

Lessons to be learned

Near casualty during inspection of cargo oil tanks

Course of events

During the close-up inspection of the deck-head in a cargo tank by rafting, one person became dizzy in the tank and half unconscious after evacuation from the tank.

Extent of damage

None.

Probable cause

The most probable cause of the casualty is that cargo residue came into the cargo tanks during ballasting by cargo pumps/lines, causing the dangerous atmosphere.

The last cargo in the cargo tanks was gas condensate. At time of inspection, the vessel had been at anchorage for weeks, and all the tanks had been cleaned and gas freed many weeks before the inspection took place.

After inspection of some cargo tanks by direct access, where no cargo residue could be seen, some tanks were ballasted in order to do close-up inspection of the deck head by rafting. The ballasting was done over night by use of the cargo pumps and lines.



Rafting in cargo tank.

The raft was arranged the next day but as the inspectors were about to start paddling around in the tank, they sensed the smell of gas and had to rush up the ladder and on to the deck. One person became half unconscious and could not stand upright. However, he rapidly recovered and then explained that when he entered the boat to attach the paddles, he suddenly felt a sweet taste in his mouth and became dizzy.

The oxygen level in the tank was measured to 21% and gases were also recorded.

The gas content was most probably caused by cargo residue in the cargo pumps and cargo lines, since these were used during ballasting.

A thin film was visible on the water surface inside tank and there was a slight smell, even at the hatch access level. It is believed that moving of the raft/paddles caused gas to evaporate more quickly from the film on the water surface in the tank, causing the change in the inspection conditions after they started to use the raft.

Lessons to be learned

- Always adhere to required procedures for safe entry of enclosed spaces!
- When conditions for entry are changed, the work permit previously issued is no longer valid and a new permit is to be issued. The new permit is to include proper testing of the tank atmosphere, ventilation and so forth.

Source: Det Norske Veritas