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I F S M A - NEWSLETTER

The International Shipmasters Link

IFSMA Register of Technical Consultants and Maritime Experts (RTCME) now Available on the Internet at "www.ifsma.org"

INSIDE THIS ISSUE:

Coming soon - The IFSMA Register of ISM Auditors

An Electronic Version (pdf) of this Newsletter is available at "www.ifsma.org"

Some thoughts from your Secretary General

I would first like to thank all those members who responded to my last request in this column and gave their views on Radar. It came as no surprise that there was a strong unanimous opinion that Radar remained essential to assist in collision avoidance. As I mentioned IFSMA wished to express your views at the IMO Sub-Committee on the Safety of Navigation expressing the Shipmasters' argument for keeping radar as a key tool in Collision Avoidance and an important aid to Navigation.

Your views were conveyed to a large number of delegates who attended a special lunchtime joint presentation by the UK and IFSMA on the future of Radar. At the end of this presentation there was reassurance that in spite of the growing demand on communication bands, radar will not be threatened.

Immediately after this presentation I flew to Copenhagen to attend the Quality Shipping Conference held by the Danish Maritime Authority. This was an excellent conference, well attended by some powerful members of our industry and the meeting concluded with some sound resolutions. We will outline and discuss these in our next newsletter.

However, my reason for attending this meeting on your behalf was to give a paper entitled 'The ISM Code – Is it working?' We have to admit that there are some disheartening signs, such as the recent Paris MOU Black and Grey Lists shows a significant number of administrations stubbornly continue to have substandard ships under their Flag. Also it is currently estimated that 30% of ships are failing to comply with the ISM Code on STCW standards alone. However IFSMA upholds the aims of the Code -To Provide for safe practices in ship operation and a safe working environment; to establish safeguards against all identified risks; and to continuously improve safety management skills of personnel, including preparing for emergencies.

I argued that the ISM Code brought about a change in safety management culture both ashore and afloat, and experience shows that it takes 7 – 10 years before the benefits of this type of change really become recognized. However I expressed my views that many shipmasters faced four key barriers to overcome a shipboard reluctance to implement the code.

Firstly, there is a perception that the Code causes a paperwork mountain. Where companies have not simply built on their existing systems and have contracted a new system into the company or 'bought it off the shelf', they have often inundated the seagoing staff with mountains of paperwork. One example is the recent case of the *Eurasian Dream* where the High Court found that the master would have required two to three weeks to read all the manuals on board. The ISM Code was not intended to be paperwork based, and some organizations must revisit their SMS to ensure that it works without adding unnecessarily to the paper workload on the Master.

Secondly, the spirit of the code is to encourage a 'No Blame Culture' so that non-compliance issues can be raised without fears of recrimination. I simply explained that the criminalisation of the Master of the *Erica* sent out a message that this concept was not accepted by some administrations and organisations.

Thirdly there is the issue of Fatigue. Unlike other transport industries, the Master is not covered by legislation that ensures he or she has a limit on hours continuously worked or that ample rest periods are assigned. Whilst the role of the Master at sea makes this type of legislation impracticable on most ships, bearing

in mind the second Issue mentioned above, what protection is there for the Master if in the interests of safety he stops operations to take a justifiable rest?

Finally I mentioned that ISM Auditing Procedures should be carried out by Masters (or Senior Officers) who had experienced the ISM Code in action. I argued that audits differed from both surveys and inspections and auditors required specific skills in examining how a safety system was working. I also expressed my opinion that for Class to do both surveys and safety audits was unhealthy.

The paper raised debate and some unexpected support for the fourth issue, the ISM Audit. Some administrations are beginning to question who is competent to carry out this type of work and agreed with the concept that experienced ship's officers were the most suitable to do this.

So we got some positive encouragement for the development of our Register of ISM Code Auditors and our plans to create a training programme. If this inspires you to become involved, our Register will be developed this year and we will be sending out the necessary forms for you in the near future.

Best wishes to you all.

On the Lighter Side

I love deadlines. I especially like the whooshing sound they make as they go flying by.

Accept that some days you are the pigeon and some days the statue.

I don't have an attitude problem, you have a perception problem.

Needing someone is like needing a parachute. If s/he isn't there the first time, chances are you won't be needing her/him again.

IFSMA 28th General Assembly Resolutions

The following Resolutions were passed by the IFSMA 28th Annual General Assembly in Vladivostok, Russia. These are **YOUR** Resolutions, please use them whenever and wherever you can.

IFSMA Res. 1/2002 - Humanitarian Assistance

The IFSMA 28th General Assembly at Vladivostok Russia,

RECALLING the recent M/V TAMPA incident where the vessel was made unseaworthy after rescuing over 400 persons in distress; well beyond the limits of its safety equipment, was denied a Port of disembarkation;

REALIZING that the Master had complied with obligations under international law and in the best of seafaring traditions, it is abhorrent that the vessel was not allowed to land those persons.

STRONGLY URGES IMO to support the Master's ability to render humanitarian assistance and seek a port of disembarkation consistent with the safety of the vessel, crew and those rescued in the Master's best judgement.

IFSMA Res. 2/2002 - ISM Implementation

The IFSMA 28th General Assembly at Vladivostok Russia,

NOTING that the International Safety Management Code (ISM) will become mandatory for all vessels over 500 gross tons on July 31, 2002

NOTING ALSO that feedback from vessels already having implemented the system indicates a substantial increase in administrative workload for ship's officers.

OBSERVING that vessel safety may be improved by enhanced training and work procedures it should not be accomplished at the expense of the safe operation of the vessel at any time

RECOMMENDS that the human element including fatigue be considered in creating a vessel specific ISM code.

IFSMA Res. 3/2002 - Security Officer

The IFSMA 28th General Assembly at Vladivostok Russia,

NOTING the International Maritime Organization (IMO) proposal to designate an officer to enhance vessel security, IFSMA welcomes this positive initiative

RECOMMENDS that this position should be filled by a dedicated, certificated ship's officer(s) with specialized training.

IFSMA Res. 4/2002 - Port of Refuge

The IFSMA 28th General Assembly at Vladivostok Russia,

RECALLING the frequency of recent incidents where vessels in distress have been denied a Port of Refuge or Safe Haven;

REALIZING that mishandling of these incidents for political reasons has caused more serious damage to vessels, unnecessarily threatened the lives of seafarers and has clearly damaged the environment.

RECOGNIZING that the Master's first responsibility is the safety of the crew and protection of the environment, IFSMA

STRONGLY URGES IMO to support the Master's ability to seek the best Port of Refuge or Safe Haven.

IFSMA Res. 5/2002 - Survival Craft Drills

The IFSMA 28th General Assembly at Vladivostok Russia,

NOTING the frequency of serious accidents involving survival craft whereby mariners have been seriously or fatally injured.

NOTING FURTHER that the SOLAS Convention (1974 as amended) has a requirement to have survival craft manned in the course of launching drills.

RECOGNIZING that having survival craft manned for launching drills is a major contributing factor to these casualties,

CONSIDERING how to improve inherent safety, IFSMA

STRONGLY URGES that the requirement in the SOLAS Convention for manned launching drills be deleted.

IFSMA Res. 6/2002 – Submarine Underwater Safety

The IFSMA 28th General Assembly at Vladivostok Russia,

RECALLING the accidents that have occurred to the submarines in recent decades through collisions with each other, fishing vessels and fishing gear;

BEING AWARE that the ineffectiveness of the modern submarines' hydro acoustic systems makes their underwater operations dangerous for navigation, fishing, and other economic activities especially in costal areas;

REALIZING that nowadays the subs operational areas and areas, where intensive economic activities at sea are developing, coincide and that the problem of the nuclear submarines safe navigation is common for many countries if not to mention that it may become global;

CONSIDERING how to improve the inherent safety of the submarine operations in costal waters

RECOMMENDS The International Maritime Organization (IMO) initiate a comprehensive special survey on the "World Submarine Fleet Underwater Operations Safety and the Accident rate".

STRONGLY URGES The International Maritime Organization (IMO) to promote discussions and consultations on the governmental and ministerial levels on the possible solutions.

INVITES The International Maritime Organization (IMO) after the survey appealing to the different information sources is finished, to adopt a resolution on the measures to be taken by the countries possessing the submarine fleets.

RECOMMENDS ALSO for the abovementioned purposes to organize an international expert working group including IFSMA, IMO and other interested experts and organizations.

IFSMA Res. 7/2002 – The Negative Influence Of Tonnage On Ship Safety

The IFSMA 28th General Assembly at Vladivostok Russia,

NOTED with concern the apparent negative influence on the safety aspect of ship designing by the application of tonnage (net or gross) in financial matters such as port charges.

ANNOUNCED the formation of an IFSMA correspondence group in order to thoroughly investigate this matter and bring forward adequate recommendations.

On the lighter side 2

My reality check bounced.

On the keyboard of life, always keep one finger on the escape key.

Never argue with an idiot. They drag you down to their level, then beat you with experience.

Activities in Vladivostok

In addition to the formal business of the General Assembly, delegates also took part in the following events:

A. Welcome Ceremony

The Ceremony to Welcome Delegates was held at the Negotiations House, just outside the City of Vladivostok. This was the same venue where the General Assembly was to be held on the following two days. Outside the main entrance delegates and guests were serenaded by the Orchestra of the Pacific Fleet Headquarters who played some very melodic and appropriate pieces much to the appreciation of all present.

Delegates moved inside to the large entrance lobby and hall at 1900 hours to be honoured by song and the welcoming speech by the Chief Federal Inspector Lyubov Drozdova, this was replied to with a speech by the IFSMA President Christer Lindvall and followed by the speech of the Mayor of Vladivostok.

Following the speeches the concert program continued with "Primorskoye Tango" performed by members of the far Eastern State University and the Russian block "Original" the violinist's ensemble. Following these excellent performances delegates were entertained to a sumptuous buffet accompanied by Captain's Unity brand best Russian Vodka.

