Inland Navigation News Letter

Editorial

Dear readers,

As we enter the final quarter of the year and look back at our activities since January we can see that 2019 is going to rank among our busiest years. Developments recorded this year include an improved version of the Rules, enhanced software, as well as co-operation on a range of hi-tech, innovative and promising subjects. Meetings were also held with several European institutions and national administrations to assist them with improved safety for inland navigation vessels.

Classification stands on the historic principles of safety and confidence, while it must also be at the forefront of technological innovation. They say a watched pot never boils, but we cannot say the same about our team, who have risen to all the challenges put in front of them. You can learn more about their achievements, and the developments underway, in the articles to follow.

We wish you all a busy and successful autumn,

Truly Yours,
Jean Michel Chatelier / Director

BV promotes greater inland safety

In a bid to protect the environment and stimulate trade, many countries are devising plans to develop their waterway infrastructure. These countries are promoting greater waterway use by industry, and encouraging companies to increase their share of waterborne traffic in the transport mix. Clearly, river transport using modern vessels is more eco-friendly than truck and motor traffic on urban networks. Since maritime harbours are often located near river mouths, transhipment onto inland navigation vessels that are designed for short voyages in estuaries and restricted maritime areas can reduce chain breaks and bring significant advantages. In addition, many large lakes cross national borders, and sailing straight to the opposite bank may render transportation easier, cheaper and more ecological than going round a stretch of water by road or rail and crossing several borders.

At the same time, we must remember that waterborne transport requires safe, reliable vessels, governed by appropriate regulations and operated by qualified crews. As such, a lack of suitable technical regulations, or even excessive requirements arising from the international maritime codes laid down for ocean ships, may be a barrier to the development of transportation on waterways, lakes, estuaries and coastal waters.

Today’s classification societies were established in the Industrial Age when severe weather conditions generated significant casualties, bringing tragedy and financial loss to the shipping industry. In the decades following, the classification societies have

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- BV promotes greater inland safety
- European regulatory news (ADN safety committee and CESNI)
- Croatia recognises Bureau Veritas
- “RAIN EMPRESS” offers state-of-the-art propulsion
- “Rudder” software receives upgrade
- Checking compatibility for dangerous goods list
- Managing survey schedules
become key partners for national maritime administrations and flag states, contributing significantly to improved ship safety. Classification certificates were gradually considered a prerequisite and have become obligatory in the registration of ships as evidence of the ship’s reliability, quality, maintenance and even seaworthiness.

Inland navigation is beyond the scope of the International Maritime Organization (IMO) and the industry evolved somewhat later than the maritime industry so it has not followed the same uniform approach. Bureau Veritas, one of the founders of IACS (International Association of Classification Societies), supports a consistent approach to inland navigation safety by publishing specific classification Rules. The last edition of the Rule book NR217 allows assignment of the notation “Estuary plus” for inland navigation vessels operating in estuaries, large lakes and other maritime environments where the maximum significant wave height is limited to 2 metres. This notation is completed with the operating area, stating the specified zone where the vessel may operate, together with the maximum wind force and possibly other restrictions (e.g. route, current speed, etc.).

The notation “Estuary Plus” relates to the hull structure (depending on the wave height), the minimum forward draught (to avoid slaming), bow height, freeboard, “safety clearance” (position of the lowest non-weathertight openings), freeing ports and intact stability (weather criterion). Additionally, there are requirements relating to crew safety (bulwark and guardrails) and self-sufficiency (double propulsion systems, bilge system in open cargo holds, power sources). The classification survey scheme is also boosted by an annual survey and a dry-dock inspection at mid-term.

Vessels intended for operation in rougher waters than

ADN Safety Committee (August 2019)

The Informal Working Group of Recommended Classification Societies was very active at the last ADN Safety Committee. Indeed, some 20% of the documents submitted to the Committee for discussion were sent by the Classification Societies. Most of these documents related to interpretations and improvements in the text of the ADN. The classification of the zones in ADN 2019 needs to be clarified, particularly for zone 1 around the openings of zone 0. A proposal aimed at clarifying these definitions, and resolving the discrepancies between different language versions, will be drafted for the next session.

