

August 5, 2008

Attn: Thomas K. Roth-Roffy  
Investigator-in-Charge  
Office of Marine Safety  
National Transportation Safety Board  
Washington, D.C. 20594

Subject: Technical review of the draft marine factual report of the allision of the M/V *COSCO BUSAN*, with the San Francisco Oakland Bay Bridge, Nov 7, 2007.

To the National Transportation Safety Board:

At the invitation of Investigator-in-Chief, Thomas K. Roth-Roffy, I am writing to respond to the commentary and conclusions presented in the draft Marine Accident Report, dated June 27, 2008, which we received from the National Transportation Safety Board in connection with its investigation into the allision of the Hong Kong-registered container ship *COSCO BUSAN* with the San Francisco-Oakland Bay Bridge on November 7, 2007.

Sperry Marine appreciates this opportunity to provide comments on the draft factual report. On behalf of the company, we would also like to thank your organization for the courtesy and professionalism shown by your investigators during this process.

Sperry Marine believes that the draft accident report accurately describes the navigational equipment aboard the M/V *COSCO BUSAN* and correctly notes that this equipment was tested and recorded as having been functioning properly, both prior to and after the vessel's allision with the Bay Bridge. Specifically, Sperry Marine affirms the report's conclusions that all relevant post-accident tests concluded that the radar system was functioning normally.

Sperry Marine also endorses the report's explanation that any distortion in the radar's image was attributable to abnormally high gain settings, which had been altered immediately prior to the voyage by the *COSCO BUSAN* crew. Sperry Marine concurs with the report's conclusion that the RACON transponder at the mid-point of the Delta-Echo span appeared on the radar screen at regular intervals during the voyage.

Based on the information available, including the information presented in the NTSB's draft report, Sperry Marine agrees with the conclusion that the allision of the *COSCO BUSAN* with the Bay Bridge on November 7, 2007, was not related to any defect or deficiency in the navigation equipment supplied by Sperry Marine. The draft factual report is consistent with this view.

With respect to safety recommendations, the draft factual report indicates that the crew aboard the *COSCO BUSAN* experienced confusion regarding the proper use of the navigational equipment, including difficulty interpreting electronic chart symbols, a lack of proficiency in the proper use of the ship's Integrated Bridge System, and a possible lack of training regarding the proper settings for the radar system. Although Sperry Marine expresses no view here on the extent to which such confusion regarding the proper use of the navigational equipment may have caused the ship's allision with the Bay Bridge, these facts suggests that the vessel's crew training requirements should be revised to ensure that bridge personnel are trained on the specific make and model of IBS equipment installed aboard their vessel, particularly the RADAR, ECDIS and Autopilot.

In conclusion, Sperry Marine concurs with the report's conclusions that the vessel's IBS was in good working order, that this equipment was providing accurate and timely navigational data throughout the voyage of the *COSCO BUSAN*, and that the allision was not caused by any deficiency in the navigational devices supplied by Sperry Marine.

Very Respectfully,



Michael J. Hughes  
Northrop Grumman Sperry Marine  
Manager, US Product Support and Training  
michael.hughes@sperry.ngc.com  
office: 434-974-2433