B. Laying wreaths for Capt Anna Schetinina and visit to NORFES

On the evening of Friday 31st May, delegates were invited to visit NORFES located at Nazimov Cape, where the VTS Centre for Vladivostok Port and its approaches is located. Delegates were made very welcome by the NORFES Staff and found the visit very interesting. En-route to NORFES delegate stopped off at the grave of Captain Anna Schetinina, Hon-

orary IFSMA Member, to lay wreaths in remembrance of this great Lady Captain.

The evening concluded with a ferry excursion to the Golden Horn and Amurski Bay region surrounding Vladivostok. A Buffet Dinner was provided on board and finally, during the transfer back to the hotels delegates were able to experience a bus excursion entitled "Night Vladivostok".

C. Annual Dinner

On the evening of Saturday 1st June 2002 the IFSMA Gala Annual Dinner was held at the Hotel Versailles in Vladivostok City. The guests of honour were The Vice Governor Victor Gorchakov, Federal Inspector Lyubov Drozdova and Head of Board of FESCO and Honorary Members of FESMA captain Victor Miskov. After the speeches delegates and guests were entertained by singers and dancers who put on a very professional show much enjoyed by all present.

Use of Radar at Sea

A selection of the replies to IFSMA Secretary General's article defending the used of Radar at Sea are reproduced below, these were received from a wide geographical area.

Dear Sir,

After reading the last IFSMA Newsletter and Sec. Gen. thoughts, I would like to express my opinions about the radar utility at sea.

My last ship was equipped with two radar's and ECDIS (electronic nav charts). She was a feeder (460 teus), Chinese construction, 6 months old and we were operating in a weekly basis service, between U.A.E., Oman and Iran. The ports were Khorfakan (home port), Muscat, Jebel Ali, Bandar Abbas, Abu Dhabi. This means that three or four times per week we were crossing or running on the Ormuz Strait. The visibility was always poor, about two or three miles. The electronic charts system was reliable. Connected with the GPS and the ARPA radar, allowed us to track the traffic and follow the lanes in a smooth and easy way, avoiding the stress of plotting positions on the paper charts and allowing us to pay more attention to the traffic.

However we could only have the other vessels plotted on the electronic charts, if the radar was in the true motion and true vector mode. The inconvenient is that we don't have the relative vector to identify a collision motion vessel and the watch-keeping officer should pay attention to this fact.

1 The navigation on the area is very undisciplined, close to anarchic. Rules were often omitted by ships approaching in our red sector and in collision course.

2 The VHF / channel 16 is 24 hours per day busy with all kind of communications, noise, songs, prays, religious, slogans, all kind of talking, making impossible or at least very difficult the contact between two vessels.

3 I fully agree with you with VHF assisted collisions remark. I do not allow the watch-keeping officers to solve traffic problems by VHF.

4 I always require the Aldis Lamp ready to use on the bridge. Proper signalling should be done in time to change course in case of the other ship not following the collision rules.

5 I have already arrived in the bridge, crossing the Finisterre TSS and the watch-keeping officer, with heavy traffic on our port side, flashing to the crossing vessels with a flash light! He ignored the use of Aldis or his location in the bridge.

6 It doesn't exists a standard rule for the use of the true and relative vectors not the

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Group Photograph outside NORFES VTS Centre

Wreath Laying at Captain Anna's Grave

The President, Captain Lindvall giving a Speech

The Delegates from Murmansk (MSMA) - Captains Anatoly Cherapanov and Lyudmila Tibiyaeva.

Captains: Petr Osichansky (FESMA), Rodger MacDonald and Paul Owen (IFSMA) The

Delegates hard at work during the General Assembly

Delegates and Guests during the Annual Dinner

During the visit to the NORFES VTS

Captain Hiroshi Kawashima, Former President of IFSMA

Captain Petr Osichansky, President of FESMA, our hosts, and his two charming assistants who made sure all the arrangements ran smoothly.

radar's on board. Some let us use both options without any restrictions. Others, more reliable in my opinion, only allowed the use of true vectors for 10 seconds and jump to relative vector automatically.

7 One night, I show up on the bridge, in the roads of Texel TSS and found the watch keeping officer using true vectors assuming that they were true ones. He was not able to identify any vessel in collision course...
8 I had on board, a GPS that with thunderstorms, stopped working for more than 12 hours. By than I saw officers in panic with the idea of using the sextant again. They were not able to do it.

The use of radar as a key tool, for navigation or to avoid collisions or grounding, is a must. A good watch-keeping officer, is able to work with any kind of radar after some hours of watch, but the understanding of the ship's motion under fog or bad visibility is an art were common sense is required. As much gismos we have on the bridge, the less attention we give them. It's just another box, they say. But regarding the radar's, they always complain if they have poor picture, are not working good, why they bought such a cheap ones, etc. Radars are the most basic and important tool on the bridge together with the gyro and the auto pilot.

Best regards

Dear Sir,

I have been an Australian Great Barrier Reef Pilot for twelve years, a ship Master prior to that, but my comments are made as a Pilot, rather than as a serving ship Master. As a Pilot, I see a great cross section of ship types, crew and levels of training and equipment standards. There is certainly a growing reliance on GPS, not backed up by training and experience. My comments are personal and although I feel they reflect general Pilot point of view, are not intended to be taken as the official opinion of my organisation.

I am quite familiar with both electronic charts and with the AIS system. We as a Pilot group have been testing a portable AIS system at the request of the Australian Maritime Safety Authority (AMSA). We have tested several electronic chart systems, both separately and in conjunction with the AIS system, where the AIS equipment is carried in a portable pack by the Pilot, and other equipment hard fitted aboard several coastal vessels on regular piloted runs through the Reef. Most of us carry a laptop fitted electronic chart system, both as a training aid, and as a back up chart and positioning system.

A good ARPA radar will give the operator (trained) a rapid assessment of collision risk, and trial manoeuvre possibilities, even in poor visual conditions. An ECDIS system with AIS will certainly conveniently display on an easily read chart format, the position, course and speed of other vessels in the area, but will not, as I understand the system, give nearest approach, or enable a trial manoeuvre. This is where radar is still imperative.

In the narrow and shallow Barrier Reef waters, we frequently encounter prawn trawlers, fishing vessels, yachts and small coastal vessels (not piloted). These craft present a real collision threat, which is not addressed by ECDIS/AIS, as they will all be exempted from the requirements of carrying AIS - radar (and a good lookout!) will always be required. The large, fast deep sea vessels (which will be required to carry ECDIS/AIS) are no problem as they are all piloted, and collision avoidance is achieved by Pilots using slightly different tracks, with VHF concurrence. Also (perhaps seen as an "old fashioned" view), it is always reassuring to a Reef Pilot to have a parallel index set up on the radar, just to be sure of clearing distance when tropical rain sets in quickly.

Reef Pilots have a shipping list, so we know fairly closely when to expect to encounter a fellow Pilot, so AIS in our operation seems superfluous (unless used by all vessels, large and small), however its value in other high traffic and confined waters is undoubted.

I have also been involved in or aware of several rescue situations, where small vessels have indicated distress either by setting off an EPIRB, making a Mayday on VHF, or by red flares. This has led to a search in a general area with perhaps a line of sight bearing as the only guide. Radar was used to find the distressed vessels - again these are small vessels, where AIS is not mandatory, or where fire or water damage may have rendered such equipment unserviceable even if fitted.

Recently in the Reef we had an incident where it was decided that a danger needed to be highlighted quickly, until a more long term solution was found - almost overnight a buoy fitted with Racon was deployed - even before Marine Notices were noted on board, ships officers were seeing the Racon signal on radar, and looking at the Chart for the unexpected Racon – thus achieving the desired effect of drawing attention to the danger. (certainly better trained/more experienced officers would have gleaned such danger anyway).

When piloting one large, high speed and very well run ship, I experienced first hand the answer to the oft asked question "what if it fails?". We were in fairly confined Reef waters, in heavy rain during the wet season, I was using radar (parallex index and clearing bearings), but also keeping an eye on the large screen electronic chart that was displaying DGPS position. This system had two separate DGPS aerials and receivers, designed to cross over if a failure occurred to any component, or to either video display. The chart display went blank; one aerial had failed (we later found due to rain water damage), but the system did not cross over. The Electronics Officer was called to the Bridge, and his tests showed a corrupt file in the software of the operating system. It was quite a straightforward correction - he reinstalled the operating software and reconfigured the system, and after about forty minutes the electronic chart was again in operation - but during this time I was back to full reliance on radar, for both positioning and collision avoidance. How many times in the future may such a situation occur, how many average merchant ships carry an electronics officer, and how would one cope without radar? This incident showed me that even apparently "failsafe" systems with built in redundancy are not entirely reliable.

It is often said that aircraft rely absolutely on electronic positioning and collision avoidance systems. Present day standards of ship crew and equipment do not compare with the levels seen in the aircraft industry.

I have no doubt of the great value of a full ECDIS/AIS system, but I do not believe that this diminishes the need for shipborne radar (with ARPA) and continued training in its use.

I trust that these comments may be of some small assistance to you in preparing the presentation to the IMO Sub-Committee on the Safety of Navigation.

Yours Sincerely.

Dear Sir, Rodger,

I refer to your comments in the IFSMA Newsletter No. 34 regarding the captioned subject, soliciting views of IFSMA members.

I am pleased that IFSMA is preparing a document on the Safety of Navigation for submission to IMO, emphasizing the importance of keeping the radar as an aid to Navigation and Collision Avoidance.

While I do appreciate that merchant ships must keep abreast with the advancement in modern technology and its application for improvement in security measures, there can be no argument is favour of transferring the task of collision avoidance to shore based controllers.

The automatic Identification System (AIS) must only fitted on board merchant ships after a proper seafarers training system for its use has been put in place and provided maritime experts are convinced that "AIS" will not distract the navigating officer on the bridge.

