battery fires, while also inhibiting thermal runaway. In this regard, the efficiency of Aqueous Vermiculite Dispersion[16] [17], and low-pressure twin fluid water mist[18] are currently being studied by academia and industry organizations.

CONCLUSIONS

1. It was not excluded that the Li-ion batteries on board were either the cause of the fire, and / or a contributing factor to the intensity and spread of the fire.
2. The safety investigation did not exclude the possibility that the fire may have started due to a short circuit in the electrical power socket of the yacht's water scooter.
3. The yacht most probably lost its stability and eventually listed to port side as a result of the water from the fire-fighting activity.
4. The fire continued intermittently for two days after the accident, even with the yacht partially submerged.
5. The retention on board of a dead battery suggested that there was not full awareness of related fire hazards.

RECOMMENDATIONS[19]

The Company is recommended to:

13/2022_R1 issue a formal notification to all crew members serving with the Company, advising them of the hazards posed by Li-ion batteries.

13/2022_R2 establish written procedures to guide all crew members serving in the Company, on the proper handling and disposal of faulty / dead Li-ion batteries.

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15 *Vide* footnote 7.

16 Further information on Aqueous Vermiculite Dispersion can be accessed from: https://www.avdfire.com/

17 Wang, H., Sun Q., Guo J., Xie S., He Y., Chen X. (2020). *The Efficiency of Aqueous Vermiculite Dispersion Fire Extinguishing Agent on Suppressing Three Typical Power Batteries*. Retrieved from: https://asmedigitalcollection.asme.org/electrochemical/article-abstract/18/2/020901/1086698/The-Efficiency-of-Aqueous-Vermiculite-Dispersion?redirectedFrom=fulltext

18 Guo. J., Wang H., He. Y. (2021). *Inhibition Effect of Thermally-Induced Fire in 21,700 Lithium-Ion Battery with Low-Pressure Twin Fluid Water Mist*. Retrieved from: https://asmedigitalcollection.asme.org/electrochemical/article-abstract/18/2/020912/1094102/Inhibition-Effect-of-Thermally-Induced-Fire-in-21?redirectedFrom=fulltext

19 **Recommendations shall not create a presumption of blame and / or liability.**

SHIP PARTICULARS

Vessel Name:	*Siempre*
Flag:	Malta
Classification Society:	Not applicable
Official Number:	18160
Type:	Commercial Yacht
Registered Owner:	Black Pepper Yachting Partnership
Managers:	Private yacht Group Ltd., UK
Construction:	Steel and Aluminium
Length Overall:	34.75 m
Registered Length:	32.97 m
Gross Tonnage:	220
Minimum Safe Manning:	Six
Authorised Cargo:	Not applicable

VOYAGE PARTICULARS

Port of Departure:	Bonifacio, France
Port of Arrival:	Olbia, Italy
Type of Voyage:	Short International
Cargo Information:	Not applicable
Manning:	Four

MARINE OCCURRENCE INFORMATION

Date and Time:	06 September 2021 – 01:28 LT
Classification of Occurrence:	Serious Marine Casualty
Location of Occurrence:	Olbia, Italy
Place on Board	Open aft deck
Injuries / Fatalities:	None
Damage / Environmental Impact:	Constructive Total Loss
Ship Operation:	Moored
Voyage Segment:	Alongside
External & Internal Environment:	Clear sky, night-time. Easterly wind of about two knots. Calm sea with no swell. Air and sea temperatures were both recorded as 20 °C.
Persons on board:	Four