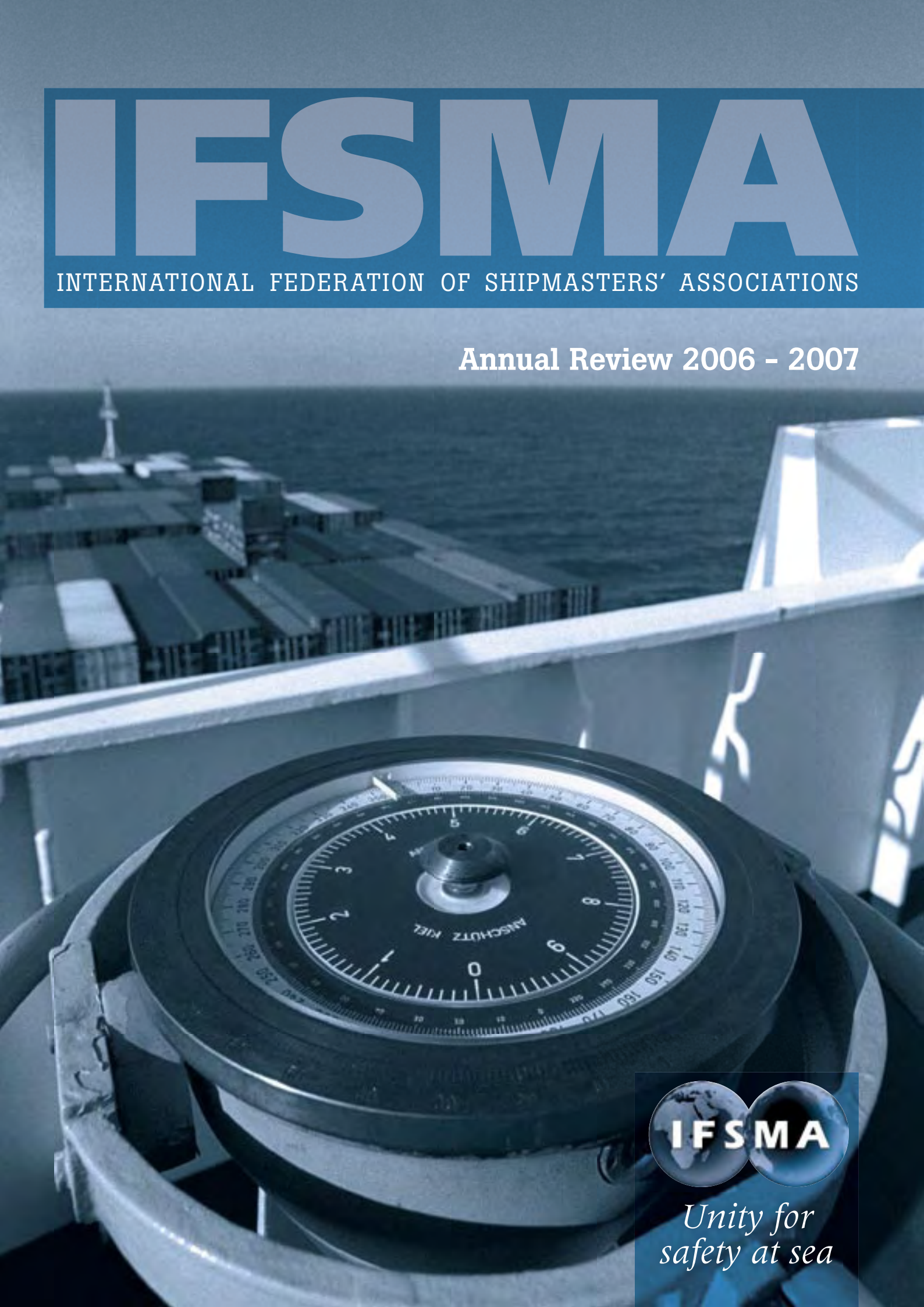
IFSMA

INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS

Annual Review 2006 – 2007



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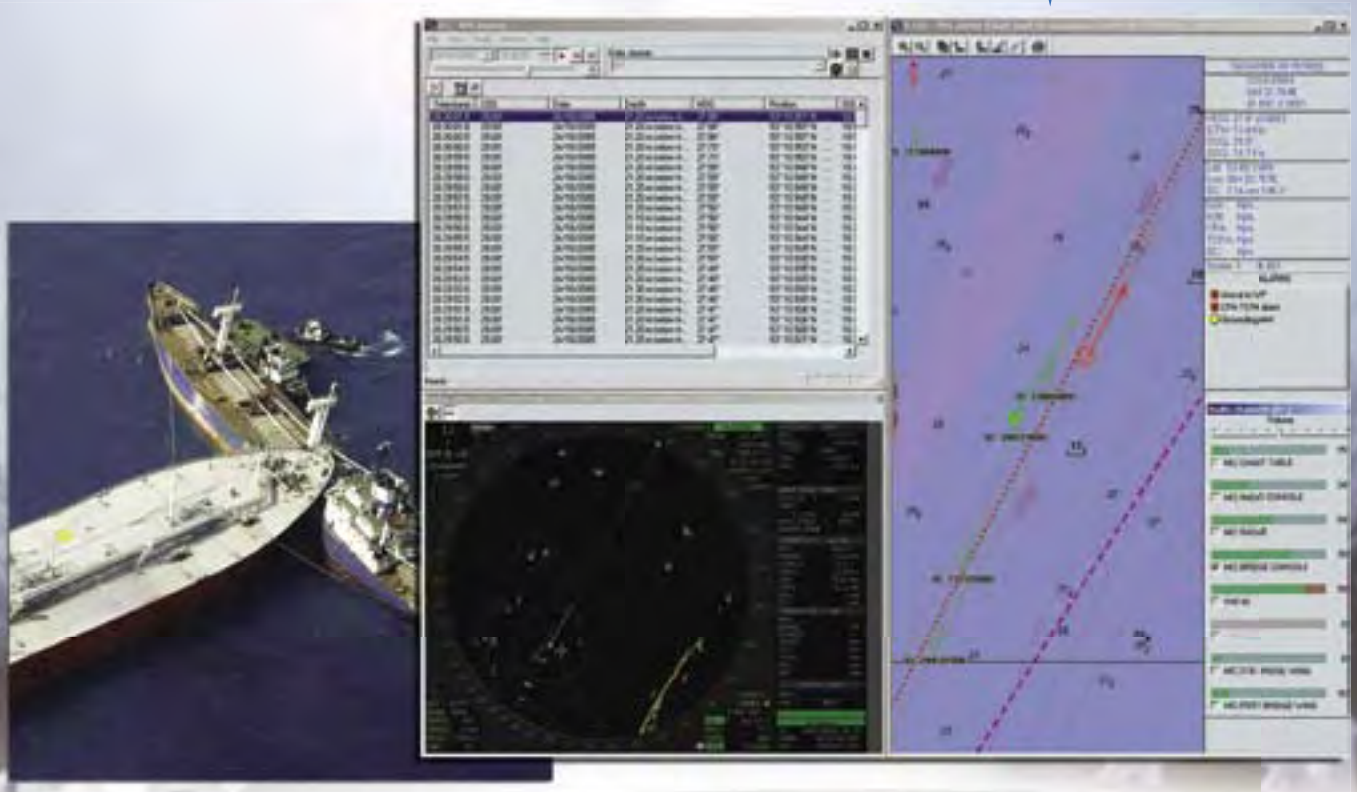

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The Grieg Group has its beginnings in a long and proud maritime tradition. Today, in addition to shipowning and shipbroking, the group is engaged in fish farming and processing, global logistics, insurance broking and asset management, employing some 900 people.

MARIS roots go back to the start of the maritime information technology explosion of the mid-1960s. MARIS is a system house with world-class experience in maritime on-board systems. Innovative engineering from people in MARIS has added several "worlds first" to the global list of milestones. Among our worlds first are "Wheelmark" certified ECDIS and PC radar/ARPA, IEC 60945 certified Flat Panel Computer and S-VDR/ECDIS COMBO.

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Introduction to IFSMA

IFSMA has been working on behalf of the serving Shipmaster since 1974. Then, eight European Shipmasters' Associations united into a single international professional co-ordinated body.

Now the Federation links more than 10,000 Shipmasters from about 60 countries, either through their National Associations or as Individual Members. It retains the original ideals of an apolitical organisation, upholding the international standards of professional competence for seafarers.

IFSMA works to promote safe operational practices, safety of life at sea, injury prevention, protection of the marine environment and property at sea.

Its London headquarters is ideally placed close to the International Maritime Organization (IMO), where it has enjoyed consultative status as a non-governmental organisation since 1975. Its representatives there represent the views and protect the interests of serving Shipmasters without outside influence being brought to bear.

Representing IFSMA at IMO are the Secretary General and a team of active or former Shipmasters. They attend four main committees: the Maritime Safety Committee, the Marine Environment Protection Committee, the Legal Committee and the Facilitation Committee.

This team is also active in the nine sub-committees of IMO, the Working and Drafting groups and attends Council meetings and the Assemblies.

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Unity for safety at sea

contents...

