

On “The American Bureau of Shipping.”

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Mr. Chairman and Gentlemen.

It is my high privilege to be permitted to come before you, members of this society, to tell to you of the history, work, aims and ideals of the American Bureau of Shipping, America's Classification Society, the organization that has sent me to represent it temporarily upon the staff of Japan's Classification Society, The Imperial Japanese Marine Corporation.

Classification of Vessels of National Importance.

Classification of merchant vessels is indispensable to maritime prosperity and is thus a matter of national importance. A certificate of classification issued by a registration society is a guarantee that the vessel so classed is properly constructed, equipped and engined. Such a certificate assures the insurance underwriter and the owner as well that the seaworthiness of the vessel is undeniable and that its construction, equipment and power characteristics are in accordance with the requirements of the classification society. Therefore the risk peculiar to an inferior construction, engine and equipment is eliminated and only the hazards common to sea service remain to be considered. The result therefore of building to the rules and survey of a classification society, in so far as providing for and obtaining a proper construction, equipment and engine goes, is the assurance that the lives of those who travel by sea in vessels properly certified, and the vessels themselves with their cargoes, are to that extent safe guarded and thus become national assets.

Purpose of Classification.

The avowed purpose of all societies for the registration of vessels is to class them in

accordance with their degrees of strength and seaworthiness, with proper regard, on the one hand for the safety of life and property, and on the other to obtain the necessary strength and sea going qualities without impairing the earning power of the vessels by requiring them to carry around for their lifetimes, unnecessary weights of structure that reduce the cargo carrying capacities. A moral obligation rests upon the classification society, as the owner's representative, to prevent the incorporation of unnecessary weights in a vessel, there-by assuring a vessel of the maximum earning capacity, combined with satisfactory strength. Before classification societies established rules for the design and dimensions of hull, equipment and engine, vessels were built from experience gained by a long series of observations of vessels built from prototypes, with features characteristically bad eliminated.

Metal Construction Simplifies Classification.

Up to the last century all vessels' hulls were of wood and the motive media sails. With the advent of metal hulls and steam propulsion, ship designers were able to regard the hull as a girder, thus approximating the stresses brought upon the floating vessel, and design the motive power more nearly to accord with the resistance to be overcome. To arrange scantlings to meet such stresses and engines of adequate horsepower became the study of naval architects and marine engineers, the general principles involved being well known and carefully considered in any standard arrangement of scantlings and engines. Resulting from such investigations, combined with long sea experience, tables and rules have been prepared by the classification societies which insure that vessels built in accordance there-with will have the required strength to successfully meet the varying conditions of ocean traffic.

History.

On April 22, 1862, sixty years ago, the legislature of the state of New York incorporated the American Shipmaster's Association, the incorporators being well known in shipping and marine Insurance fields.

The purposes of the association were those of collocating and disseminating marine and commercially interesting information, of encouraging and advancing well qualified

commanders and officers of merchant vessels, of ascertaining and certifying the qualifications of such persons as shall apply to be recommended as commanders or officers, and of promoting the security of life and property on the seas. This last named purpose obviously carried with it the preparation and adoption of rules for construction and survey which, when complied with in the construction of a vessel, entitled it to classification in the association. The association continued to function under the title of "The American Shipmaster's Association" until the first of November, 1898, when by order of the supreme court of the state of New York, the association was authorized to assume the corporate name of "The American Bureau of Shipping."

The affairs of the Bureau are administered by a committee, representing various American Shipping interests and although the Bureau is incorporated, it has no capital stock and pays no dividends.

During the period that had elapsed from its original incorporation as the American Shipmaster's Association and its continuance as The American Bureau of Shipping, the work of classification had been chiefly confined to American built coastwise vessels. At one time the shipping interests of the United States under government aid, in the shape of wise legislation and encouragement, had assumed large proportions, but upon the withdrawal of such aid, and as a result of treaties favourable to foreign shipping, these interests gradually declined. This decline resulted in but a small number of merchant vessels built in America and this combined with the lack of vision on the part of the Bureau in not making alliances outside of its country, caused its power and influence to parallel the downward trend of American shipping. In the meantime foreign classification societies, from large and extensive experience, had so built up their staffs of advisers and surveyors, had so revised their rules and broadened their activities in all phases relating to building, insuring and salvaging vessels, that the American Shipowners found their interests best served by the building under foreign classification rules. This tendency became so pronounced that, prior to the Shipping Board assuming control of the building facilities of America, 96 per cent. of the seagoing vessels of the United States was built under the rules of foreign classification societies. Therefore, in 1915, the American Bureau found it essential to re-organize and to consider the advisability of forming connections

with foreign registration societies in order to enlarge its operations and usefulness.

