

Plant-Wide Control for Acid Gas Removal Process with Safety Consideration

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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. Hence, the identification and elimination of control system flaws can be performed, resulting in safe and sustained operation of the process. This study was supported by the Development of 300 MW Class Korean IGCC Demonstration Plant Technology of the Korea Institute of Energy Technology Evaluation and Planning (KETEP) and Doosan Heavy Industries & Construction granted financial resource from the Ministry of Trade, Industry and Energy, Republic of Korea (2011951010001A). This work was also supported by the Priority Research Centers Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education (2014R1A6A1031189).