REGULATION SCHEDULED OR LIKELY TO ENTER INTO FORCE

JUNE 2006

Coating Performance Standards (*NEW SHIPS*)

Mandatory Compliance

MSC 81 *approved* revisions to SOLAS II-1 which, upon adoption by MSC 82 in Dec 2006, will require dedicated seawater ballast tanks on all mew ships $\geq$ 500gt and all new double-side skin spaces on bulk carriers $\geq$ 150m to be coated in accordance with the approved Coating Performance Standard which is also set to be *adopted* at MSC 82.

New is defined as a ship for which:

- the building contract is placed on or after 1 July 2008, or
- in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 January 2009, or
- the delivery of which is on or after 1 July 2012

The effectiveness of the protective coating system is to be verified during the life of a ship by the Administration based on the guidelines to be developed by the Organization.

Voluntary Compliance

MSC.1/Circ.1198 was approved and recommends early implementation of the Coating Performance Standard to bulk carriers $\geq$ 150m in length which are constructed on or after 1 July 2006.

Technical Standards

After significant debate that occurred over the 1-1/2 week meeting, standards for the surface preparation and paint application were agreed as summarized below:

- The soluble salt limit $\leq$ 50 mg/m2 of sodium chloride
- The steel surface should be prepared so that the coating selected can achieve an even distribution at the required nominal dry film thickness (NDFT) and have an adequate adhesion by removing sharp edges, grinding weld beads and removing weld spatter and any other surface contaminant in accordance with ISO 8501-3 grade P2.
- 90% of all thickness measurements shall be greater than or equal to NDFT and none of the remaining 10% measurements shall be below 0.9 (NDFT).
- The surface is to be treated so as to achieve Sa 2½ on damaged shop primer and welds and Sa 2 removing at least 70% of intact shop primer, which has not passed a pre-qualification that is certified by the required test procedures as per the Standard
- The surface after erection is to achieve St 3 or better or Sa 2½ where practicable for butts. Small damages of up to 2% of total area are to achieve St 3. Contiguous damages over 25 m^2 or over 2% of the total area of the tank are to achieve Sa 2½.
- A dust quantity rating of "1" is required for dust size class "3", "4" or "5". Lower dust size classes are to be removed if the dust is visible, without magnification, on the surface to be coated.
- A minimum of two stripe coats and two spray coats are required. The second stripe coat, in way of welded seams only, may be reduced in scope where it is proven that the NDFT can be met by the coats applied in order to avoid unnecessary over thickness. Any reduction in the scope of the second stripe coat shall be fully detailed in Coating Technical File.
- Coatings are to be applied in accordance with the manufacturer's specifications and are not to be applied if the relative humidity is above 85% or if the surface temperature is less than 3°C above the dew point.

Approval and Verification

Based on the results from prequalification tests (this may include 5 years of field experience in order to accept the current epoxy coatings that are know to perform at acceptable levels) of the coating system, which must be documented, a Statement of Compliance or Type Approval certificate is to be issued by a third party, independent of the coating manufacturer.

To ensure compliance with the CPS, a precise set of inspections are to be carried out by the qualified coating inspectors certified by NACE Level II, FROSIO level Red, or equivalent, as verified by the Administration. These inspectors must inspect surface preparation and coating application throughout the coating process to ensure compliance with this standard. Emphasis is placed on initiation of each stage of surface preparation and coatings application as improper work is extremely difficult to correct later in the coating progress. Representative structural members shall be non-destructively examined for coating thickness.

Prior to approving the Coating Technical File the Administration is to:

- check that the *Technical Data Sheet* complies with the coating performance standard;
- check that the coating identification on representative containers is consistent with the coating identified in the *Technical Data Sheet*;
- check that the inspector is qualified in accordance with the qualification standard included in the coating performance standard;check that the inspector's reports of the coating's application, as well as surface preparation, indicate compliance with the manufacturer's the *Technical Data Sheet;*
- monitor implementation of the Coating Inspection Requirements

Protectively Located Fuel Oil Tanks (*new ships*)

The Committee adopted resolution MEPC.141(54) which contains the new MARPOL regulation 12A applicable to all new ships having an aggregate FO capacity of 600 m^3 and greater. Each bunker tank (which excludes tanks that do not normally carry fuel oil such as overflow tanks) fitted in such ships and having a capacity (98% of the tank's gross volume) greater than 30m^3 is to be protectively located.

