

SUCCESS STORY

Best galvanized surface qualities for the automotive industry



METALS

HOT DIP GALVANIZING LINE NO. 5

VOESTALPINE AG AUSTRIA

ANDRITZ

ENGINEERED SUCCESS

Hot dip galvanizing line for latest high-strength steel

Commissioned at the end of 2009, this line produces steel strip mainly for the automotive industry. The furnace is composed of highly sophisticated technological equipment, such as a direct-fired furnace and a differential rapid jet cooling system. The annual capacity is around 400,000 tons per annum, with a maximum speed of 350 m/min.



Process section: Skin passing, tension leveling, coating

TERMINAL EQUIPMENT

The fully automatic entry and exit sections provide the feedstock for the annealing and galvanizing process, which includes an option for additional galvannealing of a wide range of products (CQ, DQ, EDDQ, BH, AHSS, MP).

PROCESS SECTION

The advanced furnace technology, including a highly sophisticated DFF (Direct Fired Furnace), annealing at up to 860° C and the innovative concept of the DRJC (Differential Rapid Jet Cooling), ensure controlled cre-

ation of strip with different metallurgical phases. By producing steel strip with GI, GA and zinc-magnesium coating, the line covers nearly all of the market's demands.

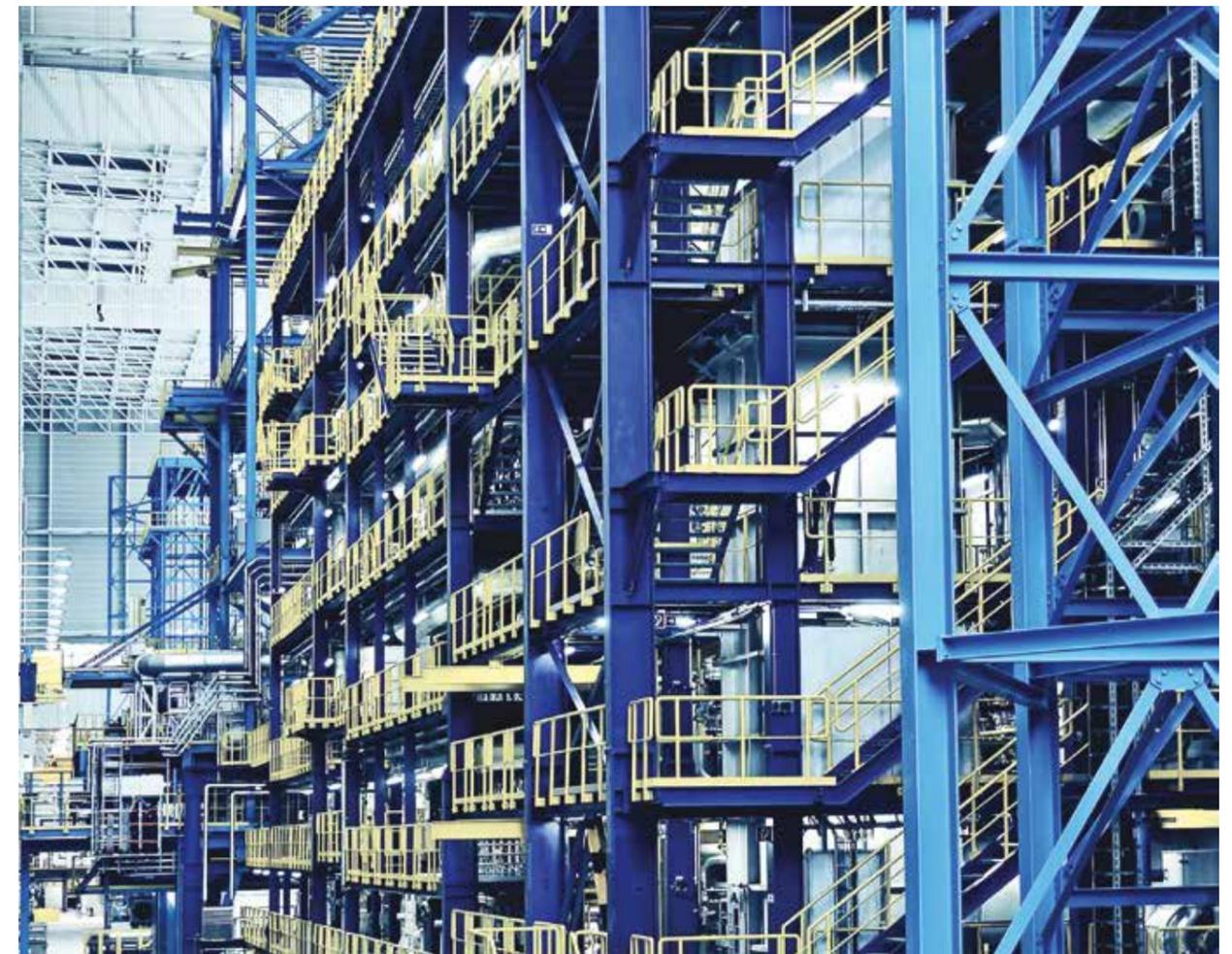
AFTER POT TREATMENT

Following galvanizing or galvannealing, final surface conditioning, including final influence on the material properties, takes place at the 4-Hi skin pass mill (WR 650 mm and 450 mm) by means of wet skin passing, as well as at the tension leveler with 6-Hi cartridge design.

