

Recycles steel mill dust and
recovers crude zinc oxide

Steel Mill Dust Recycling Plant

Features

- Processes various types of steel mill dust (including dust and waste from integrated steel mills and electric furnaces).
- Efficiently produces homogeneous quality DRI while recovering high-concentration crude zinc oxide.
- Applies high-temperature processing to decompose dioxin-contaminated dust and prevents the re-composition of dioxin.

Overview

(Technical principles, actions, etc.)

Our FASTMET® process is an RHF (rotary hearth furnace)-based direct reduced iron steelmaking process that produces direct reduced iron from iron ore, steel-mill dust and other materials. The carbon and other contents in coal, coke breeze and steel-mill dust can be used as a reductant.



FASTMET® Plant

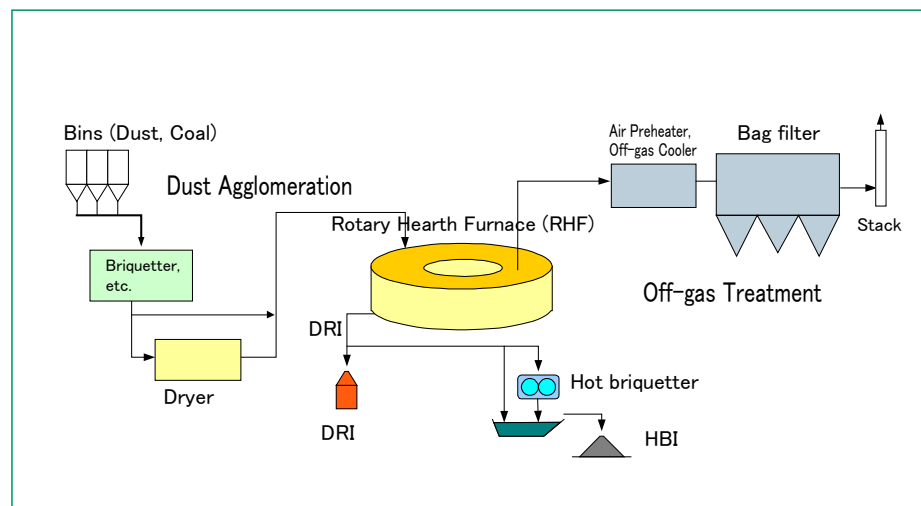
Introductory Track Record

Three process lines to the Hirohata Works of Nippon Steel Corporation

One process line to Nittetsu Shinko Metal Refine Co., Ltd.

One process line to the West Japan Works (Fukuyama) of JFE Steel Corporation

One process line to the Kakogawa Works of Kobe Steel Ltd.



FASTMET®Process Flow

Effects

- Our FASTMET® Process makes it possible to recycle steel-mill dust, which was difficult to recycle and disposed of in landfills, by applying our DRI technology and reducing the material at a high temperature in a short time. This process is also able to recover highly concentrated crude zinc oxide from the off-gas. The recovered crude zinc oxide can be sold as a valuable material and makes the recycling process more economical. Moreover, carbon in the dust can be utilized as a reductant and CO₂ emissions are reduced at the same time.

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