Safe boats need safe people

Proper maintenance is essential

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Lifeboat safety is a live issue, as Seaways *readers know. Debate usually focuses on injuries suffered by seafarers during boat drills and questions about the fitness for purpose of the lifeboats themselves. However David Bradley, representing one of the world's leading lifeboat manufacturers, argues from experience that accidents are caused by misuse and bad maintenance.*

In this article, he calls on the shipping community to insist that all flag states use well trained, authorised personnel to maintain and repair lifeboats and he outlines the new generation of safer on-load hooks his company has introduced.

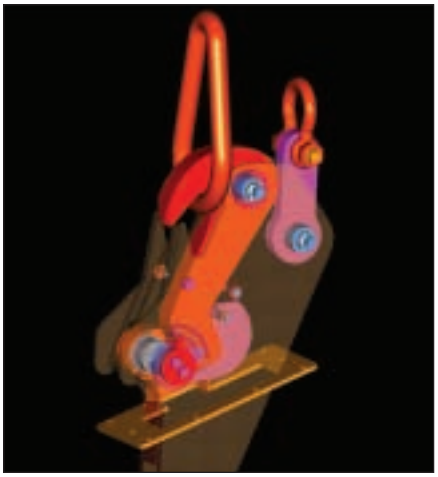
By way of introduction, I work for Schat-Harding, a world leader in lifeboat and davit systems, not only in terms of volume, but also in innovation. We spend a lot on research and development, investing heavily in trying to keep seafarers safe. I can say that we led the world with free-fall boats, with our KISS (keep it safe and simple) range and currently with our new, safer on-load release hooks.

Seaways readers are, or have been, mariners, who know about boats and maintenance. You know how important it is that boats are ready to use, and that the people using them know what they are doing, so you will understand why I get aroused by issues around lifeboat safety, especially when, day after day, my engineers come in with photographs like those shown on page 21. We constantly see lifeboats and davits which are unsafe because they have the wrong parts fitted, or they are simply seized up. Too frequently we get reports of seafarers hurt during boat drills. And in every case, we find the accident is down to misuse or bad maintenance.

I and my company are the first people with an interest in changing this depressing picture. We want seafarers to be safe: that is the whole reason for our existence. Our outreach and influence as a leading manufacturer go way beyond what one or another flag state can do or what any one class society can do. But we cannot act alone. We, and more importantly, the crews who depend on our boats, need all parties to work together. Flag, class, owner and manufacturer; seafarers depend on us. Nautical Institute members can help by using their influence to ensure the flag states step up to the plate and get this right.

Fundamentally, there are two ways to tackle the problem. One is to use technology to develop safer systems, the

▲ Poor maintenance can cause accidents



▲ The new generation LRH 12 hook

▲ Open position

other is to ensure the systems are looked after and used properly. These two approaches must go hand in hand. We can improve systems but we can never design an on-load release hook which is proof against incorrect use: safe boats still need safe people.

Solas amendments

IMO has acted to make ships' lifeboats safer by introducing amendments to Solas Chapter III and MSC1206. Yet some flag states are trying to bypass their implementation. At the same time, the UK MCA has published a report which says all on-load release hooks currently fitted to ship's lifeboats are unsafe and should be replaced, while dismissing the role of maintenance and training in the use of hooks and boats.

In my opinion, IMO has got this right, the MCA has got things partly right – and those flag states that are refusing to follow MSC1206 and enforce correct maintenance by manufacturer-approved engineers have got this sadly and badly wrong. Whatever technology or concepts are introduced for the future, crews will still need to use the equipment properly and the equipment will still need to be maintained properly.

Schat-Harding's experience is consistent with the MCA's analysis that most accidents with lifeboats are caused by misuse or incorrect maintenance of the on-load hooks. But we differ on the solution. The MCA's idea is that redesigned hooks will clear up the problem. Schat-Harding believes that the real answer lies with IMO's reforms. These hinge on the need for correct training and maintenance.

There are also those who propose more radical solutions, such as float free capsules. We are not closed to those ideas either, but we would like to focus on the real problems of today, not blue sky solutions which given the time needed to change regulations will be a long way down the line.

