



Application of FEM simulation to roll pass design and roll stress analysis

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ABSTRACT

Simulation of rolling of long products has grown tremendously over the past years in the steel making industry. FORGE® has demonstrated its capability to accurately predict material flow, and avoid passes overload. However, the analysis of the stresses in the rolls has not been a major concern. Since rolls are expensive, the next step in simulating the rolling process is to predict the risk of breakage and estimate the wear of the rolls. The simulation is key in this analysis. This presentation shows examples of roll pass design analysis through simulation, and investigates the influence of the cooling system positioning on the rolls' stresses, and wear.

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