



PRESS RELEASE

Annual meeting of the RINA Technical Committee

The annual meeting of the Technical Committee, the body which expresses its technical opinion as regards the RINA rules for ship classification was held today in the RINA offices in Roma, concomitantly with the celebrations for the 150th anniversary of the founding of RINA. The meeting was chaired by Umberto Masucci, Chairman of the Ship and Aircraft Brokers and Agents Fund (FAMA) and Vice Chairman of the Federation of the Sea.

Among the new rules examined, the following are highlighted:

- requirements for natural gas used as fuel on board ship (**Gas fuelled ships**)
- requirements for permanently moored floating units for natural gas liquefaction (**FLNG**)
- new Rules for the classification of units operating in the **Caspian Sea** and in other similar areas

for which a summary is given below.

The list of Technical Committee members is shown below.

The RINA Technical Committee for the current quadrennium consists of:

Chairman:

- Avv. Umberto Masucci, Chairman of the Ship and Aircraft Brokers and Agents Fund (FAMA) and National Advisor to CONFCOMMERCIO

Members:

- Prof. Ing. Antonio CAMPANILE, Professor of Offshore Structures at the University of Napoli Federico II
- Dr. Aldo COSENTINO, Member of the Board of Directors of the Institute for Environmental Protection and Research (ISPRA)
- Dr.ssa Annamaria CRUCIANI, Division 4 Internal Maritime Safety, Ministry of Infrastructure and Transport
- Ing. Giuseppe DEMOFONTI, Senior Scientist in Mechanical Metallurgy – Materials Development Centre
- Ing. Filippo GRASSIA, Senior Scientist of the Research Area of the CNR
- Ing. Domenico IMPAGLIAZZO, Division 4 Internal Maritime Safety, Ministry of Infrastructure and Transport
- Ing. Giorgio LA VALLE, CEO MES (Marine Engineering Services)
- Ing. Roberto MARTINOLI, CEO of Grandi Navi Veloci
- Ing. Luigi MATARAZZO, Vice CEO FINCANTIERI
- CV Bruno SPANGHERO, Captain. Head of the Ship Design Branch Department of research, design, means, materials- General Staff of Italian Navy



Safety: New notation GAS FUELLED SHIPS for natural gas used as fuel on board ship

The cost of fuel, the new and more restrictive limits on air emissions, already established and about to enter into force or under review have compelled the industry to seek new technical solutions among which, also the possibility of using fuels other than traditional ones.

The use of natural gas offers:

- a total reduction in sulphur oxide emissions,
- a considerable reduction in nitric oxide emissions,
- a 20% reduction in carbon dioxide emissions

and at competitive prices according to current values and estimates for the near future.

It is thus necessary to give the industry a regulatory tool to ensure that the arrangement and installation on board of machinery using this type of fuel are such as to provide a level of integrity, from the point of view of safety and reliability, equivalent to that of a conventional installation.

The aim of the new notation **GAS FUELLED SHIPS** is to establish requirements for the use of liquefied or compressed natural gas (LNG or CNG) on board ship as an alternative to traditional fuels.

Offshore: Floating units for natural gas liquefaction (FLNG)

Floating units for the liquefaction of methane gas, its storage and subsequent offloading onto gas carriers for final transport to the area of destination, generally known as FLNG (Floating LNG) and also FPSO LNG (Floating Production Storage Offshore LNG), represent one of the most interesting technical and commercial sectors in the field of offshore hydrocarbon exploitation. The flexibility which these units offer in terms of positioning make them particularly attractive for use where it is necessary to eliminate environmental impact, consisting of a large gas liquefaction plant ashore, and also enable them to be relocated to different geographical areas, provided the environmental conditions are similar.

In the light of this interest and to be able to offer the industry a valid regulatory tool, RINA has developed ad-hoc rules for FLNG units, which are contained in the new Chapter 5 of Part E of the "Rules for the classification of Mobile Offshore Units and MODU". The new RINA rules cover aspects linked to hull structure and plants, related to both ship and processes. With reference to



the latter aspect, RINA has developed specific criteria, based on risk analysis, to be able to adequately deal with the safety aspects associated with use, in an offshore marine environment, of plants and machinery used in oil refineries on land.

The challenges offered by this new use can thus be met on the basis of the analysis and verification principles of the RINA Rules. They not only guarantee plant safety but also, at the request of the interested parties, their efficiency through specific certification of the new technology used, called Technology Qualification Certification.

Offshore: Units operating in the Caspian Sea and in similar areas

The ever increasing demand for oil has compelled oil companies to look for new fields in areas until now unexplored due to their severe environmental conditions.

One of these is the Caspian Sea characterised by:

- environmental temperatures varying between -35°C and +45°C,
- an ice thickness up to 0.6 metres,
- shallow waters,
- oil fields containing toxic gases (in particular H₂S),
- “zero discharge” environmental policies.

Bearing in mind the particularity and uniqueness of the area, RINA has developed (on the basis of traditional requirements applicable to seagoing ships) rules for the classification of offshore units operating in the Caspian Sea and in similar areas.

Some of these units have special characteristics and non traditional tasks. For example, the IBEEV (Ice Breaking Emergency Evacuation Vessels) are designed to operate throughout the year (hence the fact that they are also ice breakers) to safely evacuate personnel operating on offshore platforms in the case of an emergency.

For the latter, RINA has developed the new service notation: **IBEEV** which takes into account the main characteristics of these vessels:

- complete isolation from the outside (the air needed for the people on board as well as for the engines is provided by special pressure vessels),
- ability to sail through fire (pool fire),



- resistance to over pressure due to an explosion,
- ability to break the ice in shallow waters (traditional ice-breakers cannot operate in shallow waters).

Genova, 10 June 2011