MARINE OCCURRENCE REPORT

STRIKING OF A DOCK

BY THE RO-RO VESSEL "KENT ATLANTIC"
IN THE HARBOUR OF SAINT JOHN, NEW BRUNSWICK
29 APRIL 1997

REPORT NUMBER M97M0028

The Transportation Safety Board of Canada (TSB) investigated this occurrence for the purpose of advancing transportation safety. It is not the function of the Board to assign fault or determine civil or criminal liability.

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Summary

On 29 April 1997, at approximately 1805[1], the Ro/Ro vessel "KENT ATLANTIC", while under the conduct of a licensed pilot, struck the northwest corner of berth 2B at Saint John, damaging the dock face and holing the shell plating on the port side of the bow of "KENT ATLANTIC". There was neither injury nor pollution as a result of this striking.

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1 All times are ADT (Coordinated Universal Time minus three hours) unless otherwise noted.

Other Factual Information

	"KENT ATLANTIC"
Port of Registry	Oslo
Flag	Norway
Registry/Licence Number	7304895
Type	Ro/Ro, paper carrier
Gross Tonnage	10,522
Length	146m
Propulsion	2 Pielstick, 5,884KW 2 C.P. Propellers. Bow Thruster (One)
Registered Owner	Swan Shipping, Oslo

Due to its unique position in the Bay of Fundy, Saint John experiences some of the highest tides in the world. Accordingly, ship movements are usually confined to periods of slack water, or as closely as possible, to high water.

The port of Saint John is a compulsory pilotage area with pilots certificated and supplied by the Atlantic Pilotage Authority. In 1996 there were 1,724 pilot assignments.

The pilot who was dispatched to "KENT ATLANTIC" was correctly certificated, experienced and well rested before boarding the vessel at an anchorage position on 29 April at 1658. He had worked with this ship on many different occasions.

The pilot was accompanied on the bridge by the master, mate and helmsman, and reportedly a Bridge Resource Management (BRM) regime was in place, but he did not mention any involvement in monitoring the progress of the vessel. He was aware of the weather conditions prior to boarding the vessel and that the vessel was in a ballast condition. He had noted wind conditions from the anemometer mounted in the pilot office. He was also aware of the predicted time of high water and the irregularities in times and heights due to freshets.

At 1727, "KENT ATLANTIC" reported to Marine Communications and Traffic Services Centre(MCTS)(Fundy Traffic) that her anchors were aweigh and that she was proceeding.

There are three Calling In Points (CIP) at designated areas in the approaches to, and in, Saint John Harbour: Nos. 6, 7, and 8.

At 1738, the tug "ATLANTIC TEAK" was at CIP 6 and reported to Fundy Traffic.

At 1742, "KENT ATLANTIC" reported to Fundy Traffic that she was at CIP 6 and would be up to CIP 7 in ten minutes.

"ATLANTIC TEAK" arrived at CIP 7 at 1748 and reported her location to Fundy Traffic.

At 1749, "KENT ATLANTIC" ordered the tugs to switch to Channel 7. It should be noted that Channel 7 is not recorded by the MCTS system and was used as a working frequency between the pilot, with his hand-held VHF radio, and the tugs. Both tugs changed to the new frequency.

The above noted times are transcribed from the audio tape recording as recorded by Fundy Traffic.

Some time after 1749, the pilot ordered the tugs to take up positions with "ATLANTIC BEECH" forward on the port bow and "ATLANTIC TEAK" aft. The tug aft was to make fast on the port quarter with two lines, supplied by the tug. Between CIP 8 and Rodney Terminal the tugs usually would be in position or made fast to an inbound vessel. The distance between Rodney Terminal (D) and the designated berth 2B is approximately 0.32 miles.

"ATLANTIC BEECH" left her position at Pier 13 at 1750 and reported her movements to Fundy Traffic.

At 1751, "KENT ATLANTIC" called Fundy Traffic to report that she was at CIP 7, and would be at CIP 8 in eight minutes. The vessel again called at 1758, reporting that she was now passing CIP 8 and would call again when alongside Pier 2.

