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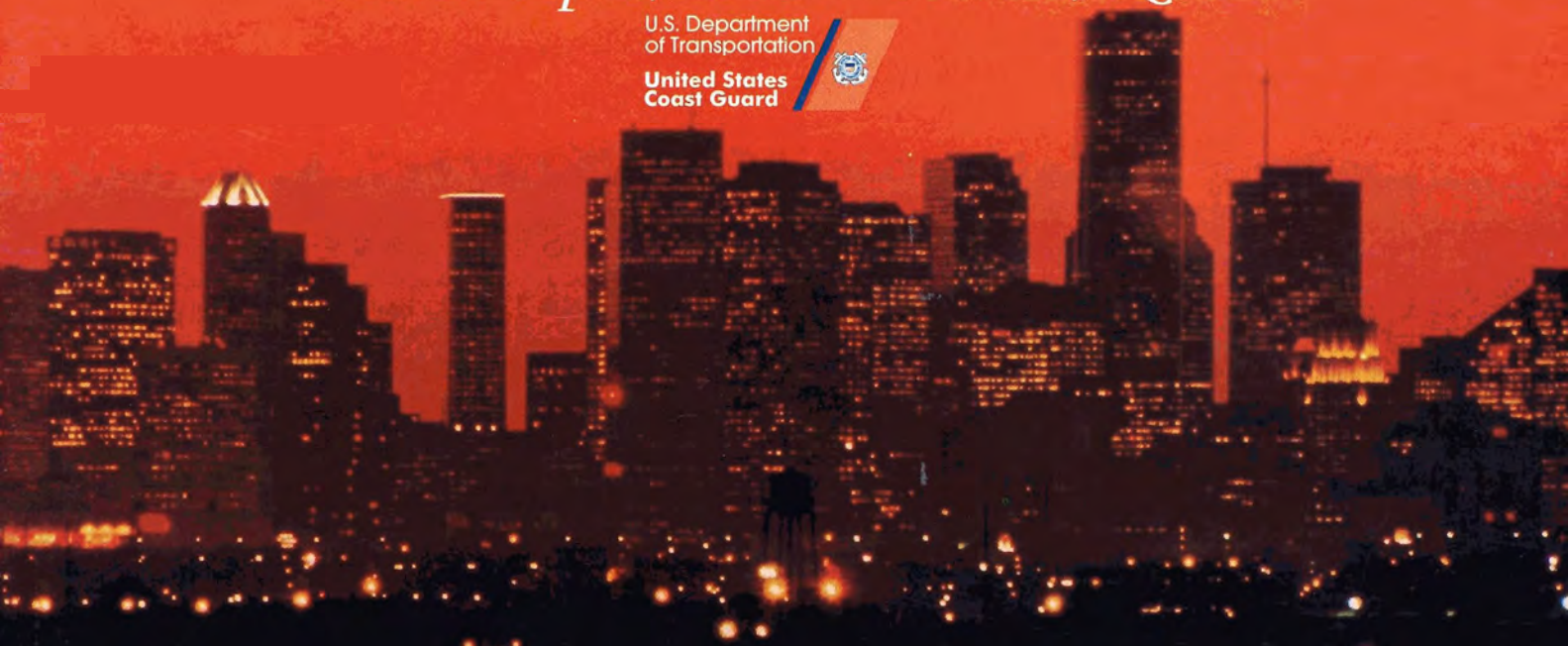

Special issue on port-state control

Accountability is becoming the watchword of the maritime industry.

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The publication of names of individuals and countries associated with substandard ships has received considerable coverage by international maritime trade journals. Concern over adverse publicity, along with the possibility of delays caused by more frequent boardings caused a number of flag states and shipping companies to examine the way they do business.

Charterers are paying more attention to the performance records of the ships they hire. Countries are reexamining their maritime safety and environmental protection programs to improve their overall record. Interaction between the Coast Guard and the international maritime community has improved significantly.

Program improvements

The Coast Guard continues to improve its port-state control program so that it remains tough, fair and consistent. For example, the procedures for listing owners and operators are being modified to focus more attention on those associated with multiple ship interventions. Also, greater weight will be given to a particular ship's history in prioritizing boardings.

These changes will pinpoint Coast Guard interventions on those most responsible for substandard ships, ultimately improving maritme safety and the protection of the marine environment in and near United States waters.

Special issue

This issue of *Proceedings of the Marine Safety Council* is devoted to national and international port-state control efforts. Maritime authorities, ship owners, classification societies and representatives from maritime industries all over the world express their views on port-state control issues. Their opinions may not always coincide, but their insistence on the necessity to eliminate substandard shipping wherever it exists for the sake of maritime safety and a pollution free environment is universal.

Photographs accompanying this article are courtesy of the Port of Houston Authority.

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Photograph courtesy of the Port of Houston Authority.

Development . . . Direction . . .

By Dr. James Cowley

Maritime legislation

At the turn of the century, there were no international conventions on maritime safety or pollution prevention. The few countries with merchant fleets of significant size developed legislation applicable to their own ships and issued their own certificates. Safety legislation was mainly confined to safe depth of loading (Plimsoll Line) for ships in general.

The notable exception to the right of innocent passage was the collision regulations' legislation applied by the United Kingdom in 1846 to foreign ships in British waters. It was an attempt to prevent collisions by ensuring that all ships operated by the same procedures. At that time, ships did not endanger shore-side populations except when carrying explosives, and coal did not visibly pollute the oceans.

It had always been recognized, however, that countries had a humanitarian obligation to seamen and passengers of ships leaving their ports, despite the simultaneous recognition that interfering with another state's property was a very serious matter.

Ships were detained only if they were "manifestly unsafe," an appeals procedure through a court of survey was held in public, and recompense for unreasonable detention was incorporated in United Kingdom legislation. Thus in 1906, when the United Kingdom applied its regulations for life-saving equipment to foreign ships leaving its ports, the legislation was not applied to foreign ships for which "the provisions in force appeared to be as effective as the provisions of the United Kingdom act." Making this assessment was virtually impossible since national regulations were based on casualties of a country's own ships instead of experience gained from ships from all countries.

To limit restrictions on free trading, however, mutual recognition of certificates of several countries was established.

International conventions

Bi-lateral assessment procedures were not a satisfactory solution. There was clearly a need for an international convention with uniform requirements for ships of all countries. Ideally, this could avoid unfair competition and ensure uniform standards of passenger and crew safety regardless of a ship's flag.

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Deficiencies . . .

Right: Bubble gum patches up portable fire extinguisher.
Below: Fire hose leaks like Swiss cheese.

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An overwhelming urgency for an international treaty on passenger ship standards arose following the *Titanic* disaster in 1912. The following year, representatives from 13 countries met in London to develop an International Safety of Life at Sea (SOLAS) Convention on uniform standards for passenger ships and radio requirements for cargo ships.

Although that convention didn't enter into force due to World War I, many of its provisions were followed and successive SOLAS conventions were developed by the International Maritime Organization (IMO) (or its predecessor, the Intergovernmental Maritime Consultative Organization) in 1929, 1948, 1960 and 1974. Since it became effective in 1980, SOLAS 1974 has been amended many times.

Surveys and certificates

All the conventions burdened the flag-state administrations with the task of ensuring that their ships were periodically surveyed and, at the time, to "fully guarantee the completeness and efficiency of the inspection and survey" of the ship and equipment complied with the convention provisions. This responsibility applied regardless of whether government surveyors conducted the survey or surveyors authorized to act for the government (i.e., classification societies).

In addition to ensuring that his ship was safe and seaworthy at all times, a ship owner "had the responsibility of maintaining the condition of the ship to conform with the provisions of the convention and to ensure that the ship would remain fit to go to sea without danger to the ship or persons on board (SOLAS) or present an unreasonable threat of harm to the marine environment {International Convention for Prevention of Pollution from Ships (MARPOL 73/78)}." All these elements still apply.

The SOLAS and MARPOL conventions state explicitly that valid, unexpired certificates shall be accepted by port states unless there are "clear grounds for believing that the condition of the ship or of its equipment does not correspond substantially with the particulars of any of the certificates," or that the ship and its equipment are not in compliance with the provisions of the convention. Logically, this must be so, or the foundations of the convention system are undermined and the maritime world reverts to over half a century ago.

The principle of "clear grounds" was so basic, that it was stated in text which is set aside from ordinary operational regulations, and is included in a separate section of the relevant convention, which can only be amended by an explicit procedure which is difficult to carry out.

Early practices

Legally, the provisions of the conventions concerning port-state control have not changed for passenger ships since SOLAS 1929 became effective in 1933, or for cargo ships since SOLAS 1948 entered into force in 1952. There are fundamental changes under consideration at the IMO, however, and practices have changed dramatically in recent years.

For example, through the 1970s, United Kingdom surveyors had to contact headquarters before taking any adverse action beyond the scrutiny of a foreign ship's certificates, if there was reason to believe that conditions described in the certificates were not valid.

Criteria for detaining foreign ships were most severe, such as "manifestly unfit to proceed to sea without danger to human life." (Merchant Shipping (Load Lines) Act 1967) Surveyors could detain ships for breaches of regulations, but were told not to without consulting the senior district officer, as "the need actually to detain rarely arises and a warning to the ship's master or owner's agent that the ship will not be allowed to sail until any deficiency has been remedied is normally sufficient to secure speedy compliance." (Instructions to surveyors: Exercise of powers of detention under the Merchent Shipping Acts of 1894 to 1970.)

. . . more deficiencies

Deplorable condition of fire-fighting equipment could seriously effect an emergency situation on board.

Regional agreements

Toward the end of the 1970s, the trend of European and North American ship owners to "flag out" their ships to open registers accelerated. Increased interest in foreign ship standards then led to establishing the Hague Memorandum of Understanding in 1978 by eight North Sea states (Belgium, Denmark, France, Federal Republic of Germany, Netherlands, Norway, Sweden and the United Kingdom). Effective four years later in 1982, the bi-annual frequency of information exchange was too low to be of any consequence.

In January 1982, the Hague memorandum was superseded by the Paris Memorandum of Understanding, with the additional participation of Finland, Greece, Ireland, Italy, Portugal and Spain. In 1994, Canada became a full member, providing an exception to the regional nature of the agreement. The United States, Japan, the Russian Federation, and, recently, Croatia, participated as cooperating maritime authorities, together with IMO representatives.

The objectives of the Paris agreement include the inspection of 25 percent of the ships visiting a member country's ports, and no re-inspection of ships without defects within six months.

The Paris agreement is not a treaty because member countries wished to retain individual competence and the freedom of decision-making in general and at the IMO in particular. The pattern of procedures of the memorandum is being followed by an agreement between ten Latin American countries, and by a new Asia-Pacific memorandum of understanding between countries in that region, adopted in Tokyo in 1993.

There is also a comprehensive Australian port-state control program recently directed at bulk carriers in particular, and the long-standing United States boarding program, which appears to be directed at passenger vessels with intermediate emphasis on gas, chemical and oil tankers, and more recently, over the whole spectrum of ships in order to identify substandard vessels.

IMO and port-state control

Common to all regional agreements is an avowed commitment to comply with IMO conventions to eliminate substandard ships. A substandard ship was first defined by the IMO in 1975 in resolution A321(IX) as follows:

"In general, a ship is regarded as substandard:

- if the hull, machinery or equipment, such as for lifesaving, radio and fire-fighting are below the standards required by the relevant convention, owing to, inter alia;
  - (i) the absence of equipment or arrangement required by the convention,
  - (ii) non-compliance of equipment or arrange ment with relevant specifications of the conventions, and
  - (iii) substantial deterioration of the ship or its equipment because of, for example, poor maintenance; and
- if these evident factors as a whole or individually make the ship unseaworhty and put at risk the life of persons on board if it is allowed to proceed to sea."

The resolution continued: "It is impracticable to define a substandard ship solely by reference to a list of qualifying defects. The inspector will have to exercise his professional judgment to determine whether to detain the ship until the deficiencies are corrected or to allow it to sail with certain deficiencies which are not vital to the safety of the ship, its crew or passengers, having regard to the particular circumstances of the intended voyage."

This definition was adopted in 1981 in an IMO document which formed the basis for port-state control procedures for the last 14 years, and is still in effect.

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Currently, an IMO working group is tackling the complex task of amalgamating several subsequent resolutions, which will probably condense the substandard ship definition to. "a ship whose hull, machinery or equipment, such as for lifesaving, fire-fighting or pollution prevention, are below the standards required by the relevant convention."

A ship thus becomes substandard if it does not comply with applicable new regulations introduced by the IMO, but it does not suddenly become unsafe or unseaworthy. This does not mean that convention requirements may be disregarded, but there are cases where equipment to meet new requirements is not available. Accidents may happen or equipment may fail and be unavailable in a particular port.

In such cases, the flag state should arrange for the local classification society surveyor to ensure that the ship is made as safe as possible to continue to a repair port. The flag state should at least inform the port-state control officer that it agrees with proposals for coping with the problem. The officer may allow the ship to proceed subject to appropriate conditions.

Ship-owner responsibilities

A ship owner's non-delegable duty to maintain a safe ship predates international conventions and has been confirmed by the courts. If all ships were constructed and operated by uniformly high standards of safety, international conventions and port-state control would not have been necessary.

Also, before any conventions, commercial ships were required to be registered and comply with legislation under which owners were severely penalized for taking unseaworthy ships to sea. This situation remains the same.

The conventions lay down the minimum standards to which ships must be constructed, maintained and operated. The burden is on the flag state to include all convention requirements in national legislation and arrange for enforcement. A flag state may delegate the survey and certification tasks (but not the responsibility) to "recognized organizations" - usually classification societies.

In this respect, no administration has sufficient resources to deal with all statutory surveys required by the conventions without the assistance of classification societies, which maintain international networks of qualified surveyors. The major societies also have ship and machinery design resources and expertise, which cannot be maintained within government administrations cost-effectively.

Agreements and inspections

Solving one problem often raises others. How can a flag state be sure that its obligations are totally fulfilled? Competent classification societies must be appointed, and their powers and responsibilities clearly defined.

In the case of the Southwest Pacific Republic of Vanuatu (New Hebrides prior to independence), having an open register of some 400 ships, only full members of the International Association of Classification Societies are appointed with comprehensive formal agreements. Each agreement specifies the exact power and responsibility delegated (not including exemption decisions). For example, a surveyor may board any Vanuatu vessel with reason to believe that convention requirements are not being met. This is a sure deterrent to ship owners hoping to avoid compliance.

Photograph courtesy of the Port of Houston Authority.

Port-state responsibilities

Port states are not obligated to inspect foreign ships, but should do so in the interests of safety and pollution prevention. Within their territorial waters, they may impose their law as long as it is consistent with international conventions to which they are party.

A port-state control officer has "clear grounds" to conduct extended inspections on ships of non-parties since they cannot have valid certificates. In the case of a convention ship, a competent surveyor's external observation of the hull, draught and load-line marks, and life boats may provide "clear grounds" for an inspection even before ship documents have been examined.

Operational practices

An impending change in IMO legislation (effective January 1, 1996) concerns the extension of port-state control to operational requirements concerning the safety of ships and pollution prevention, IMO resolution A742(18).

Under the provisions, a control officer with clear grounds for believing that a master or crew are unfamiliar with essential procedures, must "ensure that the ship shall not sail until the situation has been brought to order in accordance with the terms of the conventions." This could result in a port-state control officer requiring performances or answers to questions, which, when requested in a language foreign to a ship's officer, are unreasonable. Unless such situations are handled with discretion, major problems will result.

Targeting and blacklisting

The need for making the most efficient use of scarce resources has led to "targeting" of substandard ships, owners, registers and classification societies, and the publication of "blacklists." Blacklists are based on port-state control inspection results, which are collated in a variety of ways, such as the number of delays or detentions over certain periods of time.

Everyone accepts the fact that substandard ships should not be allowed to endanger the lives of their crews or passengers, trade with unfair advantages or be allowed to pollute the marine environment.

However, it has been claimed that some ships have been detained unnecessarily, the competence of and interpretation of international conventions by port-state control officers is questionable, detention criteria vary widely, and the manner in which targeting results are presented can be unfair to some organizations or individuals involved.

For example, classification societies should not be quoted if the fault is unrelated to their duties (i.e., human failures), and flag states should not be included in detention lists if they live up to their responsibilities. Some recent events, give rise to concerns about inequities and practices contrary to safety at sea.

Detention orders

All vessels develop defects which have to be repaired. Masters have correctly put into port with problems such as steering malfunctions, and have been served detention orders, which is a stigma on the flag state and the owner and, in such cases, is opposed to the intent of international conventions. Could these masters be forgiven for remaining at sea? And would a port state place detention orders on its own ships in similar circumstances?

In accordance with conventions, the port-state control officer should inform the nearest diplomatic representative of the ship's flag state of a detention, which is often disregarded. Such breaches of convention provisions are serious matters in themselves and cannot be in the interests of safety.

Another problem arises when a port-state control officer detects defects or alleges them, but insists that the classification society verify that they have been corrected even though proof of repair and conformance has been adequately presented. This delays the ship until a classification surveyor can be found, which is costly to the ship owner and unwarranted.

Inconsistencies in port-state control procedures occur in individual countries and regional organizations under memorandums of understanding. Furthermore, it appears that there is 70 times the chance of detention in ports with the highest percentage of ships detained per port call than those ports with the lowest percentage.

Conclusions

Although port-state control is relatively new and evolving, it has made notable accomplishments, particularly in Australia, Canada, Japan, the United States and Europe. There are still teething troubles, however, which will be best resolved through frank discussions on an international level, in accordance with IMO conventions, resolutions and principles.

Inevitably, injustices will occur which will displease fair-minded individuals, but if inspections are conducted to improve maritime safety and are not unduly influenced by statistical, political or other considerations, the general public and the maritime community will surely continue to benefit.

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TARGETING > > > > > >

a measuring tool that works

By LCDR Mary Landry

There is no doubt that the IMO has made significant contributions to safer shipping and cleaner oceans. However, when attempts are made to evaluate or measure its success, one runs into problems. So many member countries fail to provide the necessary "progress reports" for a basis of evaluation.

A new practice of targeting substandard ships, flag states, owners, operators and classification societies offers an opportunity for measuring results, which would provide strong indications of regulatory compliance.

Commercial shipping accounts for over 90 percent by volume (and 95 percent by value) of goods being transported worldwide. The IMO has been the leader in establishing international conventions, codes of practice and recommendations for vessel owners and operators providing this vital transportation link.

Currently, the IMO has 149 member states and two associate members. Its treaties and conventions apply to the vast majority of international shipping. For example, 95 percent of the world fleet is governed by countries party to MARPOL (73/78), which covers pollution prevention. This means that the majority of ships are supposed to be in compliance with IMO's high standards of safety and pollution prevention.

The IMO has attempted to address compliance by looking at implementation (or lack thereof) of the various conventions and protocols. The IMO's secretary general, William O'Neil, states: *"Implementation, according to the dictionary, means putting something into effect. Making sure that it gets done. And as far as IMO's twin targets of safer shipping and cleaner oceans are concerned, implementation is the key to success. It is a responsibility that no one who is involved in shipping can evade."*

Background

To date, the IMO has relied on the countries (flag administrations) to provide domestic legislation and oversight of the established requirements for vessels flying their flags. In the United States, the Coast Guard is responsible for drafting domestic legislation and overseeing inspections of United States vessels. In other countries, there may be government entities which manage these shipping aspects, or flag states may delegate their responsibilities to classification societies.

So far so good. The IMO sets the standards. A large percentage of the world shipping fleet fly flags of states that are party to the various treaties and conventions. The states supposedly have entities providing oversight to ensure regulations and standards are maintained. This should mean that efforts could be concentrated on that small percentage not covered - the so-called "outlyers."

Unfortunately, the old saying, *"one bad apple can spoil the whole barrel,"* applies.

No matter how well an organization provides mechanisms for safety and pollution prevention, and how well they monitor and enforce the mechanisms, that small percentage of ships not covered by international convention standards can cause a disaster that reflects on the entire shipping community.

More importantly, the remaining percentage, which should be in compliance, gives a false illusion of prevention and control. Many mishaps occur on vessels flying the flag of a nation which is party to international treaties and conventions, and supposedly in compliance.

The IMO learns of these bad apples through a system of checks and balances called flag- and port-state control. The flag state monitors its own vessels. The port state provides a back up for standards which may have been overlooked by the flag administration.

Flag-state control

A treaty or convention is a legal instrument in which the parties define mutual obligations and rights according to international law. The problem lies in how far the party states participate. This varies widely.

The United States, for example, has an established system where its ships are regularly examined and issued certificates attesting to compliance with domestic and international laws. In addition, the shipping community has the infrastructure for complying with regulations. If a ship needs to discharge oily wastes, the United States port has the oily-waste reception facility for the job.

Other countries are not as well equipped. Many lack the necessary domestic legislation to back up the treaty, and have no inspection system or facilitie to enable compliance with the regulations.

Photograph courtesy of the Port of Houston Authority.

Some countries are identified in Intertanko's publication, *"Reception Facilities for Tankers."* It has been called both a handbook for tanker operators and a diary of shame for ports and nations. It lists the countries which have ratified the MARPOL conventions and the countrys' ports, many of which do not comply with the convention. For example, Algeria and Tunisia have ratified MARPOL, but do not have the facilities needed by tankers for compliance.

Indeed, the system of flag-state control has drawbacks. The IMO can provide a basis for legislation, but cannot execute legally binding force of their conventions on any party states. The conditions drafted by the IMO in conventions must be codified into law and regulation by member nations.

Beyond this, once the laws and regulations are established, they must be enforced, and this is up to the individual flag states. And there are problems in enforcement. For example, one study showed that out of more than 1,000 reported discharges from ships flagged by parties to the MARPOL convention, only 206 cases were acted upon by the flag states, and in only 77 cases (less than eight percent) were fines imposed.

The IMO is attempting to provide technical support to countries without the necessary monitoring and enforcement facilities. The Marine Safety Committee and the Marine Environmental Protection Committee have each established subcommittees for flag-state implementation to assist member countries to achieve effective global implementation of IMO initiatives. Particular attention will be paid to the needs of developing countries, and the issue of flag-state authority delegation will also be addressed.

In the meantime, the rapidly evolving port-state control system is filling the gap.

Port-state control

Port-state control is the newest system to expand oversight, but it is not new. It goes back many years, and was actually built into the 1929 SOLAS convention. Regulation 19, chapter I of the 1960 SOLAS convention stipulates that, *"the port state could inspect a ship and detain it until that ship could proceed to sea without endangering passengers and crew."*

Where the system is expanding is in jurisdictional limits and information-sharing from state to state.

Historically, jurisdiction was established under the Convention on the Territorial Sea and the Contiguous Zone, and translated to the 12-mile outer limits of a state's territorial sea. Recently, however, some countries have expanded the oversight for pollution prevention to the 200-mile Exclusive Economic Zone.

MARPOL 73/78 and the 1982 United Nations Convention on Law of the Sea assign specific standard-setting and enforcement authority concerning vessel-source pollution to the port state. The new powers range from broad rights in ports and internal waters to limited rights in the Exclusive Economic Zones and high seas.

The port state can board a vessel at sea before it comes to port and deny entry if standards are not met. It can also board a vessel in port and detain it until violations of convention standards are corrected.

In addition, there has been renewed emphasis on using port-state control as a regional and international monitoring and enforcement system. Like flag-state control, port-state control implementation varies from country to country.

In the United States, a port-state control system has been operating for years and was enhanced in the early 1980s by the Coast Guard's Marine Safety Information System, a computer data base collecting histories of port calls of vessels, including their deficiencies and violations.

Since 1982, a number of European countries have conducted a regional system of port-state control under the Paris Memorandum of Understanding on Port-State Control (See page 11). Since then several other regional systems have been established in other areas to tighten the net on substandard shipping.

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The good news is that some traditional open registry countries are cleaning up their acts.

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Checks and balances

The flag state is primarily responsible for setting and monitoring safety standards. The port state boards a vessel and verifies that the flag state has performed the proper oversight. When the port state finds a deficiency, it should notify the flag state, which has the real enforcement hammer. The port state can fine and detain vessels in its waters, but unless the flag state does its job, the cycle will continue.

Flags of convenience

The real "weak link" in the chain of implementation of the shipping community is the flag of convenience ("open registry" states with less stringent operating and manning requirements, plus tax benefits). Particularly developing states benefit handsomely from the registration revenues, without necessarily conducting proper vessel oversight. Increasingly accepted as a way of conducting business, flags of convenience are not only widely used in commercial shipping, but by the fishing industry to bypass catch restrictions.

A recent United States trade journal advertised a flag of convenience seminar to instruct shipping companies in how to reduce problems and delays under the port-state control inspection system, as well as benefit from flying flags of convenience.

The use of flags of convenience provides a weak link in the chain of implementation of international standards. Some flag of convenience states which have ratified SOLAS and MARPOL routinely have higher than average delay/detention rates than vessels registered in regulated, traditional maritime states.

In the meantime, the IMO continues to examine the lack of enforcement of pollution penalties, loss rates and high detention rates to target flag states which merit careful monitoring.

The newest tool used in various port-state control regimes, including the Coast Guard, is information sharing and targeting bad actors.

Information sharing

There is new emphasis on information sharing in the shipping community. The Coast Guard's Port-Safety Information Exchange provides a data base that can be accepted by anyone with a computer and modem. The IMO is considering an international ship information data base.

The ability to share information is a vital tool in identifying the status of a ship and its compliance with international laws and treaties. An information data base is also an excellent source of technical assistance to countries developing a port-state control system. For one thing, it saves countless hours of building a data base from scratch.

Targeting

The concern for targeting activities must be balanced with the ability to achieve safe shipping. The Coast Guard now plans to use its information data base to target substandard classification societies, flag states and, of course, ships. The European Community practices targeting as well and is presently considering adopting common criteria for inspection standards and ship detention.

Conclusion

Yes, the old days are gone. Technology and automation have brought about reduced crews and more advanced systems to run ships. Until the system of oversight becomes more integrated, and truly weeds out the "good" from the "bad actors," some overlap must be tolerated.

As information sharing improves and the world fleet learns to work with the "watch dog" approach, efforts can be streamlined. Inspections can be closely coordinated through international cooperation.

Careful oversight by flag and port states, classification societies, management and crews will provide fewer places for substandard ships to hide. Once these areas are fully integrated, the IMO should be able to accurately assess where the successes are and where improvements need to be made.

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Regional commitment has international impact

By Mr. Henk E. Huibers

In days of yore, international shipping was neatly arranged and simple to oversee. Historically, flag-state administrations, sometimes assisted by classification societies, took full responsibility for the compliance of ships on their registers with international maritime safety and pollution prevention regulations.

In those days, ship owners did what they were supposed to do to keep their ships up to standards. There was a genuine link between the country of registry and the domicile of the ship owner, and, in general, his ships were manned with competent nationals.

What a nice world that was, and how things have changed!

Today, ships are registered in one country, manned by multi-national crews often rounded up by obscure agents in far off outposts, and operated by management companies in other countries. The owner has no real link with the country of registry and the beneficial ownership is most likely held by a banking consortium whose chief interest is the investment return. This is an environment where substandard ships thrive.

The awareness of a degeneration of compliance with appropriate merchant shipping standards did not gain ground in Europe before the early 1980s. Soon port state administrations began to verify whether visiting foreign merchant ships complied with generally agreed-upon international standards for maritime safety and pollution prevention. It was only a matter of time before European port states realized that concerted control of substandard shipping would work.

History

The Paris Memorandum of Understanding on Port State Control is an international agreement between the maritime authorities of 16 countries (Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Spain, Sweden and the United Kingdom) to establish a harmonized port-state control system to eliminate substandard shipping.

