

13TH INTERNATIONAL CONFERENCE ON
ADVANCED MATERIALS AND NANOTECHNOLOGY
OCTOBER 26-28, 2017 OSAKA, JAPAN

Extruded briquette (BREX): New charge component for modern metallurgy

Aitber Bizhanov

JC Steele and Sons, Inc., Russia

Stiff Vacuum Extrusion (SVE)-new agglomeration technology has been successfully applied for the briquetting of natural and anthropogenic raw-materials of the ferrous metallurgy. The results of the investigation of the extrusion briquettes (BREX) metallurgical properties showed that they can be efficiently used as the charge components of Blast Furnaces (BF), Direct Reduction Iron (DRI) reactors and submerged Electric Arc Furnaces (EAF). The behavior of BREX under the reduction conditions has been investigated. The mechanism of the hot strength has been described. The examples of the industrial application of SVE for BFs and the results of the full-scale trials of SVE for DRI and ferro alloys production are represented in detail. Evaluation of the prospects of the application of carbon containing BREX made of natural and anthropogenic raw materials in BF production is given.

Biography

Aitber Bizhanov has completed his PhD from National University of Science and Technology MISIS, Moscow. He is the Official Representative of JC Steele and Sons, Inc., NC, USA, world largest producer of the equipment for stiff extrusion agglomeration. He has published more than 45 papers in reputed journals and owns more than 15 patents in metallurgical applications of stiff extrusion agglomeration.

abizhanov@jcsteele.com

Notes: