

# M/V Hanjin Pennsylvania: Explosions at Sea

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## Final Report - Pictures



**Photo 1.** The newly built M/V HANJIN PENNSYLVANIA (starboard) fully loaded with containers. Holds one-six are from the bow to the accommodation, holds seven and eight are from the accommodation to the stern. Note how high in the water the ship is in this picture.



**Photo 2.** November 11<sup>th</sup>. Fires in containers above hold four on the port side.



Photo 3. November 11<sup>th</sup>. M/V HANJIN PENNSYLVANIA (starboard) the morning of the first explosion above hold four. Fires continued to burn for 4-days and spread to containers above hold six forward of the accommodation.



Photo 4. Containers above hold six and forward of the accommodation burning. Note the intensity of the fire and the location of the accommodation to the right.



**Photo 5. November 15<sup>th</sup>. The massive explosion in hold six aboard the M/V HANJIN PENNSYLVANIA. Note the large, rising orange fireball the tremendous plume of gray-black smoke and silver effects rising with the plume and then falling back to the sea.**



Photo 6. The M/V HANJIN PENNSYLVANIA (port) after the explosion of Nov 15<sup>th</sup> in hold six. Fires continue to burn above hold six and smolder above hold four. Note the missing containers above hold four and the plume of gray-black smoke from hold six.



Photo 7. The M/V HANJIN PENNSYLVANIA (port) riding very low in the water as a result of fire fighting efforts. Note the burned containers above hold three and the missing and burned containers above hold four. Also note the raised and twisted deck hatch, the missing containers and heavy damage to the containers above hold six forward of the accommodation. Damaged containers above hold six are hanging over the port side



Photo 8. The view after Nov 15<sup>th</sup> from the accommodation of M/V HANJIN PENNSYLVANIA. Note the missing containers on the port side of hold 4 where the initial explosion occurred on Nov 11<sup>th</sup>.



Photo 9. The aftermath of the Nov 15<sup>th</sup> explosion in hold six. Note the twisted wreckage here and compare to the containers above holds three, four and five.



Photo 10. The aftermath of the Nov 15<sup>th</sup> explosion above hold six. Note the deck hatch (weight approximately 30 tons) that is normally held in place by a series of heavy pins.



Photo 11. The M/V HANJIN PENNSYLVANIA (port) in Singapore during salvage and recovery operations. Note the twisted and upraised deck hatch now resting in the port side forward rack above hold six. The deck hatches from the port side and center racks in the aft rack of hold six are missing.

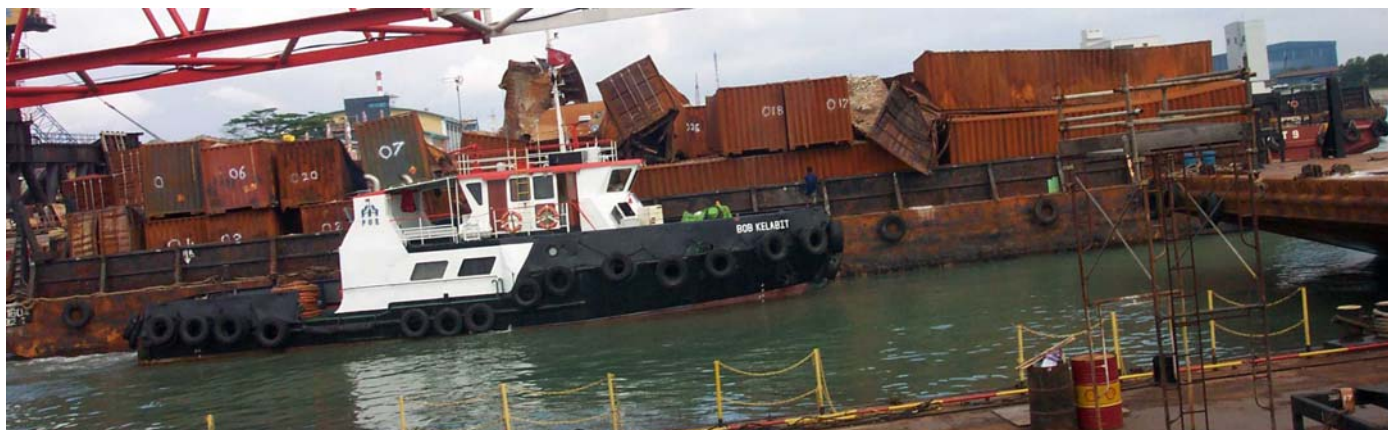


Photo 12. A barge in a Singapore salvage yard with burned out containers from M/V HANJIN PENNSYLVANIA. Note the orange 1.4G placards on the containers to the left (0#, 06 and 07) that curiously survived in spite of the fact the paint did not.



Photo 13. A container with fireworks from the M/V HANJIN PENNSYLVANIA is surveyed in Singapore. Note the cartons to the right and nearest to the door have heavy fire damage but the cartons to the left do not. A motorized forklift is being used to lift the General Average and some surveyors to view the top tier of over 50 containers of fireworks. About 20 other people viewed this from the ground. Cutting and grinding as well as other metal salvage operations continued in the vicinity of this busy salvage yard. These containers were handled from the ship to the salvage yard despite the fact many of these containers were water logged from the fire fighting efforts and had been exposed in the equatorial sun for over a month.



Photo 14. A warehouse full of 5” and 6” aerial fireworks shells in a Chinese warehouse await shipment to a European customer. Note the 1.4G classification and the various European language descriptions on the top carton of 5” aerial shells. These same aerial fireworks would be classified as 1.3G if shipped to the United States and other markets.



Photo 15. A distribution warehouse utilizing rack storage for imported 1.4G fireworks in Hamburg, Germany. No sprinkler system is apparent and the stacks of cartons on these pallets are not stabilized. Electrical systems do not appear to be explosion proof and motorized equipment is clearly used to move the pallets of fireworks. Distances from this building to other buildings and public areas is not known.