

Paper Presented at Seminar

The Implications of Increasing Safety and Environmental Standards for Ship Operators⁺

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1. Introduction

Ladies and gentlemen the implications of increasing safety and environmental standards for ship operators and managers must be viewed against a background of increasingly stringent legislation developed to an extent by politicians whose primary objective is re-election and Major Oil Companies who wish to limit their liability.

Safety is not a commodity which can be purchased, or manufactured. It is an attitude, a culture in which those who carry out an enterprise do so in a manner which will protect themselves, the workplace and the environment from harm in that order. This embraces all the parties to a maritime adventure, including cargo

owner, ship owner, ship operator, forwarding agents, insurers, terminal staff, port operators.

The safe transportation of goods at sea is not dependent upon any one single party and the venture is therefore only as safe as the weakest link in the chain. Recent cases have demonstrated that safety goes beyond the operation of the ship and there are implications for designers, builders classifications societies and surveyors. It is therefore important to communicate with one another.

The protection of the Environment is not always synonymous with the protection of the ship and its cargo. Operational discharges necessary for the generation of power aboard ship provide potential if not actual pollution to the sea and and the air. Noise pollution in

⁺ This paper was presented to the Marine Safety & Environmental Protection Seminar co-chaired by Prof. Lee Sang-Jib, President of the Society of Maritime Safety and Capt. Brian Tayler, Director of British Marine Equipment Council, Nov. 2, 1995.

Germany has prevented barges from discharging at night for a number of year now.

Fire fighting gases such as Halon which have significant beneficial effects for the fire fighters are now found to be a danger to the atmosphere and have been banned. The paints designed to protect the hull from marine organisms and so boost performance and reduce corrosion introduce toxic particles into the marine ecology which can find their way into the food chain.

What then are the implications of increasing standards. Other speakers today will talk about the law, design and construction elements. I hope to give you some insight into the implications which arise for the operators and managers of ships.

2. Operational Elements

The ship operator, as is every other link in the transportation chain, is there to make a profit for himself and to contribute to the profit of his partners. If the ship is involved in an incident then this will detract from the commercial success of the voyage. It is therefore not in the ship operators interests to allow an occurrence.

Error free operation, while not necessarily being one hundred percent attainable, should be the clear goal for everybody to be working towards.

Prevention of accidents has always been known to be preferable to the cure. Prevention however does not come without its own cost and large sectors of this industry still believe that the cost of prevention outweighs the cost of failure. Ladies and gentlemen, if the accountant only measures the bottom line, then that is all that he will see.

1.

Income from service = cost of service
- profit(loss)

This traditional bottom line accounting does not tell the real story of what is going on within the organization.

2.

cost of service = lowest cost of labour,
material and fuel
+ cost of getting it right
+ cost of making mistakes.

We have very little control over the cost of labour, material and fuel. they have their international levels and provide a fairly even field for all the players. For most of us the winners and losers are decided by getting the right balance between what we pay to "get in right" and what it costs when we "make mistakes".

3. The Cost of Getting It Right

Prevention of mistakes requires planning, consultation, organization and communication. Cargo planning, Voyage planning, Maintenance planning. It is not enough to make plans, they must be carried out. They must be monitored to ensure that the criteria are being met and where deviations occur they must be corrected.

We need to use people to carry out the plans, and they must be trained. They must know how to interpret and implement the plans. They must be knowledgeable so that they can respond to any deviations and they must be sufficiently skilled to make any charges or repairs that might become necessary. They must not be so tired that they miss some tell tale sign of things going wrong, during often dull routine monitoring.

I am old enough to recall what now seen to have been the golden years in shipping during the fifties, sixties and very early seventies. Freight rates were high enough to give sufficient reward to ship owners and operators so that the training of personnel was thorough. As the freight rates fell so the money available for training fell. There was then a large pool of experienced and highly trained personnel. Like me they are now aging and that pool has almost dried up. Years of failure to invest in seafaring staff must now take its toll.

