BULK CARRIERS:
CASUALTIES IMPROVING BUT MORE WORK NEEDED

MARITIME SECURITY CODE TAKES SHAPE

BALLAST WATER REQUIREMENTS FOR NEW SHIP DESIGNS
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Bulk carrier safety: recent rulemaking is having a demonstrably positive effect, says Intercargo

Dedicated to excellence
Risk-based rulemaking charts the way ahead

The range and spread of work undertaken in IMO’s committees and sub-committees is quite phenomenal, as the reports emanating “from the meetings” in each issue of IMO News bear witness. In May, the Maritime Safety Committee met for what was to prove a particularly long and onerous session, as a number of important long-term issues are now reaching crucial stages in their development.

All the work of this committee is central to the goals and aspirations of IMO, but I would like to highlight two items in particular that are of special importance. The Organization’s work on bulk carrier safety has been detailed and painstaking, but it is exploring a new methodology for rulemaking that could set the benchmark for similar exercises in the future.

T

he IMO’s Maritime Safety Committee (MSC) has continued detailed preparatory work for the diplomatic conference on maritime security that is to be held at IMO in December, to the point where confidence for a successful outcome to the conference is high. Nevertheless, in a reflection of the immense complexity of the issues being tackled by the Organization under this heading, the MSC has agreed to convening of a second intersessional working group on the subject, to be held from 9th to 13th September 2002.

Among a raft of items designed to address maritime security issues, the most far-reaching is a proposed International Ship and Port Facility Security Code (ISPS Code) which would be implemented through SOLAS chapter XI. The Code would have two parts, one mandatory and the other recommendatory.

In essence, the Code takes the approach that ensuring the security of ships and port facilities is basically a risk management activity and that to determine what security measures are appropriate, an assessment of the risks must be made in each particular case.

The purpose of the Code is to provide a standardized, consistent framework for evaluating risk, enabling governments to offset changes in threat with changes in vulnerability for ships and port facilities.

To begin the process, each Contracting Government would conduct port facility security assessments. Security assessments would have three essential components. First, they must identify and evaluate important assets and infrastructures that are critical to the port facility as well as those areas or structures that, if damaged, could cause significant loss of life or damage to the port facility’s economy or environment. Then, the assessment must identify the actual threats to those critical assets and infrastructure in order to prioritize security measures. Finally, the assessment must address vulnerability of the port facility by identifying its weaknesses in physical security, structural integrity, protection systems, procedural policies, communications systems, transportation infrastructure, utilities and other areas within a port facility that may be a likely target. Once this assessment has been completed, Contracting Government can accurately identify the level of appropriate security measures for the ship and for the port facility.

The draft preamble to the Code states that, as threat increases, the only logical counteraction is to reduce vulnerability. The Code provides several ways to reduce vulnerabilities. Ships would be subject to a system of survey, verification, certification, and control to ensure that their security measures are implemented. This system would be based on a considerably expanded control system as stipulated in the Convention for Safety of Life at Sea (SOLAS).

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Ballast water management is to become a major consideration in the design of new vessels following the approval by IMO of a Circular containing a raft of design suggestions for ballast water and sediment management options in new ships. The Circular states that, as a fundamental principle, ballast water management and the ways in which it can be achieved should be considered as a basic component of a ship’s design. Moreover, ballast tank design should facilitate all aspects of ballast water management.

It goes on to stipulate that the installation of recording equipment should be considered for all ballast water operations and treatment actions and that it should be possible for these records to be readily available to appropriate authorities that may request copies. A Ballast Water Management Plan should be created for every ship. This plan should give guidance on safe and effective operation of the various ballast water management and treatment options that are considered appropriate for the ship.

The 47th session of the International Maritime Organization’s Marine Environment Protection Committee (MEPC), which met from 4 to 8 March at IMO Headquarters in London, approved the Circular among a series of measures aimed at reducing the harmful effects of marine organisms transported in ballast water and the risks involved in some ballast water management techniques. A draft international convention for the control and management of ships’ ballast water and sediments, as well as associated guidelines for its implementation, are being developed for consideration and adoption by a diplomatic conference scheduled for 2003. A Working Group at MEPC 47 further developed a draft text of the proposed convention. In particular, the Group developed a section on Special Requirements in Certain Areas and developed text for the criteria for establishing a ballast water discharge control area, and requirements for ships discharging ballast water within such areas. However, the text is very much provisional until decisions have been taken regarding the choice of one or more ballast water treatment standards. A full report of MEPC 47 begins on page 16 of this issue of IMO News.
IMOs Secretary-General William O’Neill has highlighted the need for widespread and concerted efforts to improve bulk carrier safety. Speaking at the opening of the 45th session of the IMO Sub-Committee on Ship Design and Equipment (DE) in March, Mr O’Neill said, “Bulk Carrier Safety has been a priority on our agenda for over ten years now and, while certain improvements have been introduced, the work has not been finalized, as we are regrettably reminded from time to time by the continuing loss of bulkers.” He added, “I would therefore encourage, once again, all parties concerned - Governments, Industry and technical organizations - to work in unison, not in an isolated manner, to bring the issue to a positive conclusion as soon as possible.”

At the end of the DE session, an informal meeting convened by Mr. O’Neill to consider bulk carrier safety. Mr. O’Neill observed that the approach currently being taken within IMO is the right one at this point but that more work needs to be done to prevent continuing losses. The meeting, at IMO Headquarters on Friday, 22 March 2002, was attended by Mr. F. Tsoo and Mr. R. Holt, Chairman and Secretary-General of INTERCARGO, respectively; M. Seara, I. Ponnamperuma, R. Bradley and J. de Rose (Chairman of the IACS Council, Permanent Secretary and Permanent Representative of IACS to IMO, respectively); and members of the IMO Secretariat.

Mr. O’Neill observed that bulk carrier safety had been a priority on IMOs agenda for over ten years and acknowledged that, while considerable improvements had been introduced, the work had not been finalized. Upon his proposal, the meeting decided to exchange views on the current state of affairs, discuss measures currently under development and consider possible additional measures that should be taken to stem the continuing loss of bulk carriers and the seafarers who work on them. The meeting reviewed a tabulated, chronological listing of the mandatory and recommendations that have been taken so far, in particular since 1995, to enhance the safety of bulk carriers. Although the wide array of measures developed by both IMO and IACS over the years, and confident that those currently before the MSC would serve their purpose well, they were unanimous that more work had to be done to improve the situation.

The meeting considered that the approach to enhancing safety of bulk carriers decided by and underway at the MSC (distinguishing, in general terms, between measures applicable to existing bulk carriers and others to apply to future bulkers; and taking into account the results of the relevant formal safety assessment study) was the right path to follow at this time. To bring this work to a successful conclusion, the meeting urged all parties involved, Governments, Industry and technical organizations concerned, to act together under the auspices of IMO at the next and subsequent sessions of the MSC.

The meeting was briefed by representatives of IACS about measures the Association had recently announced and, recognizing IACS’s contribution to the overall work to improve the safety of bulk carriers, invited them to continue to keep IMO informed of such initiatives so that action could be taken in a harmonized manner to the benefit of safety and the environment. It was generally regarded as a state of feeling tired, weary, or sleepy that results from prolonged mental or physical work, extended periods of exposure to stress, exposure to harsh environments, or loss of sleep. The effects of fatigue are particularly dangerous in the shipping industry, say the guidelines. The technical and specialized nature of this industry requires constant alertness and intense concentration from its workers. Fatigue is also dangerous because it affects everyone regardless of skill, knowledge and training. The guidelines assert that, to deal effectively with fatigue in the marine environment requires a holistic approach.

There is no one-size-fits-all approach to addressing fatigue, but there are certain principles (e.g. lifestyle habits, rest, medication, workload) that must be addressed in order to gain the knowledge and the understanding to manage this human element issue. The IMO Guidelines on Fatigue include nine modules and an Appendix:

- Module 1 Fatigue
- Module 2 Fatigue and the Rating
- Module 3 Fatigue and the Ship’s Officer
- Module 4 Fatigue and the Master
- Module 5 Fatigue and the Training Institute and Management Personnel in charge of Training
- Module 6 Fatigue and the Owner/Operator/Manager
- Module 7 Shipyard Fatigue and the Naval Architect
- Module 8 Fatigue and the Maritime Pilot
- Module 9 Fatigue and the Tugboat Personnel

The IMO Guidelines on Fatigue have been issued as MSC/Circ.1214 and are now available as an IMO Publication.

Guidelines on Fatigue

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Available from IMO Publications

O’Neill urges unified action on bulk carrier safety

Bulk carrier rulemaking is working, industry body says

Recent efforts to tighten the regulatory regime defining bulk carrier safety are paying dividends, according to a report prepared by Intercargo.

According to the report, which analyses bulk carrier casualties over a ten-year period from 1992 to 2001, the number of ships, lives and the amount of tonnage being lost are all decreasing. “All the rulemaking that has gone on in recent years seems to be having a demonstrably positive effect,” the report concludes.

Nevertheless it highlights the fact that bulk carriers still have a high risk profile and the loss of life associated with bulk-carrying sinkings remains high. Over the ten-year period in question, 638 crewmembers lost their lives in bulk carrier sinkings and, in 2001, bulk carrier losses accounted for 64 deaths.

However, the report points out that estimates say the application of the Enhanced Programme of Inspections during Surveys (EPS) and the new SOLAS chapter XII provisions have reduced the risk of fatality on new and existing ships by 50 per cent and 25 per cent respectively. Furthermore, the ISM Code, says the report, has arguably the most potential for raising the standards on bulk carriers and of the crews that sail them.

The average age of bulk carriers lost during the period under scrutiny has been steadily rising and now stands at 20.5 years. Structural failure, says the report, has remained a significant cause of annual loss at around 70-73 per cent.

Intercargo - the international Association of Dry Cargo Shipowners - is a non-governmental organisation with consultative status at IMO. It represents the interests of owners, operators and managers of dry-cargo shipping. The report - Bulk Carrier Casualty Report 1 - was presented to the 75th meeting of the Maritime Safety Committee.

This widely recognised and practical intensive course is now in its 13th successive year. The course covers in detail the major IMO conventions and codes along with other relevant international regulations and conventions, inspection systems and documentation. The Course is taught by an experienced team of academics and practitioners from the UK, USA and Europe.

Venue: Senate House, University of London
Fees: Sterling £2,500

The course is conducted by the Centre for Maritime Co-operation of the International Chamber of Commerce.

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IMO - towards sustainable development at Johannesburg 2002

When world leaders meet at the Johannesburg Summit 2002 - the United Nations World Summit on Sustainable Development (WSSD) - IMO will be there to report on its role in the integration of environmental, development and policy making as part of its work in achieving maritime safety and the prevention of marine pollution by ships.

At the 1992 United Nations Conference on Environment and Development (UNCED), in Rio de Janeiro, Brazil, also known as the 1992 Earth Summit, IMO was able to report significant progress on many issues relating to the environment and sustainable development.

There remained much to be done, however, and Agenda 21, a global plan of action for sustainable development adopted by the Rio Conference, gave fresh impetus to IMO's activities in the maritime sector, especially in the area of prevention and control of marine pollution from ships.

Some of the major achievements of IMO since 1992 in the context of Agenda 21 are outlined in this article.

