

M.S. Notice 8 of 1999

No:11-NT(35)/99

Dated: October 15, 1999

Subject : Entry into enclosed spaces on board a ship

1. In the recent past, two officers died on board Indian ships, arising from improper entry into cargo tanks on board conventional tankers. In one of the incidents, a chemical carrier was on a regular run carrying rape seed oil and soybean oil. At the time of completion of discharge of each cargo tank at the end of every voyage, an operation called 'squeezing' was carried out. This operation involves manually pushing the balance cargo remaining below the heating coil of the tank into the well of a cargo pump to minimize residue. For this purpose, at the time of discharging, members of ship's crew entered respective cargo tanks frequently soon after the cargo pump lost the suction.

2. This operation (viz. squeezing) is not a recommended procedure in any of the standard manuals of cargo operation. The entry into the tank was made without taking any tank measurement for toxicity - this cargo being non-toxic. Moreover, the ships staff did not find it necessary to take the oxygen content measurement as well, because the cargo tank had a fresh intake of air from the atmosphere at the time of discharging, which was considered adequate by the ship's staff.

3. This practice of the ship's staff, in violation of standard check-list procedure for cargo tank entry, gave false sense of security to a cadet who had commenced his sea-life only a month earlier. During subsequent cleaning operation of the cargo tank, which had been opened up after 20 days, the cadet made entry into the tank to pick up an ullage tape, which he had dropped at the time of taking soundings of this tank. Senior officers, had been ignoring all safety aspects in this regard. Hence this had become a normal practice and the cadet being unaware of the dangers, entered the tank wearing only a gas mask. He recovered the tape from the tank-bottom and while returning, collapsed inside the tank at an intermediate platform and lost his life.

4. In another incident, a senior officer of a tanker made entry into a slop tank having at least half-a-metre of sounding of dirty slops in that tank. The purpose of the tank entry was to investigate leakage in the slop tank from the adjacent cargo tank. There was no proper lighting and no proper safety harness kept in readiness. This officer, who had donned a self-contained breathing apparatus, entered the tank and while walking on top of a girder, fell in the water and became unconscious. Precious time was lost in bringing him up from the tank as proper size of safety harness was not available on board the tanker. In fact the officer had to be lifted up with the help of a gant-line. This resulted in considerable loss of time in rescue operation. This officer was found to be dead when he was brought up on deck.

5. The Directorate is concerned with the unsafe practices adopted by the ship's floating staff, which, in

turn, are not inadequately monitored by shipowners. All concerned are hereby instructed to comply with the following instructions with immediate effect: (i) The unsafe practice of "squeezing" should be stopped forthwith on vessels carrying vegetable or similar oils. During discharge, cargo temperature should be raised adequately and maintained to avoid man entry for "squeezing" purposes. (ii) Cartridge or canister face masks should not be used in any enclosed space. These masks are to be used only in accordance with manufacturer's instructions and in an atmosphere with at least 17% of oxygen by volume. Such masks are designed to purify air of specific contaminants only and will not protect the user against concentrations of hydrocarbon or toxic vapours in excess of the designed parameter, or against oxygen deficiency. Such masks should never be used in place of a breathing apparatus. (iii) Safety precautions prescribed in Quality Manual must be taken before making entry in any enclosed space. Established procedures and guidelines are to be followed as laid down in Chapter XI of International Safety Guide for Oil Tankers and Terminals. (iv) Man entry into a slop tank containing slops should not be undertaken until the tank is reasonably dry and gas free.