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Capt Christer Lindvall
IFSMA President

IFSMA gains visibility and grows stronger

DEAR COLLEAGUES, LADIES AND GENTLEMEN…

…First of all I want to thank the Koninklijk Belgisch Zeemanscollege (KBZ), the royal maritime college for Belgium, for inviting us, the members of IFSMA, to join in the celebration of its 150th anniversary. At the same time, I would also like to thank, once again, the Council of American Master Mariners, CAMM, for hosting our successful annual general assembly last year in Los Angeles.

I am also delighted, as your President, to say that IFSMA as an organisation is getting more and more visible and is being heard worldwide. We are invited throughout the world to participate as speakers and as chairmen at many different conferences and seminars.

During the past 12 months since we last met we have also attracted some new member organisations, among them AMOSUP from the Philippines and the Company of Master Mariners of Canada. IFSMA's finances are fairly good, even after we reduced membership fees last year, because of this increase in membership.

In the Executive Council we have been discussing a new and improved newsletter or magazine and eventually plan to launch major conferences on subjects which are close to our hearts. Other organisations such as The Nautical Institute, Intertanko and maritime academies seek our co-operation in different areas. This also shows that others are interested in hearing the voice of Shipmasters. This, together with an improved financial situation, makes it possible to take further steps to improve our image and our impact on the entire shipping industry and the politicians.

One of the major problems faced by the industry today is the shortage of competent officers, which is particularly acute

Left: Security (photo-USCG) ISPS Code is having an adverse impact on life at sea

Below: Wolgang Schroeder's case brought criminalisation of Shipmasters to the fore

"IFSMA as an organisation is getting more and more visible and is heard worldwide"

amongst experienced tanker and engineer officers. IFSMA has warned about this and has been expecting problems for many years, with the number of ageing officers, low recruitment and a high wastage of certified officers. Other factors contributing to the shortage of officers are:

- The strict requirements of the STCW Convention and the ISM Code;
- The adverse impact the ISPS Code has had on life at sea and in port for seafarers;
- The increased criminalisation of officers.

A further factor is the growing size of the world fleet, with more than 4,000 newbuildings on the orderbooks and only a low level of scrapping of about 400. If nothing is done, the shortage will increase from about 10,000 officers today to a shortfall of 40,000 officers in the coming decade, according to a survey conducted by BIMCO and ISF. There is a very high risk now of a decline in nautical skills, as there has been little effort to train cadets to fill the gap between supply and demand.

Over the past year we have participated in a number of IMO meetings (*see our Secretary General's report p 4*). The IMO headquarters in London is still under renovation and will be so until early next year at least; meetings have therefore been held in different places in London, and in Paris and Istanbul. The next Maritime Safety Committee will most probably meet in Copenhagen. It was in Istanbul that we were informed of the sad news that the newly elected chairman of the Maritime Safety Committee, Igor Ponomarev, had just passed away, aged 41.

Important subjects on the agenda today include the revision of the STCW Convention, fatigue and manning – especially on ships with low manning – improved safety on passenger ships, the criminalisation of officers, piracy and robbery, the human factor, seafarers' ID and the right to shore leave while in port.

There have been some severe disasters at sea, among them passenger ships involving major loss of life, including the loss of the *Al-Salam Boccaccio ´98*, in the Red Sea, and the *Senopati Nusantara*, in Indonesian waters. The Swedish ro-ro ship, *FinnBirch*, unexpectedly capsized in the Baltic Sea with the loss of two seafarers. Helicopters could not reach them because of the ship's heavy list, heaving and rolling. The helicopters had to wait, and only when the ship had sunk could they take the seafarers out of the water.

The greatly needed International Maritime Labour Convention has not yet entered into force. It will only take effect 12 months after at least 30 countries representing 33% of the world tonnage have signed up to it. So far only Liberia has signed the agreement. The European Union has the intention that all 27 of its member states will sign the treaty in the course of 2008.

In the Executive Council we have come to the conclusion that we should work closer with the European Commission and the European Maritime Safety Agency (EMSA) because of the influence they and their member states have within IMO. IFSMA should also participate in different projects promoted by organisations such as The Nautical Institute, various maritime academies and other non-governmental organisations.

Finally, I want to urge you to put pressure on your individual governments to improve the situation for active shipmasters and other seafarers onboard vessels to ratify the International Maritime Labour Convention. We want to improve conditions for our colleagues who sail on ships with only two navigators, where the risk of fatigue is always present.

Thank you for listening, and I hope we will have a successful meeting here in Antwerp.

Capt Rodger MacDonald
IFSMA Secretary General

The year in review

IT IS MY PLEASURE TO REPORT ON THE WORK CARRIED OUT BY THE IFSMA SECRETARIAT UNDER THE DIRECTION OF THE EXECUTIVE COUNCIL

The IFSMA Annual General Assembly was hosted by CAMM and took place in San Pedro, Los Angeles, on 8–9 May 2006. Further details of this conference are on the IFSMA web site. There were four Resolutions passed and details of these are included in the Minutes and Annexes of the 32nd AGA. These resolutions dealt with the following issues:

- Criminalisation of seafarers;
- E-Learning in maritime training and education;
- Shipmasters and the fishing industry;
- Manning and fatigue concerns.

The Secretariat and the Executive Council have worked on each of these resolutions and will continue to commit themselves to ensuring Shipmaster interests are kept to the forefront of national and international bodies responsible for introducing and implementing treaties and codes that affect the Shipmaster. The following is a report on some of the work that has been carried out since the 32nd AGA and 15 March 2007.

Fair treatment of seafarers

IFSMA continued its campaign for the fair treatment of seafarers, with representatives attending the IMO Legal Committee's 92nd session held in Paris, France, during October 2006. The guidelines on fair treatment of seafarers in the event of a maritime accident were adopted by the Legal Committee at its previous session and by the governing body of the ILO at its 296th session on 12 June 2006.

The Legal Committee decided that it would be premature to amend the guidelines now, but agreed to review and monitor them. This issue was also raised at the Sub-Committee on Flag State Implementation (FSI) in June 2006, when it continued its review of the Code for the investigation of marine casualties and incidents, with a view to making the Code mandatory. The foreword, general provisions, mandatory standards and recommended practices in the new draft revised code were developed, taking into account the guidelines on fair treatment of seafarers in the event of a maritime accident.

During this time the case of Capt Schroeder was causing great concern within the shipping community. This highlighted the need to develop the guidelines further to a code or convention that is internationally accepted.

Claims for death, injury and abandonment

The Joint IMO/ILO Ad Hoc Expert Working Group on Liability and Compensation regarding Claims for Death, Personal Injury and Abandonment of Seafarers is continuing to develop a standard and guidelines in relation to claims for death, personal injury and abandonment of seafarers. The drive to complete these arrangements has been prompted by a resolution adopted by the ILO International Labour Conference. At its 94th session in February 2006, the International Labour Conference adopted the 2006 Maritime Labour Convention.

Fatigue and safe manning

Lessons that have been learned from casualty investigations showed that excessive hours of work or insufficient rest can contribute to fatigue, identified as an important contributing factor to maritime casualties and to health problems of seafarers.

Taking this on to the STW Sub-Committee, the subject was discussed. After a lot of debate the sub-committee agreed to adopt a holistic approach towards addressing fatigue, and to consider in future all issues relating to fatigue under two work programme items – review of the principles for establishing the safe manning levels of ships, and a comprehensive review of the STCW convention – rather than duplicated consideration of a further item on the programme.

The sub-committee concluded that Resolution A.890 (21) as amended, should be reviewed and the need for revisions to be identified. IFSMA's submission for all ships to have a minimum of a Master and two mates was rejected at this session. Nevertheless, it remains an issue in the review.

E-navigation

The Maritime Safety Committee decided to include, in the work programmes of the NAV and COMSAR Sub-Committees, a high-priority item on *Development of an e-navigation strategy*, with a target completion date of 2008 and with the NAV Sub-Committee acting as co-ordinator. NAV 52, which met in July 2006, was instructed to give preliminary consideration to this important topic.

The aim is to develop a strategic vision for e-navigation, to integrate existing and new navigational tools, in particular electronic tools, in an all-embracing system that will contribute to enhanced navigational safety and to reducing the burden on the navigator. The COMSAR Sub-Committee discussed the development of an e-navigation strategy at its 11th session. Having considered the working group's report on the development of an e-navigation strategy, the sub-committee agreed that user requirements should be clearly defined by the NAV Sub-Committee (meeting July 2007) before any technical improvements could be studied if the GMDSS equipment was to utilised as a data communication network for e-navigation. IFSMA is part of this project's correspondence group.

Education training and competence

The comprehensive review of the STCW Convention and the STCW Code took up considerable time at the STW Sub-Committee meeting. Importantly for IFSMA, it was agreed that any item for review must fall within the following eight principles:

- Retain the structure and goals of the 1995 revision, and not scale down existing standards;
- Do not amend the articles of the convention;
- Address inconsistencies, interpretations, outdated provisions, MSC instructions, clarifications already issued and technological advances;
- Address requirements for effective communication;
- Provide flexibility in terms of compliance and for required

levels of training and certification and watch-keeping arrangements due to innovation in technology;
- Address special character and circumstances of short-sea shipping and the offshore industry;
- Address security-related issues.