Prevention of air pollution from ships

In 1997, IMO adopted a Protocol to amend MARPOL 73/78, adding a new Annex VI to the Convention entitled ‘Regulations for the Prevention of Air Pollution from Ships’. The adoption of the Protocol is being followed up by further discussion on climate change gases, including carbon dioxide (CO2), with the aim of developing technical measures to reduce their emissions.

Discussions on air pollution from ships had actually begun at IMO in the late 1980s, and the adoption of the Protocol marked the completion of several years of preparatory work. When it comes into force, MARPOL Annex VI will set limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibit deliberate emissions of ozone depleting substances. It has been ratified by five States as at 31 May 2002.

IMO’s Marine Environment Protection Committee (MEPC) has established an action programme to facilitate its entry into force including development of relevant implementation guidelines. An IMO climate gas study has been completed and the Organisation decided in May 2000 to prohibit the use of perfluorocarbons (PFCs) onboard ships. PFCs have extremely long atmospheric lifetimes (in excess of 5000 years) and possess high global warming potential.

Table 1: Special areas under MARPOL 73/78

<table>
<thead>
<tr>
<th>Annex I (oily)</th>
<th>Annex II (Chemicals carried in Bulk)</th>
<th>Annex V (Garbage)</th>
<th>Annex VI (Air pollution from ships)**</th>
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<tbody>
<tr>
<td>Mediterranean Sea</td>
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<td>Black Sea</td>
<td>North West European Waters</td>
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<tr>
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<tr>
<td>Red Sea*</td>
<td>Red Sea*</td>
<td>Gulf Areas*</td>
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<tr>
<td>Gulf of Aqaba</td>
<td>Gulf Areas*</td>
<td>North Sea</td>
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<tr>
<td>Antilles Area</td>
<td>Gulf Areas*</td>
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<tr>
<td>North West European Waters</td>
<td></td>
<td>Arctic Area</td>
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</table>

* The ‘special area’ requirements for these areas have not taken effect because of lack of adequate reception facilities, and lack of ratification of the Convention by the bordering States. It is anticipated that the Gulf of Guinea and the Gulf of Aden will have the “special area” designation.

** These areas become Siox Emission Control Areas after entry into force of the Air Pollution Annex.

Harmful aquatic organisms in ships’ ballast water

Ships’ ballast water may contain harmful aquatic organisms which may settle as ‘harmful alien species’ in new regions of the world, causing tremendous damage, either economically or in regard to the original biodiversity. IMO has adopted guidelines and conducted technical co-operation projects, to minimize the adverse effects of the introduction of harmful aquatic organisms through ships’ ballast water.

Since 1994, the MEPC has been developing mandatory regulations for the control and management of ships’ ballast water and sediments. A Diplomatic Conference to adopt an international instrument is tentatively planned for late 2003.

Protection of special areas and particularly sensitive sea areas

The concept of the ‘special area’ was introduced by IMO in 1973 under MARPOL Annexes I, II and IV in order to provide additional mandatory measures for preventing marine pollution for ships in those areas. For example, under MARPOL Annex I, any discharge into the sea of oily mixture from ships shall be prohibited while in a “special area” unless a discharge agreement has been entered into between the relevant coastal States.

The special areas established by IMO under MARPOL 73/78 are listed in table 1.

The International Conference on Tanker Safety and Pollution Prevention (TSPP), convened by IMO in 1978, introduced the concept of “particularly sensitive sea areas” (PSSAs). PSSAs are areas deemed in special need of protection against marine pollution from shipping and dumping and account for the particular sensitivity of the areas in respect of their renewable resources.

There are currently four designated PSSAs: The Great Barrier Reef, Australia, was the first area to be designated a PSSA in 1990. Sabana-Camagüey Archipelago in Cuba was designated a PSSA in September 1997. A pelagis Island, Colombia and Around Florida Keys, United States, were designated in 2002.

New guidelines for the identification and designation of ‘special areas’ and particularly sensitive sea areas were adopted by IMO’s 22nd Assembly in November 2001.

Ratification of MARPOL 73/78 in the Gulf Area

The countries in the Gulf Area, assisted by IMO, have established a politically binding protocol aimed at ratification of MARPOL 73/78 and providing adequate reception facilities in order for the area to be declared a functional “special area”.

Oil and chemical pollution preparedness and response

Agenda 21 invited States to consider ratifying the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC Convention), which was adopted by IMO in 1990 in response to the necessity of preventing and minimizing enormous environmental consequences caused by major tanker accidents. It also invited IMO to consider possible extension of the OPRC Convention to cover chemical spill response.

As a result, the 1990 OPRC Convention entered into force in 1995 and a protocol to extend the Convention to cover hazardous and noxious substances (HNS) - chemicals - was adopted in 2002.

Compensation for pollution damage caused by hazardous and noxious substances (HNS)

The International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (the HNS Convention) was adopted in 1996 by IMO’s Legal Committee has been working to accelerate its entry into force. The Convention will make it possible for up to 250 million SDR (about US$330 million) to be paid out in compensation to victims of accidents involving HNS. The HNS Convention has been ratified by two States as at 31 May 2002.

Safe carriage of irradiated nuclear fuel and by sea


The INF Code stipulates that all ships carrying INF materials, regardless of size, should comply with relevant requirements concerning damage stability, fire protection, temperature control of cargo spaces, structural considerations, cargo securing arrangements, electric supplies, radiological protection equipment and management, training and shipboard emergency plan. This is the first international code prescribing such requirements.

Port State control

While the primary responsibility for implementing the regulations provided for in IMO conventions rests with the flag State, IMO also acknowledges the role of Port State control (PSC) in promoting more effective implementation of all applicable standards for maritime safety and pollution prevention. Experience has shown that Port State control can be extremely effective, especially if organized on a regional basis. Eight regional Memoranda of Understanding (MOUs) on Port State control have been established, which have become effective tools to promote the implementation of IMO’s treaty instruments on maritime safety and prevention of marine pollution.

The MOUs now cover most of the world’s oceans: Europe and the north Atlantic (Paris MOU, established 1982); Latin America (Acuerdo de Vila del Mar, 1992); Asia and the Pacific (Tokyo MOU, 1995); Caribbean (Caribbean MOU, 1996); the Mediterranean (Mediterranean MOU, 1997); the Indian Ocean (Indian Ocean MOU, 1998); West and Central Africa (Abuja MOU, 1999); and the Black Sea region (Black Sea MOU, 2000).

Navigational safety and management of international straits

Agenda 21 requested IMO to promote navigational safety by adequate charting of coasts and ship routing as appropriate, and to address the matter of heavily used international straits with a view to ensuring compliance with generally accepted international regulations.
The first ships’ routing system (traffic separation scheme - TSS) was established in the Dover Strait, United Kingdom, in 1987 and IMO has made observable of such schemes mandatory in 1991. IMO’s responsibility for ships’ routing is enshrined in SOLAS Chapter V, which recognises the Organization as the only international body for establishing such systems. Several schemes, including TSS, mandatory reporting systems, etc., have been adopted around the world over the years and since UNCED 1992, more measures have been taken with a view to enhancing maritime safety and preventing marine pollution.

These include the adoption of new and amended traffic separation schemes, areas to be avoided, rules for navigating through the Straits of Malacca and Singapore and a partial system of archipelagic sea lanes in Indonesian archipelagic waters. A number of mandatory ship reporting systems have also been adopted since 1992, including in the Straits of Malacca and Singapore, the Torres Strait and the Inner Route of the Great Barrier Reef and the Systems for protecting North Atlantic right whales in sea areas off the north-eastern and south-eastern coasts of the United States.

Facilities in ports for the reception of wastes from ships
Agenda 21 invited States and IMO to assess the need for additional measures to address disposal and management of the marine environment by establishing port reception facilities for the collection of oil and chemical residues and garbage from ships, especially in MARPOL 73/78 “special areas”.

MARPOL 73/78 sets out requirements for port reception facilities and all Parties to the Convention are obliged to provide reception facilities for ships calling at their ports. The requirement is especially significant for “special areas” because of the vulnerability of these areas to pollution. The responsibility for providing reception facilities is a matter for individual Governments, and progress in this regard has not been satisfactory.

To help the situation, IMO published the Comprehensive Manual on Port Reception Facilities in 1991, and Guidelines to Ensure the Adequacy of Reception Facilities in 2000. IMO has also organized an extensive programme of national and regional workshops in Asia, India and other countries.

Carriage of chemicals in bulk and in packaged form (Annex III)
Agenda 21, Chapter 19 on Environmentally sound management of toxic chemicals, including prevention of illegal international traffic in toxic and dangerous products has influenced IMO’s work in its revision of Annexes II and III of MARPOL 73/78 dealing with the transport of chemicals in bulk and in packaged form, respectively. In particular, IMO has participated with other international bodies in the co-ordinated processes for harmonization of classification and labelling of chemicals. The revised Annex III (intended to be finalized in 2003) will take into account the Global Harmonization System (GHS).

Shipping
Ships sold for recycling (scraping) may contain environmentally hazardous substances such as asbestos, heavy metals, hydrocarbons, and ozone depleting substances and others. Concerns have been raised about the working and environmental conditions at many of the world’s ship-scraping locations.

Annex I of the Convention states that by an effective date of 1 January 2003, all ships shall not apply or re-apply organotins compounds which act as biocides in antifouling systems. By 1 January 2008 (effective date), ships either: (a) shall not bear such components on their hulls or external parts of surfaces; or (b) shall bear a coating that forms a barrier to such compounds leaching from the underlying non-compliant antifouling systems. 

Stricter pollution prevention from cargo ships (including bulk carriers)
In 1997, IMO adopted a new SOLAS chapter XI-3 on Additional safety measures for bulk carriers, as well as amendments to the enhanced programme of inspections for tankers and bulk carriers (AM-74(11A) as amended). These measures are intended to reduce accidents and pollution.

In April 2001, IMO adopted a revised global timetable for accelerating the phasing-out of single-hull oil tankers, intended to have a major impact in minimizing pollution by oil tankers. Single-hull tankers will be scrapped several years earlier than previously required and the phase-out years for single-hull oil tankers terminate at 2015. Tankers complying with relevant requirements of the revised regulation 13G of MARPOL Annex I may be allowed to continue operation until their anniversary date in 2017 or they reach 25 years of age, whichever is the earlier date.

IMO’s MEPC worked on the issue through the 1990s, eventually developing mandatory regulations to control harmful anti-fouling systems used on ships. In October 2001, IMO adopted the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, which, when it enters into force, prohibit the use of harmful organics in anti-fouling paints used on ships and will establish a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems.

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The issue is not environment versus development, or ecology versus economy. It is how to integrate the two.

From Rio to Rio+10
The Johannesburg Summit (2002) and the World Summit on Sustainable Development (WSSD) - is the 10-year follow-up to the 1992 UN Conference on Environment and Development (UNCED), held in Rio de Janeiro, which took place in September 1992 (the “Earth Summit”), when the United Nations adopted Agenda 21, a global plan of action on sustainable development.

The Johannesburg Summit also gave rise to “Rio+ 10” Summit 2002- “Your Earth Summit” or “Beyond”. It takes place from 26 August to 4 September, 2002. It offers an opportunity for world leaders to adopt concrete steps and identify quantifiable targets for better implementing Agenda 21.

