

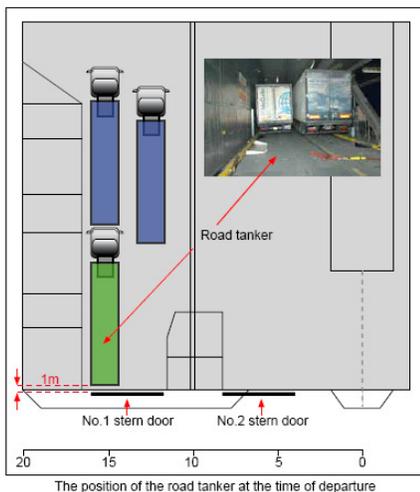
Securing of RORO Cargo

Introduction

A report has recently been published by the Marine Accident Investigation Branch in the United Kingdom concerning an incident when a Heavy Goods Vehicle (HGV), consisting of a tractor unit and a semi-trailer bulk powder tanker, left the deck of a high speed ferry as it accelerated away from port. The 34MT HGV was the last vehicle to be loaded on the port side aft, one metre in front of one of the four aft aluminium non-weathertight doors to the vehicle deck. Four polyester web lashings which had been fitted to the semi-trailer were tightened by means of their internal ratchet mechanisms; however, no lashings were fitted to the tractor unit. Four rubber chocks had also been placed around the aft wheels on the trailer unit. Unfortunately the driver had omitted to put the tractor unit in gear or apply the tractor unit parking brake. He had also not applied the parking brake for the semi-trailer which had to be applied from a location outside the cab at a control position on the chassis.



shell door was missing, a HGV tractor unit was wedged up against the internal insulation at the top of the door opening, and the trailer unit was hanging vertically over the stern. The tractor unit subsequently returned towards deck level where it was secured in position, and the trailer unit rested vertically on top of no.2 waterjet.



After departing her berth and clearing congested waters the vessel started to accelerate from 17.5 knots to 40 knots. As she accelerated, her static stern trim of 20cm started to increase. As the vessel reached 27 knots an alarm sounded indicating that one of the vehicle deck doors was open.



Simultaneously a loud crashing noise was heard from the vicinity of the port aft vehicle deck, which was immediately investigated by the deck crew. They found that the port aft

Conclusions

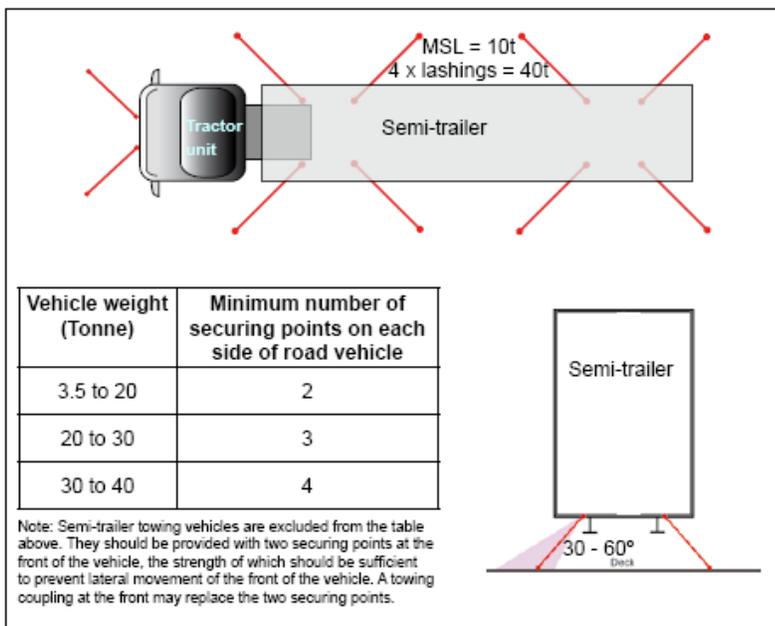
1. The tractor and trailer unit were parked with neither the tractor nor trailer unit parking brakes having been applied, nor the tractor unit being put in gear, even though signs were posted on the vehicle deck to this effect. Deck crew were also provided with hand held signboards, instructing drivers to put their handbrake on and to leave their vehicles in gear, however these were not in use at the time of the incident. Drivers were not verbally instructed to apply brakes, and the crew did not seek confirmation that they had done so. It was also not a requirement of the carrier for trailer unit brakes to be applied during crossings.



2. The tractor and trailer unit had not been parked or secured in accordance with the requirements of the vessel's own Cargo Securing Manual or in line with the guidance contained in the IMO Code of Safe Practice for Cargo Stowage and Securing (CSS Code).
3. The two ferry securing rings fitted on each side of the forward end of the trailer unit and the absence of any rings on the tractor unit did not comply with the guidance contained in the CSS Code or the International Organisation for Standardization (ISO) standards: Lashing and securing arrangements on road vehicles for sea transportation on Ro/Ro ships – General requirements – ; ISO 9367-1; Part 1: Commercial vehicles and combination vehicles, semi-trailers excluded, or ISO 9367-2; Part 2: Semi trailers.
4. In the United Kingdom the majority of freight vehicles presented for transport do not have the recommended number of ferry securing rings fitted, and many were found to have no ferry securing rings fitted at all.
5. The number and spacing of the fixed lashing securing points on the deck of the vessel did not comply with the guidelines contained in the CSS Code or the ISO standards.
6. The Maximum Securing Load (MSL) of the lashings being used on the vessel was half of that approved for use by the Flag State.
7. The inspection and maintenance regime for the vehicle lashings was ineffective. The lashings used to secure the road tanker were worn and found under subsequent testing to fail at less than 50% of their designed breaking strength.
8. Although it was requirement of the Cargo Securing Manual, inspections of the vehicle decks and the load integrity by the First Officer at the earliest opportunity after clearing pilotage waters were not being routinely undertaken.
9. Changes to the securing arrangements adopted onboard which diluted the requirements of the Cargo Securing Manual had not been reviewed and approved by the Flag State.
3. All freight units are to be stowed and secured in line with the requirements of the Cargo Securing Manual and CSS Code. If changes are made to the stowage and securing arrangement onboard, the revised cargo securing manual is to be submitted to the Flag State for review and authorisation.
4. Haulage contractors should be encouraged to fit ferry securing rings to both their tractor units and trailers, in line with the requirements of the ISO standards.
5. The number, type, positioning and spacing of lashing securing points on vehicle decks should comply with the guidelines contained within CSS Code or the ISO standards.
6. The MSL of lashings should comply with the requirements of the Cargo Securing Manual. An inspection regime should also be implemented as part of the vessel's planned maintenance system with prescribed discard criteria along with a maximum working life for lashing equipment.
7. Ideally, prior to sailing, vehicle stowage and securing arrangements should be checked by a Deck Officer to ensure that both are in compliance with the requirements of the Cargo Securing Manual. Some operators, realising that this may be impractical on intensive sailing schedules, require at least one random inspection per day.

Recommendations

1. Tractor unit and trailer brake systems should be applied; ideally deck crew should verbally check with drivers that this has been done.
2. Vehicles should be put in gear; again, ideally, deck crew should verbally check with drivers that they have done this.



CSS Code ferry securing ring guidance

The full MAIB report on this incident can be found here: www.maib.gov.uk/publications/investigation_reports/2009/stena_voyager.cfm

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For further information on this or other Loss Prevention topics please contact the Loss Prevention Department, Steamship Insurance Management Services Ltd.

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