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Primetals Technologies Receives FAC for New AOD Converter, Ladle Furnace, and Stainless Caster at JSL

- **New production line featuring an AOD converter, ladle furnace, and continuous caster**
- **Jindal Stainless expects a significant increase in production capacity**
- **Advanced automation systems contribute to improved product quality and optimized process efficiency**

Stainless steel producer Jindal Stainless Ltd. (JSL) has granted the final acceptance certificate (FAC) to Primetals Technologies for a new stainless steel production line at its Jajpur, Odisha site. The newly installed equipment includes a 150-ton argon-oxygen decarburization (AOD) converter, a 150-ton ladle furnace, a single-strand continuous caster, and comprehensive automation solutions. With this expansion, JSL's production capacity will increase by approximately 1 million tons per year.

Efficient Vessel Exchanges

The AOD converter features a top-blowing lance, an exchangeable converter, and a process gas mixing station. Designed for optimized processing, the converter enables shorter cycle times—approximately one hour from charging to tapping—while minimizing process and reduction gas consumption. The Vaicon Quick vessel-suspension system facilitates fast vessel exchanges, while the Vaicon drive damper reduces vibrations, extending equipment life. A primary dedusting system with a counter cross-flow cooling system ensures high efficiency within a compact space.

The process optimization systems, AOD Optimizer and LF Optimizer, integrate advanced metallurgical models which enhance process control and improve accuracy to ensure that JSL reaches a stable product quality while meeting the production targets. Further benefits include reduced consumption of AOD process gases and reduction agents as well as lower energy consumption at the ladle furnace.

Having previously collaborated with Primetals Technologies on the Level 2 automation modernization of AOD No. 1 in Jajpur, JSL had set high expectations for performance. The delivered equipment and automation solutions have successfully met the key operational requirements.

State-of-the-Art Caster Automation

Primetals Technologies has also supplied a single-strand continuous caster to process stainless steel in the 200, 300, and 400 series. The caster is equipped with modern automation systems, including the LevCon mold-level control system for auto-adaptive and dynamic bulging compensation, and the Level 2 CC Optimizer system, which supports production planning and data recording throughout the casting process.

Additionally, several expert systems have been incorporated into the process automation setup. The Mold Expert system detects and prevents caster-mold breakouts while analyzing the casting process. The Yield Expert system optimizes cut length and strand adjustments to maximize production output. The caster produces slabs with widths ranging from 850 to 1,680 millimeters and thicknesses between 160 and 220 millimeters. Its design aligns with JSL's existing carbon steel caster at the Jajpur site, helping streamline maintenance and spare parts management.

A Leading Stainless Steel Producer

Founded in 1970 by Om Prakash Jindal, JSL is India's leading stainless steel producer, with an annual production capacity of more than 3 million tons. The company operates multiple stainless steel manufacturing and processing facilities in India and abroad. JSL's diverse product range includes stainless steel slabs, blooms, coils, plates, sheets, precision strip, wire rod, rebar, blade steel, and coin blanks.



Primetals Technologies has implemented a new AOD converter meltshop and continuous caster at Jindal Stainless in India.



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Torch-cutting solution from Primetals Technologies implemented at JSL's Jajpur site.

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