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CAP ACERO awards Primetals Technologies follow-up orders after successful replacement of converter #2

- **Primetals Technologies will revamp converter #1 after converter #2 was successfully started up earlier this year**
- **Converter #2 revamped by Primetals Technologies will be equipped with the proven pneumatic slag retention system Vaicon Stopper**
- **Vaicon Stopper ensures the reduction of slag carry over during tapping to a minimum**
- **Vaicon Stopper leads to a significant decrease of operating cost due to lower consumption of slag formation agents and deoxidizing materials with a positive impact on steel quality**
- **150th reference for Vaicon Stopper worldwide**

In October, Primetals Technologies received the order from Compania Siderurgica Huachipato S.A. (CAP ACERO) to replace LD (BOF) converter #1 in its Talcahuano, Chile works. This repeat order follows the successful start-up of converter #2 in May 2018, which was also revamped by Primetals Technologies. In addition, CAP ACERO also ordered the installation of Primetals Technologies' Vaicon Stopper slag retention system on converter #2, marking the 150th implementation of this system worldwide. Vaicon Stopper ensures the reduction of slag carry over to the ladle during converter tapping to a minimum and leads to a significant decrease of operating cost due to lower consumption of slag formation agents and deoxidizing materials, with a positive impact on steel quality. The modernized converter #1 is scheduled to come into operation in March 2020.

CAP ACERO (Compania Siderurgica Huachipato S.A.) is based in Talcahuano in central Chile, and was founded in 1950. It produces long products, mainly for the mining and construction industries, and wire rods. The revamp of converter #1 is planned to follow the same successful setup regarding technologies, scope split and execution as the project for revamping of converter #2. Converter #1 will have a tapping weight of 100 metric tons and a larger reaction volume, which will improve the metallurgical process. Converter vessel and trunnion ring will be suspended by the maintenance-free Vaicon Link 2.0. This

flexible, rugged suspension system minimizes stresses caused by heat-related deformations, ensures balanced load pick-up, and has a long service life. The tilting drive will be equipped with new bearings.

Regarding the revamp of converter #1, Primetals Technologies will be responsible for the detail engineering of the converter vessel and the trunnion ring. The project is performed under the leadership of Primetals Technologies together with VAPOR Industrial S.A., Santiago de Chile, Chile. Primetals Technologies will be responsible for planning and designing the new plant components, the supply of the suspension system Vaicon 2.0, the trunnions and the bearings as well as the assembly engineering, supervising the disassembly and reassembly, and the training of the operating and maintenance personnel. VAPOR Industrial S.A. will handle the manufacture and transport of the plant components.

The pneumatic slag retaining system Vaicon Stopper to be installed on converter #2 in Spring 2019 allows to reduce the slag carry-over to the ladle significantly to values as low as 2 to 3 kilograms per ton, the final performance values depends mainly on vessel size. The reduction of the carry over slag has two substantial effects on the steelmaking process. It improves the quality of the steel in the teeming ladle through reducing the inevitable phosphor pick-up from the slag while reducing the amount of consumables to be added for a more efficient ladle furnace operation.

The scope of supply of the slag retaining system comprises the infrared camera driven slag detection system SlagMon for early and reliable detection of slag at the end of tapping, the pneumatic actuated slag stopper unit for pneumatic sealing of the tap hole as well as the media supply system. The Vaicon Stopper is connected to the converter with a quick exchange device. This allows easy exchange of the whole unit, hence, maintenance can be done offline in the workshop without any impact on production.



First heat of converter BOF #2 installed by Primetals Technologies at CAP Acero (Compania Siderurgica Huachipato S.A.) in Talcahuano, Chile. (Photo: Jean Paul Sauré, CAP Acero).

This press release and a **press picture** is available at www.primetals.com/press/

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Primetals Technologies, Limited, headquartered in Frimley, Camberley, United Kingdom, is a worldwide leading engineering, plant-building and lifecycle partner for the metals industry. The company offers a complete technology, product and service portfolio that includes the integrated electrics, automation and environmental solutions. This covers every step of the iron and steel production chain that extends 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 IHI Corporation - holds a 51% stake and Siemens a 49% stake in the company. The company employs around 7,000 employees worldwide. Further information is available on the Internet at www.primetals.com.

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