Incidents submitted to IMO relating to vessels carrying SMCs

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A paper has recently been submitted to the International Maritime Organization (IMO) concerning vessels which despite carrying a Safety Management Certificate (SMC), had accidents on board in which the investigators found little evidence of established procedures for reporting non-conformities, accidents and hazardous situations in keeping with the procedures to be expected when an SMC is in place.

The following incident reports were included

Multiple fatality – explosion related to paint solvent

Eight crew were spray painting a ballast tank using a two-part epoxy mix thinned with solvent. Excessive quantities of solvent were used. There was an explosion which severely ruptured the tank and resulted in the deaths of all eight crew members.

- Although there had been documentation on board with instructions for entry into confined spaces, there were no instructions for continuous work in such spaces.
- Ventilation was found to be inadequate and there was no evidence that the need to maintain a safe atmosphere was understood by the crew.
- No equipment was on board to test for an explosive atmosphere and none of the equipment being used for ventilation or other purposes in the tank was safe for such use.
- The ship management company had not ensure that adequate instructions were provided for the use of the epoxy paint.

The accident investigators found that the safety management system in place should have provided information on chemical safety and given proper guidance on risk assessment.

Operation of machinery under maintenance

A fitter welding machinery was seriously injured when the machinery he was repairing was inadvertently operated. The investigation carried out by the ship's classification authority found that, despite procedures being in place for energy isolation/lockout, there was little evidence to show that relevant verification and review processes were carried out.

Fatality – working in the proximity of lifting operations

During the test of a crane wire after it had been changed, a bosun was dragged into the sheaves at the top of the crane by a lanyard attached to his belt. He was killed.

The investigators noted that the company's safety manual had no precautions or procedures in place for crew members working in close proximity to moving machinery on cranes.

Fatality – blow-out of sight glass while de-scaling evaporator

An engineer was killed when the sight glass of an evaporator he was de-scaling blew out and struck him. He was attempting to remove the sight glass while it was under pressure.

Although there were procedures from the manufacturer for de-scaling the evaporator, modifications had been made and the process for de-scaling had been changed, without any written record of the new process being made. The engineer had been given verbal, but it was evident that he had not properly understood them.

It was found that the management company had not ensured that the procedure for de-scaling was properly reviewed following modifications to the unit.

In all of these incidents it was clear to investigators that although relevant safety documentation was in place, it was not effective because it had not been subject to proper ship-specific review and internal audit. The IMO paper suggests that ship operating companies should do so and should train and encourage their crews to do so, thus properly making use of safety documentation as a valuable tool for accident prevention.