

# Synopsis

At 0422 Universal Co-ordinated Time (UTC) on Saturday 25 April 1998 the Marine Accident Investigation Branch (MAIB) was notified by Humber Coastguard that the cargo vessel *Rema* had apparently sunk in the North Sea some 20 miles off the Yorkshire coast.

*Rema* was registered in Belize but sank in international waters with the loss of her four man crew. They were all British. Inquiries began that day and, on 8 June 1998, MAIB agreed to undertake an investigation on behalf of the Belizian Authorities. On 16 June, a United Kingdom investigation was initiated and upgraded to an Inspector's Inquiry. It was carried out by Mr A Rushton with Mr J S Withington, Principal Inspector appointed as Inspector in Charge.

*Rema* was a 748gt, steel, general cargo vessel, built in the Netherlands in 1976. Her accommodation and engine room were aft, and she had a single hold fitted with MacGregor single pull hatch covers. She was diesel driven and fitted with a fixed pitch propeller.

The vessel arrived in Berwick-upon-Tweed in ballast on 22 April 1998. The cargo of "Redstone Chippings" was loaded on 23 April and she sailed for Terneuzen, the Netherlands at about 1230 on Friday 24 April. The weather on departure was good, the wind south-west 3-4 and the seas slight to moderate. Only four crew were on board.

At 0321 on Saturday 25 April, *Rema* transmitted a "Mayday" on Very High Frequency (VHF) Channel 16 giving her position as about 22 miles north-east of Whitby. Humber Coastguard responded by mobilising local RNLI lifeboats, RAF helicopters and several merchant vessels. There was no sign of *Rema*, but debris found confirmed she had sunk in position 54° 41'.95'N, 00° 08'.86W.

An underwater survey was carried out on the wreck during the period 24-27 June 1998. The vessel was found to be upright and intact, but with evidence of soft contact bow damage due to impact with the sea bed. When she sank her cargo had shifted forward and forced its way out of the forward hatches to spill onto the sea bed. Implosion damage to the hatch covers, forecastle head and wheelhouse was found, together with propeller blade contact damage. The bow damage was consistent with the vessel plunging almost vertically by the head to the sea bed before settling back down on an even keel and into an upright position.

The investigation found that *Rema* left Berwick-upon-Tweed with a full cargo and all ballast tanks empty. Calculations carried out for various conditions of stability showed she would founder if an additional 769 tonne of water was to enter her hold.

The cause of the foundering was water entering the hold without anyone being aware of it. This eventually caused a loss of buoyancy and *Rema* was lost. At that point, she plunged bow first to the sea bed so quickly that it was unlikely that anybody on board had time to escape.

Although the available evidence was scrutinised very carefully and the video tapes from the underwater survey were enhanced, it proved impossible to identify the means by which water entered the hull. None of the observed damage could account for any flooding. Although it has proved possible to determine what happened when *Rema* sank, the investigation has not been able to explain why.