

KINETICS AND MECHANISM OF SOLVENT EXTRACTION OF COAL - RELATIONS TO CHEMICAL STRUCTURE. Larry L. Anderson, Doohee Kang, Department of Mining and Fuels Engineering, University of Utah, Salt Lake City, UT 84112.

High volatile bituminous coals were extracted with tetralin in a batch-recycle reaction system. The reactions which produce benzene, hexane and pyridine soluble fractions show definite regimes which are significantly different in the way hydrogen is required from the donor solvent. Analysis of the liquid products as to chemical type and molecular weight reveal structures not present in long term reactions typical of SRC production. Oxygen structures in the primary products and the kinetics of the reaction to produce these species give information which may be related to the size of structural units in the coal and the connecting linkages.