9. Vetting Inspections

.1 Introduction

Ship vetting is an in-depth assessment of a ship with respect to its quality and that of its owner, operator and manager, right from commissioning to current status.

Vetting enables the charterer to optimise vessel selection by matching available vessels to operational requirements of the voyage and therefore maximising efficiency.

.2 Brief History

Tanker ownership was traditionally with oil companies. Long term time charters were becoming increasingly rare with the spot charter market becoming very active.

In and around the ‘70s and ‘80s, the oil industry saw ownership of tankers gradually moving from oil companies to independent shipowners. The pattern of tanker ownership moved from the well established independent shipowner with a substantial fleet to non-traditional shipping interests, often with no active interest or experience in shipping. The fleet size was also small, sometimes only a single ship representing the owner’s stake in the oil industry.

Ship managers began to play a growing and influential role in this changing world. The oil industry, now being a major spot charterer of all types of tonnage, began to be concerned with the quality of tankers.

A number of member companies of an internationally well established organisation called the Oil Companies International Marine Forum (OCIMF) began the development of ship vetting systems in the late '70s and early '80s. Each scheme was unique to the individual company's needs.

Recognising that different standards were sometimes being applied, with consequent confusion amongst shipowners, OCIMF members developed Inspection Guidelines for Oil Tankers in 1989, based on international conventions such as SOLAS, MARPOL, STCW etc. and industry-accepted technical guidance such as ISGOTT (International Safety Guide for Oil Tankers and Terminals) and other standards.

Individual in-house databases enabled the oil company to form a reliable view of a ship's suitability for charter. The number of major tanker accidents in 1989, ship quality and liability issues assumed an even greater prominence in the oil industry. Besides vessels, there was a realisation in the industry that shore-based management of the ship was important as well. Therefore, OCIMF members began to assess the quality of ship management agencies, operators, their policies and the implementation of those policies.

.3 The Objectives of Vetting

The overall aim is to increase safety at sea and to decrease pollution. The following issues are part of the broader perspective of ship vetting:

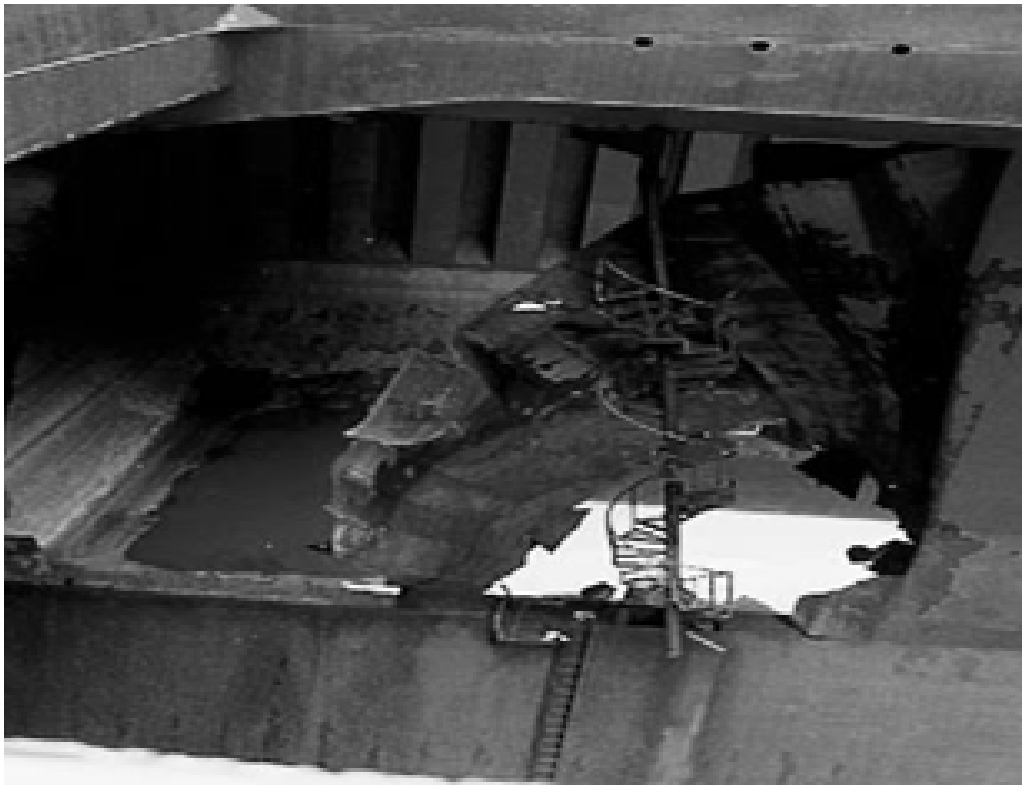
- To check whether the ship complies in every respect with international legislation, with certain industrial standards and certain national laws (e.g. OPA 90 - a ship which does not comply is not allowed to enter any American port).
- To avoid major oil pollution cases because it damages the reputation of oil companies and it involves enormous financial responsibilities. At the same time, the environment is better protected.
- To increase safety on board as well as to better the safety management of a company.