Those who now operate ships do so with less people which implies that they must be even more highly trained. Sadly this is often not the case. The traditional maritime nations no longer boast significant fleets which can sustain the training infrastructure. Less expensive mariners, from less developed countries are given marginal training and expected to cope. It is a matter of some considerable pride to them that so many achieve so much when the odds are so stacked against them.

There is a school of thought in the United States of America which seems to believe that safety can be engineered into ship. This is not a new phenomena. OPA 90 and double hulled ships is, upon reflection, a typical American response. Fifty years ago the American attitude to fire aboard ship was to build a ship which contained no, or at least minimal combustible material. Did that succeed? In truth only to a very limited extent. They forgot that the paint was still combustible, the ship's fuel was combustible and often the cargo was combustible.

The European approach was more pragmatic and the flammability of the ship and to ensure that it, the cargo and the people onboard were adequately protected developed rules to ensure

that the crew were sufficiently protected developed rules to ensure that the crew were sufficiently well trained to extinguish a fire should it occur, and that the ship was provided with the necessary system and equipment to combat the fire.

It bodes well to reflect that typical shipping companies spend less than 3% of revenue on the training of their staff.

4. The Cost of Getting It Wrong

Very few organizations are prepared to consider the costs of wrong. Often they don't have a means to measure when, where and how it went wrong, or to assess the real cost.

A typical response may be that the industry is converted by insurance policies. The insurance industry has been systematically raided over the past twenty years by unscrupulous operators and stupid claims managers. Who today can get hull cover with a deductible of less than \$100,000. Where is the P&I cover with a deductible of less than twenty thousand dollars?

What is the cost per \$1,000 as compared to ten years ago.

Who pays for the army of Oil major inspectors, the port and flag state surveyors the P&I surveyors the Salvage Association Surveyors, and more importantly what does it cost you??

How large is your insurance claims department, how many superintendents do you employ, how many safety officers, how many port captains?

These are among the costs of getting it wrong, but you will not find them set out in the balance sheet as such. Bottom line accounting does not tell the story. We need to reevaluate

how we make up our books.

Typical these costs can amount to 30% of revenue. You have to look for these costs because they are hidden in your system. They don't appear as invoices for "lack of safety". They appear as spare parts for broken machinery, paint to cover scratches, small claims departments, Increased insurance premiums.

Look for them, add them up and be prepared to be stunned.

5. Increasing Legislation

Because shipping by its very existence is international, it is necessary to meet the legislative requirements of the countries which the ship will visit. For this very reason the International Maritime Organization was founded. The aim being, inter alia, for member states to come to a consensus on requirements so that they could be implemented universally.

The course taken not just by the Federal Government of the USA, but by the individual national States within the USA is one of unilateral legislation. Those who wish to trade to the USA must monitor and comply with not only the Internationally recognized Rules, but also with Federal and Local State legislation. the administration needed by each individual shipping company to monitor and comply with the ever changing requirements is a burden upon the shipping operators.

A whole industry has been borne within the USA supplying, essentially the promise of assistance in the event that the ship is involved in an incident. None of those services is aimed at prevention. THIS IS ALSO A COST FOR GETTING IT WRONG.

Outwith the influence of the European memorandum of understanding on Port State

control and the US cost guard the monitoring of shipboard standards varies quite considerably, however within these spheres of that influence there can be no doubting that the overall standard of ship has improved.

There has been no dramatic increase in the standard of the bulk European owned and based ships, the prudent owner has always protected his asset by operating it in a responsible manner. The ships with owners who are not as aware of the true operating costs of a ship, those who are being manipulated by unscrupulous managers and those operated by scoundrels are not such frequent visitors to these waters.

Individual countries are as yet unable to ratify all the conventions of the IMO, particularly with respect to environmental issues such as the provision of disposal facilities for hydrocarbon tank washings, garbage etc.

