

Safety Culture

See back page: HOW CAN COMPANIES CHECK IF THEY ARE LOSING MONEY?

Safety culture is enlightened self interest

Safety culture is of interest to all senior decision makers in shipping companies, not only those with direct involvement in the day to day technical operation of their companies' ships, because improving safety saves money as well as lives.

In addition to ethical and social responsibilities, shipping companies practise a safety culture because:

- **Senior managers that cannot manage safety will be unlikely to manage a profitable shipping company**
- **A dedicated approach to safety is a cost saving not a cost**
- **Safety culture provides a means of maximising the benefits and cost savings that can be derived from implementing the ISM Code.**

HOW CAN A SAFETY CULTURE SAVE MONEY?

The following benefits have been derived by shipping companies from the conscious attempt to practise a safety culture:

- **reduction in lost employee hours**
- **reduction in hospital costs**
- **reduction in sick leave**
- **reduction in pollution costs**
- **reduction in cargo damage**
- **reduction in insurance premiums**

“The indirect costs of maritime accidents are estimated to be around 3 times the direct costs associated with injuries, deaths, property damage and oil spills.”

FOCUS ON SAFETY CULTURE

Regulators, classification societies, the maritime press and IMO constantly refer to the need for ship operators to practise a safety culture. But what precisely do they mean?

Everyone agrees with the objectives of a safety culture - the reduction and elimination of accidents which involve injuries to ships' personnel and damage to property and the environment — but there can be some confusion as to what a safety culture really represents.

Experts commonly describe it as the values and practices that management and personnel share to ensure that risks are minimised and mitigated to the greatest degree possible. In short, this means that safety is always the first priority.

With a true safety culture, every crew member - whether a rating or a master - thinks about safety, and new ways of improving it, as matter of course.

The cause of practically every unsafe incident can be traced to some form of human or organisational error. If people think about safety continuously, many accidents simply will not happen because virtually all so called “accidents” are in fact preventable.

The development of a safety culture does not lend itself to prescriptive rules, and the purpose of this leaflet is simply to encourage key people in shipping to consider how even more might be done to improve levels of maritime safety.

Although experts on the subject may talk in terms of psychology or behavioural change, the key to achieving a safety culture is:

- **Recognising that all “accidents” are preventable and normally only occur following unsafe actions or a failure to follow correct procedures**
- **Constantly thinking safety and**
- **Always setting targets for continuous improvement.**

SO WHAT IS A SAFETY CULTURE?

There is nothing inherently new about the concept of a safety culture. The term simply embraces what the majority of reputable ship operators have recognised for years - that safety is a priority and that it has to be managed efficiently and systematically like any other part of the business.

As long ago as 1981, and with no claims to originality, ICS and ISF published their Code of Good Management Practice which advocated a "culture of self regulation of safety". The ISM Code is to a large extent derived from the ICS/ISF Code of Practice, reflecting the development of the industry's understanding of safety management, in line with the emphasis in safety culture on constant improvement.

Safety management is a complex subject and shipping companies can always benefit from the continuing research that has been undertaken in this area. But it is important to recognise that safety culture should not necessarily be seen as something radically different from what many shipping companies are doing already.

Safety in shipping: the industry's improving record

Merchant shipping is arguably the safest and most environmentally benign form of transport. Perhaps uniquely amongst industries involving physical risk, commitment to safety has long pervaded virtually all deep sea shipping operations. Shipping was amongst the very first industries to adopt widely implemented international safety standards.

A range of different measures appears to indicate that the safety record of shipping has shown a continuous improvement in recent years, despite a substantial increase in the size of the world fleet.

Research by the International Underwriting Association (which represents hull insurers) suggests that there has been a trend of steady reduction in total losses of ships during the 1990s. This reduction is even more marked when shown in terms of losses to the proportion of ships afloat (see figures 1&2).

The number of third party liability claims resulting from shipping accidents, including personal injury claims, also appears to have decreased during the 1990s. According to the UK P&I Club (the largest maritime third party liability insurer), the number of received claims (after adjustments to take account of changes to the number of ships entered in the Club) reduced from 18,000 in 1990 to about 12,000 in 1996 (see figure 3). A similar improvement is revealed in respect of the number of large claims over US \$100,000 (see figure 4).