Application

New ships as defined below will be required to protect their bunker tanks:

- Building Contracted on/after 1 August 2007;
- Keel laying date on/after 1 Feb 2008 (where this is no contract); or
- Delivery on/after 1 August 2010

Exemptions

Self-elevating drilling jack-up drilling MODUs are exempt from the requirement for double bottom protection, but need to comply with the side protection requirements.

Only bunker tanks in column stabilized MODUs that are located within the MODU Code's extents of vertical and lateral damage need to comply; tanks outside of these extents of damage are exempt.

Only side protection requirements apply to new FPSOs/FSUs.

Overview

The new MARPOL regulation 12A:

- limits the size of FO tanks to not more than 2500 m^3;
- requires FO piping contained within the effected tanks to be located above the distances indicated below unless fitted with remotely operated (fail safe) isolation valves at the tank's penetration; and
- contains two options, prescriptive and deterministic, to determine the extent of protection for fuel oil tanks.

Prescriptive Option (double hull protection)

A double bottom with a height not less than B/20 (minimum value is 760 mm) or 2 m, whichever is lesser, and a wing tank must meet the following:

- a minimum width of 0.4 + 2.4 C/20,000 m where the minimum value is 1.0 m or, if the tank size is <500 m^3, 760 mm, for an aggregate FO capacity of less than 5,000 m^3; and
- a minimum width of 0.5 + C/20,000 m (the minimum value is 1.0 m) or 2 m, whichever is the lesser, for an aggregate FO capacity of 5,000 m^3, or more.

  C is 98% of the total FO capacity

Probabilistic Option (oil outflow assessment)

In ship types, such as container ships, where the fitting of double bottoms can be impracticable, the regulation provides an option to assess oil outflow based on the application of probabilistic damage density functions to the actual tank arrangement. FO density, the location of the tank relative to the side shell and the tank size are used to determine mean oil outflow considering 40% outflow due to side damage, 60% outflow due to bottom damage and a percentage of oil entrapped by tanks bounding the bottom shell plating. In the event a double bottom or double side is fitted to reduce the mean oil outflow, their dimensions are not to be less than that required under the Prescriptive Option.

Carriage of Noxious Liquid Substances, NLS *(CHEMICAL SHIPS)*

The revised MARPOL Annex II, adopted on 15 October 2004 as Resolution MEPC.118(52), and the 2004 amendments to the International Bulk Chemical (IBC) Code, adopted on 10 December 2004 as Resolution MSC.176(79), both come into force on 1 January 2007.

New pollution categories - The current five category system (A, B, C, D and Appendix III) has been revised to Category "X" (substances presenting a major hazard), Category "Y" (substances presenting a hazard), Category "Z" (substances presenting a minor hazard) and OS (Other Substances presenting no harm to marine resources). IMO re-categorized substances, for which they received the necessary information in order to evaluate under the mandatory Global Harmonized System, into four Categories. As a result, a significantly greater number of products will require carriage in chemical tankers. Of the 800 products evaluated, only 32 have been categorized under Chapter 18 of the IBC Code. A summary of these changes for the *big movers* is provided in Table 1. A complete list of re-evaluated substances may be found at Resolution MSC.176(79). Substances which have not been re-evaluated by IMO due to lack of submitted safety/pollution data can be found in MSC/Circ.1128.

