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German steel producer HKM orders customized relining machine from Primetals Technologies

- **Tailormade solution to increase safety and improve occupational health**
- **Automated lift and robotic manipulator for handling bricks**
- **Mounting and unmounting of the relining machine happens automatically**
- **Implementation scheduled for summer of 2024**

German steel producer Hüttenwerke Krupp Mannesmann (HKM) has ordered an LD converter (BOF) relining machine from Primetals Technologies. It will replace a 30-year-old and outdated machine at HKM's steel plant in Duisburg, Germany. Startup is scheduled for June 2024.

HKM's decision to award the contract to Primetals Technologies was based mainly on the tailormade design, which is optimized for HKM's needs, and successful recent relining machine projects with features such as staff elevators and tailormade solutions for brick logistics. Primetals Technologies will engineer, manufacture, implement, and provide advisory services for the installation and startup of the new relining machine.

Improving occupational health

Primetals Technologies did a comprehensive study to find the best relining solution for HKM, one that would meet their needs in terms of state-of-the-art ergonomics, staff access via a separate elevator, and an automated working platform.

As part of the solution, personnel working inside the converter vessel will no longer need to lift the bricks. This is thanks to a semi-automatic system in which two magazine lifts transport the bricks from the depalletizing station and into the converter. A brick manipulator, which is an arm-like robotic device for handling materials, will then automatically discharge the bricks from the magazine lifts onto an extendable roller table.

With this logistics concept, the bricks are pushed into their final position without the workers having to lift them. Additionally, a staff elevator ensures that the personnel have easy access to the relining platform.

Detailed safety systems

A detailed safety concept will increase occupational safety during the relining procedure. As an example, a solution for emergency rescue in case of technical issues with the staff elevator will be implemented. Also, Primetals Technologies will install an emergency power unit for use in the event of a power failure.

The new machine will be used for the relining of HKM's movable converters. The relining procedure is executed on a separate relining stand. When the converter is in place, the relining machine is inserted through the detachable bottom. After the relining procedure is completed, the machine fully retracts and can then easily be moved into its parking position.

The engineering and testing phases will take place in Austria in partnership with leading suppliers and partners. Once manufacturing has completed, the machine will be pre-assembled and tested at the workshop before being transported to Germany.

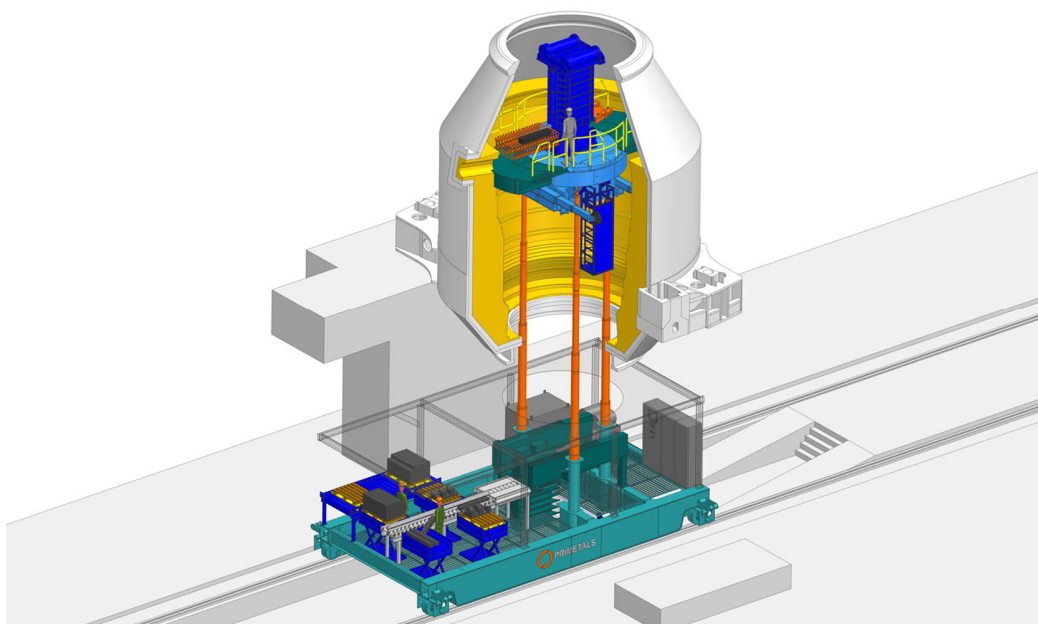
A joint venture

HKM produces four million tons of liquid steel annually and employs some 3,000 people. The steel producer operates an integrated plant in Duisburg and produces intermediate products for the processing industry. HKM is owned by Salzgitter, Thyssenkrupp, and Vallourec.

Key facts: The major components of HKM's new relining machine

Primetals Technologies' tailor-made relining machine consists mainly of the following:

- Base frame with a traction drive and a transverse thrust mechanism
- Height-adjustable rotating work platform
- Automatically expandable platform extensions
- Staff elevator
- Refractory brick feeding and depalletizing station
- Automatic brick magazine lift for up to ten bricks
- Brick manipulator solution including roller table on the working platform
- Automation system
- Emergency power unit



HKM's new relining machine from Primetals Technologies, with an automated solution for brick handling.

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

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