Premium rolling slabs are a basic requirement for premium rolled products. The products of AMAG’s rolling-slab casthouse are solely intended for AMAG’s own rolling mill. The complexity of AMAG’s portfolio of rolled products places special demands on the expertise and flexibility of the casthouse. All families of aluminium alloys, from 1xxx to 8xxx-materials, are cast at one location; specific expertise has been developed in the processing of high-strength and super-high-strength alloys of the 2xxx and 7xxx-families.

Various continuous casting processes, from conventional vertical continuous casting and LHC (Low Head Composite Casting) to EMC (Electromagnetic Casting), are available to meet the individual product requirements. As we are continuously increasing the output of rolled products, we have to adapt the casthouse capacity for rolling slabs. When designing new facilities, our focus is always on meeting quality requirements and increasing flexibility to satisfy customer needs.

Use of single-chamber and multi-chamber furnaces at AMAG

When scrap metal is melted that contains aluminium, it is essential to select the appropriate furnace technology for the different raw materials. Therefore, the scraps must be exactly sampled and classified as soon as they are delivered. Covered storage of the scraps, sorted by type, and batch planning based on guidelines enable high-grade alloys and sizes to be produced using raw materials in a cost-efficient manner. Standardized guidelines also ensure that, out of the large number of different furnaces, the optimum melting technology is selected for the individual scrap type.

The multi-chamber shaft melting furnace technology is best suited for small-sized, thin-walled and highly contaminated scraps. The single-chamber melting furnace has proven successful for large-sized, slightly contaminated scraps at AMAG.

Capacity increase of the EMC machine

When a second electromagnetic casting machine (EMC II) and a multi-chamber shaft melting furnace were installed in 2009, the rolling slab production capacity was significantly increased in the wrought-alloy casthouse. In late 2012, a new single-chamber melting furnace with combined casting function, with a bath capacity of up to 70 t, was additionally put into operation and integrated into the existing site in a particularly space-saving manner. This additional capacity increase at the same time provides more flexibility for the alloy mix. The new casting unit also allows producing new, larger slab sizes for the rolling mill under construction and covering a broad range of alloys with a large proportion of recycled scrap.

The new furnace can be tilted and equipped with regenerative burners and an electromagnetic pump, so scrap can be melted and cleaned and the liquid metal be cast in one unit. The regenerative burners provide for an optimum melting capacity, while at the same time minimizing power consumption and CO₂ emissions. Moreover, the patented burner technology and burner lance arrangement adjusted to the furnace prevent formation of nitrogen oxides. The significant reduction of power consumption compared to conventional burners results in a reduction of costs and CO₂ emissions. The gas-to-air ratio is additionally controlled as a function of the residual oxygen content in the waste gas, so the energy content of minor organic scrap contaminants can be utilized for the process.

Accordingly, waste gases are minimized. It goes without saying that a state-of-the-art filter system was installed together with the furnace. As a result, the emission...
The AMAG Brand: Quality, Expertise, Creativity, Flexibility.

This is the first issue to feature AMAG’s new brand presence.

Over the recent years, a lot has changed at AMAG’s Ranshofen location: The IPO, which means independence, new production facilities, a new entrance area and new headquarters, and the launch of a large-scale rolling mill investment project.

Today, AMAG presents itself as a modern, commercially successful enterprise, with a large proportion of special products, a high level of flexibility and comprehensive production know-how.

So, what would be more natural than to express these characteristics in a new brand presence.

To AMAG, the brand is a promise: a promise that is authentic, realistic, sound, and one that can be kept. The brand reflects the traits of a corporate personality.

Moreover, the logo is the central visualization element of the brand, complemented by the corporate design in its entirety. Reliability, creativity, team- and solution-focused approach, partnership, fairness, flexibility, competence and relationship orientation – in short, stability and dynamism – all these characteristics of AMAG are to be reflected in the new AMAG logo.

The graphic design of the logo was reduced to a minimum and the word mark AMAG, a strong, stable symbol, was set in the center. The dynamic character is created by continuing the blue line element in the graphic design.

All brochures, magazines, data sheets, etc., are adjusted to the new brand. This issue of AluReport is the first example of the new corporate design.

A light and airy design that visually supports important and interesting contents and the coloring matching the contents of the articles (see color codes on the right-hand side) are new design elements in AMAG’s corporate design.

Summary

By investing in an additional melting furnace with integrated casting function at the EMC II production line, AMAG casting GmbH has significantly increased the capacity for rolling slabs using EMC technology. The product quality achieved at this line and the extension of the product range contribute to further strengthening AMAG’s position as a premium manufacturer of rolled products.

values of the furnace with respect to all of the relevant pollutants are well below the legal limit values. The furnace is additionally equipped with an electromagnetic pump, which is provided with an intermediate tank mounted at the side, to enable stirring and efficient alloying of alloying materials to be performed at a low oxide formation rate. Another advantage of melt homogenization is that hot spots are avoided and heat exchange in the melt is improved.