PRIMETALS TECHNOLOGIES

Press

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JSW Steel orders Meros and WGR system for existing sinter plant No. 4 at Vijayanagar plant

- **Meros system is designed to treat 430,000 Nm^3 per hour and will reduce dust emission level to less than 5 mg per Nm^3**
- **First of its kind in India**
- **Provisions are made for future installation of DeSOx, DeNOx, DeOrganic and heavy metals removal systems**
- **Waste Gas Recirculation (WGR) System will recirculate up to 50% of the sinter off-gas**
- **Coke savings of about 7% and a reduction of off-gas cleaning requirements of up to 50% may be achieved**

Primetals Technologies has received an order from Indian steel producer JSW Steel to supply a Meros (Maximized Emission Reduction Of Sintering) off-gas cleaning system with WGR (Waste Gas Recirculation System) for its existing sinter plant No.4 at the Vijayanagar works in Karnataka State, India. It is designed as a special bag filter based dry gas cleaning system for sinter plants and will be the first of its kind in India. The Meros system will treat up to 430,000 Nm^3 per hour and will significantly reduce dust emissions to less than 5 mg per Nm^3. Provisions are made for the future installation of DeSOx, DeNOx, DeOrganic and heavy metals removal systems. With the installation of the sinter plant WGR system, up to 50% of the off-gas will be recirculated in the sintering process. This will result in coke saving of about 7% and a reduction of off-gas cleaning requirements of up to 50%. This Meros plant is expected to be started-up in the first quarter of 2019.

Primetals Technologies will be responsible for the engineering, delivery of key equipment and automation of the integrated WGR and Meros system as well as for advisory services for commissioning. The Meros plant for JSW Vijayanagar´s 224 m^2 sinter plant No. 4 represents another one in a row of newly installed sinter gas cleaning systems by Primetals Technologies until late 2019, together with the recently received orders from JFE in Japan and Kardemir in Turkey.

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The advanced Meros process also involves injecting and finely distributing adsorption and desulfurizing agents, such as activated carbon and either hydrated lime or sodium bicarbonate, into the off-gas flow. This efficiently binds and removes heavy metals, harmful and hazardous organic components, as well as sulphur dioxide and other acidic gases. The use of sodium bicarbonate to reduce the amount of sulphur dioxide also eliminates the need for a conditioning reactor. The dust particles are deposited in a specially developed, energy-efficient bag filter. The greater part of the dust removed by the filters is recycled back into the flow of off-gas to further optimize the efficiency and cost-effectiveness of the gas purification process. Any remaining unutilized additives are then once more in contact with the off-gas, so that they are finally almost completely utilized. There is also considerably less discharged residue when sodium bicarbonate is used instead of hydrated lime. The process automation system ensures stable operation, even when there are considerable fluctuations in the volume and composition of the off-gas. Emission limits can therefore be observed at all times.

JSW Group is a multi-billion-dollar conglomerate, with presence across India, USA, South America and Africa. JSW Group is a part of the O.P. Jindal Group with strong footprints across core economic sectors, namely, Steel, Energy, Infrastructure, Cement, Ventures and Sports. It employs a diverse workforce of over 40,000 individuals. The flagship company of JSW Group, JSW Steel is one of India's leading integrated steel manufacturers with a capacity of 18 million metric tons of steel per year. By end of next decade, JSW Steel aims to produce 40 million tons of steel annually. JSW offers a wide gamut of steel products that includes hot rolled, cold rolled, bare and pre-painted galvanized and Galvalume steels as well as TMT rebars, wire rods and special steels.

MEROS is a registered trademark of Primetals Technologies in certain countries.
GALVALUME is an internationally registered trademark of BIEC International Inc. and some of its licensed producers.

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Meros plant from Primetals Technologies at voestalpine Stahl GmbH in Linz, Austria.

This press release and a press photo are available at
www.primetals.com/press/

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Primetals Technologies, Limited headquartered in London, United Kingdom is a worldwide leading engineering, plant-building and lifecycle services partner for the metals industry. The company offers a complete technology, product and service portfolio that includes integrated electrics, automation and environmental solutions. This covers every step of the iron and steel production chain, extending from the raw materials to the finished product – in addition to the latest rolling solutions for the nonferrous metals sector. Primetals Technologies is a joint venture of Mitsubishi Heavy Industries (MHI) and Siemens. Mitsubishi-Hitachi Metals Machinery (MHMM) - an MHI consolidated group company with equity participation by Hitachi, Ltd. and the IHI Corporation - holds a 51% stake and Siemens a 49% stake in the joint venture. The company employs around 7,000 employees worldwide. Further information is available on the Internet at www.primetals.com.