At approximately 1805, while approaching Pier 2, the port bow of the "KENT ATLANTIC" struck the northwest corner of berth 2B. The vessel's shell plating was holed and the face of the dock was damaged.

At 1817, "KENT ATLANTIC" reported to Fundy Traffic that she had turned and was outbound. The vessel was going back out to anchor. About ten minutes later "KENT ATLANTIC" made a request to Fundy Traffic for the latest weather forecast. Fundy Traffic responded with a forecast, issued at 1700, giving a continued gale warning with winds northwest at 25 to gales
35 knots, diminishing to northwest at 20 knots overnight.

The report of the striking was received through the agent, and recorded by MCTS at 18:22. A further report was received from the vessel, at 18:35, while she was en-route to the anchorage. The regulations state, that, the master of a ship within a Vessel Traffic Services Zone shall ensure that a report is made to a marine traffic regulator as soon as the master becomes aware of the involvement of the ship in a collision, grounding or striking.

The measured distances between CIP 6 and CIP 7 and between CIP 7 and CIP 8 are 1.3 miles and 1.45 miles respectively. These distances indicate that the calculated average inbound speed of "KENT ATLANTIC" over the ground was approximately 9.44 knots and 12.49 knots respectively. In other words, the vessel made a calculated average speed of 10.97 knots between CIP 6 and 8.

The speed limit in Saint John Harbour is governed by the rules stipulated by Canada Ports Corporation. The Saint John Port Corporation, with the approval of the Governor in Council, makes by-laws. The rules state that no vessel can move in a harbour at a rate of speed that may endanger life or property or is in excess of any rate of speed authorized by the Corporation. There is no posted speed limit in Saint John Harbour.

It was the pilot's intention to have both tugs in position alongside the ship at some time between CIP 8 and Rodney Wharf, with "ATLANTIC TEAK" made fast on the port quarter.

The skipper of "ATLANTIC TEAK" reported that after passing a heaving line up to the port quarter of "KENT ATLANTIC", he backed away before making fast with tow lines. He considered the speed of the vessel to be too fast and was worried about being forced into the hard chine, which was level with the tug's forward bulwark.

The skipper of the forward tug "ATLANTIC BEECH" also considered the speed of "KENT ATLANTIC" to be too fast and was worried about coming alongside the port bow.

Neither of the tug skippers reported to the pilot that they considered the speed of "KENT ATLANTIC" too fast. That the controls of both tugs were at Full Ahead in an endeavour to keep up with the vessel was also not reported.

The listed speed of the tugs is given as 12 knots for "ATLANTIC TEAK" and as 13 knots for "ATLANTIC BEECH".

The owners of the tugs have no written instructions regarding a safe speed when approaching a vessel to make fast. That decision is left to the tug skipper's discretion.

The skippers of both tugs have extensive knowledge of Saint John Harbour and have worked harmoniously with both the pilot and "KENT ATLANTIC" previously. "KENT ATLANTIC" is a regular trader into the port of Saint John, where paper is loaded for Caribbean ports. The master is familiar with the special features of Saint John, having made eight or nine voyages to the port.

When off the berth, it had been the pilot's intention to turn the vessel short round to starboard, assisted by the bow thruster and the tugs, with "ATLANTIC TEAK" made fast on the port quarter. "ATLANTIC BEECH" was initially to push on the port bow, then as the ship went astern towards the berth, to change position to the starboard bow.

On earlier voyages, berths 3A and 3B had been used, however, the "KENT ATLANTIC" had berthed at number 2 on several prior occasions, and, as the faces of berths 2A and 2B are parallel to berths 3A and 3B, a similar berthing manoeuvre was planned on this occasion.

Between Rodney Pier and the designated berth, the tugs were still not in position. The pilot, had ordered the tugs to change positions, because of the advice about the "extreme flair" (hard chine) problem from the skipper of the "ATLANTIC TEAK". During this time the wind started to swing the bow to port and because of the close proximity to the face of the dock neither tug could get into position on the port side of the ship. The "ATLANTIC TEAK" was worried about being crushed between the ship and the dock, and "ATLANTIC BEECH" was worried about the propeller wash as the main engines of "KENT ATLANTIC" were at Full Astern.