A widespread demand for much more stringent regulations on shipping safety was triggered by the grounding of the *Amoco Cadiz* off the coast of Brittany in 1978, spilling 230,000 tons of crude oil.

Adopted in January 1982, the Paris memorandum superseded the Hague Memorandum of Understanding signed by eight European countries in March 1978 to ensure that foreign ships entering their ports complied with the requirements of the International Labour Organization (ILO) Merchant Shipping (Minimum Standards) Convention, 1976 (No. 147).

Initially, the Commission of the European Communities started preparing a directive of member states to enforce international regulations on shipping safety and pollution prevention for ships calling at community ports. While this work was taking place in Brussels, European ministers and representatives of the IMO and ILO met in Paris in December 1980 to discuss the elimination of substandard ships.

The ministers met again in Paris in January 1982, and established the Paris memorandum, based on the directive of the European communities and the Hague memorandum.

Operation

The first responsibility for compliance with international convention standards remains with the flag state. Additional action by port states to enforce compliance is also required.

The Paris memorandum also specifies commitments for participating countries.

Country commitments

- Each maritime authority will honor the provisions of the memorandum.
- Each authority will maintain an effective system of port-state control to ensure that foreign merchant ships visiting its ports comply with standards laid down in relevant international conventions and their amendments.
- In principle, there will be no flag discrimination.
- Each country must achieve an annual total of inspections amounting to 25 percent of the estimated number of ships entering its ports in that year. (In practice, this results in the inspection of about 90 percent of all ships using ports in the region.)
- Each authority will consult, cooperate and exchange information with the other authorities.
- In so far as the relevant conventions don't cover small ships, the authorities will be guided by flag-state certificates and will take necessary action to ensure that the ships are not hazardous to safety, health or the environment.

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Structure

The Paris memorandum established a structure for port-state control.

Port-state control

- The Port-State Control Committee is the executive body, composed of representatives from each maritime authority and of the Commission of the European Communities. The IMO and ILO participate as observers. The committee carries out specific assigned duties and promotes the harmonization of procedures and practices relating to inspection, rectification, detention and the application of no favorable treatment clauses, which compel states to comply with provisions of the convention whether they have ratified it or not. Cooperating maritime authorities participating in committee meetings include the United States Coast Guard, the Russian Federation, the Republic of Croatia and Japan.
- A secretariat, located at Rijswijk near The Hague in the Netherlands, acting under the guidance of the committee, prepares meetings and assists the committee in carrying out its functions. The secretariat also exchanges information, and prepares reports.
- A computerized information system, located in Saint-Malo, France, contains results of each port-state control inspection conducted anywhere in the region. These results are immediately available to any partner to the memorandum through on-line terminals.
- Port-state control officers carrying out inspections are properly qualified officials authorized by national shipping inspection services of participating authorities. Regular seminars are held for surveyors to ensure uniformity of inspection procedures.

Stipulations

The Paris memorandum does not extend the scope of port-state control beyond international convention requirements. The conventions themselves do not explicitly impose the obligation of port-state control, but leave this to the discretion of contracting governments. Participating members of the Paris memorandum, however, commit themselves to specified enforcement efforts regarding port-state control.

The memorandum specifies that, unless there are clear grounds for a more detailed inspections, a port-state control inspection will consist of a visit on board a ship to check relevant certificates and other documents. However, it is common for a control officer to make a superficial round over the ship. The officer either is satisfied with the conditions observed during this initial round and concludes the inspection, or notes deficiencies warranting a more detailed inspection, which may lead to vessel detention.

When determining whether a ship should be detained, an officer considers the seriousness of the deficiencies in relation to its intended voyage. Taking into account the fact that many European ports are within a few hours sailing of each other and there are no unreasonable risks to safety, health or the environment, the officer may allow a vessel to sail with deficiencies which could be corrected more effectively in the next port. In such cases, the officer notifies this port of the vessel's deficiencies and its pending arrival.

There are legal implications involved when an inspection leads to detention. The memorandum does not provide a legal basis for intervention concerning a foreign vessel. It merely specifies the commitments of its subscribers concerning relevant conventions and notes that vessel detention may be appropriate. Even the control regulations of relevant international conventions do not provide a direct basis for legal action. Therefore, convention provisions must be implemented by national laws of the member countries. Such legislation must provide the basis for such action as detention.

The role of the port-state control officer when deciding whether to detain a vessel is very delicate and is based on professional judgment. Knowing that an undue detention or delay may lead to legal action for compensation by the ship owner, the officer must make a careful assessment of all the aspects involved.

In 1993, two cases of alleged undue detention were brought before a court of law in member states. These were the only cases known during the operation of the memorandum where a detention was legally challenged. The courts concluded that the detentions were justified.

A yardstick for the necessity to maintain strict port-state control is provided by the fact that in 1993, 8.2 percent of all ships (or 926 vessels) inspected under the memorandum were detained.

Results

Since port-state control began in Europe in 1982, some 170,000 inspections have been conducted. This averages to around 17,000 annual inspections.

Approximately 6,000 inspections resulted in detention due to substandard conditions. There was a period when the number of ships detained gradually declined, but since 1989, this trend reversed. In fact, in 1993, there was an explosive increase in detentions.

An aging world fleet and present rock-bottom freight rates could account for a large percentage of the detention increase. Also, laid-up vessels have been recommissioned and many old ships which normally would be scrapped were kept in service.

These developments combined with crew reductions justified in relation to the anticipated highly automated ships have serious consequences with regard to ship maintenance and effective operation.

The 25 percent inspection target has proved to be the most difficult commitment to achieve.

Target

To maintain a well-balanced port-state control system over the entire region, the inspection percentage of individual member countries is just as important as the regional inspection percentage. In the early years of the memorandum, some member countries did not have the available manpower to comply with the 25 percent commitment. However, other members overshot the target, sometimes with percentages of more than 40. This was the situation around 1986.

Since then, most members with low percentages have been able to build up their efforts, and those who overshot the target have reduced their efforts somewhat. This resulted in a more balanced inspection pattern in the region, which remains the case today.

Harmonization

The fact that different countries with diverse maritime traditions and inspection procedures engaged in closely coordinated action under the memorandum, called for measures to harmonize their practices.

To help achieve this, seminars are conducted twice a year for port-state control officers to exchange practical ideas and experience. Also, similar meetings are arranged for individuals responsible for data communication to the computerized information system. The objective is to coordinate computer procedures within the region. Recent computer improvements include more statistical capacity and user-friendliness.

Vigilance

This is not the time to reduce efforts to eliminate substandard shipping because of a good track record. Such shipping is a persistent phenomenon, especially now when ship owners can easily take refuge in many exotic registers, which are frequently not supported by knowledgeable maritime administrations. Relaxation of port-state control would almost certainly boost substandard shipping again.

In the wake of several serious shipping disasters, the European ministers responsible for maritime safety held a conference in Paris in March 1991 to reinforce the Paris memorandum impetus. Casualties involving the *Herald of Free Enterprise*, the *Scandinavian Star*, the *Kharg V* and the *Exxon Valdez* brought to light that poor ship management on ship or shore, was to various degrees at fault. Since then, more casualties have occurred, also pointing to ship mismanagement.

Operational requirements

During the 1991 Paris conference, the ministers decided that port-state control under the Paris memorandum should be extended to cover compliance with operational requirements. This meant that port-state control officers would not only look for defective equipment, but would assess a crew's ability to adequately handle essential shipboard equipment by having them demonstrate their skills. Such drills may include an assessment of the ability of multi-national crew members to communicate adequately in emergencies.

The ministers realized, however, that the relevant international conventions were not sufficiently clear about the specific rights and obligations of port states concerning control in operational issues. They developed a proposal for a draft IMO resolution clarifying the matter. This proposal was submitted in 1991 to the Maritime Safety Committee and the Marine Environmental Protection Committee for consideration.

In November 1991, the 17th Assembly of the IMO adopted a resolution recognizing the right of port states to exercise control on foreign ships on compliance with operational requirements.

More stringency

It was another spectacular ship disaster, the running aground and subsequent loss of the *Braer*, a Liberian oil tanker, on the coast of the Shetland Islands in January 1993, which brought the Paris memorandum ministers together again. They met in Copenhagen, Denmark, to discuss even more stringent port-state control procedures.

It was decided to adopt a strict policy on targeting ships with poor safety records as priority cases when selecting ships for inspection. The ministers also decided to publish a quarterly list of all ships that were detained in the preceding three months, and more than once during the past two years.

Control extension

It has been assumed that the introduction of port-state control in Europe caused substandard ships to shift to other regions. This may indicate that substandard ship operation is not an exclusive regional problem, but global in scope. Therefore, it is significant that important maritime nations outside the European region have supported the Paris memorandum.

There are actually three possible forms of port-state control: unilateral, global and regional.

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Unilateral control

Advantages of unilateral control include:

- it can be exercised to the extent deemed necessary by the port state;
- its scope can be enlarged to include the port-state's national requirements; and
- the commitment involved is determined exclusively by the port state.

Disadvantages include:

- its efforts can be less effective than when performed with other port states, because
  - of the lack of relevant information from abroad,
  - ships are no longer under surveillance once they sail from the port-state's territorial waters, and
  - there are no ways to enforce or monitor rectification of deficiencies after the ship has left port-state territory;
- it is less cost effective since the full financial burden rests on the individual port state;
- it places a disproportional burden on ships' staffs when confronted with different port-state control programs in consecutive ports; and
- it may distort competition between regional ports. (Ships may divert to ports with more lenient safety regimes, thus creating commercial advantages.)

The United States Coast Guard's Port-State Control Program is an example of unilateral control.

Global control

Advantages of global control include:

- it will have maximum impact on substandard operations because ships will remain under constant, world-wide surveillance;
- it ensures maximum availability of relevant information to port states;
- it implicitly allows for maximum harmonization of control performances; and
- the cost of operation is minimal.

Disadvantages include:

- it lacks sufficient commitment by participating states for geographical reasons;
- it would require an international treaty to administer, implying:
  - lengthy ratification procedures,
  - time-consuming, rigid amendment procedures, and
  - much compromise required, which is detrimental to the necessary commitment; and
- difficulty in adjusting to maritime developments requiring immediate response. (For example, measures to prevent ferry disasters are only relevant to areas with such traffic.)

Regional control

Advantages of regional control include:

- maximum commitment from participating countries that share common safety and environmental interests;
- effective use of regionally available information;
- ships remain under surveillance as long as they operate in the region, reducing the possibilities for substandard operations;
- operational costs are shared by all participating port states;
- a harmonized approach to procedures lowers the burden on ships' staffs and permits effective deployment of available resources of participating states; and
- harmonized procedures prevent distortion of competition between regional ports.

Disadvantages include:

- It is only effective in preventing substandard ship operations in the particular region, and tends to shift them to other areas.

Considering the advantages and disadvantages of the three options, it is easy to conclude that port-state control should be accomplished through concerted regional efforts. Indeed, it eliminates the disadvantages of unilateral control and allows for more commitment on the part of participants than global control.

Cooperation

Substandard ships will continue to exist as long as there are areas for them to trade. As soon as the commercial tide turns favorably for them, they will return in an even more deteriorated state, taking calculated financial risks for granted.

With more regional port-state control systems sprouting up, it would seem that the net would tighten around substandard shipping once and for all. However, to accomplish this requires closer cooperation between regions. An international harmonization of port-state control procedures would enhance a useful exchange of comparable information between regions.

Having established the first regional system in the world, the maritime authorities participating under the Paris memorandum will continue to offer assistance to newer, less experienced regions. These European nations welcome the establishment of port-state control systems in other regions, provided that they are compatible with the Paris memorandum system.

By making the world too small for substandard ships to operate, they are bound to vanish.

Global expansion impact

Although the world-wide proliferation of port-state control might arouse suspicions that merchant shipping will become subject to mushrooming control excesses, the cooperation envisioned between port-state control regions is intended to achieve the opposite. Indeed, mutual acceptance of inspection results between regions will be encouraged, thereby reducing the number of port-state control inspections.

This situation will not develop overnight. It will take time for the various port-state regions to gain confidence in one another to accept each other's findings. The mutual acceptance of inspection results also should be pursued for cost-effective deployments of available resources by port states. This is no small savings, as the port-state control efforts by the Paris memorandum countries alone cost about two million United States dollars each year.

The first steps towards more effective global port-state control cooperation were taken by the Paris memorandum Port-State Control Committee in adopting a common view on inter-regional electronic data exchange. All regional data bases with port-state control results should be linked in the near future, making such results available to all maritime authorities performing port-state control with common procedures, regardless of region.

Comprehensive safety records could easily be compiled for any ships and made available to all appropriate authorities, which would focus attention on ships that really deserve it, while easing the pressure on ships with good records. The objective is to haunt substandard ships wherever they operate.

It should be noted that old ships should not be viewed as substandard on the sole basis of age, although there is a certain correlation between a ship's age and the number of its deficiencies. Ships are rated as substandard on the basis of poor shipboard and shore-based management practices, low training levels of crews and poor maintenance. These elements can exist regardless of a ship's age.

Age does play a significant role in the case of older tankers and bulk carriers with massive structural corrosion that saps their strength. It should be anticipated that these ships will receive particular attention from port-state authorities world-wide, for whom age is a guiding criterion.

Conclusion

Actions against substandard shipping will continue, if not increase. This is imperative from safety and environmental perspectives, as well as a commercial point of view. A commercially healthy shipping industry not bothered by unfair competition from substandard ships is necessary for bona fide ship owners to afford well-trained crews on well-maintained vessels.

The battle against substandard shipping is long and persistent, but can only lead to success through unflagging determination and cooperation by port states in their efforts to enhance safe shipping, protect the marine environment, and maintain acceptable living and working conditions on board foreign ships in their ports. These three objectives are closely linked.

Port-state control will not cure all evils and it can never replace efforts that should be made in the first place by ship owners to comply with convention standards and by flag states to enforce this compliance. Neither is port-state control exclusively European. It concerns port states throughout the world.

In addition, the total impact of regional port-state control is more than the aggregate of individual port-state efforts. Just as the total impact of interregional cooperation on port-state control exceeds the sum of the regional efforts.

Finally, all parties concerned with the safety of shipping and the welfare of seafarers - from flag states, ship owners, classification societies to marine underwriters, trade unions, maritime layers, charterers or port states - should cooperate in efforts to stop substandard ship operation.

Substandard shipping is a sheer disgrace to the whole maritime industry. It has harmed the industry more than enough, not only in terms of dollars and cents, but in reputation and prestige.

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How port-state control can succeed

By Professor P. S. Vanchiswar

In their common goals of safety of life at sea and prevention of ship-related pollution, port-state control is clearly a supplement and not a substitute for flag-state control. For the latter to be effective, there must be an adequate maritime safety administration of knowledgeable technical officials. This also applies to port-state control, which is based upon flag-state expertise.

There are two types of administrations - maritime and maritime safety. These expressions cause no confusion in developed countries with free market economies and considerable maritime experience.

However, in many developing countries with planned economies and little maritime experience, the term, "maritime administration" used by itself causes confusion and misinterpretation. Such ministries are usually concerned with economic and commercial aspects, and not capable of flag- or port-state control.

Legalities

The progress of port-state control in Europe and North America, and the emergence of port-state control agreements in other regions are advancements in maritime safety and marine environmental protection. The existing provisions in relevant conventions regarding port-state control and inspections of foreign merchant ships deserve to be harmonized world wide.

While the ILO convention #147 covers a wide range of matters concerning maritime safety and the welfare of seafarers, there are no specific standards directly prescribed. Thus, the provisions of the convention are subject to many different interpretations in various countries and even by port-state control officers in the same country. It is hoped that up-coming revisions of the convention will address this issue.

Procedures/practices

To rationalize and harmonize port-state control, we must develop detailed international guidelines covering all aspects. It is fortunate that IMO's Flag State Implementation Subcommittee is discussing the matter. The following should be considered:

1- The need for an adequate maritime safety administration under competent officials, who are also responsible for flag-state control. The expertise of port-state control is acquired through flag-state surveying experience, enhanced by the legal, political and procedural aspects of the former.

2- A port-state control system has to have checks and balances. No single official can have the total power to inspect, finalize deficiencies and detain a ship. An inspecting official must submit a report to higher authorities for approval before further action.

3- Detailed guidelines for port-state control officials are necessary to harmonize procedures. This is on the IMO subcommittee's agenda.

4- There are information gaps between port-state control actions and their flag-state administrations, especially in developing countries. In many cases, the administrations have become aware of port-state control actions only through lists of deficiencies reported to IMO. These gaps must be bridged.

5- While regional port-state control agreements are emerging, a global network of information will take time to develop. In the meantime, to facilitate a smooth flow of shipping to and from all ports, each ship may have to maintain a log book to reflect the dates and locations of port-state control inspections, deficiencies found and if they are corrected.

Operational prerequisites

IMO resolution A.742 (18) recommends procedures for control of operational requirements for ship safety and pollution prevention. The primary needs are competency and adequate manning. These depend on three vital, inseparable links in the quality chain: maritime training, examination/certification, and manning. Training and certification are being addressed during the revision of the Standards of Training, Certification and Watchkeeping Convention of 1978.

It is hoped that matters pertaining to sufficiency of ship manning will also be addressed, particularly certain current limitations. Present international regulations regarding manning are:

(1) IMO SOLAS Convention (1974): Chapter V, Regulation 13

(a) The contracting governments undertake, each for its national ships, to maintain, or, if it is necessary, to adopt, measures for the purpose of ensuring that, from the point of view of safety of life at sea, all ships shall be sufficiently and efficiently manned.

(b) every ship to which chapter I of this convention applies shall be provided with an appropriate safe manning document or equivalent issued by the administration as evidence of the minimum safe manning considered necessary to comply with the provisions of paragraph (a).

(2) ILO Merchant Shipping (Minimum Standards) Convention (1976): No. 147, Article 2 (e)

Each member which ratifies this convention undertakes to ensure that seafarers employed on ships registered in its territory are properly qualified or trained for the duties for which they are engaged, due regard being had to the Vocational Training (Seafarers) Recommendation, 1970.

(3) United Nations Convention on the Law of the Sea (1982): Article 94 (3)(b)

Every state shall take such measures for ships flying its flag as are necessary to ensure safety at sea with regard, inter alia, to the manning of ships, labor conditions and the training of crews, taking into account the applicable international instruments.

The common limitation of present international regulations pertaining to manning is that they are too general and subject to different interpretations by various parties. Also, there have been recent changes in manning patterns or structures from traditional ones that existed for many decades.

One thing that is needed is a global review of manning aspects, taking human factors into full account.

Technical assistance

Port states have had to take corrective actions in many cases where flag states, particularly in developing countries, could have been more effective. It is likely that many of these flag states would need technical assistance in creating and strengthening their maritime safety administrations. When such needs are identified and assistance provided, the time, costs and efforts of port-state control would likely diminish.

Conclusion

We will see universal port-state control when all nations in the world develop comprehensive maritime "safety" administrations, which recognize and comply with all relevant international convention standards and regulations. Then we will see the demise of substandard shipping throughout the world.

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Photograph courtesy of the Port of Houston Authority.

Port-state control *spreads* because it works

By CAPT Steen Stender Petersen

Begun in Europe with the Paris Memorandum of Understanding (see page 11) in 1982, port-state control has prevented the movement of many substandard ships through ports. The concept is spreading rapidly throughout the world.

Amendments to the original Paris memorandum have given port-state control more "teeth," enabling it to be more discriminating and more probing. It is important to remember that port-state control arose to address and redress the failures of some flag states.

Some countries now introducing port-state control, however, do not have the necessary tools to fulfill their obligations as flag states.

Surveyor competence

With the international growth of port-state control, ship owners are concerned about the competence of the port-state surveyors in many countries who board international vessels. Well qualified surveyors are vital in this effort.

In some countries, government-appointed surveyors assume the additional tasks associated with port-state control, and, thus far, have worked competently. Notwithstanding, there have been cases where good ships have been unnecessarily inspected and delayed.

The IMO established guidelines for operational requirements during port-state control inspections. Several shipping industry organizations persuaded the IMO to maintain a rider to the guidelines which prevents port-state surveyors from interfering with normal shipboard operations during their inspections. Nor should the surveyor require demonstrations of operational aptitude which would unnecessarily delay a ship. This is an important "brake" on overenthusiastic port-state control surveyors in situations where inspections are not justified.

Operational requirement control

In May 1994, the IMO approved an amendment to the SOLAS Convention making port-state control of operational requirements legal. It enables surveyors to assess "the ability of ship's crew in respect to operational requirements relevant to their duties, especially with regard to passenger ships and ships which may present a special hazard."

Port-state inspections are usually limited to checking a vessel's condition and reviewing documents describing the condition of a ship and its equipment. This amendment, however, empowers port states to request additional information about a ship if the surveyor finds evidence that officers or crew are unfamiliar with essential shipboard practices. Such evidence could include:

- a history of vessel mishaps caused by operational errors;
- indications that the crew has not carried out cargo operations properly;
- signs that crew members cannot communicate effectively with one another; and
- the absence of an up-to-date muster list.

If port-state surveyors find evidence of operational shortcomings, they can evaluate whether the crew has adequate knowledge of the vessel's bridge, machinery operations, cargo, communications procedures, fire and damage control plans, and anti-pollution procedures. If serious deficiencies are found, the port state can detain the vessel.

Again, the success of port-state control depends on a sufficient number of capable surveyors and uniformity of procedures which do not burden crews or interfere with normal shipboard operations.

The record

Early in 1994, the Paris-based memorandum of understanding on port-state control issued its 1993 annual report. Revised detention criteria and arrangements for better targeting of vessels for inspection were introduced, and Canada was admitted as a member during the year under review.

The number of inspections increased from 14,783 in 1992 to 17,294 in 1993, and the number of ship calls rose from 23.8 to 26.1 percent, exceeding the regional target of 25 percent for the first time.

Also, the number of ships detained due to serious deficiencies affecting their seaworthiness rose to an unprecedented level during 1993. A total of 926 detentions were recorded, well over the 1992 figure of 588 (which was higher than previous years), and the percentage of vessels detained rose from 5.62 percent in 1992 to 8.23 percent - about one in 12 vessels inspected.

The major categories of deficiencies remained the same as in previous years: life-saving appliances, fire-fighting equipment, safety in general (of which gangways and electrical equipment conditions were the worst), and navigation (out of date or missing charts and other nautical publications). Most deficiencies were caused by negligent maintenance and could have been avoided by proper shipboard operation. The report also notes an increase in the number of bulk carriers and reefer vessels detained.

The 1993 report notes a significant increase in deficiencies in general - from 27,136 in 1992 to 43,071 in 1993. But analysis of the deficiency rate reveals that the number of ships found to be without deficiencies rose from 8,095 to 8,913 in the same period of time, suggesting that the proportion of "good" ships had remained fairly constant.

Wider gap?

A number of explanations could have contributed to these figures, including more rigorous inspections. One inference, however, holds that the gap between quality and less satisfactory tonnage has grown.

Targeted flags

The targeted flags' list for 1994-95, based on a three-year rolling average for detentions, is updated.

The number of targeted flags has increased from three to 21, with Cuba, Portugal, Myanmar, Brazil, Bulgaria and Lithuania joining the list, and Liberia, the Bahamas and the Netherlands Antilles being removed due to improved records. For 14 flags, more than one in ten vessels inspected over a three year period had deficiencies serious enough to detain it.

On May 1, 1994, members of the memorandum of understanding and Canada decided to each publish factual data every three months on the detention of ships. Included on the lists are only those ships which have also been detained at least once in the previous two years. This is expected to eliminate ships which might have been detained as borderline cases during the six-month period due to "bad luck" with temporary malfunction of equipment.

Photograph courtesy of the Port of Houston Authority.

Coast Guard initiative

Also on May 1, the Coast Guard launched what could be the world's most stringent vessel inspection initiative in the fight against substandard ships, their owners, flag states and classification societies. Boarding priorities were based on the performance records of ship owners, classification societies and flag states. The initiative is expected to encourage those responsible for substandard ships to cease operations in United States waters or adopt management practices which ensure compliance with accepted standards.

The targeting of ships and owners was implemented in June, and the Coast Guard published its target listings, identifying flag states whose ships will be targeted for increased safety inspections when in United States waters, as well as data on targeted ship owners.

Aggressive port-state control is regarded as the principal weapon to be used against operators of substandard ships. In time, it will become more discriminating, taking pressure off good ships, while stepping up enforcement on the potentially substandard.

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Delicate balance

There must be a delicate balance between the need to isolate the marginal operator without unduly inconveniencing the well-run majority. The latter has to contend with questions from port-state surveyors, in addition other surveyors and their requests for access to the ship and its senior officers, when they have other demands on their time.

While the United States port-state control seems like a workable solution to the problem of bad ships, it should not be enforced unilaterally. There is a lot to be said for transparency, but a number of criteria should be qualified. The Coast Guard's published list of deficient ships carries a dire warning of what is likely to happen more often as port-state control spreads around the world. To name flags, shippers and owners, ostensibly to shame them into self-improvement, carries a number of risks.

Accuracy

The information published by port-state control around the world must be accurate or owners may have recourse to the courts. Owners may also be able to persuade their government to act against vessels flying the flag of the state which injured them. The end result would be what the original authors of the Paris memorandum foresaw when they decided to apply their criteria in a non-discriminatory way.

Ship owner reaction to the published detention lists prove they are being taken seriously. It is also clear that some owners may have genuine grounds to believe they have been treated unfairly. An over zealous approach may undermine the value of such exercises if charterers believe port-state surveyors fail to distinguish between really bad and borderline cases.

Cooperative improvement

Unless clear grounds exist that ship or equipment conditions do not correspond substantially with the particulars of any of the ship's certificates, or that they do not comply with international convention regulations, the usefulness of publicizing lists of targeted owners is questionable. This is particularly true when the necessary repairs can be made through cooperative efforts by authorities and owners.

Targeted owners should be granted sufficient notice in case of intervention to allow them to correct any deficiencies in a reasonable time period before the Coast Guard's final decision to publicize the list.

Asia-Pacific region

An Asia-Pacific memorandum of understanding was signed in Tokyo in December 1993, effective April 1, 1994. The region contains at least 13 economically developing states, many of which are without the necessary expertise to carry out effective port-state control. These authorities will have to recruit and train surveyors from the beginning, whereas states with advanced maritime infrastructures will merely increase recruitment for port-state control survey commitments.

The Asia-Pacific memorandum was initiated due to poor standards of many ships engaged in international trade. It makes sense to tackle the problem of substandard ships on a regional, cooperative basis.

Conclusion

Almost everybody agrees that substandard ships - and their owners and operators - must not be allowed to continue in operation. It is those ships which are targeted to try to improve maritime safety, save lives and prevent pollution of the seas.

The weapon against substandard ships is port-state control. Since it started in 1982 in Europe, it has spread to other regions and will be adopted by more nations in the future. The system has already produced results, with substandard ships being detained until they meet international regulations.

However, many ships are being detained for minor faults. If port-state control is to be successful, it should concentrate more forcefully on substandard vessels, particularly where there is a risk of loss of life or pollution during adverse weather conditions.

Port-state control must be international in concept with the same rules in every region applied equitably. Unilateral control must be avoided at any cost.

Because of recent amendments, port-state control has grown tougher and more far-reaching. Crews of professionally-owned ships will have to tolerate more inspections in port-state regions. In efforts to rid the seas of substandard ships, unfortunately, everyone must suffer until such vessels are destroyed or brought up to accepted international standards.

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BIMCO

Founded in 1905, the Baltic and International Maritime Council (BIMCO) is the world's oldest and largest private international shipping organization. The secretariat is domiciled in Copenhagen, Denmark. BIMCO has members in 108 countries. There are 964 owner-members with 12,028 vessels totaling 375 million dead-weight tons — or 60 percent of the world merchant fleet.

Canada joins European system

By CAPT Barry F. McKay

Canada did not invent the port-state control inspection system, but it is the only country in North America to be a full member of a formal memorandum of understanding. In fact, Canada belongs to two memorandums - one headquartered in Paris (see page 11), the other in Tokyo (see page 20).

Both Canada and the United States were granted observer status within the Paris memorandum after its conception. Canada became a full participating nation in May 1994. The member states agreed to inspect at least 25 percent of all foreign-flagged vessels visiting their ports. Most states have achieved this goal.

Shipping statistics

According to a December 1993 report of the Institute of Shipping Economics and Logistics, 52 percent of the world fleet is more than 15 years old, compared to 16 percent ten years ago.

Lloyds casualty reports indicate that almost 66 percent of shipping casualties occur in 15-year-old vessels. Canada's Transportation Safety Board statistics back this up, demonstrating that among the total commercial vessel losses reported between 1983 and 1992, 68.7 percent were over 15 years of age. They accounted for over 80 percent of the marine casualties resulting in a loss of the vessel during the same ten-year period.

Horror stories

Canadian surveyors have seen life boats frozen into the davits due to lack of use or damage, holes in life boats, life rafts that have rarely if ever been inspected, and serious deficiencies in the type, quantity and efficiency of fire-fighting equipment. These defects are commonplace.

It is the bad ones that command attention. A vessel arrived in Vancouver with a cargo of zinc concentrate from South America. The cargo was to be discharged and the vessel depart, when a Coast Guard inspector uncovered deficiencies, including the whole gamut of defects in life-saving and fire-fighting equipment, officer certification, living conditions and structural soundness. Abandoned by its owners, the vessel was towed to a breaker's yard nearly two years later.

Bulk carrier inspections

Canada initiated a bulk carrier inspection program under its port-state control umbrella in July 1993. Targeted are "single-skinned" carriers, at least ten years old, carrying high-density or corrosive cargo, or with new flag states or classification societies. The program came about due to a steady rise in losses of these ships.

The program was responsible for the detention of 61 vessels in three Canadian ports (Vancouver, Seven Islands and Port Cartier) in 1993. An additional 116 ships were detained through regular inspections.

Under the program, a team of two surveyors is dispatched to perform a structural vessel inspection. Initially, the number one hold, the collision bulk-head, the after most hold and a pair of amidship upper wing tanks are inspected. If no evidence of severe wastage or damage is found, the inspection is ended. However, if there are signs of excessive corrosion, or frame, knee, deep web or transversal damage, then an in-depth inspection will be conducted, which focuses on the peak tanks, double bottoms and all holds. This can take several hours, during which time cargo cannot be loaded.

All efforts are made to minimize vessel delays by coordinating the timing with the ship's agent and performing the inspection when the vessel is at anchor awaiting a berth or immediately upon its arrival before longshoremen board.

One inspection uncovered serious corrosion problems in the hull plating of a vessel, which was detained pending repairs. Subsequently, the owner requested that the ship be permitted to leave port and proceed unmanned under tow to a California port where the necessary repairs would take place.

Permission was granted, and the vessel left, but never arrived in California. Instead, a few months later, it turned up in Cape Town, South Africa, with several feet of hull plating missing on both sides. The extent of damage was staggering. The holes in the hull allowed a person to see right through the ship across the tank top of number one hold. The ship was truly lucky to have completed its voyage. (The owner had placed a crew on board once the vessel was outside Canadian waters and loaded another cargo.)

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The Exxon Valdez spill in Prince William Sound, Alaska, in 1989, focused attention on tank vessels.

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Regional nature

Port-state control systems are now regional in nature, as is the Paris and Tokyo memoranda, and the growing South American system headquartered in Vina del Mar, Chile. Plans are also underway for regimes in the Caribbean, North Africa and the Indian Ocean.

The limited membership of a regional system permits a standardization of inspection procedures and policies, which may not be possible in a global system. Frequent, regular meetings are held, ranging from surveyor training to regional port-state committee sessions.

Regular meetings are essential if a standardized approach to ship inspections is to be maintained across the regions. The system benefits with consistent high-quality surveys, and owners and masters know what to expect when their vessel enters a regional port.

The harmonization of standards and policies throughout the Paris region is possible largely because all participating maritime authorities are at a similar level of development, and have a common outlook on most marine issues. When views diverge, regional cooperation enables cross training and exchanges.

As new memoranda of understanding are developed, conflicting points of view of divergent nations involved may present problems in setting mutually acceptable standards. The Asia-Pacific group of 12 politically and economically diverse countries should be an interesting proving ground for solving problems.

Data base

A computer data base (SIRENAC) is maintained in St. Malo, France, for members of the Paris memorandum. It contains records of all inspected vessels, and tombstone data on many unsurveyed vessels.

Before a field surveyor inspects a vessel, he or she may interrogate the computer system and receive the history of the vessel, including a defect and deficiency report, flag history and detention records within the past six months. Following the inspection, the surveyor will update the data base, which will be available to colleagues throughout the system.

The information in the system is considered proprietary, and is not shared with anyone but the owner, other regulatory bodies and the flag state. As the port-state control system becomes more global, the data in SIRENAC probably will be shared with other regional groups.

Tankers

The notorious oil spills of the *Amoco Cadiz*, *Exxon Valdez* and *Braer* have focused public attention on tank vessels. The tanker industry has cleaned up its act in the past 10 years, but still has a negative image.

A similar program to that dealing with the inspection of certain bulk carriers is being considered for tank vessels. Also, various ports now provide tugs to escort tankers to terminals and target ships for inspection which threaten the environment.

In 1993, Canada issued standards requiring all new oil tankers to be constructed with double hulls and existing tankers to be retrofitted with double hulls or equivalent arrangements, or eventually be retired from service. These standards are based largely on IMO requirements and the Oil Pollution Act of 1990 enacted by the United States.

Conclusion

One positive spin-off of the participation of developing nations in port-state control programs could be improved applications of international conventions by flag states to their own ships. This would reduce the number of substandard vessels throughout the world.

Some nations will, of course, dismiss the positive results of port-state control, maintaining that one can't prove whether a particular ship would have foundered if it hadn't been inspected and forced to perform certain repairs.

However, those of us who have conducted port-state control inspections, and have witnessed the results of neglect and profiteering first hand, feel that such programs are extremely worthwhile. Future casualty and oil spill statistics should bear us out.

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Port-state control works "down under"

By Mr. Trevor Rose

Australia is an island nation with some 36,000 kilometers of coastline to look after. Some is among the most spectacular and environmentally sensitive on earth. Not only is the coastline of environmental value, but it is important from the viewpoint of maritime trade, resource exploitation, tourism and related perspectives.

The country's economy depends heavily on maritime trade, particularly on the export of bulk materials, including oil, gas, grain, coal, iron ore and other minerals. More than 95 percent of all maritime cargoes to and from Australia are carried by foreign-flag ships. The country's shipping in terms of tons per nautical miles is the fifth largest in the world.

The Australian Maritime Safety Authority (AMSA) has implemented a strong port-state control program to ensure that the foreign ships trading in the country's ports do not pose a threat to life, property or the environment. In conducting port-state control, AMSA applies the standards of the international maritime conventions.

Experience has demonstrated that it is not a lack of international standards which has produced substandard ships, but the lack of enforcement of existing standards.

Port-state program

Australia has been conducting port-state control inspections for years. After observing the success of such programs conducted in Europe under the Paris Memorandum of Understanding, Australia established a formally structured port-state control program based on the European model in 1985.

The loss of a significant number of bulk carriers after loading at Australian ports in the late 1980s and early 1990s focused port-state control attention on the structure of bulk carriers. The casualties involved the vessels, *Singa Sea*, *Alexandre P*, *Mineral Diamond* and *Melete*, and resulted in the total loss of 92 lives.

The recent memorandum of understanding between a number of maritime administrations in the Asia-Pacific region (See page 20) will also influence AMSA's activities in this area.

Inspections

AMSA surveyors conduct inspections in accordance with international guidelines published by IMO and ILO. At least 85 percent of all first-visit vessels are targeted for inspection and are categorized into types of eligible ships. (An eligible ship is one which has not been inspected by AMSA during the previous six months - three months for passenger ships.)

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This rotted lifeboat sail was discovered during a recent AMSA inspection.

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Eighty-five percent of all eligible tankers and bulk carriers over 16 years of age, 85 percent of all eligible passenger ships, 50 percent of all eligible tankers and bulk carriers under 16 years of age, 50 percent of all eligible vessels over 10 years of age and 15 percent of all other eligible vessels are targeted for inspection.

However, surveyors are instructed to use their own judgment in determining whether to inspect a ship.

Generally, an AMSA surveyor initially boards a foreign ship to check on its statutory certificates and documentation. The surveyor then conducts a brief inspection of the ship's condition, including its accommodations, engine room, bridge and main deck areas. Crew members are frequently asked to demonstrate emergency equipment such as lifeboats and fire pumps.

The initial inspection enables a surveyor to assess the general condition of the ship and its equipment, along with the ability of the crew to safely operate the vessel. If, during this inspection, the surveyor concludes that the ship could have serious deficiencies, a detailed inspection is carried out.

In addition, the master and owner can be prosecuted under Australian law for taking or allowing a ship to go to sea in an unsafe condition.

Accomplishments

Each year, AMSA publishes a report on its port-state control activities. During 1993, the report cites more than 2,000 ship inspections, accounting for about 40 percent of eligible ships visiting Australian ports. Of these, 72 were detained for critical deficiencies to be corrected before the ships could leave port.

During 1994, 153 ships were detained. This increase is not necessarily a result of AMSA inspecting more ships or a drastic decrease in ship quality. Before 1994, AMSA only detained a ship if critical deficiencies could not be rectified before its scheduled departure time. Now, every ship is formally detained when a deficiency is found that must be corrected before departure, irrespective of the time the ship will be in port.

All details of substandard ships are reported to IMO, the flag state and the classification society.

A deep crack in a ship's hull is a serious deficiency.

The ship's master and, if appropriate, the classification society are informed of detailed inspections and are welcome to accompany the AMSA surveyor. One or a team of two or three surveyors of different disciplines, make a thorough investigation of the ship. (Most of AMSA's surveyors were merchant ship masters or chief engineers.) When conducting inspections, surveyors follow instructions based on IMO resolutions with a ship-inspection report book, which serves as a complete record of each inspection.

If during an inspection, a deficiency is found which must be corrected before sailing, the ship will be formally detained until this is done. The master, flag-state consul and, if appropriate, the classification society are informed of the detention. Also, a report on the ship's condition and defects are sent to the IMO, the flag-state administration and the classification society.

Current developments

Australian port-state control has always ensured that a crew can safely operate their ship. AMSA is now placing more emphasis on crew competence in port-state control inspections.

For example, a ship was detained recently because the radio operator could not send or receive distress signals. The ship was not allowed to sail until the operator was trained and could demonstrate emergency radio equipment operation.

On another occasion, the full crew of a chemical tanker was changed while the ship was at an Australian port. Observations of the new crew during cargo operations revealed that they were not sufficiently familiar with the ship's equipment and machinery to operate it safely. The ship was detained until the crew had learned the basic procedures of safe ship operation.

An important AMSA tool is an on-line computer network connecting all port offices to a data bank of detailed records of all control inspections. Located in Canberra, this data bank is always checked by surveyors before they inspect a ship visiting their ports.

Probably the most significant event affecting AMSA's port-state control program is the establishment of the Asia-Pacific Memorandum of Understanding in April 1994 (See page 20). The memorandum contains standards of conduct for port-state control and provisions for:

- exchanging inspection data,
- notification of ships with deficiencies headed for a member country,
- annual inspection of half of the ships operating in the region,
- training of surveyors in port-state control,
- assisting developing countries in establishing port-state control programs, and
- developing a surveyor's manual to promote uniform inspections.

An international computer network is also being established so that ship inspection details can be shared between country members of the Asia-Pacific memorandum, and eventually with other regions. The central data base for this network is located in Canada.

In 1992, the Australian government's standing committee on transport, communications and infrastructure conducted an investigation into shipping and produced the report, *"Ships of Shame."* One of its recommendations was that AMSA publish monthly results of port-state control inspections. As of January 1, 1995, the following data is published for all ships detained by AMSA during the preceding month:

Published ship data

Name and flag,
IMO number,
classification society,
deadweight and cargo type,
owners and managers,
charterer and charter type
port and date of inspection,
last port-state control inspection,
last special survey,
serious deficiencies, and
action required.

Conclusion

An important AMSA goal is for every ship owner sending vessels to Australian ports to expect to be inspected. At worst, ships in good condition with competent crews will be subjected to the minor inconvenience of having to show AMSA surveyors their statutory certificates and assist in a short ship inspection.

However, if during an initial inspection, the surveyor establishes clear grounds that the ship is not properly maintained and does not substantially comply with international convention standards, the ship will be subjected to an extensive inspection, and could be detained until critical deficiencies are corrected.

The best advice AMSA can give to individuals involved in ship operation in the Australian trade is there is nothing to fear if their ships are properly maintained and their crews are well versed in their duties.

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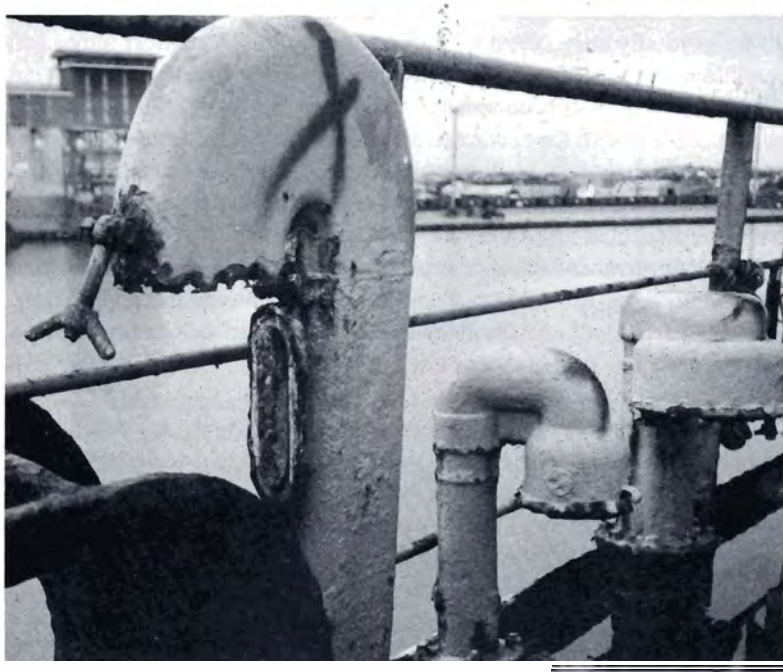
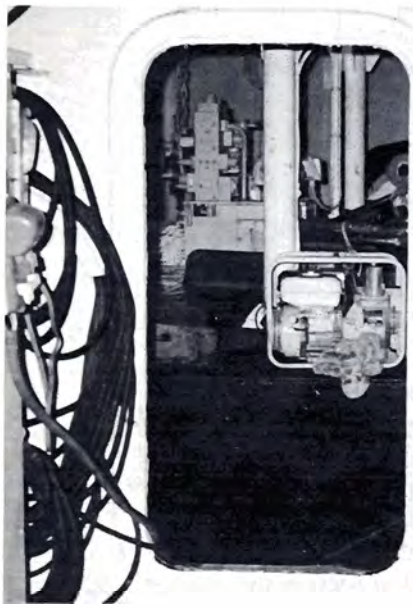
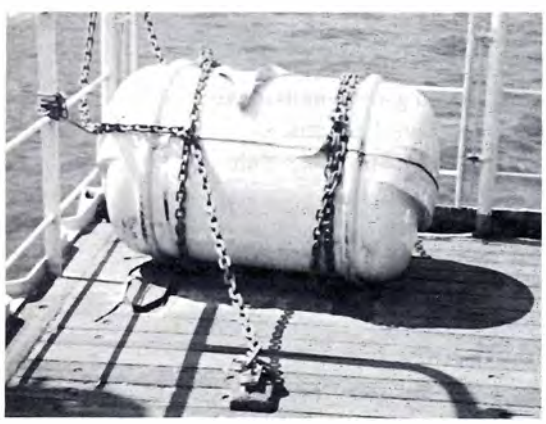


Air pipe defects prevent watertight closure, which could be dangerous.

How Hong Kong conducts inspections



Door is missing between engine and steering rooms.



Liferaft is improperly stowed.

Nozzle and coupling is missing from fire hose box.

By Mr. J. M. McPartland

Background

Before 1989, port-state control inspections in Hong Kong were mainly reactive. Ships were inspected only if complaints about their condition were received from crew members, pilots or other involved parties. In 1989, an active inspection policy was adopted, although the targets thus far have been modest -- some two percent of ships or about 100 vessels visiting Hong Kong per year.

Hong Kong was one of 18 maritime administrations in the Asia-Pacific Region to participate in the1993 memorandum of understanding on port-state control in Tokyo, Japan. Under this memorandum, the target for inspection for all members is at least 50 percent of all visiting ships by the year 2000. Specific targets for each administration will be established, and Hong Kong will likely be asked to inspect up to 20 percent of visiting vessels -- a large increase over the current rate.

Typical inspections

The majority of ships in Hong Kong harbor are moored to buoys or at anchor. Directed to inspect a vessel in a specific area of the harbor, the port-state control officer selects the most neglected looking vessel. Often "clear grounds" to conduct a detailed inspection are established before boarding - i.e., a missing anchor, no loadlines or draught marks, or numerous hull patches.

The officer contacts the master on board and inspects the ship's certificates and log books. If "clear grounds" have not been established, the officer will ask permission to make a brief general inspection. If no obvious deficiencies are found, the inspection will end. However, a detailed inspection is usually necessary.

Masters and officers usually cooperate with the port-state control officers, although sometimes during follow-up inspections when the owner's representative is present, they may be less cooperative. The master or chief mate are usually present during a deck and cargo-hold inspection, while the chief engineer normally attends engine room inspections. The officer may request operational tests, such as a lifeboat lowering or a fire drill.

When an inspection is completed, the officer issues a deficiency list to the master and confers with the section head on shore to determine what repairs are necessary before the vessel is allowed to depart. The vessel's agent, classification society and flag state are notified of the repairs. It is sometimes difficult to identify representatives of classification societies and surveying organizations who are not members of the International Association of Classification Societies. In some cases, the surveyors are not conversant with the regulations which apply to a particular vessel, and their assistance in ensuring compliance is limited. In such cases, port-state control officers provide free consultancy services to the flag state and the owners.

Ships are usually not formally detained in Hong Kong. A clearance to depart is withheld until deficiencies have been satisfactorily corrected and a follow-up inspection is conducted. If it is difficult to repair certain equipment, the port-state control officer may, with the agreement of the flag state, accept temporary substitutions, such as an inflatable liferaft for a damaged lifeboat.

When a vessel sails with deficiencies, the authorities at the next port are notified. If the vessel does not make necessary repairs, it will be inspected on its return to Hong Kong.

Deficiencies

A large proportion of deficiencies involve life-saving and fire-fighting equipment. Lifeboats, launching mechanisms, fire hoses, nozzles and emergency fire pumps are often deficient. Problems with watertight integrity of hatch coamings and covers are also common, especially in smaller vessels.

There are many ships below convention size, which trade in the Southeast Asia region. Many are quite decrepit after years of voyaging in the Inland Sea of Japan, but are purchased for further trading in the South China Sea. They are all too often poorly maintained, ill equipped, lacking adequate stability data and basic amenities for the crew. Managers frequently have limited experience with ship operation, and vessels are registered with flag states and classed by societies that exercise little control over conditions on board.

If safety of life were not an issue, some queries from ship managers regarding deficiency lists would be amusing. In one case, in which a port sidelight was not working, the ship managers requested the port-state control officer to "be more specific, since there are many lights on the port side." They also asked, "what is a fire and boat drill?" and wondered whether "a diamond shape was a device for shaping metals in a lathe for engineering purposes." It is ironic to note that almost all such vessels hold valid certificates, despite their poor condition.

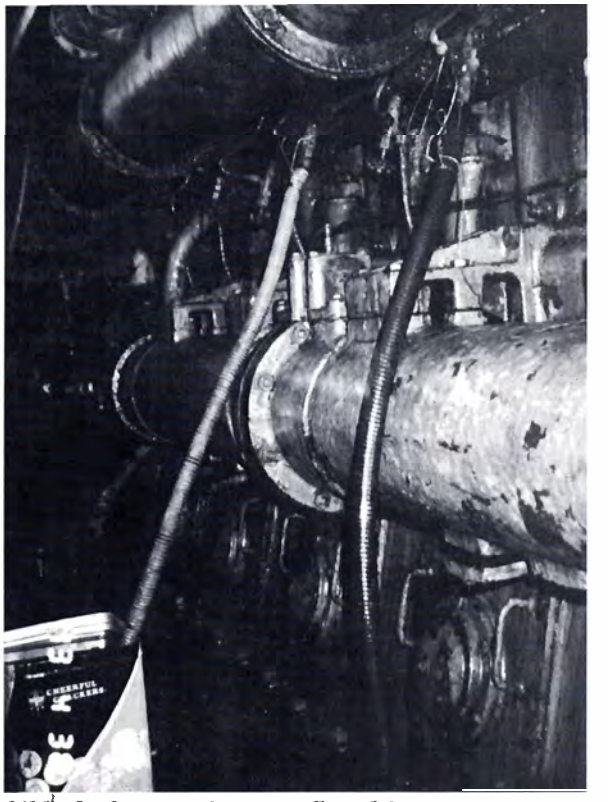
Hong Kong ships

Hong Kong has authorized seven members of the International Association of Classification Societies to conduct statutory surveys on its behalf. However, one safety equipment survey in each five-year period must be conducted by a Marine Department surveyor. This inspection covers the entire ship and normally lasts two days. Hong Kong ships calling at Hong Kong ports are also subject to spot checks by surveyors.

When Hong Kong-registered ships are detained after port-state control inspections in foreign ports, the Marine Department is immediately notified. Each report is followed-up with the vessel owners or managers, and classification society, if it conducted the most recent survey.

The responses of owners and managers clearly reflect different standards of responsibility. Some are satisfied that the vessel has been released and was not unduly delayed, whereas others immediately try to minimize chances of a similar occurrence in the future.

Once the Hong Kong Marine Department is satisfied with the response from the owner or manager, and, if appropriate, the classification society, it submits comments to IMO.



Oil leaks from engines overflow drip can.

Of concern to the Hong Kong Marine Department are ships that enter port for repairs and are detained by port-state authorities citing no deficiencies, other than ones for which repairs have been arranged. It is inevitable that ships will sustain heavy weather damage or machinery problems which cannot be prevented. While port states should ensure such vessels do not sail until they do not endanger crews or the environment, ships with prearranged "normal" repairs should not be reported to the IMO as delinquent detainees.

Conclusion

Port-state control is not the complete solution to the problem of substandard ships. At best, it reinforces the efforts of responsible flag states in monitoring the condition of their vessels, and ensures that all ships meet minimum safety standards.

Recent legal developments have permitted port states to target ships under flag states with poor safety records. The International Safety Management Code effective in 1998 seeks to ensure that ship management standards meet basic criteria.

The next step must be to ensure that flag-state administrations and authorized classification societies meet certain basic criteria concerning their ability and commitment to comply with various conventions.

Photographs accompanying this article are courtesy of the Hong Kong Marine Department.

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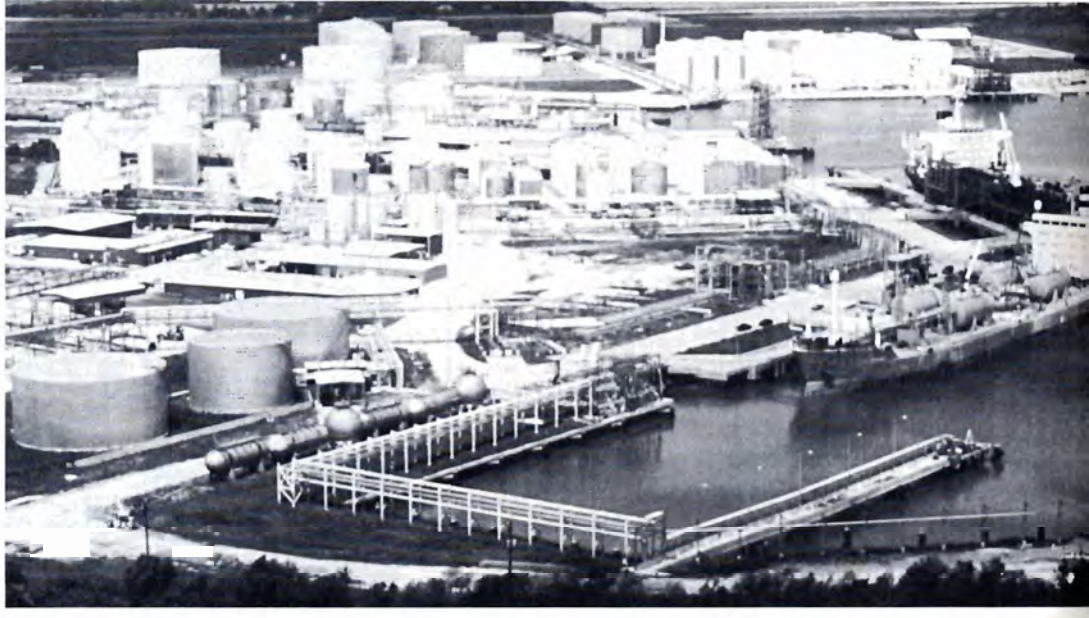

Photograph courtesy of the Port of Houston Authority

Industry must be involved

By Mr. Timothy C. Healey

Rid the sea of substandard ships! Protect the lives of people at sea! Stop the pollution of our seas from ships! These most worthy goals have become the politically correct rallying cries heard along the shores of most port states throughout the world every day.

These same phrases echo through the halls of government in Washington and numerous coastal states. They are a driving force at the IMO. Support is global and broad based — from local or regional citizens' groups to responsible industry leaders.

As is the case with most safety-related laws and regulations, a noteworthy single issue or a series of incidents attract sufficient public attention to trigger a political/legislative response.

In simplified retrospect, it can be said that the *Titanic* brought the International Ice Patrol and the *Morro Castle* gave us fire protection standards. We owe the Port and Tanker Safety Act to the *Argo Merchant* casualty and the *Exxon Valdez* grounding yielded the Oil Pollution act of 1990. The port-state control initiative is the latest chapter in this on-going drama.

The port-state control initiative, however, is not the result of a single incident. It is based on the realization that some substandard ships still sail the seas despite a proliference of regulations, and something must be done about it. Unfortunately, the highly segmented maritime industries cannot get their collective public relations together to tell the real story of how safely and effectively it operates.

When was the last time the six o'clock news featured a tanker at sea without an accident or oil spill? Government authorities have not spread this news either. Therefore, the entire ocean shipping industry image remains tarred and feathered for the sins of a few.

Background

Minimum safety standards have been initiated constantly since the days of the perceptive and responsible Mr. Plimsol. (It is the Plimsol or loadline mark on a hull that, when submerged, indicates overloading.) The first international SOLAS convention in the 1920s reflected government's awareness of the international nature of shipping.

The present conventions (SOLAS, MARPOL, Loadline, STCW and others) are the accepted international minimum standards for maritime safety and pollution prevention. In all of these agreements, responsibility for ships meeting these standards lies primarily with the flag administration. In reality, this responsibility is shared with others.

