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NIPPON STEEL & SUMIKIN ENGINEERING CO., LTD.

Press release

Energy-Saving Reheating Furnace Completed for PT Krakatau Osaka Steel in Indonesia

NIPPON STEEL & SUMIKIN ENGINEERING CO., LTD. (Representative Director and President: Shinichi Fujiwara; Head Office: Shinagawa-ku, Tokyo; hereinafter, "NSENGI") has completed the construction of an energy-saving reheating furnace in Indonesia. The reheating furnace was built for PT Krakatau Osaka Steel (KOS), a joint venture between Osaka Steel Co., Ltd. and leading Indonesian steelmaker PT Krakatau Steel (Persero) Tbk., to be used along with rolling equipment that processes section steel, bars and other steel products.

The reheating furnace was planned as new equipment for the combined mill installed at the KOS factory in Banten province at the western end of Java Island. KOS uses the facility to manufacture small and middle sections, bars and flat bars, which are expected to see growing demand particularly in the infrastructure sector. The contract was signed in June 2015, and the furnace has been in operation since January 2017.

The regenerative burner that powers the reheating furnace was uniquely developed by NSENGI and has the following characteristics.

- Reduces energy consumption by approximately 10% compared to the conventional heat exchanger type (recuperator), by preheating combustion air to a high temperature
- Cuts NOx emissions by half
- Uniform temperature distribution inside the furnace
- Improved fuel gas nozzle arrangement for a longer operating life and greater serviceability

This marks the second time our regenerative burner has been applied to a reheating furnace in Indonesia, the first being for PT. Gunung Garuda.

NSENGI will continue to leverage its proprietary regenerative burner technology as it actively pursues reheating furnace construction and conversion projects at home and in Asia, helping its customers slash energy costs and meet environmental load reduction targets.

Equipment Overview

Construction site: Krakatau Industrial Estate, Cilegon, Banten, Republic of Indonesia

Types of steel manufactured: Small and medium sections, bars and flat bars

Production output: Approximately 500,000 tons/year (at full capacity)

Reheating furnace capacity: 120 T/Hr

Full view of the reheating furnace



Operating principle of regenerative combustion system

Combustion by cyclically switching on and off the burners in each of two burners