The port anchor was let go in an unsuccessful attempt to avoid the striking, which occurred at about 1805. Damage to the corners of the dock was confined to the north-west corner. Here an area approximately 1.5m by 1.5m of concrete was cracked or broken, and the fendering in way of the concrete was broken and disturbed.

Damage to the "KENT ATLANTIC" was confined to the port side of the bow in the area of the hard chine. Here the shell plating was set in and holed over an area of approximately 1.5m by 0.6m, about 23m abaft the stem. Repairs were carried out afloat.

Analysis

The average speed of "KENT ATLANTIC", calculated to be approximately 12.49 knots, between C.I.P's 7 and 8, was considered by the tug-skippers to be too fast for the safe manoeuvring of their vessels. "ATLANTIC BEECH" and "ATLANTIC TEAK" had been ordered by the pilot to go alongside, with the aftermost tug to make fast on the port quarter.

"KENT ATLANTIC" passed the area between CAP. 8 and Rodney Terminal, without the tugs being in their respective positions. The pilot, instead of aborting the docking manoeuvre, continued to approach the area east of the berth as though the tugs were in their designated positions.

The force of the bow thruster, acting to starboard, was not sufficient to overcome the force of the wind on the starboard bow.

Dropping the port anchor did not stop the bow swinging to port, although its use may have reduced the impact and subsequent damage to the vessel and the dock. Between CIP 8 and the berth, the pilot ordered the tugs to exchange positions, that is, the forward tug was to go aft and the after tug was to go forward. These orders were not heard fully, by the bridge team, due to the method of communicating between the pilot and the tugs. The usual method of carrying out this position change, has been for the bow tug to drop back alongside, and for the stern tug to

move out and forward to the bow position. On this occasion, the bow tug attempted a 360 degree turn to port. Carrying out this order, in the attempted manner, lost valuable time while the tugs were assuming the new positions.

The pilot, knowing the wind conditions and that neither tug was in position, did not abort the berthing manoeuvre in sufficient time to avoid the striking.

Off the berth, the strong northerly wind forced the vessel to sheer to port, overcoming the action of the bow thruster to starboard. The port anchor was used in an unsuccessful attempt to avoid the striking.

Neither of the tug skippers informed the pilot of their reason for not taking up their positions, the reason being that they both considered the speed of "KENT ATLANTIC" to be too fast for safe manoeuvring.

Findings

1. The speed of "KENT ATLANTIC" was too fast for a safe manoeuvre as the tugs attempted to come alongside the vessel, where the hard chine represented a further hazard.

2. The pilot did not abort the berthing early enough when the tugs were not in position.

3. Valuable time was lost in repositioning the tugs in the 3 cables before the selected berth was reached.

4. The pilot knew the wind conditions off the berth and the uncertainty of the tide due to freshets. However he did not ensure that the tugs were in position and made fast, or at least in position, in good time.

5. The pilot and tug skippers had worked together successfully in the past.

6. The use of the port anchor before the striking may have reduced the force of the impact and lessened the amount of damage to the vessel and the dock.

7. The striking was not immediately reported nor was the reason given for returning to an anchorage position.

Causes and Contributing Factors

The speed of the vessel was considered to be too fast, by both tug skippers while attempting to go alongside. This safety consideration was heightened by the hard chine design of "KENT ATLANTIC".
The tug masters did not make known to the pilot, their main concern, that the vessel was moving too fast for safe manoeuvring alongside.

The pilot, knowing the weather conditions off the berth, did not ensure that the tugs were in position and made fast, or at least in position, in sufficient time to permit a preplanned turning and berthing.

This report concludes the Transportation Safety Board's investigation into this occurrence. Consequently, the Board, consisting of Chairperson Benoît Bouchard, and members Maurice Harquail, Charles Simpson and W.A. Tadros, authorized the release of this report on 26 August 1998.