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عنوان مقاله:

Evaluation of Specific Energy Consumption of Crude Oil Desalinations

محل انتشار:

چهارمین کنفرانس بین المللی رویکردهای نوین در نگهداشت انرژی (سال: 1393)

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خلاصه مقاله:

Desalination plays an important role in oil production processes; while its energy consumption includes thermal and electrical types. Production of more than 4 MMbarrel/day in Iran, lead to consume huge amount of gas fuel to obtain heating of crude oil and the feed of power plants which provide electrical energy of desalination units, too. After crude oil extracting from wells; it conducts to gas separating units; then, desalinationunits to separate water cut and salt contents. The final product of desalination should satisfy the standard of less than 29 gr/m3 salt and less than 0.1 % volumetric of water. So far, there aren't any specified criteria for specific energy consumption of these units. In this paper, standard of specific energy consumption of crude oil desalinations has been informed through energy audit of 12 desalination unit which contain different feed and operational specification. This standard, explain the criteria of energy consumption which cause evaluation of energy optimization and preventing of waste streams. The results of this study show that specific energy consumption has a direct relation with desalination temperature (desalted vessel). In addition, variable parameters of the relation distinguish on the basis of sweet and sour crude oil. Also, desalination temperature has an indirect relation with API.

کلمات کلیدی:

specific energy consumption, crude oil desalination, temperature, API, water and salt

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