

عنوان مقاله:

Transport of heavy oil through pipeline using a bio/chemical emulsifier mixture: A pilot-scale evaluation

محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

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خلاصه مقاله:

In this research, the new microbial *Bacillus licheniformis* strain ACO4 is used to produce a bioemulsifier. Based on laboratory studies performed, this bioemulsifier has a high emulsification capacity for the formation of the Iranian Nowruz heavy oil in water emulsion. This strain was able to reduce the viscosity of the emulsion from 10000 cP to 830 cP at pilot scale. This emulsion was stable for 72 h under the optimum conditions of temperature, water content and emulsifier concentration. The emulsion and heavy oil were passed through the pilot pipeline and the amount of sediment was observed and compared. The substantial stability of the oil in water emulsion allows the heavy oil to be transported practically over long distances or remain stationary for a considerable period of time prior to utilization.

کلمات کلیدی:

Bioemulsifier, Heavy crude oil, Oil, water emulsions, Pipeline

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