- To decrease the danger of explosion and/or fire and the ensuing damages for the terminal installation and its surroundings.
- To ensure that cargo is not carried on substandard ships. There are too many implications if the cargo is damaged or lost due to substandard vessels, owners, operators or managers.

There are at present mainly two initiatives working in this field:

Ship Inspection Report Programme (SIRE) is a project worked out by OCIMF and concerns the transport of oil by sea.

Chemical Distribution Institute (CDI) is an independent organisation with its own statutes and it is also part of a bigger project, initiated under the 'Responsible Care Programme' of the European Community, concerning the distribution, transport and storage of chemicals and gas over the road, in the air and at sea.



Vetting inspections are carried out by qualified personnel, as per the OCIMF standards and guidelines to make it uniform. SIRE was introduced to ensure this uniformity. It is open to OCIMF members, bulk oil transport operators, oil, power industrial or oil trader companies which charter tankers as a normal part of their business and government bodies such as port, canal and flag state authorities.

According to industry estimations, ships on average are subject to around 10 inspections per year. This includes one to two CDI inspections every year, with two or three from oil companies forming part of the OCIMF. Then there are three to four per year from terminals, two to three from independent vetting associations, one from the P & I club, one ISM audit every year, three to four Port State Control audits, one annual flag state audit, eight surveys from class and an annual inspection from the United States Coast Guard (USCG). These inspections cost about USD 3,000.00 each.

Choosing a Ship

The charterer's decision of whether or not to charter the vessel is made on a variety of different criteria, of which the inspection is just one element. Charterers review information from numerous sources, including the vessel's detention and casualty record, its past experience with the vessel and its management. They have their own complex systems (many automated) of actually assessing the ship from the data available and determining whether or not it is suitable.

It is worth noting that charterers do not want to fail ships, or to set impossibly high standards. The more ships deemed suitable for charter, the keener is the competition, and the more likelihood a vessel will be available immediately when required.

In some instances, charterers may be fully aware about problems on board Vessel ‘A’, but feel these problems to be less severe as compared to the problems on Vessel ‘B’, and will prefer their cargo to be given to Vessel ‘A’ inspite of the said problems. If two ships become available for the same price, but one of them has a minor deficiency, then the charterer may well choose the one without the deficiency with everything being equal. But having deficiencies

reported does not necessarily blacklist the ship. But obviously, if the vessel is deemed too high a risk, then it will not be chartered. Part of the reason for the whole process is trying to reduce the chances of substandard ships being used to carry oil.

Another consideration is that if a vessel is also detained by Port State Control, then while it may not be liable to charter costs (if the shipping company can be proved to be to at fault), it does mean that a very valuable asset, its cargo, is sitting idle, and will be late to arrive at its destination. Charterers want to avoid chartering a ship which might be detained.

With spot charters, brokers typically present the charterer with a range of different options at different prices enabling the charterer to take the cost into account when making his chartering decision. Contrary to popular belief, charterers, especially OCIMF members, will often pay more for a ship they believe to be of superior quality.

.4 Chemical Distribution Institute

The Chemical Distribution Institute, based in the UK has its own inspection system which it is harmonising with the OCIMF SIRE system. The form was originally introduced by CEFIC, the European Chemical Industry Council.

The CDI is gradually harmonising its safety measures with OCIMF, so the two groups can share information.

Companies in CDI include Chevron, DOW, Lyondell, BP Norsk Shell, Du Pont, ExxonMobil, Hoechst, Akzo Nobel, BASF, ConocoPhillips, Petrobras and Kuwait Petroleum.

