

**Fire on board and the subsequent sinking of the PRC wooden cargo vessel
“Yue Hui Zhou Huo 3861” in the waters near Fat Tong Mun on 13 November 2003**

1. The Incident

- 1.1 At about 1900 hours on 13 November 2003, a fire broke out in the engine room of the vessel “Yue Hui Zhou Huo 3861” (粵惠州貨3861) (Figure 1) while it was on passage in the waters near Fat Tong Mun. The fire spread rapidly and went out of control. All 5 crewmembers on board abandoned the Vessel and escaped into the sea without any life-saving appliances. The Master, the Engineer and one sailor were able to swim to Steep Island nearby and later rescued by helicopter while two other crewmembers were reported missing. The Vessel was destroyed by the fire and later sank. On 18.11.2003 and 25.11.2003, Marine Police found the dead bodies of the two missing crewmembers.

2. Findings

- 2.1 At the time of writing the report, the vessel was not salvaged and no inspection on the vessel could be carried out.
- 2.2 Due to lack of corroborative evidence, the exact seat and cause of the fire cannot be ascertained. However, from the observations made during the investigation, there is reason to believe that the fire was attributed to the state of maintenance of the vessel and its machinery and equipment on board. Such observations are:
- 2.2.1 The vessel was experiencing an excessive ingress of water through the stern tube bearings. The fact that the Master had to suspend cargo operation and take the vessel out of the harbour to pump out the engine room bilge suggests that the leakage could not be easily stopped or even reduced while the vessel was alongside. This indicates that the stern tube leakage problem was quite bad and had been persistent for some time.
- 2.2.2 The sudden and rapid onset of the fire suggests that the fire might have been caused, or at least had been fed, by an abundant supply of fuel. The most probable scenario was the bursting of a main engine fuel pipe after subjecting to prolonged and excessive engine vibration. The engine vibration was most probably initiated by engine and shafting misalignment that had also caused the stern tube leakage.
- 2.2.3 Plastic sheeting had been used to cover the forward main deck to make it more weatherproof. This should not have been necessary if the watertight integrity of the Vessel was properly maintained.

- 2.2.4 The malfunctioned fire extinguishers and the improper stowage of lifebuoys further illustrate the lack of attention on the proper maintenance and readiness of fire fighting and life-saving appliances on board the Vessel.
- 2.2.5 Besides the above observation, it is also noted that the engine configuration, as stated by the Engineer of the vessel, was not in accord with those described in the vessel's Inspection Certificate. The Certificate itself was confirmed valid by the certificate issuing authority. The only logical explanation for the above discrepancy is therefore that there had been some unauthorized modification on the vessel, whereby an additional engine and shafting system was installed without the approval or monitoring of the competent authority. Hence the standard or quality of such unauthorized modification is doubtful.
- 2.3 All the above observations suggest that the root cause of the accident and the subsequent lost of lives of the two crewmembers was a grossly lack of safety concern and awareness of the operator and crew of the vessel.

3. The Lessons

- 3.1 Important lessons should be learnt from this incident :-
- (i) the machinery of vessels and equipment thereon should be properly maintained and any modification should be properly carried out, in order not to endanger the safety of the vessels and the crew working on board.

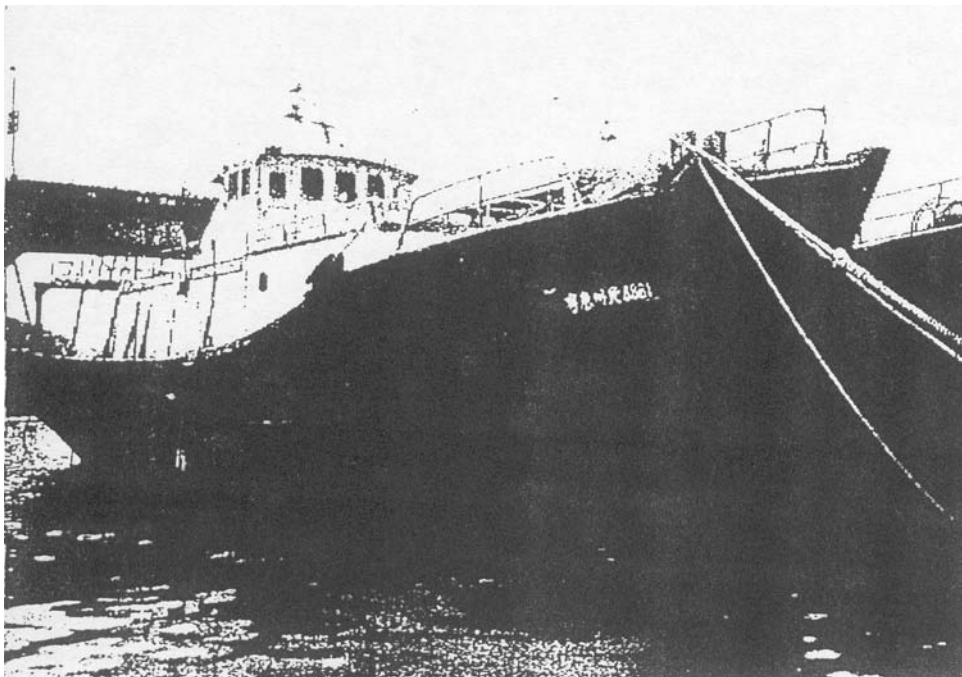


Figure 1