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## An exploratory study on global risk-assessment determination for gas-fuelled inland waterways passenger ships

The increasing focus on navigation sustainability is forcing the utilisa-

tion of alternative power sources on board of inland vessels. The adoption of Liquefied Natural Gas is for sure a good option to reach the imposed targets on pollutant emission reductions. However, the issues related to the gas storage on board increase the hazards for people and environment in case of failures compared to a diesel fuelled vessel. In this sense, the analysis of risks is of primary importance. Traditionally, the failure and risks individuation is mainly based on qualitative consideration. In this study a procedure to quantify the risk is proposed and is tested on two inland waterway vessel having two different LNG propulsion systems in stalled on-board. The proposed method is aimed to give a quantitative comparison between two designs.

**Primary authors:** Prof. MARINÒ, Alberto (University of Trieste); MAURO, Francesco (Universita' di Trieste, University of Rijeka); Prof. BUCCI, Vittorio (University of Trieste)

Presenter: Prof. BUCCI, Vittorio (University of Trieste)

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