The databases are available to all participating companies, accredited inspectors, shipowners (marine) and terminal operators (terminals).CDI produces report analysis software, which can, for example, show tables and reports of the

number and percentage of non-conformances, inspector observations, comments and non-conformances by category.

.5 Ship Inspection Report Programme (SIRE)

With a significant increase in ship inspection activity, OCIMF members with ship vetting programmes recognised that duplication of ship inspections was occurring and occasionally several inspectors from oil companies, and indeed from other organisations such as Port State Control and insurance interests, had been on board the ship at the same time seeking to carry out inspections. Clearly, apart from the sheer inefficiency of this activity, ship staff was put under considerable stress at times when the ship was busy in port, probably loading or discharging. OCIMF members also recognised that it would be impossible for individual companies to maintain up-to-date inspection reports on every ship that was potentially of interest to them and that some system of sharing inspection reports was necessary. This combination of circumstances led to the development of the SIRE programme that was launched in November 1993.

The original SIRE programme consisted of a database comprising OCIMF member company's inspection reports compiled according to each company's individual inspection procedures. The SIRE report itself contained only that information that had been submitted by the inspecting company and neither the report nor OCIMF provided any conclusion, rating or recommendation as to the suitability of the ship. A key feature of SIRE is that membership is entirely voluntary.

SIRE's main objectives were to extend the availability of ship inspection information and data beyond the membership of OCIMF, to reduce the duplication of effort by inspecting companies and, as a consequence, to ease the inspection burden on ship's staff, Following OCIMF's mandate, the SIRE programme was, and remains, strictly non-commercial and it only considers issues concerned with ship safety and pollution prevention.

While the SIRE programme was developed primarily to address the risk management needs of OCIMF members, it was recognised that there were

considerable potential benefits to the tanker industry as a whole and to those other bodies who had an interest in managing the risks associated with ship quality. It was felt that shipowners would benefit from a more efficient inspection system and that non OCIMF-member charterers could have access to SIRE. Importantly, recognising their crucial role in ship quality assurance, it was decided that port and flag States could become SIRE users.

It is a fact that vetting inspections are becoming stricter and more demanding. Although most shipping companies are able to comply with the requirements of the major oil companies, they often lose track of the rapid changes of these requirements, which are recorded and kept in previous inspection records. Bearing in mind that these requirements vary from one oil company to another, the problem is compounded.

.6 Inspector Accreditation

To be accredited as a SIRE inspector, inspectors must have a Class 1 deck or engine certificate of competency and not less than five years of sea service including not less than two years at a senior rank.

They must pass a formal written examination, pass an onboard audit, and undergo periodic re-auditing. They must conduct a minimum number of inspections every year and periodically attend refresher courses.

The Inspection Process

Inspectors working for oil companies go on board ship and make a report based on quality of the vessel, its equipment and operational practices.

Under the SIRE programme, all the vetting inspections, which oil companies make on shipowners, are put into a standard format, so they can be shared between the oil companies.

The SIRE inspection is geared around checking for items which can only be checked by physically having someone on the ship, checking that all the documents are there (logbooks, manuals, certification) and are correctly compiled, the necessary complement of seafarers is present, they can all speak a common language, there is a training policy all charts are up to date, alarm systems are operational and tested, lifeboat drills are held, hoses, gauges, mooring equipment and pipelines are in good condition, planned maintenance systems are being followed and the ship is clean and tidy. All the inspection questions are based upon IMO regulations and best-accepted industry practices.

The inspector normally spends about 8 hours on board the ship carrying out the inspection, normally accompanied by a senior ships officer or in some cases the ship's superintendent

The inspector's report is sent to the shipping company, which has 14 days in which to make a comment on it (or explanation for any deficiencies). The shipping company can comment at any time during which the report stays in the system.

Once any comment has been received, or after 14 days (whichever is the earlier), the report is made available through the SIRE system. SIRE participants can access each report and the applicable comments. Government organisations, including port state control authorities, can access all the reports free of charge.

The reports are made available on the system for 12 months, after which they are put in an archive for 12 months and then deleted. In most cases vessels are inspected 2-3 times a year ensuring that the most up to date condition of the ship is available.

SIRE has put together a very large database of information about tankers. 45,000 inspection reports have been submitted to SIRE so far; currently there are

over 10,000 reports on over 6,300 vessels, with inspections conducted over the last 12 months. Over 1600 reports are pulled out of the database every month.