As more governments became involved with the development of international shipping safety regulations, a steady stream of new rules sprung forth. An occasional eruption of new regulations was also felt, particularly within two years of a well-publicized accident.

Decades of new or revised standards developed in the international community share two characteristics. First, the new rules lagged behind the implementation of new, more stringent standards typically brought into force in the United States for American-flagged ships. Second, like the American regulations on which many IMO standards are based, they focused on technical solutions for perceived weaknesses.

Attention to human components of operating the huge, waterborne machines only recently has been recognized and addressed. When the industry as a whole acknowledged that 80 percent of all accidents were due to human error, only then did efforts began to focus on human factors, ergonomics, training, certification and the like. Hence the Standards for Training, Certification and Watchkeeping was published in the late 1970s, and a revision effort is underway now as part of an enforcement scheme.

Today

The much debated "U.S. flag penalty" of burdensome, excessive regulations was presumed to be yielding a safety benefit. When shipping was good, money was available and added costs could be accommodated. But when rates went down, operating margins suffered and expense reduction became critical.

Maintenance is deferred. Overall conditions, including safety considerations, worsen. New replacement tonnage for older hulls is not ordered. Owners must assume more risks to remain afloat. Planning becomes short-term, as survival instincts are aroused. The erosion of safety is woven deeply into this fabric.

On a global level, the world shipping community has been similarly hit by economic hard times. The results are the same. Safety becomes suspect.

Add to this dismal picture the tragic loss at sea of a bulker with all hands in a North Atlantic winter storm. Or a passenger ferry capsizes within sight of its departure port. Or a tanker or tank barge runs aground, spilling oil on a popular beach.

Doomsday prognosticators quickly surface to espouse the evils of greedy ship owners operating unseaworthy ships from their protected tropical villas. They spout that seamen are untrained and slovenly. Class societies are inept and ineffective. And flag administrations are empty shells that either cannot or will not enforce the standards they agreed to uphold.

Politicians, being alert opportunists, seize the spotlight with moving rhetoric to defend the helpless passenger, the forgotten seafarer and our ocean's ecosystem. Hence, we get more laws; more regulations.

Are more regulations working? Yes and no. Newer ships are probably safer ships. But operators learned long ago that an indirect result of accidents is harm to the company's and the industry's profitability and reputation. These are not welcomed.

But accidents continue to happen. As they do in all transportation modes.

Tomorrow?

So were do we go from here? Borrowing from VADM A.E. "Gene" Henn, we must look at the layers or responsibility. Flag administrations, port-state authorities, classification societies and owners all share in this. Consider the following:

Once dominant flag administrations no longer have large fleets. Open registries have grown in both number and tonnage registered. Traditional flags consider some open registries untrustworthy and unable to perform adequate enforcement on their registered fleets.

A potential dilemma facing the IMO is how to determine a substandard flag administration, identify and penalize them. Given that the IMO's authority comes from its dues-paying member nations, it is unlikely that the secretariat will bite the hand that feeds it.

And what if this misplaced, over generalized confrontation with member countries should result in several flags banning together (as has been done among Northern European nations, Pacific rim countries and Caribbean islands)? As IMO financial support is based on tonnage, should a very small number of nations elect to withhold their assessed dues, the IMO would be in great danger of having to cease operations. It does not appear likely that this approach would be successful.

Classification societies have been targeted for criticism. The largest, most reputable societies have formalized their practices, bolstered the perception of their accountability and generally responded well to this challenge. It is represented by the International Association of Classification Societies secretariat and upgraded member standards.

Owners remain fragmented and divided. Many have come forward and are raising their safety standards through management commitment, quality management procedures and resource expenditures to make it happen. Unfortunately, other owners are hard to identify and, therefore, to be held responsible. This is aggravated by international and corporate law.

This leaves the immediate enforcement burden on port-state authorities. The Coast Guard has shouldered this burden for decades. Occasionally, its efforts at foreign-vessel compliance have been intensified. It happened in the late 1970s, with the Foreign Tanker Boarding Program, for example. The port-state control initiative is merely its latest effort in this arena.

Port-state control

This is not so much a new program, but rather a better managed continuation of the enforcement of existing regulations. And perhaps it is less of an initiative and more of a "me too" response to the Northern European port-state control scheme. That the Coast Guard has embarked on this program is predictable, given its reputation for leadership, involvement and innovation.

If done well, the Coast Guard's port-state control program may succeed in deterring unscrupulous owners from sending their ships to our ports. As the United States is the world's largest trading nation, this could have a significant impact on the world's fleet.

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harm is great. But if done poorly, the chance of economic Pitfalls that could hurt the program include:

careless targeting (was an intervention and detention of another ship of a given owner really conducted, or were repairs made and the alleged discrepancies resolved? Was a proper and timely report of intervention filed with the flag administration and the IMO?);

lack of professionalism or skills by an inspection party (an unescorted inspector repeatedly hammering a weep on an identified, topped off, internal fuel tank resulting in flooding of bilges before temporary repairs or alternative permanent repairs and safeguards were discussed or addressed);

incorrect application of standards (holding an existing ship to a new ship standard); or

overzealous enforcement (declaring a SOLAS intervention due to unseaworthiness, but failing to note the vessel was on blocks, in a drydock for planned repairs; or declaring a SOLAS intervention because dried paint was found on the exterior of a fire hose nozzle, despite the paint having been scraped off by a crew member with his fingernail).

Not all of these examples occurred in the United States, but were reported incidents involving port-state control authorities. The consequences include undue delays to ships involved, wasted human resources and financial costs from delays. Hard to quantify, but also present, are the intangible costs of damaged professional reputations. Longer term results include lost trade and unemployment.

Another potential pitfall is the appearance of unequal treatment between United States- and foreign-flag ships. The United States fleet is old and its loss ratio is actually worse than some open registries, according to the Institute of London Underwriters. Therefore, the Coast Guard cannot ignore the domestic fleet.

What can the Coast Guard do to protect itself from errors such as these? Training, quality management and attention to detail are some considerations. The talented, but limited resources of the Coast Guard could also profit from another readily available source it has relied upon in other areas for years — experts from within the shipping industry.

Advisory committee

A Port-State Control Advisory Committee may be the best vehicle available to help the Coast Guard do what needs to be done. The Marine Safety Program makes successful use of similar committees under the provisions of the Federal Advisory Committee Act. Costs for gaining pertinent expertise and feedback are minimal to the taxpayer.

Owners, operators, charterers, shippers, admiralty lawyers, environmental protection proponents, pilots, cargo interests, financial institutions active in the industry, marine insurers, port administrators and professional mariners could bring valuable insight into making the effort more meaningful and effective.

The open exchange and dialogue of an advisory committee is not available through a public hearing or public rulemaking activity. The result is an unnecessarily restricted opportunity for public and industry involvement on a matter of concern to all.

Conclusion

It is generally accepted that the protection of lives, property and the environment is the goal of the Coast Guard's port-state control initiative. It is imperative that the program be effective. The use of a tried-and-proven technique -- the establishment of a federal advisory committee -- must be considered before the international respect and well-earned professional reputation of the Coast Guard is put under a cloud of doubt.

The industries represented by this program are diverse — and not capable of being represented by a single person or voice. But most of the segments in the industry are ready to establish a dialogue with the Coast Guard, because they share a common goal: to prevent substandard ships from trading.

The Coast Guard should be encouraged to exploit the attributes of this diversity to enrich its understanding of industry operations and gain broader support for its initiative. A number of organizations already exist that could assist this effort, including the Connecticut Maritime Association, among others.

A federal advisory committee is tailor-made to encourage conversation among responsible allies, as well as act as a buffer between potential antagonists. The public being served deserves this opportunity to make a difference.

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Human element enters the picture

By Mr. Jon Whitlow

Port-state control is a very topical subject. Many administrations or regional port-state control organizations are considering publishing information on ships subject to detention. The IMO is codifying port-state control resolutions.

The 18th IMO assembly adopted resolution A.742(18) (Procedures for the Control of Operational Requirements Related to the Safety of Ships and Pollution Prevention), which provides for the exercise of operational port-state control. The resolution was also incorporated into the Safety of Life at Sea (SOLAS) Convention, effective July 1, 1996.

The International Labour Organization (ILO) is scheduled to discuss the issue, and the European Union is adopting a port-state control directive.

The International Transport Workers' Federation (ITF) fully supports these initiatives. However, the ITF believes that the rationale for port-state control should be examined to determine its objectives and if it will adequately attain them, if pursued in isolation.

Ineffective flag-state control

ITF seafarer affiliates generally accept that existing international safety standards provide an adequate foundation for national legislation, and that the main problem is a lack of application and enforcement. Many flag states are unable and unwilling to secure and maintain adequate control of safety and environmental protection standards of their flag vessels.

A Shell International Marine study of oil industry standards in May 1992 concluded:

"The study sought to identify why industry standards are causing concern, and how standards might be improved. It found that the depressed shipping market of the 1980s has led to fundamental changes in the structure of the industry. The dominance of owners and charterers with long-term objectives is being replaced by a survival ethos which has led most owners to cut manning and maintenance costs to the bone, and some owners to play one classification society against another, and to exploit the lack of commitment/resources of the administration of many open registries (flags of convenience).

"With ship owner influence domineering classification societies, and protection and indemnity clubs (P+I clubs), and the potential power of underwriters and national administrations neutralized by competition, the less scrupulous ship owner of today is able to pick and choose to the extent that traditional industry standards are no longer effectively enforced."

A 1993 ITF document entitled, *"European Commission draft paper on a Common Policy of Safe Seas — A European Seafarers' Response,"* concluded:

"The trade unions suggest that the proposals amount to little more than treating the symptoms and, as such, fail to address the causes. This paper has sought to show that the principal cause for the overwhelming majority of the problems . . . is the existence of flags of convenience. Therefore, the real issue must be how to combat the social dumping and competitive distortion which is the 'raison d'etre' for flags of convenience. The European seafarer affiliates of the ITF believe that it is only through the closure of flags of convenience registries that these problems can be addressed and that 'level playing fields' will be reestablished. The European Commission could, to this end, make a significant contribution by prohibiting flags of convenience vessels from calling at European ports."

Flags of convenience

The maritime industry is international and, for the most part, deregulated. The problems can therefore only be addressed on a global basis. The growth of flags of convenience is due to the international nature of the industry and a desire by ship owners to gain short-term competitive advantages.

Flags of convenience enable ship owners to minimize operational costs by tax and trade union avoidance, recruitment of foreign low-wage seafarers, non-payment of social security contributions and the avoidance of safety and environmental requirements.

The ITF believes that flags of convenience have produced dire consequences in the industry, including too low freight rates; cheap, under-qualified crews, substandard ship maintenance, ships that are too old and ship owners unable to invest in newer vessels.

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Port-state control is no substitute for effective flag-state control, and, on its own, is unlikely to eliminate substandard ships. Effective port-state control, however, may prevent some needless loss of life and may reduce marine environmental pollution.

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The ITF has conducted a 40-year campaign against flags of convenience with two objectives:

1- to establish by international governmental agreement a genuine link between the flag a ship flies and the nationality or domicile of its owners, eliminating the flag of convenience system; and
2- to ensure that seafarers serving on flag of convenience vessels, regardless of nationality, are protected from exploitation by ship owners.

The ITF strongly welcomes the intervention of the secretary general of the IMO, who stated in his 1994 World Maritime Day address that:

"We in IMO believe that the shipping community can no longer accept what in effect amounts to a double standard in implementing safety and anti-pollution measures. We believe that any country or company which wishes to operate in international shipping must obey the rules which this organization has developed over the past three decades. If it is not prepared to do so then it should be prohibited from competing with those who are."

Port-state control results

Despite the fact that port-state control is spreading throughout the world, it is generally only effective in developed countries. Reports from national administrations and their regional port-state control organizations indicate that safety standards are falling.

Recently published United Kingdom figures indicate that 70 percent of all foreign ships subject to port-state control inspections (25 percent of all ships are supposed to be inspected) had deficiencies. Also, there were five times as many vessels being detained than there were five years ago. Also, 1993 German figures reveal that 75 percent of all vessels inspected were defective, with 53.9 percent having severe deficiencies.

1993 reports from the secretariat of the Paris Memorandum of Understanding on Port-State Control (PMOU) and the Australian Maritime Safety Agency (AMSA) reveal that the overwhelming number of detected deficiencies relate to technical matters amounting to failure to conform to IMO requirements

MAIN CATEGORIES

	PMOU	AMSA
Live saving appliances	**24.30%**	**27.97%**
Fire fighting appliances	**16.77%**	**21.68%**
Safety in general	**12.85%**	**12.79%**
Navigational equipment	**11.59%**	**6.65%**
Ship's certificates	**5.23%**	**1.06%**
MARPOL	**4.65%**	**1.52%**
Food and accommodation		**7.75%**

However, it is widely accepted that 80% of all maritime casualties are human-factor related. Therefore, it can be stated that port-state control as currently conducted fails to address the most pressing problems. A ship which fully complies with all IMO conventions will still be substandard and constitute a threat to safety of life at sea and to the marine environment if human element considerations are not also fully addressed.

Human element

Not enough attention is paid to the reasons behind the fact that 80 percent of maritime casualties are due to human error. All too often, the underlying cause of the error can be traced back to poor design, lack of coherent training and bad employment policies. The problems are most likely related to:

* questionable crew competency,
* certification problems,
* fatigue,
* lack of common language,
* casual employment,
* discrimination, and
* abuse of crew members.

After the *Kirki* , a Greek-registered oil tanker loaded with approximately 82,660 tons of crude oil, lost its bow off the Australian coast in July 1991, and following a number of bulk carrier losses, the Australian Federal Parliamentary Inquiry produced a report entitled, *"Ships of Shame."* The preface stated:

"At the onset of the inquiry, committee members were generally aware that there were problems associated with some ships calling at Australian ports. They were not prepared for the sickening state of affairs associated with the operation of substandard ships that was revealed as the inquiry proceeded. The committee was told of:

* *the operation of unseaworthy ships;*
* *the use of poorly trained crews, crews with false qualification papers, or crews unable to communicate with each other or Australian pilots;*
* *ships carrying false information;*
* *classification societies providing inaccurate information on certificates;*
* *flag states failing to carry out their responsibilities under international conventions;*
* *careless commercial practices by insurers;*
* *inadequate, deficient and poorly maintained safety and rescue equipment;*
* *classification societies classing ships rejected by more reputable societies;*
* *beating of sailors by ships' officers;*
* *sexual abuse of young sailors;*
* *crews starved of food;*

* *crew members forced to sign dummy paybooks indicating they had been paid more than they actually received;*
* *sailors forced to work long overtime hours without pay;*
* *crew members denied telephone contact with home when family members have died;*
* *sailors not paid for several months and/or remittances not being made to their families;*
* *sailors denied medical attention;*
* *officers regarding crew members as dispensable; and*
* *crews denied toilet and laundry materials."*

The preface listed the following beneficiaries:

* *"flag states who accept ship registration fees and pay "lip service" to their international maritime obligations;*
* *classification societies that readily accept changes in class of vessels already rejected by reputable classification societies;*
* *classification societies that issue certificates not in accord with true vessel conditions;*
* *ship owners, operators and managers;*
* *crewing and training agencies; and*
* *charterers, exporters and importers."*

The employment of multinational crews has generated all too frequent examples of discrimination and racial abuse. In addition, crew members are often denied the right to freedom of association. Seafarers from developing countries are intimidated from joining bona fide trade unions and from complaining to sympathetic unions in ports of call. They are warned that if they contact an ITF affiliate, they will be blacklisted and prevented from pursuing a career at sea.

It is unfortunately the case that the modus operandi of the industry often stifles crew complaints, even when they concern the safety of the vessel. Some ship owners require crews to sign loyalty or indemnity letters, and warn them that if they cause problems, they will be sacked and blacklisted. They may also have to pay the costs of their replacements on the vessel.

The ITF is also aware that a number of states which feature prominently in Amnesty International's documentation of the systematic abuse of human rights collude with owners and take punitive measures against seafarers who make trouble, including claiming their legal entitlements or complaining about unsafe vessels.

Fatigue factor

Identified as contributing to maritime accidents, the fatigue factor was examined by a joint ILO/IMO group of experts. Their findings were reflected in IMO assembly resolution A. 772(18) on fatigue factors in manning and safety.

The ITF has evidence that fatigue is prevalent when long overtime periods are the norm. The long periods of service, typically one year, without relief contributes further to fatigue. Furthermore, the reductions in manning levels of newer vessels, which are justified due to technological developments, have been extended to older vessels, many operating with smaller crews than they were designed for.

A survey conducted by the United Kingdom's officers' union found that some 77 percent of officers considered fatigue to have worsened in the past three to ten years. This finding agrees with the 74 percent who reported an increase of working hours in that period. Some reported upwards of 85-hour weeks and frequent unbroken periods of up to 20 hours. Also, 85 percent said stress levels had increased in the same period.

A 1993 report by the Japanese Maritime Research Institute suggests that 53 percent of grounding and stranding casualties, and about 38 percent of collisions are attributable to "less alert lookouts" and "dozing off during navigation."

Despite these and other fatigue studies, no international instrument which regulates work hours or provides for minimum mandatory rest periods has yet been ratified by enough governments to enter into force. Therefore, port-state control officers cannot deal with fatigue-related problems.

There are other human element aspects are given insufficient attention by administrations, and, therefore, not enforced by port-state control officers, even when they have direct bearing on safety of life at sea and environmental protection.

Labor standards

ILO convention #147, Merchant Shipping (Minimum Standards) was adopted in 1976, and entered into force in 1981. It prescribes minimum standards concerning safety, social security, employment conditions and living arrangements to be followed in merchant ships registered under any flag by reference to ILO conventions listed in the #147 appendix. These conventions cover minimum age, medical examinations, officers' competency standards, food and catering on board ship, crew accommodations, prevention of occupational accidents, sickness or injury benefits and repatriation. The appendix also refers to conventions on freedom of association, and protection of the right to organize and collective bargaining.

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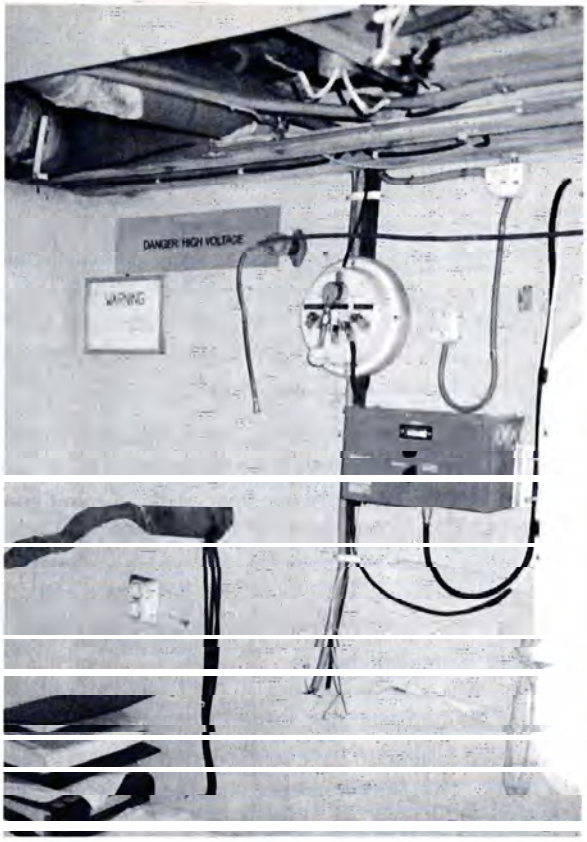

Exposed electrical wires hanging around indicate a total disregard for safety and health.

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ILO convention #147 obliges ratifying flag states to exercise effective jurisdiction over their ships regarding:

* *safety standards, including competency, work hours and manning;*
* *social security measures;*
* *shipboard employment conditions and living arrangements;*
* *the engagement of seafarers; and*
* *the establishment of procedures for the investigation of complaints.*

ILO 147 also enables a ratifying port state to inspect foreign ships at its ports, regardless whether the flag state ratified the convention. The port state can take action, including detention, to rectify conditions on board which are clearly hazardous to safety and health. A recent ILO booklet provides procedural guidelines.

Port-state control officers often do not fully implement the provisions of ILO 147.

ILO 147 Deficiencies

	1991	1992	1993
Accommodation	502	545	828
Food/catering	206	236	381
Working spaces	140	124	240
Total	848	905	1,449

Recent developments

A number of administrations, including the United States and Canadian Coast Guards, and the Australian and United Kingdom maritime safety agencies, have recently published information identifying vessels, flag states, companies and classification societies which have not complied with international minimum requirements, with resulting detentions. The culture of secrecy endemic in the shipping industry allows the substandard operator to compete unfairly with responsible operators.

Following the chartered oil carriers, *Aegean Sea* and *Braer*, grounding and breaking up in the early 1990s, a confidential British Petroleum memo was published in the media. It revealed that British Petroleum had surveyed 3,206 tankers owned by charter firms, and rejected 986 of them as "unacceptable."

Surveys are conducted routinely by classification societies, P+I clubs, port states and some charterers. However, their results are confidential and allow substandard operators to carry on freely. Classification societies and P+I clubs rarely take punitive action against a vessel. When they do, there is prima facie grounds for believing the vessel is substantially substandard and probably not seaworthy.

IMO database

The establishment of an IMO International Ship Information Database is being discussed. Once set up, the information should be freely available to all interested parties: flag states whose reputations may suffer by such vessels flying their flags; port states whose coasts may be polluted by vessels coming to grief within their Exclusive Economic Zones, and whose citizens may have to risk their lives on search and rescue missions; trade union members who are needlessly risked; and charterers who would deal with other vessels if they knew about substandard vessels.

It is unfortunate that classification societies, P+I clubs and some charterers have not agreed to share information on vessel deficiencies with the world shipping community. They should be obliged to provide such information to save lives and prevent pollution.

While the International Association of Classification Societies has recently begun to communicate information on declassed vessels to port-state control agencies, it really does not go far enough. Seafarers whose lives may be at risk should have a right to all safety-related data on a vessel before they agree to sail on it. Unfortunately, this is not always the case.

While there are some encouraging signs, the unacceptably high loss of life on bulk carriers continues with more than 130 seafarers having lost their lives on such vessels in 1994. Also, a 1993 port-state control report by the Australian Maritime Safety Agency reveals that from 50 to 100 percent of bulk carriers inspected in various Australian ports had deficiencies.

Short-term direction

The failure to enforce ILO instruments through ILO 147 to the degree that IMO convention requirements are enforced needs to be addressed. The IMO and ILO aspects of port-state control must be unified, which could perhaps be best accomplished by a joint committee with a wider inclusion of seafarers and their representative organizations within port-state control and related agencies.

Long-term directions

Given that some administrations, particularly those that operate flags of convenience, are unwilling and unable to shoulder their international responsibilities, some mechanism should be established to prevent them from operating ships internationally. One solution could be to reexamine the United Nations Convention of Conditions for Registration of Ships, which has not entered into force, with a view to provide a genuine link between the flag a vessel flies and the country where it is beneficially owned.

While the performance of many genuine flag administrations is a matter of concern, they are often willing to raise their standards with technical assistance.

Conclusion

Given that port-state control is no substitute for flag-state control, and that after the repeated failure of some administrations to meet their international obligations, it is time to initiate some form of international control backed up by sanctions.

It is also clear that while effective port-state control may lead to worthwhile accomplishments, including identifying flag states that consistently fail to maintain internationally agreed minimum standards, it will not cancel out those flag states nor get rid of sub-standard vessels. At best, it will export the problem to other areas of the world where countries are unable to undertake comparable levels port-state control.

The international community must take decisive action to purge sensitivities accompanying the concept of flag-state sovereignty. In other words, they must ensure that any country or company wishing to operate in international shipping must obey the rules which IMO and ILO have established over the past decades. If they do not do so, they should be prohibited from competing with those who do.

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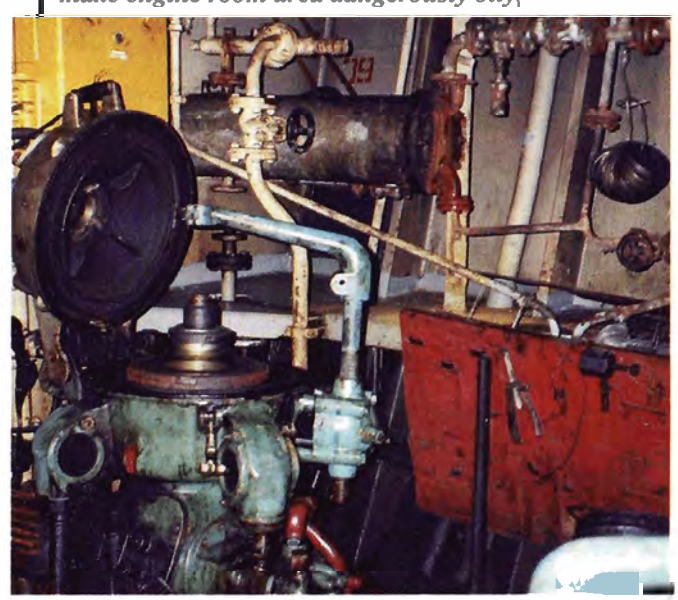
Human factors played a role in these defects.

Left: Boat deck lamp wire hole is wrapped in tape.

Right: Air pipe needs repair.

Below: Engine room pipe is replaced with rubber hose.

Below: Leaks in steam and oil heaters make engine room area dangerously oily.



Japan society takes firm stand against substandard ships

By Mr. Tsukasa Kamata

The Japanese classification society Nippon Kaiji Kyokai (ClassNK) welcomes the internationally-operated port-state control system as an effective means of eliminating substandard ships.

Using a computer data base for efficiency, the Coast Guard's targeting of owners, flag states and classification societies contributes greatly to minimizing substandard ships. Signatories to the Paris Memorandum of Understanding on Port-State Control are also scheduled to introduce a targeting system, which would support classification surveys aimed at preserving the safety of ships at sea.

Economy of substandard ships

Substandard ships are an unfortunate but undeniable reality. It is easy to criticize owners for poor maintenance and classification societies for improper surveys. However, there are critical factors underlying these problems.

1- Ship owners need to minimize operating costs in the face of severe international competition. Usually, the first cost cuttings are in crew wages and preventive maintenance. With many ships, safety and environmental protection are often sacrificed through such cost-cutting, yet there are still markets for substandard, cheap ships.

2- Diversification of operations and new complex equipment and operating manuals necessitate increasingly high levels of knowledge and skill among crew members. This is prevented, however, by using cheap labor.

If only a minority of owners operate substandard ships just for profit, rectification should not be difficult. However, it is a reality that the vast majority of owners face the same economic challenges. The ClassNK society, therefore, feels that more time and energy are needed to eliminate substandard ships.

Elimination

More stringent port-state control operations, class surveys and flag state inspections, supported by increased mutual cooperation in these areas, are essential to eliminate substandard ships. In view of the economic challenges facing owners, however, tougher inspections by themselves are not enough. In ClassNK's view, we must create an environment where ship owners, shippers and charterers are prevented outright from using substandard ships.

ClassNK believes we must establish a system of international competition, whereby owners can operate ships spending affordable costs for safety and environmental protection. Owners, flag and port states, classification societies, shippers, underwriters and all other maritime organizations must cooperate closely with each other to accomplish this goal. Creating scapegoats cannot solve this problem.

The recent consolidation of the port-state control system and increasingly stringent inspections by classification societies will make significant strides in eliminating substandard ships. For this to happen, port states and classification societies must establish more open lines of communication.

