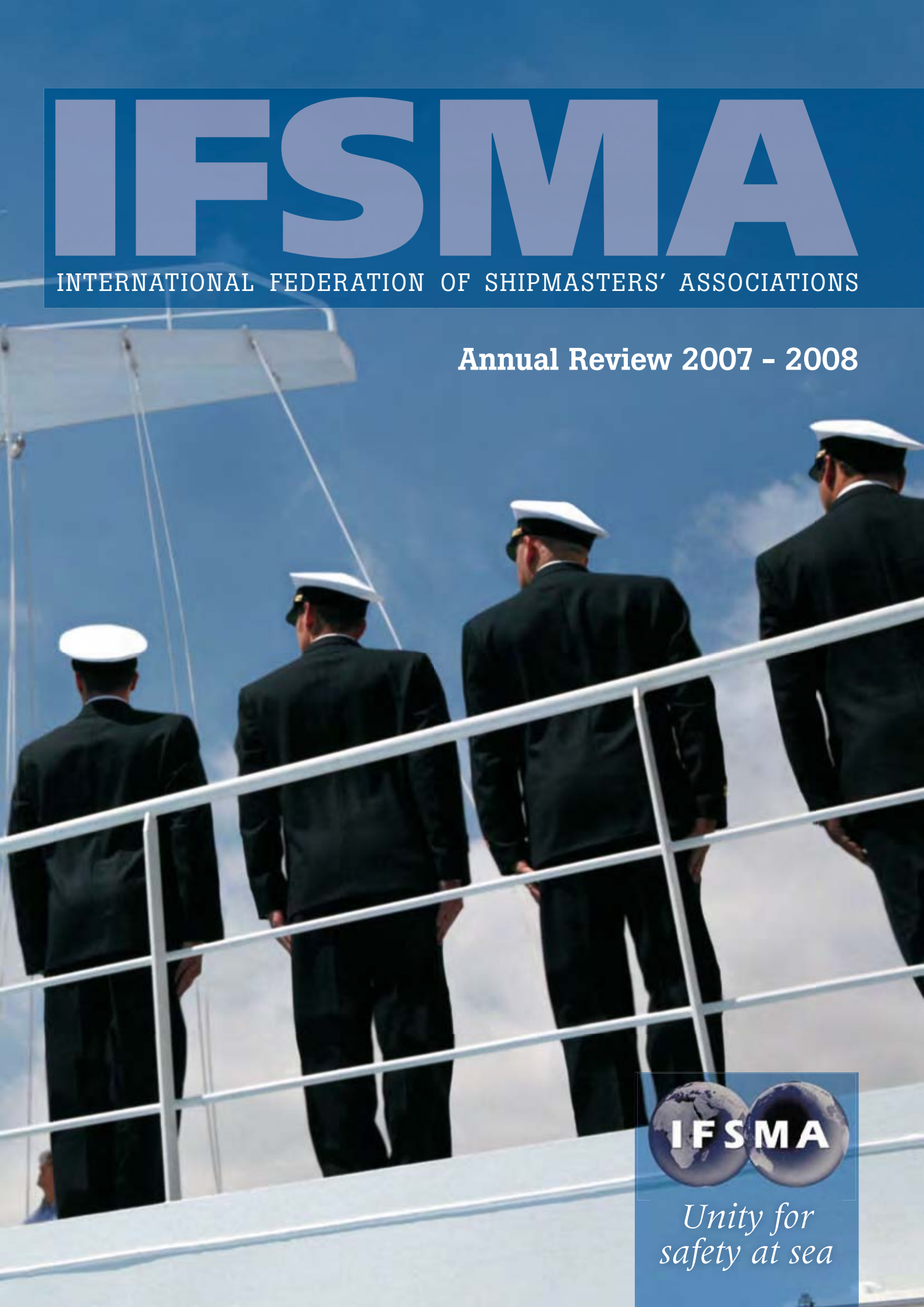
IFSMA

INTERNATIONAL FEDERATION OF SHIPMASTERS' ASSOCIATIONS

Annual Review 2007 - 2008



IFSMA

Unity for safety at sea

Sea-web™

The Register of Ships online

Free trial available

***Sea*-web™ is the ultimate maritime reference tool, combining comprehensive ships, companies, shipbuilders, fixtures, casualties, port state control, ISM and real-time ship movements data into a single application.**

Fully searchable with

- Details of 170,000 ships of 100 GT and above
- Five levels of group and operational ownership
- Export facility
- Extensive image library
- Direct link into the Fairplay news database
- Hyperlink to Equasis
- Casualty Module available
- Fixtures Module available
- Vessel Movements Module available with historic movements and port callings
- Credit Summary Reports Module available
- Web Service Module available
- Credit Report Module available
- Reporting facility

Lloyd's Register Fairplay

Our commitment to quality is reflected in our ISO 9001:2000 certification. Lloyd's Register - Fairplay is ISO certified for the provision of publishing, events and information services for the shipping industry.

FREE trial available at www.sea-web.com

For further information contact: Lloyd's Register - Fairplay Ltd, Lombard House, 3 Princess Way, Redhill, Surrey, RH1 1UP, United Kingdom
Tel: +44 1737 379700 Fax: +44 1737 379001 Email: sales@lrfairplay.com
Web: www.lrfairplay.com

SW/HS/2008



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 11,000 Shipmasters from about 62 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.

IFSMA
International Federation of Ship Masters' Associations
www.ifsma.org
Tel: + 44 20 7261 0450
Fax: + 44 20 7928 9030
202 Lambeth Road,
London SE1 7JY, UK.

Unity for safety at sea

contents...

Designed and created by **Safety at Sea International** magazine:

Lombard House, 3 Princess Way,
Redhill, Surrey RH1 1UP

T: +44 (0) 1737 379000
F: +44 (0) 1737 379001

Supplements Editor: Bridget Hogan
Art: Hannah Kidd
Production: Sarah Treacy
Sales: Ian Parker

Printed by Buxton Press Ltd,
Buxton, Derbyshire SK17 6AE, UK

www.safetyatsea.net

Photos: Thamesport, Captain Peter Newton. Cover photo: Costa Crociera

Officer shortage as world fleet grows

CHRISTER LINDVALL, PRESIDENT, IFSMA, SAYS WELCOME TO BREMEN

Dear Colleagues, ladies and gentlemen, I welcome you all, especially those who are attending an IFSMA General Assembly for the first time, to the historical and beautiful Hanseatic city of Bremen. I would also like to thank Bremen University, Centre of Maritime Studies and especially our colleague Willi Wittig together with Rogge Marine Consulting for inviting us to have our AGA here, in conjunction with the ISPIC Conference. I served on the selection committee, and I can tell you that the papers that will be presented are very interesting, covering issues that we consider important and will discuss at our AGA, as stakeholders in the present and the future international shipping industry.

A year has passed since we met in Antwerp. Once again I want to thank the Royal Belgian Seamen's College (KBZ) for their great hospitality during our visit to the Port of Antwerp which is so very well-known to us seafarers.

I also have the honour to announce that we have got a new member association and also some new individual members. Therefore, I want to welcome you all and also SINDMAR, the Brazilian shipmasters' association, as a new IFSMA member.

I have also a heavy and sad task to perform. I have to inform you that our former president and honorary member Gerhard Goldberg passed away on 8 December, 2007. Our thoughts go out to his wife Marliese, who is known to many here.

Reviewing the world this year, we note that the new Maritime Labour Convention 2006 has been ratified by only

Photos: Warsash Maritime Academy, Dietmar Hasenpusch, USCG

three countries. The general opinion is, however, that it will be ratified by the stipulated 30 parties representing more than 33% of the world tonnage by 2010, which means that it will enter into force in 2011.

The world fleet is set to increase with more than 4,000 newbuildings on order and just 500 ships expected to be scrapped. This means the worldwide shortfall of officers will be about 27,000 by year 2015, equating to 6% of the total workforce of 415,000 officers. This was acknowledged by IMO SG Efthimios Mitropoulos in his opening speech to the STW subcommittee in March, 2008.

The shortage of officers is due to many factors, including the expanding fleet and need for sea transport, rising standard of living in some of the former labour-supplying countries, lack of recruitment in many countries, the bad image of the industry due to piracy and criminalisation and a blame culture.

I participated in the STW working group on minimum safe manning, where IFSMA has been very much involved, especially in addressing fatigue as a contributing factor to many collisions and groundings. There are frequent problems with smaller ships engaged in short sea voyages with only a shipmaster and one watchkeeping officer onboard, both of whom often have to work excessive hours, far above what the legislation permits.

This means in addition to the usual 12-hour days on the bridge, they have to undertake all outstanding tasks in the remaining two hours to comply with the STCW which state there should be 70 hours of rest per week. The schedule is equivalent to 98 hours of work. The total number of crew on these vessels is frequently down to between four and six people. This equation of the workload and the working hours available is impossible to solve even behind a desk ashore. At 04.00 or 05.00, after five hours watch, the officer's fatigue is equivalent to having 0.4pp 1,000 alcohol in the bloodstream. An officer who has been awake more or less for 24 hours, which is often the case because of disturbances during his rest hours, will act as if he has 0.8pp 1,000.

If officers really had consumed that level of alcohol, should we permit them to work on without taking any action?

No, therefore something must be done.

I am consequently very satisfied that we were able to add to Res A.890 Principles of Safe Manning that administrations should take into account port operations and a new paragraph saying that 'administrations should consider the circumstances very carefully before allowing a safe manning document to contain provisions for less than three qualified deck officers, while taking into account all the principles for establishing safe manning'.

I also want to mention our important work with the improvement in lifeboats, drills and other lifesaving equipment together with other stakeholders in the shipping industry. I would also emphasise that the presentation on Fairtrade last year has been given a lot of attention. We had an interesting informal meeting with the European Maritime Safety Agency (MSA) when we had our executive council meeting in Lisbon.

Another occasion I want to mention is IFSMA's participation in the LSM Manning & Training Conference in Manila, where our first IFSMA Forum was held. An entire day was spent presenting and discussing the STCW Convention, past, present and future. The 40 participants awarded IFSMA 4.7 out of 5 for its contribution – results far above my expectations. The next day we presented the outcome of the forum for the conference audience of 400 who also expressed appreciation.

Finally, I hope we will have a fruitful meeting ahead of us in Bremen under the banner – *Unity for safety at sea* – for the benefit of our members, all ships' masters and all their crews. ■

Capt Christer Lindvall
IFSMA President

The year in review

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

The 33rd IFSMA Annual General Assembly was hosted by the Royal Belgian Seamen's College (KBZ) in Antwerp 24-25 May 2007 and all details can be found on the IFSMA web site.

Five resolutions were passed, details of which are in the minutes and annexes of the 33rd AGA. These resolutions dealt with the following issues.

- Safety of passenger vessels
- E-navigation
- Fairtrade
- Seafarers' administrative workload
- Safe operation of ships (safe manning levels)

The Secretariat and the Executive Council have worked on each of these resolutions and will continue to ensure the interests of shipmasters' are kept to the forefront of national and international bodies responsible for introducing and implementing treaties and codes that affect the shipmaster. Here is a report on some of the work that has been carried out since the 33rd AGA in May 2007.

Passenger ship safety

Continuing on from the IMO's work programme item on passenger ship safety a resolution on guidelines on voyage planning for passenger ships operating in remote areas was adopted, in response to the growing popularity of cruise ships sailing to new destinations, some of which are at considerable distances from search and rescue facilities.

E-navigation

IFSMA continues to be involved in this fast-growing technology on two fronts: the IMO work programmes with NAV and COMSAR sub-committees. The sub-committee finalised the following definition for e-navigation as a concept based on harmonisation of marine navigation systems and supporting shore services driven by users' needs:

E-navigation is the harmonised collection, integration, exchange, presentation and analysis of maritime information onboard and ashore by electronic means to enhance berth to berth navigation and related services, for safety and security at sea and protection of the marine environment.'

It provisionally agreed that the core objectives of an e-navigation concept, using electronic data capture, communication, processing and presentation should be to:

Facilitate the safe and secure navigation of vessels using hydrographic, meteorological and navigational information;

Facilitate vessel traffic observation and management from shore and coastal facilities, where appropriate;

Facilitate communications, including data exchange, between ship to ship, ship to shore, shore to ship, shore to shore and other users;

Improve the efficiency of transport and logistics;

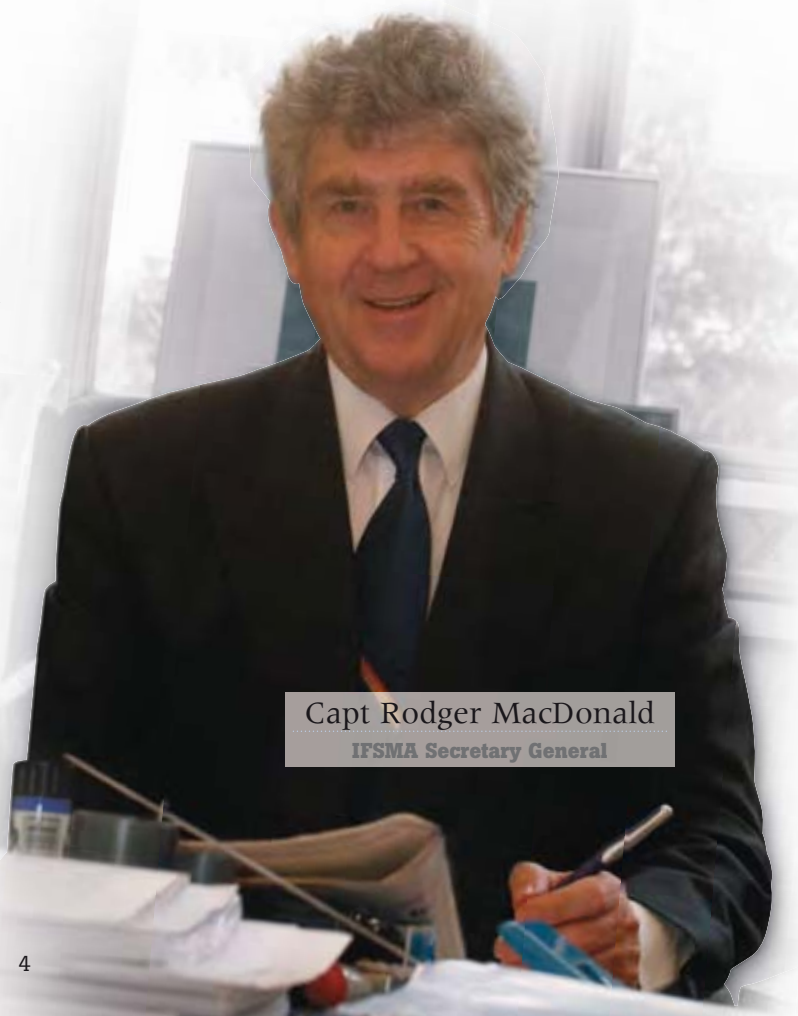
It should support contingency response, and search and rescue services;

Demonstrate defined levels of accuracy, integrity and continuity appropriate to a safety critical system;

Integrate and present information on board and ashore through a human interface which maximises navigational safety benefits and minimises any risks of confusion or misinterpretation on the part of the user;

Integrate and present information onboard and ashore to manage the workload of the users, while also motivating and engaging the user and supporting decision making in corporate training and familiarisation requirements for the users throughout the development and implementation process;

Facilitate global coverage, consistent standards and arrangements, and mutual compatibility and interoperability of equipment, systems, symbology and operational procedures, so



Capt Rodger MacDonald
IFSMA Secretary General

Photo: Angelo Scorza

as to avoid potential conflicts between users; and

Be scalable, to facilitate use by all potential maritime users.

The sub-committee agreed that the e-navigation strategy should be driven by user needs rather than by technology. It was advised that the UK, IALA and IFSMA were developing a methodology to identify users and their needs and would be providing the appropriate input to the correspondence group on the subject.

Accordingly, the sub-committee agreed that the correspondence group should continue this work. The correspondence group will submit a document to COMSAR 12, raising specific questions that should be addressed by COMSAR, and prepare a final comprehensive report for submission to NAV 54.

Administrative workloads and safe manning levels.

IFSMA has continued expressing powerful concern on these subjects. Our President, Capt Christer Lindvall, has presented a paper on this subject in the *IFSMA Annual Review*.

Fair treatment of seafarers

IFSMA continues to campaign for the fair treatment of seafarers, although it was not able to attend the 93rd session of the legal committee, which was held in Panama. However

there was no change or further developments on fair treatment during the session.

It is regretted that the guidelines for the fair treatment of seafarers have not influenced some administrations as the criminalisation of seafarers continues. This is demonstrated by Greece where the authorities have apparently arrested out of hand Capt Kristo Laptalo, the master of the *M.V. Coral Sea*, and his chief officer, Konstantin Metelev. It is alleged that some cocaine was found amongst the ship's cargo of bananas. Although the Greek government acknowledged IFSMA's letter of protest delivered through the Greek ambassador in London, we have not yet heard of any positive action.

Revision of the performance standards for integrated navigation systems and integrated bridge systems

At MSC 83 the performance standards for INS were finalised for adoption. The purpose of an INS is to enhance the safety of navigation by providing integrated and augmented functions to avoid geographic, traffic and environmental hazards. An INS comprises navigational tasks such as route planning, route monitoring and collision avoidance, including the respective sources, data and displays which are integrated into one navigation system.

An INS is defined as such in the performance standards if it covers at least two of the following navigational tasks/functions: route monitoring, collision avoidance and track control. Other navigational tasks may also be integrated into the INS. The scope of the INS may differ, depending on the number and kind of tasks and functions integrated into the INS.

The performance standards allow for a differentiated application of the requirements depending on integrated tasks and functionality. The INS performance standards are structured in four major modules:

- Module A – integration of information
- Module B – task related requirements for Integrated Navigation Systems
- Module C – alert management
- Module D – documentation requirements

The NAV sub-committee re-established the correspondence group to develop guidelines for IBS, including performance standards for bridge alert management.

It also agreed to amend the title of the agenda item to *Develop guidelines for IBS, including performance standards for bridge alert management* and to seek an extension of the target completion date for another two sessions.

These guidelines should be taken into account by those designing and installing INS and IBS systems. Recommendations are that the physical arrangement of the systems on the bridge and presentation of information should permit observation or monitoring by all members of the bridge team and the pilot. Further, the system should avoid the potential for a single-person failure during operation and should minimise the risk of human error by facilitating monitoring and cross-checks between the bridge team and pilot.

Education, training and competence

The comprehensive review of the STCW convention and the STCW code continues and a report on the March 2008 meeting of STW 39 will be submitted in the supplementary review to be tabled at IFSMA's AGA in Bremen.