6. ISM Code

There has been much in the maritime press over the past few years claiming that 80% of accidents are the result of human error. Since we are a people business, men design and build ships. Men operate and maintain ships and so to that extent any failure can be considered "human error" I have in all my life never met a man, or woman, who has decided to go out and make a mistake. So mistakes are not deliberate acts and therefore we must look a little further.

People and equipment are brought together to perform an activity and if this occurs within the confines of a planned system of work there will be no failure. It is therefore incumbent upon employer to ensure that operators always work within a system of work.

I do not believe that legislation is the way to

enforce good management practice. Never the less the IMO has introduced the Code of Safe Ship Management and Pollution Prevention. This is an attempt to ensure that the ship operators and managers maintain the ship in the same condition as it is found at the time of survey for the Ships Safety Certificates such as SAFCON, Safety Equipment, Load line, IOPP etc.

The prudent operator will not be significantly affected by this as it simply requires a third party conducting an audit aboard ship and in his office to verify that a system is in place which will ensure compliance.

The system will have to be operated in a very flexible manner to accomodate the realities of ship operation. The audit bodies have not yet been selected. Some countries such as the United Kingdom, Hong Kong and Singapore have I believe decided that their own surveyors will conduct the office audit of companies operating within their countries. Many more will delegate this function to an approved organization.

The Classification Societies are gearing up to carry out this as the bulk of the ship audits. Inevitably one must ask are they the right organizations to be entrusted with this task. Have they the numbers of suitably qualified and experienced staff to physically do the work?? Have they the necessary experience to judge if the system is competent or not. These questions are still to be raised.

Ultimately, will this legislation succeed where all the previous requirements have failed?

The possible environmental legislation which is presently under development in Europe and the USA is still in its infancy BS7750 has already been adopted by some of the oil majors in some locations. This will have a significant

effect upon terminals, refineries, ships and shipping, road transportation.

Protection of the environment from the ravages of man will not be easy.

One of the few initiatives which is proving to have direct financial rewards is the Port of Rotterdam Green award. Started in 1994 it has been adopted by Portnet and now also covers major ports in South Africa. A VLCC can save up to \$10,000 per visit to the port of Rotterdam while a suezmax size tanker will save \$2,800 on her first visit.

This is an exciting start and it is to be hoped that and national will take up this challenge in the future.

7. Summary

Safety is built in to the activities of the prudent ship operator. Any investment made towards this end is likely to have a measurable payback in positive terms. That there must be an investment is inevitable, because the industry at large has let things slip too far for too long. Those who have not allowed it to slip too far and who are the first to recognize that safety, far from costing money, in the long term actually preserves it, will be winners.

Too many seem to have lost sight of the fact that every one hundred pennies saved is a full one hundred pennies profit. Every hundred pennies of additional revenue contributes no more then fifteen pence to profit.

Environmental protection is not so simple, nor so financially attractive. Man needs the minerals of the Earth as well as the products of the soil and sea to survive. We(the human race) are still not in the position, politically or financially to manage the Earth's assets without causing damage. The evidence of our damage is evident

in many different parts of the Globe and will in some cases haunt several generations still to come.

We have learned a lot, and continue to learn, but despite the best intentions some Government needs for their people will be at the expense of people in another region for the foreseeable future.

We sailors ply the seas with the raw materials of commerce as well as the finished and part finished goods. It does not always sit well to consider too deeply what effect the ship and the cargo it carries is having, or may have, on some communities, or on the sea through which sail. None my generation can hold up his head and claim to be without blame in the pollution of the seas. Times are changing though, and Governments are turning their attention more and more to the protection of our planet and its precious resources.

This will not be without cost. The investment will have to be made not for our benefit, but for the benefit of generations yet to come, however the cost will have to be borne by society as a whole, not by the shipping community alone.

The debate surrounding the choice between engineering our way to a better tomorrow, or adapting our working practices will continue. Each method has the same goal as its target and as long as we attain the goal does it really matter how we get there?