

SYNOPSIS

Dea Fighter is a safety stand-by vessel operated in the North Sea with a crew of 12. She is equipped with two davit launched fast rescue craft (FRC).

During 1999 the lifting wire of the starboard FRC davit failed twice. Once on 13 May when in Aberdeen Harbour, and again on 16 July when on station at an offshore installation. FRC occupants were injured. On each occasion the wire failed about 1m from the FRC's lifting eye.

The owners of *Dea Fighter* carried out their own investigations into the causes of the failures. As the results were inconclusive, the Marine Accident Investigation Branch (MAIB) began its own investigation on 17 September 1999.

Shortly before the first failure, an undersized top sheave was fitted to the davit arm. Apart from changing the wire geometry, this allowed the wire to be displaced from the sheave's groove and become trapped between the sheave and sideplate boss of the arm. Excessive bending of the wire also resulted. When swinging out the FRC, with the telescopic arm fully compressed, the change of wire geometry caused the wire to be grossly overloaded.

A combination of gross tensile overload, excessive local bending and crushing caused the wires to fail. The mechanism of failure was similar on each occasion.

The Maritime and Coastguard Agency (MCA) is recommended to publish standards for the FRC launching systems on board safety stand-by vessels.

It is also advised to publish advice in its system of Marine Guidance Notes, Code of Safe Working Practices for Merchant Seamen, and Instructions to Surveyors, on the importance of using replacement parts on davits and lifting gear which are to manufacturer's specifications.

The owners of *Dea Fighter* are recommended to modify their davit operator training and on-board instructions to suit the amendments made by the davit's manufacturer, Caley Ocean Systems. They are also recommended to introduce management procedures which will ensure that replacement parts for davits comply with manufacturer's specifications.

The International Association of Classification Societies (IACS), International Chamber of Shipping (ICS) and the International Transport Federation (ITF) are recommended to disseminate the lessons learned from this investigation to their members.