

## Design and Operation Strategy of CO<sub>2</sub> Terminal

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With the advancements in carbon capture and storage (CCS) technology, much interest has recently been developed in the CO<sub>2</sub> transport options. This work is focussed on the design and operational strategy of CO<sub>2</sub> terminal which acts as a connecting link between CO<sub>2</sub> liquefaction and shipping section. The study is performed using dynamic analysis in order to have a realistic design. Three scenarios have been developed to define the operational strategy of the terminal as: loading case, idle filled tank case and unloading case. A reasonable equipment sizing has been done after consultation with vendors data and available literature. The heat influx to storage tanks include the heat leak from bottom, roof, dry wall and wet wall. This is important for careful quantification of heat flux across the system. Rigorous control loops are appended to keep the process variables at their set points. The results show that critical operational parameters remain within the allowed range for the safe operation of the terminal. This research was supported by a grant from the LNG Plant R&D Center funded by the Ministry of Land, Transportation and Maritime Affairs(MLTM) of the Korean government.