



TECHNICAL INFORMATION

36 Myeongji ocean city 9-ro,
Gangseo-gu, Busan, 618-814
Republic of Korea

Phone : +82-70-8799-8867
Fax : +82-70-8799-8869
E-mail :
Person in charge: EUN Hyeonjun

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Subject : Issuance of ‘Research Report of Material Compatibility for Liquid Hydrogen Storage on Marine Application’

Interest in low-carbon and carbon-free fuels is increasing to decarbonize shipping within this century, and major developed countries are pushing for a hydrogen economy to meet their carbon-neutral goals. Hydrogen is a carbon-free fuel in itself and is used as a raw material for the production of alternative fuels such as ammonia and methanol, which is expected to gradually expand international hydrogen transport and trade.

Hydrogen should be treated in the form of liquid hydrogen for efficient storage in hydrogen fueled-ships and hydrogen carrier, but the industry's understanding of the materials used in the liquid hydrogen system and the related material test facility infrastructures are still insufficient.

Accordingly, since 2019, the Korean Register has established a test evaluation and analysis infrastructure for eco-friendly alternative fuel ultra-low temperature materials and conducted hydrogen environment simulation tests (ultra-low temperature, hydrogen metal penetration). As a result of this study, this research report establishes an evaluation method for materials such as hydrogen pipes and tanks, and presents standards for materials.

The Korean Register is publishing the "Research Report of Material Compatibility for Liquid Hydrogen Storage on Marine Application" to help customers understand the materials for applying the liquid hydrogen storage system for ships, so please refer to it for related tasks.

Attachment: Research Report of Material Compatibility for Liquid Hydrogen Storage on Marine Application

Distributions : KR surveyors, Ship owners, Other relevant parties

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