



PRO MINERALS PVT. LTD.
BASANTPUR, KEONJHAR DISTRICT,
INDIA
THE WORLD'S MOST COMPACT
PELLETIZING PLANT

CIRCULAR PELLETIZING TECHNOLOGY

THE WORLD'S MOST COMPACT PELLETIZING PLANT



THE CUSTOMER

Name: Pro Minerals Pvt. Ltd.

Location: The plant is located near the iron ore mines of Noamundi, in the Singhbhum district in the Indian state of Jharkand, and the Joda-Barbil area, in the Keonjhar District in the Indian state of Orissa.

About the customer: Pro Minerals was formed in 2010 to process iron ores from mines in the vicinity into higher-value products like lump ore and pellets for sponge iron production. The company has been operating a beneficiation plant since January 2014, and the pellet plant will follow in late 2015. Pro Minerals is a sister company of Hari Machines Ltd. (manufacturing workshop), allmineral asia (equipment and technology provider for beneficiation plants) and Cemtec India (equipment and technology provider for grinding and pelletizing plants). As such, the CPT plant is the ideal addition to the company's inhouse capabilities.

THE CHALLENGE

In January 2011, Primetals Technologies received an order from the Indian company Pro Minerals Pvt. Ltd. to erect a new greenfield Circular Pelletizing Technology (CPT) plant in Keonjhar, India. The target: produce pellets suitable for coal-based DR production at a capacity of 1,2 million tons per year (mtpy).

THE SOLUTION

Primetals Technologies has combined the best of both worlds in its CPT solution – the well-proven travelling-grate process with the simple, compact and robust mechanical design of a circular dip-rail cooler. The result is a revolutionary pelletizing technology that significantly reduces the size and weight of the typical pellet plant.

- Sound process technology as proven in straight-grate pelletizing plants
- Induration furnace with a pellet output capacities from 0.5 up to 3.4 mtpy
- Small footprint and low space requirements
- Highly efficient utilization of circular-grate equipment – only 25% of pallet cars are not inside the process zones
- Low operational expenses as a result of flexible use of various energy sources for the firing process (heavy fuel oil, gas from coal gasification plant)
- No waste materials due to 100% recycling loops of all input materials
- Fully automated process control and plant operation

SCOPE OF SUPPLY

- Design of the induration furnace
- Design of the preprocess facilities: additive grinding, mixing and green pelletizing
- Implementation of a dual-fuel system using heavy oil and coal gasification
- Advisory and start-up services

PLANT DATA

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| Active Area | 191 m2 |
| Output | 1.2 MTPA |
| Dual Fuel System | |

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