Oil-Like Substances - The current provisions of Annex II/Regulation 14 permit "oil tankers" certified under MARPOL Annex I to carry specific Category C and D Noxious Liquid Substances as Oil-Like Substances. These Annex I "oil tankers" were not required to meet the IBC or BCH Codes except if their length was less than 150m and they carried Category C Oil-Like Substances, in which case compliance with the Ship Type 3 damage stability requirements of the IBC or BCH Code, as applicable, was required. However, on/after 1 January 2007, carriage of any Oil-Like Substance in Annex I "oil tankers" will not be permitted under the revised Annex II unless the "oil tanker" is modified to fully comply with the provisions of the 2004 Amendments of the IBC Code, including the special and operational requirements associated with the new Categories of substances listed in Chapter 17 of the IBC Code. Tankers certified under the IBC or BCH Code, as relevant, by 1 January 2007 need only meet the special and operational requirements associated with the new Categories of substances.

Vegetable Oils - Contrary to the current IBC Code, which lists all vegetable oils as one product in Chapter 18, "List of chemicals to which the Code does not apply", the 2004 amendments list each vegoil, for which IMO has received the required information, individually in Chapter 17. Therefore on/after 1 January 2007 vegetable oils will be required to be carried in chemical tankers complying with the IBC Code as a Ship Type-2 (double hull). However, an Administration may allow identified vegetable oils (indicated with "*2(k)*" in column "*e – Ship Type*" of IBC Code Chapter 17) to be carried in Ship Type-3 chemical/NLS tankers, except that the entire cargo block length needs to be protected by double hulls that comply with the following dimensions: 760mm wing tank width, and B/15 or 2m double bottom height, whichever is lesser but not less than 1m).

Stripping Limits - The new reduced stripping limit of 75 liters applies only to new ships built or converted on/after 1 January 2007. Existing chemical carriers certified under the IBC or BCH Code may need to reduce their stripping capabilities depending on their keel laying date and the pollution category of the substance to be transported. Any ship converted to a chemical carrier, irrespective of its date of construction, shall comply with the IBC Code using the commencement date of conversion as the date of construction. The exception to the above provisions is for chemical carriers built and certified before 1 July 1986 to the BCH Code to carry substances having a pollution hazard only (i.e., only "*p*" is indicated in column "*n*" of Chapter 17 of the IBC Code). If such ships are modified to carry a more stringent Pollution Category of substance, the requirements of the BCH Code, based on the keel laying date remain applicable. The following table provides a comparison of the current and revised discharge and stripping limits based on keel laying (or conversion) date and Pollution Category of substance.

Discharge Limitations - All ships (new and existing), regardless of the substance carried, will be subject to the revised discharge limitations of not less than 12 nautical miles from the nearest land in a depth of water of not less than 25 meters. Pumping, piping and unloading arrangements requirements may need to be applied based on the new pollution category of the substance.

Comparison of

Current MARPOL Annex II and Revised MARPOL Annex II Requirements - MEPC.118(52)

<table>
<tr><th>Requirement</th><th colspan="4">Current MARPOL Annex II</th><th colspan="4">Revised MARPOL Annex II (1/1/2007)</th></tr>
<tr><td>Pollution Category</td><td>A
Major Hazard</td><td>B
Hazard</td><td>C
Minor Hazard</td><td>D
Recognized Hazard</td><td>X
Major Hazard</td><td>Y
Hazard</td><td colspan="2">Z
Minor Hazard</td></tr>
<tr><td rowspan="2">Maximum Residue after Stripping</td><td colspan="4" rowspan="2"></td><td colspan="4">Ship Details</td></tr>
<tr><td colspan="3">IBC/BCH</td><td>Other</td></tr>
<tr><td>X [1] < 1/7/86 (BCH Ships)</td><td rowspan="2">Not Applicable</td><td>300 liters</td><td>900 liters</td><td rowspan="2">No minimum</td><td>300 +50* liters#</td><td>300 +50* liters#</td><td>900 +50* liters#</td><td rowspan="2">If “Z” and in IBC Ch.18, empty to maximum extent</td></tr>
<tr><td>1/7/86 ≤ X [1] < 1/1/2007 (IBC Ships)</td><td>100 liters</td><td>300 liters</td><td>100 +50* liters#</td><td>100 +50* liters#</td><td>300 +50* liters#</td></tr>
<tr><td>X [1] ≥ 1/1/2007 (IBC Ships)</td><td colspan="4">Not Applicable</td><td>75 liters#</td><td>75 liters#</td><td>75 liters#</td><td>Not Applicable</td></tr>
<tr><td colspan="4"></td><td colspan="4">* performance test tolerance
performance test required</td></tr>
<tr><td>Discharge</td><td colspan="4"></td><td colspan="4"></td></tr>
<tr><td>Criteria</td><td>Residue to reception facility, except 0.1% by weight or below.</td><td>≤ 1 ppm</td><td>≤ 10 ppm</td><td>≤ 1 part NLS to 10 parts water.</td><td>Residue to reception facility, except 0.1% by weight or below.</td><td colspan="3">Any residue can be discharged to sea</td></tr>
<tr><td>En route</td><td colspan="4">≥7 Knots</td><td colspan="4">≥7 Knots</td></tr>
<tr><td>Piping Outlet Location</td><td colspan="3">Underwater</td><td>Not Applicable</td><td colspan="4">Underwater (not mandatory for ships with KLD <1/1/2007 carrying Cat. Z)</td></tr>
<tr><td>Nearest land</td><td colspan="4">≥ 12 nautical miles and water depth ≥ 25m</td><td colspan="4">≥ 12 nautical miles and water depth ≥ 25m</td></tr>
<tr><td colspan="9">X [1] - keel laying date or commencement date of conversion to a chemical carrier.</td></tr>
</table>

