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Chinese Steel Producer Orders World's Most Powerful Continuous Caster from Primetals Technologies

- **Bow-type caster with a capacity of 5,000 kilonewton per roll – equivalent to weight of 15 fully loaded trucks**
- **Will produce slabs of extraordinary thicknesses of up to 460 millimeters**
- **Startup scheduled for 2025**

Wuyang Iron and Steel has placed an order with Primetals Technologies for a 1-strand continuous caster with several record-breaking features. The caster will be implemented at Wuyang's plant in Wugang, Henan province, and is set to become the world's most powerful of its kind. Moreover, it will produce the world's thickest slabs, measuring up to 460 millimeters in thickness.

Thanks to the new equipment, Wuyang will be able to manufacture plates for heavy-gauge applications like the shipbuilding and wind turbine sectors. Annual capacity will be at one million tons of high-quality slabs. Products of such thicknesses are usually produced with ingot casters or vertical casters, both of which are not as cost-effective and efficient as Primetals Technologies' new type of bow-type continuous slab caster.

Remarkable Reduction Force

Single Roll DynaGap (SRD) segments from Primetals Technologies allow for the dynamic alignment of individual roll gaps when changing parameters that influence the production, like steel grade, cooling grade, and casting speed. The SRD segments enable forces of 5,000 kilonewton per roll, corresponding to the weight of 15 fully loaded trucks. These extraordinary strong forces ensure sophisticated internal microstructures of the slabs, while keeping the mechanical properties at a consistent and high quality.

Unsteady Bulging Reduced by 50 Percent

The caster will also feature Primetals Technologies' new and ground-breaking method for establishing ideal caster-roll geometry as early as at the design stage. This solution reduces unsteady bulging by 50 percent, enables higher casting speeds, and leads to greater productivity.

The tried-and-tested oscillator will be carefully designed with the philosophy of compensating for heavy weights by utilizing cascaded leaf springs, which helps to run the oscillator at dramatically reduced energy consumption levels.

Primetals Technologies' continuous bending and straightening concept, Smart Segment, in combination with a dry-casting machine design that includes the Eco Star rolls results in significantly improved slab-

surface quality. The Eco Star rolls' internal cooling system is optimized to withstand the high temperatures needed to minimize surface defects during the dry-casting process.

A Leading Producer of Thick Plates

A subsidiary of HBIS Group, Wuyang Iron and Steel is leading the production of wide and thick steel plates in China. It also houses a key research centre within the steel plate industry. Wuyang Iron and Steel operates two technologically advanced, double-stand production lines for wide and thick steel plates.

Key facts: Wuyang Iron and Steel's 1-strand slab caster

Capacity: 1 million tons per year

Radius: 12 meters

Metallurgical length: 44 meters

Dimension of slabs: 370 to 460 x 1,600 to 2,500 millimeters

Steel grades: low-carbon, micro alloyed, low alloyed, austenitic and martensitic stainless, peritectic, high-strength low-alloyed (HSLA)



Representatives from Primetals Technologies and Wuyang Iron and Steel at the signing ceremony.

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

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