Narrow tolerances for elongation values and accurate rolling forces ensure the production of high quality products supplied to the wide range of end-users, including automotive exposed applications.

The chromium-free coating and ultra-thin application of surface protective media opens up different new market segments.

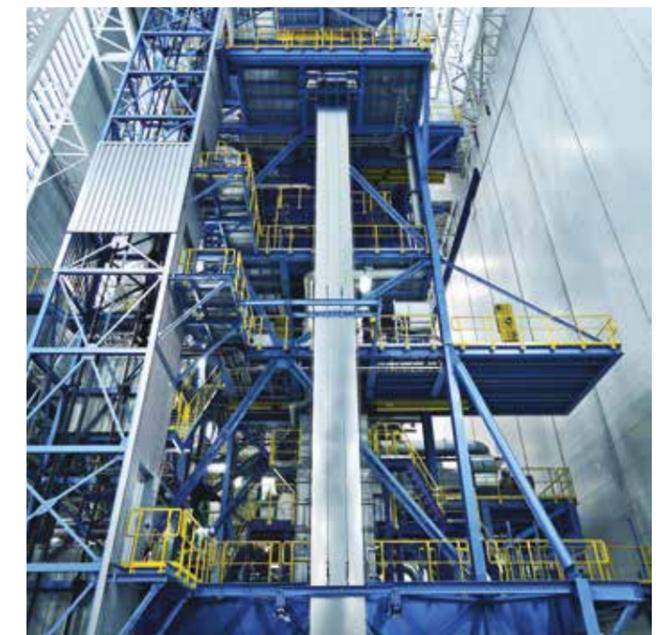
Exact width trimming by the turret-type side trimmer concludes the geometrical adjustments to meet customer demands (bottom left).



DF Furnace section

PLANT FACTS

Capacity	400,000 t/year
Strip thickness	0.6–2.0 mm
Strip width	750–1,750 mm
Coil weight	max. 35 t
Entry section speed	max. 300 m/min
Process section speed	max. 220 m/min
Exit section speed	max. 350 m/min
Steel grades	CQ, DQ, DDQ, EDDQ, HSLA, CP, TRIP
Zinc coating weight	total 60–350 g/m ²
Project start	2007
Start of operation	2009



APC with galvannealing



ENGINEERED SUCCESS FOR FLAT PRODUCT PROCESSING

ANDRITZ Metals is – via the Schuler Group – one of the world's leading suppliers of technologies, plants and digital solutions in sheet metal forming. The product portfolio also includes automation and software solutions, dies, process know-how and service. In the metals processing segment, the business area provides innovative and market-leading solutions for production and processing of flat products, for welding systems, as well as furnaces and services for the metals industry.

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