Our company has always been ready to collaborate with industry or governments to work on new ideas and new standards; indeed we are ahead of the MCA on this and some time ago we introduced a complete re-engineering of our hook range. The new hooks have a unique design concept which offers a safer solution and is less maintenance dependent than most of the hooks in use today.

Our range of lifeboats leaving our Norwegian factory with Schat-Harding brand hooks is almost completed. All our KISS totally enclosed lifeboats, freefall lifeboats, cruise tender lifeboats and partially enclosed lifeboats are fitted with them. This just leaves two boat types in our MCB totally enclosed range. These boats are scheduled to be fitted with our new LHR6 on-load release hook from May onwards.

We have also retrofitted this new second generation of hooks for some owners, including Celebrity Cruises. There are about 70 different hooks out there at present, all of which are variants of the first generation designs. Most are copies of copies and have moved a long way from the original design concept. Current hooks all work to a design which has small safety tolerances, making them sensitive to lack of maintenance and with which it is hard to see if they are locked or not.

Our new second generation hooks solve those problems we believe. We have eliminated the need for strict tolerances and have used corrosion resistant material on critical components, to simplify maintenance routines and improve reliability. The hooks are fitted with a clear external indicator to show that the hook is closed correctly, thus offering necessary reassurances to the operators.

So we have put technology to good use. But it is impossible to avoid accidents with any form of quick release hook if the crews are not trained and the maintenance is not done correctly. This is why we believe strongly that IMO's MSC1206 must be fully implemented.

The newly revised Solas Chapter III states: 'Maintenance, testing and inspections of lifesaving appliances shall be carried out based on the Guidelines developed by the organisation…'

These Guidelines are set out in MSC 1206 – probably the most significant change to IMO lifesaving rules for many years. This spells out what must be maintained and when, and who must maintain it. The essence of the Guidelines is that all maintenance must be carried out in accordance with a scheme laid down by the manufacturer. Some inspections and weekly and monthly maintenance can then be done under the supervision of a senior ship's officer in accordance with the

▲ Hook replacement: LRH 12 on the Celebrity cruiseship *Millennium*

▲ These photographs, a small sample of the many sent to Schat-Harding by the company's engineers, show what can happen if lifeboats and hooks are not properly maintained.

instructions provided by the manufacturer.

MSC1206 is, then, very specific about all other inspections, service and repair, which 'should be conducted by the manufacturer's representative or a person appropriately trained and certified by the manufacturer for the work to be done'. When any work is being done MSC1206 requires: 'Repairs and replacement of parts should be carried out in accordance with the manufacturer's requirements and standards'.

MSC1206 also covers authorisation of personnel. It states that when the Guidelines require certification of servicing personnel, such certification should be issued by the manufacturer in accordance with an established system for training and authorisation. Finally, when the 'repairs, thorough servicing and annual servicing are completed, a statement confirming that the lifeboat arrangements remain fit for purpose should be issued by the manufacturer's representative or by the person certified by the manufacturer for the work'.

So, IMO has issued a clear regulation and detailed set of requirements which require shipowners to service their equipment properly and to do so using maintenance schemes, spare parts and personnel authorised or provided by the manufacturer. Properly put in place, this regulation and MSC1206 would eliminate almost all the cases of faulty maintenance which we have seen and which in some cases have led to tragic accidents.

Tragically, there are some flag states which remain determined to continue to allow servicing by personnel not authorised and trained by the manufacturer. IMO MSC1206 only allows them to do this when the manufacturer does not have facilities available. But some, like the UK MCA, have already issued guidance (MSN1803) which says that any independent lifeboat servicing station with two years' experience can simply apply to be authorised in lieu of the manufacturer for the purposes of MSC1206.

This is dangerous; it will lead to confusion and seafarers will pay with their lives, whatever the technology in use. Shipowners may also find their pockets hit, with more detentions as port state control officers get confused over whether or not equipment has been correctly serviced by the authorised persons. Fortunately, some major registries with good safety records are taking a more sensible line, and are enforcing the IMO Guidelines.

I hope the MCA and other registries will follow this lead.

Man overboard

1: Preparation

Captain Michael Lloyd FNI
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You think it may never happen on your watch… but if it does… Do you really know how to prepare for a 'man overboard'?