ClassNK surveyors carefully check fire hoses and immersion suits.

Lifeboats are subject to thorough equipment checks and swing-out tests.

Classification societies

Classification societies play very important roles in ensuring the safety of ships and the protection of the environment. Class surveys are a matter of concern, however, for the maritime community.

For many years, these societies have examined ship design, and carried out class surveys during and after construction. The surveys are conducted according to the society rules which have been established partly on the basis of extensive technical expertise and partly through ship safety engineering research.

Authorized by a ship's flag state, the relevant classification society conducts statutory surveys for international conventions, including SOLAS, MARPOL and load line, and issues statutory certificates.

The International Association of Classification Societies, which includes major societies around the world, strives to make surveys and regulations more stringent. For example, the association introduced unified rules on July 1,1993, requiring stricter surveys on oil tankers and bulk carriers. This was in response to catastrophic casualties involving these types of ships.

The benefits of enhanced class surveys should gradually become apparent. However, even if the results of periodic surveys are satisfactory, proper ship maintenance between surveys is necessary to keep ships in good condition. Ship safety and environmental protection can be optimized by thorough, appropriate, periodical classification surveys, and by unscheduled port-state control inspections to ascertain ship maintenance conditions between the classification surveys.

A ship is a large structural assembly with complex machinery systems. Thorough inspections conducted in the time available depend on the skills of knowledgeable and experienced surveyors. They must make impartial judgments about deficiencies after determining their nature, extent, developmental possibilities and probable effects on ships safety.

ClassNK is among major classification societies which take pride in specialized groups of engineers involved with ship safety and the environment. They are determined to further eliminate substandard ships, partly through consolidating survey systems and organizations, and partly through surveyor training.

Deficiencies

According to ClassNK records, life-saving and fire-fighting equipment account for about 70 percent of deficiencies identified in port-state control inspections. The majority of these deficiencies stem from poor maintenance.

On-board weekly and monthly inspections, abandon-ship station and fire station drills. according to regulations 18 and 19 of chapter III of SOLAS 74 (83 amendments). would prevent most of these deficiencies.

Stressing the importance of proper maintenance, ClassNK distributes a check list, *"Good Maintenance on Board Ships,"* to owners of ships it classifies.

Some ships are still detained by port states. When notified of a detention, ClassNK's headquarter staff reviews survey records of the ship, determines the cause and nature of the deficiencies - whether due to poor maintenance, involving the classification societies, or to a misunderstanding or different interpretation by port-state officers. After reviewing the results of the port-state investigation, the society takes action, i.e., sending a warning to the ship owner, reeducating its surveyors or expressing opinions to port-state officers.

Greater care is required by port-state officers conducting inspections. Corrective actions have been ordered that are not specified in conventions. Deficiencies have been identified through misunderstandings. Judgments have been based on superficial evidence.

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ClassNK surveyors scrutinize everything concerning safety on board merchant ships from engine room shut-down valves, and fire hoses and pumps, to bilge hopper tanks and cargo holds.

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Port states must realize the enormous impact made by exposing names of targeted owners, flag states and classification societies. An identification as a port-state offender produces social and economic ramifications. It is necessary, therefore, to carefully employ statistical methods to avoid accidental conclusions. In publicizing such lists, due care must be exercised not to mislead the readers.

Also, deficiencies related to hull structure and engine plant require special technical assessment. ClassNK welcomes pertinent inquiries from port-state officers and is willing to cooperate with them.

Conclusion

For port-state control to be more practical and effective, all involved parties must fully understand their rules and fulfill their responsibilities. Toward these ends, ClassNK concludes:

1- **owners must practice proper control and preventive maintenance of their ships, and ensure their crews are properly trained;**

2- **classification societies must continue improving their survey systems, taking into consideration the current social environment. Also, their surveyors must be properly trained;**

3- **port-state control must further improve systems in officer training, handling of statistics and publishing of targeted ships; and**

4- **maritime bodies must cooperate responsibly to create an atmosphere accounting for safety and environmental protection costs.**

Photographs accompanying this article are courtesy of ClassNK.

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A tanker is inspected by Netherlands port-state control surveyers in Rotterdam.

Oil industry views port-state control

By Mr. Ed Ball

Introduction

The Oil Companies International Marine Forum is a voluntary association of oil companies interested in the safe marine transportation and delivery of crude oil and its products, including gas and petrochemicals. Its prime concern is for the safe conduct of tanker and terminal operations, and pollution prevention.

The forum provides a platform for its members to present their views to intergovernmental bodies, governments and industry organizations. Established with 18 members in 1970 out of increasing concern for the marine environment, the forum now has 38 member companies and international groups. It is regarded as a leading authority on the safe operation of marine transportation and terminals for oil and related products.

The Oil Companies International Marine Forum has published numerous guidelines and recommendations for ship and terminal design, operation, maintenance and inspection to improve safety and environmental protection. Many members operate large fleets and have first-hand experience with tanker inspection.

The infrequent, but highly publicized incidence of tanker accidents in recent years has heightened public awareness of potential pollution risks associated with the marine transportation of petroleum. However, it should be recognized that more than 99.9 percent of all oil carried aboard ships is transported to its destination without incident.

Tanker industry

Today's tanker industry is basically international and consists of more than 3,000 ocean-going oil tankers which trade between many nations, often servicing different charterers on successive voyages. The industry is fragmented with more than 2,000 owners whose ships are run by more than 600 operators.

Many within the industry and many states involved in shipping have recognized the need for higher standards. For example, the IMO has developed major initiatives, port states have introduced extensive tanker inspection programs, and major oil companies have designed sophisticated tanker inspection and vetting systems.

Additional support aimed at improving tanker quality has been initiated by responsible ship owners, classification societies and insurers. As a result, tanker operations are considerably safer today than they were five years ago, and the incidence of major tanker casualties has been significantly reduced.

It is essential, however, that the industry continue its efforts to improve ship safety to ensure the protection of its crews and the environment.

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Inspections

Tankers are inspected by their owners, operators, flag and port states, classification societies, potential charterers, hull insurers, municipal or harbor authorities and others. The list is growing as more parties concerned with tanker safety lose confidence in owners, flag states and classification societies. This increased inspection activity can be a significant distraction to crews and disruptive to operations.

Tanker inspections fall in three categories:

1- Statutory inspections conducted by the flag state as a condition of registry. These inspections are intended to ensure compliance with flag state and international laws and regulations. Lack of confidence in the performance of some flag states has encouraged port states and others to conduct their own inspections.

2- Structural and other surveys conducted by classification societies. Meaningful structural surveys require extensive planning and are expensive. Tanks have to be empty, clean, gas free and effectively illuminated with safe access. A lack of confidence in some societies has caused hull insurers and others to perform their own inspections.

3- Operational inspections are conducted by ship owners to ensure compliance by ship staff with company maintenance and operating policies and standards. Some owners have delegated this responsibility to managers. A lack of confidence in managerial abilities of some owners and managers has encouraged port states and others to conduct their own operational inspections.

The countries which register ships and provide their nationality are called flag states. They are responsible for ensuring that all ships in their register are properly manned and maintained, that they are operated safely and fully comply with applicable international conventions. Many flag states lack the resources and/or expertise to fulfill these obligations, and, therefore, delegate inspection and survey responsibilities to classification societies or other organizations. This is permitted under international conventions, although the responsibilities remain with the flag state.

Some flag states do not discharge their responsibilities properly. They do not provide the necessary administrative resources to fulfill their obligations. Nevertheless, some high quality ships may be on the registers of these flag states due to the high standards of their owners. However, other ships under these flag states may be poor quality.

The Oil Companies International Marine Forum believes that all flag states should ratify relevant international conventions and strictly fulfill the responsibilities required.

Necessity of port-state control

Although flag and port states, classification societies and others play important roles in trying to ensure tanker safety, the primary responsibility for safe tanker operation rests with the ship owner.

The tanker owner is free to select the registry and classification society for his or her ship. The owner is responsible for establishing a ship management organization, hiring and training a crew, and developing, issuing and enforcing procedures designed to ensure safe operation and maximum protection of the environment. Tanker owners are also responsible for ensuring their ships and operations comply with all applicable laws and regulations.

The majority of tanker owners work diligently to meet these obligations responsibly. There are some, however, who may try to avoid them.

Port states are authorized to inspect certificates of ships of other flags in their jurisdictions by the SOLAS convention, MARPOL 73/78 conventions and the Standards of Training, Certification and Watchkeeping Convention. Port states can make significant improvements in marine safety by detaining ships with invalid certificates or serious deficiencies, and by reporting deficiencies to the flag states.

Port states should focus inspection activities on ships not recently inspected by others and those that are suspected of being unsafe. Flag state performance should also be an inspection criteria. Port states can apply pressure directly to lax flag states by intensifying the inspection of vessels in their registries.

Port states should use their legal authority to detain ships with serious deficiencies and to identify them publicly. Targeting by port state authorities of flag states, owners, ships and classification societies with well known deficiencies is completely justified.

Broadening port-state control

Port-state control is well established in Europe, North America, Japan and Australia. Through participation in the Latin American Agreement of 1992 and the Asia-Pacific Memorandum of Understanding, other countries are developing similar procedures. In the past, port-state inspections have concentrated on vessel documentation and certification. Recent IMO action has broadened the scope of inspections to include operational matters where appropriate.

Countries experienced in port-state control administration should assist other nations which are attempting to establish their own port-state control programs and procedures of inspections to achieve uniform, high standards. The IMO Subcommittee on Flag State Implementation should facilitate the transfer of experience from countries which have been managing port-state control systems for many years to other IMO-member states.

Port states should employ trained inspectors knowledgeable in tanker operations and procedures to generate meaningful inspection reports.

Port states should also make their inspection reports on individual ships readily accessible. The beneficial impact of port-state control would be greatly enhanced if each state's ship inspection reports were made available to other states and appropriate interested parties. This should be done immediately.

Long-term computer-based information systems would improve the transfer of data. Here the Oil Companies International Forum can assist. In November 1994, the forum completed the first operating year of its Ship Inspection Report Program which provides data base storage and retrieval facilities for tanker inspection reports submitted by its members. The forum is willing to share the technology of this system with flag and port states.

Conclusion

It must be stressed that the majority of tankers operating today are well established and competently managed, fully meeting all necessary requirements for safe operation. This emphasizes the urgency of addressing the small number of substandard ships that still trade, harming the image of the tanker industry.

Unless these ships are publicly identified and forced to operate in an acceptable manner, the industry will not achieve its goals for safety and environmental protection. It is up to all parties responsible for crew and ship safety that those goals be achieved sooner rather than later. Port-state control is an essential element in this endeavor.

Netherlands port-state control inspection continues.

Photographs accompanying this article are courtesy of Shell International Shipping Limited.

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American ship owners view port-state control

A well-built and maintained ship which is competently manned provides a benchmark for port-state inspection

By Mr. Michael T. Bohlman

Sea-Land Service, a large containership operator with 55 vessels and 36 charter vessels calling at 120 ports in 80 countries, is firmly committed to the safe, reliable and profitable operation of liner services. We feel our views represent those of the majority of ship operators. Fire, capsizing, grounding and foundering do not differentiate between flags of registry when they strike. It is only the ship, crew and the standard of its operation that make the difference.

Age should not be the only criterion in determining seaworthiness. This vessel traded on the Baltic Sea for 61 years when this photograph was taken in 1959.

Need for port-state control

Port-state control has been with us one way or another for a long time, and many of its responsibilities should continue for years to come. The protection of environmentally sensitive areas is one example, as is vessel-traffic control systems, such as those in certain United States ports, the English Channel, the Strait of Gibraltar and other traffic-sensitive areas of the world. (The protection of unclaimed areas outside of territorial waters, such as Antarctica and the open sea itself, is, in our view, still not adequately addressed.)

However, the broad application of port-state control to vessel inspection is new. Exceptions include the Coast Guard's letter of compliance program for foreign-flagged liquefied gas carriers, which has been in effect for many years.

The opportunity to make meaningful improvements to ship operation is here. Port-state control, properly managed in concert with traditional ways of regulating ship operation can achieve this.

Coast Guard dedication

The maritime industry applauds the United States Coast Guard's longtime dedication to improving marine safety. Its commitment to a safe environment for American ships, crews and passengers stems largely from the Congressional initiative following the *Morro Castle* and *Mohawk* disasters in the early 1930s. Years later, the fruits of the Coast Guard's labors, broadened to include the task of environmental protection, is mirrored in the adoption of many of its rules by other flag states. The task is far from complete, however, and to some extent, is a two-way street requiring the same interest and dedication by ship owners and regulators.

Level playing field

It has become politically fashionable to refer to a "level playing field" in speaking of competitive advantages and disadvantages on an international scale. We have heard this term repeatedly in trade talks among nations, but nowhere is it more germane than in maritime transport, where the commercial environment can be threatened by political issues, such as subsidies, cargo preference rules and cabotage (coastal trade).

Safety concerns are an integral part of the uneven ship-operating world. All too often, vessel casualties result in loss of life or pollution of the sea and shore. Tankers and bulk carriers are found most often in casualty reports for two major reasons: these ships constitute a majority of maritime traffic, and, more important, the nature of some speculative trades leads to questionable operational standards. Many casualties could have been prevented or minimized had uniform standards for vessel condition, manning and classification requirements been maintained.

The dilemma facing the maritime world is to define standards that are tight enough to make compliance a formula for success, but not so rigid as to make ship operation any more difficult than it is. We have struggled over this issue for more than 200 years of maritime regulations.

It is ironic that topographically, the oceans constitute the world's most level playing field. It is unfortunate that we cannot apply some of this attribute to operations.

Air transport analogy

An interesting, if imperfect, analogy to port-state control may be found in the air transport industry. Within the United States, a great many participants operate essentially the same equipment with essentially the same manning scale and safety standards. The success and profits of individual air transport companies is linked to a wide range of non-safety related aspects of their business, including advertising, access to markets, aggressive pricing and customer perks.

Our concerns, however, relate to international competition. Throughout much of the world, the same equipment and manning scales are present, but operating standards often differ.

In terms of international traffic to the United States, foreign-flag air carriers must maintain strict operational standards and comply with air-traffic control system requirements. Certain national carriers with questionable operational standards are also discouraged, if not prohibited, from flying in United States air space by the federal government. It is an excellent example of workable port-state control.

The analogy is imperfect due to the fact that even in this well-regulated case. the playing field is not strictly level because of a long continued practice of paying heavy subsidies to certain foreign carriers for reasons of national prestige and visibility.

Flag-state control

Nearly all traditional maritime nations, such as the United States, maintain meaningful control over the operational standards of their merchant ships, providing the assurance that cargoes will arrive safely, intact and on time. However, a small number of states with little or no maritime heritage, offer inexpensive registration of vessels in so-called open registries with minimal interference from the flag state after registration fees are paid. Some of these registries, referred to as "flags of convenience" or "flags of shame," exist only to enrich state treasuries. Their ships may rarely call at a home port - if at all - and if the nation has a port.

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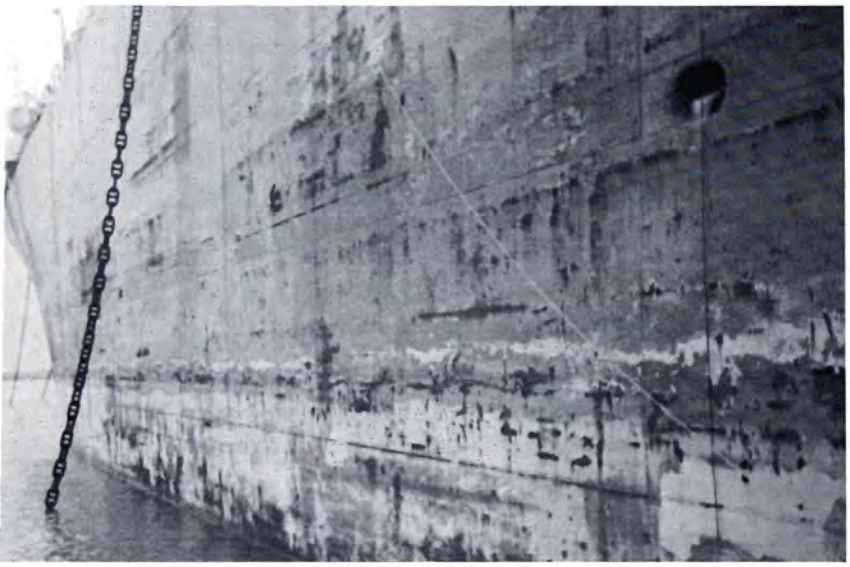
Inspectors should recognize the difference between pervasive deterioration that threatens structural integrity (right) and superficial corrosion (below).



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This does not mean all registries of this type are rogues. Some open registries have large fleets of well-run ships, including those owned in traditionally maritime nations. The owners have chosen outflaging for various reasons, including taxation, manning and freedom from legislative and other political pressures.

It should be noted that the United States is far from being alone in this practice. Several decades ago, the Greek merchant fleet moved from home to open register and back again, each move motivated by national policy. In recent years, a significant percentage of Japanese-owned ships have flown a number of open-registry flags to permit them to be manned, at least in part, by non-Japanese seamen. Also, following the breakup of Yugoslavia, the former national fleet scattered in all directions.

Nevertheless, rogue registries sometimes attract operators who focus entirely on the bottom line with little concern for operational standards, their crews or the need to maintain their assets in proper seaworthy condition. It is conceivable that these operators may walk away from an environmental disaster or a casualty involving significant loss of life with little concern, but with a perceived assurance that they will be insulated from blame.

Balanced view

The corporate aim of any reputable, responsible transportation company is to provide a service that meets the needs of its customers economically, reliably and safely. The company also has a responsibility to its personnel and owners to operate profitably.

In an international-based industry like marine transportation, the competition faced by an American owned, flagged and crewed ship is not with vessels operated to the same standards with the same operating cost basis, but with ships that may run to different rules. Crew costs may be significantly less for the other vessels, as may capital costs and many other areas of expenditures made by the owner to keep his or her fleet at sea. There are significant differences between the foreign and American ship owner's costs for maintenance and repair. The former is usually free to repair where the right combination of price and value is offered, whereas the American ship may be required to use United State facilities or pay the penalty of import duty on the value of the work done.

Notwithstanding the fact that class requirements may be identical between an American ship and a comparable foreign-flag vessel, there are usually differences between the respective flag-state requirements. The differences may be small compared to the rules of traditional maritime nations, somewhat greater with reputable open registers, and downright mind-boggling with rogue registers.

Unsafe ships

Any perusal of casualty reports should cause one to conclude that serious maritime casualties gravitate towards rogue registers. Reputable flags have problems too, as evidenced by high-profile events involving American tankers and British passenger vessels, but rogues still account for many unsavory events at sea.

The current crop of horror stories recounting the frequent loss of elderly bulk carriers is familiar. In the most pathetic cases, the vessels simply disappeared, taking their entire crews with them. These tales belong to the age of wood and sail, not to the enlightened late-20th century.

Other cases involve allegedly deplorable conditions of some vessels still afloat, being offered to the charter market. These same vessels have customarily been snapped up for spot cargoes, usually at attractive charter rates. It is only when a ship appears on a national blacklist that proper attention is paid to its grossest deficiencies.

The culprit is a lack of common standards in judging a satisfactory, seaworthy vessel. The minimum standards assumed by each individual flag state in establishing maritime safety vary widely from one state to another. This is a shortcoming that begs correction.

Hardware and software

If ships are hardware, then manning and operational issues can best be termed software. Inspection by port or flag state, or both, will help ensure that the quality of hardware is acceptable, but the software is another matter.

Several years ago, a study conducted in the United Kingdom concluded that "accidents of competence" far outnumbered "accidents of incompetence" in marine casualties that could be blamed on human factors (the most common causes of such incidents). In other words, mishaps seem to be caused by competent people doing stupid things.

How then can legislation end the loss of life that often occurs in passenger vessel casualties. It was usually the case that the vessels carried more passengers than their licenses allowed, which indicated that at least someone recognized the limits of the vessel -- the hardware. But it was the software that failed.

In this case, it appears that neither port nor flag state (which may be one and the same) are able to maintain control. Does this not call for increased national commitment motivated by enforceable supranational oversight?

Vehicle for exclusion?

The argument for port-state control will have a down side. While regular port-state inspections will result in a higher level of maritime safety, there remains a distinct possibility that such inspections might be used as a means to exclude vessels of one or more flag states from trade for reasons other than safety.

This could upset the level playing field that was so meticulously crafted in establishing the concept of port-state control. Carried to an absurd extreme, it is possible that a port state could bar vessels of its own flag from trading in its own ports for political or emotional reasons, or just plain mean spiritedness.

Classification societies

Classification societies will have a continuing role to play in the future. Widely maligned (perhaps wrongly) as being a tool of ship owners, the classification societies must cooperate more with each other, and flag and port states.

The role of the classification societies will help create the concept of one world — one standard that the maritime industry seeks. The first tentative steps towards this goal were taken many years ago when some countries, lacking technical and field staff to monitor safety conditions of their flag vessels, assigned a few societies to handle this task.

We believe that this was a constructive step, but, in retrospect, only a small part of an evolutionary process. We are now ready for the next step.

The greatest challenge

Vessel inspection must be carried out by people. Whether belonging to a flag or port state, these individuals must be experienced, well trained and capable of making decisions that stand up to the scrutiny of both the regulations and common sense.

Several years ago, a small passenger vessel operator increased the number of fire extinguishers on his craft above the requirements. He bought non-approved, but reputable extinguishers for the extra supply, while his required compliment of extinguishers were approved under the requirements. The inspecting officer refused to let the vessel sail until the non-approved units were sent ashore!

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It is well recognized that a ship does not earn its keep while standing still. An operator who may be paying as much as $20 a minute to run one vessel, may pay up to $1,200 in costs for each hour of delay. If the delay is warranted for safety reasons, so be it. If not, there is reason to believe that the system is not working.

The challenge, of course, is to find competent personnel to enforce reasonable regulatory standards internationally. We must make sure that vessels are not detained for minor, if not frivolous, reasons that do not materially effect their seaworthiness and the safety of ship and crew. Perhaps we should give the IMO more teeth so that it can function as it should — as an arbiter and an enforcer of meaningful maritime regulations.

The bottom line

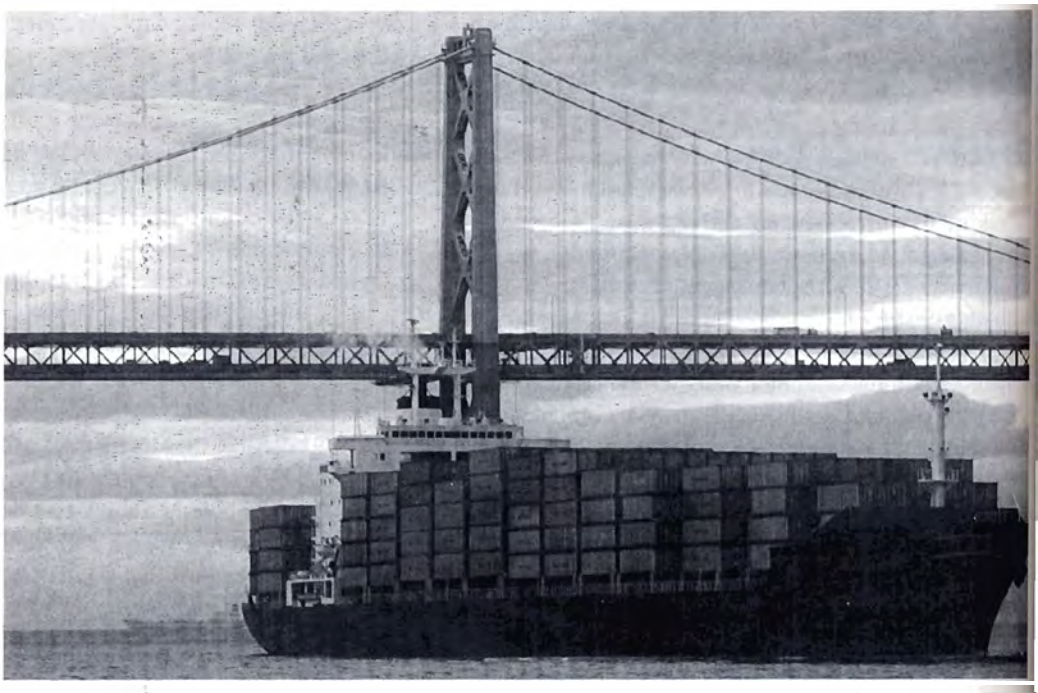
The world cannot exist without fleets of ships to carry the cargoes that provide the basics for civilization. The maritime world cannot function with universal goodwill and respect — and with the required standards of safety and reliability — if a handful of rogues tarnish the entire industry. Flag-state control of maritime activities will succeed provided that all flag states are equal, but reality falls short of this goal.

We believe that all ships, regardless of ownership, registry or trade, should be subjected to a uniform and consistent standard of safety, ensuring that all players are treated fairly. To do otherwise is like putting a high school soccer team into world cup competition.

Uniform standards, consistently applied, are required to ensure that good ships are not detained for inconsequential reasons and that bad ships are removed from competition. Responsible members of the maritime community deplore the notion of running a bad ship, and passionately abhor the lack of business ethics that would charter or otherwise engage the same vessel.

Finally, we believe that a major part of the solution to this problem is to combine the best features of port-state control with those of first-rate flag-state control, assigning to each the responsibilities for which it is most qualified. Steering such a course will certainly improve the overall performance of the world's fleet, enhance both its safety and reliability, bolster its somewhat tarnished image in the eyes of the press and public, and help protect the earth's fragile environment.

This goal cannot be reached without real costs that can and will be borne by the nations of the world. It also cannot be achieved unless all parties — ship owners, operators, charterers, flag and port states, regulatory agencies, insurance companies and classification societies — work closely together. We sincerely hope that they are ready to do just that.



Effective traffic control in restricted areas is an effective use of port-state resources.

Photographs accompanying this article are courtesy of Sea-Land Services, Inc.

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Ship owners are ultimately responsible for safety at sea

By Mr. Arne Ulstrup

In various maritime circles, one recently gets the impression that port-state control is the overall mechanism for ship safety and pollution prevention. Flag-state control is all but forgotten. The reason is that most flag states have delegated their control obligations to classification societies. Consequently, some ships never see a flag-state surveyor on board.

Responsibility

First and ultimately, the ship owner is responsible for safety of his or her vessels at sea. He or she must ensure that ship and crew always comply with international convention regulations. After an inspection, the ship owner must make sure that ship and equipment are maintained for safety at sea.

Secondly, the flag state must conduct inspections to ensure compliance with requirements. The same applies to a classification society entrusted to carry out statutory inspections on behalf of a flag state.

If the ship owner and flag state fail to do their jobs, port-state control is the last safety net, although it is neither complementary nor supplementary to flag-state control. However, the port state is in no way responsible for foreign ships' safety standards.

Port-state inspectors

Inspectors conducting port-state control must have no direct commercial interest in the ports or ships. Such inspections must be carried out by civil servants.

It is not appropriate to involve classification society surveyors in port-state control inspections, since they are paid by the ship owners. These inspections are carried out without notifying owners or masters.

Minimum qualifications for port-state control inspectors in Denmark include:

- authorization to carry out flag-state as well as port-state control;
- completion of at least two years of flag-state surveyor service;
- authorization to detain a ship in accordance with appropriate national legislation, which complies with international regulations;
- possession of a certificate of competency as a master or chief engineer, and at least two-year's service as at least a chief officer or second engineer;
- a passing grade as a naval architect, a mechanical engineer or an engineer in a maritime field, having worked at least five years in their fields; and
- ability to communicate orally and in writing in English.

Substandard ships

In Denmark, about 60 foreign ships are detained annually due to unseaworthiness. This represents about ten percent of the number of foreign ships inspected. About ten of the detained ships are in such deplorable condition that they should go to scrap or undergo extraordinary repairs.

Masters have remarked that they don't understand the reason behind the intervention because their ships have new certificates declaring them in perfect condition, even though they are floating coffins. These masters simply don't understand ship safety or they are under tremendous pressure from the owners. This demonstrates a total lack of care for the safety, or working and living conditions of their seafarers.

The term "substandard" gives the impression that a ship is in really bad shape. Actually, a ship is regarded as substandard when its hull, accommodations, machinery or equipment such as for life saving, fire fighting and radio are below the standards required by relevant international regulations.

For example, if the SOLAS convention prescribes that a ship must carry 12 distress flares and it only carries 11, it is substandard. Briefly, a ship is substandard if it does not fully comply with the standards.

Seaworthiness

Before a ship leaves port, it must be seaworthy, that is, fit for sea. This means that the ship in no way is a hazard to safety, health or the environment.

"Seaworthy means that the ship is capable of combating and enduring the ordinary perils of the sea on the intended voyage."

The inspector conducting port-state control must determine by his professional judgment whether a ship is seaworthy or not. If not, it must be detained until all deficiencies have been corrected.

All possible efforts should be made to avoid a ship being unduly detained or delayed. This has given some ship owners and flag states the impression that the port state must let a ship proceed to sea without complying 100 percent with all regulations. Often their argument is that minor deficiencies can be rectified before the next port of call. However, if they are minor, why not correct them before departure?

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Far left: Crack in deck.
Near left: Pipe patched with tape.
Below: What remains of a lifeboat seat.

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Problems

Irrespective of all the rules and regulations on ship safety, and inspection guidelines, both inspectors and ships often run into trouble, which is unnecessary. Following are some examples where ships, classification societies and port and flag states fail or act bureaucratic without reason.

1) Problem

Ships are detained because port state authorities do not fully understand the implications between the International Convention on Tonnage Measurement of Ships (TM 69), which states that all ships must have new tonnage certificates after 1994, and the old tonnage rules. Many port states use tonnage figures on the TM 69 certificate as parameters, even though a ship has also been measured under the old rules.

Solution

Some port-state authorities need to inform their field inspectors of the differences between the new requirements under TM 69 and those of the old rules.

2) Problem

Some port states wish to publicize the ship owner's names. Sometimes, however, the names of charterers, brokers etc. are published instead of the responsible parties - the ship owners or operators.

Solution

Those responsible for publishing names should be sure they are correct.

3) Problem

Ships are detained for minor deficiencies which cannot be corrected in port. For example, the projectiles for line-throwing appliances are outdated. Projectiles cannot be bought in the port where the ship is detained and it will take over a week to get them.

Solution

The inspector on the spot should be instructed to handle such cases with professional judgment in a practical manner. In this case, the ship should have been allowed to proceed to the next port for necessary corrections.

4) Problem

Port-state inspectors require that ships' equipment must obtain the approval of the port-state authorities as well as the flag state.

Solution

Port-state authorities should instruct inspectors that equipment is to be approved by the flag-state authority, not the port-state authority.

5) Problem

Ships are entering port without complying with stipulated standards.

Solution

The ship owner must make sure that his or her ship and its equipment are maintained at all times to comply with appropriate standards. It is not acceptable for any ship owner to use public-control systems to find deficiencies which should have been spotted by him or herself and his or her employees.

6) Problem

Flag state control authorities or those delegated to act on their behalf should detain all ships not complying with regulations. It is unacceptable for so many deficient ships to play around with new certificates, which actually justify only one voyage under tow to the nearest scrap yard.

Solution

Flag states must conduct unscheduled inspections, first, to see whether the ship owner is maintaining the ship properly, and, second, to see whether the organization acting on behalf of the flag state does what it is supposed to do. The flag state should be authorized to punish by fine or imprisonment both the ship owner and master if they fail to keep the ship up to standard.

Ship owner cooperation

Ship owners/operators and masters who comply with the regulations should view port-state control as a tool to get rid of the bad operators, not as a burden. If the following are in order, a port-state control inspection will go smoothly.

1- The ship and equipment comply with all provisions of relevant regulations.

2- The ship carries a ring binder for filing all certificates and other documentation.

3- The ship carries a *"Record of Approved Safety Equipment"* form, showing flag state requirements and the rules which must be followed.

4- The ship's officers are familiar with and have on board:

a) *"Procedures for the Control of Ships"* (IMO resolution A 466 XII);

b) *"Procedures for the Control of Ships and Discharges"* {IMO resolution A 542 and resolution MEPC 26 (23) under annex I and II of MARPOL 73/78};

c) *"Procedures for the Control of Operational Requirements related to the Safety of Ships and Pollution Prevention"* {IMO resolution A 742(18)}; and

d) *"Inspection of Labor Conditions on Board Ship: Guidelines for Procdure"* (Published by the ILO).

5. Each ship (captain) has a contingency plan for handling difficult port-state control inspection situations (for example, a ship has to comply with regulations over the level of international conventions or it is detained).

6. The ship is reasonably clean, the gangway properly rigged, the alleyways clean and papers neatly at hand.

Accomplishing the above, and maintaining a positive attitude should help port-state control inspections to run smoothly without unreasonable delay or costs for the ship owner.

More cracks on deck.

Improving safety

Globally, almost all statutory surveys are conducted by classification societies instead of flag-state representatives.

The number of ships with deficiencies, which are clearly hazardous to safety, health or the environment, has not decreased since 1980/1981, when a mandatory annual survey scheme was introduced. (This means that all SOLAS, MARPOL and load line ship areas covered by IMO conventions are inspected annually by the flag state or delegated authority. Previously, there was up to five years between certain surveys.)

Ships with deficiencies display fresh and clean certificates. The only appropriate action is detention. To illustrate such situations, the port-state control inspectors should photograph the worst areas, and attach the photos with brief descriptions to their reports to IMO, ILO and flag states. Such material cannot be ignored by responsible flag states.

Flag states should ensure that all relevant ILO instruments are followed by establishing survey/certification schemes covering such areas as crew accommodations. Only a few flag states have such systems.

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Training

In an emergency, the world's best equipment will be effective only when the crew is trained to use it. Until foolproof equipment can be designed, the importance of training cannot be overemphasized.

The problem with training for emergencies is that it is very difficult to achieve realism. This can only be done by creating an emergency, which is risky.

Training, however, does not have to involve a lot of risk to be realistic. Fire-fighting is one area where realism is achieved. In some courses, crews actually enter burning units, giving them a healthy respect for fire, along with confidence in using fire-fighting equipment.

Training in lifeboat and liferaft launching would be far more effective if conducted on ship in moderately rough sea conditions. But this is rarely done. In fact, many crew members have never seen a liferaft inflated. They don't know what is inside or how to get the best use of liferafts.

There might be less enthusiasm for liferafts as a means of escape if crews spent a few hours training in one in moderate sea conditions. Not only would they have a better understanding of liferaft performance, but they would be aware of how quickly seasickness occurs, along with how quickly people can lose their ability to cope with simple problems in such a situation. Survival is largely a matter of overcoming mental degradation, and training can help tremendously.

A measure of realism can be achieved by using training films.

Conclusion

The development of tighter port-state control regimes is coming. This should not be necessary, however, in view of the warnings given to both flag states and ship owners.

Ships will and must be detained if they are unseaworthy. It is unacceptable for them to be allowed to proceed to sea.

If a master or owner complains of undue delays or detentions due to port-state control interventions, the answer to this must be: *"If you consider the items as minor, there is no need to postpone their correction."*

Too many ships have deficiencies that should be rectified before their next port of call. However, port states will no longer accept this.

Globally, flag states should implement the already established survey systems. If this was done, port-state control would not be necessary.

Furthermore, flag states should convince ship owners to maintain their ships so they will remain fit to proceed to sea without endangering ships, crews or passengers.

Finally, if ship owners would give seafarers the respect they deserve, the working and living conditions on board ships would be at least equivalent to those ashore.

Photographs accompanying this article are courtesy of the Danish Maritime Authority.

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Right: Useless life jackets.
Below: Disgraceful toilet facilities.

Classification societies welcome partnership role

By Mr. Edward T. Reilly

"The International Association of Classification Societies (IACS) wishes to inform (IMO) member states that its member societies have agreed to common procedures with respect to their cooperation with port states in the context of port-state inspections. A member society will attend on board a vessel classed by that society when so requested by a port state in order to facilitate the rectification of reported deficiencies or other discrepancies. The individual IACS member society concerned will, where appropriate, duly notify the vessel's flag state and owners of such attendance and will fully cooperate with the port state in the rectification of any such safety related matters of either a classification or statutory nature within its purview or authority delegated to it."

IACS statement submitted to the IMO at the 61st session of the Maritime Committee, October 1992.

Misinterpretation

While this statement was drafted in a straightforward manner, it is still subject to wide misinterpretation. So it seems that further clarification is in order.

The statement conveys a willingness on the part of the classification societies to cooperate with port states when properly notified. It also clearly expresses the reason for agreeing to attend onboard subsequent to port-state control visits.

What it does not state is a responsibility to report to other than those parties with whom it has a pre-existing agreement to provide service. It also does not state that, by notifying the classification society of a request to attend onboard, the port state has fulfilled its obligation to notify the flag state in writing. Notifying the classification society does not in any way alleviate this conventon responsibility.

It also does not state that the classification society will attend in any other capacity than of a classification agent. Specific authorization is required from a flag state before a classification society can represent flag interests. Some administrations have delegated such authority, others have not. It is also erroneous to assume that a classification society has been formally engaged by the port state.

Port states should realize that classification societies are not authorized to direct that financial expenditures be made to correct deficiencies. This is the responsibility of the owner. In all instances, the power of the classification society is limited to a measure of control over certification documentation.

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Photograph courtesy of the Port of Houston Authority.

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A classification society does not respond to an invitation to board by taking sides in any dispute. The society will independently assess the situation, provide advice and guidance, and when appropriate, make recommendations. Only when empowered by a flag state, will a society take other action, such as withdrawing statutory certification.

It also should be clearly understood that a classification society voluntarily participates in such instances, and is not bound by any international instrument to do so.

The matter of record keeping needs clarification in the context of port state matters related to the classification society. Too often, statistics or analysis are offered by port states which inextricably link the classification society to vessels which have been subject to intervention or detention. This is not true, for a society is not responsible for actions of a ship owner.

Reasonable care should be taken not to blemish the name of a classification society without first establishing proof of responsibility for deficiencies. After all, the only commodity a classification society brings to the maritime marketplace is its "good name."

Partnership and progress

Classification societies view themselves as partners in the business of promoting maritime safety and pollution prevention. Flag and port states are perhaps the most influential partners in enforcing standards to achieve this goal.

Classification societies cannot be successful without such partnerships. As most port states are also flag states, the foundation for effective partnerships is made up of a few key ingredients, including an established working procedure. In the case of a flag state, this is assured through a well-developed, formal delegation of authority, reflected in a public document.

At the request of the IMO, IACS compiles a list of flag states that establish delegations of authority with classification societies. It is unfortunate that some flag states continue to administer statutory certification processes without the benefit of delegating authority.

Classification transfer

Significant occurrences in the economic life of a vessel include the change of classification from one society to another. There are many legitimate reasons why a vessel owner would consider such a move. In most cases, such a decision would reflect one or more business reasons, including a change in ownership, flag, underwriters or trading patterns; vessel refinancing; major vessel modification or charterers' requirements.

There are, however, instances where a vessel owner might consider changing societies to avoid dealing with outstanding recommendations made by the present classification society. Without having access to relevant technical data related to a particular vessel seeking classification, it is extremely difficult for a society to entertain such a request.

IACS members have adopted a transfer of classification agreement, and have established a data base tracking each administrative and technical step in such transactions. Each required step of a transfer is recorded, permitting a quick and accurate review of the situation by interested parties. There are also safeguards in place within the system to prevent a vessel from effectively changing classification societies without satisfactorily dealing with all outstanding recommendations.

Many flag and port states have great interest in reviewing classification transfer data as a source of valuable insight as to the condition of a vessel. Recognizing this interest, IACS members have agreed to share the data with legitimate interest groups, including port states and underwriters.

Port states are encouraged to use the data, and enhance this valuable tool by providing information on vessels which have dropped out of active classification with IACS members. Such vessels are subjects of concern in that their subsequent classification status is unknown to IACS and the related maritime community.

Conclusion

Although ready to assist in times of need, classification societies ask that relevant substantial progress be made before they are requested to come aboard a vessel during a port-state control inspection. The societies are approachable on any maritime safety matters and should be contacted when the continued validity of certification of a vessel is in question. Dialogue is encouraged, particularly before situations get out of hand.

Classification society members of IACS share the same goals with port states — to uphold the highest standards in maritime safety and protection of the natural environment. This strong common interest can produce more beneficial results through a meaningful partnership of the two most powerful parties in this period of change when vigilance is the watchword.

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Classification society looks at port-state control

By Mr. Ioannis Kourmatzis

Background

Port-state control is conducted in most parts of the world under regional governmental agreements based on relevant parts of international conventions.

In Europe, port-state control is conducted in accordance with the Paris Memorandum of Understanding, 1982; in the Far East and Pacific under the Tokyo Memorandum of Understanding, 1993; in Latin America, it concurs with the Latin American Agreement, 1993; and in the United States, it is under legislation and the Coast Guard's initiative for Boarding Regime to Target Substandard Ships, 1994.

Port-state control in Latin America inspects a minimum of 15 percent of all vessels visiting their ports; Europe, a minimum of 25 percent; and in Asia-Pacific, a minimum of 50 percent. All ships visiting United States ports have to be boarded at least once a year, representing 100 percent coverage on ships, but only 20 percent of ship visits, as each vessel calls United States ports an average of four to five times a year.

Schemes

In general, port-state control programs cover from 25 to 50 percent of ships arriving at their ports. Some states, including the United States and the United Kingdom regularly publish lists of detained ships. Port states may also target flag states, owners and classification societies with below average records of port detentions, i.e., give priority inspection for their ships to improve safety levels and phase out substandard vessels.

World-wide, an increasing number of ships are being inspected more extensively. Ships found with deficiencies are often detained to correct them before departure. Such delays are costly for owners, and provide healthy incentives to keep ship shape.

In 1993, there was an 8.23 percentage of ship detentions in European ports under the Paris Memorandum of Understanding, representing about one in 12 inspected ships. There was a 48.46 percentage of inspections with deficiencies, approximately one of two inspected vessels.

Responsibilities

Life at sea and the marine environment is protected by a series of safety nets: owners, flag states, classification societies and port states.

Owners/operators are primarily responsibile for the safe operation of ships and adherence to international rules and regulations. A company's management philosophy, maintenance practices and commitment to safety and environmental protection largely determines the standard of its vessels at any given time.

Classification societies must verify compliance with rules and regulations periodically, not continuously. Therefore, it is important for owners to maintain the safe operation of their ships and equipment between the periodic surveys. Classification societies are often delegated flag-state responsibilities.

Port-state control, conducted throughout the year at random or on a targeted basis, is a valuable supplement to the periodic surveys. However, it should never be considered as a substitute for flag states, which are charged by IMO to oversee the implementation of international codes and regulations.

The objectives of these parties is to improve the standards of the world fleet concerning safety and pollution prevention.

Coast Guard scheme

The Coast Guard focuses on vessels and owners (and indirectly flag administrations and classification societies) that have higher risks of being substandard. At the same time, owners who comply with international safety rules and regulations have little about which to be concerned. In the long run, they will experience fewer boardings and inspections, and less interference with normal operations while in port.

Qualified inspectors, intervention criteria, agreement on what constitutes major deficiencies and mechanisms to solve disputes are essential for the successful implementation of an efficient and credible port-state control scheme. The Coast Guard addresses all of these factors and appears to be able to rapidly eliminate substandard vessels from United States ports.

The prompt and complete implementation of such schemes differentiates between good and unscrupulous operators, which is essential. For one thing, it eliminates unnecessary multiple inspections of good quality vessels, which not only does not promote safety, but can have adverse effects on safe operations while a vessel is loading or discharging cargo in port.

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Photograph courtesy of the Port of Houston Authority.

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Class societies and control

The major classification societies, which belong to the International Association of Class Societies, follow a common procedure when asked to board a vessel to facilitate the correction of reported deficiencies during a port-state control intervention. The society concerned will notify the vessel's flag state and owners of such activities, when appropriate, and cooperate fully with the port state in rectifying safety-related matters of a classification or statutory nature within its authority.

Det Norske Veritas (DNV), a member of the International Association of Classification Societies, supports the use of port-state control as an audit instrument. As an advocate of transparency, DNV looks positively to "public listing of detained vessels," provided that such detentions are based on valid criteria.

As the first class society, DNV introduced the principle of total safety class in June 1992. This is reflected in the society's rules, which cover statutory regulations, such as SOLAS, MARPOL and ILLC, as well as the traditional areas (hull/machinery), ensuring that oversight on all safety aspects on ships is achieved whether or not the flag administration has authorized the class society to perform control on their behalf.

We at DNV also believe that the proper implementation of the International Safety Management Code will change owners' attitudes from reactive to proactive, and, in the long run, render port-state control intervention unnecessary.

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American Bureau of Shipping and Coast Guard have same goals . . . different roles

By Mr. Greg Shark

The American Bureau of Shipping (ABS), which has both classification and statutory certification responsibilities, wholeheartedly supports the efforts of port-state control throughout the world. In fact, ABS works closely with the Coast Guard in developing port-state control programs both nationally and internationally, coordinating IMO's efforts to amalgamate its numerous resolutions into a single comprehensive document to harmonize regional and national practices.

Classification society role

A unified statement issued by the International Association of Classification Societies, of which ABS is a member, clarifies the role of classification societies in port-state control. Essentially, it points out that member societies will cooperate with port states by attending their classed vessels upon request of a port state "*. . . in order to facilitate the rectification of reported deficiencies . . .* "

It must be understood that the class society — acting on behalf of the flag state — does not conduct port-state control inspections, nor is it authorized to detain ships.

For effective cooperation by classification societies with control efforts, it is essential that lines of communication between port and flag states, owners and operators, and classification societies be as open, accurate and efficient as possible to minimize interruptions of vessel operations.

ABS cooperation

ABS views port-state control positively, provided that it is fair and consistently applied. Internally, ABS manages reported deficiencies as "client feedback" through a quality-control system. Accordingly, the problems are evaluated and corrected, thereby impoving service delivery. However, to assure accurate and complete assessments of feedback, the classification society should be requested to attend port-state control inspections.

In this context, it should be noted that ABS, while not-for-profit, must generate revenue to cover base costs by conducting surveys, including inspection attendance. But, in that a classification society is not empowered to "control" a ship, ABS always tries to obtain the master's permission to board a vessel when invited by a port-state control inspector to do so.

To produce fair, accurate and clear evaluation reports, port-state control inspectors must qualify the nature of deficiencies with great care. However, administering such programs involve human interactions and decision-making processes, which permit the possibility of errors. It is therefore paramount that all responsible and affected parties have an opportunity to review all evaluation data before it is released.

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ABS and Coast Guard recognize initial stages of active corrosion.

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Positive aspects

ABS finds several unique attributes in the present Coast Guard methods of conducting port-state control. Among the most important aspects are the:

(1) **Point System Matrix** (targeting program),
(2) **Appeals Process**,
(3) **Centralized Administration** and
(4) high levels of open **Communication**.

Point System Matrix

Although perhaps somewhat arbitrary, the Point System Matrix or targeting program affords a clear, quantitative means to identify potential risks associated with certain vessels calling on United States ports. However, this is providing that a sufficient data sampling has been taken to render sound judgment. The approach enables the captain-of-the-port to better allocate resources by prioritizing potential risks.

Appeals Process

The Appeals Process operates effectively, providing a mechanism for externally reviewing and determining causes of deficiencies before they are assigned points under the targeting program. Through the Appeals Process, a more accurate conclusion can be reached, particularly when all parties involved attended the port-state control inspection.

Centralized Administration

The Centralized Administration of the Coast Guard's port-state control program greatly improves the efficiency of rectifying deficient ship conditions. It affords consistent disposition of deficiencies, enhancing the overall integrity of the program.

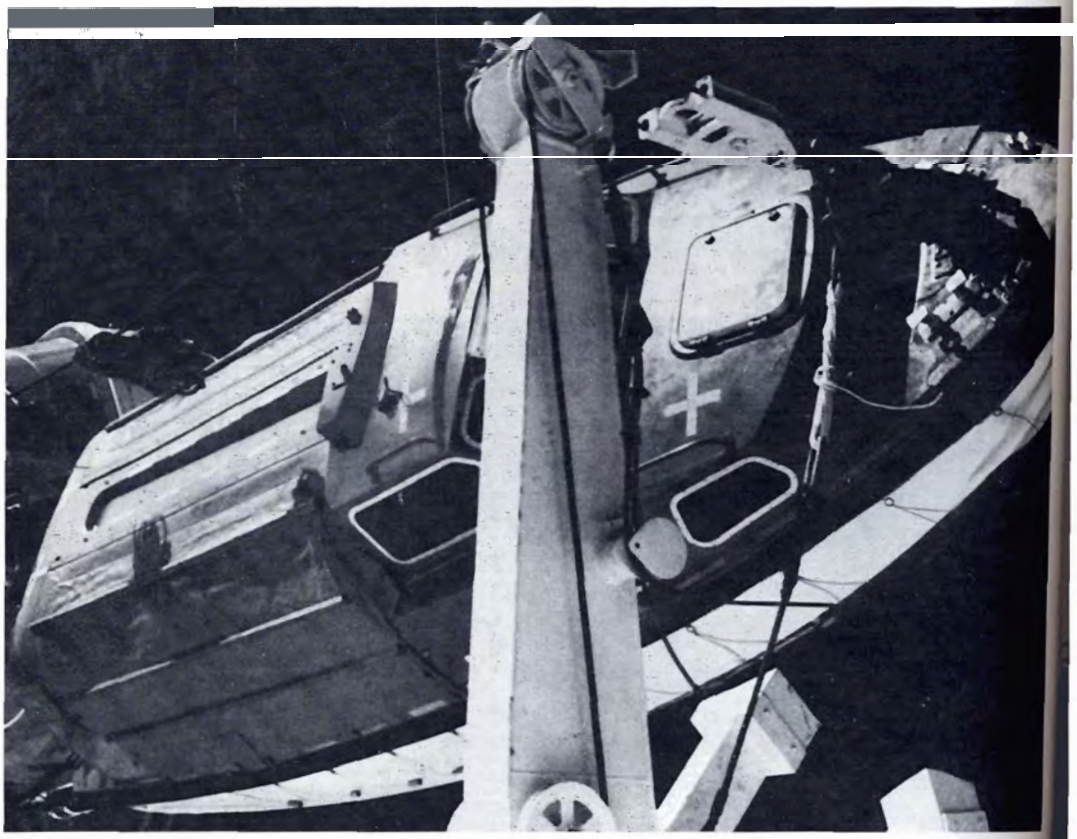
Communication

Provisions for effective communication to the responsible parties, particularly during the initial stages of port-state control inspections, cannot be over emphasized. Conditions of non-compliance are identified, readily acknowledged, and corrected, either by permanent repairs or temporary measures. The Coast Guard fully exercises reporting procedures found in the international conventions by contacting the flag state, and also the classification society, recognizing their normal involvement in the statutory certification process.

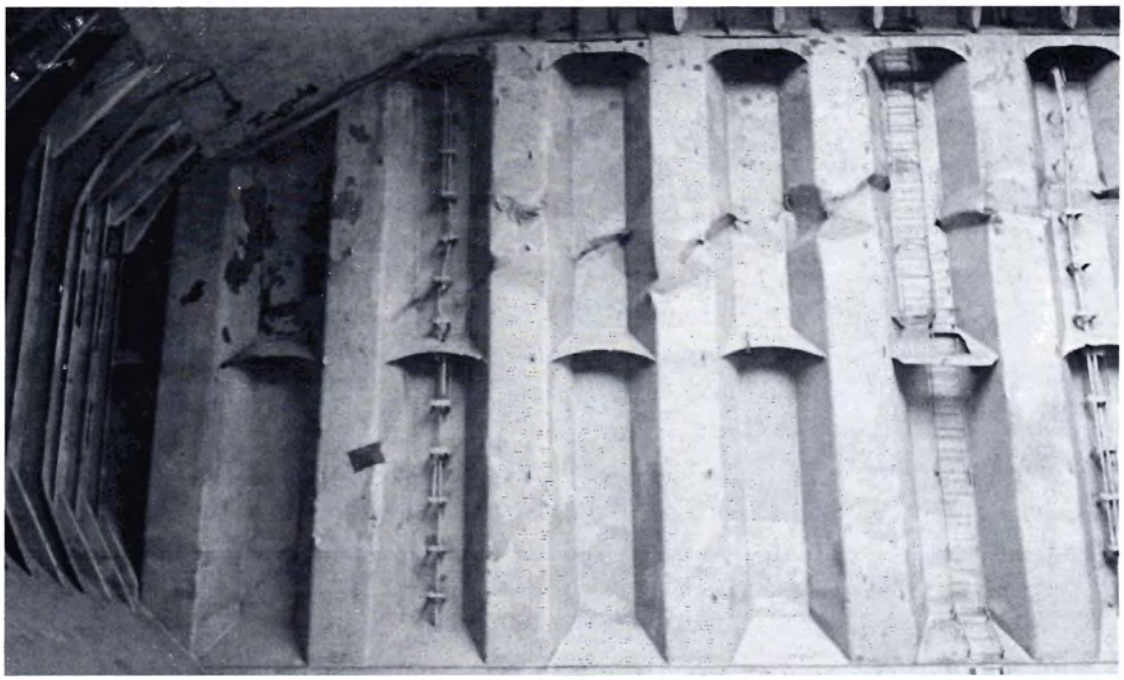
Future considerations

Categorizing deficiencies

One consideration would be to categorize deficiency types to identify the parties responsible. For example, if the hang-up of a life boat being lowered is askew, drills might be in order for the crew. This would reflect on the vessel owner or operator, rather than the flag state or classification society. This categorization should be viewed as an effort to improve efficiency by rightly attributing deficiencies to the relevant responsible party, not as an attempt to shed responsibility.



An excessive tilt or "hang-up" of a lifeboat can be caused by improper launching.



Corrugated transverse bulkhead is badly buckled.

Statutory role

Conditions may exist that are beyond the control of a classification society in its statutory role. Considering the relevant time between the last statutory survey and the nature and extent of the deficiencies, these conditions can include:

- expiration of vessel or equipment certificates after the last statutory survey, or certificates which were not endorsed within the allotted time;
- voyage damage since the last survey;
- improper maintenance of watertight integrity of closing appliances;
- crew responsibilities (log completion, test and drill performance, knowledge of essential documents and their use, and improper cargo loading);
- missing equipment or provisions that are easily pilfered; and
- initial stages of structural deterioration caused by active corrosion.

The Coast Guard has been receptive to this situation and is evaluating the possibility of developing a list of "accountability principles."

Additionally, it should be recognized that the society which classifies a vessel may not be the same one issuing the statutory certificates. This is not the norm, but the port state should consider this possibility when determining appropriate parties to contact. A list of classification societies, recognized by flag states relative to statutory certifications, is periodically documented by the International Association of Classification Societies and presented to the IMO. This list would be helpful to the Coast Guard in this regard.

