عنوان مقاله:

UsingTSWEETProcessSimulatorto OptimizationofSulfur,recovery unit

محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

تعداد صفحات اصل مقاله: 12

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خلاصه مقاله:

In this sulfur recovery unit (SRU), hydrogen sulfide (H2S) is converted to elemental sulfur using modified sulfur recovery unit. In the present study, application of different alternatives for increasing the reaction furnace temperature and sulfur recovery of Claus sulfur recovery units (SRUs)are investigated by TSWEET process simulator. This simulator based on Gibbs free minimization. The usefulness of different techniques such as acid gas enrichment, Acid gas flow of AG splitter, oxygen enrichment and air dry flow for increasing the furnace temperature and sulfur recovery are determined by proposed simulator. It is shown that furnace temperature increases up to maximum temperature, increasing fraction of AG splitter flow to main burner and then decreases by a sharp slope. In the case of concentration of H2S and oxygen concentration, temperature of main burner increases monotonically. Also in this paper it is found that sulfur recovery increases up to a maximum value and then decreases as H2S concentration (in all three concentrations of oxygen) increases While in the case of oxygen concentration is not so.

کلمات کلیدی:

claus unit,suplhur recovery ,H2S concentration,H2S ، CO2 ratio,oxygen concentration,

لینک ثابت مقاله در پایگاه سیویلیکا: