Surveyor's Notebook

KEEP TO THE BASICS – 1st of the two Parts.

The following is a brief précis of a number of incidents which provide valuable lessons. The first rule of a Safety Management System (SMS) is to learn from your mistakes. Hence we have the very useful tool in the ISM Code – near miss reporting.

These articles are headed 'KEEP TO THE BASICS'. Each one of the incidents described below could have been prevented by simple adherence to good seamanship practice. It could be argued that you do not need a sophisticated SMS to prevent incidents like those described below.

1. Working on the stern tube seal – keep to the basics

A ship was having work carried out on the stern tube seal. The ship did not go into a dry-dock but remained alongside a secure berth close to a repair yard. To gain access to the stern seals, the ship was 'tipped' by the head and scaffolding was erected around the stern. The work was being carried out by shore technicians. The ship's owners took the opportunity to carry out other maintenance including having a specialised technician attend to carry out repairs and adjustments to the main engine.

Whilst carrying out the main engine adjustments, the shore technician disengaged the turning gear, the propeller shaft rotated, the blades turned and the scaffolding around the stern collapsed. As a result the shore workers were severely injured.

Lessons learned:

- *all repair work should be done with a risk assessment and work permit system completed*

- *all work carried out by shore staff technicians should be properly supervised by the responsible officer, in this case the chief engineer*

- *all personnel working on the ship should be informed of other work that may*

impact on the work they are doing. Have morning meetings to inform and discuss the work to be done during the day. Good communication is an effective safety tool.

2. Working aloft – keep to the basics

A tanker was steaming and carrying out routine work on deck. Two experienced able seamen (AB) were about to start painting one of the mast posts. The first AB had to return to the store room to get some additional equipment, so the second AB decided to continue with the work and started to climb an aluminium ladder resting against the derrick post in order to climb into a bosun's chair. The portable ladder was not fixed and when the AB was about 4 metres above the deck, the portable ladder slipped and the AB fell to the deck below. The fall resulted in a severe head injury, even though the AB was wearing a protective helmet.

Lessons learned:

- *there was no risk assessment or permit to work (aloft) in place, and there should have been*

- *there was a lack of a safety culture; no one should climb a ladder ashore let alone onboard a rolling ship that is not fixed or safely fastened*

- *working aloft should always be done with two persons in attendance, refer to the UK MCA Code of Safe Working Practice for Merchant Seamen*

Keep to the basics of good seamanship and accidents will be prevented.

3. Cargo damage – ballast water – keep to the basics

A bulk carrier loaded with cement was on an ocean crossing in winter. After leaving the load port, additional ballast was pumped into the upper wings tanks to reduce the GM (meta-centric height) so as to make the rolling motion onboard more comfortable in the seaway.

During the voyage a ballast exchange was carried out. This ship was constructed with common double bottom and upper wing ballast tanks' made

common through a metre square trunking, equipped with an inspection / access ladder leading to the lower double bottom tanks. This is a common enough arrangement on 'panamax' ships. During the ballast exchange and a few days later it was thought that one of the upper wings had not been filled fully so was pumped full with further ballast.

On arrival at the discharge port, when carrying out the draft survey it was calculated that the ship had substantially more cargo onboard than when it left the load port three weeks earlier. Of course this was not possible and it transpired that there was over 1,000 tonnes of sea water ballast onboard and this was all in one hold. The cement had by this time started to harden; there was a hold full of solid and solidifying condemned cement cargo, which took six weeks to dig out. Total costs, excluding off hire, were over $1.5m.

After inspection a corrosion hole was found in the connecting trunking between the double bottom tank and the upper wing tanks.

Lesson learned:

- *consider whether to ballast at all when loaded with water sensitive cargo; ballast water can leak through tank top manhole lids, poor bilge and ballast valves, faulty non return valves, damaged air and sounding pipes, poor or damaged ballast tank or hold bulkheads*

- *good practice for ballasting is to gravitate in ballast if possible; this can prevent overpressure of the ballast tanks*

- *when ballasting, carry out diligent and recorded soundings (weather permitting)*

- *ensure that regular soundings of all accessible spaces, including hold bilges, duct keels, bow thruster spaces, tanks, cofferdams and voids are taken at all times at sea (weather permitting). Monitoring the watertight integrity of the ship is a basic seamanship task*

- *all ships must have rigorous tank inspection programme, particularly ballast tanks. This must be a part of the Planned Maintenance System (PMS). It needs to be recorded and monitored by the shore managers. A*

tank inspection schedule should be drawn up and the officers and crew involved, trained in what should be inspected and recorded

…….to be continued.