The improved safety record of shipping is further supported by its environmental record. Estimates of the quantity of oil spilled by shipping reduced from 384,000 tonnes in 1983 to only 10,000 tonnes in 1998. 1998 may have been an exceptional year, but the overall trend (figure 5) is clear.

While technological development plays a part in these encouraging figures, it is generally accepted that the main contributor is increased safety awareness amongst management and employees. But the underlying concept of a true safety culture is that there is always room for further improvement.

Figure 1: Total losses by number Ships over 500 gt

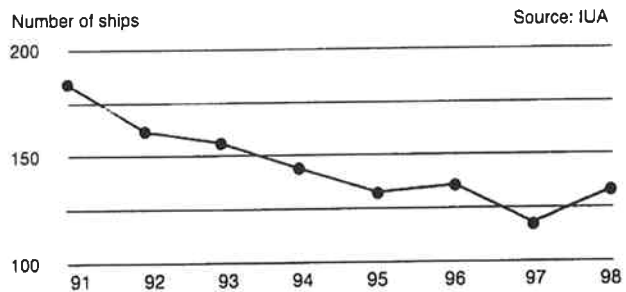


Figure 2: Total losses (by number of ships) in proportion to shipping afloat Ships over 500 gt

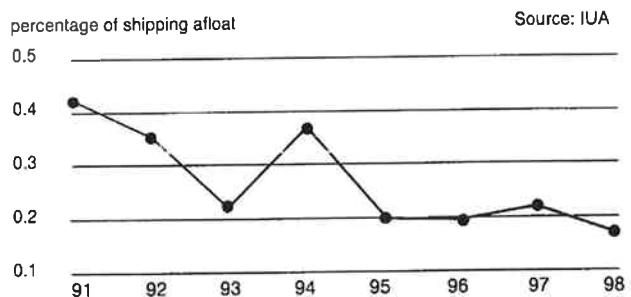


Figure 3: All claims — frequency

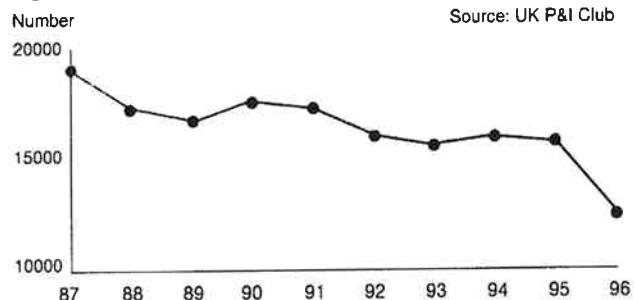


Figure 4: Major claims — frequency

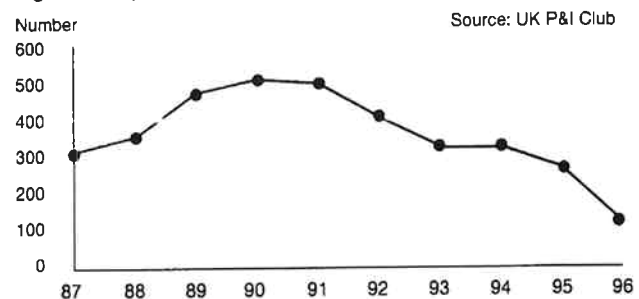
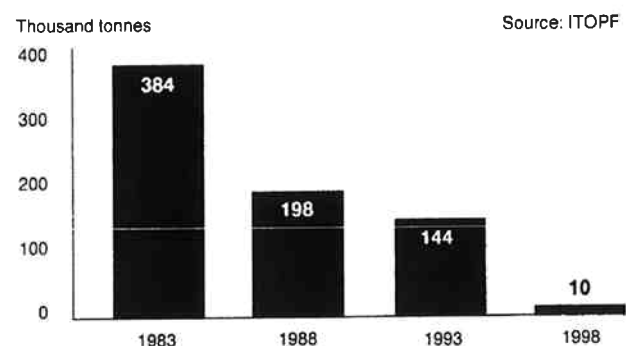


