

London, April 18, 2024

Zhongshou Special Steel Group Chooses Arvedi ESP for Transition into Green Steel Production

- **Arvedi ESP line from Primetals Technologies centerpiece in transition of conventional production route into green steel manufacturing of hot-rolled band**
- **Proven high quality of hot-rolled coil produced in endless mode as well as absence of fossil fuel consumption main reasons behind Zhongshou's choice of technology**
- **Zero CO₂ emissions during operation a further benefit for Zhongshou**

Chinese steel producer Zhongshou Special Steel Group has recently ordered an Arvedi ESP line from Primetals Technologies for its plant in Luanzhou, Hebei Province. The festive signing ceremony took place in Vienna on April 17 and saw participation of top-level managers from both companies along with governmental representatives.

Primetals Technologies entities in Austria, China, and Germany will supply the complete mechanical scope as well as the process-related electrics and automation solution. The plant is scheduled to be in full operation at the end of 2025.

The most energy-efficient process

The Arvedi ESP endless strip production technology, acclaimed as the only officially certified solution for carbon neutral thin-slab casting and rolling, is the most energy-efficient process for producing endless hot rolled coil (eHRC) of high quality. This is the main reason why Zhongshou selected Arvedi ESP for its transition from the conventional route, consisting of an LD converter (BOF) and a hot-strip mill, into an electric arc furnace (EAF) and Arvedi ESP-based production line.

“We have a clear target of holding a position as front runners in green steel production both on the domestic and international markets, while also being able to compete on markets protected by carbon border adjustment (CBAM) restrictions. The Arvedi ESP technology and its record-breaking low carbon footprint will be playing a key role for us in achieving this target,” says Zhongshou chairman Zheng Ting Wen.

“Currently, steel producers across the globe prepare to decarbonize their production routes. Zhongshou takes a decisive step on this endeavour with the investment in the world's twelfth ESP plant, allowing them to reach zero CO₂ emissions at the casting-rolling stage during operation. We look forward to collaborating closely with Zhongshou for the transition into green steel production,” says Andreas Viehböck, Head of Upstream Technologies at Primetals Technologies.

“Almost 20 years ago, Giovanni Arvedi pioneered endless strip production with the invention of Arvedi ESP,” says Mario Arvedi Caldonazzo, CEO of Arvedi Group. “Today, after numerous improvements over the years, Arvedi ESP is still the only proven solution for green steel strip production. With this technology, Zhongshou Special Steel Group will be able to significantly reduce CO₂ emissions while maintaining a high production capacity to meet the increasing need for highly demanding steel grades.”

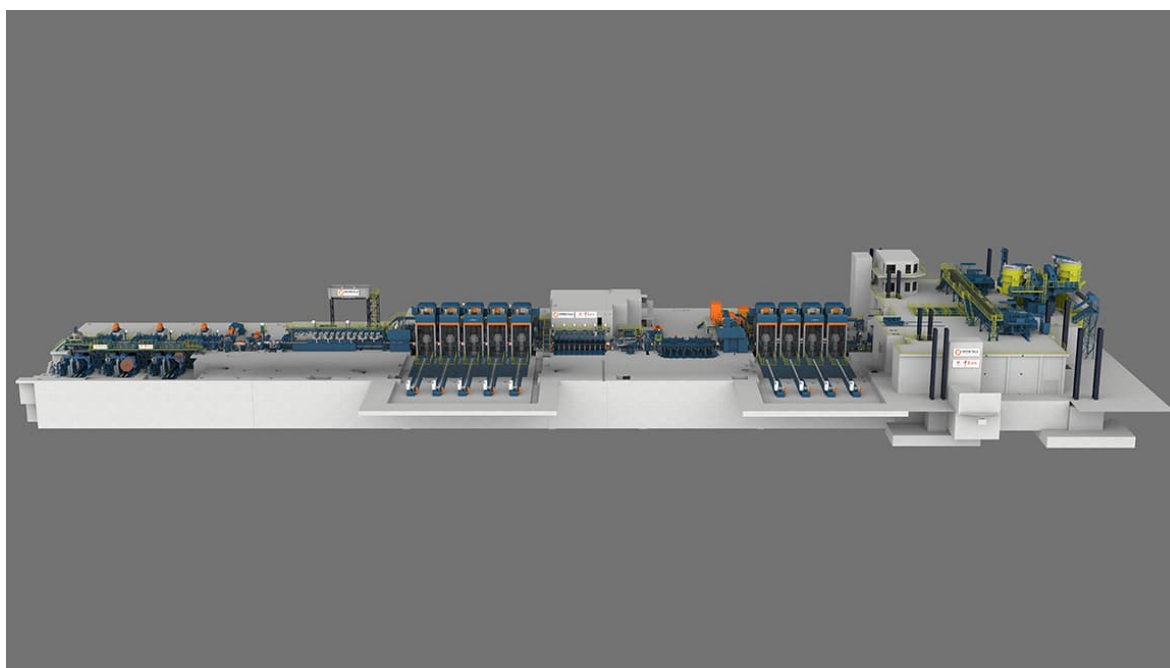
Zhongshou’s ESP plant will be the 9th of its kind in China and is set to be the most powerful one on the market to date. This is thanks to its design, consisting of a long casting machine, four high-reduction mill stands, and five finishing mill stands. The plant will roll the product starting from a strand thickness of 130 millimeters.

The high reduction capability will enable Zhongshou to supply the commodity market at high productivity rates, as well as high-strength low-alloy steel (HSLA) niches, including the automotive sector, with coil thicknesses ranging from 0.7 to 12.7 millimeters. The production will be geared towards full endless mode over the full range of thicknesses.

Higher level of productivity

The ESP plant will incorporate advanced electrical and automation systems, featuring the latest Level 2 automation software models and technological control systems to achieve tight dimensional tolerances while ensuring exceptional product quality.

Moreover, automation solutions like Primetals Technologies’ anti-bulging solution LevCon will contribute to consistent and high levels of productivity. Arvedi ESP’s well-proven high mass flow is made possible with a new and innovative way of regulating the stopper, and additionally, thanks to LevCon, the casting speed is never slowed down to compensate for bulging effects.



3D rendering of Zhongshou’s Arvedi ESP line from Primetals Technologies.



Representatives from Zhongshou and Primetals Technologies during the signing ceremony in Vienna.



Photo from the signing ceremony in Vienna. From left to right: Andreas Viehböck, Head of Upstream Technologies at Primetals Technologies, Zheng Ting Wen, Chairman at Zhongshou Special Steel, and Tomislav Koledic, CEO of Primetals Technologies China.

This **press release** and a **royalty-free picture** are available at [primetals.com](https://www.primetals.com)

Contact for journalists:

Björn Westin, Press Officer

bjoern.westin@primetals.com

Mob. +43 664 6150250

Follow us on social media:

[linkedin.com/company/primetals](https://www.linkedin.com/company/primetals)

[facebook.com/primetals](https://www.facebook.com/primetals)

twitter.com/primetals

Primetals Technologies, Limited, headquartered in London, United Kingdom, is a pioneer and world leader in the fields of engineering, plant building, and the provision of lifecycle services for the metals industry. The company offers a complete technology, product, and services portfolio that includes integrated electrics and automation, digitalization, and environmental solutions. This covers every step of the iron and steel production chain—from the raw materials to the finished product—and includes the latest rolling solutions for the nonferrous metals sector. Primetals Technologies is a Group Company of Mitsubishi Heavy Industries, with around 7,000 employees worldwide. To learn more about Primetals Technologies, visit the company website [primetals.com](https://www.primetals.com).