

Quality, safety, security and environmental management systems in shipping

Captain Graham Botterill
Maritime Lead Auditor, Specialist
Advisor to the House of Lords on
Ship Safety



FERRIBY MARINE

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

**Version
(Edited 05 08 2005)**

**A Speech given by
Capt. Graham J. Botterill
Managing Director
of
Ferriby Marine**

**at the
MLAANZ Annual Conference
5th to 7th October 2005
held in
Auckland, New Zealand**

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

1. QUALITY ASSURANCE - WHAT IS IT ?

This word “**QUALITY**” is often misinterpreted, the correct definition is “**THE TOTALITY OF CHARACTERISTICS OF AN ENTITY THAT BEAR ON IT’S ABILITY TO SATISFY STATED OR IMPLIED NEEDS.**”

In short it means “**FITNESS FOR PURPOSE**” to ensure Customer satisfaction.

It’s the level of excellence that goes into a service, it’s skill and commitment - you and your colleagues bring to your jobs, each time, all the time.

It’s error free performance, on every job you do.

WHY IS QUALITY IMPORTANT ?

Because Customers expect Quality – not once, but every time.
Quality is the key to Customer satisfaction and to the growth of your Organisation.

Without Customers we can all go home, because there will be no job.

WHO SHOULD CARE ABOUT QUALITY ?

Everyone who provides a service (or product) and everybody who buys one.

QUALITY HAS ONE GOAL - 100% EXCELLENCE.

QUALITY IS PRIDE – ACHIEVEMENT – TEAM EFFORT.

QUALITY IS A PROMISE – THAT YOU MAKE TO YOURSELF – YOUR CUSTOMERS OR THE SERVICE.

QUALITY IS ESSENTIAL FROM START TO FINISH - TO REDUCE ERRORS -
REDUCE DELAY - APPLY YOUR KNOWLEDGE.

THE GOLDEN RULE OF QUALITY IS “**I’LL DO MY JOB WITH THE SAME COMMITMENT TO QUALITY I EXPECT FROM OTHERS WHO PROVIDE THE SERVICES I BUY.**”

HOW CAN WE IMPROVE QUALITY ?

- Pay attention to detail.
- Know as much as you can.
- Have the right attitude.
- Learn from mistakes.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

- Take the initiative.
- Share ideas.
- Set a goal of 100% quality.

2. SAFETY - WHAT DOES IT MEAN ?

The definition of safety means the state of being safe, freedom from injury, danger or risk.

REMEMBER !

No accidents might be a good record, a good safety record is no accident.

Ships are much safer places now than they were a few years ago, but still far too many accidents are happening, people are getting killed, or injured.

The great majority of injuries are due to individual carelessness, poor work or inadequate training and organisation.

A safe working environment does not just happen, it's the result of good management, planning and communication.

I believe the objective can be achieved by:

- **“THE ACTIVE PARTICIPATION”** of everyone, at whatever level, in discussions about work and safety matters.
- Ensuring that everyone learns to **“RECOGNISE HAZARDS”** and thus to avoid them.
- Effective and open two way communication about dangerous occurrences and near misses.
- Emphasising and developing an **“AWARENESS OF RESPONSIBILITIES”** at all levels.
- Developing an **“EFFECTIVE”** safety organisation.
- Careful investigation of all accidents and dangerous occurrences, to find out **“THE TRUE CAUSE”** in order to prevent them happening again.
- Involving sea personnel in reviewing, updating safety procedures and in the investigation of accidents or near misses.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

INDIVIDUAL SAFETY AND THE LAW

In addition to the Employer's responsibility the Occupational Health and Safety Regulations, place a duty on all individuals to take reasonable care for the health and safety of themselves and of all other persons onboard, who may be affected by their acts or omissions.

Regulations also require all personnel to co-operate fully, to ensure all activities are performed safely.

Additionally, it is an offence under the Regulations, for any person to interfere with or misuse anything provided onboard, in the interests of health and safety.

Shipboard procedures are the subject of numerous other Regulations such as, the supply of protective clothing and safety equipment.

All equipment is provided to protect personnel from unnecessary death or injury, or suffering from the activities of others around, who are not properly protected.

3 SAFETY – THE INTERNATIONAL SAFETY MANAGEMENT (ISM CODE) FOR THE SAFE OPERATION OF SHIPS AND POLLUTION PREVENTION.

Having been personally involved as Specialist Advisor to the UK House of Lords Select Committee, under the Chairmanship of Lord Carver in 1991, to look into Ship Safety and whose recommendations were instrumental in making ISM mandatory and, later being appointed by the ICS/ISF to help develop the guidelines for the uniform application of the ISM Code in 1993; my heart and soul has been devoted to ensuring the ISM works and meet it's objectives.