Agenda 21 and The Rio Convention on Environment and Development, adopted in 1992 by over 170 Governments of the United Nations System, represents a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System, and other groups in every area in which humans impact on the environment. Agenda 21 includes 40 chapters in five major groups of priorities:

Preamble (Chapter 1).
Human Settlements, Economic Development, the Environment and the Old Economy. (Chapter 2).
Institutional frameworks (Chapter 3).
Management of resources for sustainable development (Chapter 4).
Section 3: Strengthening the participation of local and national communities. (Chapter 23-30).
Section 4: Economic instruments (Chapter 31-34).
Section 5: Implementation (Chapters 35-40).

The Convention on Sustainable Development in the Maritime Area, adopted in December 1992 to ensure that follow-up of UNCED, to monitor and report on implementation of the agreements at the local, national and regional levels.

A Survey review of Earth Summit and the Rio Convention (1992) was published in 1997 by the United Nations Environment Programme for the special session and the 50th anniversary of the United Nations, which elected in December 2000 that the General Assembly would establish a central organizing body for the follow-up of the Rio Conference and its Sustainable Development.
Regulatory landmark date as new measures enter force

July 1st 2002 was a landmark day for the shipping industry as several important new IMO measures to improve the safety of vessel operations came into force. At most significantly, the date marked the end of the second phase of ISM Code implementation as the Code became applicable for all ships above 500 gross tonnage trading internationally. It also saw the entry into force of a number of amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS), including those that make the carriage of voyage data recorders (VDRs) and automatic identification systems (AISs) mandatory for certain types of ship.

On 1 July 1998, the ISM Code became mandatory under SOLAS, and from that date it applied to passenger ships, including passenger high-speed craft, oil tankers, chemical tankers, gas carriers, bulk carriers and cargo high-speed craft of 500 gross tonnage and above. As of 1 July 2002, other cargo ships - including general cargo ships and container ships - and mobile offshore drilling units of 500 gross tonnage and above must comply.

The mandatory ISM Code provides an international standard for the safe management and operation of ships and for pollution prevention. It places direct responsibility on shoreside management to ensure that its ships operate to the prescribed level of safety. The Code establishes safety management objectives and requires a safety management system (SMS) to be established by “the Company”, which is defined as the shipowner or any person, such as the manager or bareboat charterer, who has assumed responsibility for operating the ship. The Company is then required to establish and implement a policy for achieving these objectives. This includes providing the necessary resources and shore-based support. The procedures required by the Code should be documented and complied with in a Safety Management Manual, a copy of which should be kept on board. Regular checks and audits should be held by the company to ensure that the SMS is being complied with and the system itself should be reviewed periodically to evaluate its efficiency.

The full and successful implementation of the ISM Code should ensure that a company has safety and environmental pollution risks under control. Among other things, a proper safety management system as required by the ISM Code should ensure that all applicable international standards are complied with, help prevent accidents occurring, ensure procedures are in place for dealing with any shipboard emergency, ensure there are adequate communications between ship and shoreside personnel, ensure that all individuals know their role and responsibility and are adequately trained and have the appropriate resources to do their job, and that all activities and operations are planned, controlled and verified.

The new regulations requiring certain ships to carry VDRs and AISs are included in the revised SOLAS chapter V (Safety of Navigation), which is among a raft of amendments to the Convention that entered into force at the beginning of July. Like the black boxes carried on aircraft, VDRs enable accident investigators to review procedures and instructions in the moments before an incident and help to identify the cause of any accident. Under regulation 20 of the new SOLAS chapter V, the following ships are required to carry VDRs: passenger ships constructed on or after 1 July 2002; ro-ro passenger ships constructed before 1 July 2002 not later than 1 January 2004; and ships, other than passenger ships, of 3,000 gross tonnage and upwards engaged on international voyages, cargo ships of 500 gross tonnage and upwards not engaged on international voyages and passenger ships irrespective of size built on or after 1 July 2002. It also applies to ships engaged on international voyages constructed before 1 July 2002, according to an agreed timetable.

Regulation 19 also allows an electronic chart display and information system (ECDIS) to be accepted as meeting the chart carriage requirements of the regulation. The regulation requires all ships, irrespective of size, to carry nautical charts and nautical publications to plan and display the ship’s route for the intended voyage and to plot and monitor positions throughout the voyage. But the ship must also carry back-up arrangements if electronic charts are used either fully or partially. In all, the revised SOLAS chapter V on Safety of Navigation has 35 regulations, compared to 25 in the present chapter V.

In addition to the new chapter V, a raft of amendments to SOLAS were adopted in December 2000, all entering into force on 1 July 2002. A new High-Speed Craft Code, mandatory under SOLAS chapter X, 2000 is an updated version of the mandatory High-Speed Craft Code adopted in 1994. It applies to all HSC built on or after the date of entry into force. A revised SOLAS chapter II-2 (Construction, Fire protection, fire detection and fire extinction) and a new International Code for Fire Safety Systems (FSS Code) also entered into force. The revised chapter II-2 has a new part E that deals exclusively with human element matters such as training, drills and maintenance issues and a new part F that sets out a methodology for approving alternative (or novel) designs and arrangements. A new regulation 3.5 in SOLAS chapter II-1 (Construction, Structure, subdivision and stability, machinery and electrical installations) prohibits the new installation of materials which contain asbestos on all ships (except for vanes used in rotary vane compressors and rotary vane vacuum pumps, watertight joints and linings used for the circulation of fluids when, at high temperature or pressure there is a risk of fire, corrosion or toxicity, and supple and flexible thermal insulation assemblies used for temperatures above 1000°C).
IMO environmental meeting approves new measures on ballast water management for ships

Ballast water management is to become a major consideration in the design of new vessels following the approval by MEPC of a Circular containing a raft of design suggestions for ballast water and sediment management options in new ships.

As a fundamental principle, the Circular states that ballast water management and the processes chosen to achieve it should be considered as a basic component of a ship’s design and that ballast tank design should facilitate all aspects of ballast water management.

Installation of recording equipment should be considered for all ballast water operations and treatment actions and it should be possible for these records to be readily available to appropriate authorities that may request copies.

The Circular goes on to state that ballast water system designs should take special account of the increased need for content sampling, with an aim to enhancing the quality and ease of sampling of ballast water and sediments, without the need to enter potentially dangerous spaces or to partially fill ballast tanks.

Where ballast water exchange at sea is the chosen method, the overall design, strength and stability of the ship should be sufficient to permit its execution on all ballast voyages and in all except severe weather conditions. For the guidance of the master, the maximum sea state and swell conditions identified by the builder, if any, in which ballast water exchange can safely be carried out should be recorded in a Ballast Water Management Plan, which should be created for every ship.

The plan should give guidance on safe and effective operation of the various ballast water management and treatment options that are considered appropriate for the ship. The design of the ship should include consideration of the consequences of ballast water exchange at sea including: stability, hull girder strength, shear forces, resonance, sloshing, stemming, propeller immersion, limitations brought about by insufficient strength in various parts of the ship when the tanks are sequentially emptied and appropriate strengthening incorporated to allow this operation to be conducted safely.

A draft international convention for the control and management of ships’ ballast water and sediments, as well as associated guidelines for its implementation is being developed for consideration and adoption by a diplomatic conference scheduled for 2003. However, until this convention is adopted and enters into force, IMO member Governments should apply the Guidelines for the control and management of ships’ ballast water to minimize the transfer of harmful aquatic organisms and pathogens, adopted by resolution A.888(20) in 1997 and also the guidance contained in the Circular mentioned above. Governments are invited to bring the guidance to the attention of ship-builders, ship-owners, shipmasters and other parties concerned.

A Working Group at MEPC 47 further developed a draft text of the proposed convention. In particular, the Group developed a section on Special Requirements in Certain Areas and developed text for the criteria for establishing a ballast water discharge control area, and requirements for ships discharging ballast water within such areas. However, the text is very provisional until decisions have been taken regarding the choice of one or more ballast water treatment standards. If these special requirements - so-called “Tier 2” requirements - are agreed, these would come on top of the general requirements, “Tier 1” - applicable to all ships carrying ballast water.

A key part of the convention will be to agree on standards, which should guide the development of ballast water treatment techniques. These techniques should be applied on board a vessel and should be: (1) safe for the ship and crew; (2) environmentally acceptable; (3) practical; (4) cost effective; and (5) biologically effective.

The Committee concurred with the Working Group that the ballast water exchange standard would be one of the tools within the legal instrument, along with one or more treatment standards. There will be provision for the review of both ballast water exchange and treatment standards based upon submissions to the Organization in view of developing technology.

The Working Group agreed that any 100% removal or inactivation standard can be guaranteed to be effective in eliminating the transfer of unwanted organisms and pathogens, but that standards based on a lesser percentage have an unquantifiable benefit. A large proportion of the Group was of the opinion that a 95% reduction would achieve a worthwhile reduction of risk and would be a practicable and achievable solution in the medium term. Others were concerned that this was not a scientifically supportable conclusion.

The Committee agreed to re-establish the Correspondence Group on ballast water management to carry out a detailed comparative assessment of each of the proposed standards, taking into account the various technologies that might be used to achieve these standards and all other relevant factors and considerations, with particular attention to practicality, life cycle costs, the overall support for these standards, and the effect of the standard on society. The Committee agreed to the re-establishment of a Correspondence Group on ballast water treatment techniques.

IMO’s role in the recycling of ships, the terminology used to refer to ship scrapping, was first raised at the 44th MEPC session in March 2000 following which a correspondence group was established to research this issue and provide a range of information about current ship recycling practices and suggestions on the role of IMO.

Greenhouse gas emissions

An MEPC Working Group considered issues relating to greenhouse gas emissions during the session. Although their contribution is relatively small, ships nevertheless do emit greenhouse gases and, because they operate worldwide, IMO has been specifically requested to deal with emissions from ships under the Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC).

Following discussion in the Working Group and in plenary, the MEPC agreed to establish a Correspondence Group to collate information received and prepare an IMO Strategy Policy on International shipping carbon dioxide emissions from ships. This would include development of a draft Assembly resolution on the matter.

The Working Group noted that one approach included the idea of an environmental indexing system for ships, to assess an individual ship’s environmental performance in relation to greenhouse gas emissions. The Committee agreed that the idea provided a basis for future work.

Fuel oil sampling - guidelines adopted

The MEPC adopted “Guidelines for the Sampling of Fuel Oil for Determination of Compliance with Annex VI of MARPOL 73/78”.

The guidelines are an important element in the MEPC’s work in progressing towards implementation of Annex VI on Prevention of Air Pollution from Ships of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78). The regulations in this annex, when they come into
force, will set limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibit deliberate emissions of ozone depleting substances. The Annex was adopted in September 1997 and will enter into force 12 months after being ratified by 10 States whose combined fleets of merchant ships constitute at least 50% of the world fleet. A Resolution (adopted by the conference that adopted Annex VI) invites IMO's Marine Environment Protection Committee (MEPC) to identify any impediments to entry into force of the Protocol, if the conditions for entry into force have not been met by 31 December 2002.

