

Technical Bulletin

NUMBER 2 2002

Testing free-fall lifeboats

Many shipowners build vessels, even very large vessels, with fully enclosed free-fall lifeboats in the belief that this is a safer means of saving the crew in case the ship has to be abandoned

A free-fall lifeboat is a boat which does not depend for launch on the trim or list of the vessel in any way and which can easily be hydrostatically (float-free) launched should the vessel go down too fast for the crew to board and launch it themselves.

Unfortunately, many accidents have occurred when training crewmembers (and during inspections, due to a lack of training) and testing as per SOLAS requirements. Some of these accidents have been fatal.

When organising the training of crews in the use of these lifeboats, you should first ensure that all personnel are aware of the primary safety procedures for boarding and properly securing themselves in their seats prior to any free-fall launch. All manufacturers provide operation manuals for these appliances and it must be stressed that this operation manual (along with all other safety equipment operation manuals, as appropriate) should be read and the contents understood by all persons involved in the testing of the appliances prior to any free-fall or davit tests. Several 'dummy runs' are advisable and a competent person should ensure that all personnel within the lifeboat are correctly seated and secured – especially the head restraints.

The most common accident to personnel is spinal/neck damage caused by being improperly secured in the boat – and looking around as the boat hits the water.

The most common damage to the boat itself is caused by frequent freefall launching (bow) and contact with davits on recovery (stern), as illustrated in the photos, above right.



Loss of bow fendering and damage to the 'overall spray system' are both caused by entry into the water and cracks in the GRP fabric of the craft by the same means. Damage to stern assemblies, rudder nozzles and bilge grab rails is mainly caused by launch and

recovery using the davit, even when due care is being exercised to avoid such damage. The design of the davit assembly is often such that when the ship is in even a gentle seaway, there is very little room to manoeuvre the lifeboat upon recovery and as such, minor damage is almost inevitable.

Look into your own system and try to arrange testing in such a manner as to both minimise injury to personnel and damage to the lifeboat. After all, the lifeboat is there primarily for emergency evacuation and if damaged, will not be as effective if and when required.

SOLAS Ch.III Reg. 18.3.6 states that:

Each lifeboat shall be launched with its assigned operating crew aboard and manoeuvred in the water at least once every three months during an abandon ship drill...

The 1996 (effective 7/98) Amendments to SOLAS Ch.III Reg. 19.3.3.4 state:

“Lowering into the water, rather than launching of a lifeboat arranged for freefall launching, is acceptable where freefall launching is impracticable, provided the lifeboat is freefall launched with its assigned operating crew and manoeuvred in the water at least every six months. However, in cases where it is impracticable, the Administration may extend this period to 12 months, provided that arrangements are made for simulated

launching which will take place at intervals of not more than six months.”

In consultation with the UK MCA, the *assigned operating crew* is deemed to be the minimum number of personnel required to safely launch and recover the lifeboat – as with conventional lifeboats.

A commonly used method for simulated launching of freefall lifeboats is to attach the lifting wires to the recovery hook allowing plenty of slack (always ensuring that the lifting wires cannot slip from the hook) and a sufficiently strong ‘bowsing’ line – usually a chain – between the stern of the lifeboat and the davit in the area around the embarkation platform. The bowsing line is to have sufficient slack so that when the freefall mechanism is operated, the boat runs a very short distance down the track, is brought up by the bowsing line/chain and is easily recovered back to the stowed position for resecuring. Many boats have as standard an attachment point for a ‘security chain’ – used to avoid inadvertent launches.

Sources of Information:

UK P&I Ship Inspection / Loss Prevention Department, SOLAS and MCA