The ISM code was introduced because statistics confirmed that around one third of the world fleet and owners/operators of ships were sub-standard; Shipping being the only form of transport that did not require some form of licence to operate. So how did this happen? How did at least 50% of the world fleet become substandard and who is responsible for enforcing the rules and regulations in shipping.

The Classification Societies have come in for a great deal of flack over the ISM Code; in some cases with good reason, but often the blame has not been fully justified. One problem is that they have become too close to the shipowner.

He who pays the Piper calls the tune. It is high time we got back to the original concept where the underwriter paid the Classification Society and then Class could play a more independent role. The classification societies set the rules for the hull and machinery classification of ships and carry out routine surveys of hull, machinery and other survey requirements.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

Same old problems

The objective of the ISM Code was to ensure “The Safe Operation of Ships and Pollution Prevention”, but since the ISM Code deadline on 1 July 1998 this objective has begun to lose its impact.

The good companies who have always obeyed the rules and regulations have got even better and the poor ones (in relation to safety) have with reluctance and considerable struggle improved only a little, if at all. They have been pressured to do something about their lamentably poor showing in the safety league tables and have shown firm resistance.

The good companies have always approached ISM with the right attitude, even when they were being squeezed by falling freight rates, cargoes going to competitors who were not maintaining the same high standards and operating on a shoestring.

Unfortunately, some of these good companies are no longer with us today. They have paid an unfair price for maintaining standards in a highly competitive world and system has not supported them. Shipowners and Charterers want well-found ships with well-trained crews, but many are not prepared to pay for such a service. They are leaving it to Port State Control to bring these sub-standard operators and ships to book.

The people who need the training – who need to have their eyes opened to the benefits of good safety standards, are top management, but they still sit in their ivory towers and when things go wrong, they simply look for others to blame. This leads us to responsibilities.

It was strange that within the last four months leading up to stage one of ISM certification implementation on the 1st July 1998 when statistics showed there were still hundreds of companies and ships still to be audited, NO COMPANY'S OFFICE OR THEIR SHIPS CEASED TRADING.

The Classification Societies were involved in consultancy, which they now term training, but when the less committed companies come along they provided manuals (and still do) and say “modify these and we will audit you against them”.

Ferriby Marine had experience of four companies in a prominent country where we were consultants and, despite all our efforts they were not ready for certification and we told the companies so. Within one week they were boasting to us they had received their DOC's and SMC's. We invited the Flag State involved, some of whose staff had been through our combined QA/ISM Lead Auditor Training Course, to randomly select any of the companies and vessels involved and to accompany us on a re-audit to verify the situation, but they refused.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

Standards of Auditing

Auditing in the Maritime Industry is a new skill that is special and requires proper training. Some of the auditing standards that we see unfortunately leave a lot to be desired. The ISM Code recognises that no two companies or their ships are the same and that every company's way of working is different – the Code allows the company to design their own systems to meet the requirements of the Code.

The system must work for the company and not the company for the system. Some Auditors try to get the company to change the system for them and impose their own ideas on how the company should work and many have a fixed set of questions, i.e. the same questions for every job, thereby devaluing the result of the audit.

Questions must be taken against the way each company has decided to work and the only standardised check list is at the document review stage to assess if the company have adequately addressed all 16 requirements of the ISM Code. Once the company has passed the document review stage, the audit is to find out if they do things the way their system says they do and can then provide objective evidence to the Auditor that they actually do what they say they do.

There are 136 **shalls** in the International Quality Standard ISO 9001:2000 and 48 **shoulds** in the ISM Code. Under ISO if there is a shall and the company are not complying – it's a non-Conformance. However, in the ISM Code there are 48 shoulds which leaves the whole audit of ISM open to question from both a legal and auditing point of view. You are reminded of the implications of **shall, may and should** in the Collision Regulations.

For Shipowners/Managers who have implemented the Code, especially those who have also obtained ISO 9001:2000 certification, it appears that the hard work and expense is paying off. Companies are gaining greater control over their ships and the costs of operating them. Time off hire and delays are being reduced and accidents have declined. But no matter how good a system is, it is the people who make the system work, and it will not work without well trained personnel.

After their initial horror on seeing the documentation, ships' Masters appreciated having their authority strengthened by the ISM Code and having the lines of authority onboard and ashore properly set out and ship/shore communications clarified and improved. Most mariners, especially those who have received good ISM training, regard the SMS onboard as “their system” and take pride in making it work which leads to greater safety, efficiency and teamwork.

There will be many benefits to Shipowners from a legal point of view. Apart from reducing the number of circumstances from which litigation can result, a properly run SMS will potentially provide useful evidence to support a shipowner. For example, the owner's duty to exercise due diligence to make his ship seaworthy at the start of a voyage, under the Hague-Visby Rules may be evidenced by a properly implemented SMS and compliance with the ISM Code. Where his insurer seeks to show that the owner was privy to unseaworthiness, the ISM documentation can be

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

used to demonstrate that he had taken all possible steps to remedy the problem before the ship set sail.

To date, the real winners are the Classification Societies who have managed to obtain a new source of revenue (even though there is a conflict of interest) who have successfully shut out others from undertaking the audit process; and Charterers who have found another way to get out of their responsibilities.

Suppose Things Go Wrong

The ISM Code was developed in response to several major casualties and incidents of pollution in order to improve the safety of ships and those who serve on them. It was also developed to reduce pollution and damage to the environment by establishing a minimum standard for Safety Management onboard ships. The Code was not developed with litigation in mind, but rather it was developed to reduce the incidents from which litigation results. Nonetheless, the ISM Code is likely to have a large effect in Law in one or more of the following areas:

- A. Compliance with the Laws of the Flag and/or coastal State.
- B. Evidence of the vessel's seaworthiness or unseaworthiness.
- C. Compliance with contractual obligations, for example, many Charter Parties, Insurance Policies and Loan Agreements now require vessels to 'comply' with the ISM Code. The International Group of P&I Clubs has resolved to make compliance a condition of entry into their member clubs.
- D. Documents produced to comply with the ISM Code are likely to be discoverable documents in any civil or criminal action.
- E. Failure to comply with the ISM Code may impact on the possible criminal liability of Masters, Shipowners, Operators or Managers.
- F. Compliance to the extent of an owner's exercise of due diligence in relation to the Hague-Visby Rules or the state of knowledge of the owner in relation to marine insurance or limitation of liability issues.

Surveying versus inspection versus auditing

A ship **audit** is defined as : “A systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria is fulfilled”.

A ship **survey** is defined as : “A detailed examination, including tests when required, of a ship and its equipment in accordance with the requirements of the appropriate Convention or other instrument, at specified dates”.

A ship **inspection** is defined as : “Whatever the Principal specifies the inspector to carry out”.

These days it appears that in most cases checklists form the basis for inspections and audits. They give details of what is to be inspected/audited, what questions to be asked and what objective evidence to be obtained. I know the operators of one small product tanker (about 1200 dwt) whose vessel underwent the SIRE survey with supposedly satisfactory results, only to be told that because the tanker was

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

about 30 years old they could not take it on charter. However they would be quite happy to use this single hull vessel for estuary work and bunkering on one of the busiest rivers in the U.K. Quite illogical when you consider that a vessel is most at risk whilst operating in confined waters. However, there are two aspects to consider here so I'll leave it to you to decide on the logic.

It's now becoming a regular occurrence in the Classification Societies that a Surveyor is doubling up as an Auditor. But the skills of an Auditor are quite different to that of a Surveyor. The whole approach, attitude and knowledge, prior to conducting a Management System audit, particularly so for ISM, are totally different to a Surveyor going in to conduct a survey for a Class (Hull and Machinery) or Statutory Equipment requirement. I believe the independent auditor who has received independent international IRCA training has in general a much greater skill in auditing than a Class Surveyor who has been given the job to carry out an audit - perhaps at the same time as he carries out a Survey.

Some of the auditing standards I see leave a lot to be desired; auditors are even imposing their own ideas and standards on the owners, managers and sea-staff. Just wait until something goes wrong – this type of Auditor won't have a leg to stand on! ISM Audit Checklists of the office and the ships which follow the Document Review must be completed against the Company's own Documented System to establish if they do what they say they are doing. ISM recognises that no two companies are the same and the ships and systems of working may not be the same.

No practical experience

Due to the current state of the world's fleet and lack of traditional training for Merchant Navy officers, those now coming ashore with certificates as Master and Chief Engineer are greatly reduced and we are seeing more and more Inspectors, Surveyors and Auditors who, whilst being adequately qualified academically are lacking and in some cases almost devoid of practical experience.