Before any of the new certificates can be issued under the revised regulations:

- The Procedure & Arrangement Manual (P&A) must be submitted to an ABS engineering office for review and approval.
- A performance test may be required, depending on the new pollution category of the substance, to verify the quantity of residue in the tank and its associated piping needs to be witnessed by the surveyor issuing the certificate. These tests are to be carried out in accordance with Appendix 5 of resolution MEPC.112(53). To ensure that the quantity of residue does not exceed the limits specified in the Revised MARPOL Annex II Regulation 12 (see above Table) before requesting attendance.

Ships other than chemical carriers built before 1 January 2007 which haul only Category Z substances listed in IBC Code Chapter 18 do not need to undergo this performance test as the tank and associated piping need only be stripped to the maximum extent possible.

Ballast Water Management (*ALL SHIPS*)

Implementation Scheme

The new Ballast Water Convention adopted on 13 February 2004 will enter into force when 30 States representing 35% of the world's gross tonnage become signatory. Currently, only eight States have ratified the Convention.

All ships including submersibles, floating craft/platforms, FSUs and FPSOs) are to manage their ballast water in accordance with an approved Ballast Water Management Plan and record such management in a Ballast Water Record Book. All ships ≥ 400gt (except floating platforms, floating storage units and floating production/storage offloading units) are to be surveyed (initial, annual intermediate, and renewal) and certificated (not exceeding 5 years).

The following table summarizes the implementation schedule of the type of treatment required according to the age of ship and its ballast capacity as per the provisions of the Convention:

Ballast Capacity (m^3)	Construction Date	First Intermediate or Renewal Survey, which ever occurs first after anniversary date of delivery in the year indicated below								
		2009	2010	2011	2012	2013	2014	2015	2016	2017
< 1500	< 2009	⇦ D1 or D2 ⇨								D2
	≥ 2009	⇦ D2 ⇨								
≥ 1500 ≤ 5000	< 2009	⇦ D1 or D2 ⇨						⇦ D2 ⇨		
	≥ 2009	⇦ D2 ⇨								
> 5000	< 2012	⇦ D1 or D2 ⇨								D2⇨
	≥ 2012	⇦ D2 ⇨								

Treatment Standards

Ballast Water Exchange Standard, D1

- 95% volumetric exchange; or
- Pumping through three times the volume of each tank.

Ballast Water Efficacy Standard, D2 - Approved treatment systems are to treat ballast water such that:

- there are less than 10 viable organisms per m^3 ≥50 micrometers in minimum dimension; and
- there are less than 10 viable organisms per millilitre < 50 micrometers in minimum dimension and ≥10 micrometers in minimum dimension; and
- Indicator Microbe concentrations:
    1. toxicogenic vibrio cholerae: < 1 colony forming unit (cfu) per 100 millilitre or < 1 cfu per gram of zooplankton samples;
    2. Escherichia coli: < 250 cfu per 100 millilitres
    3. Intestinal Enterococci: < 100 cfu per 100 millilitres.

