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## Chemical demulsification for treating crude oil emulsions

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During production and processing of petroleum the water in petroleum emulsion forms. Coalescence and combinations of spread droplets of water are inhibiting by interfacial barrier. This is because of existing emulsifying agents like resins and asphaltenes in petroleum; therefore it must be broken-down emulsions and separate water after petroleum production immediately for operative and economic causes. The studied work included applying five commercial demulsifiers at different temperature, demulsifier concentration and different brine concentration to heavy and moderate crude oil quality KD-3100, KD-3200, FD-6144, FD-6210 and RI35Q. The acquired results with commercial demulsifiers for Khurmala crude oil at 55°C and 100 ppm KD-3100, KD-3200, FD-6144, FD-6210 and RI35Q are 78, 80.6, 78, 86 and 90 % respectively and at 65°C and 100 ppm KD-3100, KD-3200, FD-6144, FD-6210 and RI35Q are 87, 85, 91.3, 94 and 97% respectively. In addition, the attained results for Demir Dagh crude oil at 55°C and 100 ppm KD-3100, KD-3200, FD-6144, FD-6210 and RI35Q were 63.3, 66.6, 65, 73 and 76.6% respectively and at 65 °C and 100 ppm KD-3100, KD-3200, FD-6144, FD-6210 and RI35Q were 77, 76.6, 80, 82 and 85% respectively. Three different brine concentrations NaCl were prepared and used to evaluate water separations efficiency and the optimum NaCl concentration was at 3.5 % NaCl concentration. The results obtained in combinations of FD-6144 and RI35Q demulsifier were 96 and 90.6 % while 1:1 and 1:3 ratio respectively at 55° C for Khurmala crude oil. Furthermore, the outcomes were 98.6% and 93.3 % while 1:1 and 1:3 ratios respectively at 65° C for Khurmala crude oil. The findings also obtained in Demir Dagh Crude oil were 78% and 63.3% when 1:1 and 1:3 ratios respectively. And also 86.6% and 71 % are obtained when 1:1 and 1:3 ratios respectively at temperature 65oC. The acquired results for changing brine concentrations for khurmala crude oil at 100 ppm of RI35Q and at 65oC were 91%, 94.5% and 97% for 0.5, 2 and 3.5% of brine concentration respectively, However the result were 88%, 91% and 94 % for 0.5%, 2% and 3.5 % of brine concentration respectively at 100 ppm of FD-6144 and 65° C. The attained results for changing.

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