

PRESS RELEASE

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Hydro Aluminium Commerce, TX expanding heat treatment capacity by using new Hertwich furnace technology

Hydro Aluminium in Commerce (TX), USA has placed an order with Hertwich Engineering, a company of the SMS group, for the supply of a modern batch homogenizing furnace and a further saw for extrusion billets.

In 2010, Hertwich Engineering has completely modernised its batch furnace concept for the homogenisation of extrusion billets. The performance of Hertwich's newly developed batch furnace with its new heating system and automated log handling is comparable to that of a continuous furnace.

This means clients can now choose between the two concepts or combine the two, as in the case of the US company Hydro Aluminium Commerce, TX. This flexibility has led to a significant increase in client interest.

Hydro Aluminium Commerce, TX processes some 100,000 tonnes of aluminium scrap into extrusion billets at its Commerce facility. The company already operates a Hertwich continuous homogenising furnace and has now placed an order for a state-of-the-art batch

homogenising furnace together with an additional saw. The new furnace has a capacity of 55 tonnes and is designed for billets up to a maximum length of 7.7 metres and diameters in the range 178 - 406 mm.

The decisive advantage of the new batch-furnace design concept is the heating. With conventional batch furnaces, the air releases thermal energy when passing through the material being heated. This leads to non-uniform temperature distribution. Longer heating times are necessary to compensate for the temperature differences.

The concept of the new HE furnace generation combats this disadvantage by changing the direction of air flow in the furnace (using so-called reversed air). Thus the billets in the furnace are heated more uniformly. Experience has shown that heating time can be reduced significantly in this way.

The flow direction is reversed with the help of flaps. The fan operates at full power during flow reversal. The energy supplied via the fan suffices to balance out the heat loss during the soaking time. No external heating (whether supplied via burners or electrically) is necessary during this period. During operation, the temperature is kept constant using frequency-controlled fans. Baffles enable the hot gases to be distributed uniformly throughout the whole furnace chamber. The chamber is designed in such a way that uniform air flow is not impeded or prevented anywhere in the chamber.

Cooling is carried out in a similar manner to heating. The fact that the cooling air flow is reversible as well ensures that the temperature is uniform during this phase, with correspondingly better metallurgical results.

The two homogenising furnaces will be arranged in such a way that they can operate in combination, enabling homogenisation to be carried out flexibly. A second sawing plant will be installed to eliminate waiting times. A transfer car coupled with an automated stacker and spacer handling will be used to transport the billets.

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.