The Informal Working Group “Membrane Tanks” has made substantial progress and a list of provisional amendments has been presented to the Safety Committee. The degassing of tank vessels at reception facilities was also discussed. Following the review of five different documents, an informal working group on degassing of tank vessels has been established.

pure fluvial vessels must secure authorization from the relevant national authorities. BV is keen to take part in the development of the industry by helping authorities set suitable operational conditions in relation to the parameters of the classification notation “Estuary Plus”.

The statutory regulations laid down by the State Administrations apply in addition to the classification rules. These may involve additional, complementary requirements which take into account national law and the specificities of the internal and territorial waters, the latter involving possible agreements with neighbouring countries. The regulations should also provide guidance on those topics not included in the scope of classification, such as radio communication, navigational lights, habitability, qualification of crew, etc.

As is the case for seagoing ships, Bureau Veritas may be delegated by a national administration to certify inland navigation vessels according to the statutory regulations. Certification with adaptation according to the ISM Code (International Safety Management) - although not strictly applicable to inland navigation vessels - may also bring a strong improvement in operational safety. Such a delegation may cover all or part of the regulations, using a working agreement which permits the classification society to act on behalf of the national authority while the latter maintains its right to fix the framework and terms of the arrangement.

Bureau Veritas is keen to build strong and reliable partnerships with national authorities and is available to provide assistance towards both class-related issues and regulatory provisions. Any queries should be addressed to: do_ivm@bureauveritas.com

During the last meeting of the CESNI/PT, we saw a lively and constructive discussion on the subject of accidents involving inland navigation vessels (particularly passenger vessels). This matter will be discussed further at the September meeting.

One frequent cause of accidents is collision between inland vessels and bridges. A workshop will be organized at the end of September to identify, evaluate and discuss the factors involved in these incidents and possible solutions.

The Working Group CESNI/PT/ELEC is currently preparing a specific chapter (Chapter 12) on “Electronic Equipment and Systems”. Discussions have begun on a possible revision of the Model of Certificate.

Croatia recognises Bureau Veritas

The Ministry of Sea, Transport and Infrastructure has recognized Bureau Veritas as an approved certification body for the inspection of inland navigation vessels registered in the Republic of Croatia and carrying dangerous goods (as defined by the ADN regulation). Our surveyors in Rijeka and Split are qualified for new constructions and vessels in service, and are available to assist clients with the relevant surveys needed to operate on European waterways. Contact: mar_cro@hr.bureauveritas.com

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Reederei Jaegers has recently put into service the “Rain Empress”, a new ADN type C tanker with a diesel-electric propulsion system which is also equipped for future hybrid propulsion. Measuring just 66.86 metres in length and 7.15 metres wide, the “Rain Empress” is one of the smallest type C tankers built for a purpose other than bunkering. The concept is for full diesel-electric propulsion with two generators of 300 kW and one generator of 100 kW. By combining two or three of the generators, the vessel can adapt to its precise energy needs: for example, two pods for propulsion, the bow thruster, the cargo pumps and other services on board. As the vessel is sailing on the Amstel River, the vessel has also been designed to meet future requirements imposed by the city of Amsterdam. The aft engine room has a separate compartment to store a future battery system, with sufficient capacity to enable the ship to pass through the centre of Amsterdam with zero emissions.

Bureau Veritas has developed several rules related to battery systems. The dedicated rules are contained in our seagoing ships rule, NR467, and can also be applied to inland navigation vessels. Provided the installation is fully in line with the rules, the following additional class notations can be assigned: “Battery system” is assigned when batteries are used for the purpose of propulsion and/or electric power supply during operation. “Electric Hybrid” is assigned when the vessel is equipped with an Energy Storage System which is used to supply the electric propulsion and/or the main electrical power distribution. Depending on the system installed, the notation “Electric Hybrid” is completed with:
- PM for Power Management mode (load smoothing mode, peak shaving mode, enhanced dynamic mode)
- PB for Power Backup mode
- ZE for Zero Emission mode

Our Rules are available online at http://erules.veristar.com.

