

عنوان مقاله:

Exclusion of Undesirable Water in Oil Emulsion from the Reservoir Fluid

محل انتشار:

هشتمین کنفرانس بین المللی فناوری های نوآورانه در زمینه علوم، مهندسی و تکنولوژی (سال: 1400)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Mehdi Ghanbari - *Department of Chemical, Petroleum and Gas Engineering, Technical and Vocational University, Tehran, Iran*

Feridun Esmaeilzadeh - *Department of Chemical Engineering, School of Chemical, Petroleum and Gas Engineering, Shiraz University, Shiraz, Iran*

خلاصه مقاله:

The crude oil production is occasionally encountered the interference of stabilized water in oil emulsion due to the enormous amounts of asphaltenes, resins, naphthenic acids and solid particles in high salt content crude oil. The prevalent chemical method has been utilized to remove the emulsions being in the reservoir fluids, is costly due to continuous consumption of a demulsifier and application specific according to the product specifications, brines and chemical demulsifier types. This study suggests a magnetic demulsification method to demulsify the unwelcome water in oil emulsion formed within the reservoir, without any need of magnetic field during the demulsification process. On the basis of our studies, the presence of magnetic particles also can reduce the viscosity of a crude oil at the same time. The results show that the new method is able to demulsify the emulsions by more than 99% of separation efficiency. Some significant parameters of temperature, magnetic dosage, particles size and the capacity of the demulsifiers are evaluated here.

کلمات کلیدی:

demulsification; water in oil emulsion; reservoir fluid; separation

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1270420>

