

## Explosion in ballast tank causing loss of life

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IMCA has received a report of an incident wherein during a repair job in a pre-load tank (ballast tank) onboard an oil rig at a repair yard, an explosion occurred in the tank.

### What happened?

The oil rig was undergoing extensive repairs.

Repair workers using oxy-acetylene torches inside the pre-load tank, had shut the gas torch valves down and left the tank for their break. After their break, when they entered the tank again to continue the job, there was an explosion as soon as they ignited the gas torch.

Two workers were seriously burned and hospitalised. One of them subsequently died in hospital.

### What were the causes?

The most probable cause of the explosion was ignition of gas coming from the gas torch. On investigation, it was found that the valve on the gas torch was not tight, hence gas had accumulated inside the tank during the break, as there was no proper ventilation of the tank.

### Lessons learnt

The following lessons may be drawn from the incident:

- The conditions for the validity of the issued hot work certificate may change quickly during a work shift and need frequent follow-up.
- Continuous proper ventilation is vital for work carried out in any enclosed space. In this case this would have avoided or reduced the accumulation of gas causing the explosion.
- Gas equipment, including hoses, should be well maintained, so as to perform as desired.
- While temporarily leaving a work place, appropriate precautions should be taken. In this case, the main gas cylinder valves should have been closed and/or equipment removed from the tank.



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