

## Foreword

The 3rd International Scientific and Technical Conference on Scientific and Technical Progress in Ferrous Metallurgy (SATPIFM 2017) was held from October 19th to 20th, 2017 in Cherepovets, Vologda Region, Russia. The organizers of the Conference are PAO Severstal and Cherepovets State University.

SATPIFM is the regular international conference series in Russia. It has been held in Cherepovets biennially since 2013.

SATPIFM is designed to bring together scientists, engineers, researchers in the field of ferrous metallurgy, as well as representatives of metallurgical companies for sharing ideas and fostering research network and worldwide collaboration.

Over 120 representatives from 7 countries (Russia, Ukraine, Sweden, Italy, Czech Republic, Spain and France), 11 universities (Cherepovets State University, Higher School of Economics, Yaroslavl State University, Moscow Institute of Steel and Alloys, Bauman Moscow State Technical University, Nosov Magnitogorsk State Technical University, Lomonosov Moscow State University, South Ural State University, Stankin Moscow State Technological University, Donetsk National Technical University, Moscow Aviation Institute), 6 manufacturing companies (Severstal, Magnitogorsk Iron and Steel Works, Vyksa Steel Works, Novokramatorsk Machine Building Plant, Chepetsky Mechanical Plant, Novolipetsk Steel Plant) and 20 research institutions, design centers, research and production associations (Bardin Central Research Institute of Ferrous Metallurgy, National Research Center "Kurchatovsky Institute", Central Research Institute of Structural Materials "Prometey", CHELYABGIPROMEZ (Chelyabinsk National Design Institute for Metallurgical Plants), Research and Development Center "High Technology Metallurgy", Institute of Ferrous Metallurgy of the National Academy of Sciences of Ukraine, Royal Institute of Technology (Sweden), FIVES KEODS (France), Research and Development Center for Computer-Aided Engineering Tools, Skolkovo Institute of Science and Technology, IT-Service, Severstal-Infocom and others) took part in the conference.

This collection includes the papers selected from a large number of papers and presentations received by us.

We would like to express our appreciation to the International Organizing Committee and the Local Organizing Committee for good planning of the event, engaging presentations and innovative approach to work. We extend our gratitude to all those involved in organizing the conference for their efficient and hard work, to all the authors who have submitted their works to SATPIFM 2017, and also to the reviewers who provided their valuable comments and suggestions.

### Editors

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