

Maritime Operations

SAFETY BULLETIN – 03 OCTOBER 2005 #4

AMMONIA LEAKAGE ON FISHING VESSELS

A serious leak on a fishing vessel, which resulted in 4,000 lbs of ammonia venting from a ruptured pipe in an enclosed space, highlights the significant threat ammonia can pose to mariners.

Two crew members suffered ammonia burns as they escaped by running through the venting ammonia after a discharge pipe on the receiver line ruptured. The leak could not be isolated for four hours due to the high levels of ammonia and the danger of working in an enclosed space. The four breathing apparatus bottles were exhausted and there was no compressor on board to recharge them. cargoes.

The investigation conducted by Maritime New Zealand found the cause was a badly corroded pipe located behind condenser pipes of the refrigeration machine.

In the course of the investigation it was found that a previous leak, involving the loss of 1500 lbs of ammonia, had occurred eight months before. This had not been reported to Maritime New Zealand.

Maritime New Zealand recommends:

- All owners and operators of vessels regularly ensure refrigeration systems and piping are thoroughly and systematically inspected regardless of how inaccessible such systems may be. This may require use of mirrors and removal of objects that may compromise a proper inspection, such as retaining brackets on pipelines.
- Refrigeration systems are pressure tested at each survey with inert material.
- All crew be trained in ammonia emergency procedures.
- Ammonia emergency drills are carried out on a regular basis.
- Vessels fitted with ammonia refrigeration plants carry compressors to recharge breathing apparatus bottles.
- Ammonia safety masks are installed for the maximum number of crew likely to enter in every confined space where there is a danger of ammonia venting.

For any further information on the above Safety Bulletin, please contact John Mansell, General Manager, Maritime Operations on 04 494 1228.