“Rudder” software receives upgrade

BV’s “Rudder” software performs calculations of rudder scantlings according to Bureau Veritas Rules: rudder stock, rudder blades, pintles, bearings and rudder horn cross-sections. Following the publication of the new edition of the Rules for the classification of inland navigation vessels, NR 217, in February 2019, a new improved version of “Rudder” has been released. This new version shows modifications in horizontal flange couplings, cone couplings, rudder stock bearing, pintles and single plate rudders.

The software may be downloaded at https://marine-offshore.bureauveritas.com/rudder-software-innovative-rudder-scantling-technology.

For questions or assistance in using the software, do not hesitate to contact us at: marine.software@bureauveritas.com.
According to § 1.16.2.5 of ADN regulation, classification societies must draw up a list of all the dangerous goods accepted for carriage for each tank vessel as an appendage to the certificate of approval. This list will include provisions for certain substances and their compatibility with the construction materials of the vessel which come into contact with the cargo. This includes installations and equipment. Indeed, dangerous goods may generate uncontrolled reactions, such as combustion, toxic gases, pressure increases, and the formation of unstable or corrosive substances. The vessel’s hull and cargo piping system may also be affected, which could imply a risk in future loading and unloading operations. At the same time, the cargo may also be affected, resulting in substantial losses for the cargo owner. Apart from the manifest incompatibility between some metallic materials and specific products (e.g. UN1824 vs galvanized steel), most of the chemical compatibility information must be provided by the manufacturer — either of the material (e.g. coating and lining) or equipment (flange, connection device, gauge, etc.). When it is aware of a lack of compatibility between materials and substances, Bureau Veritas enters the information into the software used for issuing the list of products. As a result, any product that has been identified as incompatible with the particulars of the vessel’s equipment is automatically removed. However, due to the huge number of substances carried in tankers (ADN table C), and the possible variations of chemical components, not to mention the number of different manufacturers worldwide, there are countless possible combinations. In addition, classification societies are not provided with all the relevant information from manufacturers, and therefore the product list is issued with reservations in order to remind the shipowner and operator that the final check for compatibility between vessel and product ultimately remains their responsibility. If confirmation is not reached based on the formal description of the product to be transported, a request can be made to the manufacturer of the coating, lining, piping equipment etc for verification of an absence of compatibility. In order to draw up the ADN product lists correctly, Bureau Veritas encourages both the chemical industry and the manufacturers of shipbuilding materials to provide updates when there are potential issues of compatibility between identified substances and given materials. Manufacturers should also provide instructions on surface preparation and conditions of application for coating materials and linings. Finally, cargo areas of tankers in service should be subject to periodical assessment to ensure that protection against possible incompatibility remains intact. For that purpose, we refer readers to BV guidance note N607.

Our teams remain available to assist in all related matters:

managing survey schedules

Bureau Veritas strives to meet customers’ needs at all times and as part of this goal is implementing new tools to help with management and survey schedules. The aim is to provide clients with several inspection options, offering a selection of surveyors in several locations, in order to improve overall efficiency in meeting requests. In future, any request for an on-board survey will be entered and tracked in a new global agenda, accessible to all BV Marine offices where planners have been assigned to manage survey requests. The main role of the planners will be to support the Ship in Service/Systems Operations managers, by optimizing the survey schedule. All BV surveyors worldwide will have a clear view on the agenda, which will be available 24/7. With the new software and management system, client requests will be answered more quickly, and a first-level analysis will be carried out to estimate: time needed for survey/audit; a proposed assignment of a surveyor/auditor in a suitable area; and finally quick confirmation to the client of availability. Planners will be able to amend the local agenda in real time.