Trust that these brief comments will assist you in your task.

Best regards,

Dear Sir,

In my opinion the use of modern radar at sea today falls broadly into the following areas, supported by comments.

Radar as a tool for detecting other objects.

In the Second World War radar was invented for the purpose of alerting the operator and observer of the presence of an undetected object. The timely detection of these objects allowed an investigation, identification and decision making process to take place that saved thousands of lives.

In the year 2002 nothing has changed, and one of the most important and vital rolls radar still has to play is the early detection of visually undetected objects on the horizontal plane surrounding the ship.

Practically speaking the radar is used as a tool to alert watch keepers to undetected objects in order to void a collision. Also to compare visually detected objects with radar detected objects in order to draw comparisons, enhance mental picture and situational awareness. This basic usage is carried out by trained personnel with understanding of the operational limitations of the system. In short, early detection of objects on the surface of the sea saves lives by giving the bridge personnel. A warning that there is indeed something there, time to investigate the nature of the detected object and further information sufficient to allow the watch keeper to make an informed decision and act accordingly to ensure maximum safety.

Should persons be in any doubt about the radars ability to save lives by means of object detection, they must consider making a passage in one of the worlds many crowded and overfished coastal areas. For example the approaches to Manila bay, for thousands of miles all around the Indonesian coast, the Bay of Bengal, the coast of China, Yellow Sea and Sea of Japan, off the Australian and New Zealand coast

The Florida Strait. The list could go on and on but the main point to note is, all of the areas I have just mentioned, are heavily frequented by small vessels, mostly well below 300grt. Many of these small vessels are indeed hard to detect on radar and frequently hard to detect visually and the Bridge watch keeper needs all the help he or she can get to detect and avoid a collision. The same rule applies to the detection of large vessels but the potential loss of life from the running down of small vessels is much greater, especially when many, and in some countries most, small vessels have themselves no radar, poor or no navigation lights and will only detect another vessel by visual means at close range.

Radar used as a tool for the determination of distance.

Radar is capable of giving the operator information about the range, or distance from another object. For collision avoidance purposes the earlier an object is detected, its range ascertained, the more time is available for a decision to be made

and subsequently the safety factor increases directly in proportion to the amount of warning the operator has been given. When a radar object is detected very late, the very first questions that is asked is "what direction and how far". In other words the simple determination of distance is directly translatable into safety.

The offshore oil and gas industry uses radar for determination of distance on a continual basis and could simply not function without it.

Radar is continually used in navigation and pilotage for determining a ships distance from a particular object or area, point of interest or area of significance. In fact the modern radars application in this manner is so broad that it is difficult to quantify.

Radar as a tool for determining geographical location.

Radar is continually in use to help ascertain the position of a ship. This is especially so on the coastal and river and port water of the world. Thousands of times each day all over the globe, masters, watch keepers, maritime pilots, maritime traffic control and Coast Guards use radar specifically to ascertain position. This position fixing is achieved by range and electronic bearing, gps reference, Map overlay, visual perspective reference, acknowledgement of geographical shapes, interrogation of electronic transponders, and this is just to mention a few of the more common usages.

Maritime Pilots in many ports and rivers around the world are specially trained in the use of radar and commensurate with a detailed "radar picture knowledge" of their local area, can carry out their work, if safe to do so, in dark, poor visibility and indeed in zero visibility and still allow the safe movement of shipping traffic.

Radar as a tool for collision avoidance.

One of the most potent and vital uses of radar today is in assisting the ships master and watch keeper to gather information on other maritime traffic, then make informed decisions based on the information gathered and in accordance with the International Collison Regulations make ship handling decisions such as to avoid a close quarters situation and a situation that may lead to a collision. It cannot be overstressed the huge and critically vital role modern marine radar plays in keeping collisions at sea to an absolute minimum.

It is without doubt that radar used in this way and backed up by visual information and sound watch-keeping experience is largely to thank for the pollution free and safe seas in which most mariners now sail and to which the general public have a right to expect.

Radar as a tool for search and rescue.

Every day without doubt some where on the globe marine radar is used to save life in a search and rescue situation. It may be simply to note the position of a distressed vessel in distress within range of the radar observer or it may be used to carry out a detailed sea surface search in a desperate hunt for persons in distress. The mariner has at his or her finger tips a piece of electronic equipment that is able to scan thousands of square meters of sea surface in seconds, and depending on operating conditions, allow the mariner to closely scrutinise the electronic results of a surface search and have the best possible chance of detecting the distressed object. Without the use of radar in a search and rescue, the mariner would be missing a huge amount of information would have to rely purely on a visual contact made within the visual horizon. This would greatly reduce the prospects of a successful detection and subsequent res-

cue and would certainly waist countless lives.

General Comment.

I for one would not be prepared to sail at sea on a cargo ship, of any description, if marine radar was no longer allowed to be used. The ships master would need to be totally and comprehensively legally covered, nationally and internationally, from any of the consequences that would, without question, arise from sailing without radar at sea as we now know it.

Sailing in times of a national emergency with radars shut down is one thing, but having radar removed from the bridges of all sea going ships, so that my 16 year old nephew can order a medium sized pizza on a crystal clear 9 GHZ cellular phone, and then pass the profit of the call onto some globalized multinational is simply not acceptable. No I do not want to be part of that .

The final say about radar at sea.

What have the public the right to expect?

They should be able to expect, radar, to be available to assist the mariner to avoid collision and the loss of life and to keep his or her ship geographically safe in such a way as to avoid devastation and pollution of the seas and coastal environment.

The public have a right to expect mariners to have radar, available for use to ensure the worlds flora and fauna remains undamaged by the merchants ships of the world insofar as possible.

What have the men in their small fishing canoes and small fishing craft that ply their trade on the coasts and rivers of the worlds third world countries, Countries that now make up at least half of the worlds coast lines. What have these millions of faceless people to expect?

They have the right to expect that each and every mariner when passing through their area, will use radar to the best of their ability in order to detect their craft, as early as possible thus giving sufficient warning and time to avoid running them down and almost certain death, if they otherwise have not been visually seen.

Yours sincerely.

Dear Sir,

We have discussed your letter “Some thought from your Secretary General” at our meeting and came to the unanimous opinion that the Radar is still the most important aid to navigation in spite of existence of other electronic aids, however important they may be. It is very strange for us that it occur to somebody to think that ECDIS and AIS can replace the Radar. So we fully support your efforts in defending the use of radar at sea.

Best regards.

Accidents With Lifeboats

IMO MSC/Circ.1049, 18th May 2002. Also see IFSMA Resolution 5/2002.

1 The Maritime Safety Committee, as its seventy-fifth session (15 to 24 May 2002), considered the issue of the unacceptably high number of accidents with lifeboats that have been occurring over recent years and in which crew were being injured, sometimes fatally, while participating in lifeboat drills and/or inspections.

2 The Committee noted that most accidents fell under the following categories:

.1 failure of on-load release mechanism:

.2 inadvertent operation of on-load release mechanism;

.3 inadequate maintenance of lifeboats, davits and launching equipment;

.4 communication failures;

.5 lack of familiarity with lifeboats, davits, equipment and associated controls;

.6 unsafe practices during lifeboat drills and inspections; and

.7 design faults other than on-load release mechanism.

3 Pending further consideration of the problem, the Committee wishes to draw the attention of manufactures, shipowners, crews and classification societies to the personal injury and loss of life that may follow inadequate attention to the design, construction, maintenance and operation of lifeboats, davits and associated equipment.

4 Member Governments are invited to:

.1 bring this circular to the attention to their maritime Administrations, relevant industry organizations, manufactures, shipowners, crews and classifications societies;

.2 take the necessary action to prevent further accidents with lifeboats pending the development of appropriate IMO guidance;

.3 ensure that:

.3.1 on-load release equipment used on the ships flying their flag is in full compliance with the requirements of paragraph 4.4.7.6.2.2. of the LSA Code;

.3.2 all appropriate documentation for the maintenance and adjustment of lifeboats, launching appliances and associated is available on board;

.3.3 personnel undertaking inspections, maintenance and adjustment of lifeboats, launching appliances and associate equipment are fully trained and familiar with these duties;

.3.4 maintenance of lifeboats, launching appliances and associated equipment is carried out in accordance with approved established procedures;

.3.5 lifeboat drills are conducted in accordance with SOLAS regulation III/19.3.3 for the purpose of ensuring that ship's personnel will be able to safely embark and launch the lifeboats in an emergency;

.3.6 the principles of safety and health at work apply to drills as well;

.3.7 personnel undertaking maintenance and repair activates are appropriately qualified;

.3.8 hanging-off pennants should only be used for maintenance purpose and not during training exercises;

.3.9 all test required for the design and approval of life-saving appliances are conducted rigorously, according to the guidelines developed by the Organization, in order to identify and rectify any design faults at an early stage;

.3.10 the equipment is easily accessible for inspections and maintenance and is proven durable in harsh conditions, in addition to withstanding prototype tests; and

.3.11 the approving authorities or bodies pay close attention to proper workmanship and state-of the-art possibilities when assessing equipment for approval: and

.4 encourage shipowners, when undertaking maintenance and repair activities, to employ qualified personnel, preferably certified by the manufacturer.

5 Member Governments are further invited, while enforcing the provisions of SOLAS regulation IX/4.3. to ensure that the above issues are addressed through the Safety management System of the company, as appropriate.

SOLAS Amendments

New High-Speed Craft Code and new Fire Safety Regulations amongst SOLAS amendments entering into force on 1 July 2002.

Amendments to the International Convention for the Safety of Life at Sea (SOLAS) affecting many aspects of ship safety enter into force on 1 July 2002. They include a new revised SOLAS chapter on fire protection, fire detection and fire extinction, amendments to chapters II-1, IX and X (to make a new High-Speed Craft Code mandatory) and record of equipment attached to safety certificates.

