

October 3, 2011

Nippon Steel Corporation
Kobe Steel, Ltd.

Steel Mill Dust Recycling Joint Venture Begins Operations *Creates competitive recycled iron units in the face of high-priced raw materials*

Nippon Steel Corporation and Kobe Steel, Ltd. announce that their steel mill dust recycling plant began commercial operation on October 1. As part of the objectives to deepen and expand their alliance, the two companies decided in October 2008 to establish a joint venture to recycle steel mill dust and turn it into direct reduced iron. Construction of the plant began in May 2010.

1. Outline of the Joint Venture

Name: Nittetsu Shinko Metal Refine Co., Ltd.
President: Masato Oita, Deputy General Superintendent, Hirohata Works, Nippon Steel
Established: October 2008
Capital: 900 million yen
Equity share: Nippon Steel 70%, Kobe Steel 30%
Location: Nippon Steel Hirohata Works (in Himeji, Hyogo Prefecture)
Main equipment: Rotary Hearth Furnace, hot briquette machine
Treatment capacity: Approximately 220,000 metric tons per year

- (1) Nippon Steel and Kobe Steel is using steel mill dust and iron ore fines from their steel mills as raw materials to produce direct reduced iron (DRI) and to recover zinc. For this purpose, a joint venture company called Nittetsu Shinko Metal Refine Co., Ltd. was established in October 2008 within Nippon Steel's Hirohata Works.
- (2) Nittetsu Shinko Metal Refine installed a recycling plant that utilizes Kobe Steel's FASTMET® Process. In this process, steel mill dust is heated to a high temperature in a doughnut-shaped Rotary Hearth Furnace (RHF) and quickly undergoes reduction to make DRI. At the same time, the zinc in the steel mill dust is recovered. The DRI can be used as an alternative to purchased scrap and iron ore as the main raw material, and the recycled zinc can reduce the use of zinc ore. Recycling also promotes zero emissions.
- (3) Nittetsu Shinko Metal Refine is recycling the steel mill dust and using it to produce DRI. The DRI is supplied to Nippon Steel and Kobe Steel, with a portion also going to Sanyo Special Steel Co., Ltd., a group company of Nippon Steel.

2. Purpose of the Joint Business

(1) Recycling of Byproduct from Steelmaking Process (Producing Competitive Iron Units)

The joint venture plans to produce competitive iron units by recycling steel mill dust, a byproduct from the steelmaking process. This recycling business, from a worldwide standpoint, is an extremely effective measure to deal with the sharp increase in steel demand centered on emerging countries and escalating raw materials prices.

(2) Promotion of Regional Recycling and Zero Emissions

Through the joint business, both Nippon Steel and Kobe Steel will be able to cover a broader region for steel dust recycling and zero emissions. The joint business goes beyond the framework of each individual company by integrating the process technology established by Kobe Steel and operation know-how established by Nippon Steel on the recycling and effective utilization of steel dust.

In addition to the new business, Nippon Steel is using its three other dust recycling plants at its Hirohata Works to recycle steel mill dust generated from steelmakers, including alliance partners, located in the Kansai region of Japan.



Nittetsu Shinko Metal Refine's steel dust recycling plant

Media Contacts:

Nippon Steel Corporation
Public Relations Center
Tel +81-3-6867-2135

Kobe Steel, Ltd.
Publicity Group
Tel +81-3-5739-6010