Figure 5: Quantity of spilled oil, tonnes



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Implementing a Safety Culture

There are perhaps three components to introducing a genuine safety culture:

1. **Commitment from the top**
2. **Measuring the scale of the problem**
3. **Changing behaviour.**

1. Commitment from the top

If company personnel are to act safely at all times, commitment from the highest level of the company is vital. Regardless of the ability and motivation of the operational managers with day to day responsibility for safety, if commitment from top-ranking decision makers is lacking then the efforts of everyone else will invariably be wasted. However, in order to develop this commitment at the senior level, it is necessary for senior decision makers to have a proper understanding of the true costs of accidents.

Accountants may be prone to question why safety should be the first priority if compensation for accidents is met by insurance. But accidents imply a lack of reliability, and a lack of reliability will soon lose customers. A safety conscious company is an efficient company and efficiency brings its own rewards. To foster a safety culture is a matter of enlightened self interest.

2. Measuring the scale of the problem

Crucial to achieving a genuine safety culture is having the means to monitor the company's current performance in order to identify ways in which safety can be continuously improved. Across all industries, the most widely used form of

monitoring the effectiveness of current policies is the use of the Lost Time Accident (LTA) rate*. An LTA is an incident which results in absence from work beyond the day or shift when it occurred. The LTA rate is usually calculated as the number of LTAs that occur during 100,000 working hours.

Research has demonstrated that if the number of personnel accidents is reduced then the number of other accidents, such as those involving damage to property, will also be reduced. The goal of a true

safety culture is to reduce the LTA rate to zero, and companies regarded as being at the cutting edge of safety culture claim to achieve negligible LTA rates.

There are a number of other means of monitoring safety performance which may include making distinctions between serious injuries and minor ones, or which may be derived from statutory reporting requirements contained in national legislation. The key point, however, is that companies employ some means of monitoring their safety performance over time.

Many companies find it useful to compare their safety records with those of other companies or industries. The major oil companies (i.e. those that belong to the Oil

The Safety Triangle

If 30 LTAs are prevented a life will probably be saved!

1 Major Injury (LTA)
30 Minor Injuries
330 Unsafe Acts or Actions

Research has shown that for approximately every 330 unsafe acts, 30 are likely to result in minor injury. Of these 30 minor injuries, one is likely to be an LTA with a cost implication for the company. Thus every time 300 unsafe acts are prevented an LTA is likely to be prevented. More to the point, however, statistics have shown that if 30 LTAs are prevented a life will probably be saved!

Companies International Marine Forum), for example, compare their safety statistics on an agreed basis, as do the operators of offshore support vessels that belong to International Support Vessel Owners' Association. It is recognised that conditions existing in different trades cannot be readily compared, but it can be productive to conclude informal arrangements to exchange information and experience with companies operating in broadly similar circumstances.

3. Changing behaviour

The key aspect of a safety culture is changing the behaviour of seafarers and shore based managers so that they believe in safety, think safety and always seek further improvements.

The introduction of a genuine safety culture based on the concept of continual improvement, and personal commitment and responsibility on the part of everyone in the company, is a long term process and involves a lot of hard work. To a certain extent, experience gained through the introduction of Safety Management Systems required by the ISM Code should result in a change in behaviour. It should be recognised, however, that companies can take additional steps to encourage the change from a culture of compliance with regulations to that of a culture based on individual commitment to safety.

At one extreme, companies may wish to conduct detailed "behavioural assessment" programmes, using outside expertise, in order to work out the best way to move forward. The assistance of outside consultants may then be used to oversee the change to the company's safety culture. For many companies, however, a less ambitious approach may be more appropriate.

A starting point is making sure that employees fully understand why they are following the procedures required by adherence to the ISM safety management system. They need to understand that the purpose is not simply to satisfy ISM Code auditors but to bring about actual improvements in safety.

Additional advice on accident prevention, and the introduction of safety culture, is available from P&I Clubs, classification societies, national maritime administrations and national shipowners' associations. The most important thing for companies to recognise, however, is that changing behaviour is a continuous and deliberate process. This requires the full commitment of senior management, which includes making the necessary financial resources available.

