

Physicochemical characterization of Gulf asphalts

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Abstract: The neat asphalt samples collected from the different asphalt producing refineries in the Gulf countries were subjected to two aging processes to simulate heating, mixing and compaction, and in service aging. The asphalt samples of the different aging stages were subjected to physical and chemical tests. The measured physical and consistency properties were used to calculate various temperature susceptibility indices. Corbett analysis, Ion exchange chromatography, HP-GPC, and FT-IR analysis were used to study the effect of aging on the molecular nature of asphalts.