Tanker Condition Assessment Scheme - Model Survey Plan

MEPC 47 approved a Model Survey Plan for tankers, intended to help in carrying out the Condition Assessment Scheme (CAS) for certain tankers. The MEPC Circular containing the Model Survey Plan also includes:
- A Guidance Note for the Safe Conduct of CAS surveys which has been developed for the safe conduct of CAS Surveys, including protection of individuals involved; and
- CAS Schedule giving a flow chart diagram and time scales for the CAS.

The CAS was adopted in April 2001, during the adoption of a revised regulation 13G of the MARPOL Convention Annex I on the prevention of pollution by oil from ships. The revised regulation is expected to enter into force in September 2002.

The Committee also agreed draft amendments to the CAS to make mandatory the Model Survey Plan and to adopt Mandatory Requirements for the Safe Conduct of CAS Surveys (based on the guidance referred to above). The amendments are intended to be adopted once the revised regulation 13G enters into force.

The CAS will have to be applied to certain Category 1 vessels continued to trade after 2005 and certain Category 2 vessels after 2010. Although the CAS does not specify structural standards in excess of the provisions of other IMO conventions, codes and recommendations, its requirements stipulate more stringent and transparent verification of the reported structural condition of the ship and that documentary and survey procedures have been properly carried out and completed. The requirements of the CAS include enhanced and transparent verification of the reported structural condition of the ship and verification that the documentary and survey procedures have been properly carried out and completed. The Scheme requires that compliance with the CAS is assessed during the Enhanced Survey Programme of Inspections concurrent with intermediate or renewal surveys currently required by regulation A.744(18), as amended.

The revised regulation 13G sets a new accelerated phase-out schedule for single hull oil tankers. It identifies three categories of tankers, as follows:
- “Category 1 oil tanker” means oil tankers of 20,000 tons deadweight and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 tons deadweight and above carrying other oils, which do not comply with the requirements for protectively located segregated ballast tanks (commonly known as Pre-MARPOL tankers). “Category 2 oil tanker” means oil tankers of 20,000 tons deadweight and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 tons deadweight and above carrying other oils, which do comply with the protectively located segregated ballast tank requirements (MARPOL tankers), while “Category 3 oil tanker” means an oil tanker of 5,000 tons deadweight and above but less than the tonnage specified for Category 1 and 2 tankers.

Harmful effects of the use of anti-fouling paints for ships

The MEPC considered follow-up action to the adoption in October 2003 of the International Convention on the control of harmful anti-fouling systems on ships. Under the terms of the new Convention, Parties to the Convention are required to prohibit and/or restrict the use of harmful anti-fouling systems on ships flying their flag, while ships not entitled to fly their flag but which operate under their authority and all ships that enter a port, shipyard or offshore terminal of a Party.

The MEPC proposed the Flag State Implementation (FSI) Sub-Committee to develop the guidelines as a matter of urgency, as required by the Convention:
1. Guidelines for brief sampling of ships anti-fouling systems;
2. Guidelines for inspection of ships anti-fouling systems; and

The MEPC requested the FSI Sub-Committee to give priority to the development of the Guidelines on Surveys of Anti-Fouling Systems which should be finalized by the end of 2002.

New Particularly Sensitive Sea Areas adopted

The MEPC adopted resolutions granting Particularly Sensitive Sea Area (PSSA) status to Malpelo Island (proposed by Colombia) and the area around the Florida Keys (proposed by the United States). They join the other two PSSAs already adopted by IMO are the Great Barrier Reef, Australia and the Sabana Camagüey Archipelago in Cuba.

When an area is approved as a particularly sensitive sea area, specific measures can be used to control the maritime activities in that area, such as routing measures, strict application of MARPOL discharge and equipment requirements for ships, such as oil tankers; and installation of Vessel Traffic Services (VTS).

Manual on Oil Pollution

The MEPC's OPIC (Oil Pollution Preparedness and Response) Drafting Group finalised the revised draft text of Section IV of the Manual on Oil Pollution and the MEPC agreed to consider the text with a view to approval and publication at its next session.

Inadequacy of reception facilities

The MEPC discussed the issue of inadequate reception facilities for waste (such as oily waste or garbage) in view of the small number of official reports on alleged lack of adequate reception facilities received each year, despite the evidence from industry organizations, which receive reports from their members, that the provision of adequate facilities in many ports is apparently lacking. The MEPC agreed to further consider implementation of the reporting mechanism of inadequate reception facilities at MEPC 48 in October 2002.

The MEPC also strongly encouraged the Member States, particularly those Parties to MARPOL 73/78 as port States, to fulfill their treaty obligations on providing adequate reception facilities.
The Sub-Committee agreed in principle to the first draft of amendments to SOLAS chapter XI (Additional Safety M-essures for Bulk Carriers) to require the fitting of high level alarms and level monitoring systems on all bulk carriers, in order to detect abnormal water ingress.

The proposed new regulation 12 on hold, tailgate and dry space water ingress alarms will be submitted to the Maritime Safety Committee (MSC) at its 75th session in December 2002 as a first draft of a new regulation for the Committee to decide whether such alarms should be fitted and, if so, the adequacy of the proposed regulation.

The Sub-Committee also agreed in principle to a proposed new regulation 13 on availability of pumping systems which would require the means for draining and pumping dry space bilges and tanks located for ward of a collision bulkhead to be capable of being brought into operation from a readily accessible enclosed space. The draft regulation will also be submitted to MSC 76 for discussion.

There was general support for a recommendation that shipowners should maintain on board and adhere to actual construction drawings and other plans showing subsequent structural alterations, though it was noted that it might be difficult to revise, update and maintain drawings kept on board ships in good order. The Sub-Committee agreed the issue should be further considered under the agenda item on Amendments to resolution A.751(18) (Wheelhouses - revised). The drafted proposals have been sent to the Secretariat for submission to the next Session of the MSC.

**Maritime security**

The Sub-Committee reviewed a number of maritime security issues referred by the International Maritime Working Group of the MSC on Maritime Security which met in February 2002.

Following recommendations from the United States that ships subject to SOLAS chapter IV should have a ship alerting alarm, the Sub-Committee agreed that carriage requirements for such alarms and guidance for the crew would be necessary. It was noted that feasibility studies and cost/benefit analyses should be carried out.

A proposed regulation on ship security alarms envisages that the ship security alarm will be transmitted through the ship’s radio installation, triggered through activation points connected to the radio installation through an appropriate interface. The ship security alarm is envisaged to function in a manner similar to the distress panel required to be fitted on passenger ships which, when pressed, initiates a distress alert using all radio communication installations required on board.

The delegation of the United States proposed that equipment to prevent unauthorized boarding in ports and at sea generally should fall into one of three categories:

- Awareness equipment which should include such items as internal and external video surveillance equipment; motion detectors; self-monitoring features for critical and vital ship’s equipment to alert the crew when there was an unauthorized use;
- Prevention equipment to increase the difficulty of unauthorized boarding, which could include fences, high intensity lighting and manned guard stations for shore-side terminals and, for ships, electric locks controllable from a central location for all external doors and doors to vital machinery and control spaces, use of special entry codes for access to vital spaces, secure and locked gangways and high-intensity deck and over-the-side lighting;
- Response equipment, which would include shipboard intrusion alarms to alert the crew when unauthorized boarding was detected, or a security EPIRB similar but distinguishable from the safety EPIRB. When in port, there should be necessary equipment to notify and communicate with shipowners and the management office, as well as with the local authorities.

The Sub-Committee agreed that different kinds of equipment could be suitable and a risk assessment for the ship in question should be carried out to determine the necessary equipment. Any such equipment should be optional and not mandatory and should in principle apply to new ships. For existing ships a cost/benefit analysis would be necessary. A balance between security and safety needed to be ensured, as illustrated by the problem of the locking of doors which could be in conflict with fire regulations. A constructive approach was necessary and provisions already contained in the ISM Code should be taken into account.

The Sub-Committee agreed relevant modifications to the proposed new SOLAS regulation A.118 on ship security alarm and to the draft International Code for the Security of Ships which will be forwarded to MSC 75 for further consideration.

**Interim guidelines for win-in-ground (WIG) craft agreed**

The Sub-Committee agreed a draft MSC circular on Interim guidelines for WIG craft, which are intended to provide as much guidance as possible to those involved in the design, construction and operation of WIG craft. The draft interim guidelines will be submitted to MSC 76 for approval.

The Interim Guidelines for WIG craft are intended to achieve comparable standards to those of the 1974 SOLAS Convention and include relevant recommendations adapted from the 2000 ISHC Code.

The Interim Guidelines for ship manoeuvrability agreed

The Sub-Committee agreed to a draft MSC resolution on Standards for ship manoeuvrability, for submission to the MSC for adoption. The standards update resolution A.751(18) Interim standards for ship manoeuvrability adopted in 1993.

The Interim guidelines were adopted in response to the lack of manoeuvring performance standards which has led to some ships being built with very poor manoeuvring qualities that have resulted in marine casualties and pollution. Designers had relied on the shiphandling abilities of human operators to compensate for any deficiencies in inherent manoeuvring qualities of the hull. The implementation of manoeuvring standards is intended to ensure that ships are designed to a uniform standard, so that an undue burden is not imposed on shipbuilders in trying to compensate for deficiencies in inherent ship manoeuvrability.

The Sub-Committee agreed a draft MSC circular on Interim guidelines for ship manoeuvrability and updated and replacing MSC/Circ.644 on Explanatory notes to the Standards for ship manoeuvrability, updating and replacing MSC/Circ.644 on Explanatory notes to the interim standards. The recommendations to interim standards are based on experience and research carried out by Member States.

**Guidelines for on-board NOx monitoring and recording devices**

The Sub-Committee continued work on developing draft Guidelines for on-board NOx monitoring and recording devices. The devices are intended to demonstrate compliance with MARPOL Annex VI on Prevention of Air Pollution from Ships, Regulation 13. The Sub-Committee agreed that the draft Guidelines will need to be developed further at the next session and it established the correspondence group on Guidelines for on-board NOx monitoring and recording devices to submit a report to DE 46.

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The Interim Guidelines for WIG craft are intended to achieve comparable standards to those of the 1974 SOLAS Convention and include relevant recommendations adapted from the 2000 ISHC Code.

Revision of Interim standards for ship manoeuvrability agreed

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Machinery space bilges - revised guidelines and specifications for pollution prevention equipment

The Sub-Committee made substantial progress in the revision of resolution MEPC.60(33) on Guidelines and specifications for pollution prevention equipment for machinery space bilges. However, it was not able to finalize an agreed text in full at this session. The areas still subject to discussion were those related to the test fluids, specifications and test procedures. The Sub-Committee agreed that the Secretariat should submit the draft revision, as developed by the working group at this session, to DE 46 and Member Governments and international organizations were invited to submit comments.

Similarly, the Sub-Committee noted that the group made substantial advancement towards finalizing the revision of resolution MEPC.198(14) Guidelines and Specifications for Oil Discharge Monitoring and Control Systems for Oil Tankers but the task could not be finalized in full due to the time constraints. It was agreed that the Secretariat would submit the draft revision to DE 46 and Member Governments and international organizations were invited to submit comments.

The Sub-Committee endorsed the view that the concept of whole bilge water treatment systems (BWTS) should be included in a possible future revision of MEPC/Circ.235 Guidelines for systems for handling oily wastes in machinery spaces of ships (issued 1998) and agreed to consider the matter at DE 46 with a view to preparing a justification for such a revision.