**Also known as the Loss Time Injury or Lost Time Incident rate.*

INSURANCE DOES NOT BLIND SAFETY CONSCIOUS SHIPPING COMPANIES TO THE TRUE COST OF ACCIDENTS

file

Container is dropped on deck during loading. Due to failure to follow an agreed procedure the incident is reported because the officer thinks no damage has been done to the container. It is subsequently discovered that a fuel tank beneath the deck has been damaged, spoiling the contents of 30 boxes.

Estimated total cost to the ship operator of this incident (not recoverable from insurance) could typically be: 30 containers \$15,000, repairs \$50,000, delay \$55,000, rescheduling \$50,000, and compensation time \$15,000.

Typical P&I deductibles: hull and machinery \$10,000, containers \$1,000 per box

How can companies check if they are losing money?

A simple check on whether or not a shipping company may be losing money unnecessarily is to see if the company's operational managers can provide senior managers with the following information:

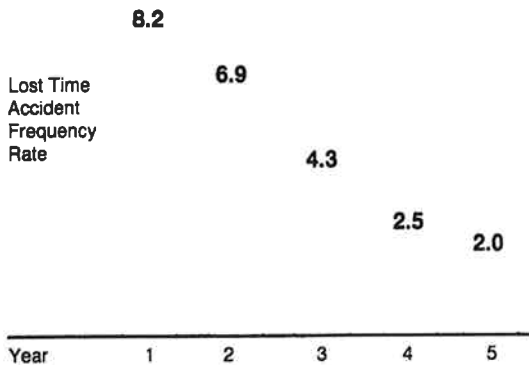
- How many "Lost Time Accidents" did the company's crew members have last year and was this better or worse than the year before?
- What proportion of the company's personal accidents were caused by a simple failure to follow established procedures, i.e. were totally avoidable and should never be repeated?
- How does the accident record of the company compare with that of its competitors? Is the company capable of finding out?
- What proportion of last year's costs resulting from accidents were not repaid by insurance and were in fact covered by the company directly?

If operations managers appear unable to answer any of these questions satisfactorily, it is possible that the company may be losing money unnecessarily and that there is more that might be done to encourage the practice of a safety culture.

Introducing radical improvements to a company's safety culture cannot be achieved overnight, but the first stage, and the key to success, is commitment from the most senior level of management including managing directors, finance directors and everyone else at boardroom level.

The full benefits of a commitment to implement a total safety culture may take four or five years to materialise, but experience has shown that real results can be achieved within as little as one or two years.

Implementing a safety culture - the experience of a multinational shipping company



ISF is the international employers' organisation for shipowners concerned with labour affairs, manpower and training issues

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Using safety culture to get the best from ISM

Safety culture, of course, is closely linked to the philosophy underlying the IMO International Safety Management (ISM) Code.

If a company successfully implements ISM this should encourage positive changes of behaviour with regard to safety management. Indeed, the proper implementation of the ISM Code should result in a safety culture.

But there can be a difference between complying with the letter of the ISM Code and fulfilling its spirit, i.e. the conscious practice of an attitude to safety in which all accidents are seen as preventable, and everything reasonably possible is done to ensure that accidents are actually prevented.

The achievement of a total safety culture goes beyond compliance with the ISM Code since it can provide a means of maximising the benefits and cost savings that can be derived from the systems which ISM requires companies to implement.

Seafarers and their managers may be compelled, by legislation, to follow certain procedures. But people cannot be compelled to believe in these procedures or to think about the safety implications of everything that they are doing.

The public focus of the ISM Code has been on the need for companies to comply with it within specified deadlines, and to be issued with Documents of Compliance and Safety Management Certificates. However, the underlying purpose of the ISM Code is to move shipping away from a culture of "unthinking" compliance with external rules towards a culture of "thinking" self regulation of safety.

Following the spirit of the ISM Code involves, not least, a commitment to continuous improvement of the company's safety record. However, safety culture involves moving beyond compliance with external rules to a culture of self regulation, with every individual - from the top to the bottom - feeling responsible for actions taken to improve safety, rather than seeing them as being imposed from the outside.

Acknowledgements

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