UK P&I CLUB

Ship Type: Tank Trade Area: Worldwide

Bulletin 427 - 08/05 - Tank Entry Fatality - Worldwide

Two crewmembers died in a recent incident onboard a VLCC discharging crude oil. Around midnight on the day of the incident, the chief officer (C/O) encountered problems pumping cargo from the tanks and the vessel was instructed to locate the reason for the loss in suction. The C/O suspected this to be due to a leaking dresser coupling on the cargo line in the centre tank. Once the tank atmosphere was released onto the open deck and the tank pressure reduced, a suction sound from within the tank indicated a leak in the cargo line.

The inert gas blower was changed over to the fresh air mode for tank entry and readings of the tank atmosphere were 1% by volume for Hydrocarbon gases and 6.5% by volume for Oxygen. Emergency rescue equipment was prepared at the tank entry point and an emergency team kept ready. The C/O instructed a deck fitter to don a self contained breathing apparatus (SCBA) and go into the tank but he refused because the tank was not gas free. The C/O woke another fitter from his sleep but he also refused to enter the tank for the same reason. The master donned a SCBA to enter the tank himself but the chief engineer (C/E) suggested two engine fitters could enter the tank instead and so woke them from their sleep. At around 04.50 hours the engine fitters and assistant chief officer (Asst. C/O) entered the tank with two torches, two radios and various spanners between them. The inert gas line and cargo lines were not blanked and the entry party did not carry personal gas detectors.

The coupling was approximately seven bays from the ladder section and the crew were wading through 30cm of crude remaining in the tank where visibility was estimated at two metres. Around 0554 hours the low pressure alarm of one of the SCBA sets in the tank was heard and the master and asst. C/O ordered the fitters out of the tank. A voice was heard on the radio in Hindi saying ‘we cannot find the way out’ followed by silence. The master and C/E each donned an emergency escape breathing device (EEBD) and entered the tank. By the time they exited the tank the asst. C/O exited too but the fitters remained inside. At the same time the third officer had summoned immediate assistance from ashore. The body of one of the fitters was recovered at 1310 hours and the other at 1945. Setbacks to the fire/rescue crew were due to low visibility, high temperatures and the crude sludge restricting movement.

The investigation revealed that the fitters had vertically descended 22 metres, horizontally traversed 53 metres to reach the dresser coupling and back to the location where their bodies were found. Air in the cylinders of the two fitters had lasted 14-16 minutes. The company safety check list and enclosed space entry permit clearly states that the oxygen reading in the compartments should be 21% and hydrocarbon less than 1% lower flammable limit. Only when the above criteria are satisfied can entry take place. A permit was not produced at the point of investigation but at a later stage and entered with ‘ventilation of the tank in progress’ – diluting the essence and spirit of the enclosed space entry safety checklist and permit. The master had signed the entry form in place of the leader of the team entering the tank, suggesting that the form was completed after the incident. SCBA should not have been used in this context and when the real emergency arose only one SCBA was available.

The man entry by master and chief engineer into the tank with no clarity of thought after the accident happened is a matter of serious concern as any further accident would have left the vessel without command. Proceedings were brought against the master, chief officer and chief engineer for causing death by rash or negligent act not amounting to culpable homicide, which is punishable by imprisonment, fine or both.

Source of information: Loss Prevention Department
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