

Optimization of N₂ Expander Using Coggin's & MCD Algorithm

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As technology of computation is changing it helps to solve the complex model very fast and also the new algorithm for the optimization are available hence there is always possibility to improve the optimized cases. Modified Coordinate Decent (MCD) and Coggin's are presented in the ODDISAY system to process optimization problems. These algorithms are coded in Visual Basic and exploited for optimization of two process design problems developed in the Aspen Hysys™ simulator. Coggin's gave better result as compared MCD algorithm. This algorithm converges fast, easy handling of control parameters besides the simple implementation. In NG refrigeration process, high refrigerant flow rate and high overall system pressure are the physical cause of intensive energy requirement in base case that were successfully reduced by this. "This research 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 and also supported by Priority Research Centers Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education (2014R1A6A1031189). "