

THE ROLE OF CLASSIFICATION AND THE CLASS SURVEYOR

Classification societies are private voluntary organizations drawn from the maritime industry. American Bureau of Shipping is one of the leading classification societies in the world and is a founding member of the International Association of Classification Societies (IACS). Through ship classification services, ABS **promotes** the safety of life and property at sea, and environmental protection. ABS, like other class societies, does not and cannot “guarantee” the safety of life, property or the environment because it has neither the authority nor the resources for such a purpose. Further, there are several other indispensable components to maritime safety- including diligent owners, competent crews, effective port state control and thorough insurers.

Classification societies arose both out of the interests of the marine insurance market in evaluating risks and the idealistic view that maritime safety can be made better if everyone tries to make it better. Class societies are not detective agencies rooting out every possible defect in a ship. The initial and continuing assumption is that anyone who classes a vessel is equally devoted to the goal of promoting the safety of life and property at sea and that any shortcomings are the result of ignorance or inadvertence, not malice. Classification is still voluntary and still depends on owners and other interests disclosing problems with vessels, not covering them up. Class societies receive limited compensation because the ideal is to make the service available to all who want a second opinion on their ship and the benefit of a review against Rules no one shipowner or shipyard could develop.

ABS has to be impartial in order to achieve its mission of promoting safety. To achieve its impartiality, ABS draws its members from all segments of the marine industry. Individuals, not companies, are elected to membership and serve on ABS committees. In keeping with its role as a neutral arbiter of standards, ABS is a non-profit organization. ABS does not have shareholders. No stock is issued and no

dividends are paid. All fees received are used to maintain and develop services for the benefit of the maritime industry.

Role of Classification

Today's Classification Society typically has two roles in relation to a vessel-classification and statutory certification agent. These two separate and distinct roles can be briefly described as follows

- **Classification- A representation by Class as to the compliance, at the time of survey, with certain structural and mechanical minimum requirements as set forth in the Class Society's Rules, guides or other criteria.**
- **Statutory Certification- Certifying agent under a delegation of authority from a Maritime Administration for requirements of international and National regulatory instruments. For example, Class may perform a survey on behalf of a Flag administration related to the requirements of the Loadline Convention.**

For purposes of **classification**, the Society utilizes its own Rules, guides and procedures. Decisions related to the relative degree of compliance with these criteria are rendered by the Society, who applies and interprets the relevant criteria. At the request of clients (usually Shipowners and Shipyards), classification societies survey ships and marine structures during construction and after construction in accordance with their own Rules and Regulations.

Ship **classification** has two basic aspects. One is the process by which standards are established and updated; the other is the process by which the standards are administered.

ABS **establishes standards, known as Rules**, for the design, construction, and periodic survey of vessels through an internal staff and an international network of committees comprised of individuals eminent in their field. These committees are made up of naval architects, marine engineers, shipbuilders, engine builders and other technical, operating and scientific personnel associated with the worldwide maritime industry. These individuals serve without compensation.

As with the product of any committee deliberation, most Rules are in some sense a compromise. There are compromises due to the limits of the community's knowledge of science and technology at a given time, compromises between the ideal and the practical, compromises just to achieve consensus. Thus while we aspire to perfection we do not pretend we have achieved it. Do not confuse a classed ship with a perfect ship. A classed ship is simply one that meets the class society's Rules, Rules developed by human hands and human minds.

Outside forces have become more of a force in Class Society rule-making. Directives from the IMO and other bodies, such as the European Union, are supplanting the traditional rule making of Class. If you have dealt with governmental bodies, you know that often there is little flexibility in their directives, and a great impact. Cooperative efforts within IACS and other forums are leading to the formulation of more and more unified or common rules. The Rules that get applied in the future may be coming from governments, not Class.

The Rules are administered by ABS personnel worldwide. The first step is a design review and analysis process to verify that the mechanical and structural details of the vessel conform to the Rules. When the vessel is constructed, the Surveyor verifies that the approved plans are followed as to Rule requirements, good workmanship practices are followed and in other respects the Rules are complied with. Surveyors apply normally accepted examination and testing standards to ships and component parts, or, in this era of quality systems, review the document chain for certain components where permitted by the Rules.

Once the vessel is completed and in service, a vessel does not automatically remain in class. As specified in the Rules, ABS conducts surveys at regular intervals to make sure the vessel is being maintained in class. Periodic surveys are performed on a five-year cycle of annual, intermediate and special surveys. Additional surveys may be required in the event of casualties, damage, or other events that may affect class. The ship owner is an integral part in the survey process. The owner must notify class of any condition which might affect class. If there is the least question, the owner should notify class and schedule a survey to answer any questions. Without cooperation from the owner, the classification system will not be as effective.