New rules on fire protection, fire detection and fire extinction

A revised SOLAS chapter II-2 (Construction - Fire protection, fire detection and fire extinction) enters into force, which also makes a new International Code for Fire Safety Systems (FSS Code) mandatory.

The revised chapter was developed over eight years by the Sub-Committee on Fire Protection and provides an entirely new structure for SOLAS chapter II-2 which may better accommodate the way port and flag States and ship designers deal with fire safety issues in the future.

The new structure focuses on the "fire scenario process" rather than on ship type, as the previous SOLAS chapter II-2 was structured. Thus, the regulations start with prevention, detection, and suppression following all the way through to escape. In addition, to make the revised SOLAS chapter II-2 more user-friendly, specific system-related technical requirements have been moved to the new International Fire Safety Systems Code and each regulation has a purpose statement and functional requirements to assist port and flag States.

The revised SOLAS chapter II-2 has a new part E that deals exclusively with human element matters such as training, drills and maintenance issues and a new part F that sets out a methodology for approving alternative (or novel) designs and arrangements.

International Fire Safety Systems (FSS) Code

Some of the original technical provisions of SOLAS chapter II-2 on fire protection have been transferred from the Convention to the Code, and many others are spelled out in greater detail in the Code. The main reason behind having a separate Code was to separate carriage and other statutory requirements, which clearly belong in the Convention and are meant for the Administration, from purely technical provisions, which are better suited for the Code and may be applied in a more user-friendly manner by equipment manufacturers, systems engineers, etc.

The purpose of the FSS Code is to provide international standards for fire safety systems required by revised SOLAS chapter II-2, under which it is made mandatory. The FSS Code consists of 15 chapters, each addressing specific systems and arrangements, except for chapter I which contains several definitions and also general requirements for approval of alternative designs and toxic extinguishing media.

Application of Chapter II-2 to existing ships

The new chapter II-2 applies to ships constructed on or after 1 July 2002. However,

the chapter also applies to existing ships for the following regulations:

- All ships which undergo repairs, alterations, modifications and outfitting related thereto shall continue to comply with at least the requirements previously applicable to these ships. Such ships, if constructed before 1 July 2002, shall, as a rule, comply with the requirements for ships constructed on or after that date to at least the same extent as they did before undergoing such repairs, alterations, modifications or outfitting (regulation 1.3.1).

- Repairs, alterations and modifications which substantially alter the dimensions of a ship or the passenger accommodation spaces, or substantially increase a ship's service life and outfitting related thereto shall meet the requirements for ships constructed on or after 1 July 2002 in so far as the Administration deems reasonable and practicable (regulation 1.3.2).

- Combination carriers constructed before, on or after 1 July 2002 shall not carry cargoes other than oil unless all cargo spaces are empty of oil and gas-freed or unless the arrangements provided in each case have been be approved by the Administration taking into account the guidelines developed by the Organization (Guidelines for inert gas systems (MSC/Circ.353, as amended by MSC/Circ.387) (regulation 1.6.5).

- In cargo pump-rooms in tankers, temperature sensing devices for bulkhead shaft glands, bearings and pump casings shall be fitted; all pump-rooms shall be provided with bilge level monitoring devices together with appropriately located alarms; and a system for continuous monitoring of the concentration of hydrocarbon gases shall be fitted on all tankers constructed before 1 July 2002 by the date of the first scheduled dry-docking after 1 July 2002, but not later than 1 July 2005 (regulation 1.6.7).

- Emergency escape breathing devices (EEBD) - All existing ships must have these fitted not later than the date of the first survey after 1 July 2002 as follows: all ships shall carry at least two emergency escape breathing devices within accommodation spaces; in passenger ships, at least two emergency escape breathing devices shall be carried in each main vertical zone; in passenger ships carrying more than 36 passengers, two emergency escape breathing devices, in addition to those required above, shall be carried in each main vertical zone. (Regulations 13.3.4.2 to 13.3.4.5 - certain exemptions apply - see regulation 13.3.4.5). On all ships, within the machinery spaces, emergency escape breathing devices shall be situated ready for use at easily visible places, which can be reached quickly and easily at any time in the event of fire. The location of emergency escape breathing devices must take into account the layout of the machinery space and the number of persons normally working in the spaces. The number and location of EEBDs must be indicated in the fire control plan and they must comply with the Fire Safety Systems Code (regulation 13.4.3, which refers to the Guidelines for the performance, location, use and care of emergency escape breathing devices (MSC/Circ.849).)

- Part E - Operational requirements - All existing ships must comply with part E (except regulations 16.3.2.2 and 16.3.2.3 - relating to inert gas systems, as appropriate) not later than the date of the first survey after 1 July 2002. Part E includes regulation 14 on Operational readiness and maintenance; regulation 15 on Instructions, onboard

training and drills; and regulation 16 on Operations.

- For new installations only on existing ships: Fire-extinguishing systems using Halon 1211, 1301, and 2402 and perfluorocarbons are prohibited for new installations (regulation 10.4.1.3).

- Deep-fat cooking equipment - for new installations on existing ships, the fire extinguishing systems for deep-fat cooking equipment must comply with regulation 10.6.4, including the requirement for an automatic or manual extinguishing system; a primary and backup thermostat with an alarm; arrangements for automatically shutting off the electrical power upon activation of the extinguishing system; an alarm for indicating operation of the extinguishing system in the galley where the equipment is installed; and controls for manual operation of the extinguishing system which are clearly labelled for ready use by the crew.

- Passenger ships of 2,000 gross tonnage and above must comply not later than 1 October 2005 with regulations for fixed local application fire-fighting systems (regulation 10.5.6).

Asbestos prohibited in new installations

A new regulation 3-5 in SOLAS Chapter II-1 (Construction - Structure, subdivision and stability, machinery and electrical installations) prohibits the new installation of materials which contain asbestos on all ships. The regulation states that for all ships, new installation of materials which contain asbestos shall be prohibited except for vanes used in rotary vane compressors and rotary vane vacuum pumps, watertight joints and linings used for the circulation of fluids when, at high temperature or pressure there is a risk of fire, corrosion or toxicity, and supple and flexible thermal insulation assemblies used for temperatures above 1000 C.

New High-Speed Craft Code, 2000

The new High-Speed Craft Code, 2000 is an updated version of the High-Speed Craft Code adopted in 1994 and made mandatory under SOLAS chapter X (Safety measures for high-speed craft). The new Code applies to all HSC built on or after the date of entry into force.

The rapid pace of development in this sector of shipping has meant an early revision of the Code. The original Code will continue to apply to existing high-speed craft. The changes incorporated in the new Code are intended to bring it into line with amendments to SOLAS and new recommendations that have been adopted in the past four years - for example, requirements covering public address systems and helicopter pick-up areas.

Consequential amendments to SOLAS chapter X (Safety measures for high-speed craft) - to make the new Code mandatory - were also adopted.

Record of equipment

Amendments to the appendix to the Annex to the Convention include revision of the details of navigational systems and equipment referred to in the records of equipment attached to the relevant safety certificate. The amendments reflect the changes introduced by the revised SOLAS chapter V.

1988 SOLAS Protocol - certificates

Amendments to the 1988 SOLAS Protocol include revision to the details of navigational systems and equipment referred to in the records of equipment attached to certificates. The amendments reflect the changes to SOLAS Chapter V.

Amendments to codes

The following amendments to mandatory codes, adopted in December 2000, also enter into force on 1 July 2002:

- Amendments to the International Code for the Application of Fire Test Procedures (FTP Code) to add new parts 10 and 11 to annex 1 on tests for fire-restricting material for high-speed craft and tests for fire-resisting divisions of high-speed craft.

- Amendments to the International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (IBC Code) and the Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (BCH Code) relating to cargo hose requirements, protection of personnel and carriage of carbon disulphide.

- Amendments to the International Safety Management Code (ISM Code) including the replacement of Chapter 13 (on certification, verification and control) with a new Chapter 13 (on certification) and additional Chapters 14 (Interim certification), 15 (Forms of certificate) and 16 Verification; as well as a new appendix giving forms of documents and certificates.

- Amendments to the Code for the Construction and equipment of ships carrying dangerous chemicals in bulk (BCH Code) relating to ship's cargo hoses, tank vent systems, safety equipment, operational requirements; and amendments to the Code for the construction and equipment of ships carrying liquefied gases in bulk (GC Code) relating to ship's cargo hoses, personnel protection and operating requirements.

May 1998 amendments to SOLAS

The following SOLAS amendments which enter into force on 1 July 2002 were adopted in 1998:

In Chapter II-1 - Construction - Subdivision and stability, machinery and electrical installations, visual examination of welded connections, where filling with water or a hose test are not practicable, is now allowed under regulation 14 on Construction and initial testing of watertight bulkheads, etc., in passenger ships and cargo ships.

In Chapter IV - Radiocommunications, Regulation 5-1 requires Contracting Governments to ensure suitable arrangements are in place for registering Global Maritime Distress and Safety System (GMDSS) identities (including ship's call sign, Inmarsat identities) and making the information available 24 hours a day to Rescue Co-ordination Centres. Testing intervals for satellite emergency position indicating radio beacons (EPIRBS) are updated in a new paragraph 9 to regulation 15 Maintenance Requirements. A new regulation 18 on Position updating requires automatic provision of information regarding the ship's position where two-way communication equipment is capable of providing automatically the ship's position in the distress alert. Where manual updating of the ship's position is required, this should be done not less than every four hours when the ship is underway.

In Chapter VI Carriage of Cargoes (Regulation 5) and Chapter VII Carriage of Dangerous Goods (Regulation 6), "all cargoes, other than solid and liquid bulk cargoes" should be loaded, stowed and secured in accordance with the Cargo Securing Manual.

If death doesn't get you, life probably will!

Indonesian Seafarer Certificates

A Circular issued by the Embassy of the Republic of Indonesia, London. 20th June 2002.

