

Analysis and Improvement of Commercialized Vapor Recovery Unit(VRU) Processes on Carrier Ship

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AsGöthenberg Protocol signed in 1990obliged the reduction of the quantity of wasting VOCs(Volatile Organic Compounds), the necessity of installing SVRU(Ship Vapor Recovery unit) has been increased. For this reason, lots of researches for effectivelyrecovering VOCs on carrier ship are ongoing.Recently, main commercial SVRUprocesses utilize the method of adsorption, membrane separation, and cryogenic separation.

Sincethe design of offshore process has more constraints than that of onshore process, proper approachesto the VRU process on carrier ship need to be considered.

In this research, we performed comparative analysis among several commercialized VRU processes and proposed modified conceptual design of SVRUconsidering process efficiency and energy consumption using commercial process simulator.