

ABSTRACT

A Heat Transfer Model for
ISPAT's Reheat Furnace

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This project proposes a heat transfer model that attempts to predict the temperature profile for a billet as it travels through the ISPAT reheat furnace.

One-dimensional heat transfer was assumed and a computer program coded in PASCAL was developed to solve the heat conduction equation by the forward difference numerical method.

The results of the model were compared to the furnace manufacturer's data for four production rates. The maximum deviations for the various production rates were:

130 mTPH	-	20%
75 mTPH	-	11%
50 mTPH	-	7%
30 mTPH	-	10%