

## عنوان مقاله:

Energy optimization (steam & power savings) in gas sweetening units of south pars-phases 2&3 project

## محل انتشار:

نهمین کنگره ملی مهندسی شیمی ایران (سال: 1383)

تعداد صفحات اصل مقاله: 5

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## خلاصه مقاله:

Gas sweetening units of SPGC(south pars gas company)were designed by French ELFCO.MDEA(which is Methyl DE-Ethanol Amine, as selective for H<sub>2</sub>S removal) uses totreat sour gas with around 5500ppmH<sub>2</sub>S&1.8%vol CO<sub>2</sub> and sweet gas specificationare 3 ppmmol H<sub>2</sub>S &1.5%vol CO<sub>2</sub>. design amine circulation flow rate is 250 m<sup>3</sup>/hwith 45%wt concentration.We had high rate of CO<sub>2</sub> co-absorbtion in amine absorber instead of higher rate of H<sub>2</sub>S absorbtion and so high H<sub>2</sub>S &low CO<sub>2</sub> contents were problems in beginning of phase 2/3 start up with too low H<sub>2</sub>Scontent of acid gas to SRU(sulfur recovery units).During start up in 2002 the lean amine flow rate was decreased to 135 m<sup>3</sup>/h(optimum flow rate found after some simulation,investigation & test run) to have on spec sweet gas. Then in order to optimize process conditions especially the utilities consumption, some HYSYS simulation & test run were done and total HPsteam saving of 1248 tons per day and power saving of 213 kw per day have been achieved in 4 gas trains of phases 2 & 3 due to lower required temperature of amine regeneration (optimum amine regenerator bottom temperature of 131.5 C). Optimum amine circulation rate found 135 m<sup>3</sup>/h in order to have on spec sweet gas(<3 ppm H<sub>2</sub>S & <1.5%vol CO<sub>2</sub>) and to have lower energies consumption in amine regeneration section (stream of amine reboiler & power of regenerator reflux air cooler).Results are applicable for phase-1 and phases 4&5 gas sweetening units

## کلمات کلیدی:

Optimisation, Energies saving, MDEA Gas sweetening

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/29631>

