OXIDATION STUDIES ON ŞIRNAK ASPHALTITES. DETERMINATION OF KINETIC PARAMETERS

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Oxidation of Şırnak asphaltite samples was investigated under isothermal conditions using a fixed-bed reactor in various temperature modes. Combustion profiles were obtained by using a continuous gas analyzer. The rate data were analyzed based on the assumptions that oxidation reaction takes place on the surface of solid asphaltite particles and decomposition of organic structures is not significant. Oxidation rates were determined and constant overall order of reaction (1.7 ± 0.3) was established. The effect of heating rate on reaching final isothermal temperatures was investigated and kinetic parameters of the overall oxidation reaction for each heating rate determined.

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