

JTSB Safety Recommendation to the Tai Yuan (Hong Kong) International Shipping Co.,  
Ltd. (as the owner of the vessel)

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October 25, 2018

Marine Accident of Cargo ship "TAI YUAN" (Fire)  
Occurred at the Berth No. 16, Hakozaki Wharf, Hakata Port,  
Fukuoka City, Fukuoka Prefecture, Japan  
on April 24, 2017

It is probable that the accident occurred when a fire that broke out within the scrap loaded into the aft cargo hold spread because firefighting by water-spraying was ineffective and appropriate firefighting methods using TAI YUAN's carbon dioxide gas firefighting equipment were not employed.

It is probable that effective firefighting methods using the carbon dioxide gas firefighting equipment were not employed because the Master did not think of using the carbon dioxide gas firefighting equipment because the Master did not have experience with fire drills for a fire in TAI YUAN's cargo holds and because TAI YUAN and Miki Shouji Co., Ltd. did not share information on effective firefighting methods for times of fire.

Additionally, it is probable that, as a result of the accident, oil that spilled from the foundered TAI YUAN spread through a large area of Hakata Bay and caused harm to the fishing industry.

In view of the result of this accident investigation, the Japan Transport Safety Board recommends that Tai Yuan (Hong Kong) International Shipping Co., Ltd., which is the owner of TAI YUAN, take the following measures for the purpose of preventing the occurrence of a similar accident and reducing damage:

Tai Yuan (Hong Kong) International Shipping Co., Ltd. shall provide thorough instruction to masters of its vessels to unfailingly execute the following measures and shall also implement training in accordance with said measures:

- (1) Build a thorough system for appropriate and smooth firefighting in case of fire with the loading business by considering and determining effective firefighting methods in accordance with the cargo's characteristics beforehand and conveying this information to the loading business.
- (2) Pay full attention to the following points regarding firefighting methods for fires within piled scrap:
  - 1) Firefighting by water-spraying may not be effective because the sprayed water can be blocked by the scrap's surface layer and not reach the fire's origin.
  - 2) Insulation material and other combustible items with low specific gravity may float in a burning state even when the water level in the cargo holds rises from continuous water-spraying and continue to burn on the water's surface.
  - 3) Firefighting using carbon dioxide gas firefighting equipment is effective.
  - 4) When a vessel has multiple cargo holds, measures such as immediately closing and sealing the hatch covers of cargo holds other than the cargo hold with the fire shall be taken to prevent a fire's spread.
- (3) Reliably provide information on firefighting equipment aboard the vessel to the firefighting organization.
- (4) Implement measures as soon as possible to control oil, such as closing air vents and setting up oil fences, whenever the danger of an oil spill from a vessel arises.