There are 275 fully accredited SIRE inspectors around the world and 67 companies who can access reports from the database.

Vetting and Its Role in Client Relationships

There are many new factors in ship vetting that affect the profitability of a company. The proper and methodical handling of problems together with the well-informed and effective relationships established between shipping companies and their customers are vitally important factors for a continued working relationship with clients, especially if these are major oil companies.

For example, after a vetting inspection, a major oil company may cause a record to be made of remedial actions to be carried out in the future. Shipping companies are expected not only to take remedial action, but also to show how similar impending occurrences will be eliminated. In some cases, it will be necessary to show how the methods used to implement remedial action were in accordance with safe practices. In other words, documentary evidence is required to show a full picture from a detected deficiency, its satisfactory repair conclusion, and measures taken to avoid reoccurrence.

Getting Ready For Inspection

The SIRE Inspector will always use the VIQ (Vessel Inspection Questionnaire) as the base document for the inspection. If the Master/Superintendent makes a pre-inspection, shortcomings can be identified and corrected prior to the actual inspection.

Generally the inspector comes on board and has a meeting with the captain. He discusses the vessel's schedule and tries to inspect the vessel with least possible interference to the cargo work. It is recommended that he be accompanied by a senior officer of the relevant department i.e. the Master or Chief Engineer.

It helps if the vessel is prepared with the initial paper work such as all the trading certificates, crew certificates, etc. It is a good idea to keep all files, log books and other records ready in the ship's office prior to the inspector's arrival. Besides

being convenient during the documentation review, it also creates a good impression about the professionalism and foresight of the vessel's officers. The Inspector will wish to sight the following, where applicable:

- The Certificate of Registry;
- The vessel's trading certificates: Safety Equipment, Load Line, Safety Radio, IOPP, Safety Construction, International Tonnage, ISM Document of Compliance (certified copy), ISM Safety Management Certificate, Certificate of Fitness or Noxious Liquids Certificate;
- Oil Record Books Parts 1 and 2 or Cargo Record Book;
- Certificates of Civil Liability for Oil Pollution;
- The USA Certificate of Financial Responsibility and the last Tank Vessel Examination Letter;
- The Class Certificate, Enhanced Survey File with Condition Assessment Report and Quarterly Class reports;
- Approved manuals: Stability, Damage Stability, Inert Gas, COW, CBT, and ODME;
- An approved SOPEP and VRP Manual;
- SOLAS Training Manual, SOLAS Maintenance Manual, life saving appliance and fire fighting equipment maintenance records;
- The Procedures and Arrangements Manual (for chemical and gas carriers);
- The Cargo Gear Register;
- Officer and crew national Certificates of Competency, Continued Proficiency and Dangerous Cargo Endorsements;
- Evidence of Administration acceptance of crew Certificates of Competency;
- The Manager's Operating Instructions;
- The Company Drug and Alcohol Policy and records of unannounced testing;
- The Garbage Record Book and the Garbage Management Plan;

- Records of testing of mooring winch brakes, mooring rope/wire manufacturer's certificates, bow stopper certificate;
- The last Port State inspection certificate;
- Hot work and enclosed space entry permits;
- The technical publications listed in the OCIMF Vessel Inspection Questionnaire as applicable to the vessel.

Once the paper work is completed, the inspector takes a round on deck to identify any deficiencies. At the same time, he might ask few questions to the crew members on deck. On completion of the deck round, he goes down to inspect the engine room.

It should be noted that the Emergency Fire Pump, Emergency Generator, Emergency Steering and the ODME will be expected to be operated by the officer or any other representative accompanying the inspector.

It is also important to communicate tactfully with the inspector at all times. Loose talk about other ship staff, the company or other body or organisation will not be appreciated. Communication should be precise, professional and to-the-point always.

The Master can expect that the inspection will take about six to eight hours and be performed in the following order, unless the order of inspection should be altered to fit the vessel's schedule:

- Review of documentation (preparatory for opening meeting).
- Opening meeting, with Master, Chief Engineer and Chief Mate (if available).
- Complete review of documentation.
- Wheelhouse and navigation.
- Communications (radio room or GMDSS station).
- The exterior of the wheelhouse.