Furthermore, IFSMA was particularly concerned with two items at this meeting: there was a need to clarify what should be the acceptable minimum time that would constitute a period of rest; and the Master should not be considered a Watchkeeping Officer when deciding the composition of the navigating watch.

It was pleasing, therefore, that the sub-committee agreed to review the hours of work and rest provisions in Chapter VIII, with a view to harmonising with the ILO 180 Convention, including the mandatory recording of hours.

On the subject of training to meet the requirements to enhance maritime security, STW agreed that there should be a three-tiered approach to security training for ships' crew. This should be included in Chapter VI of the STW Convention in addition to the adopted standards VI/5 for ship security officers.

Although IFSMA was unable at this meeting to persuade the sub-committee that a logical approach to training ships' security officers (SSOs) was to include the training with requirements for OOW, the argument will continue at future meetings.

E-learning

With regard to the development of e-learning in maritime training and education the Secretary General has been engaged in developing and operating an electronic training system for non-STCW maritime-related courses. This has been carried out through our connections with Lloyd's Maritime Academy. So far the feedback has been very positive.

Unlawful practices and certificates of competency

The UK provided information on a report on the investigation it conducted into the types of fraud associated with certificates of competency, and also how fraud might be effectively identified and prevented. To improve awareness of the situation, Latvia has also initiated a research project on the problems of fraudulent certificates.

Goal-based new ship construction standards (GBS)

IMO continues to work on the basis of a prescriptive approach for GBS for provisions for hull construction for bulk carriers and oil tankers and of a safety level approach for all other ship types. With regard to the GBS for bulk carriers and oil tankers, the MSC has already agreed on a five-tier system, consisting of goals (Tier I), functional requirements (Tier II), verification of compliance criteria (Tier III), technical procedures and guidelines, classification rules and industry standards (Tier IV) and codes of practice and safety and quality systems for shipbuilding, ship operation, maintenance, training, manning etc (Tier V). Tier I goals and Tier II functional requirements have already been agreed in principle.

Following consideration of the matter, the MSC approved the plan for the pilot project on trial application of the Tier III verification process using the IACS Common Structural Rules (CSR) and agreed that the nomination of candidates for the pilot panel should be open to all, while the selection of members by the MSC chairman, in consultation with the secretariat, would assure that the panel would be balanced.

Passenger ship safety

The MSC completed its major work programme item on passenger ship safety. It has based its guiding philosophy on the premise that the regulatory framework should place

more emphasis on the prevention of a casualty from occurring in the first place and that future passenger ships should be designed for improved survivability so that, in the event of a casualty, persons can stay safely onboard as the ship proceeds to port.

The amendments include new concepts such as the incorporation of criteria for the casualty threshold (the amount of damage a ship is able to withstand, according to the design basis, and still safely return to port) into SOLAS chapters II-1 and II-2. The amendments also provide regulatory flexibility so that ship designers can meet any safety challenges the future may bring. These amendments are expected to enter into force on 1 July 2010.

Fire regulations on balconies

The MSC adopted amendments to SOLAS chapter II-2 and to the International Code for Fire Safety Systems (FSS Code) to strengthen the fire protection arrangements in relation to cabin balconies on passenger vessels.

For existing passenger ships, relevant provisions require that furniture on cabin balconies be of restricted fire risk unless fixed water-spraying systems, fixed fire detection and fire alarm systems are fitted and that partitions separating balconies be constructed of non-combustible materials, similar to the provisions for new passenger ships. The amendments are expected to enter into force on 1 July 2008.

Prevention of accidents involving lifeboats

The MSC adopted an amendment to SOLAS regulation III/19.3.3.4 concerning provisions for the launch of free-fall lifeboats during abandon-ship drills.

The amendment will allow, during the abandon-ship drill, for the lifeboat either to be free-fall-launched with only the required operating crew onboard, or to be lowered into the water using the secondary means of launching without the operating crew onboard, and then manoeuvred in the water by the operating crew. The aim is to prevent accidents with lifeboats occurring during abandon-ship drills. The amendment is expected to enter into force on 1 July 2008.

Meanwhile, the MSC agreed a consolidated circular to include the guidelines for periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear; guidance on safety during abandon-ship drills using lifeboats; and guidelines for simulated launching of free-fall lifeboats.

Assessment of the ISM Code

The MSC reviewed the report of a study on the impact and effectiveness of the ISM Code. The report had been carried out by a group of independent experts selected from administrations, organisations, academia and the shipping industry. Based on the data collected, the group concluded that where the ISM Code had been embraced as a positive step towards efficiency through a safety culture, tangible positive benefits were evident;

and ISM Code compliance could be made easier through a reduction in the administrative process.

The committee noted that the industry had identified common areas between the ISM and ISPS Codes. It concluded that resolution A.852(20), on guidelines for a structure of an integrated system of contingency planning for shipboard emergencies, may provide guidance on the handling or management of common areas of the ISM and ISPS Codes.

Near misses

The MSC agreed there was a need to encourage companies and seafarers to document and record information on near-misses and hazardous situations in order to understand the precursors to events that were detrimental to safety and the marine environment. It invited member governments, intergovernmental and non-governmental organisations in consultative status to submit proposals to the next session of the joint MSC/MEPC working group on the human element, which is scheduled to be reconvened at MEPC 56, from 9 to 13 July 2007.

Long-range identification and tracking system (LRIT)

A new regulation on LRIT is included in SOLAS chapter V on Safety of Navigation, through which LRIT will be introduced as a mandatory requirement for the following ships on international voyages:

- passenger ships, including high-speed craft;
- cargo ships, including high-speed craft, of 300gt and above;
- mobile offshore drilling units.

This establishes a multilateral agreement for sharing LRIT information for security and search-and-rescue purposes among SOLAS-contracting governments, in order to meet the maritime security needs and other concerns of governments.

It maintains the right of flag states to protect information about the ships entitled to fly their flag, where appropriate, while allowing coastal states access to information about ships navigating off their coasts. The regulation foresees a phased-in implementation schedule for ships constructed before its expected entry into force date of 1 January 2008 and an exemption for ships operating exclusively in sea area A1 from the requirement to transmit LRIT information, since such ships are already fitted with AIS. It also identifies which authorities may have access to LRIT information.

Ballast water management

The following guidelines, which are part of a series developed to assist in the implementation of the Ballast Water Management Convention, were adopted:

- ballast water exchange design and control standards (G11);
- design and construction to facilitate sediment control on ships (G12);
- designation of areas for ballast water exchange (G14);
- sediment reception facilities (G1);
- ballast water reception facilities (G5).

The Ballast Water Review Group's conclusions were that type-approved ballast water management systems would probably be available for installation prior to the first application date of the BWM Convention. However, the installation of type-approved ballast water management systems on ships already contracted to be built in or after 2009 may not be feasible or possible only at excessive cost and/or delivery.

Inadequacy of shoreside reception facilities

The MEPC approved an action plan to tackle the alleged inadequacy of port reception facilities – seen as a major hurdle to overcome if full compliance with MARPOL is to be achieved. The plan was developed by the Sub-Committee on Flag State Implementation (FSI) and it is hoped that its outcome will contribute to the effective implementation of the MARPOL Convention and promote quality and environmental consciousness among administrations and shipping.

The plan contains a list of proposed work items to be undertaken by IMO with the aim of improving the provision and use of adequate port reception facilities. With regard to regional arrangements, the committee agreed to recognise them as a means to provide reception facilities in light of the MARPOL requirements, taking into account the benefit of having such regional arrangements in place.

Harmonisation of port state control activities

IMO has been working on a framework to promote the global harmonisation and co-ordination of port state control activities, bearing in mind the fundamental principle that flag state implementation is the very first line of defence for compliance with international standards, with port state control being complementary to the role of the flag states. For global harmonisation of port state control, the following were considered to be the most important elements:

- ratification by all member states of the IMO instruments and other relevant conventions (ie ILO Conventions);
- unified understanding and implementation by authorities and port state control officers of the provisions contained in

the conventions, codes and guidelines;
- compatibility of port state control procedures, reporting systems and standard formats;
- transparency of information as well as reliable statistics on inspection results;
- co-operation and efficient exchange of information between member states and port state control regimes;
- analysis of port state control activities, practices and statistics; training of qualified professionals as port state control officers and good understanding of processes, standards, codes and practices by all involved (flag states, port state control officers, authorities, crew, recognised organisations etc);
- revision of the available training material such as IMO model course 3.09 and developing globally harmonised training materials.

Procedures for sea rescues

The administrative procedures involved when dealing with persons rescued at sea, especially those who subsequently turn out to be involved in unregulated migration, should be reviewed, and a correspondence group on administrative procedures for persons rescued at sea is working on this.

The 1 July 2006 amendments to the SOLAS and SAR Conventions concerning the treatment of persons rescued at sea (adopted in May 2004) entered into force.

Revisions and amendments of MARPOL

Annex III Revisions have been adopted to harmonise the regulations with the criteria for defining marine pollutants which have been adopted by the UN Transport of Dangerous Goods (TDG) Sub-Committee, based on the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Draft Wreck Removal Convention approved

A draft Convention on the Removal of Wrecks has been approved by the IMO's Legal Committee, and the draft text will now be forwarded to a diplomatic conference, scheduled to be held from 14 to 18 May 2007 in Nairobi, Kenya.

