New precision plate production centre

AMAG TopPlate® – a new benchmark for precision plate production

At the beginning of 2011, AMAG rolling put its new precision plate production centre [1] into operation. The center produces AMAG TopPlate® products in top quality finish milled cast and rolled plates in various alloys.

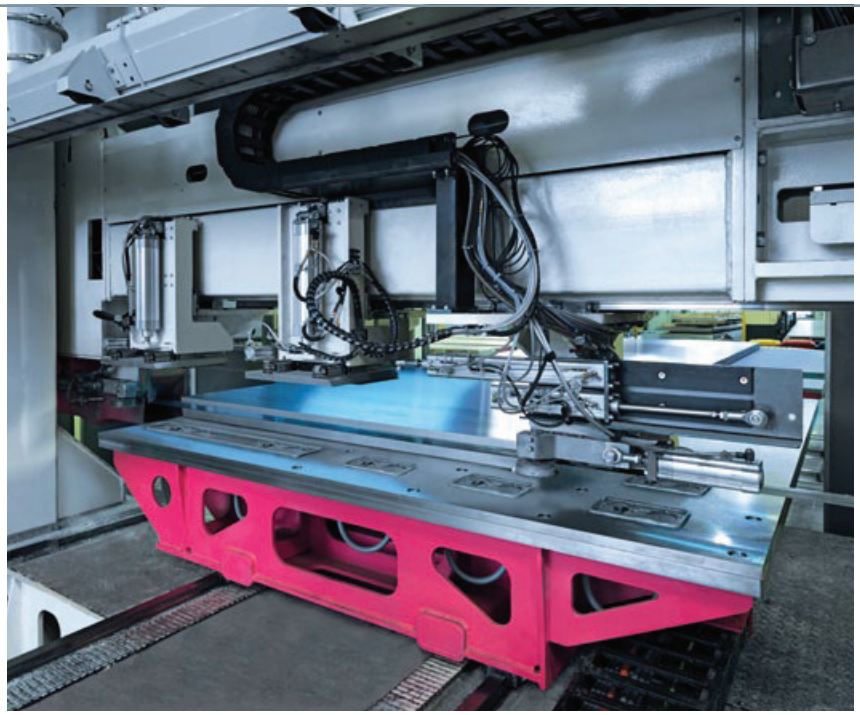
The new plate centre meets the very latest production technologies and advanced automation. In teamwork with the supplier companies Fill GmbH, Fooke GmbH and Erbo GmbH, special solutions have been developed to achieve new product quality and quality assurance standards. The highly automated plate production includes numerous key technologies, in machining, automated transport and in-line quality control. The variety of formats requires the greatest possible flexibility, while a perfect product requires cleanliness and absolute freedom from chips. The plate centre consists of an interlinked set of machine tools and matches the high standard of the rolling mill in its level of automation and material tracking. In addition, it is also integrated into the rolling mill's strict quality assurance system. Extended customer advantages furnish synergy effects in related rolling mill technologies, such as additional ultrasound testing and other specific production and quality assurance methods which are already established in the aerospace industry.

As a consequence of its long-tem experience in differing industries and as a raw material supplier to producers of precision plates, AMAG has been able to acquire extensive, customer-related know-how. AMAG TopPlate® differentiates itself from competing products, as the entire production chain is located at the company location in Ranshofen. The ingots are cast, e.g. using the electro-magnetic casting (EMC) process in the company's own casthouse and are then homogenized in line with their final application.

EMC casting provides homogenous material structures and thus higher strengths than other casting processes. Technologically optimized slab dimensions also result in uniform physical characteristics and properties across the entire thickness profile.

Maximum quality standards are guaranteed by continuous metallographic and physical testing of the slabs after homogenization. Moreover, the environment also benefits from AMAG TopPlate® as particularly the 5xxx alloys are almost entirely produced from recycled scrap, which means that the CO_2 balance has been improved. This is "Green Aluminium" in the truest sense! ■

[1] The "Precision Plate Production" project was supported by funding from the European Fund for regional Development (EFRE) and the Upper Austrian government.



Slab saw
The slab saw represents the first important step in the production chain. High levels of dimensional precision and minimum waste are achieved by thin cutting technology and the exact and stable guidance of the saw belt.

Precision milling/laser measurement
The precision milling machine with a milling head diameter of 2,500mm is fitted with specially coated cutting tips. Integrated, inline laser measurement ensures the highest quality standards during processing and records the measurement data of every individual plate. This assists process monitoring and continuous product quality checks by the Quality Management.

Foil wrapping station/longitudinal and transverse saws/stacking and packing
As a standard process, AMAG TopPlate® is foiled on both sides in the wrapping station, cut to shape by the longitudinal and downstream lateral saws and then subsequently stacked into delivery batches, prior to safe packing for transport. The complete tracking of both the material and the process are guaranteed by labelling and bar codes.

- AMAG TopPlate® C - cast plates, sawn on both sides
- AMAG TopPlate® CM - cast plates, top and bottom surface machined
- AMAG TopPlate® RM - rolled plate, top and bottom surface machined

Version	AMAG TopPlate® C	AMAG TopPlate® CM	AMAG TopPlate® RM
Thickness (mm)	8 - 210 [5-7][1)]	8 - 210 [5-7][1)]	8 - 100
Width (mm)	1020, 1270, 1520 [2020][2)]	1020, 1270, 1520 [2020][2)]	1000 - 1520
Length (mm)	2000 - 6050	2000 - 6050	2000 - 6500

1) thicknesses on request 2) Width on request
For further informations please contact our sales staff.