On behalf of the Government of the Republic of Indonesia, I have the honour to inform you that to facilitate the listing of Indonesia Seafarer Certificates in an orderly manner, the Directorate General of Sea Communications of the Communications Department of the Republic has established a website, <www.pelaut.net>.

All Indonesia seafarers whose certificates are registered with the Directorate General of Sea Communications are listed on the website, which is managed by the administrations of the Directorate General of Sea Communications.

Furthermore, the Directorate General of Sea Communications has decide that old certificates are still recognized and need not be replaced as long as the service user has no problem with it.

If a relevant institution has any doubt regarding the originality of any seafarer certificate, it could be clarified through the website, or by sending a letter by post to the Directorate general of Sea Communications, or by fax to fax number 00 62 21 350-5681 or fax number 00 62 21 352-0978.

I would also be grateful if you could pass on this circular to other relevant institutions.

On the Lighter Side 3

I love cooking with wine. Sometimes I even put it in the food.

If it weren't for STRESS I'd have no energy at all.

Bills travel through the mail at twice the speed of checks.

"Black Boxes" and AIS Regulations

New regulations for certain size ships to carry voyage data recorders (VDRs) and automatic identification systems (AISs) enter into force today (1 July 2002).

The mandatory regulations are among a raft of amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS) entering into force on 1 July 2002. In addition, under its second phase of implementation, the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) becomes mandatory for most ships trading internationally on 1 July 2002. (See also Briefings 21/2002 and 23/2002).

The revised SOLAS chapter V (Safety of Navigation), which was adopted in December 2000, includes a number of important new requirements for ships, including those relating to carriage of VDRs and AIS and acceptance of electronic charts as meeting the chart carriage requirements.

Voyage Data Recorders

Like the black boxes carried on aircraft, VDRs enable accident investigators to review procedures and instructions in the moments before an incident and help to identify the cause of any accident. Performance standards for VDRs were adopted by IMO in 1997 (IMO Resolution A.861(20) and IMO encourages all ships to carry VDRs.

In addition, IMO's Maritime Safety Committee (MSC) in May 2002 approved MSC/Circ.1024 on Guidelines on Voyage Data Recorders (VDR) ownership to complement the VDR performance standards.

VDR Requirements

The following ships are required to carry VDRs, under regulation 20 of the new SOLAS Chapter V:

- passenger ships constructed on or after 1 July 2002;
- ro-ro passenger ships constructed before 1 July 2002 not later than the first survey on or after 1 July 2002;
- passenger ships other than ro-ro passenger ships constructed before 1 July 2002 not later than 1 January 2004; and
- ships, other than passenger ships, of 3,000 gross tonnage and upwards constructed on or after 1 July 2002.

VDRs are required to meet performance standards "not inferior to those adopted by the Organization". Performance standards for VDRs were adopted in 1997 and give details on data to be recorded and VDR specifications. They state that the VDR should continuously maintain sequential records of preselected data items relating to status and output of the ship's equipment and command and control of the ship. The VDR should be installed in a protective capsule that is brightly coloured and fitted with an appropriate device to aid location. It should be entirely automatic in normal operation. Under the new regulation, the voyage data recorder system, including all sensors, shall be subjected to an annual performance test conducted by an approved testing or servicing facility to verify the accuracy, duration and recoverability of the recorded data.

Administrations may exempt ships, other than ro-ro passenger ships, constructed before 1 July 2002, from being fitted with a VDR where it can be demonstrated that interfacing a VDR with the existing equipment on the ship is unreasonable and impracticable.

VDRs for existing cargo ships

In December 2000, IMO's Maritime Safety Committee (MSC) adopted a Resolution on the carriage of VDRs on existing cargo ships, which calls for a feasibility study to be carried out to ascertain the need for mandatory carriage of VDRs on these ships. The feasibility study, being conducted by the Sub-Committee on Safety of Navigation (and other Sub-Committees as appropriate), takes into account such factors as practicability, technical problems relating to the retrofitting of VDRs, adequacy of existing performance standards including the possible development of simplified standards, experience in the use of VDRs on ships already fitted with them, including data that could not have been obtained without VDRs, and relevant financial implications, including a cost-benefit analysis.

The aim is to finalize the study by 1 January 2004 so that, if the study demonstrates a compelling need for mandatory carriage of VDRs on existing cargo ships, relevant amendments to SOLAS Chapter V and the associated performance standards can be drafted. In the meantime, the resolution invites Governments to encourage shipowners to install VDRs on existing cargo ships voluntarily, so that wide experience of their use may be gained.

Automatic Identification System (AIS)

Regulation 19 of the new Chapter V - Carriage requirements for shipborne navigational systems and equipment - sets out navigational equipment to be carried on board ships, according to ship type. Most equipment (gyrocompass, radar etc) was already required under the existing Chapter V, but the new regulation adds a requirement for carriage of automatic identification systems (AISs) capable of providing information about the ship to appropriately equipped shore stations, other ships and aircraft automatically.

The regulation requires AIS to be fitted aboard all ships of 300 gross tonnage and upwards engaged on international voyages, cargo ships of 500 gross tonnage and

upwards not engaged on international voyages and passenger ships irrespective of size built on or after 1 July 2002. It also applies to ships engaged on international voyages constructed before 1 July 2002, according to the following timetable:

- passenger ships, not later than 1 July 2003;
- tankers, not later than the first survey for safety equipment on or after 1 July 2003;
- ships, other than passenger ships and tankers, of 50,000 gross tonnage and upwards, not later than 1 July 2004;
- ships, other than passenger ships and tankers, of 10,000 gross tonnage and upwards but less than 50,000 gross tonnage, not later than 1 July 2005;
- ships, other than passenger ships and tankers, of 3,000 gross tonnage and upwards but less than 10,000 gross tonnage, not later than 1 July 2006.
- ships, other than passenger ships and tankers, of 300 gross tonnage and upwards but less than 3,000 gross tonnage, not later than 1 July 2007;

Ships not engaged on international voyages constructed before 1 July 2002, will have to fit AISs not later than 1 July 2008. A flag State may exempt ships from carrying AISs when ships will be taken permanently out of service within two years after the implementation date.

Performance standards for AIS were adopted in 1998. The new regulation requires that AIS shall:

- provide information - including the ship's identity, type, position, course, speed, navigational status and other safety related information - automatically to appropriately equipped shore stations, other ships and aircraft;
- receive automatically such information from similarly fitted ships;
- monitor and track ships;
- exchange data with shore-based facilities.

Clear waters ahead for ECDIS

Regulation 19.2.2.1.3 of the new Chapter V also allows an electronic chart display and information system (ECDIS) to be accepted as meeting the chart carriage requirements of the regulation.

The regulation requires all ships, irrespective of size, to carry nautical charts and nautical publications to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage. But the ship must also carry back up arrangements if electronic charts are used either fully or partially. Performance standards for electronic charts were adopted in 1995, by resolution A.817(19)), which was amended in 1996 by resolution MSC.64 (67) to reflect back-up arrangements in case of ECDIS failure. Additional amendments were made in 1998 by resolution MSC 86.(70) to permit operation of ECDIS in RCDS mode.

Enlarged Chapter V reflects growth in technology

In all, the revised SOLAS Chapter V on Safety of Navigation has 35 regulations, compared to 23 in the present Chapter V. In addition, a new Appendix to Chapter V gives rules for the management, operation and financing of the North Atlantic Ice Patrol, while the SOLAS Appendices giving an example Record of Equipment for the Passenger Ship Safety Certificate (Form P) and a Record of Equipment for the Cargo Ship Safety Equipment Certificate (Form E) are also revised to take into account the revised requirements in the new Chapter V.

Guidance On Ships' Daily Reporting Of Their Positions To Their Companies

IMO MSC/Circ.1043. 31 May 2002.

1 The maritime safety Committee, at its seventy-fifth session (15 to 24 May 2002), noted with concern, that ships continue to be lost without distress signals being received by search and rescue services, a situation that delays the rescue of survivors because of uncertainty regarding the ship's position.

2 The Committee also noted that the recent Report of the Re-opened Formal Investigation into the loss of the MV Derbyshire had recommended, inter alia, that "the IMO should require the compulsory daily reporting of the position of all vessels".

3 The Committee further noted that:

.1 Emergency position indicating radio beacons (EPIRBs), that transmit via satellites a distress signal which includes their position, are intended to float-free and automatically activate in the event of a ship sinking;

.2 Chapter V of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, and Chapter 5 of the International Convention of Maritime Search and rescue (SAR), 1979, as amended, both include provisions regarding ship reporting; and

.3 in the context of on-going discussions in respect of Resolution A.294(22) on Review of measures and procedures to prevent acts of terrorism which threatens the security of passengers and crews and the safety of ships, the organization was considering the development of a long-range version of the Automatic Identification System (AIS),

4 The Committee, while acknowledging that the systems referred to in paragraph 3 above, enhance the probability that a relatively recent position of a ship in distress is available to search and rescue services in a timely manner, agreed that it was also necessary to urge all ships, which are not:

.1 already participating in a ship reporting system; or

.2 trading on a regular route where the voyage time between successive ports is less than 24 hours,

to report their position to their companies, as defined in chapter IX of SOLAS, at least once every day.

5 Member Governments and international organizations concerned are invited to being this circular to the attention of all concerned.

ISM Code – Phase 2

The International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) becomes mandatory for most ships trading internationally on 1 July 2002. Compliance with the Code has been mandatory for tankers, passenger ships and bulk carriers since July 1998, under the first phase of ISM implementation, and now all other vessels covered by the SOLAS Convention, which includes all but the smallest internationally-trading vessels, must comply.

"This is a significant day for the shipping industry and for all those involved with shipping," said Mr. William A. O'Neil, Secretary General of the International Maritime Organization (IMO). "This is a positive step which contributes to IMO's goals

of safe, secure and efficient shipping on clean oceans," he added.