Treatment systems are to be approved under resolution MEPC.125(53), which contains recommended procedures for the approval of complete ballast water treatment systems. The Guidelines recommend that BWMS undergo land-based and shipboard tests (functional and biological) for type approval. However, installation of a type approved BWMS requires only a functional test for certification.

Construction Date is defined as:

- keel laying date;
- 50 tons or 1% of structural material – whichever is less; or
- major conversion.

Major Conversion is:

- change of ballast capacity of 15%;
- change of ship type;
- projected life is extended by 10 years; or
- ballast system modification except for replacement-in-kind or modifications needed to meet ballast water exchange.

BW Exchange Requirements

The Convention requires Ballast Water Exchange to take place as follows:

- at least 200 nm from the nearest land and in 200 m water depth;
- at least 50 nm from the nearest land and in 200 m water depth; or
- in the event throughout the intended route the sea area does not afford the above characteristics, in a sea area designated by the port State. There may be a need to alter the ship's intended route to exchange ballast in the designated area.

States may establish additional ballast water management measures for ships to meet based upon entering their territorial waters (<12 nmi) or their ports based on Guidelines, which remain to be developed.

In July 2005, MEPC 53 evaluated a plethora of information describing the state of development of BW treatment technologies which are to be provided to the estimated 200 to 500 ships with ballast capacities of less than 5000 m^3 and built in 2009 or later. This larger estimate is based on a more sophisticated analytic model that takes into account long-range economic and energy demands as well as ship building/scrapping capacities for fleet age and size.

The evaluation, carried out by a Review Group, included an assessment of safety considerations, environment acceptability, practicability, cost effectiveness, biological effectiveness, and the socio-economic effects specifically in relation to the developmental needs of developing countries. The following provides an overview of the assessment:

- Safety - hazards associated with the treatment equipment were considered to be within the range found onboard ships which could be mitigated by appropriate design solutions. This included the storage and handling of Active Substances which appeared to be developing through the use of automated systems.
- Environment Acceptability – there is still some concern with respect the temperature of heat-treated water, residual effects of active substances released with treated water, and the back-flushing of entrapped organisms at the point of uptake.
- Practicability – Size range was found to vary considerably between systems and between flow rates for the same system and could, in certain circumstances, be impracticable. As an example, systems with a flow rate of 300 m^3/hr was estimated to vary in footprint (1.6 – 5.5 m^2) and volume (3.6 – 10.5 m^3). In-tank treatment systems generally introduce a minimum voyage time (on the order of 2 days) which is not always practicable. Although there was no information submitted on system reliability and durability, information generally indicated a 10-yr life cycle and that the systems were fairly automated reducing skilled and extensive manual interventions
- Cost - There was not enough information provided in the submissions to come to any firm conclusions about likely costs.

- Biological Effectiveness - Because the G8 and G9 Guidelines were only finalized at this session, it was not possible to formulate reliable conclusions on from the data provided. It was however determined that most technologies appear to have met some elements of biological D-2 standard, but only two systems (which use Active Substances that have not yet been approved under the G9 Guidelines) have successfully met all elements during land-based testing.
- Socio-economic Effects – A reduction of economic costs and environmental damages is expected, but it was recognized that the cost of implementing treatment systems is absorbed by the ship owner and passed on to consumers in the form of higher transportation costs.

The MEPC, noting that the Review Group considered it reasonable to expect ballast water management technologies and type-approved systems will be available to meet the review criteria of the Convention, concluded that any action taken with respect to the 2009 retroactive date for fitting ships built in 2009 and later, with ballast capacities of less than 5000 m^3, would be held in abeyance until more complete data becomes available for a review during MEPC 55 in October 2006.

