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The development of thermo-mechanical treatment of duplex steel

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The thermo-mechanical treatment of SAF 2507 duplex steel is sensitive to many influences especially temperature and cooling rate. The thermo-mechanical treatment of these steels during the forging is described in this article. In this case, the process is focused on controlled precipitation of sigma phase. The forging technologies of two different semi-products were performed using numeric simulation. The cooling rate mainly influencing the final microstructure was observed in two defined points of the forged parts. The technological processes were measured by dilatometry measuring which helped optimizing the whole process. The final process was verified by experimental forging on the forging press.

Biography

Michal Duchek earned his Master's degree from the University of West Bohemia in Pilsen in 2006. Since that year, he has been a Researcher in the Department of Metallurgical Technology and Heat Treatment of the company COMTES FHT. He authored several research papers and utility designs.

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