

## 초저온 액화가스 단일 모듈 기화기의 열변형 구조 해석

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### Structure Analysis on Thermal Deformation of Super Low Temperature Liquefied Gas One-module Vaporizer

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#### 요 약

ABSTRACT: Liquefied gas vaporizer means machine to vaporize the liquefied gas as liquid nitrogen(LN<sub>2</sub>), liquefied natural gas(LNG), liquid oxygen(LO<sub>2</sub>) etc. In the air type vaporizer, the frozen dew is also created by temperature drop (below 273 K) on vaporizer surface. This problem increases as the time progresses and humidity increases. In addition, the frozen dew gradually becomes frost deposit consequently, heat transfer through vaporizer decreases because frost deposit form adiabatic sheet. Because of this reason, recent vaporizer system is installed as parallel type, this vaporizer system needs more expensive installation costs and more space. This study carried out structure analysis on the material of vaporizer along the working fluid flow direction using liquefied super low temperature gas. The structure analysis on the heat transfer was studied on the effect of geometric parameters of the vaporizer, which are length 1000 mm of various type vaporizer. This study also thermal variation on the working fluid through the internal vaporizer with analysis results and to present the data base.

#### 참고문헌

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