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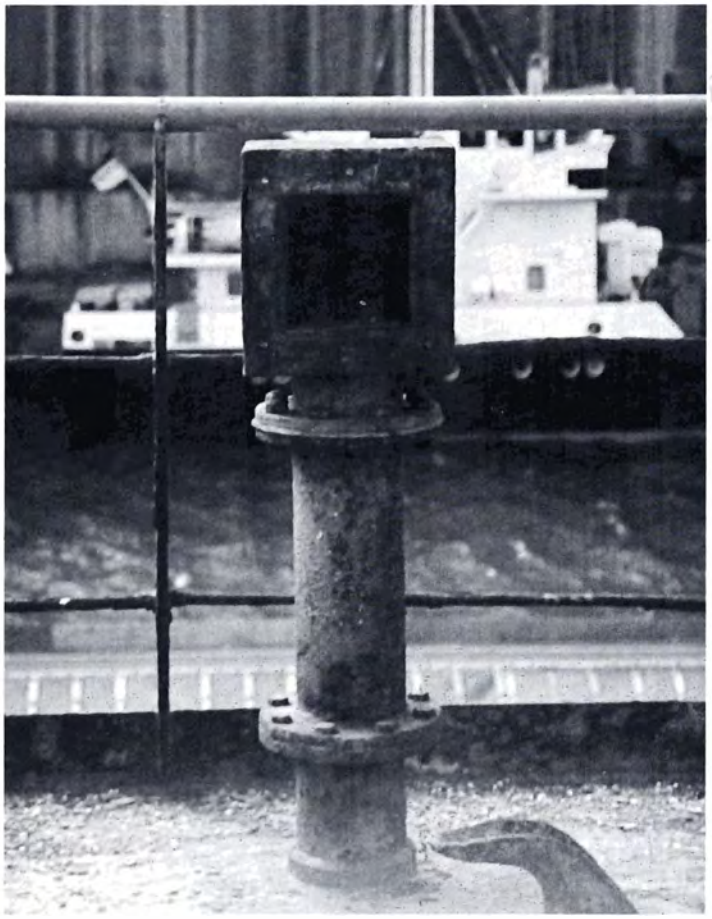
After numerous discussions of this subject between representatives of the Coast Guard and ABS, the International Association of Classification Societies recommended that a mean ratio of the flag-states' performance be used as a basis to weigh the classification society. It embraces the principle that value is added to the certification process by the classification society carrying out statutory certification delegated to it by the flag state.



Airpipe closure is missing.

Transfer of Class Agreement

It is recommended that the Coast Guard judiciously evaluate a situation whereby an owner, after being notified by a classification society of measures needed to be undertaken to correct deficiencies, transfers the vessels classification to a non-member of the International Association of Classification Societies. There is a distinct possibility that this non-member may not be as diligent as a member in ensuring that recommended corrections are carried out.

All members of the International Association of Classification Societies are bound by a Transfer of Class Agreement, which provides for continuity of carrying out a previous society's recommendations when a vessel transfers societies within the association's membership and requires the new society to report the status of the transfer upon its completion. This agreement is published weekly and distributed to marine underwriter associations and regional port-state control programs, including the Coast Guard.

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Intervention ratio and "mean" value

Perhaps the most acute issue from the point of view of classification societies is the approach to determine the intervention ratio and its "mean" value, which are used to assign points under the targeting system.

As presently understood, the intervention ratio is the number of vessels detained divided by the number of those that trade at United States ports annually. To be statistically correct, the ratio of failures should be divided by the number of inspections. However, recognizing that under United States law, all foreign flag vessels calling at United States ports must be inspected annually, and this is carried out relatively consistently, the form of the ratio is sound.

Conclusion

The Coast Guard's port-state control program provides an effective and fair mechanism to ensure the safety of vessels frequenting United States ports and transportating United States passsengers, while preserving the marine environment.

The photographs accompanying this article are courtesy of the American Bureau of Shipping.

Mr. Greg Shark is manager of regulatory affairs for the American Bureau of Shipping, Two World Trade Center, 106th Floor, New York City, New York 10048. Telephone: (212) 839-5059.

Mariner's Seabag

Pollution prevention examination questions

National concerns about pollution of our waters are reflected in extensive legislation. Similar concerns on the global level have resulted in the IMO's International Convention for Preservation of Pollution from Ships (MARPOL 73/78). The national laws and the convention have been implemented through rulemaking in Title 33 Code of Federal Regulations.

The questions on water pollution on a maritime exam are appropriate to the license level for which a particular applicant is being tested. For example, questions on crude oil washing or inert gas systems appear only on the third mate through master examinations, while questions on reporting of spills and penalties may be found on any examination.

Most information on pollution prevention is in Title 33 CFR parts 151, 153, 155, 156, 157 and 159. Exam centers provide copies of the CFR for applicants being tested.

Questions on pollution and its prevention are in nearly every deck and engineering exam. They focus on three areas. The first relates to immediate action required in an incident, including notification of proper authorities and temporary measures to reduce the pollutant's effects. The second concerns penalties associated with a pollution incident. The applicant's ability to use the CFR is tested, and the importance of pollution prevention and the severe penalties for failing to report a spill or for willful pollution are emphasized. The third area covers operations and safety measures, with questions on requirements for drip pans and scupper plugs, the use of crude oil washing and inerting systems, knowledge of operating manuals required on board and a declaration of inspection.

Radar training for towing vessel operators

New regulations require licensed operators of radar-equipped towing vessels of 26 feet or longer to attend a formal training course in the use of radar. This training must be completed by June 1, 1995.

Affected operators who hold licenses dated before June 1, 1995, must either complete a Coast Guard-approved radar-observer course or a short radar-operation course.

Short course

At least four-hours long, the radar-operation course provides basic training for better use of radar information. Upon completion of the course, a letter or certificate is issued to accompany the license as proof of compliance with the regulations.

If an individual elects to take the short course, the qualifications are valid only until his or her next license renewal or upgrade **after** June 1, 1995. At that time, the individual must have completed a Coast Guard-approved radar-observer course.

Approved course

Course lengths vary from one to five days, depending on the area of operations (i.e., rivers or oceans). These courses offer practice and tests using simulators to learn and/or demonstrate radar skills. Towboat operators completing **approved** courses will be issued certificates to be presented to a Coast Guard regional examination center. A radar observer endorsement will be entered on the license. The endorsement must be renewed every five years.

All courses stress the use of radar as an aid in position determination and collision avoidance.

The following deck questions should be answered using chart number 12354TR, Long Island Sound - eastern part - and the supporting publications.

Deck

The draft of your vessel is 2.6 meters (8.5 feet). Variation is 14° W for this entire plot. The deviation table is:

HDG. MAG	DEV.	HDG. MAG	DEV.
000°	0°	180°	1° E
030°	1° W	210°	2° E
060°	2° W	240°	3° E
090°	4° W	270°	3° E
120°	2° W	300°	2° E
150°	1° W	330°	1° E

1. What type of bottom is at Long Sand Shoal?

A. Rocky.
B. Muddy.
C. Sandy
D. Hard.

2. You are southeast of Saybrook Breakwater Light passing Saybrook Bar Lighted Bell Buoy "8." This buoy marks _____.

A. shoal water
B. a tide rips area
C. the junction with the Connecticut River
D. a sunken wreck

3. At 0005, on January 26, your position is LAT 41° 11.8' N, LONG 72°20.5' W. From this position, you plot a course for Mattituck Breakwater Light "MI" with an engine speed of 9.0 knots. If there is no set and drift, what course should you steer?

A. 207.0° psc.
B. 225.0° psc.
C. 230.5° psc.
D. 233.0° psc.

4. At 0045, you obtain the following information:

radar range to Inlet Point is 1.4 miles;
radar range to Rocky Point is 2.8 miles; and
radar range to Horton Point is 2.8 miles

What were the set and drift between 0005 and 0045?

A. 285° True, 0.9 knot.
B. 202° True, 1.5 knots.
C. 185° True, 0.6 knot.
D. 095° True, 1.4 knots.

5. You alter course from your 0045 position to head for Mattituck Breakwater Light "MI." If the visibility is 10 miles and you make good 9 knots, at what time will you lose sight of Saybrook Breakwater Light?

A. You have already lost sight at 0045.
B. 0100.
C. 0123.
D. The light is visible all the way to Mattituck Inlet.

6. At 0100, you obtain the following radar ranges:
to Inlet Point - 2.7 miles,
to Rocky Point - 4.5 miles, and
to Horton Point - 1.0 miles.
What was the speed good between 0045 and 0100?

A. 7.2 knots.
B. 8.0 knots.
C. 8.7 knots.
D. 9.2 knots.

7. From your 0100 position, you change course to 258° per standard magnetic compass. Your engine speed is 10.0 knots. A short time later, your fathometer reads 51 feet (15.5 meters) under the keel. What is the water depth?

A. 38.5 feet (11.7 meters).
B. 43.5 feet (13.2 meters).
C. 51.0 feet (15.5 meters).
D. 59.5 feet (18.0 meters).

8. According to the DR track line from your 0100 position, how far off Roanoke Point Shoal Buoy "5" should you be when the buoy is abeam?

A. 0.2 mile.
B. 0.8 mile.
C. 1.3 miles.
D. 1.8 miles.

9. At 0130, you obtain the following radar ranges:
Horton Point Light - 4.3 miles,
Mattituck Breakwater Light - 3.45 miles,
and Duck Pond Point - 2.0 miles.
What were the course and speed made good between 0100 and 0130?

A. 246° T at 9.8 knots.
B. 253° T at 9.4 knots.
C. 259° T at 9.8 knots.
D. 267° T at 9.4 knots.

10. From your 0130 position, you change course to adjust for set and drift, and you later obtain the following loran lines of position:

9960-W-14973
9960-X- 26412
9960-Y- 43919

What is the latitude and longitude of the loran fix?

A. LAT 41°00.8' N, LONG 72°40.8' W.
B. LAT 41°01.2' N, LONG 72°40.4' W.
C. LAT 41°01.6' N, LONG 72°40.0' W.
D. LAT 41°02.0' N, LONG 72°39.5' W.

11. At 0209, your position is LAT 41° 01.8'N, LONG 72°40.8' W. What course should you steer per standard magnetic compass to make good 278° magnetic? (Assume no set and drift.)

A. 262.0° psc.
B. 265.0° psc.
C. 275.5° psc.
D. 280.5° psc.

12. The south coast of Long Island Sound between Mattituck Inlet and Port Jefferson is _____
A. composed of high rocky bluffs
B. a high, flat plateau with sheer cliffs
C. fringed by rocky shoals
D. low and marshy with isolated beaches

13. At 0300, your position is LAT 41° 01.7' N, LONG 72°55.1' W. From here, you steer a course of 289° per standard magnetic compass at a speed of 10.0 knots. When can you expect to see Stratford Shoal Middle Ground Light if luminous range is 8.0 miles?

A. 0303
B. 0309
C. 0312
D. 0318

14. You must arrive at your final destination by 0800. The distance from your 0300 position is 40.5 miles. What minimum speed must be made good to arrive on time?

A. 8.1 knots.
B. 8.5 knots.
C. 9.3 knots.
D. 9.6 knots.

15. You are northwest of Port Jefferson Harbor steering 242° per standard magnetic compass. As you go westward, you see the Port Jefferson Range front and rear light come into line. If the deviation table is correct, the bearing of the range should be?

A. 140° psc.
B. 146° psc.
C. 157° psc.
D. 160° psc.

ANSWERS

1-D, 2-A, 3-D, 4-D, 5-B, 6-A, 7-D, 8-B,
9-A, 10-D, 11-C, 12-C, 13-A, 14-A, 15-C.

If you have any questions concerning Nautical Queries, please contact G-MVP-5. Telephone: (202) 267-0707.

Final rule

Merchant marine officers and seamen: Random drug testing program (46 CFR part 16) RIN 2105-AB94 (December 2).

In response to public comments, petitions submitted by industry, and on their own initiative, the Federal Aviation Administration, the Federal Highway Administration, the Federal Railway Administration, the Federal Transit Administration, the Research and Special Programs Administration and the Coast Guard (the operating administrations) have revised their random drug testing rules. As revised, the rules provide that the operating administration may lower the minimum random drug testing rate to 25 percent if the industry-wide random positive rate is less than 1.0 percent for two calendar years while testing at 50 percent. The rate will return to 50 percent if the industry random positive rate is 1.0 percent or higher in any subsequent calendar year. The industry-wide random positive rate for each transportation industry will be calculated from data submitted to the operating administrations and announced annually by the respective administrator or the commandant of the Coast Guard. Based on this revision, the random drug testing rate for the railroad and aviation industries is reduced by their administrators to 25 percent, effective January 1, 1995.

DATE: This rule was effective January 1, 1995.

For further information, contact: LCDR Mark Grossetti, project manager, Marine Investigation Division. Telephone: (202) 267-1421.

Final rule

CGD 94-106, Programs for chemical drug and alcohol testing of commercial vessel personnel: delay of implementation dates (46 CFR part 16) RIN 2115-AE95 (December 20).

The Coast Guard announces a delay in the effective date of regulations governing drug testing, insofar as those regulations would require testing of persons on board United States vessels in waters that are subject to the jurisdiction of a foreign government. Under this final rule, employees would become subject to testing no later than January 2, 1996, unless the Coast Guard, in the meantime, publishes regulations indicating otherwise.

DATE: This rule was effective December 20, 1994.

Addresses: Unless otherwise indicated, documents referred to in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA), Room 3406, Coast Guard headquarters, 2100 Second Street S.W., Washington D.C. 20593-0001, between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

For further information, contact: LCDR Mark Grossetti, project manager, Marine Investigation Division. Telephone: (202) 267-1421.

Final rule

CGD 93-079, Simplified alternative procedure for resolving civil penalty cases (33 CFR part 1) RIN 2115-AE68 (December 27).

The Coast Guard is adopting as final, with minor revisions, an interim rule allowing for greater delegation by the district commander and for a simplified alternative procedure for resolving civil penalty cases. This procedure streamlines the process for resolution of certain uncontested oil discharge and pollution prevention civil penalty cases by allowing a Coast Guard official to present a notice of violation and proposed penalty to a party in the field.

DATE: This rule was effective January 26, 1995.

Addresses: Unless otherwise indicated, documents referred to in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA), Room 3406, Coast Guard **headquarters, between 8 a.m. and 3 p.m., workdays.** Telephone: (202) 267-1477.

For further information, contact: LT Jonathan C. Burton, project manager, Marine Environmental Protection Division. Telephone: (202) 267-6714.

Final rule

CGD 91-225, Delegations of authority under the Federal Water Pollution Control Act, as amended by the Oil Pollution Act of 1990, and under the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the superfund amendments and the Reauthorization Act of 1986 (33 CFR parts 1 and 153) (December 27).

The Coast Guard is redesignating and revising certain regulations relating to delegation of authority. The changes incorporate amendments to the Federal

Water Pollution Control Act made by the Oil Pollution Act of 1990 (OPA 90); provisions added to the United States Code by OPA 90; and certain provisions of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the superfund amendments and the Reorganization Act of 1986. These statutes relate to discharges and releases of oil, hazardous substances, pollutants and contaminants. The changes largely reflect additional respnsibilities for Coast Guard on-scene coordinators to direct responses to spills of oil and hazardous substances.

DATE: This rule was effective December 27, 1994.

For further information, contact: CDR K. W. Keane, chief, Pollution Response Branch, Marine Environmental Protection Division. Telephone: (202) 267-2611.

Final rule

CGD 94-003, Ballast water management for vessels entering the Hudson River (33 CFR part 151) RIN 2115-AE76 (December 30).

The Coast Guard is issuing regulations to implement an amendment to the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990. The regulations require ballast water management practices for each vessel entering the Hudson River, north of the George Washington Bridge, after operating on waters beyond the exclusive economic zone. These rules will help to prevent the additional introduction of nonindigenous aquatic nuisance species into the Great Lakes through the ballast water of vessels operating on the Hudson River.

DATE: This rule was effective January 30; 1995.

Addresses: Unless otherwise indicated, documents referred to in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA), Room 3406, Coast Guard headquarters, between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

For further information, contact: LT Jonathan C. Burton, project manager, Marine Environmental Protection Division. Telephone: (202) 267-6714.

Notice of proposed rulemaking

CGD 93-081, Designation of lightering zones (33 CFR part 156) RIN 2115-AE90 (January 5).

The Coast Guard proposes to designate three lightering zones in the Gulf of Mexico, more than 60 miles from the baseline from which the territorial sea of the United States is measured. By using these lightering zones, all single hull tank vessels would be permitted to off-load within the United States Exclusive Economic Zone until January 1, 2015. This proposal would establish the first lightering zones designated by the Coast Guard. It would also establish three areas in which all lightering would be prohibited.

DATE: Comments must have been received by March 6, 1995.

Addresses: The executive secretary of the Marine Safety Council (G-LRA/3406) (CGD 93-081), Coast Guard headquarters, maintains the public docket for this rule-making. Comments are part of this docket and are available for inspection or copying at room 3406, workdays, between 8 a.m. and 3 p.m.

A copy of the material listed in "Incorporation by Reference" of this preamble is available for inspection at room B-178, Coast Guard headquarters.

For further information, contact: LCDR Stephen Kantz, OPA 90 staff. Telephone: (202) 267-6740.

Final rule

CGD 78-174, Hybrid inflatable personal flotation devices (PFDs): establishment of approval requirements (46 CFR parts 25 and 160) RIN 2116-AA29 (January 9).

This final rule amends the structural and performance standards and procedures for approval of hybrid inflatable personal flotation devices (hybrid PFDs). They are designed to have a minimum amount of inherent flotation to ensure that a wearer will surface after falling in the water, and to have a mechanism to inflate the PFD to provide additional buoyancy and greater clearance from the water while awaiting rescue. This rule also allows for approval of the PFDs for youths and small children. The changes are intended to make hybrid PFDs more affordable to recreational boaters by lowering production costs and reducing required production testing. It is the Coast Guard's position that increased use of hybrid PFDs may save lives.

DATE: This rule was effective February 8, 1995.

Addresses: Unless otherwise indicated, documents referred to in this preamble are available in, Room 3406, (G-LRA). Telephone: (202) 267-1477.

For further information, contact: Mr. Samual E. Wehr, Survival Systems Branch, Merchant Vessel Inspection and Documentation Division. Telephone: (202) 267-1444.

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Notice and request for comments

CGD 95-003, Prevention through people (January 13).

The Coast Guard announces the establishment of a task group formed by the chief, Office of Marine Safety, Security and Environmental Protection to assess how to improve safety and pollution prevention through improvements in areas where people are the major factor in accidents. The task group's purpose will be to develop a long-term strategy for the Coast Guard "Prevention Through People" program, which stresses solutions outside the regulatory process.

Addresses: Comments may be mailed to CDR Craig Bone, Commandant (G-MS) Coast Guard headquarters or may be made by telephone at (202) 267-6827 or by fax at (202) 267-4547.

For further information, contact: CDR Craig Bone, OPA 90 staff (G-MS). Telephone: (202) 267-6827.

Final rule

CGD 91-223, Chemical testing for dangerous drugs of applicants for issuance or renewal of licenses, certificates of registry or merchant mariner's documents (46 CFR parts 10, 12 and 16) RIN 2116-AE29 (January 23).

This rulemaking establishes Coast Guard regulations which implement the provisions of OPA 90 that require chemical testing for use of dangerous drugs of all applicants for issuance or renewal of licenses, certificates of registry or merchant mariner's documents. Testing of applicants will provide another tool to promote a drug-free workplace in the maritime industry.

DATES: This rule was effective on March 24, 1995.

Addresses: Unless otherwise indicated, documents referred to in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA), Room 3406 (CGD 91-223), Coast Guard headquarters, between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

For further information, contact: LCDR K. McKinna, Merchant Vessel Personnel Division. Telephone: (202) 267-0218. Or LCDR M. Grossetti, Marine Investigation Division. Telephone: (202) 267-0415.

Notice: Request for participants and comments

CGD 95-007, Alternate compliance for inspection and certification of certain U.S. flag commercial vessels (46 CFR chapter 1) (February 3).

On January 12, 1995, the Coast Guard and the American Bureau of Shipping (ABS) signed a memorandum of understanding (MOU) concerning delegation of vessel inspections and examinations, tonnage measurement, and acceptance of plan review and approval. Under the MOU, the Coast Guard and ABS will develop a program to provide owners and operators of certain ABS-classed, Coast Guard-inspected commercial vessels with an alternative to undergoing inspection by the Coast Guard under existing applicable federal regulations. These owners and operators are invited to participate in a pilot program designed to evaluate standards, processes and procedures under development for use in the Alternate Compliance Program, and interested persons may submit comments.

DATES: A pilot program began February 3, 1995. Applications for participation in the program must be received by May 4, 1995. Written comments should be submitted by August 2, 1995.

Addresses: Applications for participation in the pilot program must be submitted to Commandant (G-MVI-1), ATTN: ACP Pilot Program, Coast Guard headquarters. Written comments may be mailed to the executive secretary, Marine Safety Council (G-LRA), or delivered to room 3406.

Comments will become part of this docket and will be available for inspection or copying at room 3406. Copies of referenced materials are available for inspection and copying in room 1400, or from ABS, 16855 Northchase Drive, Houston, TX 77060, or the IMO, Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom (Telephone 44 (71) 735 7611, or fax 44 (71) 587 3210,

For further information, contact: LCDR David Scott, project manager, Merchant Vessel Inspection and Documentation Division. Telephone: (202) 267-1464.

Request for comments

CGD 94-100, Withholding of vessel clearances or permits: identification of satisfactory sureties in lieu of clearance or permit denial (33 CFR chapter 1) (February 10).

The Coast Guard is authorized to request that the Customs Service refuse or revoke a vessel's clearance if the vessel's owner or operator may be subject to a penalty for violating the provisions of the authorizing statutes. These statutes provide that the vessel may be cleared upon the filing of a bond or other surety satisfactory to the Coast Guard. However, because there are currently no uniform standards governing the form and terms of an acceptable surety, the policies applied have differed among the Coast Guard districts. The Coast Guard is requesting comments on what problems, if any, are created by these variations and what solutions, if any, are desirable. The Coast Guard may initiate rulemaking based upon the comments received.

DATES: Comments must be received by April 11, 1995.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CCD 94-100), Coast Guard headquarters, or delivered to room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477).

Comments will be part of this docket and will be available for inspection or copying in room 3406.

For further information, contact: CDR David Dickman, Maritime and International Law Division (G-LMI). Telephone: (202) 267-0095.

Interim rule: reopening of comment period

CGD 94-041, Radar observer endorsement for operators of uninspected towing vessels (46 CFR part 15) RIN 2115-AE92 (February 14).

On October 26, 1994 (59 FR 53754), the Coast Guard published an interim rule establishing radar-training requirements for licensed masters, mates and operators of radar-equipped uninspected towing vessels 8 meters (about 26 feet) or more in length. Under the interim rule on February 15,1995, these licensed persons would be required to hold either an endorsement as a radar observer or, if holding a valid license issued before February 15, a certificate from a radar-operation course. In response to comments from members of the regulated public, the Coast Guard is amending the interim rule to change the date on which the radar-observe endorsement or the radar-observation course certificate will be required from February 15 to June 1, 1995. The Coast Guard is also reopening the comment period to solicit additional public involvement in the rulemaking.

DATES: This interim rule was effective on February 14, 1995. Comments must be received before June 1, 1995.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CCD 94-041), Coast Guard headquarters, or may be delivered to room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477).

The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying in room 3406, workdays between 8 a.m. and 3 p.m.

For further information, contact: Mr. Robert S. Spears, Jr., project manager, Merchant Vessel Personnel Division (G-MVP-3). Telephone: (202) 267-0224.

Notice of proposed rulemaking

CGD 94-029, Modernization of examination methods (46 CFR parts 10 and 12) RIN 2115-AE94 (February 23).

The Coast Guard proposes to amend the rules that require Coast Guard-administered written examinations for merchant marine license and unlicensed rating applicants to remove references to "written" examinations and to broaden the scope of those authorized to perform the testing of applicants. These changes reflect the Coast Guard's efforts to develop alternative media testing and the use of private and public sector testing services for examination of those applicants. The development of more effective, modern testing of applicants for merchant marine licenses and unlicensed ratings will enhance safety of the maritime environment.

DATES: Comments must be received by May 24, 1995.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CCD 94-029), Coast Guard headquarters, or may be delivered to room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477).

Comments will be part of this docket and will be available for inspection or copying in room 3406.

For further information, contact: Mr. Robert S. Spears, Jr., project manager, Merchant Vessel Personnel Division (G-MVP-3). Telephone: (202) 267-0224.

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Notice of proposed rulemaking

CGD 93-056, Facilities transferring oil or hazardous materials in bulk (33 CFR parts 154 and 156) RIN 2115-AE59 (February 23).

The Coast Guard proposes to revise the regulations covering facilities transferring oil or hazardous material in bulk. These revisions should result in regulations that are more effective in providing a high level of safety and environmental protection.

DATES: Comments must be received by May 24, 1995.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CCD 93-056), Coast Guard headquarters, or may be delivered to room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

Comments on collection-of-information requirements must be mailed to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, N.W., Washington, DC 20503, Attn: Coast Guard desk officer.

The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying in room 3406, workdays between 8 a.m. and 3 p.m.

For further information, contact: LT Jonathan C. Burton, project manager, Marine Environmental Protection Division. Telephone: (202) 267-6714.

Notice of proposed rulemaking

CGD 94-070, Facsimile filing of instruments (46 CFR part 67) RIN 2115-AE98 (March 6).

The Coast Guard proposes to amend its vessel documentation regulations to provide for optional filing of commercial instruments by facsimile, and to establish a filing and recording handling fee for filing instruments by facsimile. The option of filing commercial instruments by facsimile complements the centralization of Coast Guard documentation services. Facsimile filing of commercial instruments is one way in which a centralized vessel documentation center can delivery timely services to distant vessel documentation customers and be responsive to time sensitive matters. Filing commercial instruments by facsimile should further streamline the vessel documentation process.

DATES: Comments must be received by May 5, 1995.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CCD 94-070), Coast Guard headquarters, or may be delivered to room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying in room 3406, workdays between 8 a.m. and 3 p.m.

For further information, contact: LCDR Don M. Wrye, Vessel Documentation and Tonnage Survey Branch (MVI-5), Merchant Vessel Inspection and Documentation Division. Telephone: (202) 267-1492.

Notice of meeting

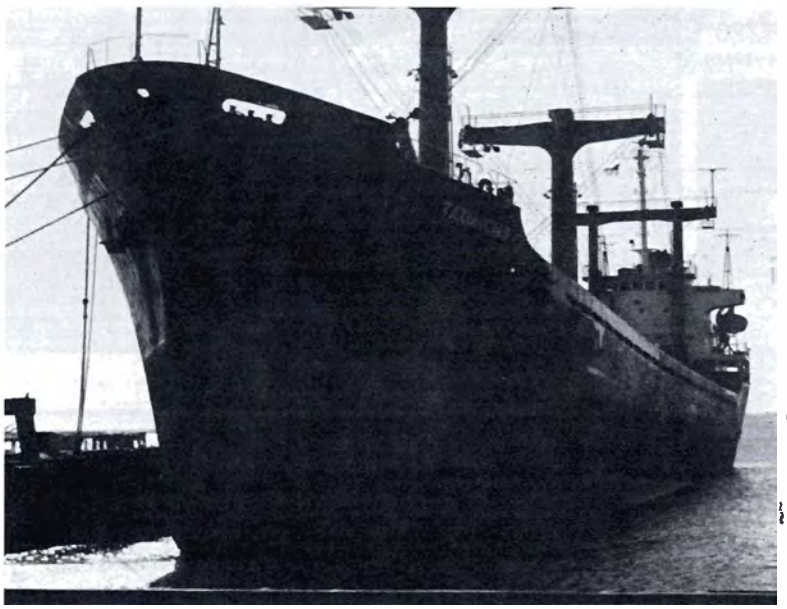
Chemical Transportation Advisory Committee (CTAC)

DATE and PLACE: The meeting will be held on June 8, 1995, starting at 9:30 a.m. in room 2415, Coast Guard headquarters. The meeting is open to the public.

