

EFFECT OF SEVERAL PARAMETERS ON WAX DEPOSITION IN THE FLOW LINE DUE TO INDIAN WAXY CRUDE OIL

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ABSTRACT

This research article investigates the effect of several parameters on the wax deposition in a flow loop due to Indian waxy crude oil with the objective of the prediction of wax deposition in the flow lines and optimization of these parameters for the control of wax deposition problems in the tubing of an oil well and flow lines at the surface. The experimental studies were carried out to determine the effect of temperature differential, flow rate, residence time, and the concentration of pour point depressants on the wax deposition. It was found that there is significant variation in the wax deposition in the flow line due to these parameters and with the addition of a copolymer of fatty acid ester, polymeric additive, the wax deposition was reduced significantly which shows the potential of this additive for the control of flow assurance problems in the oilfields.

KEYWORDS: Wax Deposition, Paraffin Wax, Asphaltenes, Pour Point Depressant