For the purpose of **statutory certification**, the Society normally operates under a delegation of authority from the Flag Administration that delineates the criteria to be used and their interpretation. The final decision as to the acceptability for the purpose of **statutory certification** rests with the Flag Administration. The Classification Society performs its certification duties as an agent of the Flag Administration, and is subject to the terms and conditions applied by the Flag.

Most countries have **two parallel systems** for promoting maritime safety and pollution prevention. The first system is usually government regulation of ships flying its flag (“flag states”) and is aimed at protecting the flag state’s citizens and their property. “Flag” normally refers to a ship’s Port of Registry. This is chosen by the shipowner to register his ownership of the vessel. Ships and their owners have to follow the **National Regulations** of the flag, that is, of the country where the vessel is registered.

Second, most countries adopt at least some of the many international conventions drafted to address marine safety issues. Through the International Maritime Organization (IMO), the family of nations has promulgated a number of **unified**

regulations, such as those issued under the SOLAS Convention (including International Safety Management Regulations), International Loadline Convention and MARPOL. Although the Conventions are uniform they require implementation and often leave room for interpretation requiring either analysis by the Maritime Administration of the Flag state or analysis and interpretation by a private body. Since classification societies already dedicate so much time and effort to promulgating Rules for ships and marine structures, many governments have delegated routine questions of Convention implementation and application to classification societies.

When a classification society performs its statutory **certification or classification** work it does not design, manufacture, control, install, operate, manage, own, repair, maintain or derive the commercial benefit from the vessel, equipment or the installation it surveys. Classification Societies like ABS have an important but *limited* role. Classification societies are not guarantors of a vessel's condition. Classification societies do not even address the wisdom of the shipowner's choices, as long as those choices are not prohibited by the Rules and pertinent statutory instruments.

The ship owner is at all times in control of the vessel, its crew and operations. The owner has invested (considerable) sums into the operation and may derive a significant profit from the vessel. It is the owner who is responsible for the selection of the shipyard to build the vessel. It is the owner and the shipyard that are responsible for the selection of the mechanical systems and equipment placed on the vessel. It is the owner who decides how to use the vessel, in what service, and with what cargoes. It is the owner who is responsible for the maintenance and repair of the vessel on the basis of the continuous experience with and observation of his vessel. The owner is at all times able to direct the vessel, stop her, divert her and subject her to further investigation and repair if necessary. At all times the owner is in full commercial and factual control of the vessel. Class, on the other hand, sees the vessel infrequently and for short

periods. Class cannot control the vessel or its operations. In fact Class has less influence over the operation of the vessel than pilots, the crew, officers and the charterer.

Recognizing the substantial risks of shipping, still substantial today despite thousands of years of experience, modern civilization has given shipowners various devices to limit their liability. International conventions limit the shipowner's liability to a pre-determined amount, but the most obvious device is the limited liability corporation. In most countries (including the United States) a ship is the sole real asset of a one-ship corporation. A ship owning interest can limit its exposure by forming separate corporations for each ship, as well as taking advantage of the limit of liability available under statutes and conventions.

Likewise, shipyards routinely limit their liability via "red letter" clauses in their shipbuilding and repair contracts. Yet, class with a much more limited involvement is not afforded anywhere near the same levels of protection enjoyed by owners and shipyards. To be sure, class does attempt to gain some limited protections via contract but it derives statutory benefits in very limited circumstances, no direct benefit from international conventions or treaties and is not positioned to receive the liability benefits experienced by one-ship corporations. Even insurance companies have a limit on their exposure through policy limits. As such, class is the only significant player in the maritime world without an effective limit of liability. Some might say that this situation can be dealt with by adequate liability insurance, but doesn't that hold true for all of the players involved? Why should class with the least involvement and lowest fee earning potential bear the lion's share of liability? Also, given the exposure to liability in today's world, this type of thinking might well render class societies uninsurable.

A class society may perform, literally, hundreds of thousands of surveys and plan reviews each year. Class and statutory survey work often relates to assets of

high value, and therefore class is potentially exposed to high risks. The average statutory fee is \$1000- the risks potentially assumed do not correspond with the fee charged. They should correspond.

Various IMO Conventions, Treaties, Rules and relevant case law in the United States, United Kingdom and elsewhere have established and refined over many decades a tried and tested system of liability apportionment which places the primary responsibility on shipowners for the safe operation of their ships and for damage and losses arising from their failure to operate their ships properly. It would be unwise to interfere with this sophisticated system of checks and balances by imposing liability on the classification societies which simply does not reflect the classification societies' limited level of involvement or the modest income they derive from their surveys.

