

Techno-Economic Study of A Novel NGL Recovery Process for Offshore Applications

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A novel configuration of natural gas liquid (NGL) recovery process is proposed for offshore application. Nine representative patented NGL recovery processes were chosen and modified in their heat integration for offshore applications. Detail techno-economic analysis of the proposed configuration was performed with these selected conventional NGL recovery processes. The results illustrate that the proposed NGL configuration is most efficient among all the considered processes in terms of operating and capital cost. Meanwhile the cold residue recycle and the flashed vapor reflux process give the highest and the lowest capital cost requirement among other processes. The excellent heat integration and sharp separation efficiency of heavier components are the main highlights of the proposed NGL recovery process. This study was supported by a grant from the Gas Plant R & D center funded by the Ministry of Land, Transportation and Maritime Affairs (MLTM) of the Korean government. This work was also supported by Basic Science Research Program through the NRF funded by the Ministry of Education, Science and Technology (2012012532).