Mr. O'Neil said that development of the ISM Code and making it mandatory for SOLAS ships can be considered one of the most important developments in maritime safety in recent years.

"Previously, IMO's attempts to improve shipping safety and to prevent pollution from ships had been largely directed at improving the hardware of shipping - for example, the construction of ships and their equipment. The ISM Code, by comparison, concentrates on the way shipping companies are run," he said.

"This is important, because we know that human factors account for most accidents at sea - and that many of them can ultimately be traced to management. The Code is helping to raise management standards and practices and thereby reduce accidents and save lives," Mr. O Neil said.

The mandatory ISM Code provides an international standard for the safe management and operation of ships and for pollution prevention. It places direct responsibility on shoreside management to ensure that its ships operate to the prescribed level of safety. Evidence so far suggests that the impact of ISM implementation has had a positive effect and the Code is beginning to achieve its aim of creating a culture of safety within shipping companies throughout the world.

Commercially, there are indications that ISM certification proves its worth. Studies have shown that the implementation of the ISM Code has already had a positive effect on safety. In fact, companies which have safety management systems in place have reported a reduction in casualties and spills, as well as a downward trend in detention rates while companies which have fully embraced the ISM Code have a better approach to safety management.

A claims analysis by The Swedish Club , which provides both hull and Protection and Indemnity cover, showed that, in 2000, vessels required to comply with the ISM Code by 1 July 1998 were having around 30 percent fewer claims than vessels covered by the second deadline of 2002.

Black List/Grey List

The deceased Tonga ship register in June gained another dubious accolade to add to its tarnished record by reaching the upper echelons of the Paris MoU's black list during its first — and last — year in operation.

Tonga was ranked 13th on the list of shame, classed as a 'very high risk' flag alongside regular offenders such as Albania, Bolivia, Sao Tome and Principé, Honduras, Algeria, Lebanon, Georgia, Cambodia, Syria, Turkey and Belize.

The list, based on inspection and detention data collected over the past three years, has some other interesting newcomers this year.

India, ranked 33rd last year and included on the grey list, is now seen as a medium risk flag, coming in 21st on the latest black list. Azerbaijan also crossed the line from grey to black.

Many of the flag states on the list run relatively small registers, but big maritime nations such as Panama, Malta and Cyprus appear in it too, as in previous years.

The list, published this week by the Paris MoU ahead of its annual report next month, reflects little improvement in the well-documented bad practices common at

the bottom end of the market. In fact, it is worse.

As in other years, operators of older ships have proved the worst offenders.

Trends highlighted by the memorandum's secretariat this week included a continued increase in operational deficiencies, up 29% since 1999, and a 150% increase in safety management defects over the past three years.

Officials did not mince their words in the report.

"Apparently a number of flag states which are responsible for certifying these (older) ships have more concern for their revenues than safety standards," the secretariat said in a statement.

Some "notorious flags seem to be comfortable with their position on the black list and have not shown any sign of improvement over the years", the report said.

Paris MoU officials recognised that some flags had taken positive steps to better their standards, however.

Notable are registers such as Croatia, Latvia and Lithuania, which all dropped down from black into grey and out of the high risk category.

It is also important to note that the list is based on three-year data. That means that important work carried out recently by flags such as Cyprus and Malta to improve their standards may not yet be fully reflected in the statistics.

But the message from the Paris MoU this week was blunt.

"Shipowners, flag states, classification societies and charterers will be held accountable for their performance and involvement with substandard ships," it said.

"On the other hand, companies, ships and flags with a good safety record will be rewarded for investing in quality shipping."

Next month will see port state control inspectors across Europe targeting safety management compliance during inspection.

The three-month campaign comes as ISM-compliance becomes mandatory for all ships and against a surge in safety management deficiencies over the past three years.

Officials are unsure what to expect but, given the latest inspection data available, the forecast appears bleak.

"A number of flags still have ships to be (ISM) certified," said Paris MoU general secretary Richard Schiferli.

He said the industry should take note of the 150% increase in ISM-related problems since 1998.

"Since all ISM-compliant ships have been subject to several audits by the company and flag or classification society since they were certified in 1998, the standard of non-compliance should be cause for concern.

"At the same time, questions can be raised as to how the companies of these ships managed to obtain a Document of Compliance," he said.

But some industry experts, while welcoming the focus on ISM by port state control inspectors, believe that a different, more in-depth way of reporting and recording ISM-related problems needs to be developed.

Nikos Mikelis, head of Intertanko's technical committee, suggested that the 150% surge in ISM deficiencies might not reflect an actual increase in on-board problems.

"More and more deficiencies are charged as SMS deficiencies," he said, adding that

virtually any problem could be attributed to a failure of the safety management system on an ISM-compliant ship.

"A more sophisticated way of analysing things is needed by port state control."

That may well be on the cards as the Paris MoU invests in upgrading its systems.

The central database in St Malo, known as SIRENAC, is being re-vamped and improved to better enable port state control officials to report and share inspection data.

One major change when the new system becomes operational in January next year will the logging of charterer data.

As from next year, the names of charterers linked to vessels detained by port state control inspectors will be recorded on SIRENAC.

The Paris MoU has yet to decide how and when it will use this information, but it has not ruled out making it public in similar 'name and shame' tactics it uses with vessels, operators and class societies.

The clear aim is to increase transparency and accountability across the shipping chain.

The Paris MoU is also keen to reward good operators and is looking to create a scheme along the lines of the Qualship 21 programme in the US. Quality operators already benefit from improvements in the way inspectors target ships, making good ships less likely to be stopped.

Lloyds List, June 26, 2002

Black List – in order of MoU ranking

Albania
Bolivia
Sao Tome and Principle
Honduras
Algeria
Lebanon
Georgia
Cambodia
Syrian Arab Republic
Turkey
Belize
Libyan Arab Jama
Tonga
Romania
Morocco
St Vincent & Grenadines
Egypt
Ukrainia
Malta
Panama
India
Cyprus
Azerbaijan
Russia

Grey List– in order of MoU ranking

Kuwait
Portugal
Thailand
Croatia
Latvia
Lithuania
Cayman Islands
Qatar
Malaysia
Faeroe Islands
Brazil
Iran
United Arab Emirates
Tunisia
Tuvalu
Taiwan
Ethiopia
Estonia
Italy
Gibraltar
Saudi Arabia
Antilles, Netherlands
Korea, Republic of
Vanuatu
Philippines
Spain
US

MAIB Annual Report 2001

The UK Marine Accident Investigation Branch has recently issued their Annual Report for 2001. We reproduce here extracts from the Chief Inspector's Forward which we believe will be of interest to members of IFSMA. We note that Rear Admiral Lang is moving on and we wish him well for the future, he will be a hard act to follow.

International

Although many organisations are concerned with advancing safety at sea, history shows that some of the most far-reaching improvements have been introduced in the aftermath of an accident. It is therefore reasonable to conclude that accident investigations can, when carried out thoroughly, make a major contribution to the development of safety at sea.

I cannot but help observe that of the 162 member states of IMO, only a handful carry out thorough investigations into accidents involving their vessels and even fewer have totally independent accident investigation bodies. A number will carry out very basic inquiries into the causes but are very reluctant to make their reports publicly available. As a result, few people learn from such accidents and little is done to prevent the same thing happening again. This failure to carry out proper investigations does nothing to improve safety, while the reluctance to do more stems largely from the lack of transparency in the international shipping community.

I continue to be deeply concerned by the blame culture that is so prevalent today. While many will argue that someone should always be held accountable for any accident, and failure should be punished to deter others, I have very grave reservations about whether this approach is contributing to a general improvement in safety.

The fear of self-incrimination, or being held solely responsible for some lapse, is having an adverse effect on people's willingness to co-operate in an accident investigation to determine the primary and underlying causes. In my opinion, the blame culture is doing little or nothing to encourage an improvement in safety.

Merchant Shipping

2001 was an unusually difficult year for the shipping industry. Although many shipowners and managers have been forced to cut operating costs to remain competitive, I have no reason to doubt that the good, responsible ones backed by conscientious flag states and classifications societies, continue to operate safe, well run vessels in the best traditions of the sea. Charterers can be confident of the quality provided by the ships concerned.

At the other end of the spectrum there are, despite the efforts of those who endeavour to promote quality shipping, far too many substandard vessels continuing to trade. Their ability to undercut the conscientious owner is a factor in his relentless need to reduce operating costs. It is not only the owner of the substandard vessel that undermines the pursuit of quality but also the failure of too many flag states to implement and enforce international regulations and conventions.

The international shipping community should be very concerned that it so often falls to the port state control inspections to reveal the problems, rather than those responsible for setting the standards.

In this fiercely competitive industry, there is relatively little incentive in some trades for owners to invest in quality. Market forces in the form of low freight rates, excess tonnage, and over capacity all favour the owner able to offer the cheapest possible option to shippers and charterers who, in turn, appear disinclined to pay a premium for using quality vessels and crews.

I believe it is still too soon to reach any definitive judgment about the benefits of the International Safety Management (ISM) code. My initial feeling, however, is that it can be made to work, and work well, providing both sea and shore staffs understand the aims of the system,

and work together to achieve the requisite results. I also detect a reluctance by many at sea to report non-conformities for fear of being criticised or disciplined. This fear is, sadly, justified in a number of cases. Trust and co-operation between those at sea and ashore need to be improved in many instances. If management is not made aware of defects and incidents, it cannot introduce the measures needed to manage the risk.

Inspectors continue to concentrate on identifying the human factor in the causal chain of any accident. I believe the MAIB has done much to focus attention on the human element, but my inspectors have no illusions that much remains to be done. It is still largely ignored by many and I make no apology for repeating, once again, my concerns about fatigue at sea, and undermanning in some ships.