Measures to enhance maritime security

The MSC approved amendments to the revised recommendations on the safe transport of dangerous cargoes and related activities in port areas (MSC/Circ.675), to include provisions intended to address the security of transport of dangerous goods by sea.

It also approved amendments to the IMO/ILO/UNECE Guidelines for packing of cargo transport units to broaden the scope of the guidelines to address the need for vigilance and the need for security procedures to be developed and followed by all concerned.

Non-SOLAS chapter XI-2 and ISPS Code ships

The MSC began consideration of issues relating to the security aspects of the operation of ships that do not fall within the scope of SOLAS chapter XI-2 and the ISPS Code (including cargo ships of less than 500gt that travel on international routes). The

Committee agreed that non-SOLAS vessels shared the same operational environment as ships that fall within the scope of application of SOLAS chapter XI-2 and the ISPS Code and the operations of the former affect the security of the latter.

Water-based fire-extinguishing systems

The sub-committee agreed to draft amendments to the revised guidelines for the approval of equivalent water-based fire-extinguishing systems for machinery spaces and cargo pump-rooms (MSC/Circ.1165), also for submission to MSC 83 for approval. The draft amendments to figures 1, 2 and 3 in MSC/Circ.1165 have been revised to clearly show the specified recommended fire test configurations and spray fire locations. In addition to IMO attendance the Executive Council met in Paris on 20 October 2006 and London on 27 and 28 March 2007.

Fires in engine rooms and cargo pump rooms

The sub-committee reviewed draft guidelines for measures to prevent fires in engine rooms and cargo pump rooms that had been developed by a correspondence group and agreed that further work was needed.

Pre-1 October 1994 CO_2 fire-extinguishing systems

The sub-committee agreed to draft amendments to SOLAS regulation II-2/10, to require all CO_2 systems to have two separate releasing controls. The draft amendments will be submitted to MSC 83 for approval and subsequent adoption, on the basis that existing ships would have to comply by completion of the first scheduled dry-docking after 1 July 2009.

Other visits made since the AGA

The Secretary General attended and presented a paper at the *LSM* Manning and Training Conference in Saint Petersburg from 23 to 24 May 2006. He also chaired a workshop debating the issues of fatigue and safe manning.

The Assistant Secretary General, representing IFSMA, attended the IALA VTS Committee meetings in Paris in September 2006 and March 2007 *(see report page 20)*.

IFMSA is a board member of the World VTS Guide and both the Secretary General and the Assistant Secretary General attended its annual meeting in London in July 2006.

On 26 January the Secretary General attended the Honourable Company of Master Mariners, as Deputy Chairman of the Education and Training Committee; this was formerly known as the Apprentices Committee. In addition, the Secretary General attended as the IFSMA representative at the Nautical Institute Education and Training Committee.

The Secretary General also attended the annual Great Gale Service at Prior Church, Bridlington, and expressed Shipmasters' appreciation of those who volunteer to operate the lifeboats around the coast of the UK.

In conclusion I would like to thank the Executive Council and all our members for their support and especially the hard work carried out over the year by my colleagues Paul Owen and Roberta Howlett.

A full length report is on the IFSMA website: www.ifsma.org

Allan Graveson
Nautilus UK

Safety and economies of scale

AS CRUISE SHIPS GET BIGGER, SO DO THE SAFETY CONCERNS, ALLAN GRAVESON REPORTS

Of all the many types of merchant ship, those with the greatest potential for the loss of life are large passenger vessels. Masters of large passenger vessels have considerable responsibility and deserve to be provided with a ship that is 'fit for purpose' – a vessel that is safely able to carry passengers and crew from point of departure to destination without causing damage to the marine environment. The vessel should be adequately manned and provided with the necessary life-saving appliances to effect a safe evacuation.

The demand for cruise vessels has increased significantly in recent years. In order to maximise the benefits of economy of scale, the largest vessels have doubled in size, from 80,000gt to over 160,000gt. Passenger vessel design has changed significantly to reflect the requirements of customers and the necessity to maximise revenue-earning capacity, with an increase in the number of decks and outer cabins, onboard recreational facilities and retail outlets.

As large passenger vessels get bigger, concerns have grown over their watertight integrity, fire-fighting protection and the adequacy of life-saving appliances. There are questions, too, over the quality and quantity of crews and whether the training and experience they receive prepares them sufficiently to operate these vessels and deal with emergencies, including evacuation of passengers.

Almost without exception, this growth in the size of vessels has coincided with failures. Large passenger vessels have been built to prescriptive requirements based on the extrapolation of the rules of construction determined from smaller vessels. This approach, together with economic considerations, has resulted in larger compartments and reduced open deck space.

Many large passenger ships are not fit for ocean crossings or operation in adverse weather conditions, let alone able to withstand an 'abnormal' wave. Increasingly, these vessels are operating in remote areas. This raises questions over search and rescue and the additional burden of responsibility that is being placed on Masters when vessels are operating in remote areas.

Recently, consideration has been given to a probabilistic or a goal-setting approach in ship construction. The two approaches are not necessarily incompatible, although the latter permits greater flexibility. This new approach has the potential for earlier adoption of new technology but it also has the potential to reduce existing requirements – so lowering current levels of safety.

Some large passenger vessels have been built with a relatively shallow draft so that they can access ports and avoid the use of tenders. Simultaneously, the number of decks has been increased and additional leisure facilities incorporated as a means of boosting revenue-earning capacity. Extra swimming pools, coupled with a number of slack tanks when in operational service, further reduce stability – but these changes are not being reflected in trials. Attempts at reducing top weight and ensuring sufficient GM have prompted designers to employ combustible materials and to include additional precautions to provide constant monitoring of vessel stability.

Manning has been reduced, so in some instances there is only a single watch-keeping officer on the bridge. This places further burdens on Masters where vessels have intensive cruise programmes, particularly in areas of high traffic density.

Over recent years, a number of potentially serious incidents have served as a warning to the industry. These have included: the collision of the *Norwegian Dream* and the *Ever Decent*; the grounding of the *Norwegian Crown*; the recent fire onboard the *Star Princess*; and several examples of ships exhibiting large angles of heel when turning, notably the *Crown Princess* and *Grand Princess*.

The passenger shipping industry, represented internationally by the International Council of Cruise Lines (ICCL) and the International Chamber of Shipping (ICS), robustly defends the status quo in seeking to prevent the introduction of new safety measures or changes in design and construction of these vessels. All measures likely to incur additional costs and reduce revenue are vigorously opposed.

Historically, professional organisations and the maritime unions have argued for improved quality of ship construction so as to ensure enhanced levels of safety for their members. Governments and regulators, while expressing concern, are rarely proactive in this area, unless they are fulfilling the

...continued on page 14

The problem:

Prevention of collision and grounding

Construction of these vessels affords better protection against these hazards than most other ship types, but major issues remain on training and adequacy of manning, both on the bridge and in the engine room. These floating small towns need sufficient crew to meet routine operational requirements and the demands associated with intensive operations. Manning levels need to be sufficient to prevent fatigue and to deal with routine and non-routine operation of the vessel, by responding to emergencies.

The solution:

IFSMA should: campaign for adequate manning of bridge and engine room, including at least two officers on duty both on the bridge and engine room at all times while the vessel is at sea.

The problem:

Stability and watertight integrity

The extrapolation of the rules of construction with respect to large passenger vessels has raised significant questions over their safety. In particular, vessels have been constructed with a shallow draft to improve port access and given more decks to provide leisure facilities, including swimming pools, so reducing the GM. The effects of this, particularly in adverse weather conditions and when a vessel is turning, need to be addressed.

The solution:

IFSMA should campaign for the existing standards of stability and watertight integrity to be maintained and, where necessary, increased.

The problem:

Fire protection

The increased size of compartments, including shopping malls and atriums, increases the potential for the spread of fire. While effective automated systems may reduce the risk of spread of fire, there is a need to take into consideration the size of compartments and the adequacy of current fire-fighting arrangements.

The solution:

IFSMA should encourage research into fire-protection systems and adequacy of current protection measures.

The problem:

Life-saving appliances and abandonment

Lifeboats have increased in size and mass evacuation systems have been developed to cater for the greater number of passengers carried. While regulatory requirements have been met, the adequacy of such systems has been questioned. Occasional reference has been made to innovative systems, such as escape modules, but the lifeboat and liferaft continue to be the main means of evacuation and survival.

The solution:

IFSMA should encourage research into innovative systems for abandonment, the adequacy of existing evacuation systems and the compatibility of life-saving appliances and equipment.

The problem:

Crew training (the human element)

The structural change in the employment of crews on passenger vessels, largely from agencies, resulting in casualisation of labour, raises serious questions about the ability to fight fire and ensure an orderly evacuation of passengers. While a core crew in both deck and engine, including the officers, will be trained to a high level, the bulk of the catering department receives only minimal training. Safety training is a fraction of that received by aircraft cabin crews.

The solution:

IFSMA should seek additional training requirements for all personnel on large passenger vessels.

recommendations of a post-incident inquiry into a maritime accident or, more recently, as a consequence of intense pressure by environmental groups.

