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The Role of Classification Societies in Maritime Industry

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Abstract: Classification societies have been playing an important and unique role in maritime industry by setting technical standard regarding shipbuilding and maintenance, and providing technical verification and other technical services. This paper has examined the history and major activities of classification societies at the beginning. In order to clarify the role of classification societies played in maritime communities, it has further discussed their relationship with International Maritime Organization (IMO), flag states, port states and industries. Consequently, classification societies are essential for safer shipping and clearer oceans.

Key words: classification societies; IACS; technical verification; technical services

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'Safer shipping and clearer oceans' is the aim of maritime industry. During the past several decades, a great amount of improvements in preventing marine pollution and loss of life have been achieved with the efforts of the whole maritime circles, including shipowners, shipbuilders, flag states, port states, underwriters, shipping financiers and charterers as well as organizations. Among them, classification societies have been playing an important and unique role by setting technical standard regarding shipbuilding and maintenance, and providing technical verification and other technical services. With their specific knowledge, experience and expertise, classification societies through their leading body, International Association of Classification Societies (IACS), have gained wide respect of shipping industry. With the blooming world trade, it demands higher standards of ship safety and environmental protection, the burden inevitably falls primarily on classification societies^[1].

1 The History of Classification Societies

Classification societies came into existence in 18th centuries to fulfil the need of marine insurers and shipowners. At that time, coffee houses, bars and inns were places for insurers to gather and exchange the information of ships that they covered, however, the hearsay is not reliable. In order to provide insurers reliable information on the seaworthiness of the ship, the first classification society was founded in 1760 and was named as Lloyd's Register (LR) to remember the owner of the most famous coffee-house within maritime circles, Edward Lloyd.

Later on, the concept of classification caught on around the world. Following LR, Bureau Veritas (BV) was founded in 1828. Registro Italiano Navale (RINA) dates from 1861; American Bureau of Shipping (ABS) traces its origins back to 1862. Furthermore, Det Norske Veritas (DNV) in 1864, Germanischer Lloyd (GL) in

1867 and Nippon Kaiji Kyokai (ClassNK) in 1899. In 20th centuries, more classification societies have been added to the list, such as, the Russian Maritime Register of Shipping (RS), 1913; the Croatian Register of Shipping (CRS), 1949; China Classification Society (CCS), 1956; Korean Register (KR), 1960; and Indian Register of Shipping (IRS), 1975.

Today, there are approximately 40 classification societies in the world but more than 90% of the world fleet tonnage is classed by members of the IACS, which is an association of leading classification societies. The establishment of IACS can trace back to the International Load Line Convention of 1930 and its recommendations. The Convention recommended collaboration between classification societies to secure “as much uniformity as possible in the application of the standards of strength upon which freeboard is based...”. Following the Convention, in 1939, RINA hosted the first conference of major societies, namely ABS, BV, DNV, GL, LR and NK, which agreed on further cooperation between the societies. It was not until 11 September 1968, IACS was formed by these seven leading societies, and then joined by RS, CCS and KR, etc.. Because of their combined and unique level of knowledge and experience, the value of IACS is quickly recognized by the maritime industry and it has become a crucial partner in the maritime circles^[2].

When classification societies first come into existence in 18th centuries, it was under the demand of insurers who need the reliable information about the seaworthiness of the vessels. They also provided technical assistance to shipowners to ensure that their vessels were seaworthy. However, in order to ensure the complete independence of classification societies, the clients of such societies were not shipowners, as is the case today, but marine underwriters themselves. From the information provided by these societies, marine underwriters were able to accurately assess their risks and to calculate insurance premiums.

During the latter part of the 19th century, a

significant change took place in the function of classification societies. Shipowners desired ‘ratings’ to be assigned to their vessels that would be valid for a significant period following a comprehensive survey of their vessels. Consequently, classification societies issued ratings that would be valid for a fixed period of time and, in turn, were paid certain fees for such surveys and certificates. The previous independence of classification societies was dwindling - the organization whose duty was to ensure that vessels maintained their standards was now being paid by shipowners for such services. On the other hand, classification societies obtained a new source of finance which assisted them in making technological advancements in their field. Detailed regulations were drawn up by classification societies regarding surveys, such regulations that were used as references in order to determine the safety of vessels. Maritime states commenced regulating matters relating to the safety of sea-transport and delegated many of their responsibilities to classification societies. As such, classification societies elected to sever their ties with marine underwriters and to strengthen their relationship with shipowners.

Today, the main object of classification has not changed much. It is still to supply information on the structural and mechanical conformity of ships and offshore units and to set rules and standards. Furthermore, besides the traditional classification services, they undertook the statutory certification services-governments authorize classification societies to ensure that vessels flying their flags are in compliance with the SOLAS Convention, the Load Lines Convention and the MARPOL Convention.

2 Classification Societies’ Major Activities

Classification societies are private organizations which undertake to arrange inspections and advise on the hull and machinery of vessels during their construction and thereafter, with respect to their

seaworthiness, and place vessels in grades or 'classes' according to the society's rules for each particular type. Classification societies' major activities fall into two categories: classification and statutory certification. Classification is the traditional part of their functions, which consists of:

(1) A technical review of design plans and related document for a new vessel to verify compliance with the applicable rules.

(2) Attendance at the construction of the vessel in the shipyard by a classification society surveyor(s), and at the relevant production facilities that provide key components such as the steel, engine, generators and castings, to verify that the vessel is constructed in accordance with the classification rules.

(3) Upon satisfactory completion of the above, the shipowner's request for the issuance of a class certificate will be considered by the relevant classification committee, or another body, of the class society and, if deemed satisfactory, the assignment of class will be approved and a certificate of classification issued.

(4) Once in service, the owner must submit the vessel to a clearly specified program of periodical class surveys, carried out onboard the vessel, to verify that the ship continues to meet the relevant rule conditions for continuation of class.

There are four status of class, namely, assignment, maintenance, suspension and withdrawal of class. Class is assigned to a vessel after the completion of satisfactory surveys. In order to maintenance the class, the vessel should be operated and maintained in a proper manner by shipping company, and should be subject to the specified program of periodical surveys after delivery. These surveys including annual surveys, intermediate surveys and class renewal/special surveys. In the case of the maintenance of a vessel are not complied with or the survey program is not carried out properly, the vessel will loss its class temperately (suspension) or permanently (withdrawal) which result that the vessel will lose its insurance automatically and

will be able to trade.

Comparing with the private role played by classification societies, they have another public role, i.e. statutory certification services. The responsibilities of classification societies increased after they are delegated by flag states to perform statutory certification. According to the United Nations Convention on the Law of the Sea (UNCLOS), the flag state has certain duties to the ships registered. In particular, under Article 94, the flag state must "effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag" and take "such measures for ships flying its flag as are necessary to ensure safety at sea...".

However, without the specific knowledge, experience and personnel, it is not realistic for flag states to fulfill their responsibility. Therefore, by their sufficient expertise and world-wide availability of highly qualified personnel, classification societies come out to be the best candidates who can act on behalf of flag states. The statutory requirements commonly cover three areas:

(1) Aspects of ship's design and its structural integrity-load line and stability in the intact and damaged condition, essential propulsion, steering equipment, etc..

(2) Accident prevention, including navigational aids and pollution and fire prevention.

(3) The situation after an accident (fire, flooding) including containment and escape.

Some or all of these statutory requirements may also be reproduced in a particular class society's rules. As states in SOLAS Ch II-1, Reg 3-1, in addition to the requirements of the other (SOLAS) regulations, ships shall be designed, constructed and maintained in compliance with the structural, mechanical and electrical requirements of a classification society which is recognized by the Administration, or with applicable national standards of the Administration which provide an equivalent level of safety.

3 Classification Societies Relationship with Other Maritime Regimes

In order to clarify the role of classification societies played in maritime communities, it can't avoid speaking about their relationship with International Maritime Organization (IMO), flag states, port states and industries^[3].

Classification societies' role through their leading body, IACS, has been recognized by IMO immediately after the establishment of IACS. In 1969, IACS was given the consultative status by IMO, and still it remains the only non-governmental organization with Observer status, which is able to develop and apply rules. The international instruments developed by IMO address in detail safety aspects other than hull structures and essential shipboard engineering systems. It is the classification that embodies the technical rules, regulations, standards, guidelines and associated surveys and inspections concerning the design, construction and through-life compliance of a ship's structure and essential engineering and electrical systems. (IACS, 1997). IMO respects class rules as the technical foundation for a safer world fleet and the elimination of substandard ships.

As mentioned before, under the UNCLOS, it is the responsibility of flag states to implement safety regulation to the vessels entitled to fly their flag. However, considering the lack of technical and personnel resources of flag states, SOLAS 1974, the Load Lines Convention 1966 and the other International Conventions permit the flag Administration to delegate the inspection and survey of ships to a Recognized Organization (RO). So far, more than 100 Administrations have already authorized members of classification societies, to apply the statutory regulations of the Conventions and related Codes and Resolutions, either wholly or partly, and issue statutory certifications on their behalf. However, in any case, the flag states shall fully guarantee the completion and efficiency of the

inspection and survey, which is covered by a written agreement between the flag state and the classification society. And it is the flag state that is primarily responsible for the ships in its fleet. When a ship is suspended or withdrawn from class, IACS members notify the flag administration concerned and publish the information e.g. on its website. As a consequence, the flag administration generally invalidates the statutory certificates concerning construction and equipment.

However, even if there are responsible flag states, there are also many flag states that could not fully implement the conventions and regulations, in particular those small flag states with large number of fleets. And also because shipping is an international business, it's usual for a vessel trades in an area far away from the regions controlled by its flag state. In this case, the enforcement of the national legislation of the flag state over its vessels becomes practically impossible. These problems have been partly overcome by Port States Control (PSC), which has become another vital element in the safety net of maritime communities. Due to the inseparable relationship between class rules and statutory regulations, "PSC takes class rules as the vital point of reference." (Mathiesen, 1998). It is an obligation of classification societies, especially the IACS Members, to strongly support PSC. IACS has been fully involved in the cooperation with PSC from the following way: making class data available to the Port State; providing training program to the port state officials; attending on board the ship if the ship is detained by PSC due to class-related deficiencies and giving assistance when necessary; carrying out inspections and surveys if requested by the appropriate authorities of a Port State; liaising with the associated flag state and shipowner when detainment happened.

Shipowners are regulated by flag state, port state and class and it is their obligation to maintain their ships in a safe and seaworthy condition. While classification societies setting standard and conducting survey, it requires the cooperation of the owners who retains the

ultimate responsibility for the safe maintenance, operation and manning of vessels. At the same time shipowners are the 'clients' who pay money to classification societies that may impose pressure on them when balancing the technical and commercial factors. In order to avoid improper competition between them and also to seek a higher standard of ship safety, IACS Member societies are working together to establish a set of common rules applied to all the ships classed.

In the past two decades, the purpose of the IACS is to work towards the improvement of standards of safety at sea and the prevention of pollution of the marine environment, to provide for communications and cooperation with relevant international and national maritime organizations and to co-operate closely with marine industries of the world^[4].

4 Conclusion

As a whole, classification societies, particularly IACS Member societies, have been playing a vital role in the maritime industry. With more resources at work

than anyone else, IACS has been and intends to be even more at the forefront of making new rules and developing the technology to prevent both pollution and loss of life. The continued existence of classification societies is likewise essential for the promotion of safety of life and property at sea, as well as to conserve our sensitive environment and marine resources.

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论船籍社在航运中的作用

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摘要: 船籍社为船舶建造和检验设定标准, 并提供技术支持和服务, 因此对航运业起着举足轻重的作用。本文探究了船级社的发展历史和业务, 并进一步讨论了船级社和世界海事组织、船旗国、沿岸国等关系, 从而探讨了船级社对航运安全和海洋环保的重要作用。

关键词: 船籍社; 国际船籍社协会; 技术支持; 技术服务

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