

THERMOGRAVIMETRIC KINETICS STUDY ON SOME CHINESE OIL SHALES

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In this work the pyrolysis of oil shale kerogen was investigated by using TGA apparatus. The overall first-order reaction model has been successfully used (correlation coefficient exceeds 0.99) to simulate weight loss data (T-x curve) for type I kerogen. For kerogens of types I, II and III, Friedman method can be reasonably used. Much work has been done on reaction kinetics of Fushun and Maoming oil shales. The results showed that the apparent activation energies of Fushun and Maoming shales are about 160 KJ/mol. This paper presents reaction kinetics of some Chinese oil shales compared with Fushun and Maoming oil shales. It was found that the activation energies of most oil shales studied range from 160 KJ/mol to 170 KJ/mol. These results provide important information for shale oil industry in China.