



EFFICIENT HEATING SYSTEM (EHS)

FLEXIBLE BILLET HEATING FOR OPTIMUM USE OF ENERGY SOURCES

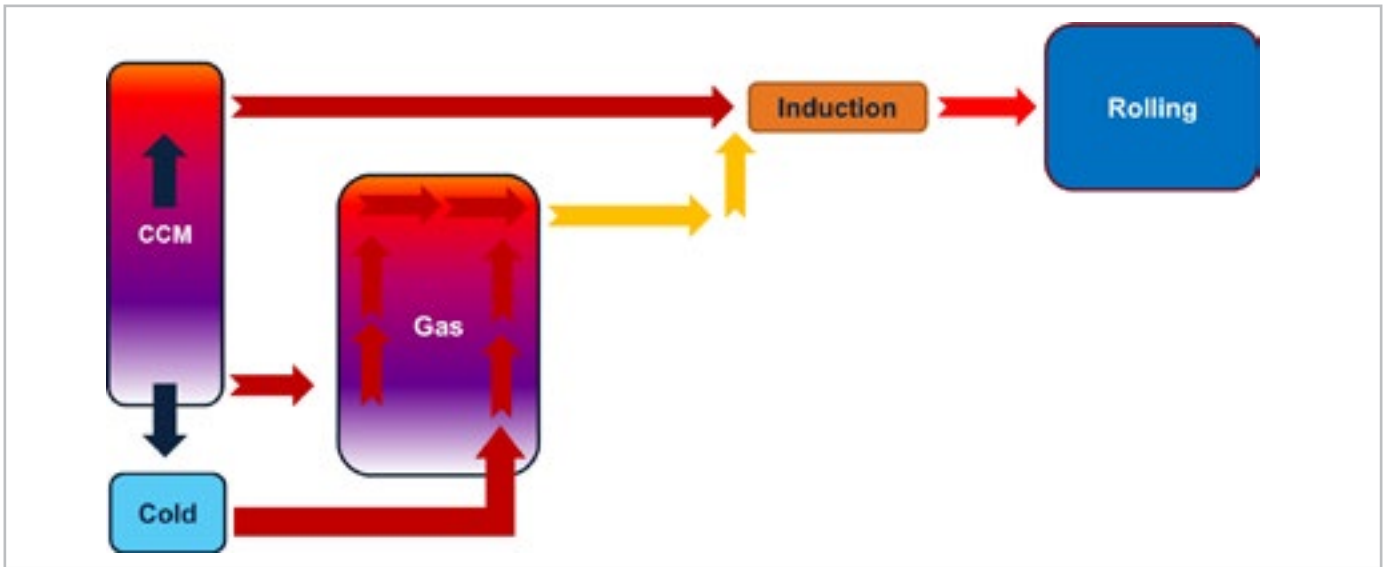
The Efficient Heating System (EHS) is a flexible plant solution which maximizes the efficiency of the billet pre-heating by combining different energy sources. The process route is tailored to local energy cost patterns and source availability. The electric heating through high-performance induction units allows a significant reduction of scale generation.

FIELD OF APPLICATION

Rolling mills for long products

MAIN BENEFITS

- significant reduction of scale loss
- optimum use of combined heating sources: sensible, gas/oil, converter, electric induction
- flexibility to daily/weekly energy cost patterns
- dedicated tool to optimize the process flow and design the components
- "green" technology facilitates financing of project



MAIN FEATURES

A proprietary analytic tool serves to customize the EHS according to any situation, taking into account the availability of fossil fuel and its heating capacity (eg. converter gas), the cost-schedule of different energy sources (eg. weekly, day and night), the production campaigns, and other peculiar customer's requirements. The process is controlled via a simple interface. By reducing the consumption of fossil fuel, the EHS may significantly contribute to the reduction of CO₂ emissions.

EHS is applicable to both green- and brown-field installation.

TECHNICAL DATA

Scale reduction	up to 50%
OPEX savings for 800 tpy mill	2-3 EUR/t

OPTIMIZED ROUTE OF BILLET RE-HEATING

From the most conventional heating route, where cast billets are charged at room temperature to a fossil furnace, to the full direct charge where cast billets are hot-charged to the induction furnace for temperature equalization and boost before rolling.

Between these two extremes, all the combinations of hot- and cold- charge, with gas-and induction furnace may be implemented, for the final optimum route