The very first man overboard (MOB) situation I experienced was while I was a cadet on a ship in the Mediterranean. A seaman, working in a lifeboat which was stowed in the falls, fell back over the side. The call went up, and as the boats were located on the boat deck, not far back from the bridge, it was heard – not surprisingly, as the bridge was manned by the OOW, the cadet of the watch, the quartermaster on the wheel and a seaman lookout. The radio officer was also on watch in his office on the bridge. I was detailed immediately to sound three long blasts on the whistle. This, apart from being the recognised signal to other ships for MOB, was also the ship's MOB action stations signal. The OOW ordered the wheel hard over which, as it was manned, was instantaneous. The lookout let go the MOB lifebuoy and smoke marker. Responding to the signal on the whistle, the captain arrived on the bridge together with the fourth officer and two other cadets; the two seamen designated as lookouts arrived, picked up their binoculars, went to each wing of the bridge and took over the lookout from the bridge seaman. The chief officer, a cadet and the boat lowering party were already assembled on deck; the boat was lowered to the boat deck and manned by the third officer, junior engineer and five crew. The ship turned round, slowed down and the boat was lowered. The seaman was found clinging to the MOB buoy, hauled inboard and returned to the ship.

The whole incident took around 15 minutes. No one seemed particularly excited by it; the man was put into dry clothes, given a large tot of rum and in the afternoon was back working in the boat. Entries were made in the log book and that was that. So it should have been. We practised MOB with the boat sent away at sea on every voyage. In addition we used the boats regularly: (Liberty boat, barbecues, beach parties and ship visits) thus there was a seamanlike familiarisation with boatwork among all on board. (The lifeboats, although quite cumbersome, were open, so capable of being used for boatwork.) The six cadets carried were from training ships where they had been immersed in boatwork and the ratings were all familiar with boats.

Well, the sea has not changed, but everything else has. On the positive side, the safety culture has now managed to infiltrate even the more recalcitrant skulls and safety belts, non-slip decks, coupled with a general acceptance that it may not be a good idea to have sailors dangling over the side in a force 9, has certainly reduced the number of incidents. However, there are now many at sea who are not as familiar with the ship and seamanship as they should be. In addition, there will always be conditions when seamen have to go out on deck in bad weather. Individuals still do foolish things regardless of the technology surrounding them thus, despite precautions, lectures, posters and safety departments, people still have a habit of falling off the ship into the sea. It is our job to bring them back, preferably alive…

The present predicament

Today, unless the ship is leaving or entering harbour, steering will be on autopilot. If it is daytime and in open waters, the OOW will be the only person on the bridge; often at night too, if the truth be told. There is the requirement that during the day, if he is not on the bridge, the duty seaman should be within instant call by the bridge. However, because of the chronic manning situation on many ships, this rule is often interpreted as, if the foc's'le has a phone, he is within call.

The ship now is generally larger, the bridge is wider and the wing doors often closed, thus not only will the shouts of man overboard not be heard but the dash out to the wings to release the MOB lifebuoys will take longer, in a situation where every second counts. The boats, unless you are lucky enough to have a purpose built rescue boat, will be two enclosed lifeboats. In many cases they will be stowed high up on the ship. Add this height to the possible height of a bulk carrier in ballast and the drop can be very high. In addition, the modern ship has the lifeboats' davits aft, as part of the accommodation housing. All too often this means that the boats, when lowered are in considerable danger of being swept under the stern counter, rather than being against the side of the ship.

With such difficulties in just using the boat, you would expect the expertise of today's crews to be better than previously. Regrettably, the seamanship training of current ratings and officers could be regarded as non-existent compared with the past: very basic with little boatwork knowledge or practical training.

Regardless of all these difficulties, it is the duty of the master to do all he can to rescue the person from the water to a place of safety and to demonstrate that he did all possible to affect such rescue. Put it bluntly, if the rescue is successful, any rule broken in the process will be forgiven. If it is not, be sure that every decision and action will be pulled apart by every deskbound mariner in the flag state concerned, even to the requirement that you must pull out the risk assessment document and issue a work permit for lowering the boat.