UDC 539.3

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ON THE DETERMINATION OF SPECIFIC WORK OF COAL CRUSHING

Mathematical Rittinger, Kirpichev-Kick and Bond laws for relations of crushing energy and linear sizes of a crushed piece of rock are analyzed. It has been found that the disadvantage of the formulae describing these laws is in unknown coefficients of proportionality without developing the corresponding technique of their determination. It has been suggested that crushing work for grinding be measured using formulae of the mechanics of rigid deformable bodies. Dependencies of ultimate strength and crushing work on an index of size reduction and those of crushing work on specific surface energy of coal crushing under various values of specific surface energy are derived.

Keywords: *specific work for crushing, rock grinding, crushing energy, index of size reduction, ultimate strength.*

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