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## BOOK OF ABSTRACT

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# Computational Analysis of Soaking of Steel Bloom in Reheating Furnace

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## ABSTRACT

Steel blooms and billets are reheated in the reheating furnaces before hot working. This soaking of the steel blooms are to be precisely controlled for proper rolling afterwards. Many a times it is found that during rolling defective products are generated. That happens due to either overheating or incomplete or insufficient heating. Therefore, detecting the proper heating is very important for reducing the defective products and reducing the productivity hour losses. This work aims to numerically predict the condition of soaking from the pyrometer data of the exit of the reheating furnace, using heat conduction equations to calculate temperature distribution over time. Based on the predictions, the soaking time needed to reach the target temperature can be determined.

***Keywords:*** Soaking pit, Reheating furnace, Computational fluid dynamics, Bloom, Bilet