

PRESS RELEASE

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Hydro Aluminium Invests in Hertwich Homogenization Technology for New Recycling Plant in Spain

The state-of-the-art facility will produce high-quality, low-carbon aluminium products for key European industries.

- Included in the delivery: three batch homogenization furnaces, two cooling chambers, a billet saw, an ultrasonic testing station, and a packing station.
- The plant in Torija, Spain is set to produce 120,000 tons of low-carbon recycled aluminium annually. The products will be used for key European industries such as transport & automotive, building & construction, renewable energy installations, and consumer durable markets.
- Focus is on reducing energy consumption and optimizing heat treatment for various material qualities.
- A step cooling system and a bidirectional airflow system enable flexible and uniform heat treatment, increasing energy efficiency and reducing consumption.



Hydro, a leading company in aluminium and renewable energy, relies on Hertwich Engineering's technology, a subsidiary of SMS group, for the construction of a recycling plant in Torija, near Spain's capital, Madrid. Hertwich's delivery includes three batch homogenization furnaces with two cooling chambers, a billet saw, an ultrasonic testing- and a packaging station. The new recycling plant is scheduled to begin operations in 2026.

The recent order is based on the aluminium recycling plant in Cassopolis, Michigan, USA, which Hydro officially inaugurated in November 2023. In that location as well, three chamber homogenization furnaces from Hertwich, along with additional components, are in use. "Hydro's goal is to ensure consistently high-quality products at all its sites worldwide," says Gerold Keune, Managing Director of Hertwich Engineering GmbH. "Hertwich technology provides an important and reliable foundation for this. The new order underlines our long-standing partnership."

At the new site in Torija, near Madrid, Hydro will produce 120,000 tons of low carbon recycled aluminium annually, primarily using scrap aluminum from the market and its own process returns. The primary customers for the extruded billets are key European industries such as automotive, transportation, and construction. In these high-tech sectors, the versatile material aluminum must meet a wide range of requirements. The batch homogenization furnaces are equipped with an optional step cooling system

developed by Hertwich. Their flexible heat treatment allows for frequent switching between different high-performance alloys.

Additionally, the batch homogenization furnaces use a special reverse airflow process. This bidirectional airflow ensures a uniform air temperature and heats the chamber up to a quarter of the time faster. Thus, Hertwich technology contributes to making aluminium production more sustainable: energy efficiency increases, and energy consumption decreases.

The fully integrated system operates with minimal personnel requirements. It is designed for extrusion billets with a diameter of 178 to 305 millimeters (7–12 inches) and a cutting length of 7.0 meters. In the plant, the vertically cast aluminum billets are first positioned horizontally. They are then inspected for internal cracks in the linear ultrasonic testing system. The saw then cuts them to length. The billets are subsequently bundled into stacks weighing up to 50 tons and loaded into the furnaces. The multi-hour chamber homogenization at up to 610 degrees Celsius ensures a uniform microstructure in the billets. After heat treatment in the cooling chambers, the finished billets are bundled into individual layers, weighed, and strapped with plastic bands at the packing station.

Hertwich Engineering, a company of the SMS group is renowned for its future-oriented, energy saving technologies and outstanding service in aluminium casthouse. The company is active worldwide with design, supply, construction and commissioning of special machinery and equipment for the Aluminium industry. Hertwich is competent for supplying complete Al-casthouse on a turnkey basis (one-stop-shopping). The product range comprises melting equipment for aluminium scrap, conti and batch homogenizing plants, sawing plants, horizontal and vertical casting machines and quality inspection stations, etc. To stay ahead Hertwich relies on its own R&D and proprietary know-how. For 50 years, the advanced technology has revolutionized the industry and the company maintains its worldwide lead.