

SYNOPSIS

All times are UTC.

At 1030, on 21 March 2004, *Dart 8*, a Bermudan registered roll on/roll off cargo vessel, was making fast at her usual berth on the River Thames when a mooring line parted, sprang back and seriously injured the vessel's bosun. The wind had been blowing off the berth at a speed of about 25 knots, with occasional stronger gusts. The vessel had been stemming a strong flood tide.

The master was holding the vessel alongside by using the thrust from the main engine and the two forward bow thrusters, while the crew on mooring stations fore and aft sent lines ashore. The forward mooring team consisted of the bosun, who was in charge, and four seamen. Strong wind initially hampered the crew's attempts to throw heaving lines on to the berth, however, they managed to get one head line fast ashore from each of the two forward winches. At the time of the accident, the bosun was bending on a heaving line in preparation for sending a third head line ashore.

A sudden strong gust of wind caught the vessel, and the bosun became aware that a lot of weight was coming onto the two head lines. He ordered the seamen on each winch to slacken their lines. The seaman on the port winch heard the order, probably because he was downwind of the bosun, and he slackened his rope. However, the seaman on the starboard winch did not hear the order, and the rope on his winch suddenly parted with such force that it recoiled and struck the bosun, fracturing his right leg.

During the MAIB investigation, the starboard winch was tested and no defects were found. The winch was designed to render when an adverse force of about 20 tonnes was applied. Detailed analysis of the rope has shown that the estimated residual minimum breaking load, prior to it parting, had reduced from 770kN to 94.2kN, less than half that required to render the winch. Visual inspection of the rope indicated severe deterioration, caused by abrasion, over a length of about 6 metres in the vicinity of where it passed around a roller fairlead.

The ad hoc inspections of mooring ropes which had been carried out, had not identified the abrasion, and the consequent dangerous condition of the rope that failed.

As a consequence of this accident, the managers of *Dart 8* have implemented a planned maintenance regime for the mooring ropes used on their vessels.

Recommendations regarding the safe working practices associated with the use of mooring ropes, have been made to *Dart 8's* managers. The Maritime and Coastguard Agency (MCA) is recommended to consider current concerns about mooring rope control and safety, and to issue a Marine Guidance Note (MGN) on the subject to replace the current one, M.718, which was issued in 1975.