The Sub-Committee noted that MSC/PC had agreed that the use of a recording device to record the oil
concentration in bilge water should be made tamper-proof and mandatory for new ships. Most States have a test method for the determination of the oil content in water incorporated into an appropriate national Act. As these differ from each other and from the test method indicated in resolution MEPC.60(33), it would be beneficial to have a single ISO test that would provide a means of comparing the results.

The Sub-Committee agreed to pass on to M EPC the recommendation that ISO Standard 9337-2 “Determination of hydrocarbon oil index - Method using solvent extraction and gas chromatography” be used as a uniform method for the determination of oil content.

Guidelines on the Enhanced Programme of Inspections During Surveys of Bulk Carriers and Oil Tankers

The Sub-Committee prepared a draft M SC circular annexing the agreed test of the draft Guidelines on sampling method of thickness measurements for a longitudinal strength evaluation and repair methods.

Technical provisions for means of access for inspections. The Sub-Committee agreed to a draft MSC resolution on the adoption of Technical provisions for means of access for inspections. The draft technical provisions would be mandatory under a proposed new regulation SOLAS II-1/2-12/2, including changes to the application date, and also agreed to the contents of a new Ship structure access manual.

The regulation would apply to new oil tankers of 500 gross tonnage and over and bulk carriers, of 20,000 gross tonnage and over, constructed on or after a date to be decided.

With regard to oil tankers, the Sub-Committee acknowledged that a means of access to the overhead structure was required for detecting corrosion as well as fatigue cracks and that the most critical area for fatigue cracks was at the transverse bulkheads where the relative deflection is largest.

Concerning bulk carriers, the Sub-Committee agreed that hold frames represent the most vulnerable structure and considered that it was necessary to provide permanent means of access to the hold frames and their upper brackets, covering at least 25% of the total number of frames in all cargo areas.

Draft Guidelines for Ships Operating in Arctic Ice-covered Waters near completion

The Sub-Committee agreed to some changes to the draft Guidelines for Ships Operating in Arctic Ice-covered Waters, to be submitted together with an associated draft MSC/MEPC Circular to the MSC for approval, subject to concurrent approval by M EPC.

The draft Guidelines cover design, outfitting and operation of relevant ships, including crowing by adequate numbers of suitably trained personnel.

The modifications to the draft agreed by the Sub-Committee relate to a proposal to harmonize the ice class descriptions in the Guidelines with those in the draft IACS Unified Requirements for Polar Ships and to better define the double bottom spaces in which working liquids may be carried.

SARTs on ro-ro passenger ships

The Sub-Committee agreed to a draft amendment to SOLAS chapter III to include a requirement for SARTs on ro-ro passenger ships to carry search and rescue transponders (SARTs). The amendments would refer to SOLAS regulation III/26 “Additional requirements for ro-ro passenger ships”, section 2 of which contains requirements for SARTs.

The Sub-Committee agreed that a SART should be provided for every life raft and should be manually activated. However, a number of delegations preferred automatic activation because this would cater for persons that were incapacitated and therefore not able to switch on the manual activation. It was agreed to bring both sides of the argument to the attention of the MSC.

Desalinators for lifeboats and liferafts - performance standards agreed

The Sub-Committee agreed a draft M SC circular on Performance standards and performance tests for manually powered reverse osmosis desalinator, for submission to the MSC for approval.

Revised fishing vessel safety Code and voluntary guidelines

The Sub-Committee agreed modifications to relevant chapters and sections of the draft revised fishing vessel safety code (part B) and Voluntary Guidelines and agreed to finalize the texts at the session.

The work on the Code and guidelines is being coordinated by the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF) and the final draft text should be ready for submission to the MSC for approval in 2004.

The revised Code and Guidelines will contain 11 comprehensive chapters, covering: general provisions; construction, watertight integrity and equipment; stability and associated seakeaithness; machinery and electrical installations and periodically unattended machinery spaces; fire protection, fire detection, fire extinction and fire-fighting; protection of the crew; life-saving arrangements and appliances; emergency procedures, musters and drills; radiocommunications; shipborne navigational equipment; and crew accommodation.

Large passenger ship safety - correspondence group established

The Sub-Committee discussed issues relating to large passenger ship safety, referred to it by the MSC and agreed to establish a Correspondence Group to further the work ahead of the next session.

The three objectives of the large passenger ship safety work plan to be tackled by the IE Sub-Committee are:

• To review lifesaving appliances and arrangements requirements with a view to improving evacuation and recovery measures;

• To develop measures to assess alternative designs and arrangements so that new concepts and technologies may be permitted in lieu of the prescriptive regulation, provided that an equivalent level of safety is achieved; and

• To consider measures to ensure ships can safely proceed to port after a fire or flooding casualty.

Anchoring, mooring and towing equipment - draft regulation proposed

The Sub-Committee agreed in principle to a draft amendment to SOLAS aimed at ensuring adequate provision of anchoring, mooring and towing arrangements on ships.

The proposal follows a number of incidents reported by Member States in which the failure of ships mooring fittings and/or their associated structures, when manoeuvring with tugs, has jeopardised safety.

The proposed draft amendment to SOLAS chapter II-(Construction - subdivision and stability, machinery and electrical installations) would require suitable arrangements to be provided on all ships for anchoring, mooring and towing operations conducted as part of their normal and emergency operations.

Accidents with lifeboats - draft MSC Circular agreed

The Sub-Committee agreed a draft M SC circular on accidents with lifeboats, which is intended to address the unacceptably high number of accidents with lifeboats that have been occurring over recent years and in which crew are being injured, sometimes fatally, while participating in lifeboat drills and/or inspections.

The draft circular draws the attention of manufacturers, shipowners, classification societies to the personal injury and loss of life that may follow inadequate attention to the design, construction, maintenance and operation of lifeboats, davits and associated equipment.

The Sub-Committee also agreed a work plan for developing measures to prevent accidents with lifeboats, to focus on all issues which might help reduce such accidents.
Casualty investigations - new guidelines agreed

The sub-committee drafted new guidelines to help improve co-operation between flag States and other substantially interested States in marine casualty investigation. The draft Interim Guidelines to assist Flag States and other substantially interested States to establish and maintain an effective framework for consultation and co-operation in marine casualty investigations stress the responsibility of States to co-operate in carrying out casualty investigations and take into account specific provisions of the Code for the Investigation of Marine Casualties and Incidents (Assembly A.849(20) as amended by resolution A.884(21)) as a basis for a global framework of consultation and effective co-operation.

The draft guidelines and the associated draft Maritime Environment Protection Committee (MEPC) circular will be submitted to the Committees for approval.

The proposed guidelines include basic recommendations for a functioning authority for casualty investigation which is prepared to co-operate with authorities of other substantially interested States and stress the responsibility of flag States to conduct casualty investigations as required by International Law.

Casualties - lessons learned and recommendations

The Sub-Committee agreed to a summary of lessons learned from casualty analyses by the Working Group on Casualty Analysis and proposed to the Committees that “lessons learned” should be made available via the IMO website for dissemination to seafarers, masters, ship owners and managers.

The Sub-Committee also agreed a summary of casualty recommendations and analyses developed by a correspondence group on casualty analysis. The group considered a total number of 69 casualty reports and noted that the standard of reports submitted to the correspondence group was of good quality and, compared with previous years, is improving. Any reports described events and consequences in detail and indicated that the casualties have been thoroughly and carefully investigated.

The correspondence group on casualty analysis included the following in its synopsis of lessons learned from the casualties analysed:

- Lessons learned of reports analysed are related mainly to operational issues of propeller, maintenance and design, rather than to proper implementation of regulations or the need for amendment.
- Effectiveness of bridge resource management continues to be questioned. Ineffective relationships between master/crew and pilot are recurrent themes. Communication difficulties occur because of cultural differences and language barriers.
- The investigation reports have raised questions of quality of operation and maintenance manuals. Seafarers do make short cuts by not following correct procedures, but investigators have found that seamen are disadvantaged when instructions are unclear and/or relate to equipment not fitted on board the vessel. These are issues that can be addressed by management and auditors of the safety management system.
- Without proper guidance or encouragement in the use of easily understood and relevant manuals, crews are at greater risk of making errors of judgement and understanding.
- IMO has recognized that all spillage on hot surfaces of engines is probably the most common cause of fires in engine rooms. After considering technical solutions to this problem, new IMO regulations are needed to address the problem. However, regulations will not guard against such incidents, if maintenance is ineffective or neglected. A quality measure of the safety management system is its effective management of maintenance.
- Crewmen continue to disregard codes of safe working practice. Rescue personnel do not always take the necessary precautions before entering into dangerous and enclosed space. Further, when the weather is fine, seamen do not always wear lifejackets where there is risk of falling overboard.
- A significant number of lifeboat/fast-rescue craft launching equipment accidents have been investigated by both flag and port States. Design that is unfit for purpose and poor quality of maintenance and instruction manuals are frequent report findings.

The Sub-Committee re-established the Correspondence Group on Casualty Analysis to continue its work.

Anti-fouling systems - draft guidelines for survey and certification approved

The Sub-Committee agreed Draft Guidelines on Survey and Certification of Anti-fouling Systems on Ships for submission to the MEPC for adoption under cover of a MEPC resolution. The Sub-Committee will continue to develop two other sets of guidelines in the context of anti-fouling systems: Guidelines for brief sampling of ships anti-fouling systems and Guidelines for inspection of ships anti-fouling system.

Voyage Data Recorders - draft guidelines on ownership and recovery agreed

The Sub-Committee agreed modifications to the Draft Guidelines on voyage data recorder (VDR) ownership and recovery for submission to MSC 75 in May 2002 for approval. Following development of the guidelines by the Sub-Committee on Safety of Navigation (NAV), the draft guidelines cover:

- Ownership of the VDR information - The ship owner owns the VDR and its information. The FSI Sub-Committee agreed that the owner of a ship should make available and maintain all recording instructions necessary to recover the recorded information leading up to the casualty.
- Recovery of the VDR and relevant information - Recovery of the VDRs is conditional on the accessibility of the VDR or the information contained within. In non-catastrophic incidences, recovery should be straightforward. In catastrophic accidents, a decision must be taken on viability and cost of recovering VDR against potential use of the information.
- Custody of VDR information - In all circumstances, during an investigation, the investigator should have custody of the original VDR information.

The Sub-Committee agreed that guidance on the survey and certification of anti-fouling systems was intended for submission to MEPC.

Transfer of ships

The Sub-Committee agreed to develop a draft Assembly resolution on “Principles regarding the transfer of ships between States to aid in the elimination of sub-standard shipping” during its next session, for submission to the MEPC and MSC for review and approval before submission to the 23rd Assembly, scheduled for November 2003.

Preliminary principles drafted by the Working Group include the need for co-operation and sharing of information on ships between flag States. This includes co-operation when a flag State has been forced to resort to the withdrawal from a ship of the right to fly its flag with the aim that any such substandard ship is prohibited from continuing to trade in an unhindered manner.