For example, two years ago the MSA put out a Merchant Shipping Notice regarding fractures in Bulk Carriers, in way of topside tanks and hatch coamings. This information came about as the result of extensive investigations, as if it was a new phenomenon. Whilst these fractures occurred more frequently with the increase in size of bulk carriers they were nothing new and should have been apparent to an experienced surveyor, Captain or Superintendent who understood how a ship 'works' in a seaway and the attendant stresses involved during loading.

Standards of Auditing

So let us ask ourselves who is responsible for conducting and issuing ISM Certification. Under IMO Resolution A788 this is the Flag State or a Recognised Organisation appointed by the Flag State.

Flag State inspections are paid for by the Ship Owner/Manager, who is the same person who also pays for the statutory and Classification Surveys. In the majority of cases the Statutory and Classification Surveys are undertaken by the same

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

Classification Society. This leaves the only independent check on the control (or lack of it), being exercised over the ship is by Port State Control which although they are improving is at best a very hit and miss situation. Flag State Inspections which in some cases are delegated to the Classification Society and the body conducting the ISM audits, which in the majority of cases is the same Classification Society carrying out all the other surveys and issuing Certificates.

This is hardly an independent audit. There is considerable commercial pressure placed on a Class ISM Auditor faced with the situation of having to inform a Company whose whole Fleet is classed with his Society that he would be withdrawing the DOC and stopping the whole Fleet. .

There is also the situation where one Class Society issues the Statutory and Classification certificates and another Class undertakes the function of ISM certification on behalf of the Flag State. This is a much more independent state of affairs and is more on the lines of what was intended by IMO when the ISM code was first conceived.

Perhaps there is doubt in some minds as to the capabilities of the independent surveyor when compared to the Classification Surveyor and it is well known that there are some second rate independent surveyors about. However, the same could be said of some Classification Surveyors, and there are also some very competent Independent Surveyors around who have a much wider experience than their Classification Society counter-parts.

These independent auditors are certainly capable of doing ISM assessments. The whole of the ISM philosophy is based on checking objective evidence against the Company's documented procedures to ensure that the company complies with the Code. It isn't a 'survey' that is being carried out. It's a Management System audit to determine if the Company is complying with the requirements of the ISM Code and the Company's own written policies, procedures and operating instructions.

The difference then between an inspection and a survey is that an Inspector will look at a piece of equipment and say whether outwardly it appears in good condition or not, however, the Surveyor will look at it with more regard to wear and tear, which parts need changing now, in the near future.

How can the same surveyor who is inspecting and surveying the ship, it's equipment, hull and machinery and being paid by the owner for the Classification, be responsible for auditing their own work. Ideally, one completely independent Body, such as the IMO or an association of completely independent organisations sub-contracted to carry out this work on behalf of IMO should be appointed, just like the Quality Certification bodies.

One has only to look at the findings of the inquiry into the loss of the tanker ERIKA which the next speaker will elaborate on.

On a number of occasions we have, as a Recognised Organisation for a number of Flag States, failed companies and vessels for ISM who have, immediately after, received certification from other Recognised Organisations. In order to ensure

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

consistency in the effectiveness of a standard for International Auditing covering ISM and Port State Control auditors, IMO Resolution A788 (19) needs to be more specific.

The International Standard for Auditing Competency for Quality Management Systems is set by IRCA (the International Register of Certificated Auditors) and the ISM Code is based upon the Quality Standard.

IRCA have also established the competency standards for Maritime ISM Code Auditors.

In both cases they have set the standards and syllabus for approved training courses and the standards for Registration of Auditors, which is then continuously monitored and reviewed to ensure auditors maintain their qualifications. This is a step in the right direction.

4 SECURITY – THE ISPS CODE

I have personally been in the Shipping Industry for 50 years and I have never seen any Legislation pushed and rushed through IMO as quickly as the ISPS Code.

I travel the world over 300 days of the year, practising, teaching and preaching Quality, Safety, Security and Environmental Management Systems and was instrumental in establishing the ISM Code, way back in 1991/1992, so I am dedicated to improving Management Standards in shipping, but anything we do must be done properly.

I believe Security (which is safety) is an important issue for both ships and Ports, but when you rush things as we have done with ISPS, we have simply ended up with a massive chase to obtain a piece of paper which generally speaking is not worth the paper it's written on.

There is sound evidence of a relationship between Security and Safety and as consequence of this factor a consequence for “Seaworthiness”.

Notwithstanding the “doctrine of stages” Seaworthiness may be defined simply that the “...vessel is in every way fit to cope with the perils likely to be encountered on the voyage” This might extend to Security as well as to weather and cargoworthiness”.

Neglect of security issues and of proper regard for security during voyage planning may lead to allegations of un-seaworthiness as surely as poor maintenance.