Decline of American Shipping.

Before proceeding with the history of the Bureau it may be well to review the causes of decline of American Shipping. Foremost was the withdrawal of the discriminatory duties enforced by the government in favour of American vessels. This legislation had been so instrumental in building up the American marine that at one period American vessels carried by far the large part of the world's commerce. Another cause was that the American merchant-marine was entering and had entered into commercial treaties which placed American Shipping at a decided disadvantage with the carriers of other nations. The immediate result of the latter cause was that little interest was taken by the government in furthering the interests of the shipping of the United States from before the civil war until the beginning of the world's war, the only aid extended being in the shape of mail carrying subsidies. A further cause was that necessary internal developments absorbed the financial energies of the country.

The Bureau Re-organized.

During the second year of the world's war shipbuilding in the United States became much more active, and the American Bureau of Shipping, called a meeting for the purpose of considering the re-organization of the Bureau, for enlarging its usefulness by establishing faithful and accurate classification and register of merchant shipping and to aid in developing the merchant marine of the United States of America. To this end a committee of re-organization was appointed and a number of meetings were held in the latter part of 1915 and the early part of 1916. At these meetings various maritime matters were discussed, including the renewal of negotiations contemplating an amalgamation of the Bureau with Lloyd's Register of Shipping, as well as one with the Great Lakes Register; ultimately it was determined not to make the contemplated arrangement with Lloyd's but to purchase the Great Lakes Register from its owners and incorporate it with the Bureau as the Great Lakes Department and to continue the American Bureau of Shipping as a vital force in American Shipping, it being the judgement of the committee that such course would be

for the best interests of American shipowners, builders and underwriters, and from the fact that people in the United States began to have a belated sense of national pride in the affairs of their merchant marine which called for the classification of American vessels by an American society and to desire insurance of American vessels and cargo, by Americans for the benefit of America.

The Government Authorizes Classification.

Advances in connection with American shipping developed very rapidly from that date on, and congressional action, taken in connection with vessels owned by the United States, made it absolutely necessary that there should be an American Bureau of Shipping classification recognized as the authority for the proper classification of its vessels. It is obvious that no foreign classification society, or an American committee of a foreign classification society, could be accepted as an authority under which the interest of the American government could be properly served. The Bureau was convinced that the rules adopted by the British Corporation for the Survey and Registry of Shipping were the most scientific of the rules in force for the construction of steel vessels, and after conference with said corporation an alliance was made whereby the British Corporation represents the Bureau in the United Kingdom, and the Bureau represents the British Corporation in the United States, on terms and with rules mutually satisfactory. The salient features of such rules were well known to the framers of the Merchant Marine Act, which having been signed by the President of the United States, is now a law. This act provides for the classification of vessels, other than military, owned by the United States, and for such other purposes in connection therewith as are the proper functions of a classification bureau. The act directs that all departments, boards, bureaus and commissions of the Government recognize the American Bureau of Shipping as their agency, as long as that Bureau continues to be maintained as an organization which has no capital stock and pays no dividends. The recognition by Congress of the American Bureau of Shipping as the American authority places it at once in an official position for the classification of government vessels and induces further classification for privately owned vessels, and establishes it as a body capable of advising on essential kindred subjects; to this end, matters such as the determination

of load line and freeboard were referred by the government to the Bureau for advice and cooperation in considering legislation for a government load line for American vessels. It has thus become necessary for the Bureau to come at once into the field so largely occupied by foreign classification societies, fully equipped to assume the requirements and duties of an American classification society.

Foreign Classification Societies.

It must be recognized that the Bureau had to contend with foreign registration societies, some over a century and a half old, whose growth had been marked by affiliation with insurance and salvaging companies which gave them a commanding position in maritime affairs. It must also be recognized that but six years has elapsed since the American Bureau of Shipping began to strengthen its forces and affiliations and to make faithful and accurate classification of vessels and registry of merchant ships, contributory to the development of the mercantile marine of the United States of America.

Record and Rules.

The Record as now compiled is a compendium of the general characteristics of the vessels admitted, in which are given the vessel's name and official number, the signal letters; the material of which the vessel is constructed, the number of bulkheads and decks whether vessel is built with double bottom or not; whether fitted with wireless outfit and submarine signal apparatus; the hailing port; the registered dimensions; the gross and net tonnage; when built and by whom; the owners; the particulars of engines, boilers and propellers and the class of the vessel are given; so that by referring to the Record the general information concerning any vessel is at once obtainable.

The Rules contain requirements for hull, engines and equipment, also tables containing scantling dimensions for vessels of typical lengths, breadths and depths.

Alliances with Foreign Societies

Following the alliance with the British Corporation, one of the same nature was made with both the Imperial Japanese Marine Corporation and with the Registro Italiano. It

will thus be seen that working arrangements have been made by the American Bureau of Shipping with the Imperial Japanese Marine Corporation, the British Corporation and the Registro Italiano, by which each society represents the other in its home country. With the Imperial Corporation, Mr. Fred. F. Perris, long with the British Corporation, served as technical adviser up to the present year, and now, the writer, has the honour of serving as surveyor with the corporation. The head offices of the Imperial Corporation are in Tokyo, with branch offices at Yokohama, Kobe, Nagasaki and Osaka, at the present time it can be said that all these alliances have been very satisfactory.

Surveyors Placed Abroad.

During the past years offices and exclusive surveyors have been placed in Hamburg, Antwerp, Havre, Brest, Bordeaux, Rio de Janeiro, Buenos Aires, Valparaiso and Shanghai and additional non-exclusive surveyors in Spain, Portugal and all important Mediterranean ports, including Constantinople.

Increase of the Bureau.

The service furnished by the Bureau has grown in importance during the past six years and has proved worthy of the confidence of the government, and of shipowners, as well as underwriters. In 1916 there were 3 offices with 8 exclusive surveyors, at present there are 25 offices with 138 exclusive surveyors, from which it may be inferred that the Bureau is working in full harmony with the ship builders, and is rapidly gaining the confidence of shipowners, builders and underwriters.

Outlook and Forecast.

One of the most important features of a classification society is that its surveyors shall be men in whom the shipowner, the shipbuilder and underwriter have confidence as to their experience, judgment and technical knowledge. From the increase of the Bureau, it is apparent that the Bureau, by the process of selection and elimination, is acquiring a staff with the desired qualifications. The technical committee of the Bureau is headed by no less an authority on hull construction than Admiral D. W. Taylor, U. S. Navy, than whom no expert speaks with greater weight on matters of construction and design. There

is much to be accomplished by the Bureau in strengthening its forces and making affiliations for appraisals of damages and salvaging, but the record of the last six years argues well that these matters will be fully and ably dealt with. The American Bureau of Shipping has awakened to its opportunities and is strengthening its forces and enlarging its borders to meet the revival of interest in the merchant marine of the United States.

There can be no doubt that it is the patriotic duty of American Shipowners, underwriters and builders to aid and encourage the Bureau in its efforts to build up an organization which, with its affiliations, shall be second to none in the world in the service rendered in classing, surveying, appraising, underwriting and salvaging vessels owned by the shipping interests of America. If we are to have a prosperous growing merchant marine, we must also have an American Classification society, capable of rendering aid of the best class to every phase of the Shipping industry.

After Word.

All classification societies, however different their origins and how widely separated their home offices, must function similarly and should maintain like organizations, any differences being due to local national and commercial conditions, but the Imperial Japanese Marine Organization and the American Bureau of Shipping have more than most in common. Both organizations were born many years ago but laid more or less quiescent after incorporation. The American Bureau, because its country America lacked seagoing merchant vessels, and the Imperial Corporation because the Imperial Government of Japan classes ships and functions as a classification society. America at one time performed similar service for her merchant shipping, having the inspectors of her Steam-Boat Inspection Service, Department of Commerce survey vessels during construction, periodically and when damaged, but finding this involved a large and unwieldy number of inspectors, great expense, and even then failed to win the approval and support of the shipping and marine underwriting interests, abandoned by far the greater part of its merchant vessel inspection to the American Bureau as shown by the incorporation in her (America's) "Rules and Regulations" for Ocean and coastwise vessels. Steam Boat Inspection Service, Department of Commerce, of paragraph 9, Rules VI, which reads.