IFSMA has worked in conjunction with the Nautical Institute to research into the industry's needs. The key highlight in 2007 was the *What does the industry expect from the STCW review*? workshop held in Manila in conjunction with LMA's training and recruitment conference.

IFSMA is also involved in the EU-supported crisis management training programme. Our president and the secretariat have undertaken a number of initiatives to promote this important training programme at a number of conferences, seminars and when the executive council met EMSA in Lisbon.

Prevention of accidents involving lifeboats

Like many others in our industry, IFSMA has growing concern on the continuing loss of life and serious injury caused through lifeboat drills. A number of meetings to discuss these issues have been attended and our concerns have been voiced whenever possible. The secretary general presented a paper expressing the shipmaster's concern at a lifeboat workshop held in London on 16th October 2007.

The Industry Lifeboat Group (ILG) was formed last year and IFSMA is one of the NGOs that participate in this forum. Our first main action was to present a joint paper to the 51st DE sub-committee which met in Bonn in February 2008. Unfortunately the LSA work group caused considerable frustration due to the lack of progress particularly relating to onload release mechanisms.

The sub-committee's consideration of measures to prevent accidents with lifeboats occurred both in plenary and in a life saving appliances (LSA) working group under the chairmanship of Kurt Heinz (USA). In plenary the industry submission DE 51/8/7 and interventions were well-received and gained widespread support. Unfortunately the working group failed to address several items included in its terms of reference; this was both disappointing and frustrating as little or no progress was made on many issues, most particularly regarding on-load release gear.

The DE sub-committee also agreed new interim guidelines for *Recommendations on conditions for authorisation of service providers for lifeboats, launching appliances and on-load release gear together with Guidelines for the certification of personnel for servicing and maintenance of lifeboats, launching appliances and on-load release gear*.

It was agreed that the requirements should apply equally to all providers whether or not they were a manufacturer of the equipment to be serviced. Industry representatives expressed concern that the guidelines failed to require manufacturers to provide information, documents and components to independent service providers.

The risk remained that the availability of worldwide LSA service provision would continue to be insufficient and controlled by manufacturers.

The INTERTANKO intervention raising this concern, supported by ICS (et al) was included in the DE 51 report. The IMO secretariat and the legal division has been requested to advise the MSC committee on the legal basis, and any precedent, for mandating manufacturers' requirements.

The importance of making progress regarding on-load release gear was recognised, however insufficient time was allocated for any meaningful consideration of this item and the matter, including DE 51/8/7, was passed to the CG. The industry lifeboat group was congratulated for its work on lifeboat safety and was encouraged to continue this.

On a positive note, a correspondence group was re-established and its terms of reference (TOR) included items not sufficiently addressed by the workgroup including:

- Review and finalise MSC.1/Circ1206 on specific matters pursuant to the new recommendations for authorisation of service personnel
- Agree criteria to determine lifeboat on-load release hooks of 'poor and unstable design' and consider a time-scale for the replacement of such hooks
- Further consider the definition of 'unfavourable trim and list'
- Further consider the application of increases of assumed weight of persons to liferafts
- Further consider the concept of 'fail safe' regarding on-load release hooks and prepare amendments to the LSA Code.
- Develop guidelines and a draft MSC circular relating to the extended service testing of liferafts
- Further consider requirements for the performance standards for recovery systems. It is to be noted that the correspondence group is directly instructed to consider the ICS paper DE 50/21/3 in this regard.

International LRIT data exchange (IDE)

The USA will host, build and operate, on an interim and temporary basis, an IDE and agrees that a permanent home should be found by December 2009.

- LRIT information will be provided to contracting governments and search and rescue services entitled to receive it, through national, regional, co-operative and international LRIT data centres using, where necessary, the IDE
- An interim IDE will allow the LRIT system to be launched on schedule with multiple LRIT data centres operating and joined through the IDE.

Photo: Captain Peter Newton

- Use of LRIT information for safety and environmental protection purposes

IMO's MSC adopted a resolution on the use of LRIT information for safety and environmental purposes, which notes that such use of LRIT information would add significant value to existing systems by improving knowledge of ships' positions and identity. It states that MSC agrees that Contracting Governments may request, receive and use LRIT information for safety and environmental protection purposes.

SOLAS regulation V/19-1 on LRIT will enter into force on 1 January 2008 and applies to ships constructed on or after 31 December 2008 with a phased-in implementation schedule for ships constructed before 31 December 2008. The LRIT system is intended to be operational with respect to the transmission of LRIT information by ships from 30 December 2008.

International convention for the control and management of ships' ballast water and sediments

Since being adopted February 2004, the total number of contracting governments is twelve, representing 3.46% of the world merchant fleet's gross shipping tonnage, against an entry-into-force requirement of ratification by 30 states representing 35% of world tonnage.

Bearing in mind the emphasis the international community places on the issue of invasive species in ships' ballast water, IMO is urging other states to ratify the convention at the earliest opportunity.

Other visits made since the AGA

The president, the secretariat and members of the executive council, made a formal presentation to the EMSA in Lisbon and discussed our common objectives in promoting safety at sea.

In November 2007 the IFSMA president and the secretary general conducted an industry workshop in Manila to investigate what the industry expects from the STCW review. Positive discussions were recorded and the views were reported to the associated conference the LSM manning and training conference. These views were used to help IFSMA make positive contributions to the STW sub-committee.

Capt Colin Evans representing IFSMA as well as Capt Fredrik J Van Wijnen representing CESMA attended the 2007 SIRC Symposium on the 4th and 5th of July. The Seafarers International Research Symposium was held at the University of Wales (Cardiff).

The deputy secretary general was at the IALA VTS committee in Paris in September 2007 and again during March 2008.

IFMSA is a board member of the World VTS guide and both the secretary general and the deputy secretary general attended the annual meeting in London in July 2007.

The secretary general attended as chairman of the Honourable Company of Master Mariners education and training committee and was also the IFSMA representative at the Nautical Institute education and training committee.

In conclusion I would like to thank the executive council for its support, all our members and acknowledge the hard work carried out by my colleagues.

Photos: Cavotec

Challenge of the biggest containerships

PORTS AND SHIPPING COMPANIES NEED TO TACKLE MOORING PROBLEMS AS CAPT CHRIS LEFEVERE MNI, BOARD MEMBER KBZ-CRMB REPORTS

All vessels can experience mooring problems, perhaps because the number of winches, bitts or fairleads is insufficient or if they are poorly positioned. Very large container ships (VLCS), however, have individual problems to face.

VLCS with a length of 300m and more, are an increasingly common sight in port. The high freeboard and highly stacked deck cargo present a very large cross section to the wind which can affect their navigation and manoeuvrability. These characteristics are, by now, sufficiently known to masters and pilots, yet mooring problems are frequent.

Pilots report that VLCS often experience great difficulties remaining alongside at container terminals in wind force 7 and higher and this has been confirmed by masters. There have been cases where ships' lines have broken and the ships drifted off resulting in serious damage to the ships and infrastructure. It seems that the reported mooring problems

Vessel characteristics:

Panamax	VLCS	ULCS	PCC	cruiseship	containership
Capacity (teu)	4,000	8,000	12,500	n/a	n/a
LOA (m)	280	330	397	200	240
Tiers	4	7	7	n/a	n/a
Height (m)	20	31	37	23	30
Windage (m²)	5,600	10,395	14,500	4,400	6,500

are VLCS specific. This paper is not an exhaustive study on the subject of mooring problems but reports feedback from pilots and masters. Remedies are urgently needed as wind force 7 cannot be considered exceptional and many more VLCS are expected to come into service in the immediate future.

Wind areas for VLCS and ULCS exceed those of pure car carriers (PCC) and other ships. The lateral forces on these vessels from winds are very high. The windage in the full load condition amounts to 14,500 m² equating to a wind force of approximately 278tonnes in 35-knot beam winds.

On the eastbound trade the situation is often aggravated when many empty containers are carried. With a full deck cargo of 7 tiers and a draught of only 11,5m instead of 13-15m the underwater lateral area is much smaller while the area exposed to the wind is even bigger.

Mooring problems and incidents with pure car carriers (PCC) and ro-ro vessels are well known and documented. Although there are difficulties these appear to be under control and the area of windage is anyway much smaller than for a VLCS.

Cruise vessel schedules are generally chosen to avoid poor weather so there are few examples of mooring problems with cruise ships.

Wind force 7 recurrent problems have been reported by masters and pilots in ports such as Hamburg, Rotterdam, Le Havre and Antwerp. VLCS and ULCS need prolonged assistance from bow thrusters (2,000-4,000 kW), and require one or more tugs to remain alongside at terminals even as many as nine mooring lines are used at bow and stern.

Inadequate mooring arrangements generate extra operational costs and cause problems for gantry cranes during loading and discharging operations, danger for people on accommodation ladders and ultimately pose a high risk of mooring lines breaking and the ship drifting off.

Upon investigation I noticed that none of the ships were using automatic tension winches so their failure cannot have contributed to the problems. The very high ships' hulls (especially at the bow) result in steep mooring lines with poor angles for maximum tension. VLCS of more than 300m only have mooring arrangements at bow and stern, similar to much smaller vessels.

Container terminals position bollards very close to the edge of the quay to allow free passage of container cranes which further contributed to the steep mooring lines. To optimise the berth occupation ships are moored at intervals which can result in up to six mooring lines on the same bollard.

