

Design of a CO₂ terminal with specification to minimize BOG for geological storage

박지현, 이 옹, 한중훈*
서울대학교
(chhan@snu.ac.kr*)

For carbon dioxide (CO₂) geological storage, a CO₂ terminal is required to storage temporarily and transport liquefied CO₂ to a reservoir on required specification. Due to cryogenic nature of the liquefied CO₂, however, not operating on enough insulation, boil off gas (BOG) is produced in pipeline and the storage tank. The BOG increases pressure in the tank and the pipeline, which may lead to safety problem and operation energy increments. This study presented design of the CO₂ terminal with operation specification to minimize the BOG in the pipe and the tank. This study was supported by Institute of Chemical Processes in Seoul National University, Energy Efficiency & Resources Programs of the Korea Institute of Energy Technology Evaluation and Planning (KETEP) grant funded by the Korea government Ministry of Knowledge Economy (No. 20122010200071), Energy Efficiency & Resources Development Program (2010201020006D-12-2-100) of the KETEP grant funded by the Ministry of Knowledge Economy (MKE), Industrial Strategic Technology Development Program (10031883) grant funded by MKE and grant from the LNG Plant R&D Center funded by the Ministry of Land, Transportation and Maritime Affairs (MLTM) of the Korean government.