The fact that so little has been done to improve manning standards is symptomatic of how difficult it is to change things in the marine business. In my opinion there are a number of vessels operating with officers who are often too tired to conduct themselves effectively. I have very grave doubts about the ability of two officers to remain constantly alert in some trades while maintaining a watchkeeping cycle of six hours on and six hours off over extended periods. Notwithstanding working time directives, I believe there is an urgent need to review the philosophy of minimum manning levels in, particularly, the short sea trade.

I continue to be concerned by consistent reports of poor standards of watchkeeping in some vessels. Although I have no personal evidence of watchkeepers having acquired certificates by fraudulent means, the standards of competency displayed by some indicate worrying shortcomings. A number appear to have little understanding of how to apply the Rule of the Road. Such observations are a major source of concern to those many mariners who do observe them and rely on others to do likewise.

There are many examples of high standards being maintained at sea. Many mariners are doing an outstanding job, with far too little recognition, but so much of what they are achieving is being consistently undermined by others who do not share the same pride and professionalism in this most vital of all industries.

I use this opportunity to commend those who try so hard to get it right.

Confidential Reporting

In previous annual reports I have referred to the importance I attach to mariners having access to confidential reporting.

Throughout the year I have been approached by people with very genuine concerns about safety in their vessels, but who have no means of drawing people's attention to them. This confirms my strongly held view that there is a need for such a system open to all who go to sea.

The blame culture that I have already touched on previously is prevalent throughout the industry, and mariners are genuinely frightened that if they were known to be reporting safety deficiencies, they would almost certainly lose their jobs. This climate of fear is not conducive to the establishment of a safety culture at sea.

I have consistently argued for the introduction of a UK-based confidential reporting system, and it remains one of my biggest disappointments that after several years campaigning for it, my own Department for Transport has been so slow to take my recommendation forward. Although at the time of drafting this report, I have been informed that progress is being made, and I welcome this, I reiterate my belief that the need exists today.

Summary

2001 was another busy year in which, thankfully, there were no serious accidents. It is almost impossible for me to judge whether the MAIB has played any part in improving safety, but I would like to think it has. I believe the formula of investigating a few accidents thoroughly, by trying hard to identify and publish lessons to be learned, and by encouraging people to be as open

with us as possible, has contributed greatly to improving safety at sea.

As I prepare to relinquish my appointment as the Chief Inspector after five very busy and enjoyable years, I have one overriding regret. It is a great sadness to note how few other flag states around the world have full time marine accident investigation organisations that are able, and prepared, to conduct independent indepth marine accident investigations and make their reports publicly available. I think safety at sea, and the lives of everyone afloat including passengers, could be improved if steps were taken to correct this major weakness as a matter of some urgency.

It only remains for me to acknowledge the help and support I have received from so many over the years, and to thank my staff very sincerely for their loyalty, good humour, patience and professionalism.

I wish my successor, Stephen Meyer, every success in this most worthwhile and challenging of jobs.

John Lang, Chief Inspector of Marine Accidents.

Guidelines For The Assessment Of Thermal Protection

IMO MSC Circ.1046. 28th May 2002.

The Maritime Safety Committee, at its seventy-fifth session (15 to 24 May 2002), recognizing the need for systematised guidelines for thermal protection of crews and passengers according to environment factors and for appropriate performances standards for additional thermal protective equipment, approved Guidelines for the assessment of thermal protection, as set out below.

Member Governments are invited to bring the following Guidelines to the attention of all parties concerned, as appropriate.

1 Introduction

In considering thermal protective equipment for use on ships operating in various climatic conditions, Administrations and ship operators should take into account all of the relevant risk factors, to include type of ship, type of survival craft, number of persons on board, environmental conditions in the operational area, and availability of SAR services. The purpose of these Guidelines is to provide information to assist in the assessment of the impact of environmental factors, and specially water temperature on equipment selection. In the context of the medical threat of hypothermia, the IMO publication "A Pocket Guide to Cold Water Survival" should be referred.

2 Thermal Protective Performance

In addition to the performance requirements in the International Life-Saving Appliance (LSA) Code, there are some data available which illustrates the performance of the equipment at different water temperatures. Thermal protective performances for the various types of equipment at these temperatures is defined as the time to reach a deep body temperature of 35˚C or reduce a deep body temperature by 2˚C, which is the point at which significant degree of incapacitation is expected to occur. These data were obtained by a combination of theoretical and experimental methods. While based upon the best information available, they are provided for comparison purposes only. Individual results may vary greatly based on sea conditions, body, type, etc.

On the Lighter Side 4

A balanced diet is a cookie in each hand.

Middle age is when broadness of the mind and narrowness of the waist change places.

Opportunities always look bigger going than coming.

Thermal protective means. (Clothing is generally included)	IMO minimumTest requirements			Time (hrs) for core temperatures drop of 2˚C or to 35˚C when exposed to water of temperature			
	Time(h)	Water Temp. (°C)		0˚C	5˚C	10°C	20˚C
LifejacketThermal protective (TP) lifejacketAnti-exposure suitImmersion suit un-insulatedImmersion suit insulated	-* 2 h 1 h 1 h 6 h	- 10 5 5 2		- 0.5 h 1.5 h 1.5 h 6 h	0.5 h 0.75 h 2 h 2 h >12 h	0.8 h 2 h 4 h 5 h >12 h	1.7 h 4 h 10 h >12 h >12 h

Table 1: Thermal protective performances by type of personal life-saving appliances.

* No IMO requirements

3 Temperature Range and Geographical Sectors

The sea areas subject to these temperatures vary greatly throughout the year and do not always uniformly follow specified latitudes. Table 2 illustrates the approximate variation of water temperature with latitude during the coldest months of the year in the northern and southern hemispheres. More exact information on seawater temperature can be found at <www.node.noaa.gov/dsdt/oistt/index.html> or appropriate local sources.

Temperature range (˚C)	Geographical sectors (degree latitude) (North)	(South)
Above 20	0-30	0-30
20-10	30-50	30-45
10-5	50-60	45-50
Below 5*	60-70	50-60

Table 2: Variation of seawater temperature latitude

* All areas of icing conditions as defined in resolution A.749 (18) – Code on Intact Stability, should be included in this range.

The Modern Meaning of Words

Cigarette: A pinch of tobacco rolled in paper with fire at one end and a fool on the other.

Conference: The confusion of one man multiplied by the number present.

Compromise: The art of dividing a cake in such a way that everybody believes he got the biggest piece.

Tears: The hydraulic force by which masculine will-power is defeated by feminine water power...

VOC Emission Prevention - A possible solution?

It is estimated that 4 to 7 million of tons of cargo is lost due to VOC emission yearly versus 25,000 tons due to spillage. Economically as well environmentally it is unacceptable. Emissions produced by venting during loading and transit are in the range of 0.1 to 0.3 percent, depending on tanker design and cargo characteristics. Losses can reach two percent or more when the cargo has not been stripped of its most volatile components before loading aboard the tanker. Double hull tankers may produce higher VOC emission than single hull tankers, because of the double hull provides insulation of the hot oil from the surrounding cooler temperature.

Mo Husain inventor of The American Under-pressure System (AUPS) suggests that the best solution is to contain the vapour emissions that occur during transit simply by returning them to their tanks. Mr. Husain indicates that AUPS, a system provided for the prevention of fluid cargo loss can also serve as the means for reducing vapour losses. The AUPS configuration limits collision and grounding losses by using a simple closed loop inert gas distribution system, with components and controls independent of the tanker and other ship services.

M. Husain offers the following by way of explanation and encourages shipmasters to contact him with suggestions or questions.

VOC Emission Control using the AUPS System

AUPS is configured to contain both VOC emissions, and spillage of oil due to hull rupture. Emissions are contained safely during transit by circulating and returning the ullage gas back to their tanks, within a closed-loop gas distribution system. The primary control objectives are to maintain the pressure and oxygen content in the closed system from the effects of minor air leaks, radiant sun loads and the potential for crude oil out-gassing.

The design features for emission control are evaluated in the following sections and are based on experimental data from a full scale tanker test for air leaks and out gassing results from the lab tests.

Design Features

The VOC emission loss by venting to maintain the desired under-pressures from the effects of out-gassing, air leaks and diurnal sun's radiant heat are investigated for a 75,000 dwt tanker on a 15 day voyage, as well as the change in oxygen content.

The data suggests that in most cases the pressure and oxygen rise is modest and it would be unnecessary to vent any gas, and in any extreme case a small loss of small loss of cargo. The AUPS closed-loop features and operational modes and design schematics are also described.

Loss Due to Out-Gassing:

Preliminary studies explored experimentally and theoretically the vapour pressure of various types of crude oil as a function of temperature at the under-pressure conditions present in AUPS. The test results provide the mole fractions of the constituents of the saturated gases and show the hydrocarbon content of the saturated gases "are at a level of 40-50% by volume." The analysis of these results using the Claussius-Clayperon equation indicates that the VOC will achieve an equilibrium vapour pressure within the cargo hold of AUPS. The Claussius-Clayperon equation demonstrates the relationship between the vapour pressure of a liquid compared to temperature. Based on the laboratory data, it may be used to predict the boiling point of the various types of oil when ex-

posed to the under-pressures found in AUPS

$$\ln(P_{HC}) = -\frac{\Delta H_{vap}}{R}\left(\frac{1}{T}\right) + \frac{\Delta S_{vap}}{R}$$

Claussius-Clapyeron Equation

The equilibrium vapour pressures for A.P.I. grades 12, 30, and 37 oil are below the total pressure of the ullage gases at the various under-pressures. This result indicates that boiling of the oil will not occur at these under-pressures. The vapour over the surface of the liquid crude oil will equilibrate (saturate) to this vapour pressure and will maintain the desired under-pressure within the system. Once saturation, the equilibrium vapour pressure, is achieved, the VOC pressure will deviate minimally and there will be no further observable evaporation. The theoretical studies provide a good model to predict the equilibrium vapour pressure of the crude oil and may be used to provide information about the maximum attainable under-pressure. Additionally, during a typical loading of crude oil, the HC content of the residual ullage gases have been measured near 30-50% by volume. The conclusion that can be drawn from these observations are:

1. AUPS ullage space after cargo loading is near saturation of HC, and if the ullage remains a closed system minimal out-gassing or evaporation will occur over the voyage in the AUPS system.

