



# 香港商船資訊

## HONG KONG MERCHANT SHIPPING INFORMATION NOTE

### Fatal Accident Involving the Use of Scaffold on board Ship

*To : Shipowners, Ship Managers, Ship Operators, Masters and Officers*

#### *Summary*

An accident occurred on a Hong Kong registered vessel in which two seamen were injured and one subsequently died. The two crew fell about 12 metres to the bottom of an empty cargo hold after a scaffold on which they were working collapsed. This information draws the attention of company and shipboard staff the lessons learnt and the safeguards that need to be observed when using scaffolds on board ships

#### **The Incident**

1. On 7 September 2003 the crew of a Hong Kong registered bulk carrier started work to prepare the ship's holds for loading a cargo of wheat while the ship was at anchor outside the port of Albany, Western Australia. The work involved washing each hold and scraping and touching up the interior paintwork ready for the grain cargo. A scaffold, which consisted of prefabricated frames assembled in seven tiers with rubber tracked castors at the base corners, was used to perform the work on the underside of the main deck. The whole scaffold was 12.3m in height while the base was 1.26m wide by 1.875m long. At the material time the ship had a slight trim by the stern while wind at force 4-5 was prevailing in the area.

2. Prior to the incident the scaffold had just been moved from the forward end of No. 2 hold to the after end to continue the work there. After the repositioning, two seamen immediately started to resume work on the underside of the deckhead. As soon as they climbed onto the platform at the top, the entire scaffold toppled towards the after bulkhead. The two crew fell about 12 metres to the tank top as the platform scraped down the bulkhead. Both crew sustained injuries and were taken to the hospital. One of the more seriously injured crew subsequently died in the hospital. The other crew eventually recovered and returned to the ship.

## **Contributory Factors**

3. In this fatal accident, the base of the scaffold was found too narrow for the assembled height making the scaffold inherently unstable. The rope lashings used to stabilize the scaffold had not yet been secured and the casters were not locked prior to the seamen going back up onto the top platform. Although the two seamen were wearing safety harnesses these were not attached to the ship's structure. It has also been identified that some combination of ship's movement and the uneven distribution of weights at the working platform level were factors contributory to the toppling over of the scaffold. Both company ISM procedures and normal seaman-like practices were not followed.

## **Lessons**

4. It is important to ensure that scaffolds for working aloft are stable, particularly in a shipboard environment where base level may not be exactly horizontal and that ships are subject to movement due to wind and wave actions. As a general guidance the height to base ratio of a scaffold without rope lashings or preventers in place should not exceed 3 to 1. No personnel should be allowed to stay on a scaffold when it is being moved and castors must be locked before anyone is permitted to go aloft. While working aloft, the safety harness should be secured to ship's structure where practicable. Persons responsible for the safety of the work should also assess the distribution of weights on scaffolds to avoid undue top-heavy arrangement.

5. The attention of shipowners, ship managers, ship operators, masters and officers is drawn on the lessons learnt above.

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