Other interested parties, including shippers of cargo and insurers, have an interest in safety. However, these parties are generally unwilling to take on the 'burden' of additional costs associated with improved ship construction. While there are some notable, albeit rare, exceptions, shipbuilders generally seek to meet competitive tenders by reducing the cost of build – so lowering standards – or choosing not to enhance existing standards for fear of being uncompetitive.

While the dangers associated with large passenger vessels are recognised – including the inherent dangers associated with evacuation and search and rescue – no substantive action has been taken. Privately, many in the industry acknowledge that problems exist, but consider them too difficult or too expensive to resolve.

The International Maritime Organization (IMO) has recently completed a five-year initiative, instigated by the former Secretary General, William O'Neill, to address concerns over the vulnerability of these vessels and the potential loss of thousands of lives. There has been considerable discussion in the committees and sub-committees at IMO, with no measurable improvement in the safety of these vessels.

The whole basis for the review was that vessels should safely return to port. Some parties were even referring to the word "unsinkable", whereas in reality extrapolation of the rules of construction and the revision of existing standards has resulted in the vessels being less safe. The return to port concept is, and has always been, questionable, as is remaining afloat for a sufficient time to ensure an orderly abandonment.

As part of the review of SOLAS Chapter II at IMO, ship stability has come into focus and, in particular, that of large passenger vessels. This has involved the harmonisation of much regulation, adopting a probabilistic approach to ships' stability. These concerns came to the fore at the 49th Session of the Sub-Committee on Stability and Loadlines and on Fishing Vessels (SLF 49), in July 2006. The report of the working group on Sub-division and Damage Stability (SDS) received very close scrutiny as the principal working group of the sub-committee.

The outcome of the group's deliberations and matters related to the development of explanatory notes of the harmonised SOLAS Chapter II/1, the Harmonisation of Damaged Stability Provisions and Other IMO Instruments, the revision of Resolution A.266 (VIII) and the revision of MSC/Circ.650 identified in paper SLF 49/4/7, Section 12: "The s = 1 standard is broadly similar to the SOLAS 90 transverse stability requirement, however, it permits immersion beyond the margin line and permits partial flooding of the bulkhead deck". Thus we have a stability standard that is similar to the existing one but applied to a damage extent that is considerably less than that defined by SOLAS 90.

The decision to abandon ship is a momentous one. In deciding not to abandon a damaged ship, the master must have faith in the ability of a ship not to sink in a seaway. The stability criteria represented by s = 1 would not offer sufficient confidence to a ship's Master to have passengers and crew remain aboard.

The UK and Germany spoke against this lowering of standards and requested that this be reflected in the report of the SLF 49, but other flag states remained silent. The new provisions were discussed at the 82nd Session of the Maritime Safety Committee of the IMO (MSC 82) in November/December 2006, and will be subject to further discussion at the next meeting of the SLF Sub-Committee.

The 38th Session of the Sub-Committee on Standards of Training and Watchkeeping (STW 38) in the initial review of the Standards of Training Certification and Watchkeeping 1978 as amended (STCW95), January 2007, rejected the mandatory provision of additional short safety courses for seafarers.

The over-arching philosophy of the passenger ship initiative was that the ship would be regarded as its own best lifeboat. A stability standard that gives the Master insufficient confidence in the ship's ability to resist capsize or sinking is not acceptable. In such cases abandonment would be the only course of action. The 'return to port' concept is thus discredited and was used throughout the review process as a means of resisting improvements to large passenger ship safety.

Spot the seasick!

Is it the man on the right, or the lady to the left? Maybe it's the steward? In fact it's none of them; it's the ship.

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David Patraiko
The Nautical Institute

Introducing the e-navigation revolution

SEAFARERS SHOULD GIVE THEIR VIEWS TO SHAPE THE WAY THE DEVELOPMENTS ARE GOING

The collection, integration and display of maritime information aboard and ashore by electronic means to enhance berth-to-berth navigation and related services, safety and security at sea, and the protection of the marine environment: a definition from the International Association of Marine Aids to Navigation and Lighthouse Authorities.

E-navigation could make a uniquely important contribution to enhanced navigational safety and commercial efficiency and this was recognised in 2005, when Japan, the Marshall Islands, Netherlands, Norway, Singapore, the UK and the US submitted a paper (MSC 81/23/10) to the IMO Maritime Safety Committee on the development of an e-navigation strategy.

This was proposed to add a new item on e-navigation to the work programmes of the NAV (Safety of Navigation) and COMSAR (Radio Communications and Search and Rescue) Sub-Committees. The paper said a strategic vision for the utilisation of existing and new navigational tools, in particular electronic tools, in a holistic and systematic manner.

This would "help reduce navigational accidents, errors and failures by developing standards for an accurate and cost-effective system. The two committees will report on this issue to MSC 85 in 2008. It is towards creating this strategic vision by 2008 that the industry, and international bodies like IALA and the International Hydrographic Organization (IHO), are now focused in their work.

Last year, e-navigation was added to the NAV 52 work programme and a correspondence group, coordinated by the UK, and will report to NAV 53 in July 2007. Its terms of reference include:

- The definition and scope of e-navigation and the production of a system architecture;
- Key issues and priorities in a strategic vision and policy framework and the benefits and obstacles that may arise;
- The identification of the roles of the IMO, its member states, other bodies and industry;
- The formulation of a work programme.

There are many groups and organisations nationally and at an international level that are co-ordinating and providing input to the IMO. One of these is the newly formed IALA E-Navigation Committee, which has a four-year work programme. IALA will use this dedicated committee to contribute significantly to the concept of e-navigation through the IMO.

In September 2006, this committee met for the first time. It agreed that its primary value was to join ships' bridge and VTS teams to create a unified navigation team to share tactical information. For full implementation and effectiveness of such a system, it would need to be mandatory for SOLAS vessels and scalable to all users.

The committee suggested an architecture comprising three fundamental elements:

- World electronic navigation chart (ENC) coverage of navigational areas;
- A robust electronic positioning system (with redundancy);
- An agreed infrastructure of communications to link ship and shore.

It is felt that development of e-navigation strategy needs to take into account:

- Man/machine interface – the balance between standardisation and innovation and development;
- Modes of information display and portrayal;
- Appropriate communication.

Onboard e-navigation system design: equipment should engage bridge teams and maintain high levels of attention and motivation without causing distraction.

Building on this concept the Australian Maritime Safety Authority (AMSA) held an e-navigation workshop in November

2006 and produced an architectural diagram to complement the work of IALA and contribute to the IMO CG.

This clearly shows that communication between the ship and shore navigation teams is at the core of e-navigation with the aim of safe navigation and improved efficiencies of operation.

In December of 2006 The Nautical Institute held a special e-navigation meeting with the specific objective of bringing seagoing council members together with leading manufacturers and regulators involved in the concept of e-navigation.

The NI is continuing to work with all stakeholders in the industry to help represent the professional views of mariners, towards developing a future navigation system to improve safety and efficiency.

These discussions brought back a recurring theme from the series of integrated bridge systems conferences the NI held in 2002 and 2003. Then the advantages of standardised controls and presentation and the advantages of the manufacturers driving innovation were stressed. One outcome from these conferences was the desire for an IMO-approved default setting that could be triggered by a single button. Although the mariner/display interface is only one aspect of e-navigation, it is an important one.

This general concept has now evolved into what we are arbitrarily calling the S-mode of operation and we would like feedback on the idea before the NI develops it further.

It is recognised that there is a vital need to embrace new technology and for manufacturers to be able to innovate with the expectation that if they get it right, they will be rewarded with sales of their products.

Recent innovations include the chart radar, new technology (NT) non-magnetron radar and ECDIS. Standardisation of navigation displays on the bridge would simplify training and ensure that pilots and mariners could be instantly familiar with the operation of equipment when joining a vessel and therefore be better placed to concentrate on making good decisions. The question, therefore, is how to balance these two objectives.

The concept of S-mode builds on the concept of a default setting by being a 'default mode'. This mode is made possible by the increasing use of multi-function displays (MFDs) where radar, charts, electronic position systems etc are inputs that can be arranged or re-arranged in any form on a display.

S-mode would require all navigation displays, regardless of manufacturer, to have a clearly identified button that, when pressed, brings the display into a standard format with a standard menu/control system, standard interface (keyboard/joystick etc) and basic features.

This view would be standardised and therefore familiar to all pilots and mariners. It could then be manipulated by means of a standard menu system to provide limited, although adequate, functionality.

Advantages include:

- Standardised training;
- User familiarity, regardless of manufacturer;
- S-mode used until crews have proven competency to use further functionality provided by individual manufacturers;
- S-mode could be used in decision-making.

With the performance of S-mode secured and strictly governed by the IMO, manufacturers would be able to develop further functionality that they could market to shipowners as a value-added feature. If, in time, these innovative features proved to be popular and effective, they could then be brought into S-mode in a controlled way by the IMO.

At a basic level, some ships might opt to have only S-mode functionality installed; however, there may be other vessels which by the nature of their trade or quality of their training

Feedback on The Nautical Institute initiative for the S-mode, will be welcomed

can take advantage of new and innovative features that would be developed by the industry.