Transitory Deviations During BW Exchange

Bridge Visibility – Chapter V of SOLAS was amended by resolution MSC.201(81) which, when it enters into force on 1 July 2010, will allow deviation from the bridge visibility requirements during ballast water exchange which is carried out in accordance with an approved BW Management Plan. However, the master must first determine that it is safe to do so and ensures that a proper lookout is maintained at all times. The duration of the deviation is recorded in the ship's record of navigational activities.

Propeller Immersion - The MEPC recognized that propeller immersion and minimum draught and trim are regulated with respect to design requirements (e.g. MARPOL I/13 with respect to tanker segregated ballast tank capacity) and agreed that maintenance of adequate draught and trim are operational matters that are a function of ensuring that the ship can be safely maneuvered. The Committee therefore agreed that the Guidelines for the Ballast Water Exchange, currently under development, should include advice to the master regarding changes to draught and trim during the transitory periods when such conditions are onerous to meet.

Discharging Ballast Water - The MEPC considered an IACS proposal concerning exchanging ballast water while maintaining compliance with MARPOL I/18(6). This regulation requires the discharge of ballast water from oil tankers to be by gravity when the discharge outlet is located below the deepest ballast waterline, so as to avoid emulsifying any oil that may have existed in the tank and thereby facilitate identification of an oil sheen. For certain partially loaded conditions where ballast water exchange is carried out at drafts deeper than the deepest ballast condition draft, the overboard discharge may be located below the waterline and thus discharging ballast during the sequential exchange method by pumps would be prohibited. The MEPC agreed with IACS and amended the new MARPOL Annex I such that the discharge of ballast water or oil contaminated water from cargo tank areas of oil tankers can take place below the waterline if the ballast water is being exchanged under the provisions of the International Ballast Water Management Convention.

Ship Recycling (*ALL SHIPS*)

Mandatory Instrument

The 24th Assembly approved, in November 2005, a new Assembly resolution which recommends the development of a legally binding instrument. The instrument, which is likely to take on the form of a new Convention, would regulate ship recycling by covering the design, construction and operation of ships as that the ship can be prepared in a safe and environmentally acceptable manner for recycling. Ship recycling facilities are also to be regulated to ensure safe and environmentally sound recycling.

Enforcement provisions, including the preparation, updating and verification of inventories of potentially hazardous materials on board ships, the possible need for a survey and certification system, the development of a reporting system for ships destined for recycling, are likely to be included in the instrument. The inventory should address three principal categories of potentially hazardous materials: the ship's structure and equipment; operational generated waste; and stores. Concerns exist as to the liability associated with the accuracy of the inventory.

An IMO Correspondence Group is currently developing the text of a stand-alone instrument and is to report the results to MEPC 55 (October 2006) for consideration. A provisional timetable indicates that such an instrument should be ready for adoption at a 2008-2009 diplomatic conference

Emergency Towing (*ALL SHIPS*)

The 49th Session (Feb 2006) of the Design and Equipment (DE) Sub-Committee agreed in principle on draft amendments to SOLAS which would require ships shall be provided with a procedure for fore and aft emergency towing. Such a procedure shall be carried onboard for use in emergency situations and shall be based on existing arrangements and equipment available on board the ship. The procedure, which needs only to be verified as being onboard (not be approved) by the Administration, is to include emergency towing arrangement drawings, an inventory of equipment on board that can be used for emergency towing, means and methods of communication; and sample procedures to facilitate preparation for and conduct of emergency towing operations.

The regulation has been drafted to apply as follows (the dates are tentative estimates):

- all new ships constructed after 1 July 2008;
- cargo ships constructed before 1 July 2008 and above 20,000 dwt and all passenger ships, not later than 1 July 2008; and
- cargo ships constructed before 1 July 2008 and below 20,000 dwt, not later than 1 July 2010.

A correspondence group is set to further develop guidelines for owners/operators on the development of emergency towing procedures.

