

Removal of CO₂ and H₂S from Natural Gas: An Amine Solution and Ionic Liquids Approach

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CO₂ and H₂S are undesired diluents which are present in natural gas and other gas sources. The removal of CO₂ and H₂S is a common separation process in natural gas processing and is often required to improve the fuel quality (heating value) of the natural gas. Also, CO₂ in the presence of water can be a corrosive agent to metal pipes. As a consequence, the removal of CO₂ and H₂S to acceptable specifications is required prior to transport natural gas or in pipelines. Several methods have been reported for removal of acid gases from natural gas. In past few years, mixed amine solvents for the removal of acid gases have received attention. In most of the cases MDEA serve as base amine with the addition of DEA or MEA. Today, computer-aided process simulation is a universally recognized essential tool in the process industries. In this work the uses of amines solvents for acid gas removal has been studied using HYSYS simulation and are compared with ionic liquids.

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.