STUDY THE EFFECT OF THE DIFFERENT TYPES OF SOLID FUELS ON THE SINTERING PROCESS PERFORMANCE

By

Ahmed Abdel Azim El-Sayed Ibrahim

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
In

Mining Engineering

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Key Words: iron ore, sintering process, coke breeze, charcoal, petroleum coke.

Summary:

Coke breeze is the main fuel used in the sintering process. Due to its limited production in Egypt as well as the change in the imported coke breeze price is going higher from one year to another, this thesis aims at finding other alternatives to replace coke breeze. To achieve this goal, the sintering process factors such as the amount of coke breeze, water content and ignition time were optimized before testing the fuel alternatives. The used fuel alternatives are anthracite, petroleum coke, coal and charcoal.Similar results of optimum conditions using coke breeze alone were achieved by its replacement by 45 % of anthracite or petroleum coke and 30% of coal or charcoal.

Acknowledgment

I would like to express my deep regards and sincere gratitude to Prof. Ahmed Abdel Aziz Ahmed, Faculty of Engineering, Cairo University for his care, kind supervision, encouragement, constant efforts, and valuable stimulating guidance and fruitful discussion throughout this study.

I offer my profuse thanks with humble reverence to Prof. Mohamed El-Menshawi Hessain Shalabi, Central Metallurgical Research and Development Institute (CMRDI), for his invaluable guidance and support. He was a beacon light, whose constant efforts and encouragement proved to be a parallel stimulus in completing this research successfully.

I would like to thank Dr. Ayman Abdel Hamed El-Midany, Faculty of Engineering, Cairo University for for his patience, motivation, and immense knowledge. His guidance helped me in all the time of research and writing of this thesis. I could not have imagined having a better advisor and mentor for my master study.

I am grateful to my supervisor Prof. Dr. Naglaa Ahmed El-Hussiny, Central Metallurgical Research and Development Institute (CMRDI), for her support and co-operation in the hours of need and for her expert.

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