Shipowners and port have a part to play in finding a solution. Ports should ensure that terminals are equipped with a sufficient number of well-positioned bollards or alternative mooring systems and that a sufficient number of

tugs is always available. Shipowners should check that their fleets have adequate mooring systems and if necessary improve them. Naval architects, classification societies and shipyards should address this at the design stage. There is a challenge here for equipment providers too.

A range of solutions could help alleviate the problems. Additional and stronger winches and lines should be provided fore and aft. Unlike bulk carriers and tankers, the presence of deck cargoes precludes the possibility of adding a winch on the main deck.

Ports, including the Port of Rotterdam, have raised the issue of mooring facilities on board of VLCS with the International Association of Classification Societies (IACS). This resulted in a new formula for calculating the amount of equipment needed on board, taking into account the lateral wind area.

The option of lowering the forward mooring deck in line with cruise vessels and PCCs has been brought to the attention of IACS. Even though there is restricted scope because of the ships behaviour at sea, sunken aft mooring decks have been successfully included in the designs of several VLCS.

The problem of bollard spacing at container terminals needs

Photos: Captain Peter Newton, Mooring Systems Limited

to be addressed so additional bollards of sufficient strength are provided. The Port of Rotterdam has announced that at any of its new container terminals the bollard spacing has been reduced from 22.5m to 12m, which will improve the mooring configuration. The bollard safe working load has been increased from 100tonnes to 240 tonnes.

Terminals could consider installation of alternative shoreside mooring systems, replacing ropes, which would offer an effective solution. Of course these should have a compact layout to allow free passage of the container cranes

At least one interesting vacuum mooring system exists, marketed by Cavotec MSL. It was originally developed for ferry berths, but has been installed on container terminals in Melbourne, Australia and Picton, New Zealand.

The compact system consists of standard vacuum pads that can cope with extensive hull surface irregularities. The vacuum pads are locked onto the ship's side within 12 seconds. Instant release is possible. Because the pads attach to the ship closer to the waterline the system has a greater mooring efficiency than steep, angled ropes.

A system exists for large ships (load capacity 80 tons) that is able to cope with different loading conditions of vessels, tidal variations and surge conditions that may cause vertical and fore and aft movement.

At first thought the cheapest solution to the mooring problem of VLCS is possibly to have tug assistance. However, this maybe needed for hours at a time when the vessel is in port with wind force 7 or more. Unfortunately, under these conditions, there is also an increased demand for tug assistance to manoeuvre other vessels.

Consequently, either there would not enough tugs available to assist moored VLCS, or port manoeuvres would have to be postponed until tugs were again available, delaying arrivals or departures.

When in the 1960s the size of tankers increased and the first VLCCs were introduced this went hand in hand with the rethinking designs of the mooring equipment, towing arrangements and the size and type of anchors.

VLCS and ULCS are relatively new ship types. To solve their mooring problems similar adjustments to arrangements aboard and in ports are necessary. I hope this paper offers some food for thought.

Terminology:

VLCS very large container ship	≥	7,500 TEU
ULCS ultra large container ship	≥	10,000 TEU
LOA 300m plus		
World fleet		
188 at 1 January 2008		
322 on order book		
Of which 180 ULCS		

Source: AXS-Alphaliner

Photo: Captain Peter Newton

The STCW convention past, present and future

ONE OF THE MOST IMPORTANT TREATIES IS UNDER REVIEW TO TAKE INTO ACCOUNT NEW WORKING CONDITIONS AS CAPTAIN CHRISTER LINDVALL FNI, PRESIDENT OF IFSMA REPORTS

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) is one of four major conventions covering the shipping industry under United Nations Law of the Sea (UNCLOS). The others are SOLAS, MARPOL and the coming ILO Maritime Labour Convention 2006.

Since its inception in 1959, the International Maritime Organization (IMO) has endeavoured to raise the standards of the seafarers who man them. A 1960 resolution called upon contracting governments to take all practicable steps to ensure that the education and training of seafarers was kept up to date. It also recommended that IMO and ILO should co-operate.

This led to the establishment of the IMO/ILO Joint Commission of Training (JCT) in 1964. The JCT produced a *Document of Guidance* regarding training of masters, officers and seafarers in the use and operation of aids to navigation, life saving appliances, devices for the prevention, detection and extinction of fires and other safety equipment.

In 1971 the IMO Council proposed to the Assembly an introduction of an instrument on STCW and the IMO sub-committee on Standards of Training and Watchkeeping (STW) was established to prepare a draft text to the convention, an annex to it and a number of draft recommendations.

The STCW conference in 1978 was attended by delegates from 72 countries. It was the largest conference ever held by IMO and the convention was regarded as one of the most important maritime safety treaties ever developed.

The convention was the first attempt to establish a global

minimum professional standard for seafarers and the convention did raise standards all over the world, but these should have been seen as a minimum. Unfortunately minimum levels became standard through the provision 'to the satisfaction of the administration'.

The convention in itself did not deal with manning levels at that time, but still it was closely related through watchkeeping standards which became an issue for the STW sub-committee. Instead, the IMO provision regarding manning is covered by Chapter V in SOLAS 1974, backed up by Resolution (A.481 XII) which in turn has been revoked by Resolution A. Res. 890 as amended (A .Res 955).

The convention entered into force April 28, 1984. At that time 114 States representing 94.99% of the world's merchant shipping tonnage had accepted the convention.

In the late 1980s it was realised that the convention was not achieving its purpose and that there was a compelling need for revision. It did not define the skills and competence required for seafarers or take into account reduction in the size of crews, more frequent crew changes and multinational manning.

A revised STCW 78 convention as amended in 1995 was adopted at a STCW Conference in July, 1995. There were no changes in the articles of the convention which made it possible to use the tacit acceptance instead of the positive acceptance, which made the process much faster and the enter-into-force-date can be fixed, unless the amendments are rejected in the meantime by sufficient numbers. The amendments entered into force under this procedure February 1, 1997. New certificates in accordance with the new amended Convention were issued at the latest on February 1, 2002.

Outcome of the 1995 revision:

- No changes in the convention or the annex
- Mandatory STCW Code A a recommending Code B
- Three levels of Competence; management, operational and supporting
- Requirements on administrations to report back to IMO on how they fulfilled their obligations Group of experts established to scrutinise countries concerned.
- Approved countries listed (White List)
- 23 resolutions

STCW 95 defines seven functions for seafarers:

- Navigation
- Cargo handling
- Control and operation of the ship and care for persons onboard
- Marine engineering
- Electrical, electronic and control engineering
- Maintenance and repair
- Radio communications

In 2005 more discussions were held by IMO and the desire for another revision of the STCW convention was made clear. In the ten years since the last revision the technical and operational development of ships had radically changed. Reduced manning on ships, especially on small ships with only one master and one watch-keeping officer on short sea voyages, and increasing numbers of accidents caused by fatigue prompted a need to look at the A. Res 890 principles of safe manning and the regulations on minimum rest hours in Code A.

A. Res 890 was seen only as a recommendation and in reality no one followed the provisions. The workload on smaller crews had increased and working hours were longer and schedules tighter. The administrative workload required by the ISM-Code and the introduction of the ISPS-Code has increased the workload enormously without the provision of any additional crewmember on board despite the revised texts in A res 890. There was also a desire to include the requirements for able seamen, deck and engine, in the code. Other matters to address were fraudulent certificates and the need for data-based information and demonstrations of competence.

The IMO Secretary-General recalled in his opening speech 37 that the MSC had asked all sub-committees to keep uppermost in mind, in any regulatory work that they undertook, the role of the human element in safe operations. And it was this sub-committee's duty and responsibility to regulate how shipmasters, engineers and ratings discharged their responsibilities to safeguard life at sea, property and the marine environment. Personally I would also like to add that the health of the seafarer should be taken into consideration.

At the Maritime Environmental Protection Committee (MEPC 56; 9 to 13 of July 2007) there was a proposal by ICS *et al* to instruct the STW sub-Committee to consider introducing for each STCW function, to support, at operational and management level, an additional five key elements relating to understanding, behaviour, compliance, risk management and leadership as competencies to assist seafarers to understand variations in company-specific safety cultures on different ships.

MEPC 56 agreed that this involved not only seafarers on board ship but also those dealing with operations ashore: Management level (master, chief officer, chief engineer, second engineer); Operational level (watchkeeping officers); Supporting level (watchkeeping ratings and other ratings with safety and pollution prevention responsibilities).

The review

IFSMA wants to highlight the need for the introduction of maritime resource management, which should cover personnel on board as well as ashore.

There should be recognition of the urgent need to provide properly trained personnel to the growing LPG and LNG-fleet in the convention. To do this the code would need to be amended (STW 37) to include:

- Security provisions in Chapters II and III
- Development of standards for ratings
- Competence standards for tankers including LNG-carriers in Chapter V
- Review of the STCW requirements for demonstrating competence in Chapter VI
- Review of the alternative certification in chapter VII and
- Criteria for safe manning and inclusion of rest provisions in Chapter VIII.

The MSC 81 session 10 to 19 May 2006 endorsed a proposal by STW to revise the STCW Convention. The sub-committee at its 37th meeting in February 2007 agreed that the review should only embrace the following principles:

- Retain the structure and goals of the 1995 revision;
- Do not down scale existing standards;
- Do not amend the articles of the convention;
- Address inconsistencies, interpretations, outdated provisions, MSC instructions, and technological advances;
- Address requirements for effective communication;
- Provide for flexibility in terms of compliance and for required levels of training and certification and Watchkeeping arrangements due to innovation in technology;

- Address the special character and circumstances of short sea shipping and the offshore industry. In addition it should address security-related issues.