Procedures concerning observed ISM Code major non-conformity - draft circular agreed

The Sub-Committee agreed a draft MSC/MEPC circular on Procedures concerning observed ISM Code major non-conformity for submission to the MSC and MEPC for approval. The draft circular covers procedures for re-instating ISM Code Certificates after they have been withdrawn for major non-conformities.
The Sub-Committee concluded that the assessment of the effective and consistent implementation of IMO instruments by flag States, a database containing information on three levels would be required:

- First level: the database should supply information so that the Organization can answer whether IMO instruments are implemented effectively and, if so, whether they are implemented in a consistent manner.
- Second level: the database should supply information to enable the Organization to identify any possible problems encountered by States in the effective implementation of the IMO instrument because of the way the instrument has been written or structured; and
- Third level: the database should supply information to enable the Organization to identify failures of effective implementation due to the way the instrument is administered by the States.

The Sub-Committee invited submissions and proposals on the issue for the next session, in 2003. The Sub-Committee reviewed resolutions A.744(18) on Guidelines on the Enhanced Programme of Inspections During Surveys of Bulk Carriers and Oil Tankers and A.746(18) on Survey Guidelines under the Harmonized system of Survey and Certification.

The Sub-Committee was updated by the Food and Agriculture Organization (FAO) on developments since the last Sub-Committee session, which had considered the report of the first Joint IMO/Food and Agriculture Organization (FAO) Working Group on Illegal, Unreported and Unregulated Fishing (IUU fishing) and related matters held in Rome from 9 to 11 October 2000.

The issue of illegal, unreported and unregulated (IUU) fishing in world fisheries is of serious and increasing concern. IUU fishing undermines efforts to conserve and manage fish stocks in all capture fisheries. When confronted with IUU fishing, national and regional fisheries management organizations can fail to achieve management goals. This situation leads to the loss of social and economic opportunities and negative effects on food security and environmental protection.

The Committee had been requested by the Intersessional Working Group on Maritime Security to consider this issue and provide a recommendation to the Maritime Security Committee.

In its recommendations to the MSC, the Committee noted that information which is required to be documented under the ISM Code is pertinent to the identification process because it involves identification of the person responsible for operation of the ship. The Committee particularly noted the broad definition of the term “company” as used in the ISM Code, as well as the provisions on company responsibilities and authority in section 3 of that Code. The Committee was of the view that these and other provisions of the ISM Code could be used as a model and suitably adapted for the context of maritime security.

The Committee further noted that certain relevant information - notably that related to the ISM Code, was routinely made available to the flag State, and this information might be provided by means of co-operation between the port State and the flag State. The Sub-Committee on Security noted that certain information required by the ISM Code, in order to facilitate identification of the person responsible for operation of the ship, might be of assistance in this regard.

The Committee reviewed the report of the Correspondence Group at its next session.
Draft protocol to amend the 1992 Fund Convention

The Committee approved the draft text of a protocol to amend the 1992 Fund Convention on the establishment of an International Fund for Compensation for Oil Pollution Damage. The protocol had been drawn up by an intersessional working group established by the 1990 IOPC Fund Assembly in April 2000. If adopted, the protocol would establish an optional supplementary Fund open to States Parties to the 1992 Fund Convention to pay compensation for claims exceeding the limits established in the 1992 CLC and 1990 Fund Convention, which were thought by some to be too low.

The draft protocol had been approved by the 1992 IOPC Fund Assembly. However, before it could be adopted by a diplomatic conference, it was necessary for the Legal Committee to approve the text. In view of the fact that the draft protocol had been extensively discussed by the 1992 Fund Members, the Committee felt that it was not necessary to discuss it any further. It was noted that the diplomatic conference would decide on the issues in the text that were still unresolved including limits of compensation and entry into force criteria. The Committee approved the draft text and concluded that the draft protocol was ready for submission to a diplomatic conference and that it had good prospects both for adoption by the conference and subsequent implementation by States.

Places of Refuge

After hearing from the Secretariat that no legal barriers had been identified to the development by IMO of guidelines on this subject, the Committee recognised that the principal challenge was to find the proper balance between the duty of States to prevent the effects of pollution and the right of States to regulate entry into their ports and to protect their coastlines from pollution or the threat of pollution.

Several delegations noted that there was no specific reference to places of refuge in international conventions, including UNCLOS, and no specific obligation on coastal states to provide places of refuge to a ship in distress. If any delegations said the paramount consideration had to be the safety of persons in distress at sea.

Most delegations supported the development of guidelines on places of refuge to assist masters and coastal states. It was agreed there was no obstacle to the development of such guidelines provided they respected the principles of international law including those relating to the balance of interests between the ship in distress and the coastal State. It was also agreed that such guidelines must be voluntary in nature, and sufficiently flexible to take into account the wide variety of circumstances that might arise. The guidelines should allow for case-by-case analysis and application. In this regard, although the view was expressed that pre-designation of places of refuge might be useful, several delegations said they did not believe that pre-designation of places of refuge was appropriate. Such places could only be determined case by case.

Some delegations noted that the issue of placing or transferring or “exporting” the problems posed by a ship in distress from one State to another by refusing entry also had to be addressed. Particular reference in this regard was made to enclosed seas and archipelagic waters.

The Committee discussed a number of other issues related to the issue of places of refuge, including the liability and compensation aspects and the decision-making process. The Committee was updated on the work being carried out by the Sub-Committee on Safety of Navigation on operational guidelines on places of refuge and it was suggested that the MSC might be invited to provide the draft guidelines, once developed, to the Legal Committee for a final review of the legal aspects.

Monitoring implementation of the HNS Convention

Subject to some minor modifications, the Committee indicated its support for a short overview of the HNS Convention, prepared by the UK, as co-ordinator of the correspondence group on monitoring the implementation of the HNS Convention established at the 80th session of the Legal Committee. To date, the HNS Convention has received only two ratifications. The Committee requested the Organization to place the text of the overview on the IMO Website.

Maritime security, bulk carriers and large passenger ships under spotlight at IMO safety meeting

Maritime security issues topped the agenda of IMO’s Maritime Safety Committee (MSC), which met for its 75th session from 15 to 24 May, as M Member States continued the detailed preparatory work for the diplomatic conference on maritime security that is to be held at IMO in December 2002, at which any new or amended legislation could be adopted.

Other issues tackled during the meeting included the adoption of proposed amendments to the International Convention for the Safety of Life at Sea (SOLAS), 1974 as amended; ongoing work on the safety of bulk carrier ships and large passenger vessels; implementation of the STCW Convention, as amended; and the adoption of new and amended ships’ routing measures.

Security Issues

The MSC continued the detailed preparatory work for the diplomatic conference on maritime security. Among a raft of items designed to address maritime security issues, the most far-reaching is a proposed International Ship and Port Facility Security Code (ISPS Code), which would be implemented through SOLAS chapter X. For more, see page 5 of this issue.

BULK CARRIER SAFETY

New proposed draft SOLAS regulations on bulk carriers.

The Committee approved the text of draft proposed new SOLAS regulations XII/12 and 13, for adoption at SC 76 in December 2002.

The proposed new regulation 12 requires the fitting of high level alarms and level monitoring systems on all bulk carriers, in order to detect abnormal water ingress in holds, ballast and dry spaces. The recommendation for the fitting of such alarms was highlighted during the meeting of the Working Group on Bulk Carrier Safety held during the MSC’s 74th session in December 2001.

The proposed new regulation 13 on Availability of pumping systems would require the means for draining and pumping dry space bilges and tanks located forward of a collision bulkhead to be capable of being brought into operation from a readily accessible enclosed space.

The date of application of these regulations needed to be further addressed at MSC 76 when adopting the new regulations into SOLAS chapter XII on Additional safety measures for bulk carriers.

The proposed draft new regulations stem from the review of reports into the sinking of the bulk carrier Derbyshire.

Hatch cover design environmental load criteria

The MSC endorsed a proposal from the United Kingdom, reporting on results of the model tests initiated following the Reopened Formal Investigation into the loss of the Derbyshire, to update the hatch cover design environmental load criteria in the current revision of the 1988 Load Line Protocol. The MSC referred the matter to the Sub-Committee on Stability and Load Lines and on Fishing Vessels’ Safety for appropriate action.

FSA studies on bulk carrier safety

Based on the results of FSA studies on bulk carrier safety to date, the MSC agreed a preliminary list of 25 recommendations for decision-making concerning both new ships (i.e., ships to be constructed on or after the date of entry into force of the requirements that will be developed on the basis of the recommendations) and existing ships.

The recommendations for decision-making include those issues which merit further consideration and the results of a cost-effectiveness assessment emanating from an international collaborative FSA study. The items for consideration have been grouped under a number of headings:

- Hull envelope
- Includes issues such as double hull and side-skin construction, improved coatings, steel repair standards, corrosion margins of hold frames, forecastles, bulwark/breakwater structures, ballast system capacity, protection of foredeck fittings, strength and corrosion control of hold frames, coating of internal side skins.
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The Working Group on large passenger ship safety continued the Organisation’s important work on this issue.

- Closing apertures
  Includes hatch cover re-design and/or reinforcement, fore deck fittings, hatch cover means for access.
- Expiration
  Includes water ingress alarms, provision of depressurisation suits, liferafts.
- Operational
  Includes terminal interface improvement, risk based (RING) Enhanced Survey Programme targeting, PSC (Port State Control) training, weather routing, improved loading/stability information. The BC Code mandatory and incorporating a bulk Carrier Endorsement for officers’ qualifications, early implementation of SOLAS Chapter XII.
- PIRACY AND ARMED ROBBERY AGAINST SHIPS
The Working Group on Large Passenger Ship Safety reviewed ongoing work by various Sub-Committees and agreed a revised and updated work plan which includes strategic goals and objectives and specific areas for consideration.

The Working Group discussed the need to develop working criteria for the term “large passenger ships” but agreed that the parameters would vary according to the measures and regulations being discussed.

The Committee agreed that the expert Sub-Committees should develop relevant parameters, if necessary, for application purposes for any proposed recommendations. Such parameters may include, but are not limited to, the ship length, tonnage, number of persons, design parameters, etc.

STCW IMPLEMENTATION

List of Confirmed Parties updated

The MSC agreed to add four new Parties to the List of Parties deemed to be giving full and complete effect to the provisions of the revised Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) 1978, as amended.

The updated List of Confirmed Parties (MSC/Circ.1033) can be seen at http://www.imo.org/home.asp?topic_id=491

End of STCW “grace period”
The Committee urged all concerned to make every effort to ensure that serving seafarers hold certificates and documentary evidence meeting the revised Convention requirements in order to avoid major problems during port State control inspections after 31 July 2002.

The end of the transition period for implementation of the 1995 STCW amendments came into effect on 1 February 2002. However, at the time of the report, some states and vessels had not yet obtained STCW 95 certificates and endorsements before the deadline, the Sub-Committee on STCW and Watchkeeping, which met in January 2002, had issued a circular which recommended that, until 31 July 2002, port State control officers issue only a warning in cases where a seafarer’s documentation complied with the requirements immediately before 1 February 2002 but was not in accordance with the requirements of STCW 95. Port State control officers were recommended to issue the warnings to the shipping companies concerned only and to notify the seafarers and inform the flag State accordingly.

PIRACY AND ARMED ROBBERY AGAINST SHIPS

The MSC noted that the number of acts of piracy and armed robbery against ships which had occurred in 2001, as reported to the Organization, was 370, a decrease of 103 by number and 21 per cent over the figure for 2000. The total number of incidents of piracy and armed robbery against ships, reported to the Secretariat of the IMO’s Special Committee on Piracy and Armed Robbery Against Ships (SACP) in 1984 to the end of April 2002, was 2,650. The MSC observed that, although this latest reduction was a welcome development, more needed to be done to reduce this menace.

The areas most affected in 2001 (i.e. five or more incidents reported) were the Far East, in particular the South China Sea and the Malacca Strait, the Indian Ocean, West Africa, South America and the Caribbean and East Africa.

Comparing the figures for 2000 with 2001, the number of incidents reported to have occurred or to have been attempted increased from 33 to 58 in West Africa, remained at two in the Mediterranean Sea and decreased from 112 to 58 in the Malacca Strait, from 120 to 59 in the South China Sea, from 108 to 68 in the Indian Ocean, from 29 to 22 in East Africa and from 43 to 23 in South America and the Caribbean.

Most of the attacks worldwide were reported to have occurred in the territorial waters of the coastal States concerned while the ships were at anchor or berthed. The MSC was particularly concerned that, during 2001, 17 crew members had been killed, 42 wounded and five more reported missing. Sixteen ships were hijacked, two ships were missing and one ship had been lost, on four occasions, the attackers had used explosive devices.

The MSC once again urged all Governments (of flag, port and coastal States) and the industry to intensify their efforts to eradicate these unlawful acts, noting the maritime community could not tolerate the situation and the serious repercussions it had on the safety of passengers and crew.

Implementation of anti-piracy project

The MSC reviewed the report of the second assessment mission and regional mission on piracy and armed robbery against ships for Latin American and Caribbean countries (held in Guayaquil, Ecuador - 25 and 26 September 2001) and an oral report on the third and last assessment mission and regional meeting for selected West African countries (Accra, Ghana, 25 and 26 March 2002). The MSC was also updated on meetings in South-East Asia, following the March 2001 regional meeting in Singapore after which countries had been invited by the IMO Secretary-General to participate in a regional meeting to consider concluding a regional agreement on cooperation against piracy and armed robbery against ships.

Although so far only two countries (out of the ten which had participated at that meeting) had responded positively to the Secretary-General’s invitation, there had been three relevant meetings.

An EU-ASEAN Experts meeting on maritime security (held in Manila, 25 and 26 February 2002), was hosted by the Government of the Philippines.

A meeting in Tokyo (5 to 7 March 2002) was held to facilitate and strengthen further cooperation in the field of anti-piracy activities, including follow-up-activities to the Regional Conference and Combating Piracy and Armed Robbery against Ships held in Tokyo in April 2001 and some progress was made towards concluding a regional agreement.

A meeting in Tokyo (12 and 13 March 2002) considered regional co-operation issues among maritime policy authorities and private maritime related concerns, and the meeting agreed that: it was necessary to:
- continue efforts to establish and maintain international co-operation;
- improve the flow of information on piracy;
- initiate appropriate national response measures on the basis of the current trend of piracy acts; and
- enhance maritime security to suppress piracy.

The MSC urged Member Governments to give more urgent consideration towards promoting and concluding viable regional agreements to combat piracy and armed robbery against ships, given that the issue was progressing rather slowly. The MSC also instructed the IMO Secretariat to follow-up the proposals, involving ROCMAR and MOWCA, towards convening regional meetings to promote the case of regional co-operation in appropriate areas.

AMENDMENTS TO SOLAS AND OTHER INSTRUMENTS

Amendments to SOLAS

The expanded Committee adopted the following amendments to the international Convention for the Safety of Life at Sea (SOLAS), 1974, as amended. The Committee agreed that the amendments to SOLAS, the 1988 SOLAS Protocol and the mandatory guidelines proposed for adoption at the current session should be deemed to have been accepted on 1 July 2003 with the expected entry into force set for 1 January 2004.

Making the IMDG Code mandatory - the amendments to SOLAS chapters VII (Carriage of Cargoes) and VIII (Carriage of Dangerous Goods) make part of the International Maritime Dangerous Goods Code (IMDG Code) mandatory. The MSC also adopted the IMDG Code (Amendment SI-42) in a mandatory form.

The entry into force date of the mandatory (IMDG Code is 1 January 2004, but the MSC agreed that Contracting Governments to SOLAS may apply the IMDG Code in whole or in part on voluntary basis as from 1 January 2003.

Updates to Chapter IV - Radiocommunications

The amendments to this chapter relate to changes following the full implementation of the Global Maritime Distress and Safety System (GMDSS) on 1 February 1999, which involves some of the provisions relating to implementation dates in the current chapter IV supersede.

The amendments also state that a listening watch on VHF Channel 69 for distress and safety purposes should continue until 2008.

Carriage requirement for IAMSAR Manual

The amendments to this chapter relate to changes following the full implementation of the Global Maritime Distress and Safety System (GMDSS) on 1 February 1999, which involves some of the provisions relating to implementation dates in the current chapter IV supersede.

The amendments also state that a listening watch on VHF Channel 69 for distress and safety purposes should continue until 2008.

Adoption of amendments to enhanced survey programmes

The MSC adopted two sets of amendments to resolution A.741(18) - Guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers. The entry into force of the amendments is set for 1 January 2004.

1. Relates to surveys of bulk carriers and is intended to improve the quality of surveys, in particular looking at repairs to bulk carriers and at the condition of the accessories.

2. Relates to surveys of oil tankers and is intended to improve the quality of surveys, in particular looking at repairs on oil tankers and to the intermediate enhanced survey. The amendments proposed following proposals made after the Erith Incident of December 1999 and the recommendations towards promoting and defining the measures to improve the safety of oil tankers.

Access to spaces in cargo areas of oil tankers

The MSC agreed to defer consideration and adoption of the proposed revised draft regulation II-6/21 (SOLAS chapter II-6, subdivision - stability - subdivision and stability) to its next session in December. The draft revised regulation is intended to ensure that access to spaces in cargo areas of oil tankers can be achieved without the need to alter the cargo system, by designing and building the ship to provide suitable means for access.

Brett Howland, London
From the meetings

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The MSC noted that the second phase of the anti-piracy project, which was now complete, and it was now the intention of the Secretariat to make every effort to provide technical assistance and coordinate missions to countries which were expected to request assistance.

The MSC also invited the Secretariat to follow closely the developments at United Nations level, in particular the “open-ended” Informal Consultative Process on Oceans and Law of the Sea (UNCLOS) which is considering, inter alia, the issue of maritime piracy with the prospect of drafting appropriate text for submission to the General Assembly for consideration and action.

PERSONS RESCUED AT SEA

The Committee noted that the Secretary-General had brought the issue of persons rescued at sea to the attention of a number of competent United Nations specialized agencies and programmes pointing out the need for a co-ordinated approach to all attendant aspects at the United Nations inter-agency level.

The Secretary-General had also proposed the establishment of a co-ordinating mechanism (possibly in the form of an inter-agency co-ordinating panel to be activated when the circumstances so dictate) to ensure that the response of the United Nations in any future emergency could be co-ordinated in a consistent manner.

As a result, a meeting was being organized between representatives of the United Nations Division for Ocean Affairs and the Law of the Sea, the Office of the United Nations High Commissioner for Refugees (UNHCR), the UN Office for Drug Control and Crime Prevention (ODCCP), the Office of the UN High Commissioner for Human Rights (UNCHRI), the International Organization for Migration (IOM) and the IMO Secretariat, to take place at the UNHCR Headquarters on 2 and 3 July 2002 to consider and agree on how to take their task forward.

ROLE OF THE HUMAN ELEMENT

The MSC instructed all Sub-Committees to continue to take into consideration appropriate human element related matters in the course of their work.

A Working Group developed a draft proposed Assembly resolution on Promoting a Maritime Safety Culture, to be discussed further by the Marine Environment Protection Committee and to be finalized at MSC 77 in spring 2003, for submission to the next Assembly in November 2003. The proposed draft resolution would update and replace Resolution A.792(19) on Safety culture in and around passenger ships and would include all types of ships.

Fatigue - need for education and training agreed

The MSC agreed on the need to develop education and training that provides seafarers, shipowners and operators, ship designers, maritime pilots and other relevant parties with proven methods to implement ways of addressing fatigue. The MSC also agreed that training is an indispensable step in order to create awareness and a change in safety culture.

The MSC therefore instructed the Sub-Committee on Standards of Training and Watchkeeping (STCW) to consider mandating education and training requirements in this respect for all relevant parties and all types of ships, as appropriate, taking into account MSC/Circ.204 which includes IMO Guidelines on Fatigue.

PLACES OF REFUGE

In principle, the proposed general framework concerning future work on places of refuge developed by the Sub-Committee on Safety of Navigation, future work places high priority on the safety of all involved in any operation concerning the provision of places of refuge, with due attention to all environmental aspects associated with these operations. This will include the preparation of guidelines for:

1. operations of a ship to take when in need of a place of refuge (including actions on board and actions required in seeking assistance from other ships in the vicinity, salvage operators, flag State and coastal States);
2. the evaluation of risks, including the methodology involved, associated with the provision of places of refuge and relevant operations in both a general and a case by case basis.
3. actions expected of coastal States for the identification, designation and provision of such suitable places of refuge with any relevant facilities.

The Sub-Committee on Safety of Navigation will coordinate the work, while input should also come from the Sub-Committee on Radiocommunications, Search and Rescue (COMSAR) and the Marine Environment Protection Committee (MEPC).
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RESOLUTIONS

The MSC adopted the following:
• MSC resolution on maintenance of a continuous listening watch on VHF channel 16 by SOLAS ships whilst at sea and installation of VHF DSC facilities on non-SOLAS ships. This resolution requires vessels to maintain a continuous listening watch on channel 16 until the MSC determines the watch should cease, with the provision for a reassessment of the situation in 2005. The resolution was adopted Resolution MSC.73(79) adopted in 1998, which called for the watch to cease in 2005.
• MSC Resolution on Adoption of Performance standards for A-Route Navigation Watch Alarm System (NAV). The resolution was adopted Resolution MSC.35(63).
• MSC Resolution on Performance standards for Immigrant ship’s watch stations capable of two-way communications, containing performance standards for Immigrant Ship’s Watch stations meeting the relevant requirements of resolution A.852(20) on IFC for the provision of multi-beam satellite communication systems in the GMDSS.
• MSC Resolution on Amendments to the Guidelines on emergency towing arrangements for tankers (resolution MSC.35(63)).
• MSC Resolution on Maritime security and safety-related radiocommunications which is intended to iron out the discrepancy in the SOLAS Convention and the Radio Regulations regarding definitions of the different categories on radiocommunications.

NEW AND AMENDED SHIPS’ ROUTING MEASURES

The MSC approved the following, for submission to the twenty-third session of the Assembly in November 2003 for adoption:
• Draft revised Assembly resolution A.818 (19) on the Inter-American maritime navigation system. The proposed revision includes changes to the Appendix, introducing updates to the operational requirements for radiocommunication systems for oceanic, coastal and harbor approach and entrance phases of a ship’s voyage.
• Draft Assembly Resolution on Recommendations on training and certification and operational procedures for maritime pilots other than deepsea pilots. The draft Assembly resolution is a result of work on the revision of resolution A.47(IX) on the training and certification of these pilots.
• Draft proposal Assembly Resolution on Improved Guidelines for man-portable fire extinguishers.
• Draft revised Assembly Resolution on Proper use of VHF channels at sea (subject to any concurrence amendments provided by the NAV and/or STW Sub-Committees).