- The exterior of the accommodations to the poop.
- Up the main deck to the forecastle and forecastle spaces
- Back down the main deck and checking a ballast tank (as agreed in the opening meeting)
- The pump room
- to the Cargo Control Room with Chief Officer
- Discussion with Chief Engineer and into the engine room including review of PMS.
- With the Master back through the internal areas of the accommodations
- Finally a period for the inspector to summarize his thoughts
- A final meeting with the Master and department heads.

Any variation necessary to avoid disruption of the ship's normal operation will be considered. The order of inspection can be varied as necessary.

During the final meeting, a list of observations will be reviewed with the Master. This review is to ensure that there are no observations that can be cleared because of a simple misunderstanding. The Master is not expected to provide corrective actions or to indicate he agrees with the observations. His signature is only an indication that he received the observations.

The following are a few points to be remembered prior to inspection:

1. Critical equipment or documentation normally placed at the first point of access:
    - Gangway to have a safety net correctly rigged. Most nets are rigged around the gangway itself. The correct procedure would be to rig the net between the shipside and the outboard side of the gangway. The condition of the net should be checked at regular intervals to ensure that its condition does not deteriorate to the extent that it may not be able to support the weight of an average person who may fall on it.

- A lifebuoy with line and light must be placed near the point of access. The condition of the line must be checked especially at the point where it is made fast to the buoy. The buoy itself should be of the required weight. The light should be in working condition, secured correctly to the buoy and watertight.
- The International Shore Connection with gasket, nuts and bolts should also be kept standby. The nuts and bolts should be greased and moving freely. The gasket should be in good condition. The threads or the coupling itself should be free from damage.
- A visitor's helmet should be available at the gangway itself. This creates a very good impression about the safety culture on board the vessel. If many officials or visitors are expected, the appropriate number of helmets and visitor cards should be available.
- The visitor's log should be available and appropriate entries made and endorsed in it. Common details that are normally required to be filled in would be the unique visitor card number, name of the person, rank, the person's name who the visitor desires to meet, the reason for the visit, the equipment/baggage/personal effects carried by the person along with him and the date and time.
- Warning boards should be placed near the point of access. These boards should be of an appropriate size so as to be easily legible to the average individual. They should be well illuminated in all conditions of darkness. Commonly found entries on these boards could be such as but not limited to, 'No Unauthorised Access', 'No Smoking', 'No Mobile Phones', 'No Naked Lights' and 'Safety First'.
- A Safety Plan which should include a crew list and cargo stowage plan. These are to assist shore personnel such as the fire brigade to take a head count and know about the vessel's structure and equipment in case of an emergency. Needless to say, the crew list and cargo stowage plan must be updated at all times.

2. The manifold watch keeper must check with all visitors on their business and enter it in the visitor's log. Personnel in the CCR must be informed so that inspector is escorted up to the Master's cabin and around the vessel as per the Ship Security Plan.

3. All watertight doors must be shut including the engine room skylight and the midship/forepeak stores. If there is a need to open any of these doors, any staff member should be available at that point to ensure validity for the door to remain open.
4. All scuppers must be plugged. Pre-arrival checks should be made to ensure that scupper plugs are in good condition, bellows are not cracked and bolts are free of corrosion and/or damage. If in doubt, scuppers should be plugged and tested with water to ensure water-tightness.
5. Anti-pollution gear must always be in readiness. No metallic shovels/ equipment should be used as part of anti-pollution gear. Operation of Wilden pumps or other pumps should be checked each watch. Any leakages of liquid or compressed air should be made good prior to arrival port. Pump bodies should be correctly earthed to ensure that electrical charges do not develop in or around the equipment, which may be placed in or very near a hazardous area. All personnel must be aware of the fact that Oil Spill Dispersant should be used over side in case of oil pollution only after obtaining the requisite permission from shore authorities.
6. All drip trays to be cleaned and dry. No extraneous material or debris should be found in these trays. The height of the tray should not be greater than the height of ventilators or sounding pipes inside the tray. If sounding pipes are shorter than the height of the tray, they should always be capped shut to ensure water tightness. All trays must have plugs in place, including the drip trays of winches.
7. The appropriate flags/lights should be displayed. Condition of flags should be inspected and the necessary action taken prior to arrival port. A flag in tatters or one which is dirty, with grease stains or faded will not create a very good impression about the vessel in the mind of the inspector. If the vessel has just arrived in port, it may happen that the vessel's navigation lights are inadvertently left on. The designated officer or a responsible person nominated by the officer should ensure that these lights are switched off as soon as the vessel ceases to be underway.
8. Sledgehammers should be placed in position near the bitter end release mechanism of both port and stbd anchor cables. It is not uncommon to find that only one hammer has been kept for releasing both cables. Instructions that are simple and clearly legible should be posted at both chain lockers.

