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Please fill in your manuscript title.	Ethane Recoveries for Combinations of Various Off-design Operations Scenario - Saudi Aramco Ngl Recovery Plant Case Study	
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Abstract

Objectives/Scope:

This paper will highlight the impact of different combinations of various off-design scenarios on the ethane recovery using the Saudi Aramco Hawiyah NGL Recovery Plant as a case study. The challenges faced by operators, including engineers in the NGL recovery plant, is the inability to effectively estimate or anticipate what the ethane recovery (%) would be during an off-design operation event. In this case, an example of off-design operation scenarios is an operational upset leading to a loss of combination of one or more turboexpander(s), and propane compressor(s).

Methods, Procedures, Process:

The challenges faced by operators, including engineers in the NGL recovery plant, is the inability to effectively estimate or anticipate what the ethane recovery (%) would be during an off-design operation event. In this case, an example of off-design operation scenarios is an operational upset leading to a loss of combination of one or more turboexpander(s), and propane compressor(s). In this study, HYSYS software simulation was utilized to identify the ethane recoveries for a combination of various off-design scenarios. The simulation results were validated against the operating training simulator (OTS) runs, and the plant's historical data obtained from the plant process interface (PI) system for similar off-design operational events.

Results, Observations, Conclusions:

The simulation results were validated against the operating training simulator (OTS) runs, and the plant's historical data obtained from the plant process interface (PI) system for similar off-design operational events.