2. The test results also show that at the range of under-pressures expected for AUPS operation (tested up to -5PSI) no boiling is likely.

NOTE: Laboratory tests and studies was performed by Hycal Energy Research Laboratories, LTD., of Calgary, Canada.

Loss Due to Air Leakage:

The tank assembly leakage was measured during AUPS full-scale test on USNS Shoshone. The tank leakage was 1.8 inch-water during a four (4) hour test at an under-pressure of -2 psi. This was the basis for sizing the leak/tank and estimating the venting requirements to maintain the initially set under-pressure. A 75,000 DWT tanker with an ullage capacity per tank of 10,000 ft^3, would require a venting of 8% of its ullage capacity, which results in a loss of cargo of 38 lbs/tank, or 460 lbs for the 75,000 DWT tanker.

Loss Due to Diurnal Sun's Radiant Heat:

No cargo loss is expected from diurnal temperature variations in routine transit. Heat transfer analysis was performed to estimate a worst-case ullage gas temperature rise due to solar heating. The ullage pressure would increase by 7% and sharply reduce over several hours. The control procedures to mitigate these diurnal fluctuations in pressure are either to:

1. Allow the fluctuations and correct by venting when the probability of a breach is high;

2. Use a seawater heat exchanger to remove the fluctuating gas temperatures and resulting pressure.

Oxygen Level Changes Due to Air-Leaks

The air-leak rate determines the oxygen content changes of the inerted ullage spaces. The oxygen enhancement over a 15-day voyage is marginal (2% rising to 2.5% by vol.). Thus safety is assured, and no cargo loss due to VOC emission is expected.

The AUPS Closed-Loop Design

The primary purpose of the design is to maintain control over pressure and oxygen concentration. The prevention of any possibility of flammable mixtures man-

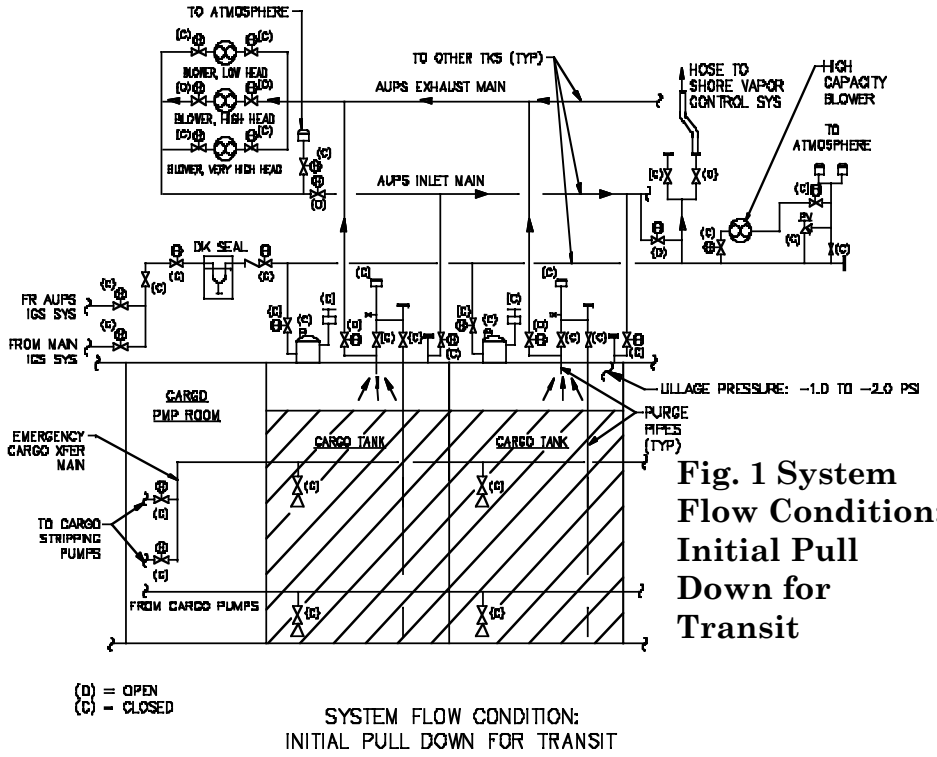

Fig. 1 System Flow Condition: Initial Pull Down for Transit

dates the continuous circulation of the inert gases mixture through the ullage spaces to preclude the formation of air gas pockets in these spaces. The design features:

1. Simple mechanical arrangement of piping, valves and blowers with automated controls to ensure safety and capability to provide dual protection from emissions and oil spills when operating.

2. Self-sufficiency and independence from ship services, including a separate electric supply system.

The AUPS dual containment system provides emission and spill containment when in operation. The arrangement of piping, valves and blowers to provide these functions is shown schematically in Figure 1. Basically, collecting the tank ullage gases into an exhaust header, and returning the gases through a separate inlet header provide the circulation of ullage gases in a closed-loop configuration. The headers are connected by two separate interconnecting ducts, one for routine circulation and one for casualty-mode circulation, each containing high head blower/ valves for routine circulation. An automated control subsystem responds to critical placed sensors to perform three major functions: (1) controlling the underpressure; (2) controlling the oxygen composition of the ullage gases; and, (3) monitoring system status to assist personnel in managing the system and automatically sequencing flow during routine and casualty operational modes.

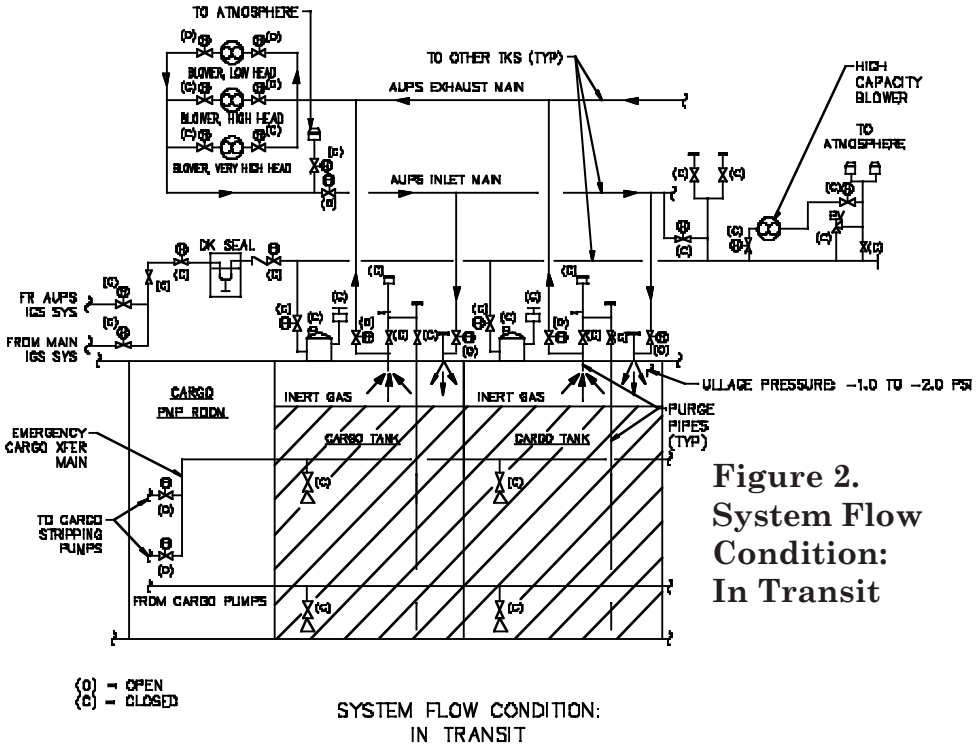

Figure 2. System Flow Condition: In Transit

Operating Characteristics	At the completion of cargo loading, the vapour spaces have been inerted at positive pressure and connected to the vapour recovery facility. AUPS is initiated and provides the means to transfer and reduce the ullage gas pressure as specified for a possible grounding casualty.
AUPS Configuration (Figure 1)	Systems operated in open loop modes discharging vapours via the high head blower, to the vapour control manifold that connects to the vapour recovery facility. The inlet valves to the ullage spaces are closed during this procedure while the tank ullage space is reduced.
Requirements	Ullage Pressure = -2 psi (typically)Flow Transfer Rate = 700 cfmTime for Transfer ~80 minsBlower Ratio = 700 cfm @ 2.0 psi
Environment Impact	Emission Containment

Mode 1: Preparation for Sea— Initial Depressurization

Operating Characteristics	This mode is employed during a routine voyage with all components operating within specifications and O2 levels < 5% by volume.
AUPS Configuration (Figure 2)	AUDS operating in closed loop-loop mode. The ullage vapours are recalculated through dedicated AUPS pipin via a low-head blower, and UPS exhaust/inlet headers
Requirements	All performance related equipment operating within specifications O2 < 5% by volume The under-pressure set for grounding casualty at – 2 psi Circulation rate = 50 cfm/tank to mitigate the formulation of local O2 concentrations Blower cfm = 700 cfm DP = -15 in H2O
Environment Impact	Emission Containment

Mode 2: At-sea Operations— Normal Transit

Operational Modes/Requirements

Loading is the primary source of evaporative emissions followed by in-transit emissions. The loading/unloading of cargo is performed with existing equipment and procedures. The emissions can be contained with vapour balance services or vapour recovery facilities. AUPS is enabled after these functions as follows.

Comment or suggestions are welcome, either to the Editor or directly to Mo Husain 10951 Sorrento Valley Road, Suite 2F, San Diego, CA 92121, Mailing Address: PO Box 825, Del Mar, CA 92014, Telephone: 858-452-1280, FAX: 858-452-6035,
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