



U.S. Department of Homeland Security

United States Coast Guard

SAFETY ALERT - LIFEBOAT RELEASE MECHANISMS

January 27, 2004 Washington, DC

POTENTIAL SERIOUS SAFETY HAZARD NORSAFE CAMSAFE LIFEBOAT RELEASE MECHANISMS

Recently a NORSAFE Miriam 8.5 meter lifeboat equipped with NORSAFE Camsafe release mechanism fell from a semisubmersible mobile offshore drilling unit during initial preparation for sea trials. While the lifeboat was being recovered and raised to its stowage position, the aft hook unexpectedly released at a height of about 70 feet, followed by the disengagement of the forward hook as it took the full load of the boat. The boat tumbled and fell to the water landing upside down, causing one fatality and injuring two other crewmen.

The NORSAFE Camsafe release mechanism became available in 2000. It is not Coast Guard approved, however, it may be fitted on some NORSAFE lifeboats accepted by the Coast Guard based on Norwegian approval.

After the accident the release mechanism control lever was found in the locked position inside the boat, but it is apparent that the hook itself was not fully engaged with the cam inside the release mechanism. Subsequent investigation found that the release mechanism control lever could be placed in the locked position even though the locking cam had not properly engaged the hook. In this condition, the mechanism can appear upon casual examination to be locked and, due to the design and roughness of the hook and cam surfaces, it could bear a significant load. However, the hook can in fact release at any time without warning.

Satisfactory engagement and locking of the release device is dependent upon successful mating between the male and female portions of the cam and hook, respectively, as shown in the following drawing.



When properly engaged, the seam between the edges of the mating components will be clearly visible in the inspection window located on one side of the release mechanism. Observation of the components within this window will enable confirmation of complete cam-to-hook engagement and look as depicted on the right.



It is important to note that this window is impossible to see from inside the lifeboat and the associated lifeboat and release mechanism manuals are not clear on what the viewer should look for to ensure proper engagement.

The casualty investigation is not complete. Additional recommendations are likely to follow.

In the interim the **Coast Guard strongly recommends:**

- That only those launching and recovery operations that are absolutely necessary should be carried out with lifeboats having the Camsafe release mechanisms.
- Prior to launching the lifeboat, proper cam engagement must be verified as well as each time the boat is lifted for recovery operations.

Verification Procedure

All ships with NORSAFE lifeboats should be inspected immediately to determine whether they are

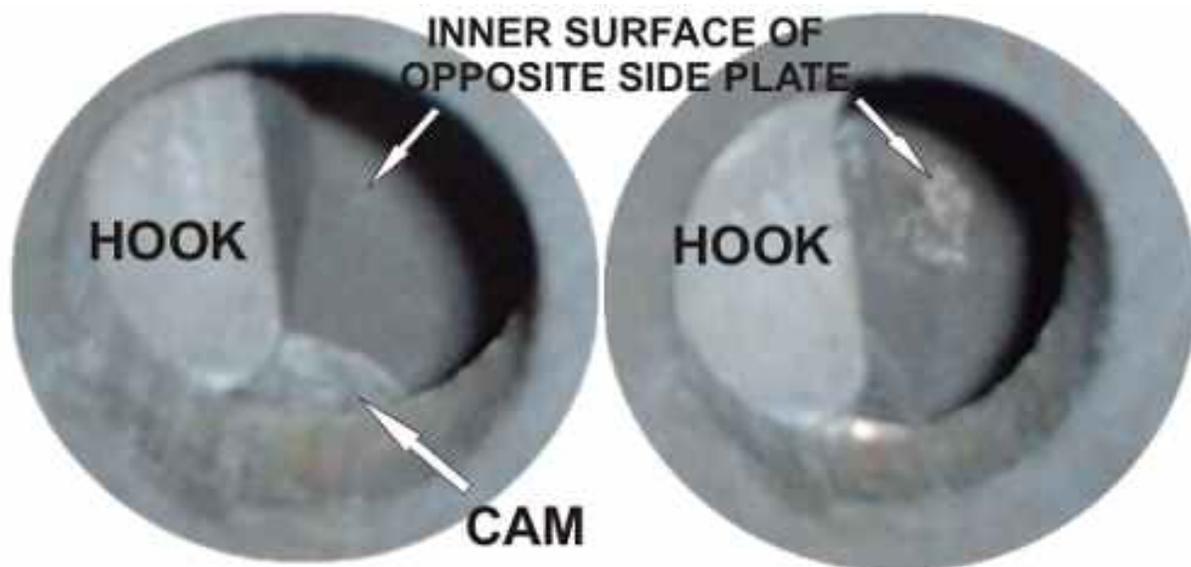
fitted with Camsafe release mechanisms. Lifeboats fitted with Camsafe release mechanisms should be examined as described below.