Surveyors' Role

Once a vessel is ready to be constructed, a surveyor(s) is assigned to the shipyard and copies of all plans reviewed by the class society's technical offices are sent to them for guidance in checking the actual construction as it progresses. The shipyard has informed any subcontractors or suppliers that their products are to meet classification society standards where applicable. The hull steel, the principal parts of the machinery and boilers, and equipment such as anchors and chains are tested and inspected at the manufacturer's plant by other surveyors. If the boilers and engines are constructed outside the shipyard (as is common practice today) the units are surveyed through their construction by the attending surveyor.

A class surveyor will attend a vessel at the shipyard from keel laying to delivery. The purpose is to verify that the plans (reviewed by the technical offices) are followed as far as the Rules require, good workmanship practices are applied, and the Rules are adhered to. During the construction of a vessel built to class,

the surveyor witnesses, at the place of manufacture or fabrication, tests of materials for the hull and certain items of machinery, as required by the Rules. They also survey the building, installation and testing of the structure and the principal mechanical and electrical systems. Throughout this time, the surveyor maintains communication with the owner and the shipyard to make sure the Rules are understood and followed, and to assist in resolving difference related to the Rules. Once again, the surveyor's attendance is not a guarantee of the vessel's condition. The Rules do not require a surveyor to be everywhere and see everything. Surveyors look at representative samples of the workmanship, fit-up, and assembly.

All through construction, a surveyor generally witnesses tests ranging from welder qualification tests to hose tests to inclining experiments to sea trials. Let me repeat, however, surveyors are witnesses. They do not run any of the tests. They do not decide when or how or by whom the test should be conducted. Surveyors are often called out in the middle of the night to witness a test, and while they may think, given the studies of circadian rhythms, that it is foolish to run tests of heavy machinery at 3:00 a.m., their duty is to watch carefully and report on what they see, not to question the wisdom of the owner or shipyard.

It should be stressed that surveyors are not inspectors and they do not supervise the construction or installation of equipment. When the surveyor is notified that an item of machinery or the hull is ready for them to witness a test, it is understood that the shipbuilder's test crew has already tested the items, found any defects and corrected them. The surveyor's visit is to merely verify that the builder's quality control is functioning.

When completed, the vessel undergoes sea trials attended by the ABS field surveyor to verify that the vessel performs in accordance with the Rule requirements and to demonstrate the satisfactory operation of machinery,

steering gear, windlass, pumping arrangements and electrical equipment, along with any other items required for Class.

When the surveyor is satisfied that all is in order, he issues an Interim Classification Certificate, pronouncing the vessel in compliance with Class requirements. The Classification Committee then considers the surveyor's reports, and if in agreement, the vessel is assigned classification and a Classification Certificate is issued.

Summary

Throughout the whole process, the criterion for approval or acceptance is the same: does the item comply with the Rules at the time of the survey? ABS's concern is NOT whether the ship is economically efficient or conforms to the latest and best practices, or is "gold-plated", but rather that it **complies with the Rules**. Classification Societies **do not enforce the construction or repair specification. They do not supervise** the building of vessels or other marine structures. They simply ensure that the systems for inspection and testing provided by the shipbuilder are sufficiently complete to enable a degree of certainty on the quality of the structure or vessel is obtained. This is a completely different exercise from the role of an independent Surveyor who might be employed by a Shipowner to permanently oversee the building of a structure. The Classification Society does not guarantee that there are no faults within the vessel, its machinery or equipment. It does however state that the conditions under which the structure was built meet their Class requirements and that the testing arrangements carried out by the shipbuilder demonstrate the quality obtained by that Builder meets the Classification Society requirements.

There needs to be a clear understanding of the role of Classification Societies - **THEY DO NOT SUPERVISE THE CONSTRUCTION OR OPERATION OF THE VESSEL**. This is a point that must be clearly communicated and understood:

- It is the responsibility of Designers and/or Builders to decide which Class and Rules they wish to build the vessel to.
- ABS does not have responsibility for design or supervision of the construction. The Classification Society compares the Designer's submission to their Rules in force at the time. In the case of ABS, the Rules are developed and approved by a Technical Committee process, which is comprised of various individuals with a collective wide range of technical experiences. Even if the Rules are challenged with respect to certain applications it does not follow that ABS has failed in its duty to apply the Rules in force at the relevant time to the design submitted.
- Neither the Rules nor the Class Society surveyor can or should provide a guarantee or an absolute security of the construction. Only the Builder, who maintains the requisite control of construction, can provide any guarantee with regard to the construction and the Designer with regard to the design. A vessel built to Class Rules can suffer a structural or equipment failure. The Rules of any reputable Classification Society such as ABS are developed over a period of time, largely based on design and construction that has been successful or fulfilled the purpose in the past. The Classification Society does not guarantee that there are no faults within the vessel, its machinery or equipment. It does however state that the conditions under which the structure was built meets Class requirements and that the testing arrangements carried out by the shipbuilder demonstrate the quality obtained by that Builder meets the Classification Society requirements.

