

Onboard Heat, Pressure and Boil-Off Gas Treatment for Stacked NGH Tank Containers

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Abstract : Despite numerous studies on the reserves and availability of natural gas hydrates, the technology of transporting natural gas hydrates in large quantities to sea has not been put into practical use. Several natural gas hydrate transport technologies presented by the International Maritime Organization (IMO) are under preparation for commercialization. Among them, NGH tank container concept modularized transportation unit to prevent sintering effect during sea transportation. The natural gas hydrate can be vaporized in a certain part during the transportation. Unprocessed BOG increases the pressure inside the tank. Also, there is a risk of fire if you export the BOG out of the tank without proper handling. Therefore, in this study, we have studied the concept of technology to properly process BOG to modularize natural gas hydrate and to transport it to sea for long distance. The study is expected to contribute to the practical use of NGH tank container, which is a modular transport concept proposed to solve the sintering problem that occurs when transporting natural gas hydrate in the form of bulk cargo.

Keywords : Natural gas hydrate, tank container, marine transportation, boil-off gas

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