E-navigation is, at the moment, a catch-all phrase for a concept of bringing existing and new technologies together to improve the safety of navigation, commercial efficiency and security. The challenge for the industry, working through the IMO, will be to produce a unified strategy for this integration and then (and only then) to develop specific systems to meet the needs of all.

This is no small feat. Chart data and systems need to be brought to an agreed standard; position fixing systems need to be of high integrity; communication systems need to be established that meet the needs of e-navigation with agreed technology, protocols and payment plans. This all needs to be achieved with an acceptable cost/benefit balance.

This is a fledgling idea and the NI seeks feedback. If it is seen to be worthwhile, the functionality of S-mode will have to be established, and the NI will work with various stakeholders to develop this. Feedback on the initiative, either as a concept or offering specific suggestions for format, should be sent to me.

To my mind, implementing technology is like a three-legged stool: if any leg is inadequate, the whole system fails. Here, one leg is the technology itself; another is the procedure for use of the technology (gained through testing and experience); and the final one is training, not only in the operation of the technology itself but also, and most importantly, in using the technology with agreed procedures to make good decisions.

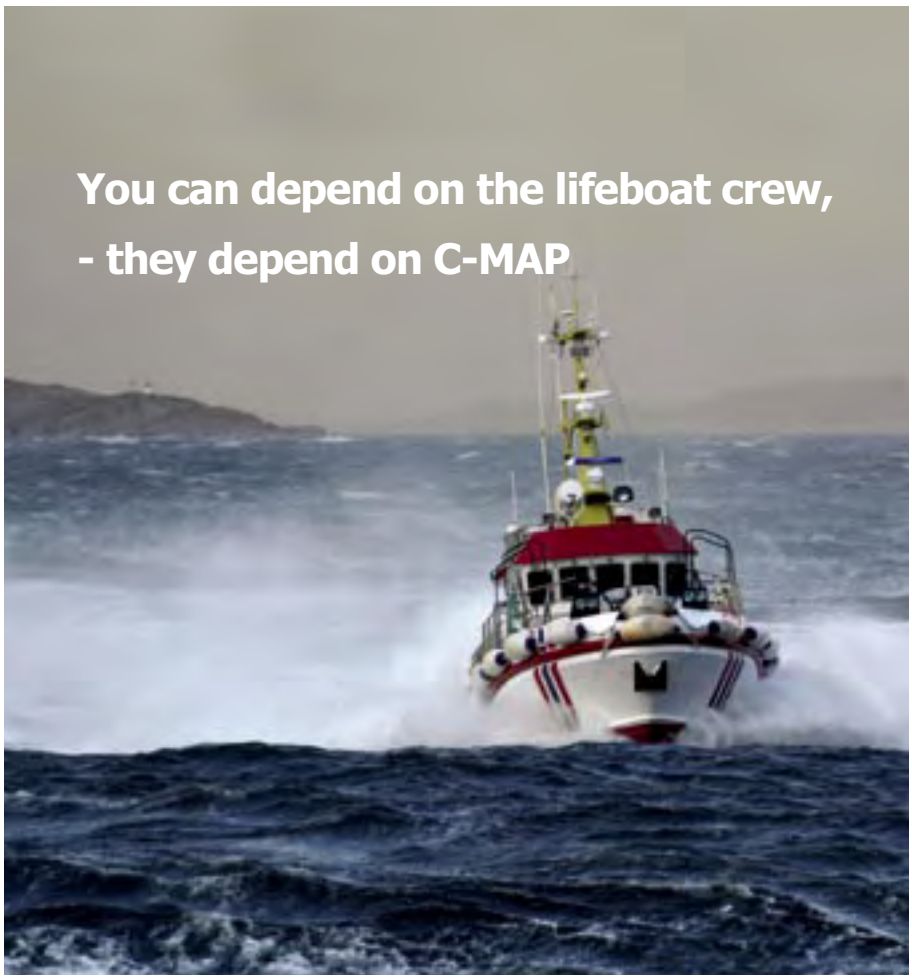
The concept of e-navigation is a worthwhile and essential goal that we should embrace. However, we should be aware that 'electronic navigation' is with us already and flourishing, led by commercial developments.

Systems already exist that have high levels of integration both onboard and via communication links to shore, and this will develop regardless of the work of the IMO. E-navigation, however, gives us a chance to bring this development within a strategic vision.

The Secretary General of the IMO, Efthimios Mitropoulos, has stressed the need for 'those who actually practise navigation' to be involved in the development of e-navigation. The NI is committed to working with our members to participate in this essential task, which is why we seek feedback on it.

Should it be seen to be worthwhile, the functionality of S-mode will have to be established, and the Institute will work with various stakeholders to develop this.

If you have any feedback on the initiative as a concept or are able to provide specific suggestions for format, send them to: djp@nautinst.org.



C-MAP Norway, the world's major supplier of electronic charts offering the largest coverage of official ENC, has for some time been a major sponsor for the Norwegian Society for Sea Rescue. By supporting electronic charts for the entire fleet, C-MAP Norway not only contributes to increase safety at sea, but also gets useful feedback from the navigators that allow us to improve and develop the C-MAP service.

"As crewmembers on Norwegian rescue boats we have learnt to value C-MAP. The user friendliness is a real benefit when our crews are changed on a regular basis. The vector charts are informative and easy to read and give a full view of the situation. As we often approach narrow waters where other seafarers experience trouble, it is good to know that we rely on quality charts to avoid running aground. Another advantage is the possibility to easily download updates directly over the high speed Internet connection. Having access to the latest updated charts is a necessity for offering a safe service and it is really something that the rescue team recognize as a valuable asset."

Skipper Robert Jakobsen
NSSR Norway

C-MAP Norway AS
P.O.Box 212, N-4379 Egersund, Norway
www.c-map.no

Paul Owen
IFSMA Assistant Secretary General

It's all in the name

AN IMPORTANT INDUSTRY GROUP MAY HAVE A NEW NAME TO REFLECT CHANGES

IALA's Vessel Traffic Services Committee meets twice a year at its headquarters in Saint Germain-en-Laye, on the outskirts of Paris.

Attendance at the International Association of Marine Aids to Navigation and Lighthouse Authorities' VTS Committee has its good and bad aspects. Good because it provides a much better representation of views from a diverse cross-section of people, and bad because it can stretch the limits of the IALA office accommodation.

More than 50 representatives attend the Committee. They are drawn from government administrations, such as Australia, Chile, China, the UK and the US; IALA industry members, including Transas, Norcontrol, Sofrelog, HITT and Lockheed Martin; and various other relevant organisations, such as IFSMA, IAPH, Trinity House and The Nautical Institute.

Until recently the VTS Committee was heavily involved with the implementation of AIS, with particular reference to VTS. Another IALA committee dealt with drawing up the actual equipment standards, which have now been agreed by IMO.

The VTS Committee is finalising the 2008 edition of the VTS Manual, as part of the updating process that takes place every four years. The manual has to be updated regularly because of the rapid pace of development and changes in the equipment used by VTS and corresponding operational procedures.

The review will take into account the recent introduction of AIS and the increasing importance of security. The manual will be launched at the VTS Symposium to be held in Bergen, Norway, in August 2008. It coincides with the finish of the Tall Ships' Race, which involves some 100 sailing vessels.

VTS has come a long way since the VTS Committee first met in the early 1990s. Thanks in large part to the work of this Committee, agreed standards now exist to provide guidance for new and existing VTS systems with regard to equipment specifications, staffing levels, operator training and operating procedures. Detailed specifications for VTS equipment are available elsewhere in a number of other IALA publications, as is the IALA model training course for VTS operators.

Not all subjects considered are straightforward. For example, the question of navigational assistance as it relates to pilotage – a rather controversial subject – was on the agenda. The Committee representatives from Trinity House, the International Maritime Pilots' Association and Crescent River Port Pilots' Association were in attendance to help guide us through.

Another difficult area the committee is working on is the study of VTS operator fatigue, to define safe hours of work under various conditions. This work continues and is unlikely to be concluded in the near future.

Given the new emphasis on e-navigation (e-nav) in IMO, IALA was invited by IMO Secretary General Efthimios Mitropoulos to consider this subject in detail and report back to IMO in due course. The IALA E-Nav Committee first met in September 2006 and held its second meeting in March 2007. One of its first tasks was to define e-nav, and therefore what the E-Nav Committee work programme should include.

In his introduction to the meeting, IALA Secretary General Torsten Kruuse explained that a related matter was to distinguish the domain awareness between the two committees. The VTS Committee would consider operational aspects while the E-Nav Committees would provide technical solutions. In addition, the boundary between ship and shore aspects of e-navigation have yet been agreed.

In the rapidly changing maritime world the VTS Committee is also considering whether to change its scope and name from VTS to VTM (vessel traffic management). This is an evolutionary step that almost seems inevitable.

VTS covers the movement of vessels within the VTS area; VTM would additionally consider the movement of vessels from berth to berth. The IALA Council – the governing body – has yet to agree to this change. The first task is to produce a definition of vessel traffic management, as up to now there has been no internationally accepted definition. There is no intention to abandon the VTS aspects of this committee.

