

Press

London, March 30, 2021

AM/NS Calvert selects Primetals Technologies to supply RH degasser and continuous caster

- Complete supply of RH degasser, continuous caster, and material handling equipment
- On-site slab production to facilitate supply of high-quality steel for the automotive industry
- Annual capacity of 1.5 million tons
- Expected completion in early 2023

Primetals Technologies will supply an RH degasser, continuous slab casting machine, and material handling equipment to AM/NS Calvert for their new steel meltshop. A 50/50 joint venture between ArcelorMittal and Nippon Steel Corp. (NSC), the facility is located in Calvert, Alabama, USA. Once completed, the plant will be capable of annually producing 1.5 million tons of slabs to feed its existing hot strip mill. This expansion will give AM/NS Calvert full control of production quality and the flexibility to produce a broad spectrum of high-quality steel grades for the automotive industry. Construction is expected to take two years.

The Primetals Technologies scope of supply includes a 180-ton twin RH degasser plant. The system includes the patented Combined Vessel & Ladle Lifting System (CVL), the Combined Oxygen-Burner System (COB Lance), mechanical vacuum pump, ladle treatment stands, wire feeder station, argon stirring emergency lance, and Level 1 and Level 2 automation systems. This RH degasser plant is designed to produce enhanced product quality like interstitial free steel grades or ultra-low carbon steel grades and to provide AM/NS Calvert with higher flexibility and throughput in a very compact layout.

Another key component is a single-strand, bow-type, continuous casting machine. The caster can produce slabs ranging in thickness from 235 millimeters to 255 millimeters, widths from 950 millimeters to 2,050 millimeters, and lengths of 4.2 meters to 11.75 meters. With a radius of 9 meters, the caster features a straight mold with segmented strand containment as well as a patented continuous bending and straightening process. A full suite of advanced process models, including DynaFlex oscillation,

DynaGap Soft Reduction, and Dynacs 3D Secondary Cooling will be supplied to ensure class-leading production quality.

Advanced Level 2 technologies will ensure slab quality control while mechatronics packages integrate technological control systems with core machine mechanical designs. These packages were designed to improve maintenance and quality tracking, optimize casting speed and slab cut length, as well as monitor systems in order to detect problems like potential breakouts and clogged cooling spray nozzles.

AM/NS Calvert is recognized as one of the most advanced steel finishing facilities in the world. Purchased by ArcelorMittal and NSC in 2014, the plant has served the North American market since 2010 with the capacity to produce 5.3 million tons of flat rolled carbon steel products annually. End-user markets include automotive, construction, pipe and tube, service center, appliance, and HVAC. Their portfolio of steel grades for high-value applications include hot rolled bands, hot rolled pickled and oiled, cold rolled, and advanced coated products. AM/NS Calvert also produces advanced high strength steels that are needed for lighter-weight, more fuel-efficient vehicles. The facility currently includes a river terminal, hot strip mill, cold rolling mill, three hot dip galvanizing lines, continuous annealing line, rail yard and supporting infrastructure.



Twin RH degasser plant with CVL lifting system by Primetals Technologies

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

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