

### CO<sub>2</sub> Gasfication of a Lignite Char Physically mixed by the Spent Catalyst provided by the company

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The effect of spent catalyst in the gasfication of coal chars has been investigated in a fixed-bed reactor under the atmospheric pressure. There are three spent catalysts were provided by the company. They were used and mixed physically with lignite char, loaded with 1wt%, 5wt%. The gasfication experiments were carried out by using the N<sub>2</sub>-CO<sub>2</sub> reactant gas at the 700°C, 800°C, 900°C under the atmospheric pressure. The change of flow rate was observed and reaction product was analyzed by using the GC (Gas Chromatography).

So we compared among the lignite char and lignite chars physically mixed by the spent catalyst and K<sub>2</sub>CO<sub>3</sub>.