Paul Owen is Assistant Secretary General of IFSMA and represents the Federation on the VTS Committee.

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Mark Dickinson
Nautilus UK

What's fair is fair

THE TRANSPORT ELEMENT IS MISSING FROM THE FAIRTRADE BRAND

Fairtrade tea. Fairtrade coffee. Fairtrade chocolate. As consumers we cannot get enough of these 'feel good' products. In the UK alone, sales of Fairtrade products were up by 40% in 2006. Every self-respecting supermarket and supplier is eager to promote their own ethically sound products.

No-one in the maritime industry should take issue with the desire to create a better world by ensuring equitable treatment and just rewards for those who produce our food and other staples of our everyday life, but at Nautilus we are concerned that a key element has been excluded from the fair trade equation – seafarers.

Society today is so divorced from the realities of mass production, distribution and transportation that few people appreciate the fact that supermarket shelves do not magically restock themselves each night.

More than 90% of the UK's imports and exports come and go by ship. And the sad fact is that far too many of those ships are sub-standard – as many as 15% according to some statistics. According to the International Commission on Shipping (ICONS), many seafarers are little more than slaves – with life at sea for many crew members involving physical and mental abuse, non-payment of wages, excessive hours of work and atrocious living and working conditions.

The International Labour Organization (ILO) has described the way in which the vicious circle of low freight rates, extremely poor conditions and standards, weak national regulatory mechanisms and the general reluctance to enforce internationally applicable labour standards drives a race to the bottom in maritime employment standards.

Two Nautilus officials are seconded to the International Transport Workers' Federation (ITF) to check ships coming into UK ports. They have secured over $500,000 in unpaid wages for crew members in 2006 (collectively the ITF recovers $20–30M in wages year after year). Often they come across seafarers who are too scared to ask for help for fear of retribution back home. This can range from pressure on other family members, to the taking back of wages recovered, beatings and blacklisting.

In 2006 a Nautilus inspector dealt with a young Filipino officer whose foot was severed in an accident onboard his ship. Nautilus offered to assist him with a claim for compensation under the terms of his government-endorsed employment contract. But he declined to take any action against his employer because he had been forced to sign a document before leaving the Philippines saying he would not contact the unions or the ITF for assistance of any kind.

In the same week, the same inspector visited a Panama-flagged ship and quickly discovered that the crew were the victims of systematic and habitual cheating. The owners initially denied the claim, but eventually $160,000 was delivered to the vessel and paid out onboard in owed wages.

Such cases are typical of the cut-throat international competition that plagues the shipping industry and are among the reasons why, in February 2006, governments, unions and shipowners reached an historic agreement on what's been termed the 'Bill of Rights' for the world's 1.2M seafarers.

It is impossible to underestimate its importance. The ILO's Maritime Labour Convention 2006 brings a number of new innovative features to ILO standards, setting and introducing measures to regulate working conditions in what is probably the world's most globalised industry.

Nautilus members have been living with the harsh realities of globalisation in shipping, such as the placing of companies offshore, for decades and, believe me, they need the support and protection that the ILO Maritime Labour Convention aims to give.

But now we need to ensure that governments around the

world ratify and implement the Convention. We also need to see that the principles enshrined in the bill of rights are properly applied in practice. And that is where Fairtrade comes in.

Nautilus believes it is wrong that people may be buying products with the rosy glow that Fairtrade gives when such products may have been carried on unseaworthy rust buckets with poorly paid, poorly trained and ill-treated crews from the Third World. It is not good enough that the Fairtrade promise of a fair deal for Third World producers results in Third World seafarers being exploited.

That is why Nautilus seeks to make sure that the Fairtrade label covers the way in which those products are transported. The ships that carry these goods should, as a minimum, be covered by the ILO Maritime Labour Convention 2006. And it does not stop with Fairtrade. United Nations agencies seem to have a policy of putting relief cargoes on to vessels operated under ship registries that break the UN Convention on the Law of the Sea's rules requiring there to be a genuine link between the ownership and control of a ship and the flag that it flies.

In the UK, the Ministry of Defence (MoD) regularly charters 'flag of convenience' ships for military exercises and operations. Barely one in three of the merchant ships used by the MoD in recent years has been British-registered and we have even witnessed the use of ships that have failed basic safety inspections.

Nautilus is not criticising Fairtrade but we do want to ensure fair treatment for the seafarers who risk their lives in transporting those goods around the world. Everyone gets to see, in one form or another, the products brought in by ship. But hardly anyone gets to see the seafarers whose job it is to bring the produce to the market place. And they certainly do not get to see the conditions of employment and the abuse that many seafarers have to put up with in their everyday working lives.

Nautilus therefore believes that IFSMA, as the voice of Shipmasters internationally, should add its voice to the call for fair treatment and fair trade for seafarers.

The dream of a $1Bn boom town

THE SPECTACULAR DEVELOPMENTS AT PAKISTAN'S NEWEST PORT ARE OUTLINED BY CAPT K RAFFAT ZAHEER

Strategically located outside the sensitive area of the Strait of Hormuz at the entrance of the Persian Gulf, Gwadar has the potential to become a transhipment hub for the country's other ports at Karachi and Port Qasim.

The viability of a port depends on its hinterland, but Gwadar has none. The area along the Mekran coast is barren, comprising desert and hilly terrain, and it is dependent on the rest of the country. To build a network of roads and railway links will require massive investment from Pakistan, but there is a shortage of local funds.

To achieve hub port status, transhipment cargo will have to be attracted through low port charges and cargo handling costs and the question is: can the Gwadar port management under PSA provide this advantage?

Marketing the port to get shipping lines to use Gwadar as a hub port will be the biggest challenge. It is likely that for many years to come Gwadar will remain a transhipment port with little prospect of serving inland destinations.

The new port can expect competition from Chahbahar, Bander Abbas in Iran, the UAE ports of Dubai, Khor Fakkan in Sharjah, and Fujairah together with Salalah in Oman. Iran already has good road and railway connections from Chahbahar and Bander Abbas to Central Asia.

Chahbahar, in southwestern Iran, is likely to be Gwadar's strongest competitor for transit trade for Afghanistan, central Asia and China. It is considered the region's economic gateway to the world because of its location on the Oman Sea shore outside the Strait of Hormuz. It shortens the inland link from the sea to CIS countries by up to 100km. Chahbahar provides the shortest link across to central Asia and the Middle East.

Gwadar needs to provide cost-effective port services if it is to become a natural choice for major shipping lines. Investors, both local and foreign, will have to be attracted to set up activities in the EPZ, although initially they will face high manufacturing costs and will need to import the workforce from other provinces in Pakistan. If successful, activities at Gwadar are expected to generate about 2M new jobs in the next eight to 10 years.

Despite the challenges, the overall potential for development of business, commerce and services at Gwadar is indeed impressive. Provided the government of Pakistan is sincere and effective in implementing the plans for building inland road and railway links, the dream of a booming Gwadar will come true.

The port first came to worldwide attention during the first Gulf War when shipping lines were confronted with security issues. Before that, the Portuguese occupied the Makran coast, including Gwadar, in the 16th and 17th centuries and then Gwadar belonged to Oman for about 200 years until it was returned in 1958.

The concept of the Port of Gwadar was formally conceived by the government of Pakistan in 1993 and in 1995 the Karachi Port Trust allocated Rs1Bn ($1.6Bn) for its development. Then, in 1996 the government increased this to Rs2Bn ($3.3Bn), bids were opened and 43 major companies tendered for its construction. In 2002 a Sino-Pak agreement was signed under which the China Harbour Construction Company built Phase 1 of the Port of Gwadar at a cost of $248M.

Phase 1 was completed in June 2006 and consists of three berths of a total length of 602m and a 4.5km-long approach channel dredged to 11.5–12.5m. The turning basin is 450m in diameter and there is a 100m service berth. Related port infrastructure and port handling equipment includes pilot boats, tugs and survey vessels. Gwadar can now handle bulk carriers up to 50,000dwt and container ships of 25,000dwt.

Phase 2 of the Gwadar development will see the construction of four more container berths, a bulk cargo terminal to handle 100,000dwt ships, a grain terminal, a ro-ro terminal and two oil terminals to accommodate 200,000dwt vessels.

The cost of this development work is estimated to be $840M and the project is expected to be completed by 2010. A Chinese consortium has offered to provide a large part of the phase II investment. China is in the process of developing its landlocked

Distances by road from Gwadar (km)

Karachi	653
Chaman	1,066
Ratodero	892
Quetta	966

Projected revenues over the next 40 years:

Sector	Expected revenue $Bn
CHC	17–30
Containers and others	10–18
Free zone	3–6
Multi-purpose terminal and others	4–8

Estimated development costs of CHC $Bn

Equipment at multi-purpose terminal	1–5
Equipment at container terminal and others	2–4
Free zone	1.5–2.5
Marine services and others	0.5

Estimated GPA income over the next 40 years $Bn

Container handling and others (9% CHC revenue)	0.9–1.6
Free zone (15% CHC revenue)	0.45–0.9
Multi-purpose terminal and others (9% CHC revenue)	0.36–0.72

western region and is looking for a location to build a refinery and a strategic oil reserve facility.

