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Editorial

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The 3rd European Steel Application Days, ESTAD 2017, took place in the Congress Center in Vienna, Austria from 26th to 29th June 2017. The four-day event, the first in the series organized by the Austrian Society for Metallurgy and Metals (ASMET), attracted more than 1140 participants from 34 countries worldwide.

The technical program identified the latest trends and innovative developments along the entire process chain from iron making to finishing lines of steel plants for flat and long products as well as numerous novel applications. The opportunities and challenges connected with such a dynamic technology have raised interest in the materials and equipment industries as well as automotive industry.

We have selected the following papers for this issue, BHM 3/2018 "ESTAD 2017":

- Challenges in the steel industry and consequences for rolling plant technologies,
- Radar solutions for harsh environmental conditions,
- Cut of OPEX – Sophisticated technical solutions for Hot Strip Mills,
- Broadening the steel markets by direct application of high quality ESP strips and
- Energy saving and process optimization in a conventional hot strip mill by application of the latest high-efficient descaling technology.

When compared to the 2nd ESTAD conference in 2015 in Düsseldorf, Germany, it is clear that there has been significant progress regarding to materials, process efficiency, and exploitation of new applications. For lightweight applications in automotive vehicles, pipelines in oil and gas industry applications as well as those in the aerospace and space sectors, there can be a clear argument for further using steel materials. Topology optimization,

in combination with lattice structures, offers outstanding solutions for many lightweight constructions. The final decision between conventional manufacturing processes and sophisticated techniques is for many still a matter of economics.

However, as recent presentations show, there is a significant increase of effort in all fields to promote resource and energy efficient techniques for many interesting applications. In addition to the ESTAD papers, an article on advanced FEM simulation of sheet metal forming has been added.

Details of the presentations can found in the conference proceedings, which can be ordered from ASMET (please contact Yvonne.Dworak@asmet.at). The 4th ESTAD conference will be from 24–28th June 2019, in Düsseldorf, Germany.

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