

Collapse of gantry crane trolley resulting in one death and two injuries.

1. The Incident

- 1.1 On 20 October 2004, the Hong Kong registered ship "*Indotrans Java*" berthed at a dock of Brazos Harbour, Freeport, U.S.A. for loading. A cargo of rice in sacks was loaded into the No. 5 cargo hold using the ship's gantry crane. A crane driver was inside the driver cab of the gantry crane trolley to operate the loading of cargo while the other two stevedores were working inside the cargo hold.
- 1.2 While sacks of rice were being loaded into the cargo hold, the supporting frames of the gantry crane trolley suddenly detached from the cross-beam of the gantry crane. The trolley and the crane driver fell down into the bottom of the No. 5 cargo hold (see figure 1). The accident caused the death of the crane driver and injury to the two stevedores.

2. Lessons Learnt

- 2.1 The accident was probably caused by the failure of the mounting bolts at the supporting frames of the gantry crane trolley. Following contributory factors were identified to the failure of the mounting bolts:
 - a) Certain structural members of the trolley of the gantry crane such as the mounting surfaces, bolts and nuts of the support frames were seriously corroded;
 - b) Bolts with strength lower than the design value were fitted on the mounting flanges of the support frames; and
 - c) The malpractice of applying sideway loading force (see figure 1) on the cargo by the crane trolley caused uneven loading on the support frames and their mounting bolts.

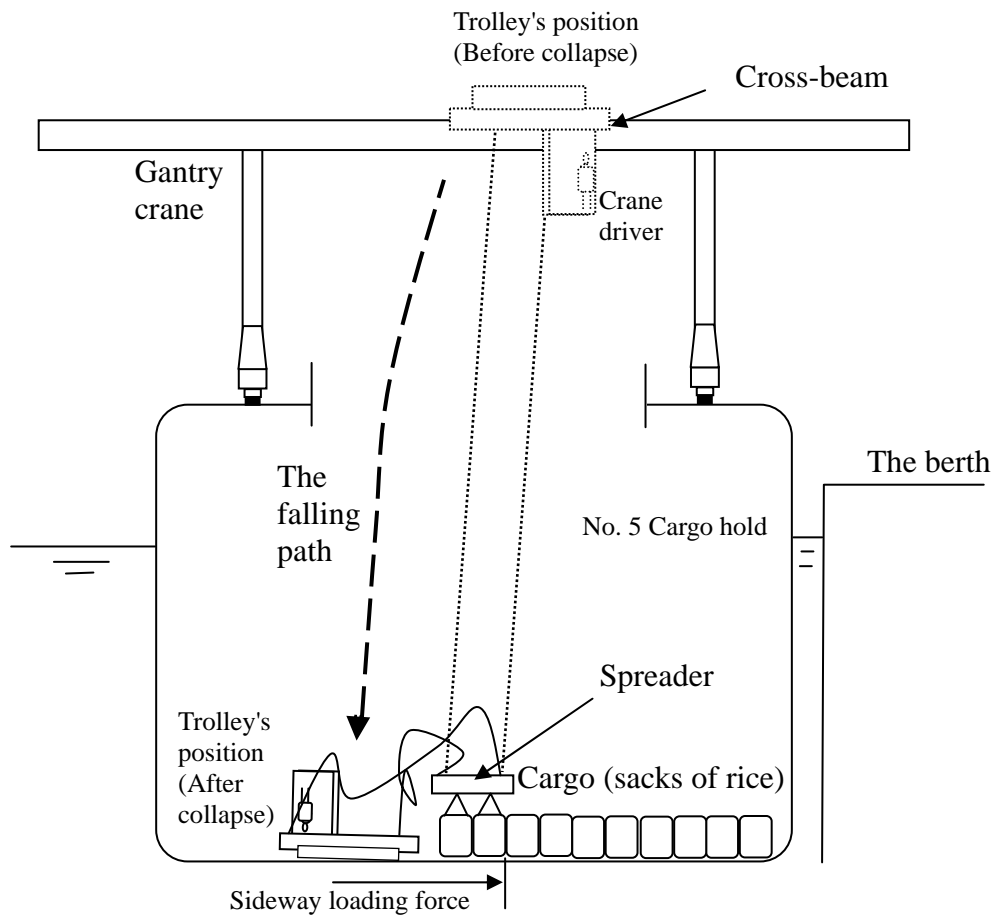


Figure 1 : The scene of the incident