

论文

沥青与焦粉热熔合物替代炼焦煤种的实验研究

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摘要:

沥青与焦粉配合后熔融均化得到挥发分和黏结指数接近焦煤的热熔合物。利用1 kg热解装置, 将热熔合物替代炼焦基础煤种进行配合炼焦, 考察其对炼焦产品产率及质量的影响。结果表明: 以热熔合物分别替代TH焦煤、JINX焦煤、JUX弱黏煤进行炼焦, 焦油产率有所提高, 焦炭产率和煤气产率均降低; 由于热解过程中供氢和受氢存在一定的温度差, 粗苯和氨的产率也有所降低; 所得焦炭的光学各向同性结构有不同程度的下降, 有利于降低焦炭的反应性。

关键词: 沥青; 焦粉; 炼焦; 光学组织; 化学产品

A study on coking with the fusion of coal pitch and coke powder to replace coking coal

Abstract:

By melting acceptable proportions of coal pitch and coke powder, the fusion sample with Vdaf and G close to coking coal was obtained. Coking coals were then substituted by fusion sample to investigate its effect on the yield and quality of coking products, using a 1 kg pyrolysis oven. Experiment results reveal that the yield of coal tar increases while both the yield of coke and coal gas reduce when the coal of TH, JINX and JUX are substituted. Due to the temperature difference between hydrogen supply and reception in the pyrolysis process, the production rate of crude benzene and NH₃ also decrease. Moreover, the fusion sample changes the microstructure of cokes, reducing their optical isotropic structure, which may lead to the decrease of coke reactivity.

Keywords: coal pitch; coke powder; coking; optical texture; chemical product

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