Sounding pipes should be clearly marked with caps in place. Arrangements for draining the chain lockers should be in working condition and the date of last test should be stencilled in the vicinity.

9. All loose gear on deck and engine room to be secured. Gear should be secured to strong points of the vessel and not to fixtures such as piping, ventilators, sounding pipes or cable trays. Gear stowed on the freeboard deck or other decks exposed to the weather should be elevated and secured on wooden/fibre palettes.

10. Fire hoses should be connected to hydrants. Hoses should be in good condition, with no cracks or pinholes that could reduce water pressure and consequently effectiveness. Couplings should not be secured with hose clamps or other temporary means. Copper wire should be used to secure couplings to the hoses. Washers should be in good condition and not hard or cracked. Hoses should also be connected to the foam line on either side of the manifold. Foam monitors should be pointed towards the manifold and the cargo area in general. Personnel should be aware that the initial discharge from the monitor should be pointed away from a fire. This is to ensure that water or a mixture of foam and water does not make direct contact with fire, which could lead to boil over and generation of an enormous amount of steam. Personnel in the vicinity of the fire could be injured by this occurrence.

11. Brake testing of mooring winches must be carried out annually. Results of the test should be stencilled along with the holding capacity, slack and heave directions and date of testing. Pins of the clutch levers should be in place and secured with either chain or wire. Brake spindles should have some marking arrangement to ensure that all personnel tighten the brake to the desired tightness only. Grease nipples should be operable, gears should be greased and all moving parts should be free.

12. Oxygen and acetylene bottles should be stored in lockers separate from each other. The cylinder valves should be kept shut. Lines should be depressurised and gauges should show zero pressure. Access to these lockers should be available only to authorised personnel. Flame arrestors should be in position and working correctly.

13. Excessive black smoke from the funnel should be enough cause to notify the personnel in the engine room to take appropriate action. There are quite a

few ports globally where fines may be imposed on vessels or the vessel blacklisted.

.7 Typical Deficiencies

Below are some of the deficiencies pointed out by a British Petroleum (oil major) inspector during an actual inspection:

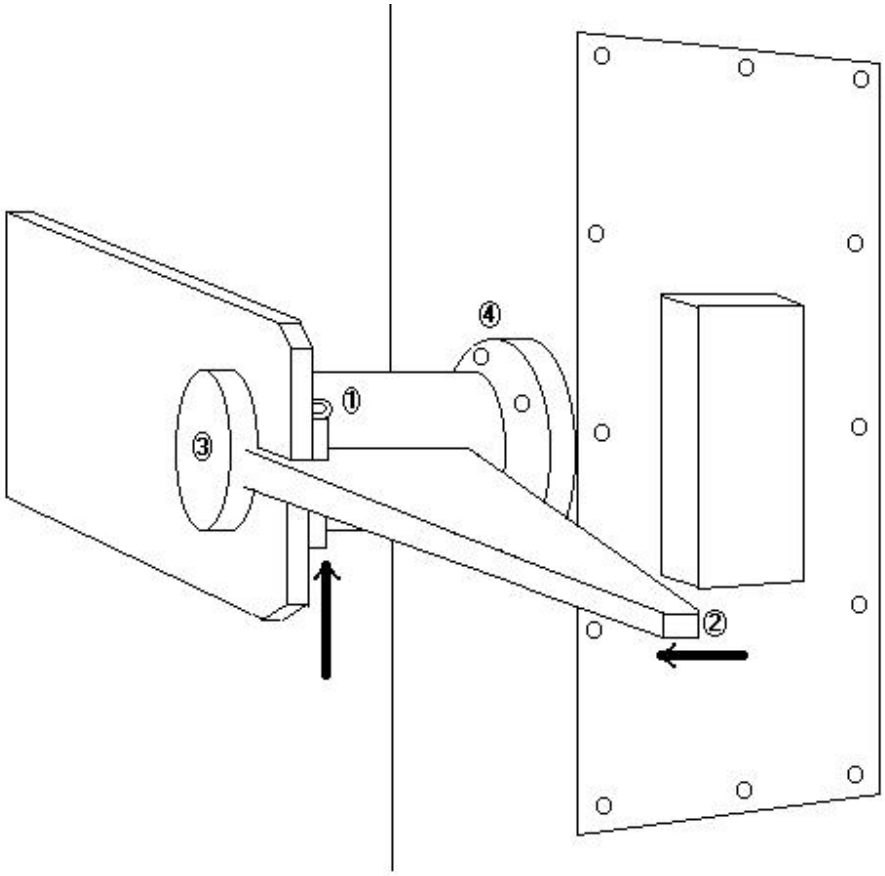
a) The aft Emergency Towing Arrangement (ETA) was not connected to the pick-up rope for deployment in 15 minutes by one crew member. The pick-up rope was later connected up by crew (the ETA has to be kept ready at all times and all components have to be connected and in working condition).