AGENDA: One of the agenda items for this meeting includes a final report of the results from a hazard operability study completed by the Marine Vapor Control System Subcommittee. This report was completed for a vapor collection system design which was felt to have the most inherent risks during barge cleaning operations. This report will provide recommended guidance to respond to a proposed Texas regulation which will take effect on November 15, 1996 requiring all barges to collect vapors during tank-cleaning operations.

Also during the meeting, the Hazardous Substances Response Plan Subcommittee will provide a progress report regarding their review of response plan criteria for hazardous substance spills. This subcommittee was formed at the last CTAC meeting to develop and recommend hazardous substances response plan criteria for both OPA 90-mandated tank vessels and marine transportation-related facilities.

For further information, contact: CAPT Kevin J. Eldridge or LT Rick Raksnis, Hazardous Materials Branch. Telephone: (202) 267-1217.



Taxiarchis.

The *Taxiarchis* incident

By LCDR Steve Hardy

Although the Coast Guard's port-state control initiative may have begun in May 1994, the concept is anything but new to the officers and crew assigned to the Marine Safety Office (MSO) in San Juan, Puerto Rico. As an island commonwealth of the United States, Puerto Rico exports and imports most of its materials and goods by vessel, and is an active container port.

The Virgin Islands, a United States territory, is equally dependent on shipping, especially to import crude oil and export refined products from a St. Croix refinery, which has the largest capacity in the Western Hemisphere.

A booming trade thrives between Puerto Rico and the Virgin Islands, as well as with other island neighbors in the Caribbean Sea. In addition, San Juan lies near two major Caribbean passes, making it an attractive stopping point for provisioning and bunkering. Vessels bearing the flags of most maritime countries call at ports under MSO San Juan's jurisdiction.

With mounting concern for the safety of foreign vessels calling at United States ports, even the most "routine voyages" can have unexpected changes in their itineraries when vessels come face-to-face with strict application of current international treaties.

One such encounter took place with MSO San Juan and the 387-foot, break-bulk freight ship, Taxiarchis in May 1994.

Arrival

On May 18, the 4,551 gross-ton *Taxiarchis* sailed into San Juan Harbor for bunkers. The Cyprus-flagged vessel was bound for St. John, Newfoundland, loaded with sugar from Georgetown, Guyana.

Shortly after the vessel tied up at Navy Frontier Pier, MSO San Juan was alerted about some very significant safety problems. Immediately an inspection team was sent to board the *Taxiarchis*.

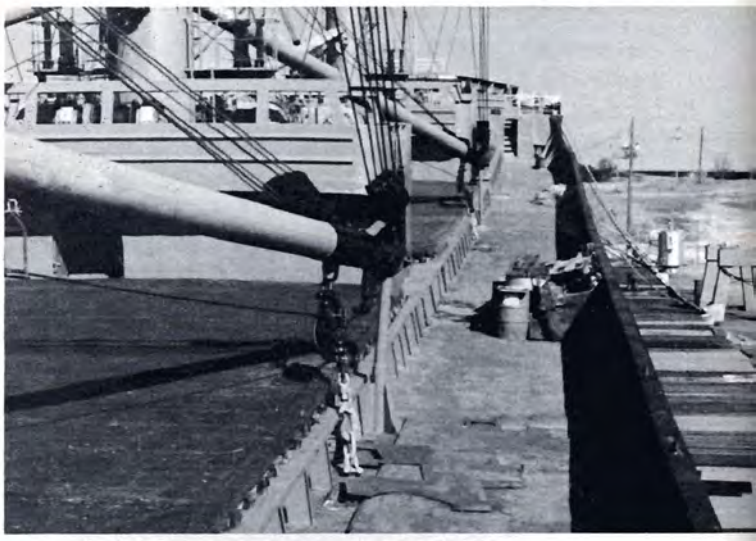
Deficiencies

A total of 34 major violations of international convention requirements were found. Among the most significant deficiencies were that the main bilge pump was inoperable, the emergency fire pump was missing, many watertight doors leaked, and there was free communication between several compartments, with at least one obviously leaking. In addition, there were numerous oil leaks from various pieces of engine room machinery, the oily water separator was inoperable and the vessel was heavily roach-infested. Also, the chief engineer did not have his original license on board.

What made the situation extremely alarming is that the *Taxiarchis* was on its first voyage after completing a major yard period and was just issued new certificates by its classification society. This was completely irreconcilable with the condition of the vessel, which had entered the shipyard with such serious problems that it was deleted from class.

Continued on page 68

Right: Starboard side of Taxiarchis looking forward.
Below: Broken flex loop on cargo/engine room fixed CO^2 fire extinguisher system.



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Response

To their credit, the classification society responded immediately, dispatching their senior surveyor for North America to San Juan to reexamine the vessel. He cooperated closely with the MSO and a non-exclusive classification society surveyor to resolve the ship's myriad deficiencies.

Once the necessary repairs were stipulated by the Coast Guard and the classification society, the cooperative crew set to work to correct the deficiencies.

Upon completion, the classification society issued new certificates good only for the voyage to Canada. There, remaining repairs were to be completed which could not have been done in Puerto Rico, due to the unavailability of necessary materials and facilities. There were structural concerns which could only be addressed when the vessel was off-loaded.

After 22 days in San Juan, the *Taxiarchis* was cleared to sail and departed on June 9.

Journey's end

The *Taxiarchis* set course for Canada, but never made it. The vessel went dead ship somewhere off the North Carolina — Virginia coast , and had to be towed into the Tidewater, Virginia area. It remains under the intervention of MSO Hampton Roads today.

But that is a story for another MSO to relate. . .

Photographs accompanying this article are courtesy of MSO San Juan.

LCDR Steve Hardy is the executive officer of MSO San Juan, P.O. Box 3666, San Juan, Puerto Rico 00902-3666. Telephone: (809) 729-6800, X308.

The real world

In an ideal marine world, each flag state would reasonably expect each vessel owner and operator to act responsibly. Each port state would expect the same of each flag state. Each vessel would have thorough examinations as indicated by the issuance of appropriate certificates. In addition, port states should be able to count on classification societies acting for flag states to perform similarly. All international maritime agreements are based on the premise that all agreeing parties will perform responsibly.

Examinations of such vessels as the *Taxiarchis* bring us to another world. In the first place, when the vessel arrived in San Juan straight from the shipyard with new certification, it should have been in tiptop condition, with perhaps a few minor discrepancies. This was not the case. Either the appointed classification surveyor didn't know his job or, worse yet, chose to ignore blatant violations. The society, to their credit, responded at once to the situation and terminated the surveyor.

Although many countries have delegated safety inspections to classification societies, it is the flag state which bears the ultimate responsibility for the condition of the vessel which they register. IMO resolution A.(739) (18) provides guidelines for the authorization of organizations acting on behalf of an administration (i.e., flag state). This guidance includes minimum standards for organizations, such as classification societies, which act on behalf of administrations. Adoption of the guidelines by flag states is widespread.

Close scrutiny by the flag state in the vessel inspection process, however, can yield tremendous gains in the overall safety of international shipping.

Not in our port!

By LT Joe Paitl

At the Marine Safety Office (MSO) in Cleveland, Ohio, our inspections are as thorough as they ever were, but we refined our strategy. As part of the new Coast Guard port-state control initiative to eliminate substandard foreign-flag ships from United States waters, we boarded the *Anezina*, a Maltese-flag bulk carrier on June 13, 1994.

The 17-year-old carrier is 422-feet long and has one low-speed diesel engine for propulsion. When the vessel arrived at the port of Cleveland, there were 27 crew members on board.

Due to numerous violations found during the boarding, a SOLAS intervention was initiated in writing by MSO Cleveland to the *Anezina*'s master. The vessel's customs clearance was withheld and the deficiencies had to be corrected before it could depart.

Violations

The Coast Guard boarding began with the usual paperwork check. All was in order, but since the *Anezina* was targeted as a high-priority vessel due to its flag state, a joint marine inspection and port operations boarding was conducted.

Upon examining the machinery spaces, a marine sanitation device holding tank was found to be without an access cover. Several hoses were running from various commodes and sinks, leading into the holding tank access opening. Another hose ran from the access opening, bypassed the original (clogged) sewage drain lines and lead directly into the bilge.

There was evidence of leaking, clogged sewage piping and a sour smell around the holding tank. Upon further examination, only one toilet was found to be operational. However, it drained on the deck around its base and overboard through a deck drain.

The showers had standing sewage and water because of improper drainage. It was evident that the showers were used as toilets because of the problems with the piping and the main sanitation device.

Hot water could not be produced on board. A crew member claimed that it had not been available since the vessel departed Europe 12 days earlier.

A spot check of the *Anezina*'s life saving equipment revealed that all inflatable life rafts were tied to deck stanchions and would be dragged under if the ship should sink.

A portable fire extinguisher in the motor lifeboat was discharged and severely rusted. When hydrostatically tested, every fire hose on board burst under normal working pressure, except one which leaked due to missing gaskets. Several fire hydrants would not produce water and all fuel vent screens were clogged.

In addition to requiring the fire-fighting and life-saving equipment deficiencies to be remedied, the Coast Guard ordered the master to correct the sanitary conditions and to provide temporary arrangements.

By the second day of the intervention, the sanitary conditions worsened. Upon entering the vessel, a strong, almost unbearable sour odor became apparent because of the severe sewage piping problems throughout the ship. All the lower-level passageways were wet with sewage backing up from shower drains.

Corrections

During the next four days a Cleveland ship repair firm worked around the clock. They repaired the sewage system and corrected all five major deficiencies. All defective fire hoses were replaced, clogged fire hydrants were flushed out, the rusted fire extinguisher was replaced in the motor lifeboat, clogged fuel vent flame screens were replaced, all inflatable life rafts were properly secured with weak links and hydrostatic releases. And finally, the sewer system was restored.

On June 17, the intervention letter was canceled and the vessel was allowed to depart the port of Cleveland.

Not in our port

It has been more than seven months since the *Anezina* boarding, but the crew's excitement as the conditions aboard their vessel improved is still vividly remembered. Port-state control enabled them to enjoy the adequate accommodations and reliable safety devices that we often take for granted in the United States.

Thanks to port-state control, this one did not get away. This vessel was not permitted to violate the laws and treaties that marine inspectors hold so very sacred — at least "not in our port."

LT Joe Paitl is the chief, Inspections Department, MSO Cleveland, 1055 East Ninth Street, Cleveland, Ohio 44114-1092.

Telephone: (216) 522-4405.

MSO Morgan City *applies targeting system*

By LT. Joel K. Moore

On May 1, 1994, the Coast Guard began an aggressive program to target foreign vessel boardings at owners, classification societies and flag states responsible for the operation of substandard ships. This should result in a noticeable decrease in the number of substandard vessels operating in United States waters as well as vessels operating under "flags of convenience."

Under this program, high risk vessels and those not in substantial compliance with appropriate international convention requirements may have cargo operations delayed or be denied port entry until deficiencies are corrected. Deficiencies are reported to the vessel's flag state and to the IMO.

Candidates

In the past, Coast Guard inspectors were not likely to board small foreign-flagged freight ships. This policy has changed. Now, port-state control measures require a qualified marine inspector to join boarding teams to assess the general condition of freight ships, as well as the giant tankers.

The goal is to weed out the most likely candidates for environmental disasters — substandard vessels.

Morgan City targeting

MSO Morgan City conducts port-state control boardings under a prioritized targeting system in use Coast Guard wide. There are four priority targets with number one being the most stringent.

Priority I:

1. stateless vessels;
2. vessels suspected of involvement in casualties that may have affected their seaworthiness;
3. vessels suspected of threatening the port or environment with hazardous materials' releases or ongoing oil discharges;
4. vessels specifically targeted for boarding by the commandant;
5. vessels targeted by an officer in charge of marine inspection or captain of the port for boarding prior to entry based on specific indications of being substandard; and
6. vessels scoring 17 or more points on a matrix of specific risk factors.

Priority I vessels are targeted for examination before entering a United States port. The boarding team includes a qualified marine inspector. When feasible, discrepancies are corrected prior to entry. At sea boardings, however, are not attempted when considered too risky or logistically impractical. In such cases, the vessels are targeted for examination and deficiencies must be corrected before cargo transfer or passenger embarkation.

If a vessel is targeted for boarding solely as a result of scoring 17 or more points on the matrix, and has been boarded within six months, the vessel may be reduced to priority III status, provided no serious deficiencies were identified during the last boarding.

Priority II:

1. vessels that do not have or are overdue for an annual tank vessel examination, biennial certificate of compliance examination or annual control verification examination;
2. vessels with overdue outstanding requirements issued at previous examinations;
3. vessels without previous Coast Guard examination records;
4. vessels specifically targeted for boarding by the commandant;
5. vessels that have not been examined since being released from a port-state intervention by the United States or any other party to an applicable international convention; and
6. vessels scoring seven or more points on the deficiency matrix.

Priority II vessels may be inspected in port, but are targeted for examination and repaired to correct deficiencies before cargo operations or passenger embarkation occur. Exemptions may be permitted based on a general exam, or other indications that a vessel is in substantial compliance with applicable standards.

If a vessel is targeted solely as a result of scoring seven or more points on the matrix, and has been boarded within six months, it may be reduced to priority III status, provided no serious deficiencies were identified during the last boarding.

Under port-state control regulations, certain tank vessels must be boarded before discharging their cargoes to Louisiana's deep-water offshore oil platform (port).

Priority III:

1. vessels that do not have or are overdue for an annual freight vessel examination or quarterly passenger vessel examination;
2. vessels alleged to be substandard by crew members, a professional association or trade union, or any other interested party;
3. vessels specifically targeted for boarding by the commandant; and
4. vessels scoring four to six points on the matrix.

Priority IV:

1. vessels possessing none of the critical criteria outlined under the higher priorities; and
2. vessels scoring zero to three points on the matrix.

Priority IV vessels are not targeted for boarding, but may be boarded at the discretion of an officer in charge of marine inspection or captain of the port.

Summary

Since May 1994, MSO Morgan City has conducted an average of three port-state control boardings a month. The process begins with a vessel's 24-hour arrival notice, which contains the information necessary to determine points on the risk matrix. If the vessel meets boarding criteria, an inspection is coordinated.

There has been some resistance to the additional boardings, with ship agents questioning why the Coast Guard has to inspect the vessel if it has valid certificates. However, if the vessel meets the criteria on the matrix, a boarding is in order.

Boardings have revealed such problems as faulty emergency generators, fire pumps and other fire-fighting equipment and additional areas of non-compliance with international standards. These findings justify the need for continued port-state control vigilance

Ultimately, our goal is to make the United States waters safe — free from life-threatening conditions, navigation hazards and hazardous materials spills. The port-state control boarding program is simply a tool to help accomplish this goal for the benefit of all.

Crew connects offshore platform cargo lines following port-state control boarding.

Another oil tanker lighters its cargo to the Louisiana Offshore Oil Port (LOOP).

Photographs accompanying this article are courtesy of MSO Morgan City.

LT Joel K. Moore is chief of the New Construction Branch at MSO Morgan City, Room 232, 800 David Drive, Morgan City, Louisiana 70380-1304.

Telephone: (504) 385-2936, X133.

Coast Guard expands foreign freighter exams

By CDR Jon Sarubbi

Background

Fourteen out of 15 deep draft vessels navigating United States waters fly a foreign flag. The Coast Guard is responsible for ensuring that these vessels comply with international maritime safety and pollution prevention standards.

Consequently, the Coast Guard recently expanded its foreign-flag freight vessel boarding program, which covers break bulk, container, bulk and other ships. Foreign passenger and tank vessels are covered under an existing boarding strategy.

Some 5,500 foreign-flag freight vessels call at United States ports every year. In the past, the Coast Guard examined these vessels to ensure their compliance with United States laws and regulations, primarily navigation safety, pollution prevention and hazardous material stowage requirements. Boarding officers rarely checked compliance with international maritime safety or pollution prevention standards beyond verifying documentary evidence, nor did they examine the role of "human factors" in vessel safety.

New emphasis

With new emphasis on port-state control, the Coast Guard increased scrutiny of foreign-flag vessels in two ways.

First, it developed a prioritized boarding system, focusing efforts on vessels with records of repeated substandard conditions, as well as their owners, operators, flag states and classification societies.

Second, the scope and depth of the examinations was expanded. They now include verification of structural integrity, life-saving and fire-fighting equipment, as well as human factor considerations. The latter address the familiarity of officers and crews with vessel and equipment operations, such as launching lifeboats and other emergency response demonstrations.

In addition to checking United States requirements, Coast Guard boarding teams also verify compliance with international convention standards, such as:

- SOLAS 74/78;
- Load Lines, 1966;
- MARPOL 73/78;
- STCW 78;
- Regulations for Preventing Collisions at Sea 1972; and
- Merchant Shipping (Minimum Standards), 1976 (ILO No. 147).

Left: Close-up of deteriorating hatch covers. Below: deck strewn with dilapidated fire-fighting equipment, pipes and litter on foreign-flag freighter.

Lifeboat found on foreign freighter has several serious deficiencies.

Two tiered examination

First tier: The boarding team first checks necessary certificates, log book entries and pollution prevention records. The team then embarks on a general walk-through of navigation, accommodation, deck and machinery spaces. During this examination, the presence and condition of required navigation, fire-fighting, life-saving and pollution-prevention equipment; on-board living conditions; structural integrity and watertightness of hull and fittings; and general housekeeping and cleanliness of machinery spaces are all checked.

This general examination is conducted to the extent necessary to determine that the vessel, its crew and equipment comply with applicable international and domestic requirements. Evidence of proper maintenance is also confirmed. If a vessel's certificates are valid and no serious deficiencies are discovered, the examination is generally terminated at this point. In most cases, only the first tier examination is conducted.

Second tier: When serious deficiencies are found, the boarding team will conduct an expanded examination, which is a more comprehensive inspection of navigation, life-saving, fire-fighting and pollution prevention equipment. This is usually triggered if one or more of the following conditions is apparent during the general examination of a vessel:

1. the vessel's certificate(s) are clearly invalid;
2. ship's logs, manuals or other required documentation are not on board, not maintained or falsely maintained;
3. serious hull, equipment or operational deficiencies may exist;
4. operational shortcomings;
5. cargo transfer and other operations not being conducted safely;
6. involvement of the vessel in casualties such as cargo spills or collisions due to failure to comply with operational requirements; and
7. inability of key crew members to communicate with each other or others on board.

Detention

A port state may detain a vessel in its waters for violations of international standards concerning:

1. vessel design, construction, equipment and manning requirements;
2. discharge of pollutants; and
3. hazardous on-board working conditions.

In extreme cases, the Coast Guard may deny a vessel entry into United States waters. Under domestic law, vessels may also be detained or restricted in navigation or cargo operations, such as by a captain of the port order.

The number of restrictions has increased dramatically since the new boarding program was initiated. For example, in FY 1993, the Coast Guard placed more than 300 operational restrictions on foreign-flag freight vessels. In the first three quarters of 1994, that number jumped to more than 700.

Not surprisingly, the number of deficiencies detected has also increased during the same period from just over 5,700 to 7,100.

Conclusion

In general, sanctions are removed when serious deficiencies are corrected or the vessel is brought into substantial compliance with domestic and international standards. While the program may cause some inconveniences, the benefits far exceed any burdens.

Improved compliance with international safety standards will decrease the risk of marine casualties and pollution incidents caused by substandard vessels in United States waters.

CDR Jon Sarubbi is chief, Merchant Vessel Manning Branch, Merchant Vessel Personnel Division. Telephone: (202) 267-0230.

Port-state control controls cargo too

By CDR Greg Adams

The Coast Guard's new port-state control program is aimed at the thousands of foreign-flag vessels carrying more than 97 percent of America's import/export cargo through United States ports. Ships, however, are only one part of the picture. The cargoes they carry and the risks associated with them are also a critical element of a comprehensive port-state control program.

For example, intermodal containerized cargo now accounts for the vast majority of non-bulk cargo moving through United States ports. Today, over 16 million, 20-foot equivalent units of intermodal freight containers are shipped annually through United States ports, double the amount of a decade ago. And the number increases from three to five percent a year.

At the same time, the volume of containers transporting packaged hazardous materials (hazmat) has also increased significantly. The Coast Guard estimates that more than two million intermodal freight containers of hazmat pass through United States seaports each year. With these enormous increases, there is far more potential for hazmat incidents due to noncompliance with safety regulations.

Container inspection

As the primary enforcement agency for the transport of packaged hazmat goods by water, the Coast Guard is in a unique position to intervene and inspect these imports and exports as they pass through United States ports. In response to the increased port-safety risk posed by containerized hazmat and to ensure compliance with hazmat safety regulations, in May 1994, the Coast Guard launched a new container inspection program. This program directly supports the Department of Transportation's (DOT) strategic goal for intermodal hazmat safety, which is to "significantly improve the safety of transporting hazardous materials on our air, water, surface and pipeline transportation network."

In FY 1994, Congress funded the container inspection program for approximately $3.6 million a year and authorized 76 new positions to " . . . enable the Coast Guard to ensure compliance of intermodal freight containers with the provisions of the Hazardous Materials Transportation Act and the International Safe Container act."

The program includes:

- fifty-one new container inspection positions at 26 coastal marine safety offices;
- a ten-member training and assistance team at the Transportation Safety Institute in Oklahoma City, Oklahoma, to promote standardization of container inspection operations and provide field unit training;
- a coordination and administrative staff at Coast Guard headquarters; and
- eleven general positions for overall fiscal, personnel and administrative support of the program.

From May through October 1994, Coast Guard inspectors examined more than 620 individual containers, and observed hazmat safety deficiencies in one-third of the containers. Such noncompliance rates have been consistently identified in earlier interagency hazmat container strike force operations and pilot programs conducted in the ports of New York and Los Angeles/ Long Beach.

Emphasis

The emphasis of the new container inspection program is enforcement and compliance to ensure that non-compliance costs are not viewed merely as routine business expenses.

A risk-based approach is being pursued to focus limited inspector resources toward shipments posing the greatest danger. Risks may be based on particular hazmat cargo types, shippers' records of compliance or a combination of both. To establish a risk base-line, the criteria uses import/export data, DOT's Unified Shipper Enforcement Data System and other internal and external intelligence information.

At present, however, there is no definitive federal hazmat data base correlating enforcement information between maritime, rail and highway modes of transportation. It will take several years to quantify the necessary data to develop a comprehensive baseline to identify high-risk container shipments. It will be a dynamic process which will be constantly modified as more complete information becomes available.

Inspection process

The container inspection process starts with a local captain of the port randomly selecting a sample population to be examined, and then further identifying high-risk containers within the selected sample.

An actual inspection consists of a detailed examination to ensure that the container is in good repair and structurally sound; that hazmat cargo is properly documented, packaged, marked, labeled, stowed, secured and segregated from incompatible materials, and otherwise in conformance with applicable federal (49 CFR 171-176) and international regulations (the Container Safety Convention and the International Maritime Dangerous Goods Code.)

In addition to freight containers, marine portable tanks and other hazmat conveyances are examined for compliance with hazmat regulations and structural soundness.

Door-to-door protection

The inspection program also improves rail and highway safety for hazmat containers. This is because the logistics of door-to-door waterborne freight and tank container delivery also depends on rail and/or highway transportation. The ports are the junction between marine and surface transportation. Therefore, the Coast Guard has the first and last look at intermodal hazmat containers moving through the ports.

To eliminate duplication of inspection effort and exchange hazmat container information and provide inspector training, the Coast Guard entered into memorandums of understanding with the United States Customs Service and the National Cargo Bureau, Inc. These agreements, coupled with state and local cooperative efforts, provide extra container inspection "outreach" benefits through information and resource sharing.

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DOD support

Recently, the Coast Guard provided container inspectors and explosive-handling supervision to assist the Department of Defense (DOD) in containerizing its sealift deployment of munitions and combat-support equipment. This was the first time that Coast Guard inspectors provided domestic and overseas expertise concerning DOD compliance with applicable federal regulations for munitions and combat-ready equipment shipping in and out of strategic United States ports. Such cooperative efforts ultimately benefit United States strategic interests helping to expedite DOD outload and retrograde munitions and equipment shipments during real sealift operations.

Conclusion Traditionally, port safety has focused on maritime activities within the immediate port area, including navigation, cargo and fueling operations and waterfront facility safety. With the new container inspection program, port safety has expanded to address not only intermodal issues, but such nontraditional facilities as land-based common carriers, freight forwarders, intermediaries and shippers.

This new program employs education, interagency corporation and enforcement to increase both government and private sector compliance. In addition, it will increase regulatory compliance of businesses and individuals who ship and receive hazmat through the extensive rail and highway transportation network serving United States ports. It will also benefit DOD's sealift resupply operations.

At a time when the Coast Guard's port-state control of maritime activities is growing, the container inspection program will control packaged hazmat moving through United States ports more effectively, thereby improving intermodal safety throughout the world.

Photographs accompanying this article are courtesy of the Port Safety and Security Division.

CDR Greg Adams is chief of the Port Operations Branch, Port Safety and Security Division.

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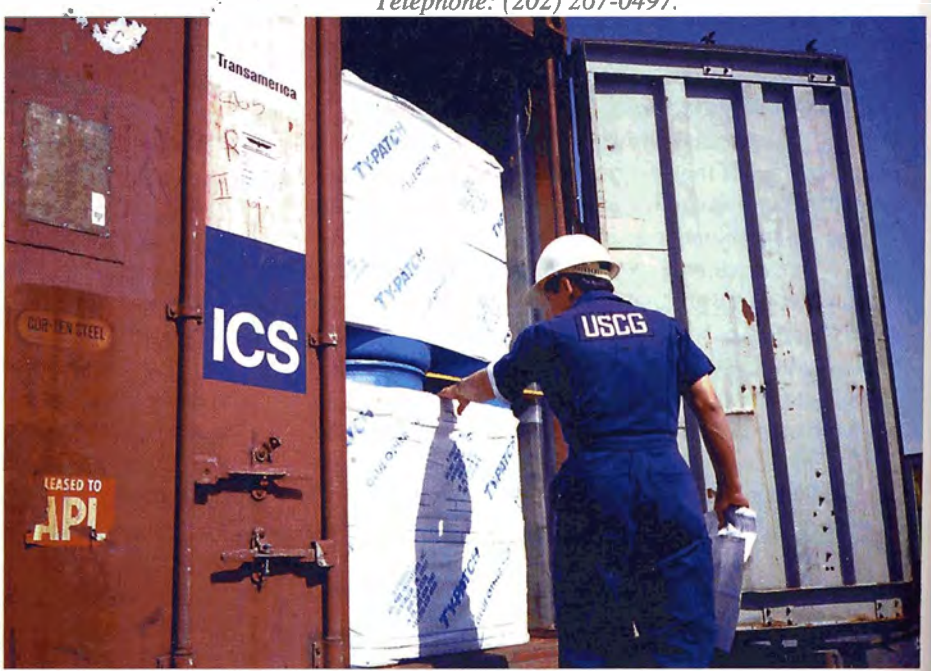

Photographs on the front and rear outside covers, and on this page are all of the port of Houston, Texas, courtesy of the Port of Houston Authority.