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**Loss Prevention Bulletin - AVA/2014/0013**

**Jan 08, 2014**

**FENDER DAMAGE AT RORO BERTH**

**Applicable to:** RoRo Vessels / Ports & Terminals  
**Region:** Vancouver, British Columbia  
**Category:** Loss Prevention

**Location:**

Annacis Auto Terminal is located on the North bank of the Fraser River at Annacis Island, Delta, British Columbia (in the vicinity of the Fraser Surrey Docks, New Westminster)

**Description of the Berth:**

The shore facility is a concrete wharf structure supported by timber piles. Bull rails of Douglas-Fir timber or similar type have been installed throughout the edge of the wharf face with Bollards anchored into the concrete foundation at intervals along the bull rail (timber beams). Large rubber tractor tire fenders are attached to the bull rail by a combination of large bolts, chains and shackles.

There is a secondary fendering system of small D-type fender or similar attached to the back of the bull rail via steel plates and chains. The entire structure in turn is attached to timber beams (bull rails) bolted through the dock infrastructure.

**The Incident:**

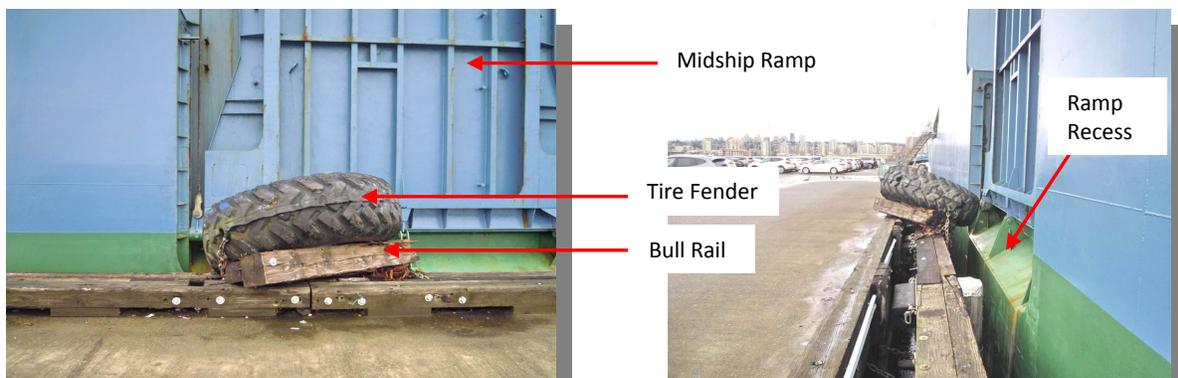
Recently in almost two identical incidents involving PCC (Pure Car Carriers) at the Annacis Auto Terminal operated by WWL Vehicle Services Canada, Ltd, the shore fender system suffered damages to the timber bull rail and fender attachment in way of distortion / bent bolts and steel plate and cracking of the bull rails (timber beams).

On both occasions the damage was caused when the starboard midship ramp of the vessel got caught / stuck in the ramp recess during the rising tide. The up thrust force was sufficient to cause the bull rail to break under pressure.

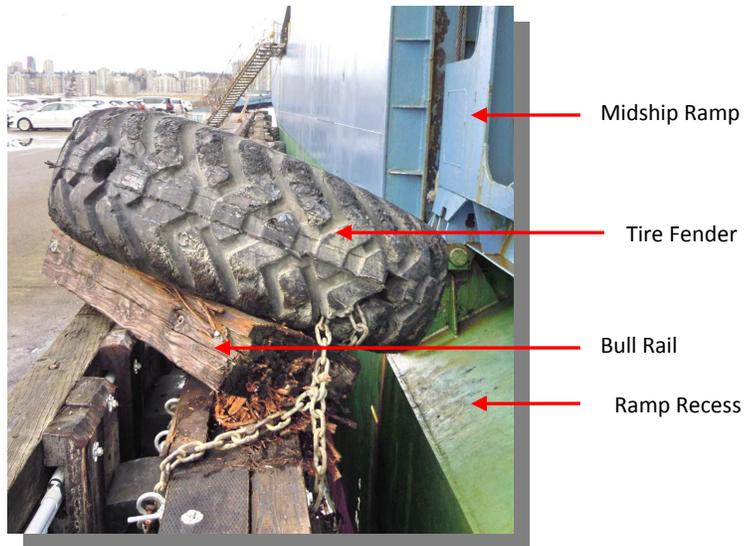
**Recommendation:**

The Master should ensure the midship ramp is not facing any rubber tire fender when the vessel is in 'position' at the dock. The final position of the vessel should be adjusted keeping the fender fore or aft of the midship ramp so that it does not get caught in the ramp recess during the rising tide.

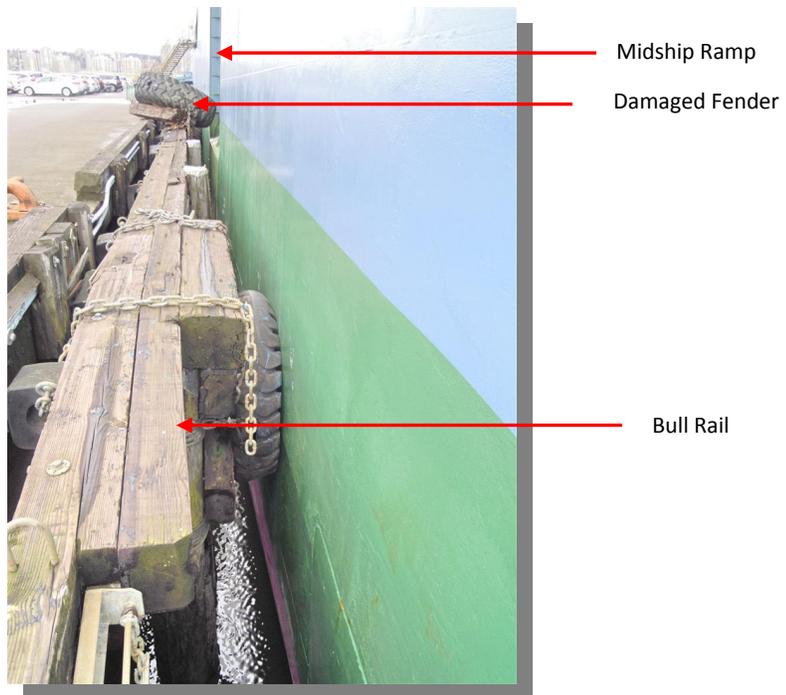
Note: The vessel will be starboard side alongside upon docking at this berth # 1.



Damage to quayside due to the fender getting caught in the ramp recess



Enlarged View



For comparison -showing the original positioning of the fender in normal conditions

Disclaimer: This loss prevention bulletin is based on the author's own research, knowledge and experience in the subject matter and should only be used for reference rather than being taken as a legal advice for any particular case or used for any other purpose.

**About AVA MARINE GROUP:**

AVA Marine is a professional marine surveying and consultancy firm – founded and led by its principal marine surveyor Kaivan H. Chinoy. The Company provides a comprehensive range of specialist marine surveying, marine loss control & consultancy services primarily in Western Canada and the West Coast of the United States

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