For consideration

After detailed discussions the sub-committee agreed on the several issues for consideration during the review. This did not imply that amendments would be necessary. Discussions will include these topics:

Chapter I: General provisions

- Certificates and endorsements to prevent the use of fraudulent certificates
- Near coastal waters
- Register of training databases by administrations
- Quality standards
- International medical standards in tune with ILO, WHO and the International Maritime Health Association (IMHA)
- Recognition and endorsement of certificates
- Revalidation of certificates
- Use of simulators etc (not below the minimum 12 months)
- Continuous and familiarisation training by companies.

Chapter II: Master and deck department

Recent changes in equipment, technology and terminology (AIS, ECDIS, electronic charts etc) and familiarisation to understand the limitations of automatic systems; environmental awareness especially oily water separators.

Chapter III: Engine department

Competence in electrical engineering and electronics in the operation of ships and limitations of automatic systems and environmental awareness especially oily water separators.

Chapter IV: Radio communications and radio personnel

Promoting and verifying familiarisation of GMDSS operators in accordance with MSC.1/Circ.1208.

Chapter V: Special training requirements for personnel on certain types of ships

Devise requirements leading to dangerous cargo endorsements (DCEs) and training standards for dynamic positioning ships. Draft minimum requirements for masters, officers and ratings on tankers, especially LNG, as well as training and competency standards.

Steam turbine requirements for engineers for LNG tankers and combine requirements for ro-ro passenger ships and for other passenger ships.

Chapter VI: Emergency, occupational safety, medical care and survival functions

Establish training standards for shipboard safety representatives, reflect the ILO maritime Labour Convention 2006. Sanitation and hygiene in accordance with WHO guidelines, limited to safety issues and the promotion of environment awareness.

Chapter VII: Alternative certification

No compelling need for change shown at MSC.

Chapter VIII: Watchkeeping

Include review on fitness for duty to provide for proper records of hours of rest and to harmonise this regulation with provisions in the ILO Maritime Labour Convention 2006. The term radio operator should be updated to GMDSS operator. Mandatory alcohol limits during watchkeeping and other shipboard duties should be introduced and the STCW Code should include any consequential amendments.

Section A

Increase emphasis on enhanced navigation, in particular berth-to-berth requirements.

Modern developments for integrated bridge systems including ECDIS. Bridge and engine room resource management (IFSMA wants to introduce maritime resource management covering the co-operation between ship and shore).

Maritime resource management

Training on maritime legislation to assist in protecting the crew, owners, operators and ships from breaching increasing legislative requirements. Promote a safety culture to embrace all levels.

Emphasis on management training

Enhanced knowledge of occupational health and safety issues

Increase emphasis on fatigue management.

Knowledge and demonstration of competence, to ensure that engineers have sufficient competence in the operation, testing, fault diagnosis and maintenance of automation, electronic and electrical systems and equipment.

Relevant requirements with a view to determining that the master should not be considered a watch-keeping officer when deciding the composition of the navigational watch.

Development of a clear system to verify work schedules and actual hours worked. This would address wide concerns in the industry over enforcement and a need for a consistent system for verification of actual hours worked or rest taken. This needs to be practical and enforceable, especially in the context of flag and port state control.

Development of qualifications and training for seafarers operating pleasure yachts and commercially-operated craft and a definition in relation to passenger ships.

Ratings

The requirements for Able Seaman Deck and Engine should be adopted at the same time as the revised STCW-Convention, so there should be no inconsistencies.

Security training

Amendments to provide security familiarisation training for all crewmembers, specific training for personnel with security duties was developed by STW 38.

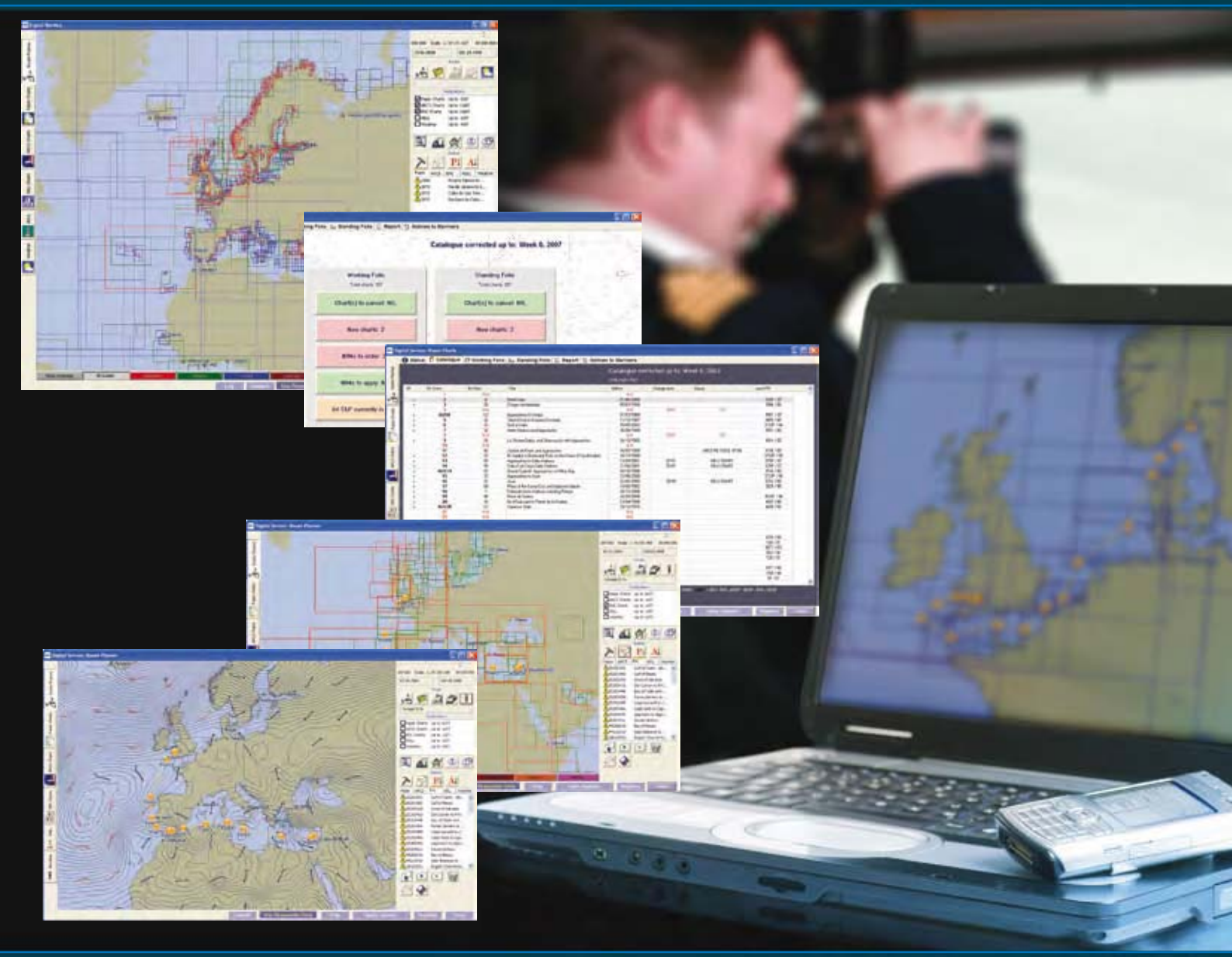
Future work

As most of the items still remain open for discussions more meetings will be needed in the future. The proposal from STW 39, to be decided by MSC 84 in May 2008, is therefore that the target date should still be 2010. The suggestions from STW to MSC also included an inter-sessional working group in September 2008, which will report to STW 40 when it is held during the first half of 2009.

The MSC in May 2009 will receive this report and approve in principle the amendments. Then it will authorise STW 41 to finalise the work at the beginning of 2010. STW 41 will submit these suggestions either to a conference in the Philippines or to an expanded MSC with parties to the STCW Convention present, in London in the summer of 2010. This is to be confirmed by the MSC 84/86 and the Council.

Maritime Digital Services

maris
MARITIME INFORMATION SYSTEMS AS
a Grieg Group company



MARITIME DIGITAL SERVICES
ONE STOP SHOP
FOR ALL MARITIME DIGITAL DATA AND PUBLICATIONS

DNV
NORWEGIAN ACCREDITATION
QUAL 002
ISO 9001 CERTIFIED COMPANY

MARIS is a limited company with head office in Tonsberg, Norway a recognized centre for maritime information technology. The company has delivered thousands of navigation systems to customers all over the world.
The majority owner is the Grieg Group (www.grieg.com)

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.

Maritime Information Systems AS (MARIS) Danholmen 25, NO-3128 Nøtterøy, Norway Tel: +47 33 30 42 50, Fax: +47 33 30 42 51 E-mail: sales@maris.no www.maris.no

in assosiation with

ARCS
PRIMAR STAVANGER
ADMIRALTY PUBLICATIONS
Lloyd's Register Fairplay
MeteoConsult A MeteoGroup Company
ic-enc

Managing crowds in a crisis

WORK IS PROGRESSING ON A SINGLE STANDARD FOR TRAINING FOR THOSE WHO DEAL WITH PEOPLE IN MARITIME EMERGENCIES, EXPLAINS CAPT CHRISTER BERGQUIST

The project *Securitas Mare* or safe seas was promoted through the EU's Leonardo da Vinci programme which aimed to create a common European standard for crowd and crisis management training. The project had 15 partners, including 10 maritime education and training (MET) institutions and the course concept has been accepted as an alternative standard in six of the participating countries. A transfer of innovation project aims to spread the concept further.