ISM Code Assessment (*ALL SHIPS*)

A report by a group of independent experts was presented and briefly discussed during MSC 81 in May 2006. Due to very limited availability of raw data, the group collected and relied on the expert judgment from various levels of the shipping industry and from questionnaires completed by shipboard personnel, shore-based personnel, shipping companies and Administrations) in conducting their assessment of the impact and effectiveness of implementation of the ISM Code. Although the replies to the questionnaire were not considered to be a representative sample of the entire industry, they were considered to represent the collective experience from those that support the Code.

Based on the date and opinions, the report concluded that although tangible positive benefits were evident when the ISM Code is fully implemented, compliance could be made more efficient by reducing administrative processes (such as use of information technology and integration of all documentation requirements) and by improving compliance monitoring.

The Joint MSC/MEPC Working Group on Human Element has been tasked to evaluate the report's recommendations which include the need to examine the cause and effect between ISM implementation and safety records, relationship between PSC and ISM compliance and possible revision to both the Code (to further improve the safety culture) and its associated Guidelines (to assist companies to implement the Code).

Explosions in Chemical and Product Tankers

In May 2006, MSC 81 considered a report on incidents of explosions on chemical and product tankers which was carried out by an Inter-Industry Working Group over the last two years. The Group set out to identify the root causes of a database of incidents that have occurred over the past 25 years the Group identified 35 occurrences that involved fires and explosions in cargo areas of chemical and product tankers. Any common factors amongst these incidents were identified with the objective of identifying corrective actions that would prevent any further similar incidents.

The analysis revealed that the accidents occurred:

- For ships < 20,000 deadweight;
- For a majority of the cases, during tank cleaning, venting or gas freeing;
- For a significant number of cases, when established procedures were not observed;
- In ships carrying MARPOL Annex II cargoes.

The most significant contribution to the incidents, which in most cases involved ignition within a tank, was a failure to follow operational procedures. Technical pr operational factors and manning levels were not considered to be a factor.

Because none of the incidents occurred when inert gas was applied, the Group recommended that formal safety assessment and cost/benefit analysis be carried out before decisions are made concerning the mandatory provision of inert gas systems to product tankers under 20,000 deadweight.

Having reviewed the Report, the Committee tasked its technical Sub-Committees to consider several recommendations including:

- The need to evaluate a number of safety, operational and environmental issues identified in the Report with respect to the provision of inert gas systems;

- The need to carry out a formal safety assessment and cost/benefit analysis before deciding on the provision of inert gas systems;

- Considering means to reduce the source of ignition, including introducing measures to mitigate in-tank pump failures and increasing the awareness of industry with respect to the consequences of static electricity which can develop from chemical spraying or steaming;

AFS CERTIFICATION *(ALL SHIPS)*

The Anti-fouling System (AFS) Convention will enter into force one year after 25 States representing 25% of the world's merchant shipping gross tonnage ratify the Convention. As of November 2005, twelve Governments have ratified the Convention. However, EU Regulation (EC) No. 782/2003 of 14 April 2003 requires:

- For EU flag ships, an AFS with organotin compounds acting as a biocide shall: (a) not be applied after 1 July 2003; and (b) be removed, or re-coated with a sealer coat to prevent the leaching of the undercoat, when the coating is changed or replaced after 1 July 2003.
- For any ship entering EU ports or offshore terminals, an AFS with organotin compounds acting as a biocide shall be removed, or be re-coated with a sealer coat to prevent the leaching of the undercoat by 1 January 2008.

The question before ship owners is what type of coating should be applied to a ship today: compliant or non-compliant (TBT) coatings. This depends on the expected duration of the coating and the AFS Entry Into Force (EIF) date as follows:

- If a ship had a TBT coating applied on/after 1 January 2003, then States are obligated to prohibit entry of such ships into their ports and waters on/after the EIF date; and
- if a ship had a TBT coating applied before 1 January 2003, then the coating must be removed or sealed by the earlier of either 1 January 2008 or the first time that the coating is renewed after the EIF date.

Until such time as the Convention enters into force, it has been recorded at IMO that States cannot apply the retroactive requirements of the Convention to foreign ships calling at a State's ports prior to its entry into force. However, States can control the manufacture and availability of coatings that contain substances controlled under Annex 1 of the Convention.