REVIEWS

**Computer-Assisted Calculation and Prediction
of the Characteristics of Metallurgical Coke, by D.A. Muchnik
and V.M. Gulyaev (Dneprodzerzhinsk: Izd. DGTU, 2007)**

Reviewed by Yu. Ya. Filonenko^a and V. Yu. Filonenko^b

^a*Lipetsk State Technical University*

^b*Lipetsk Ecological and Humanitarian Institute*

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The new textbook by Muchnik and Gulyaev is intended for students specializing in the chemical technology of solid hydrocarbon fuels. It outlines methods of calculating the characteristics of metallurgical coke as a function of the conditions of its mechanical disintegration after delivery from the coke furnace. By means of a computer, students may calculate the change in piece size of the coke, the mean diameter of the pieces, the packing density, the crushability and wear constants, and the gas permeability, in specified conditions of mechanical disintegration. Conditions for the preparation of metallurgical coke may be found from the granulometric composition, strength, and piece size ensuring its most effective use in blast-furnace smelting.

The book is clearly written and easy to read. Students need have no difficulty in assimilating the material presented.

We would like to make the following remarks regarding the book.

Certainly, students will have different levels of familiarity with computers, especially at the beginning of their university careers. The authors assume that the students will have practically no familiarity with computer use in solving practical engineering problems. The book aims at students with little computer training, especially those in correspondence courses. It is extremely important for students to learn about the computer control of relevant equipment.

Regrettably, the book does not present computational algorithms for coke characteristics. In our view, each section should have been prefaced by a computational algorithm for coke characteristics, their physical meaning, and analysis of the need for such research in terms of optimal operation of the systems in which the coke is used.

These deficiencies do not reduce the value of the book. Its publication is timely and will benefit students specializing in coke chemistry. It will also be useful to metallurgical students who intend to work at enterprises that employ metallurgical coke.