Preface

Simulation based technology development for metal forming

In almost all branches of industry, the use of material and process simulations has become indispensable in the development of new technologies. The simulations reproduce the real material behavior or the process almost realistically in such a way, that time-consuming and costly real tests can be minimized.

The Institute of Metal Forming therefore develops and carries out a wide variety of simulation approaches to support the development of materials and forming technologies for light or heavy metals and material characterization. The simulation toolbox ranges from fast models for material flow and load prediction to time-consuming multi-scale approaches including microstructure evolution and resulting mechanical properties. Due to the extensive range of forming and testing equipment, these models have been experimentally validated and thus improved continuously.

For this reason, it is our pleasure to host the 27th MEFORM Conference on March 20th to 21st, 2019 in our department to share and to discuss new findings with colleagues from industry and academia. At this year's conference topic "Simulation based technology development for metal forming", recent findings in flat and groove rolling, in extrusion, in solid forming as well as in material characterization will be presented, in which simulation gave a decisive contribution.

We would like to take this opportunity to thank all the people involved in the conference, especially the authors and speakers. We wish everyone a lively exchange of information and pleasant days in the traditional university and mining town of Freiberg.

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