Electronic highway project takes major step forward

T he innovative Air Marine Electronic Highway (MESH) project, which seeks to explore the full potential of information and communication technology for safe navigation and protection of the maritime environment, has passed a crucial milestone with the successful conclusion of the second meeting of the project steering committee in Jakarta, Indonesia.

The May meeting, attended by delegations from the three participating states - Indonesia, Malaysia and Singapore - as well as several other national representatives, industry bodies and IMO, reached agreement on a number of important issues including a framework and timetable for the initial stage of the project, which will consist of a four-year, US$12 million, demonstration to develop the MESH system scheduled to begin in 2003.

The demonstration project will be designed to showcase the potential of networking of ships and shore-based authorities such as the use of electronic navigational chart - electronic chart display and information system (ENC-ECDS) and automatic identification system (AIS) with appropriate shore-based infrastructure in the confined and environmentally sensitive waters of the Straits of Malacca and Singapore.

Under a partnership arrangement with INTERTANKO, some 60 tankers outfitted with the relevant shipboard equipment will take part in the demonstration. Before then, detailed electronic navigational charts of the project area will be produced, based on new hydrographic survey that will be undertaken under a partnership arrangement with the International Hydrographic Organization.

The final goal of the demonstration project will be the eventual development of the full-scale MESH system and to agree with the relevant stakeholders on a sustainable financing mechanism and institutional arrangement. Discussions with regard to project financing are expected to centre on the possible creation of a trust fund and a mechanism for generating revenue for using the system.

Among the general criteria already identified for the full scale system are that it should yield safety and environmental benefits, provide a comprehensive base for traffic management and be sufficiently attractive to international shipping and to the “user states” to ensure their continued co-operation and support.

As many as 60 tankers will be equipped to take part in the demonstration phase of the project. Presently, a Project Brief is being finalized by IMO in consultation with the World Bank and the three participating states. It is anticipated that the Project Brief will receive formal endorsement from the three states by the end of September 2002.

New ship routes promote seafarer care

D uring the 75th meeting of the MSC in May 2002, Spain donated a model of the hospital ship Esperanza del Mar to IMO, following a presentation from the Director of the Social Marine Institute, Mrs. Maria A. Lucena, the Director of the Spanish Shipyard 12AR and the Permanent Representative of Spain to the IMO, Mr. Esteban Pacha entitled “Spain, a step ahead in seafarers protection: the new ship Esperanza del Mar”.

Mr Yang Bing, Vice Chairman and President of COSCO Europe, paid a courtesy call to IMO Secretary-General William O’Neill during the Maritime Safety Committee meeting in May, and presented him with a model of a containership.

COSCO courtesy visit to IMO

As many as 60 tankers will be equipped to take part in the demonstration phase of the project.
Oil spill experts address high-density oil spills

Leading experts in oil spill response have agreed a series of recommendations to deal with future spills of high-density oil during the International Maritime Organization’s Third R&D Forum on High Density Oil Spill Response, held from 11-13 March in Brest, France.

The recommendations include the development and testing of new systems for detection and treatment of high density oil spills and the sharing of technical expertise between IMO, Governments and industry, including oil producers, importers and experts, and those involved in oil spill response.

Recommendations adopted by the R&D Forum centred on a number of areas, including the detection, modelling, behaviour and fate of high density oil spills, containment and recovery of floating high density oil and the recovery of sunken high density oil. Large quantities of high density oil are carried by ships either as cargo or as fuel (bunkers). This oil’s characteristics, including high viscosity and tendency to sink, present particular challenges for clean-up operations in the event of an accidental spill at sea. Although the safety standards of ships continue to improve and accident rates are falling, accidents such as those involving ships like the Nakhodka in Japan, the Erika off the coast of Brittany and more recently the Baltic Carrier in the Baltic Sea confirm the urgent need for further development and dissemination of techniques to enable coastal States to respond rapidly and effectively to spills of high density oils. In addition to technological development, the Forum also focused on the operational aspects of combating oil pollution, including training and the effective use of equipment.

Recent years have seen a number of significant developments in this field and, in accordance with the 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), Governments and IMO are playing an active role both by promoting R&D and exchanging information.

The R&D Forum was attended by some 300 delegates from 70 countries. The delegates included 35 participants from developing countries sponsored by IMO’s Technical Co-operation Programme and other sources. The recommendations from the R&D Forum will be submitted to the IMO’s Marine Environment Protection Committee at its 48th session in October 2002 for consideration and action by IMO Member States.

Globallast Programme proceeds at pace

The GEF/UNDP/IMO Globallast Water Management Programme (Globallast) is aimed at helping developing Member States to prepare in advance to be able to implement fully the provisions of the forthcoming Convention for the control and management of ships’ ballast water when it enters into force. A large range of activities were carried out under the Globallast Programme in the period leading up to the 47th meeting of the MEPC in March this year, including but not limited to:

• Port Baseline Surveys have been successfully completed in all the six demonstration sites (Sepetiba, Brazil; Dalian, China; Mumba, India; Kargh Island, Iran; Salamina, South Africa; Odessa, Ukraine).

• The legislative review under the programme has been completed and the final report, including the outcome of the 1st International Workshop on Legal Aspects of Ballast Water Management and Control, hosted by the World Maritime University at Malmö, Sweden in November 2001, will be available shortly.

• Substantial progress has been made in fostering regional co-operation at each demonstration site. The most significant achievement in regional cooperation has been the establishment of the Regional Project Task Force in the Black Sea region. During the Black Sea Conference on Ballast Water Management and Control, held in October 2001, the six coastal states involved adopted a Resolution to approve the Regional Action Plan and to urge IMO, UNDP and GEF to secure continuation of the Globallast Programme within the timeframe needed to ensure a seamless implementation of the forthcoming IMO Convention.

• In January 2002, at the Global Project Task Force Meeting in Guangzhou, all the six pilot countries expressed strong support for the extension of the Globallast Programme by one year.

The priorities of the Globallast Programme during the coming months include completion of risk assessment activities in all the pilot countries and continuing regional cooperation, focusing on the replication of the experience achieved through the Kharg Island demonstration site for the ROMPE Sea Area in the other countries of the region. Further information http://globallast.imo.org

IMO assists Guatemala to update maritime administration

Guatemala has taken steps to modernize the country’s maritime legislation, following a carefully targeted programme of technical co-operation carried out by IMO under the supervision of its Technical Co-operation Division.

The Organization provided technical advice in a three-phase programme. An initial advisory and assessment mission was undertaken between November and December 2001; preparation of a national seminar took place in January and February 2002 and finally a seminar on International Maritime Legislation and Maritime Administration was held in Guatemala City, from 25 February to 1 March 2002.

An IMO consultant carried out phases 1 and 2 and also coordinated the national Seminar. At the latter event, five additional IMO consultants lectured (including 2 from Guatemala), and it was attended by 121 persons from the public and private sectors representing shipping, port, legal, and academic institutions.

Recognizing the need for modern legislation and a maritime authority, the Seminar recommended rapid action by the Government. It has already embarked on the implementation of the Seminar’s recommendations, beginning with the preparation of modern shipping legislation, which should also provide for the establishment of a maritime port authority.

Her Excellency Sra. Martha Ruiz de Vivenol, Ambassador of Guatemala and Permanent Representative to IMO, has presented a commemorative plaque to thank IMO in recognition of the assistance it has provided.
United Nations Atlas of the Oceans is launched

The United Nations (UN) has joined with a host of other United Nations agencies and leading international scientific bodies in developing the first comprehensive real-time tool to assess the state of the world’s oceans. The Internet-based United Nations Atlas of the Oceans was launched on World Environment Day (5 June 2002) at a meeting of the Intergovernmental Oceanographic Commission of UNESCO (United Nations Educational, Scientific and Cultural Organization) in Paris, France.

More than 21/2 years in development after a decade of planning, the Atlas of the Oceans represents the most ambitious global scientific information collaboration ever on-line and an international consensus-building tool expected to assist negotiations of future marine-related agreements.

The project partnership includes: the Food and Agriculture Organization of the United Nations (FAO), the International Atomic Energy Agency (IAEA), International Maritime Organization (IMO), United Nations Environment Programme (UNEP), World Meteorological Organization (WMO), the United Nations Division for Ocean Affairs and the Law of the Sea (UNDOALOS) and the Intergovernmental Oceanographic Commission of UNESCO. The FAO led the initiative, with principal funding of $500,000 from the United Nations Foundation.

Collaborators include the Russian Head Department of Navigation and Oceanography (HDON), and the United States National Oceanic and Atmospheric Administration (NOAA), which in addition to providing information, seconded Dr. John Everett as Project Manager and provided support staff and funding.

The Atlas is designed for a complete cross section of potential users - from schoolchildren to policy-makers needing to become familiar with ocean issues, to resource managers needing access to underlying databases. The website will be supplemented by a CD ROM to make much of the information accessible in regions where Internet access is difficult. There are also plans for a printed version.

More than 350 topics are currently covered with 17 founding editors. More topics and 400-500 designated topic editors are set to be added over time.

For the public, policy makers, scientists, resource managers, the media, Non-Governmental Organizations, educators, students and other stakeholders, the Atlas will be an encyclopaedic resource offering instant access to strategic data on the state of ocean resources, development trends, maps and threats to human health from the deteriorating marine environment. It will also serve as the world’s foremost information clearinghouse and online forum for experts in ocean issues.

Project Director Dr. Serge Garcia, Director of the FAO Fisheries Resources Division, said the Atlas “enhances the world’s ability to form partnerships...benefiting all nations concerned about sustainable use of the oceans.”

Uses:
- disposal of waste from land, energy, fisheries and aquaculture, human coastal settlements, marine biotechnology, non-consumptive uses, ocean dumping and ship wastes, offshore oil, gas and mining, recreation and tourism, and transportation and telecommunications.
- Issues: climate variability and climate change, economics, emergencies, food security, governance, human health, pollution and degradation, safety and sustainable development.
- Background: including biology and ecology, how oceans were formed and how they are changing, monitoring and observing systems, and maps, statistics and online databases.
- Geographical: categorizes information according to geographic region.

The world’s oceans are crucial to the sustainable development of our planet. The UN Atlas of the Oceans is the first comprehensive, real-time resource designed to assess their condition.

Obituary

Dr Thor Heyerdahl

D r Thor Heyerdahl, the distinguished Norwegian explorer, anthropologist, environmentalist and author has died at his home in Italy at the age of 87.

Although Dr Heyerdahl first achieved popular international acclaim for undertaking a series of intrepid ocean crossings in small craft to lend credence to his theories about ancient human migration, he was also a distinguished environmentalist whose observations on the state of the oceans contributed to shaping the environmental activities of IMO during its early years and to developing the much needed regulations and conventions that today help protect the marine environment.

In association with the Norwegian Shipowners’ Association he established the prestigious Thor Heyerdahl International Marine Environment Award to provide continuous encouragement and inspiration to improve the global environment.

He will be remembered for carrying his dream into the new millennium.
Helping to keep the world’s shipping lanes safe