

Study of the treatment of subbituminous coals by NaOH solutions

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A subbituminous coal from La Union (Chile) has been treated with aqueous NaOH solutions. The quantity of coal solubilized and the elimination of ash was found to increase with increase in hydrolysis time, temperature and NaOH concentration and with decrease in particle size. Coal solubilization reached a maximum with respect to NaOH concentration in the range studied. The largest yield of solubilized products was 28 wt%, this occurred after 8 h of hydrolysis at 80 °C using an NaOH concentration of 10 g dm⁻³ and coal having a particle size between 125 and 177 μm. In the range of conditions studied, the greatest decrease in the ash yield of the undissolved coal was 29 wt%. Under the same conditions, the total sulphur content of the coal decreased by 30 wt%. © 1981.