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(57) Abstract :

The present invention relates to a pour point depressant for flow assurance of Indian waxy crude oil, a process for the preparation thereof and the use thereof for to overcome wax deposition issue in the petroleum industry. The novel green pour point depressant (PPD) Polyethylene glycol stearate (PGS) will overcome wax depositional issue which is a major flow assurance problem faced by the petroleum industry. PGS is synthesised from stearic acid and has been characterized by FTIR, ¹H NMR, ¹³C NMR and CHNS analysis. Particle size of the PPD was determined by Dynamic light scattering (DLS) measurement. The effectivity of the prepared additive PGS has been evaluated by checking pour point, viscosity and wax deposition thickness of both virgin crude oil as well as crude oil dosage with PGS in several concentration. This naturally derived pour point depressant PGS has shown better performance in reduction of pour point of Indian waxy crude oil than that of the commercial PPD.

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