In the aftermath of the *Estonia* disaster, the IMO decided that it was time to introduce a crowd and crisis management training to the shipping community. One of the main challenges for the industry and the traditional MET system was to create courses meeting these requirements, as competence in the subject was limited in the traditional academies.

Sweden and Finland, with a long tradition of extensive ro-ro passenger ferry traffic decided to try to create a common curriculum for the new course, called crowd and crisis management (CCM).

A project group including maritime academies in both countries, both shipping administrations, an external expert on crisis behaviour and reactions and a couple of passenger vessel operators, formed a reference group.

Photo: PA Photo

The course curriculum created has been used for courses in both countries and has led to an exchange of students and lectures between the academies involved. At a later stage, other academies in Denmark, Norway and Estonia were invited to take part in the exchange and to arrange courses based on the same curriculum.

This later co-operation was conducted under the auspices of a Nordic Network project called *tryggt hav*, which is Swedish for safe seas.

Securitas Mare was set up to create a European standard for this type of training of seafarers. The project's secondary objective has been to establish a standard for the development of mandatory training courses for the shipping industry. If the *Securitas Mare* project proved to be a success, the same method could also be used for harmonisation of every other course where such a need has been identified.

Already the Nordic project *Tryggt Hav* has attracted interest from other institutions around Europe, not only from the maritime world but also from other interested groups, dealing with crisis management, such as nurses, ambulance staff and fire brigades. This encouraged us to continue to develop an application to Brussels for the formation of the project.

As a maritime academy we aimed to present a course directed towards the needs of the maritime industry, but so that the main modules would be relevant to other groups needs.

We now have partner institutions in Germany, the Netherlands, Spain, Norway, Finland, Greece, Estonia and Iceland, together with help from IFSMA, in addition to the companies and authorities.

Seminars and courses have now been held at all participating academies where representatives from local shipping industries, authorities and others have participated, all with good results and feed-back. Some 150 representatives from the partners and the shipping industry have participated in the demonstration and student courses and have been through the dissemination process in their home countries and more than 1,000 have participated.

The project partners are all very much in agreement that arranging common course curriculums can be a model for the future, particularly if we really want to achieve a truly open and common labour market within the European Union.

Now the next phase of the Leonardo da Vinci programme, will extend the course to other EU member countries. Ideally networks of these types could be formed all over the world.

This project, suitably named *Securitas Mare II*, was granted EU funding last summer and under it courses have been held in the UK, Ireland and Latvia and more are planned in Bulgaria, Romania and Turkey. Meetings are scheduled with EU decision-makers in Brussels and with EMSA and a seminar onboard one of the new partner's cruise vessels is planned.

The importance of emergency training for all categories of staff and for all types of vessels is gaining credibility thanks to the initiative.

The requirement for this type of training is presently only directed towards key staff onboard passenger vessels and ro-ro passenger vessels. There is no doubt that there is a clear need for other persons onboard to be included. This is particularly true for personnel onboard vessel with very small crews.

Regardless of what kind of vessel he or she will be serving on an officer with a clear responsibility to act and react during any type of crisis would benefit from having learnt more about human behaviour under stress and in difficulties, as well as leadership and guidance under such circumstances.

It as a clear shortcoming of our present educational system that these skills have not yet become mandatory for all officers and for all students at maritime academies. People in companies' emergency shore teams also need to be trained, but so far no formal requirement exists although some have benefited from CCM courses with seagoing staff and only small changes would be needed for the courses to be relevant to them.

It may be time now to also put formal requirements for training also for the persons working ashore in a shipping companies organisation, as it has been for the seafaring staff for many years.

One must of course also mention the secondary objective of the project, which was to create a standard mandatory training course for the maritime industry. This particular aspect will be emphasised to the IMO's STW committee during their next session, since we in the project group believe that the success of the project speaks for itself in this respect.

It goes without saying that one of projects further aims is to create a new standard for this type of training which could be incorporated all around the world. Since it has been difficult to convince the IMO to change their existing standards, we opted to go to individual administrations to gain acceptance for it.

Now the course has been adopted by DNV and recognised and recommended to be given at all institutions having DNV as their accredited QA-body. Thanks to this, the project has attracted interest from a number of MET institutions around the world in Canada, the US, Singapore, Australia and the Philippines, just to mention a few. ■

More info: http://securitasmare.sjofartshogskolan.nu

Photo: USCG

The piracy plague

MARK DICKINSON ASSISTANT GENERAL SECRETARY NAUTILUS UK – GIVES INSIGHTS INTO FINDINGS FROM A SURVEY OF UNION MEMBERS UNDER THREAT AROUND THE WORLD

Piracy and armed attacks have plagued the shipping industry for many years. However, in recent times the problem has increased dramatically and there have been marked trends towards not only a numerical increase in incidents but also an escalation in the levels of violence being used against seafarers.

Against this background, Nautilus UK and Nautilus NL continue to press shipowners and governments for effective measures to protect shipmasters and their crews. We believe there is a clear need for shipmasters to be better supported if they are to properly discharge their responsibilities in the fight against piracy and terrorism.

Last year, a survey of Nautilus UK and Nautilus NL members was conducted to elicit views and experiences about the problems of piracy and security. It was not a scientific research project, but we believe it gives a good cross-section of opinions from several hundred shipmasters, officers and other maritime professionals serving on ships ranging from 100,000gt cruise vessels to 1,500gt dredgers, and operating in virtually every area of the world.

Some of these important findings, and associated commentary, are set out in this article. Nautilus believes that they offer a unique insight into the views and experience of seagoing staff, and that they deserve to be treated seriously by the industry and governments.

We urge IFSMA to use the results to campaign for the long sought-after action that is necessary to reduce what represents an unacceptable threat to the world's seafarers.

We hope too that IFSMA will join the growing call for piracy hotspots to be treated analogous to war zones and areas of warlike activity by maritime employers and insurance companies. In this way relevant protective clauses in collective agreements and employment contracts would be invoked.

Photo: USCG

Survey Findings

Question 1: ***How concerned are you about the threat of piracy against your ship?***

Answer:	**32%** Very	**41%** Mildly	**27%** Not at all

There were considerable variations between trading areas – all members working off West Africa said 'very', whilst piracy was not a concern for those in the English Channel.

Question 2: ***How concerned are you about the threat of terrorism against your ship?***

Answer:	**27%** Very	**61%** Mildly	**11%** Not at all

The fear of terrorism was higher on passenger ships and ferries. One member stated: 'If there were a terrorist hijacking of my ship, I believe we would be written off as an acceptable loss.'

Question 3: ***Which do you consider the bigger threat? – a pirate attack or a terrorist attack?***

Answer:	**47%** A pirate attack	**53%** A terrorist attack

Several members working off West Africa said that they couldn't see much of a difference – with terrorists to blame for politically inspired attacks on ships and installations off Nigeria. Another member said there is more pressure on shipmasters not to report attacks – as insurance premiums increased after the declaration of the Malacca Strait as a war risk area.

Question 4: ***Does the threat of an attack have any impact on your feelings about working at sea?***

Answer:	**11%** A lot	**49%** Not much	**39%** None

Not a significant number of members registered concerns, but the growing global shortage of skilled seafarers should not be forgotten and retention should be at the top of shipping company agendas.

Question 5: ***Have you ever been on a ship that has been attacked?***

Answer:	**22%** Yes	**78%** No

More than one in five said yes – a result that seems statistically very significant. Some members had suffered more than one attack – as many as three in one case.

Question 6: ***How useful are the government/industry guidelines on preventing attacks?***

Answer:	**21%** Very	**53%** Not much	**26%** Not at all

A mixed bag here: some members told us the guidelines have improved over the years, and are now more practical. But many members said they felt the owners don't really commit to the guidelines – especially if it costs money.

Question 7: ***Do you consider your owner/manager takes the problem seriously?***

Answer:	**72%** Yes	**28%** No

There were comments about the failure to invest in extra manning or protective equipment. One shipmaster said that when the shipboard security alert system was inadvertently activated one Friday there was no response until Monday!

Question 8: ***Do you consider the ISPS Code has improved security on ships and in ports?***

Answer:	**59%** Yes	**31%** No

Improvements have come at a price – the freedom of movement of seafarers and their ability to get vital time ashore after a long voyage. One officer said they could see the dock gates from their ship in Boston, but they couldn't even get off the vessel. Restrictions had a bad effect on the quality of life, it was felt.

Question 9: ***Is the post of shipboard security officer (SSO) a valuable one?***

Answer:	**55%** Yes	**45%** No

The answer's yes, but was a feeling that it has been devalued by being a delegated, not a dedicated, position. There should be a dedicated security officer rather than placing the extra work on an already over-worked deck officer. And it's not an easy post either. Many – including some SSOs – complained of the pressures they are placed under when people in uniforms arrive on their ships. 'How can we verify the authenticity of their IDs?' one asked. 'Do we deny them access while the situation is clarified or are they going to pull guns on us and force their way onboard claiming obstruction of officials carrying out their duties?' There is a very fine dividing line here, and in both cases the ship is in a no-win situation.'

Question 10: ***Do you consider that the introduction of the ISPS by port authorities has had a negative effect on your ability to take shore leave?***

Answer:	**50%** Yes	**50%** No

It should be noted that the survey included seafarers on ships that do not get shore leave, in the strict sense of the term, such as ferries. The situation in many areas was summed up well by a passengership master who told us: 'What needs to improve is the attitude of many port state authorities towards the ships' crew. In many places, the crew are seen as the problem as opposed to being a major part of the solution to security problems.'

Question 11: ***What measures would be the most effective in improving security and reducing the risk of attack?***

Answer *(percentage expressing strong preferences)*
62% Increased manning
33% Naval protection
29% Armed guards
53% CCTV and surveillance equipment
35% More protective equipment onboard
49% More training

Increased manning – overwhelmingly, the majority of members complained that there are just not enough people onboard to fulfil the additional responsibilities laid down by ISPS and the piracy guidelines. Don't expect overworked seafarers to be police officers on top of all their existing duties, was the overwhelming message from the survey.

Naval protection received a lot of mentions, although it depended which navy provided the protection! Armed guards onboard – mixed feelings as some had doubts about the training and quality of some of the guards supplied to their ships.

CCTV and surveillance equipment – The increased use of these received a strong seal of approval, finally, training was identified as a critical need.

Photo: Mission for seafarers

The fighting the fatigue factor

FATIGUE IS A COMMON OCCUPATIONAL HEALTH AND SAFETY ISSUE FOR SEAFARERS THAT IS NOT BEING ADEQUATELY DEALT WITH BY CURRENT LEGISLATION, AND SOLUTIONS ARE NEEDED URGENTLY SAYS CHRISTER LINDVALL, IFSMA PRESIDENT

Discussions of the STCW Convention are examining, amongst other topics, the minimum requirements of rest hours for watchkeeping personnel and changes in A Res 890, as amended – or the principles of safe manning.

One problem seems to be that minimum rest hours are followed so maximum working hours are worked in a bid to reduce the size of crews. As a result many crew members have to work excessive working hours, far above what the provisions were intended to allow. This has of course resulted in accidents and incidents caused by fatigue and severe health problems for seafarers.

And, as it was stated at the latest IMO MSC meeting in Copenhagen, the question of manning and fatigue are very closely linked to one another. There are also discussions over whether the relevant IMO and the ILO regulations should be harmonised. The problem with rest and work seems to be particularly severe on small ships on short voyages with only one master and one watchkeeping officer onboard.

To reduce fatigue, hours of rest and work at sea have to be balanced so that seafarers are adequately rested and fit for duty before performing their tasks.

This issue of 'fit for duty' is covered by STCW but not properly applied or enforced. We have also found that some masters and officers falsify their records to keep it within the

limits of the regulations.

Acording to Efthimios Mitropoulos, the Secretary-General of IMO, "fatigue has emerged as a significant contributory factor in accidents." The IMO principles of safe manning and the provisions related to watchkeeping arrangements and hours of rest in the STCW-Convention were arguably sufficiently comprehensive.

As accidents attributable to fatigue continue to be recorded, he expressed the view that perhaps the time had come for these principles to be re-assessed, possibly by setting out rules for maritime administrations to decide manning levels on ships of similar types, size and trade.

The implications of research into fatigue by Professor Andy Smith, from the Centre for Occupational and Health Psychology at Cardiff University are clear. The shipping industry and its regulators must acknowledge the serious risks and consequences inherent in allowing vessels to be manned by fatigued seafarers. These include:

- Potential for more environmental disasters
- Economic losses due to fines for accidents and/ or increased insurance premiums
- Serious health implications for seafarers

If the shipping industry does not do anything to change this situation – others will do it for us.

At STW 38 IFSMA proposed goal-based standards to evaluate manning levels on ships of similar size, trade, level of automation and IT-support. These would produce consistent results in applying the principles in the Res. A.res 890. One possible way to do this was to develop an aid or a predictor, which all flag administrations could use. Such a predictor has been developed – the Karolinska Sleeping Scale (KSS).

KSS was presented at MSC 83 and STW 39 by Prof Torbjörn Åkerstedt, Karolinska Institutet in Sweden. It is a nine-graded scale (from 1 – very alert to 9 – very sleepy) and can be used for measuring and predicting fatigue. Signs of sleepiness increase considerably at the levels 8 and 9.

Use of this system would help set up an index of operating parameters of a vessel such as: work and rest hours required, size and type of ship; number, size and type of main propulsion units and auxiliaries; construction and equipment of ship; method of maintenance used; cargo to be carried; frequency of port calls; length and nature of voyages to be undertaken; be carried out in ports; length of pilotage etc.

At the Sub-Committee last year IFSMA also proposed that the master should not be considered a watchkeeping officer when deciding the composition of the navigational watch.

The STW Sub-Committee established a Working Group and a Correspondence Group to review resolution 890 to identify possible needs for revision and to report to the STW 39 in March 2008.

At STW 39 the Correspondence Group came up with some proposals which were discussed but a lot of work remains so the Correspondence Group should continue its work.

Weekly working hours

STCW	**98**
ILO180	**72**
EU working time directive for seafarers	**72**
EU working time directive workers ashore	**48**

Photo: Physical Initiative

Considerations include:

- Identification of how a mandatory process can be created considering current tools and processes within the IMO;
- Consideration of how the workload can be better distributed and introduced into the process deliberations;
- Identification of shortcomings of the current allocation of skills, experience onboard and can be introduced into more effective minimum requirements;
- Determine if it is required to distinguish between optimum and minimum manning. If it is, identify how can some form of redundancy of man-hours be built in, for the recuperation from high workload periods;
- Decide if there is any further clarification of the main body of the resolution to prevent exceptions and exemptions; and
- Discuss ways that transparency and access can be facilitated.

IFSMA sees as very important a proposal by STW 38: 'The STW Sub-Committee urged Administrations to consider the circumstances very carefully before allowing a safe manning document to contain provisions for less than three qualified deck officers, while taking into account all the principles for establishing safe manning.'

MSC 83 in Copenhagen approved in principle this decision and agreed that the process for determination of safe manning should be made mandatory, preferably by amending SOLAS regulation V/14. MSC 83 approved the STW report recognised the increasing numbers of accidents caused by fatigue and its relationship to rest hours and manning.

So it was decided that the paragraph should be inserted into the resolution. Another very important decision was that time taken in port operations should be taken into account by administrations when deciding on minimum safe manning. The word minimum should also be inserted wherever safe manning appears in the resolution.

It is frustrating that governments are not taking into account research that shows that small ships with small crews are over-represented in collisions and groundings where watchkeeping officers have fallen asleep. Often working excessive working hours far above what the legislations permits have been worked.

IFSMA sees the revision of the STCW-Convention as a very important tool to ease the workload for masters and officers, which has increased enormously during recent years by the introduction of the measures such as ISPS and ISM codes.

Sea-Sentinel™

PORT, SECURITY AND RISK INFORMATION

Updated every working day, *Sea*-Sentinel™ is an internet based product which brings together the resources of Lloyds Register - Fairplay and Jane's Information Group to give you up-to-date coverage of global events, which may affect the security of your vessels wherever they are trading, as well as news of piracy, smuggling, stowaways and illegal migrants.

Information includes:-

- Daily and online port and security news
- Email alerts service
- Country synopses
- Access to details on over 9,800 ports and terminals
- Distance tables module available
- Port disbursements module available
- ISPS details and contact information

FREE trial available at www.sea-sentinel.com

Lloyd's Register Fairplay

Jane's
Intelligence and Insight You Can Trust

For further information contact: Lloyd's Register - Fairplay Ltd
Lombard House, 3 Princess Way, Redhill, Surrey, RH1 1UP, United Kingdom
Tel: +44 1737 379700 Fax: +44 1737 379001
Email: sales@lrfairplay.com Web: www.lrfairplay.com

SS/HS/2008

Photo: Captain Peter Newton

Valuing human capital

CAPTAIN S. BHARDWAJ VICE CHANCELLOR, AMET MARITIME UNIVERSITY IN INDIA CHARTS THE NEGLECT OF ONE OF SHIPPING'S MOST IMPORTANT RESOURCES – PEOPLE

There are several challenges facing those employed in the maritime industry today. Companies, whether they are big or small, are on the one hand, struggling with labour shortages, seafarers leaving the industry to work ashore and increasing wage costs.

On the other hand, employees have learned new rules – that loyalty is dead, job-hopping is normal and that going to the highest bidder is usual. It is arguably the case that shipping has never quite appreciated the value of human capital.

Now, suddenly the realisation is there that it is not only important but also critical and that it is in short supply. In recognition of this we hear from crewing managers that ships do not move cargo – people do and that ships' crews are their most important assets.

This focus on the human element has paradoxically evolved from investigation of marine accidents and not from human resource (HR) considerations. It has its roots in the early 1990s, when analysis of accidents revealed that in the majority – some 77% – the human element was responsible, necessitating a shift from an emphasis on technology. Part of this evolutionary process saw the framing of STCW 95 and ISM 98 to reduce the accidents and incidents attributable to human failure. STCW 95 addressed the competency requirements of shipboard staff and ISM 98 dealt with management aspects.

Companies were now required to provide adequate resources and support to implement safety management systems, which put management firmly in the safety chain. While both these instruments have helped, the HR element tends to be a weak by-product. We still continue to have intelligent, well-trained, highly skilled and experienced professionals making critical mistakes – even though technological advances have been designed to reduce these.

