

Sinter Plant 5 MTPY

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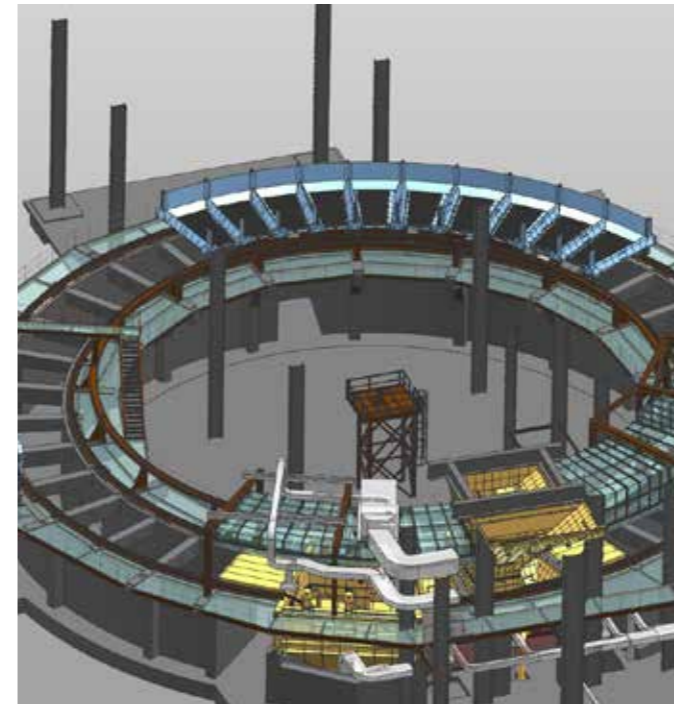
**NATIONAL MINERAL DEVELOPMENT CORPORATION, NAGARNAR, INDIA**  
NEW SINTER PLANT INCLUDING IMGS<sup>(R)</sup>  
GRANULATION AND MIXING

# STATE-OF-THE-ART SINTER PLANT

Intensive mixing and granulation system for optimized raw material preparation.

## MAIN BENEFITS

- Intensive mixing and granulation system for optimized raw material preparation
- Utilization of hot off air from the cooler as combustion air for the ignition furnace
- Designed to accommodate a future capacity increase



## THE CUSTOMER

**Name:** National Mineral Development Corporation  
**Location:** Nagarnar, India

NMDC is India's largest iron ore producer and exporter. The state-owned company currently mines more than 25 million tons of iron ore per year at a number of sites throughout the country. The new steel plant will be built in the vicinity of the Bailadila iron ore deposit.

## THE CHALLENGE

National Mineral Development Corporation Limited (NMDC), an Indian government-owned mining company headquartered in Hyderabad, placed an order with a consortium headed by Primetals Technologies for the supply of a sinter plant on a full turn-key basis. This plant will be part of a new steelworks that NMDC plans to build in Nagarnar in the Indian state of Chhattisgarh. As part of a national campaign to increase the steel output in India, NMDC will build a 3 million t/a integrated iron- and steelworks at Nagarnar.

## THE SOLUTION

The sinter strand will have a suction area of 460 m<sup>2</sup> and will be capable of producing 4.75 million tons of high-quality sinter per year. A highlight of this project includes the installation of the Intensive Mixing and Granulation System (IMGS) from Primetals Technologies for the preparation of the sinter raw mix. This solution will enable a thoroughly homogeneous sinter raw mix to be achieved, which is an important factor for the production of high-quality sinter as required by the blast furnace. Furthermore, a much higher portion of lower-cost, ultra-fine iron ores can be used in the sinter mix, thus decreasing the specific costs for the production of sinter. The sinter plant and downstream equipment and environmental facilities will be designed to allow for a future capacity increase.

## SCOPE OF SUPPLY

The Primetals Technologies scope of supply for this project includes basic and detail engineering for the entire sinter plant; the complete equipment supply comprising raw material preparation and material handling, the sinter machine, sinter cooler and offgas treatment facilities; the electrical, media supply and automation systems; and spare parts. Advisory services for erection, installation, start-up and commissioning will be provided, in addition to personnel training.

## PLANT DATA

### Sinter Plant No. 3

Sintering area	463,5 m <sup>2</sup>
Production capacity rated	598 t/h
Production capacity max.	748 t/h

### Cooler for sinter plant No. 3

Cooling area	506 m <sup>2</sup>
Feed temperature	< 800 °C
Design capacity	1,250 t/h
Main diameter	40 m
Width of trough	4.6 m
Height of side wall	1.65 m
Nominal sinter bed height	1.60 m



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