

Ironmaking in Russia

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ABSTRACT

This paper is focused on the evolution of ironmaking practices in Russia and highlights some technological aspects of blast furnaces, sinter and coke plant operation. The development of hot metal, sinter and coke production; changes in structure of reductants; and iron ore burden materials are discussed. The paper includes an evaluation of design features of the blast furnaces proper, sinter and coke plants and accompanied equipment, presentation of the largest Russian hot metal producing companies, and further outlook for the Russian steel industry.

Keywords: Blast furnace, hot metal production, iron ore, burden materials, coke rate, technologies

INTRODUCTION

Blast furnaces are the world's no.1 semi-product (hot metal and pig iron) supplier for crude steel production. Steel is produced both in basic oxygen furnaces, and electric arc furnaces (97%). In India and some other countries steel also is produced in induction furnaces. Few open-hearth furnaces still operate for steel production in Ukraine, Russia etc.

The steelmaking charge in Russia mainly consists of hot metal, which share in BOF charge varies in the range of 75-90%, and that of EAF charge – up to 10-35% (Figure 1).

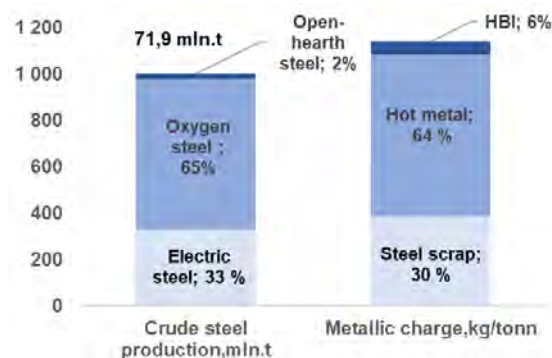


Figure1. Crude steel production and metallic charge 2019