

Design of a Safe Plant-Wide Control for Acid Gas Removal Process

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Acid gas removal unit (AGRU) has an important role in removing acid gases. The failure of AGRU control system will lead to a performance reduction in the downstream process and/or a condition when acid gas exposed directly to the environment and people around the plant. The design of plant-wide control is one of the essential factors that determines the safe operation of a plant. In this work, the design of AGRU plant-wide control, including basic process control system (BPCS) and safety instrumented system (SIS), will be studied further. The BPCS and SIS can be designed with the help of dynamic simulator, which provide the behavior of equipment over time. The disturbance test is performed to see the process behavior over the feed composition, temperature, and flow changes. This study was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education (2015R1D1A3A01015621) and also supported by Priority Research Centers Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education (2014R1A6A1031189).