Security Plans are Management Systems and to be able to verify if they are effectively implemented, just like QA (ISO) and the SMS (ISM), ships and Ports require a minimum of 3/4 months working to the System to be able to provide sufficient objective evidence of compliance. Most Plan Approvals and Verification Audits have been rushed through, because ISPS Legislation and deadlines have been rushed and remain unrealistic for the Industry making the situation farcical.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

When you consider Ship Owners/Managers and sea personnel were given at least 4 years notice of ISM compliance, prior to Stage 1, on the 1st July 1998 and the remainder at least 8 years notice prior to Stage 2, on the 1st July 2002, here we are seeing not only all Ship Owners/Managers/ships, but all Ports in the world servicing them, having barely 1 years notice and in some countries Legislation and the associated Acts were only established allowing 6 months lead in time and there are still many more countries where such Security Acts have still not been completed.

We have all learned when you rush anything in life, mistakes are made, some of which can be fatal, especially when you start to think deeply about security and eventual consequential liability issues.

Training is the key to success with most tasks, however, the IMO Training Syllabus for ISPS Training for RSO's, PFSO's, CSO's and SSO's, were not published until August 2003 and the majority of Flags did not have the time to Approve or Accredite ISPS Training Course standards, which has left training to all sorts of dubious Providers with varying standards and the Industry has not received value for money.

If the training has not been up to standard then the qualifications of Plan Approvers and Auditors is therefore open to question. The Security Plan Approval is really what most of us know as simply a Document Review and so I question the qualifications and experience of some of the personnel who have been charged to do this job, because the Plans submitted were mainly generic.

Document Review against Generic Systems are easy to carry out, it's the Verification Audits, which if done properly provide evidence of compliance or not and there has to be sufficient time for implementation of the System.

When you study the ISPS Code, Parts A and B and teach it, you will quickly identify anomalies and omissions. When you look at “Confidentiality” and “Conflict of Interest” issues which have taken place worldwide because of the stampede, you will find further farce.

Even with the ISM Code where the Industry had more time to comply, we saw “Conflict of Interest” issues with various Organisations involvement in both Consultancy and auditing. So the rush to meet an unrealistic deadline, despite attempts in the ISPS Code itself to close this door has created more “Conflict of Interest” issues.

The fact is ISM Audits, are now being called “Surveys” and very soon you will find that ISPS Audits will be called another “Survey”, to be done in conjunction with other Surveys, but there are substantial differences as many of you will appreciate between inspecting, surveying and auditing. Auditors should not be allowed to Audit their own work.

The quality Ship Owners/Managers, with good self designed ISM Safety Management Systems in place, had already addressed security issues long before

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

ISPS was forced on them, with Procedures for piracy, bomb searches, stowaway searches, access control and restricted areas with implementation and associated drills already established.

Safety includes security and vice versa, so the ISPS Code for Ship Owners/Managers and their ships is really only an extension to Clause 7 of the ISM Code. The Legislation was already in place and if that had been recognised, the timescales set would have been realistic and implementation so much easier and successful.

Instead the ISPS Code called for a separate Security Management System with another completely separate Manual called the Ship Security Plan (SSP), which is to be “CONFIDENTIAL” and locked up by the Ships Security Officer (generally the Master).

So what we are finding during Verification Audits is that because they are locked up the Masters, Officers and Crews do not read them, understand them and are unable to provide sufficient objective evidence of compliance. Shore and sea personnel need to know the Security Plans, what to do and how they are expected to react at each of the 3 levels of security, when unexpectedly called to do so.

These procedures need to be read, understood and practised, just like all the other Safety Management System (SMS) procedures, many of which included security subjects already mentioned with good SMS's.

For most Shipping Companies the DPA assumed the duties of CSO and the Master the SSO.

So for the ships the ISPS could and should have been included within the SMS, with minimal cost to the Shipping Companies and more effective implementation with security procedures being proved effective at the same time SMC Audits were due.

Now changing the subject of the ISPS Code in relation to the Ports, we have a completely different situation, because the ISM Code did not apply to Ports.

For the first time ever IMO have made Mandatory Legislation for all Ports servicing ships on international voyages and this means the ISPS Code.

Over the years many recommendations have been made to Ports with regards to safety and pollution through MARPOL 73/78, but we know there are many Ports in the world that are still unable to support ships with the handling of slops and garbage.

So Mandatory ISPS Legislation by IMO will be good for the Maritime Industry, because Ports are now being forced to support and protect visiting ships.

