PRESS RELEASE

Dou-Liu City, Taiwan, November 04, 2016

Hertwich to supply a compact remelt plant to Taiwan

Super Alloy Industrial Co. Ltd. (SAI), located in Dou-Liu City, Taiwan, has placed an order with Hertwich Engineering for the supply of a compact remelt plant for Aluminium billets in sizes up to Maximum 305 mm Diameter and 7,000 mm length. The plant is designed for a capacity of 40,000 tonnes per year and shall be commissioned in September 2017.

Super Alloy Industrial Company Ltd. (SAI), which was founded in 1994, is an internationally renowned supplier to the automobile and aviation industries. The company enjoys a particularly strong position as a supplier of forged aluminium wheels for premium and sports cars, and in addition SAI supplies aircraft seats and more recently – but growing rapidly – also aluminium chassis components. Its customers include noted addresses in Europe, the USA and Japan.

With the investment in a modern compact remelt plant SAI is creating an internal recycling circuit that includes every working step, from scrap melting, through casting, quality control and up to packaging and consignment of the basic material to be re-used. Thus, the company is in a position to control the entire production chain and therefore also the quality of the basic material. That aspect is regarded as especially important for the manufacture of high-grade, safety-relevant components.

SAI's equipment partner is the Austrian company Hertwich Engineering*, which developed the concept of the compact remelt plant in the 1980s and since then has adapted it continually in line with current requirements. Today, a series of such units are already in operation, to the complete satisfaction of the customers. At present, the US-American extrusion plant Service Center Metals (SCM) is already installing its second Hertwich unit of the said type.
The compact remelt plant designed for SAI combines all the recycling work steps in a fully automated, continuously operated and space-saving unit:

- Clean and contaminated recycling material is prepared in chutes and transferred into the pre-heat chamber of the furnace by a special charging machine (which can also be used for dross skimming).
- Machining chips are fed into the furnace via a chip-pre-treatment plant and a high speed co-flow dryer, which is thermally connected with the furnace.
- The scrap is melted in a 3-chamber melting and casting furnace with a capacity of 7 tonnes per hour. The pre-heated and decoated scrap and chips are melted in the bath of the pre-heat chamber, respectively of the chip stirring well by submersion melting. The required melt flow is generated by an electromagnetic liquid-metal pump. After this, the melt passes through a partition wall into the casting chamber, in which the melt temperature is adjusted for casting.
- The melt drawn from the casting chamber is degassed, filtered and then fed to two horizontal continuous-casting units arranged in parallel. A separate cooling water treatment plant provides the cooling water for casting.
- After solidification, the cast strands are cut into billets by a flying saw and then deposited on the entry magazine of the homogenising furnace.
- Homogenizing of billets takes place in a continuous homogenising plant with cooling station, which ensures consistent and optimum metallurgical properties.
- Cooled down billets are placed on a storage conveyor and then inspected for internal cracks and inclusions by a helical ultrasonic testing unit.
- Finally, the inspected billets are semi-automatically strapped, weighed, and prepared for shipment.

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.