



SHIPOWNERS

SECURITY FOR SMALL & SPECIALIST VESSELS

▶ CASE STUDY

Fire hazard from leaking fuel supply line

The Incident

A potential fire hazard discovered on board a vessel was found to be caused by a failed fuel pipe connection on the supply line to the main engines.

The chief engineer was called to the engine room after receiving a report of a leak on a low pressure fuel supply line. Upon inspection the engineer was able to perform a temporary repair using self-amalgamating tape to reduce the leak to a weep followed by fibre-glass resin and a bandage in an attempt to seal the leak.

The immediate cause was found to be a failed weld on a T-piece of the pipe. However the root cause was believed to be the age of the pipe, an original fit from the vessel's construction, which had incurred natural degradation over a long period of time.

Observations

- The leak was discovered early as a result of due diligence and good watchkeeping. This allowed for a controlled temporary repair.
- The vessel notified shore management as soon as was possible after the incident, providing detailed incident reports, supporting information and photographs.
- Vibration from the main engines can be an issue with equipment of this sort. Engineers should remain vigilant in their engine room watch keeping duties, for potential signs of pipe/equipment failure caused by the vibration. Signs of fretting should be investigated as soon as possible.
- Such failings cannot always be foreseen and so vessels should always carry appropriate pipe spares and temporary repair solutions for low pressure piping such as plastic steel, fibre glass resin, pipe repair claims etc.

- In this case, a trend in the failure of fuel supply piping was noticed; this was the fourth failure within 4 months.

This case study has been extracted from the [IMCA Safety Flash 12/17](#).