However, in fairness to all the Ports in the world, ISPS implementation requirements are far more complicated, difficult and extremely costly to comply with, so timescales, deadlines should have been much more realistic, practical and cost effective.

"QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING"

Despite the deadline of the 1st July 2004, having well gone by, there are hundreds of Ports and Port Facilities that have not even commenced implementation and many major Ports who have reportedly obtained Approval Certification on paper not really complying with the mandatory security requirements and because of the rush, so I can sympathise with them.

Once again because of the rush many Ports have purchased Generic Plans, which are not specific to the particular Port and therefore they have no Ownership of them.

Documented Management Systems and both internal and external auditing of the ISPS – Security Management Systems, unlike the ships and Shipping Companies are new issues for many Ports, so it is going to take some time to make sure these Security Plans become specific to the Port and are properly implemented. Effective internal and external auditing is the only way to making the ISPS Code successful.

5. THE ENVIRONMENT - WHAT ASPECTS CONCERN US

For most of the time the world's merchant vessels go about their business unnoticed, out of sight, out of mind. Only when a major incident occurs does the public take note and it is this negative image of the occasional serious casualty which leaves it's mark on the memory.

It should not be so. Shipping is overwhelmingly a safe and environmentally benign mode of transport, very economical in it's use of energy and essential to world trade. Yet Ship Owners and Operators have done little to market these strengths or promote the Industries notable and improving performance over many years.

The success of the Shipping Industry does of course rely heavily on the exercise of proper self discipline and a high degree of self regulation. Oil tankers may be an essential part of modern life, but they also have the capacity to cause enormous environmental damage. It follows that the protection of the marine environment is a control objective of the Shipping Industry.

The achievement of that objective, requires commitment to a continuing effort to improve operating standards and a positive approach to Environmental Management. There has been a marked reduction in pollution from all types of ships over the last few years, the development of improved Company practices as well as tighter regulatory measures has contributed to this record.

But there can be few Owners or vessel Operators who can claim their environmental standards, are beyond improvement in all respects. Society's increasing environmental awareness, demands constant upgrading of standards on the part of all Industries and shipping is no exception.

More than half the cargoes transported by sea, can be regarded as hazardous or harmful, from either a quality, safety, security or environmental point of view. Similarly, many materials used in the operation of ships have the potential to damage the environment.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

It has been recognised that the human factor, plays a large part in incidents of marine pollution or other forms of environmental damage. Personnel both ashore and at sea, should be provided with clear directions, guidance and training in order to limit adverse impact to the environment, caused by human activity.

The corner stone of good Management is commitment from the top. It is therefore essential that Senior Management provides directions, guidance and training that are.

- CONSISTENT WITH INTERNATIONAL & NATIONAL LAW and with relevant Industry Code of Practice.
- Realistic, practical and easy to follow.
- Understood by all personnel **and**
- evaluated, reviewed and updated on a regular basis.

Practises and Standards designed to limit the impact of Company operations on the environment, should not be implemented in isolation, but should be closely linked with other operating standards, such as quality, safe navigation and safety of life.

It is equally important that ships are properly equipped to allow and encourage environmental protection from the moment it is decided to construct a vessel, efforts should be made to ensure that it's design and equipment are, as far as reasonable in keeping with the latest technology, having regard to the protection of the environment. No discharge to the sea should be permitted from a ship, unless consistent with Legislation and with good practice.

6. HOW THE WORLD IS COMING TOGETHER FOR UNIFORMITY ON QUALITY – SAFETY – SECURITY AND THE ENVIRONMENT

The ISM Code was based upon the International Quality Management Standard ISO 9002 (1994), the thirteen (13) Elements of the initial ISM Code are thirteen (13) of the eighteen (18) Elements of the ISO 9002:1994 and when you consider that three (3) of the eighteen (18) Elements of 9002 are not applicable to Ship Management, then safety becomes eighty percent (80%) of a Quality Management System, in Ship Management, if we exclude accounting and Accounts, are not part of ISO because Accounts are independently audited by Law.

The message is that all management systems can be developed using the excellent criteria specified in the ISO9001:2000 International Standard which is internationally recognized .

Now with current edition of the International Quality Management Standard ISO 9001:2000 (which incorporates all the original ISO 9002:1994 Standard), very much designed to line up with the Environmental Management Standard ISO 14001 and the ISPS Code, more and more Ship Owners – Managers/Operators and Ports are seeing the benefit of implementing Integrated Quality – Safety – Security and Environmental Management Systems to the latest Internationally recognised Standards and documentation can now be minimal.

"QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING"

Even the Accountants, who have a lot to answer for, are realising that if you manage Quality – Safety – Security and the Environment, there are close to fifty-five percent (55%) of savings to be made of costs because:

"IF YOU THINK QUALITY – SAFETY – SECURITY AND THE ENVIRONMENT IS TIME CONSUMING, A WASTE OF TIME AND A LOAD OF BULL."

TRY ACCIDENTS !!

The business is easily blown away – however by implementing good practical and simple Management Systems, you are able to demonstrate due diligence when things do go wrong.

It's better to have a System than no System at all !

NOBODY PLANS TO FAIL, BUT MANY FAIL TO PLAN.

6. SOME ACCIDENTS

1987 - HERALD OF FREE ENTERPRISE

The RORO ferry sank in shallow waters off Zeebrugge, Belgium, killing 189 passengers and crew – Ship and Shore Management **"Was infected with the disease of sloppiness."**

1988 - PIPER ALPHA OIL RIG

167 people died in the North Sea, when a major explosion, resulting in a fire occurred on the platform. Lack of organisation, maintenance, lack of training and inexperience.

1990 - SCANDINAVIAN STAR

158 people died in Sweden, after a fire broke out shortly after the new crew and the passengers joined the vessel. No familiarisation of the crew with the ship prior to passengers joining, problems in communication and language, inadequate procedures and planning.

6000 Filipinos have lost their lives on domestic ferries over the last ten (10) years.

Exxon Valdez - Neptune Derado - Torrey Canyon - Erica - Amoco Cadiz - Braer - Sea Empress and Prestige, costs of all these accidents are now in excess of US\$ 16 billion.

7. THE NEED FOR A MANAGEMENT SYSTEM

WHEN THINGS GO RIGHT

With the New Zealand National Standard for Commercial Vessels (which was based on the ISM Code) now implemented by the NMSC, this common National Standard should:

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

- Protect the health and safety of persons from hazards arising from the operation of commercial vessels.
- Protect the environment from hazards arising from the operation of commercial vessels in the marine environment.
- Facilitate the transfer of vessels and the recognition of crew qualifications between New Zealand States and Territories.

For Ship Owners/Operators who have implemented the ISM Code properly and those who will implement the NSCV properly, the hard work and expense will soon pay off. For example:

- Greater control of the vessels and the costs of operating them.
- Time off hire and delays will reduce.
- Accidents will decline.
- Morale and motivation of shore and sea staff will improve.
- Owner/Operators ability to demonstrate due diligence.

WHEN THINGS GO WRONG

This is the area which causes most concern - because Quality, Safety, Security and Environmental Management Systems are developed to reduce the number of incidents from which litigation results, as Owner/Operators will have to:

- Demonstrate compliance with Flag and Coastal State Laws.
- Provide evidence of seaworthiness of the vessel.
- Provide evidence of contractual obligations, viz charter parties, instructions and regulatory requirements.
- Ensure documents and procedures are effective as they are now **“discoverable documents”** in civil or criminal actions.
- Be able to defend criminal liability against themselves or the Master.
- Be able to demonstrate due diligence in relation to marine insurance or liability.

COMPANIES THAT HAVE IMPLEMENTED EFFECTIVE QUALITY - SAFETY - SECURITY AND ENVIRONMENTAL MANAGEMENT SYSTEMS ARE SEEING THE REDUCTION IN ACCIDENTS HAS REDUCED INSURANCE COSTS.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

8. GOAL SETTING APPROACH

The new ISO 9001:2000 International Quality Management Standard is a big improvement on the 1987 & 1994 Standards, in that Organisations now have to demonstrate with objective evidence the following:

- Continuous improvement through measurement.
- Commitment top to bottom of Management.
- Improved communications.
- More effective planning.
- More effective Internal Audits.
- Competence awareness and training.
- Decision making based on fact.

IF THE SYSTEM IS WORKING THINGS WILL IMPROVE IF THE SYSTEM IS NOT WORKING ORGANISATIONS WILL NOW LOSE CERTIFICATION.

The ISPS Code requires Organisations to establish a framework for the detection of security threats and to take preventative measures against security incidents affecting ships or Port Facilities used in International trade.

The Environmental Standard ISO 14001, requires Organisations to set targets and unless there are extenuating circumstances meet these targets, to demonstrate they are taking the environment seriously.

9. RESPONSIBILITIES - DUE DILIGENCE

The organisation of the Shipping Office ashore and onboard each vessel, has to be right.

THE ORGANISATION CHARTS

Showing who reports to who and the associated responsibilities (of often called Job Descriptions), need particular attention when providing evidence of due diligence and the respective procedures by those responsible for them, need to be owned by those following them.

