

PRESS RELEASE

Meinerzhagen, Germany, December 03, 2019

Otto Fuchs orders Aluminium Multi Chamber Melting Furnace from Hertwich

Otto Fuchs KG supplements its casthouse in Meinerzhagen with one Ecomelt-PS150 melting furnace and two tilting holding and casting furnaces from Hertwich Engineering, a company of the SMS group. The new recycling furnace will be the fifth Ecomelt furnace and with a capacity of 7,7 t/h the largest one at Otto Fuchs. Both casting furnaces, which are also part of the scope of supply, are designed for a capacity of 20 t. This order maintains the successful partnership between Otto Fuchs and Hertwich, which already exists for more than 15 years.



Hertwich Multi Chamber Melting Furnace Ecomelt PS

As an internationally operating and leading company in the non-ferrous metals industry, Otto Fuchs KG is especially known as a powerful supplier of high-quality semi-finished products (forgings, extrusion products and rolled rings made of aluminium or other metals) and forged car wheels ready for mounting. Among other things, Otto Fuchs forging products are used in automotive, aerospace and construction industry.

The high load on these components as well as the extraordinary safety requirements already require precise control of all production steps for the semi-finished products.

Hence, Otto Fuchs consistently relies on its own extrusion billet production to ensure product quality. Run around scrap material arising from further processing (e.g. head and butt ends, burrs and swarf) are almost completely recycled inhouse. Recycling of this scrap in a homogeneous, high-quality and most efficient manner represents a challenge to the remelting technology.

The Ecomelt-PS150 furnace currently on order with a melting capacity of 7,7 t/h is the largest multi chamber melting furnace installed at Otto Fuchs to date. It combines scrap preheating and submersion melting of

decoated scrap in one compact unit. The entire furnace process is fully automated by a measurement and control system.

Scrap is top charged into the vertical arranged preheat shaft and preheated to a maximum temperature of 500°C. Within this temperature range, partial melting is ruled out. Combustion gases are ducted from the main chamber to the melting chamber and the preheat shaft.

At the bottom end of the preheating shaft, the preheated material directly immerses into the flowing melt bath of the melting chamber. An electromagnetic liquid metal pump ensures the proper melt flow between the furnace chambers and the flooding of the shaft floor.

Two single chamber furnaces, which are part of this order as well, are placed between the melting furnace and the casting unit. Molten metal is transferred from the Ecomelt melting furnace in one of these furnaces for possible re-alloying. Finally, melt is transferred via the casting launder to the casting machine as needed. Both of these furnaces are hydraulically tiltable. This arrangement ensures a continuous casting operation and reduces downtime for alloy change.

As a result of the steadily increasing consumption of aluminium, the amount of turnaround scrap for recycling will further grow in the future.

Scrap production increases considerably: While in 1995 some 400,000 tons of scrap were generated in Germany, in 2007 (before the financial crisis) the total scrap production was already 850.000 tons. In 2020 the German scrap production volume is estimated to be more than 1,5 Mio. tons.

Due to its material value aluminium recycling is economically viable. With the operation of five Hertwich Ecomelt furnaces, Otto Fuchs has adapted optimally to this development.

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.