In this equation we must consider the effects of fatigue, boredom, health, familiarity, carelessness, family problems, pressure to meet schedules, ergonomics and confinement, which all play their part in accidents and incidents. The human element really is a complex, multi-dimensional issue that affects maritime safety and the marine environment. It involves the

entire spectrum of human activities performed by ships' crews, shore based management, regulatory bodies, recognised organisations, yards and other relevant parties, all of whom need to co-operate to address human element issues effectively. Crew performance is a function of, amongst other factors, individual capabilities, management policies, cultural factors, experience, training and the work environment.

The survival and growth of this industry is challenged because of the extreme shortage of employable, skilled manpower. In India, employers had it easy until the mid-1990s. Unemployment was high and there was a steady pool of talent combined with a low turnover. A decade on and things have changed so that an employer's position is no longer enviable.

A burgeoning domestic economy, combined with a steep rise in the number of jobs ashore and an even steeper rise in demand for talent has cut the pool of labour available so that now there is a shortage of talent in India. According to estimates by US consulting group McKinsey & Company, Indian factories will need 73M workers by 2015 – some 50% more than today. It predicts India will face a huge shortage of skilled workers in the next decade, particularly in business process outsourcing (BPO) industries.

This seems like a huge paradox in India, a country with over one sixth of the world's population (1.2Bn). Half of the population is under 25 and there are 40M unemployed. Incidentally, India produces 3.6M graduates every year, and the numbers are on the rise.

All these facts and figures add to the outsider's perception of India's position as an inexhaustible supply of cheap, skilled labour. But the reality is that, there exists a huge demand for quality employees across all industries. So, when the shipping industry is competing for quality labour as never before, handling of the human element is crucial. To my mind, the most effective way forward is to treat the seafarer as human first, like any shore-based worker.

One misconception is that it takes nothing less than a master mariner to lead the HR functions of the shipping company. With due respect to their seamanship abilities, unless properly trained, they are as likely to be as proficient at this job as a fish is at carpentry. It is not just about filling vacancies, mapping performance and change management must be undertaken.

Shipping needs the specialised skills of qualified HR professionals to bring this function on a par with contemporary industry practice. In the wake of this shortage of talent it becomes necessary to value human capital and recognise it as the prime creator of economic value in most organisations.

This requires a shift in mindset from treating plants and machinery as assets and people as costs. And this takes time. We hear about manning costs all the time – but are employees a cost or an asset?

Jack Welch, ex-CEO of General Electric once said: "There are three key measures in business – customer satisfaction, employee satisfaction, and cash flow, in that order." As a matter of fact, the link between investment in human capital and profitability is most apparent in service organisations. And shipping is a service organisation.

Here, a radical shift has occurred in the way businesses manage and measure success so that customers and employees are key elements. Employee satisfaction, loyalty and productivity are linked to customer satisfaction and the nurturing of customer loyalty.

The service-profit chain attempts to clarify how profitability and growth are driven by customer loyalty, which in turn is driven by customer satisfaction and value. Value is driven by employee productivity, which is driven by loyalty and employee satisfaction.

Employee satisfaction is driven by internal quality, which is driven by leadership. Leadership underlies the chain's success. Leaders of successful service companies emphasise, by their words and actions, the importance of each employee and customer. Human capital is considered an intangible asset – but how can it deliver? The goal for a business is simple: invest capital, so that it maximises shareholder value but success depends on access to intellectual capital, operational know-how, a committed workforce and other intangibles.

At the heart of making best use of these intangibles is the firm's investment in human capital. Few organisations understand their employee investments beyond the cost of salaries and benefits. And fewer still understand the return on their investment in employees.

The fact remains that most companies lack a basis for structuring or prioritising human capital investments and a concrete notion of what return on investment is generated over time.

Companies need to measure the value that employees bring to the organisation, evaluate their impact on business performance and then align them with business results. Companies need to measure talent – which is a critical input to business delivery.

Even traditional manufacturing sectors are moving up the value chain, and leaning more heavily on ideas, creativity and innovation, instead of traditional tools like raw materials, land, labour and machines to deliver value to shareholders.

The critical contribution of talent is becoming obvious and as a result, the competition between employers continues. Where there are plenty of workers but faced with a skill shortage, the way forward could be to build talent production lines, through training and re-skilling, rather than poach from outside.

Companies also now need to factor in the global demographic shift in the job market to take into account the impulsive, individualistic generation Y – used to change and uncertainty. Companies will have to evolve strategies to deal with them.

Generation Y, is made up of people with a different approach to life and careers, who aren't willing to settle for an average life. Industry veterans cannot impose the old values on these people.

Shipping needs to be marketed properly. After all careers in the industry offer challenges, exposure, adventure, responsibilities – and the money is not too bad either. This fulfils the need to offer a career proposition to the new generation, rather than just a job.

Employers should also make use of an employee's career anchor, knowledge of which can be one of the best retention tools. There must be some turnover or skills may stagnate. A turnover of about 10% is healthy and can create a performance culture. There is no point in retaining poor performers with old skill sets.

Also, smaller organisations need not reinvent the wheel. There is information available to help them pick up best practices and shorten implementation times.

Tremendous amounts of energy and resources are applied to develop these HR initiatives in other industries and organisations are even marketed on these trends. HR innovations are of great importance and can build stronger brands. Smaller companies can benefit from these ideas too,

Whatever happens, we in the maritime industry must be aware that if we continue in the same way, we will continue to get the same results.

safety at sea international

The only monthly magazine dedicated to safety at sea

Keep your crew up-to-date

How many ships do you have in your fleet? *Safety at Sea International* magazine provides all the latest news and features to help you reinforce safety issues onboard your ship. A single copy for every vessel could help save lives.

Call Soren Bruun today on +44 1737 379704 or email soren.bruun@lrfairplay.com to find out about discounted rates for fleet subscribers.

"I would like to send this note to reiterate ChevronTexaco Shipping Co.'s deep appreciation for the continued exceptional information provided in Safety at Sea. The masters on our vessels continue to request renewals for their subscriptions and are pleased with their publications."

Megan E. Green, Information Management Specialist, ChevronTexaco Shipping

"We have been providing copies of Safety at Sea to our colleagues onboard and in the office for over ten years. It continues to provide relevant and valuable information, which enhances the already positive safety culture throughout the organisation."

Captain Ian Mathison, Risk, Safety and Security Manager, Meridian Marine Management

"The information you provide for our company is the most useful information we've ever had as we are one of the leading oil sector companies in Kuwait."

Yousef Sultan Al-Majed, Superintendent Public Relations Division, Kuwait Oil Tanker Company

www.safetyatsea.net

Lloyd's Register Fairplay

Our commitment to quality is reflected in our ISO 9001-2000 certification. Lloyd's Register - Fairplay is ISO certified for the provision of publishing, events and information services for the shipping industry.

For further information contact: Lloyd's Register - Fairplay Ltd
Lombard House, 3 Princess Way, Redhill, Surrey, RH1 1UP, United Kingdom
Tel: +44 1737 379700 Fax: +44 1737 379001
Web: www.lrfairplay.com Email: sales@lrfairplay.com

PainsWessex
MARINE DISTRESS SIGNALS

Comet
MARINE DISTRESS SIGNALS

SOLAS approved and trusted aboard ships, and workboats the world over.

LINETHROWER 250
Item no. 50200

All line throwing operations at sea between vessels, ship to shore, shore to ship and shore based rescue services.

RED HANDFLARE MK8
Item no. 52900

For use in day and night. Short range distress signal used to pinpoint position.

MANOVERBOARD 360
Item no. 53771

Day and night signal which is attached to a lifebuoy (not supplied) and used in an emergency to mark position of a man overboard.

PARA RED ROCKET MK8
Item no. 50671

For use in day and night long range distress signal situations

BUOYSMOKE MK2
Item no. 53826

15 minute orange smoke Man Overboard Lifebuoy marker. Identical to MOB360 - but without the lighting system.

SHIP'S BRIDGE KIT
Item no. 55540

Designed to meet the SOLAS/MED/USCG regulation, which requires 12 Para Red rockets on a ship's bridge, this kit is conveniently stowed in our large waterproof polybottle.

LIFESMOKE MK8
Item no. 53685

For use in day distress signal situations and to mark the position during a rescue operation.

LINETHROWER 250
Art no. 9160400 - complete unit comprising
Art no. 9160500 - body and line
Art no. 9162700 - rocket (aluminium) or
Art no. 9112700 - rocket (USA and Japan only)

All line throwing operations at sea between vessels, ship to shore, shore to ship and shore based rescue services.

RED HANDFLARE
Art. no. 9162800

For use in day and night. Short range distress signal used to pinpoint position.

LIGHT AND SMOKE SIGNAL
Art. no. 9161600

Day and night signal which is attached to a lifebuoy (not supplied) and used in an emergency to mark position of a man overboard.

RED PARACHUTE SIGNAL ROCKET
Art. no. 9123100

For use in day and night long range distress signal situations.

BRIDGE SIGNAL SET
Art. no. 9127000

Designed to meet the SOLAS/MED/USCG regulation, which requires 12 Para Red rockets on a ship's bridge, this kit is conveniently stowed in our large waterproof plastic container.

SMOKE SIGNAL
Art. no. 9161700

15 minute orange smoke Man Overboard Lifebuoy marker. Identical to Light Smoke Signal - but without the lighting system.

SMOKE SIGNAL ORANGE
Art. no. 9162000

For use in day distress signal situations and to mark the position during a rescue operation.

www.painswessex.com

www.cometmarine.co.uk