Preface

2017 International science and technical congress on Aerospace materials plastic deformation processes. Science, technology, industry (METALDEFORM-2017) was held during July 4-7, 2017 in Samara, Russia and this book proceeding contains some of the contributions presented at the conference.

The primary objective of METALDEFORM-2017 is to provide a world class forum for exchange original ideas and new information, latest research and discussing scientific in the field of aerospace materials technology, including plastic deformation processes, heat and special methods of treatment. Also it to bring together academics, scientists, engineers, postgraduates and other professionals in the area of material science and engineering technology from all over the world.

The proceedings introduce to the readers with newest researches results and findings in the field of metal plastic deformation and connected technologies.

On behalf of the congress organizing committee, we would like to express our sincere appreciation to the speakers, for their excellent and useful reports, the reviewers, for their valuable inputs for improving the scientific content of presented papers. We also appreciate to every technical committee member and author who has brought the success of the congress.

Editor Prof.

Fedor V. Grechnikov,

Ekaterina A. Nosova

Committees

Program Committee:

Evgeniy Kablov Academician of RAS, CEO ("VIAM", Russia)

(co-chairman)

Rudolf Kawalla Professor, Vice-Rector (TU Bergakademie Freiberg, Germany)

(co-chairman)

Andrey Rudskoy Academician of RAS, Rector (Peter the Great St.Peterburg Polytechnic

(co-chairman) University, Russia)

Evgeni Shakhmatov Corresponding Member of RAS, Rector (Samara University, Russia)

Nikolay Alioshin Academician of RAS (Bauman Moscow State Technical University,

Russia)

Michail Alymov Corresponding Member of RAS, CEO (Institute of Structural

Macrokinetics and Materials Science of RAS, Russia)

Bruno Buchmayr Professor (MU Leoben, Austria)

Mikhail R. Filonov Professor, Vice-Rector (MISIS, Russia)
Gunter Gottstein Professor (Aachen University, Germany)

Jurgen Hirsch Professor (Hydro Aluminium Rolled Products GmbH - R&D Center

Bonn, Germany)

Yeau-Ren Jeng Endowed Chair Professor and Executive Vice President (National

Chung Cheng University, Taiwan)

Ernst Kozeschnik Professor (TU Wien, Austria Vienna)

Nikolay Kuznetsov Academician of RAS (Kurnakov Institute of General and Inorganic

Chemistry of RAS, Russia)

Vladimir Novotortsev Academician of RAS, Director (Kurnakov Institute of General and

Inorganic Chemistry of RAS, Russia)

Heinz Palkowski Professor, (TU Clausthal, Germany)

Yuriy Tsvetkov Academician of RAS (Institute of Metallurgy of RAS, Russia)

Organizing Committee

Fedor Grechnikov Academician of RAS (Samara University, Russia) (co-chairman)

Alexander Kobenko

(co-chairman)

Vice-Governor - Minister of Economic Development, Investment and

Trade of Samara Region

Sergey Alexandrov Professor (Institute for Problems in Mechanics, Russia)

Alexander Amosov Professor (Samara State Technical University, Russia)

Evgeny Aryshenskiy Dr.Ing. (Samara University, Russia)

Alexander Dmitriev Corresponding Member of RAS (Moscow State University of

Technology «STANKIN», Russia)

Yuri Eliseev CEO "Metallist-Samara"

Yaroslav Erisov Dr.Ing. (Samara University, Russia)

Vladimir Glouschenkov Professor (Samara University, Russia)

Michail Khardin Dean of Engineering and Technological Faculty (Samara University,

Russia)

Nikolay Kolbasnikov Professor (Peter the Great St-Petersburg Polytechnic University, Russia)

Alexander Nam Research worker (Metal Forming Institute in TU BAF, Germany)

Ekaterina Nosova Dr.Ing. (Samara University, Russia)

Sergey Pavlinich CEO JSC "Kuznetsov"

Igor Popov Professor (Samara University, Russia)

Christian Schmidt Dr-Ing., Deputy Director (Metal Forming Institute in TU BAF,

Germany)

Mikhail Spichak CEO (ALCOA-SMZ)

Sergey Tiulevin First Deputy of General Director - Chief Engineer (JSC SRC

«Progress», Russia)

Madlen Ullmann Dr.Ing., Head of Light Alloys Research Group (Metal Forming Institute

in TU BAF, Germany)

Alexander Zinov'ev Professor (MISIS, Russia)