"In the inspection of hulls, boilers, and machinery of vessels, the rules promulgated by the American Bureau of shipping respecting material and construction of hulls, boilers, and machinery, and the certificate of classification referring thereto, except where otherwise provided for by these rules and regulations, shall be accepted as standard by the inspectors of this service." (Secs. 4405, 4417, R. S.)

Thus the United States government has given the American Bureau of Shipping authority not only to survey and class its own vessels, (Merchant Marine Act.) but also retained the Bureau to survey and class, in lieu of herself, all vessels under the American flag (pa. 9, Rule. VI, quoted above).

If the United States has found it expedient to employ for the survey and classification of vessels under her flag, an organization controlled by her mercantile marine interests, then it occurs to the writer and he respectfully offers the same for the consideration of the Imperial Government, if the latter may not find it expedient and profitable to retain Japan's Classification Society to survey and class Japan's Merchant fleet.

Discussion.

Dr. Imaoka, Member :—Mr. Chairman and Gentlemen : It is much to be regretted that Dr. Terano who had intended to discuss the paper read by Mr. John Martin, is unable to be present here to-day owing to illness.

Instead of Dr. Terano's proposed discussion, therefore, I will take this occasion to say a few words, as what Mr. Martin has just read had reference to classification work in which I myself have a concern.

However, it seems to be unnecessary to an audience such as this to expatiate on the importance of classification work to every maritime nation, for all principal maritime nations in Europe and America have their national classification societies, among which are the Lloyd's Register of Shipping and the British Corporation Registry, both of which have so far advanced on the road to success, without any government aid but that of being given its recognition, and others there are, such as the Germanischer Lloyd and the American Bureau of Shipping which have grown to their present prosperity through the

cooperation of both the government and the people.

In all other maritime nations the authority to make surveys on vessels has been given to their respective classification societies, while here in Japan, although a national classification society has been founded with a staff of efficiently trained officers which has been given the privilege of making some surveys on vessels, yet the greater part of the classification survey is conducted by the government and has not yet been entrusted to the society, the government still functioning as such. This constitutes an obstruction detrimental to the growth of classification work, and may presumably be due to the fact that on account of the short time elapsed since the organization was placed in working order, the government has not been brought to the belief that their interests are amply safeguarded in the hands of the classification society.

As matters stand thus, while the energetic pursuit on the part of those actually concerned in the work is most needed, it is earnestly hoped that both the government and the people will take such measures as will lead the classification work in Japan to develop as it should, so as to permit the latter to be placed on an equal footing with that of any other maritime nation, thereby enabling its classification society to become fit to take its proper place with foreign societies.

I quite agree with the speaker in wishing that the Japanese Government may find it expedient to retain the Japanese classification society to survey and class Japan's Merchant fleet.

Finally, I most sincerely hope that the time will soon come when the word "America" in his present paper shall be replaced by "Japan," so far as the government control is concerned.

Mr. John Martin:—I deeply regret that absence from my office on official business has prevented me from receiving and answering before this late day your valued favor of Dec. 2nd, with its enclosed copy of Dr. J. Imaoka's discussion of my paper "The American Bureau of Shipping," for my comment.

Dr. Imaoka's discussion develops the interesting and to Japan the commercially important fact, that the government of Japan, departing from the policies of all other maritime nations, functions as a classification society, largely to the exclusion and disadvantage of the Imperial Japanese Marine Corporation.

In America, it has been found that the Marine underwriting and Shipping interests require the service of a classification society, immediately responsive to and controlled by them, for the economical operation and dispatch of their far flung business. In addition, it has been found in America that the costs of classification and similar survey, when performed by the government, were prohibitive, so the American Government has almost entirely relinquished all but a nominal supervision over its shipping, into the hands of its classification society.

Enquiry among the marine insurance underwriting companies in Japan disclosed that government classification or certification of vessels, is not considered essential when discussing proposed insurance rates with owners or operators for vessels or cargoes; but the certificate of recognized classification society has a decided influence in effecting low rates of insurance upon prospective risks.

I sincerely echo Dr. Imaoka's hope that before long the Imperial Government will have entrusted the classification survey and certification of its merchant fleet to Japan's classification society as in that way only lays the hope of attracting domestic as well as foreign wealth to invest in the none to attractive fields, even under the most favorable auspices, of marine insurance.

I am very grateful for Dr. Imaoka's discussion of my paper which has developed these several points of importance to the Shipping interest in Japan and have to thank you for your prompt transmission of the same.
