عنوان مقاله:

(Energy Optimization in Three-Phase Separators of Crude Oil Processing (Case Study Of Bank A Cheshmeh Khosh

محل انتشار:

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خلاصه مقاله:

The crisis of energy supply is the main concern of societies in the ۲۱st century with the increase in population. Considering the direct relation between greenhouse gases emissions and energy consumption, one of the main challenges of the oil&gas industries is their efforts to optimize energy and to reduce environmental pollutants. For this purpose, the current research has been carried out in order to optimize the separators energy of the exploitation unit. Hence, the proper unit was simulated by HYSYS software, Then, using MATLAB software, the optimized energy values of the separation stages were calculated in winter and summer. The optimal pressure in the first, second, third stages and operation tank were calculated as ۴۰۰, ۸۰, ۲۰, and ۰.۶ lbf/in۲ in the winter season and ۳۸۳, ۸۰, ۲۰, and ۰.۶ lbf/in۲ in the summer season, respectively. Comparison between the operational and optimal energies indicates that the optimal energy of the first stage is more, and the second and third stages are less than the operational energies. Moreover, if the optimal energies are applied instead of the operational energies, the oil production of the unit increases ۱۸ m۳/day in winter and ۹ m۳/day in summer.

کلمات کلیدی:

"Energy optimization", "HSIS software", "MATLAB software", "separator", "crude oil"

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