Full Paper Registration Code of Publication: 11-25-6-115

Publication is available for discussion in the Internet as a material of "All-Russian Working Chemical Conference "Butlerov's Heritage-2011". http://butlerov.com/bh-2011/ Contributed to editorial board: April 7, 2011.

Features of pore and crack formation during calcination of anisotropic cokes

© Nikolay V. Negutorov,¹ Leonid V. Kim,² and Nadezda V. Pyhova³

^{1,3} Chelyabinsk State University. Br.Kashyrinych St., 129. Chelyabinsk, 454021. Russia. E-mail: ¹⁾ odou@csu.ru, ³⁾ pihovanv@yandex.ru ² Company «Grafitservis». Hero of Russia Molodov St., 22. Chelyabinsk, 454015. Russia. *E-mail: info@grafitservis.*

*Supervising author; ⁺Corresponding author Keywords: calcination, anisotropic coke, acoustic emission, coefficient of thermal expansion, porosity, mercury porosimetry.

Abstract

Acoustic emission method used to study the formation of pores and cracks in the conventional calcination at one stage the three electrode anisotropic cokes at the stage of heating, holding and cooling. Every Coke has its own "acoustic passport" - a characteristic distribution of the number of pulses of acoustic emission in the temperature ranges of heating and cooling. The greatest number of pores and cracks formed in the process of heating coke in the temperature range 600-1000. There is a "memory effect" of coke - the temperature of the most intensive formation of pores and cracks on cooling correspond to similar areas when heated.