Generic Systems will get Companies into trouble, because they are not Company or ship specific.

There are four (4) Legal implications of the ISM Code:

- Fault and Privity.
- Disclosure of documents.
- Seaworthiness, **and**
- negligence.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

10. QUALITY – SAFETY – SECURITY AND ENVIRONMENTAL TRAINING

Through our experience, the most successful Owners/Operators and vessel crews are those that have attended good, reputable IRCA Registered Quality - Safety - Security and Environmental Management System training prior to commencing, or early on in the designing of their Integrated Management Systems.

Sydney Ferries are a prime, good example of this, because the shore and sea personnel were then able to become involved in writing the relevant procedures or specific Work Instructions for the various types of ferries and various shore activities.

**BECAUSE THE SYSTEM MUST WORK FOR THE COMPANY, NOT THE
COMPANY FOR THE SYSTEM**

and please remember

**NO MATTER HOW GOOD ONE'S SYSTEMS ARE, AT THE END OF THE DAY,
ONE IS TOTALLY RELIANT ON THE PEOPLE.**

**BIG IS NOT BEAUTIFUL, BECAUSE THE MORE THAT IS WRITTEN, THE LESS
CHANCE THERE IS OF ANYONE EVER READING IT !!!**

GOOD TRAINING AT THE START SAVES MUCH PAIN, LATER!

11. EMERGENCY PREPAREDNESS - DRILLS

Under the ISM Code the Ship Owners/Operators Shore Offices are now audited and they have to demonstrate through emergency drills, that they are prepared to support the vessels effectively, when they have emergencies.

The vessels themselves have to ensure that all new personnel joining for the first time, are made familiar with the vessel, with objective evidence which will then be verified by External and Internal Audits, including their preparedness to deal with emergencies.

Once personnel are made familiar with alarms, responsibilities, emergency organisation, safety and fire equipment, machinery and pumps, the only way to ensure they are prepared for emergencies is through regular and varied DRILLS, which must be evaluated, analysed and repeated until they prove effective.

12. OH&S ASPECTS

At the moment the world has different OH&S Standards and in New Zealand we have eight (8) States with differing OH&S Standards.

It may be of interest to you, that ISO Head Quarters in Switzerland, with 146 Members countries are getting close to agreeing ONE, INTERNATIONAL OH&S STANDARD which will be called ISO 18001, which will then bring the world totally together on Quality, Safety, Security and the Environment.

“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL MANAGEMENT SYSTEMS IN SHIPPING”

13. COMPANY / VESSEL PROCEDURES

One relatively small Manual which includes Quality, Safety, Security and Environmental Procedures or Instructions is needed for how the Management Systems work ashore and one separate small Manual for the same subjects is all that is needed for the vessels.

Procedures or Instructions, can take the form of Checklists - simple but effective and auditable.

14. CONCLUSIONS

(A) SHIP OWNER/OPERATORS RESPONSIBILITIES

Are Commitment - Resources and Training, to ensure good Team work and enthusiasm of both shore and sea personnel.

(B) IMO RESPONSIBILITIES

We don't want anymore Regulations, we have too many as it is. All we want is to ensure everyone in the Industry obeys the Rules and Regulations we already have in place. The only way to do this properly is through totally independent, trained and qualified IRCA Registered Auditors.

(C) FLAG AND STATE RESPONSIBILITIES

To provide the enforcement, infrastructure and necessary organisation to take on their responsibilities themselves and stop taking the easy way out by delegating everything to the Classification Societies.

(D) CLASSIFICATION SOCIETY RESPONSIBILITIES

To continue the good work in research, design monitoring of construction and surveying of ships to enforce their Rules.

(E) PORT STATE CONTROL RESPONSIBILITIES

It's unfortunate that PSC is the Policeman responsible for monitoring the weaknesses of Sub-standard Flags, coming into their Ports. All that's needed is to keep working together to ensure some uniformity in the Standard of PORT STATE CONTROL INSPECTIONS.

(F) INSURERS RESPONSIBILITIES

In the past Insurers were only too happy to insure anything that floated, but having suffered major claims, they have now had to show greater interest in the status of both the Ship Owner/Operator and the vessels before agreeing to do so. Insurers should now continue with a more pro-active involvement in promoting these new Standards.

**“QUALITY, SAFETY, SECURITY and ENVIRONMENTAL
MANAGEMENT SYSTEMS IN SHIPPING”**

THANK YOU FOR YOUR ATTENTION.