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Specification of liquefied natural gas as a fuel for marine applications

*Spécification du gaz naturel liquéfié comme carburant pour les
applications maritimes*



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Foreword

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This document was prepared by Technical Committee ISO/TC 28, *Petroleum and related products, fuels and lubricants from natural or synthetic sources*, Subcommittee SC 4, *Classifications and specifications*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 408, *Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Introduction

Due to numerous economic and environmental factors, the use of liquefied natural gas (LNG) as fuel for marine applications has increased. The 0,10 % sulfur limit, in the sulfur emission controlled areas in Europe and the US, which entered into force on 1 January 2015 has been one of the major driving forces for using LNG as fuel for marine applications. The decision for the 0,50 % global sulfur limit from 1 January 2020 by the International Maritime Organization (IMO) might further increase the interest in LNG. The International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code) was a response to the need of guidance in this emerging market. Since LNG-fueled vessels are likely to bunker LNG in different parts of the world, a common specification is needed for ship owners, ship operators and LNG suppliers. It would help engine manufacturers and ship designers and it is beneficial for the development of this new alternative marine fuel market.

In 2018, IMO adopted an initial strategy on reduction of greenhouse gas (GHG) emissions from ships. The strategy includes the objective to peak GHG emissions from international shipping as soon as possible, whilst pursuing efforts towards decarbonizing the sector as soon as possible in this century. It also includes the objectives to reduce the CO₂ emissions per transport work and total annual GHG emissions from international shipping by 2050, with an interim target in 2030. Thus, LNG produced from renewable sources as biomethane that can reduce CO₂ emissions when used as marine fuel is also addressed in this document.

LNG is produced in different locations in the world in liquefaction plants. Large scale production facilities are often dedicated to specific markets such as natural gas grids and large power plants that use their own standards. This document takes into consideration this major constraint for any adaptation to marine applications specificities/requirements.