The new port of Gwadar is expected to deliver a series of benefits – more opportunities for trade with landlocked central Asian states and Afghanistan, more trade and transport links with the Gulf states, and transhipment of containerised cargo.

The province of Balouchistan is expected to gain socially and economically as shipping-related industries are established, together with oil storage, refinery, petrochemicals, export processing and industrial zone activities.

Investment opportunities include privately owned warehouses and cold storage units, private cargo-handling equipment and trucking yards.

As well as the development of the industrial zone and industries, hospitals, schools and colleges will have to be built. There are expectations for the growth of a tourism industry. The marine-related industries could include shipyards, dry-docks, repair yards and bunkering. Ferry services between Gwadar-Karachi and Oman Bander Abbas and the UAE are planned.

The 40-year port management contract has been awarded to PSA. The salient features of the operation contract are: the Gwadar Port Authority (GPA) will receive 9% from cargo operations and marine services and 15% from free zone businesses. No duty will be imposed on machinery and equipment imported for development work in this area or for port operations, for 40 years.

Port operator CHC is to be exempted from corporate tax, local and provincial taxes for 20 years and there will be duty exemption for shipping lines and bunker oil for Gwadar port for 40 years.

CHC will expand berthing space as demand grows during the concession period up to a total maximum of 14 berths over an area of 4.2km. It will provide pilotage, tugs, mooring, vessel traffic control, anchorage management and bunkering.

The GPA will be responsible for dredging the approach channel and harbour to maintain the required depth. It will provide all conservancy, security and fire-fighting services.

A railway is planned to link Gwadar to Dalbadin, which is on the Quetta–Taftan–Zahidan (Iran) line. A road link Gwadar–Turbat–Hushab–Khuzdar, connecting to the N-25 is under construction. Another link Khuzdar–Ratodero will connect to the N-55, the Gwadar–Ahmedvai will link to the N-40 and a fourth Gwadar–Gabd–Iran border will connect to the highway from Chahbahr northwards.

A new airport with a runway long enough to accommodate jumbo jets is planned and construction is about to start. Once this new airport is commissioned cargo jumbo jets would operate carrying air cargo to and from Gwadar.

All these road, rail and air links are aimed at positioning Gwadar as a hub for multimodal transport services, which should considerably reduce the overall cost of transport for inland destinations and make products from these areas more competitive in the international market place.

There will be scope to introduce air-sea and air-land cargo services from Gwadar to the Middle East and South Asia.

Capt K Raffat Zaheer is an Individual Member of IFSMA

Capt SV Subhedar
Individual Member

Progressive training techniques

MEETING THE CHALLENGE OF SAFE, CLEAN AND SECURE SHIPPING THROUGH BEST PRACTICE

Formal training of seafarers began early last century mainly in what was then the domain of colonial powers. Before that time seafarers' jobs were often passed from father to son and learning the art of navigation and seamanship was done the hard way – the Columbus way. Between these two eras discoveries and inventions took shipping through the Industrial Revolution to engines and electronics.

I was lucky enough in 1966 to enjoy formal training on a 1927-built British troop ship, the TS *Dufferin*, commissioned in Mumbai. In India trainees served on it before going on to train for the army, navy or in aviation. Good training and a minimum basic general education was provided for cadets over two to three years, which prepared them for a hard life at sea. Merchant ship sea service was then, and is still today, an unnatural habitat and a dangerous vocation, second only to deep-sea fishing. Therefore, the main object of the training was, and should still be, to ensure good seamanship.

The International Maritime Organization (IMO) made the first attempt to produce minimum uniform Standards of Training Seafarers in 1978 against a background of increasing global trade, but because of a lack of interest in the then developed countries for producing seamen, this first attempt was only partly successful, as various marine administrations interpreted the requirements less than uniformly to suit individual requirements.

The new STCW 1995 mandates function-based training. For the first time training has been encompassed within quality and company responsibility. However, only limited consensus was possible in 1995, and these standards are now seen to be inadequate. Although compliance measures are better than ever, there is no uniformity in the maritime industry as there is in civil aviation, mainly because STCW 1995 is based on weak articles from STCW 78. These need to be strengthened.

STCW should require training onboard vessels, just as pilots or doctors are trained on aircraft and in hospitals. I believe the new goal should be to produce many quality seafarers. There is still no sign of improvement from the famous BIMCO study findings in the early 1990s on manpower shortages.

Using STCW 95 as a base, we need to equate nautical and marine engineering training as closely as possible. Dual and alternate certification should be made possible up to the level of operational and support level. This must be done pragmatically by prescribing equal amounts of education and training for both streams, with equal amounts of structured onboard training under a prescribed quality system and under company responsibility. This does not necessarily mean double the time to produce a dual certification. Training schemes should be developed for shipping, not the other way around.

New trainees coming now to a seagoing career need the assurance of a career onboard and beyond within 10–12 years. Before 1980 Masters had this benefit, but lately, with split-second communication, the authority of Masters and chief engineers has been grossly eroded.

It works both ways. Poorly trained Masters and chief engineers discourage companies from giving them authority. Some countries demand very high academic scores to join approved pre-sea institutions, even though no such requirement exists in STCW 95, and insist that more than the minimum training period be served.

What is needed is minimum interference in industry-identified training. IMO, therefore, should mandate standards based on a minimum general education for nautical and engineering streams and allow trainees to gain credits in a much more liberal way. Maritime administrations should

be satisfied with determining functional competency onboard.

There should be an emphasis on producing good trainers. Not all Masters and chief engineers can be good trainers. But they can all be made to do their bit when trainees are undergoing training onboard or in the workplace. Every medical doctor helps train juniors in clinical practice. We in the maritime industry must embrace this model of learning.

There is a need also to give credit and recognition to more simulator training. However, again, this is only as good as the trainer. IMO has become embroiled in setting out simulator specifications. With galloping changes in electronics and communications this is not an easy task. Therefore, agreement is necessary only on what a simulator should be able to do as a minimum. A trainee doing more should get equivalent benefit.

Some 20,000 trainee officer cadets have been trained in the past 10 years, but it is a prolonged process. Procedural delays and those poor training establishments that have not satisfied the trainees in all respects have led to many leaving the marine industry in general and seagoing service in particular.

To induct and retain new trainees there may be a need to follow or redevelop European models of vocational qualification administered by a few central bodies like the PSC MoUs. Maybe there is a larger role for professional associations.

Talent is the most important resource in any business organisation – not money or materials. The shipping industry now urgently requires smart, sophisticated, technologically literate, globally astute and operationally agile crews.

The way forward is to coach new trainers and trainees on cross-cultural issues. This is very important for today's multi-cultural crewing. Good management of relationships across diverse cultures cannot be overemphasised. Connecting people is a subject of study that cannot be ignored any more and the HR department, Masters and chief engineers should work together to make these changes happen.

The training function needs to be managed to attract and keep the flow of trainees constant, otherwise I fear the trainee population will soon dry up. Nautical training establishments need to work in public-private partnerships to retain trainers and build a world-class infrastructure, including research facilities.

To retain and attract a younger workforce to sea, management aboard and ashore must get away from the idea of all work and no play and involve seafarers in drawing up business plans and targets. This will only happen when IMO mandates companies to train masters and chief engineers to take on these responsibilities. Role-play training, development programmes, open houses, work environment studies and on-leave tenure to ship management and shipowner offices would be cost-effective incentives.

Similarly, there is the need to prepare new trainees for taking decisions. STCW does not now prepare anybody for taking command or becoming trainers. It only prescribes training requirements – even the definition of trainee is missing!

Good communication and risk assessment skills, which include training in good listening, reporting and responding, is vital. New trainees will benefit from this wherever they go. Trainees should receive training that they can use to develop themselves over and above STCW-mandated requirements. This will also help in achieving cross-functional responsibilities onboard.

We ought to start using creative ways, such as large-scale interactive processes to involve ship and shore employees across the globe – with lessons from behavioural science – so this new culture can take root. Companies can use this to enhance the safety and quality cultures.

On-demand learning, including e-learning and long-distance learning, are both cost-effective and modern methods. We in shipping have been awfully slow to adapt. These technologies are waiting to be used by modern trainees coming into the industry with high A-level and science graduation scores.

STCW 95 is not good enough for them. On-demand learning shifts the experience from a single event into a process that is embedded in the daily workflow. Individual, team and organisational level learning needs to keep pace with a fast-changing corporate world. In this alignment process, leadership – formal, shared and consultative – is the key element. If it is missing it has to be learnt.

Expectations of modern seafarers go beyond sea service and the traditional roles of Masters and chief engineers. They expect to be respected by staff ashore and helped to develop their potential as much as possible. They expect to be made part of the ship management process with good training policies.

New trainees are already alarmed by inaction over the issues of fatigue and criminalisation. Industry also expects modern seafarers to deliver good service aboard, ashore and when interacting with ports and cargo facilities.

Marine administrations and the IMO require modern seafarers to be able to cope with new rules and requirements rapidly and fit into new training for the formal safety assessment approach to rule-making.

Society demands safe, clean and secure best shipping service at yesterday's prices. In the next 10 years we have to meet the challenge through better selection of trainees, improved induction processes and training assistance in both the good and bad time cycles of shipping. There is no other option.

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