b) Material safety data sheets (MSDS) were not available for chemicals stored in the steering gear compartment (MSDS must be available for all chemicals, paints

and other compounds that might give rise to an undesired event in case of accident or personal injury).

c) The starboard aft and forward main deck mooring winch clutch levers were not properly secured rendering the clutching arrangements ineffective (securing pins must be in place in both conditions i.e. when the clutch in in gear or out of gear).

d) The port side navigation light was with partly detached holding bracket and was not bolted down at the base (this could have serious implications towards the visibility of the light itself).



e) The bitter end release arrangements for port and starboard anchor cables outside the chain lockers were covered with steel boxes and secured with 24 bolts thus hampering quick release (the arrangement has to be such that the cable can be released in the quickest possible manner in the simplest possible way. The typical arrangement is a large L-shaped pin connected to the last link within the locker secured with a smaller pin. The small pin is supposed to be removed and the L-shaped pin knocked out with a sledge hammer, a process that should take 30 seconds).

f) The foam compound in two drums for portable applicator in the engine room was labelled with last test date that was six years from the date of inspection (foam compound is normally tested at intervals of one year).

g) The incinerator was used for burning of oily rags in the engine room but there were no entries in the garbage record book to reflect these activities (this could imply that the oily rags might have been disposed of by other illegal means or that there is a failure on part of the vessel's staff towards completion of documentation).

h) The fixed combustible gas detector for cargo pump room was fitted with a single sensor head sited above the bottom platform and at the port side away from the cargo pump casings (detectors need to be placed at all sensitive locations and in good number to ensure early detection).

i) The local inert gas main manometer was indicating zero pressure and reported to be defective while discharging operation was in progress (SOLAS requires a minimum of 100 mm water gauge pressure in the cargo tanks during discharging. A defective manometer will provide no indication if pressure falls below the requirement or in case the tanks actually go into vacuum)).

j) The brake holding test of all self storing mooring winches had exceeded 12 months interval (12 month intervals may not be exceeded unless the vessel can

justify non-performance due to an unintentionally long voyage because of machinery failure or due to failure of equipment required for testing).

.8 Practical Issues within the Industry

Many tanker companies are reaching the conclusion that shipping has a real image problem i.e. most oil companies don't trust them, politicians don't trust them, and so they get subject to so many rounds of vetting inspections and new regulations.

The problem with vetting inspections and regulations is that they are not a very good way of ensuring the quality of the ship i.e. they generally give shipping companies a bunch of hoops to jump through, and reward the shipping companies who manage to figure out what the hoops are and jump through them.

The result is that shipping does not genuinely get much safer, oil companies continue to distrust shipping companies, shipping companies have a bad image and the problem gets worse.

There is plenty of data available about shipping companies in various databases, including data about their casualty record, costs, decision making processes, detentions, casualties and surveys.

If this data was better shared, everybody would know who the bad ships are, and would not give them any business, and everybody would know who the good ships are, so they would not need to be subjected to continuous inspections and seafarers could get more rest. The overall safety of shipping would be much improved.

Self Assessment Questions

01. When and why was ship vetting introduced?
02. What is overall aim of vetting?
03. What are the practical issues faced by personnel within the industry?
04. What is the role of the Chemical Distribution Institute?
05. What is the SIRE programme?
06. What is the process of inspector accreditation?
07. What do VIQ and VPQ stand for?
08. Name at least five common deficiencies that could be easily rectified.
09. Name at least ten documents that an inspector would like see.
10. Would vetting be a good idea for vessels other than tankers also? Give your own reason.

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