1. With the lifeboat in the STOWED position, and MAINTENANCE PENDANTS FITTED, check the inspection window of the hook (which may be outboard) to determine whether the cam and hook are completely engaged.

2. A properly engaged cam and hook will look like this:



3. An improperly engaged hook and cam may look like this:



IMPORTANT - The inside surface of the opposite side plate (or half) of the release mechanism will be visible, unless a significant portion of the hook is out side the side plates.

4. If the cam and hook are not completely engaged, the load of the boat must be temporarily transferred from the release mechanism and on to the maintenance pendants. Next the release lever at the helmsman's station is reset while the hook is pushed into place by hand to ensure the cam and hook are completely engaged. The load may then be returned to the release mechanism after confirming complete cam engagement through the inspection window.

With the cam and hook completely engaged, the release mechanism is safe to use. However, until the investigation has been completed, and the need for corrective measures for the Camsafe release mechanism and/or installation has been determined, **ONLY THOSE LAUNCHING AND RECOVERY OPERATIONS THAT ARE ABSOLUTELY NECESSARY SHOULD BE CARRIED OUT**, with lifeboats having the Camsafe release mechanisms.

Questions regarding this information and reports of any Camsafe release mechanisms found not completely engaged may be addressed to Kurt Heinz of the Coast Guard's Life Saving and Fire Safety Division at (202) 372-1385 or Kurt.J.Heinz@uscg.mil.

NOTE - On January 29, 2004 additional information relating to this safety alert was distributed as follows:

LIFEBOAT RELEASE MECHANISMS

Based on comments and questions on the recent January 27, 2004 Lifeboat Release Mechanism Safety Alert, the Coast Guard is providing the following clarification regarding access to the Camsafe inspection window, resetting procedures, and the safety of other release mechanism designs.

- The Camsafe (7T) inspection window is impossible to see from inside the Norsafe, Miriam lifeboat and therefore the crewmember must either crawl out the hatch near the release mechanism or use the side hatch to go around the outside of the boat to check the window.
- The associated lifeboat and release mechanism manuals differ and are not clear on what the crewmember should look for to ensure proper engagement. (See detailed description and photographs in the previous message.) The release mechanism manual is less detailed than the lifeboat manual, but neither makes it clear that, to ensure complete engagement of the hook and cam, the crewmember at the release mechanism must push on the hook tail while the helmsman closes the release lever.
- The posted instructions within the lifeboat do not completely cover all the required steps to safely recover the lifeboat.
- The use of the seat harness while raising the lifeboat might have prevented the fatality and is recommended anytime the lifeboat is raised or lowered.

There have been a number of casualties associated with recovery of lifeboats and the testing of their release mechanisms, and it is currently the subject of study and discussions within the International Maritime Organization (IMO).

The Coast Guard emphasizes that while lifeboat release mechanisms are required by IMO regulations to be protected against accidental or premature release when under load, the methods and effectiveness of protection vary with different manufacturers' designs. Accidents can occur with most designs if they are not used properly.

Mariners must never assume that any release mechanism will work like the one on their last ship -- study how each mechanism works and practice with it.

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