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Industry Insights

Are Lithium-ion batteries to blame for recent boat blazes?

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Ian Hoy, UK Underwriter, Pleasure crafts at Beazley contributed to an article in the January edition of Boat International. Read his full views below.

It is important to distinguish between the different types of lithium exposure on a vessel. Broadly speaking, we are looking at three categories:

- Vessels that are powered solely or in part (e.g. as an alternative to a generator for the navigation, household and comfort appliances) by lithium batteries (e.g. Silent Yachts for the former and Sanlorenzo SX88;
- Vessels that have had a retrofit of lithium batteries;
- Toys onboard that are powered by lithium batteries.

Our view of the risk and how we underwrite it varies depending on which category we are looking at:

For vessels that are powered solely or in part by lithium batteries the battery bank, battery management systems will be integral to the overall design of the vessel. The quality of the parts used tends to be high, with battery banks being supplied by major manufacturers. If yacht builders brought insurers onside during the manufacturing process to explain how the design and product process will help to mitigate the lithium battery risk, it would open up the number of insurers who will be willing to quote.

Retro-fitted lithium power packs are more challenging, because insurers need to understand who was responsible for the installation, whether Class is involved, and whether a suitably qualified surveyor is

involved if it is not class maintained.

Toys is perhaps the most challenging category. There has been a lot of speculation as to the cause of several of the fires in the last couple of years, with the toys onboard being cited as the most probable cause. The Maltese Marine Safety Investigation Unit's report into the fire on Siempre concluded that "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." In the case of Siempre, there were two electric surfboards, an electric hydrofoil surfboard and two electric underwater scooters onboard at the time of the fire. This particular incident highlights the dangers faced of having lithium onboard.

From an insurer's perspective, we can help the yacht owner and Captain manage this risk, and reduce concerns around having lithium toys onboard, through providing practical steps to follow for lithium batteries. For example, we look to include the following:

- No lithium batteries are to be charged while the insured Vessel is unattended or between sunset and sunrise;
- Lithium batteries are to be charged on deck only;
- Lithium batteries are to be charged using the original equipment manufacturer's supplied charger;
- Lithium batteries are to be charged on a heat proof mat;
- All lithium batteries are to be charged as per the manufacturer's recommendations;
- Operational fire extinguishers suitable for lithium-ion batteries to be onboard and accessible by crew members in the event of a fire;
- When not being charged or in use, the lithium batteries are to be stored in a fireproof battery box.

We have had direct experience of the consequences of a lithium battery fire some years ago. Fortunately, in this instance, the vessel concerned did not sustain significant damage and we were given an early heads-up of the threats posed. Since then, we have asked for details of any lithium powered toys to be notified to us so that we can make sure the appropriate risk mitigating actions are included within our quote to help manage the threat.

We continue to look at how best to approach the risk of lithium batteries and assess what other services we can provide to the owners and Captains to manage their lithium battery exposure. It is possible that in the not-too-distant future, there might be specific surveys to look at how lithium powered toys are being stored and charged on board. Such an approach will be an opportunity for insurers to help owners and Captains understand and manage the risk. Yacht managers today provide guidelines on how to manage lithium batteries – we would like to see this taken to the next stage, where each vessel has a clear step-by-step process for the management of lithium batteries.

Having a personal watercraft or toy onboard is not a bad thing – but key to their enjoyment is making sure that they are safe and properly looked after.

Read the full article here.

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