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### Press Facts

Steel service center

#### **Heinrich Georg Maschinenfabrik: New GEORG high-performance leveller in operation at EMW Steel Service Center**

Six-high machine excels in levelling high-strength steels

**Kreuztal, Germany, 12 January 2021** Heinrich Georg Maschinenfabrik has recently commissioned a new high-performance leveller at EMW Steel Service Center based in Neunkirchen in the German Siegerland region. The new machine enables EMW to add high-strength steel coils to its product range and boost its levelling throughput.

As customers have been placing increasingly exacting demands on the flatness of higher-strength steel strip, EMW has equipped its No. 2 multi-blanking line with a new high-capacity roller leveller from GEORG. The new leveller replaces a machine that could process strip of 300 N/mm<sup>2</sup> yield strength at the maximum.

The main target of the project was to broaden the supply range of coils to include strips with yield strengths between 600 and 1,000 N/mm<sup>2</sup> and thicknesses between 1.0 and 1.5 mm. EMW supplies hot-rolled coils – pickled or galvanized – and cold-rolled coils with inorganic or organic coatings.

GEORG supplied and commissioned the leveller in only eight months from the placement of the order. Successful levelling of the first coils took place in mid-August 2020. EMW issued the FAC as early as on 30 September 2020. Since then, the machine has been continuously in use on a three-shift basis.

#### **Machine design and data**

The new RM 55/17/7-6h–1600 machine is equipped with 19 levelling roller sets of six-high configuration. All levelling rollers have a diameter of 50 mm. The machine is suitable to process strips with surfaces as challenging as electrogalvanized steel sheet and grades for car body shells, for example.

The new roller leveller can handle material between 300 and 1,600 mm wide. It is designed to level 0.4 to 3.0 mm thick strip with tensile strengths of up to 700 N/mm<sup>2</sup>, yield strengths of up to 450 N/mm<sup>2</sup> and elongations at break between 15 and 45 %. In the 0.4 to 2.0 mm thickness range, it can process strip of up to 1,200 N/mm<sup>2</sup> tensile strength, up to 1,000 N/mm<sup>2</sup> yield strength and an elongation at break of 8 %. In order to cope with the challenging task of leveling high-strength materials, the machine features an exceptionally rigid frame and a distribution gear with output shafts arranged in three rows.

Especially for thin strip, it is crucial that the rollers can be adjusted with highest precision and excellent accuracy of repetition. In the GEORG leveller this is guaranteed by the four high-precision, low-backlash planetary gearboxes, which set the roller spacing, and seven adjustable wedges, which assure highly accurate setting of the back-up roll assemblies.

The leveller comes with a semi-automatic quick-change system, which enables the complete levelling roller cassette to be replaced as one module without having to take apart the ball joint shafts.



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Thus cassette changing times are reduced to just 15 to 25 minutes. In order for the machine to be ready for future flatness quality requirements in the 0.4 to 0.8 mm strip gauge range, also 21-roller cassettes are available.

The scope of supply for EMW comprised a new strip threading unit complete with threading table, a counter-bending roll and a conveyor unit for feeding the strip into the leveller. GEORG has integrated an existing crop shear between the threading unit and the leveller to further reduce the cycle times in coil processing.

The results obtained during the first months of operation have shown that the new machine can level a much wider range of products than the previous one. On top of that, flatness of all products levelled has been 50 % better than specified in DIN EN 10131.

Torsten Brüggemann, Production Manager of EMW Steel Service Center, summarizes his experience with the new machine so far: "We have been able to even further improve the quality of all products from our range. Coil flatness is no longer an issue during our production meetings. The new machine has even taken over coils from our bigger machines. This not only saves costs, but also provides us more flexibility in production, and, consequently, we can produce more."

Hermann Krämer, Product Manager Levelling Machines at GEORG, summarizes in one sentence the reasons why EMW selected GEORG as supplier: "We obviously convinced those at EMW in charge of the decision with our integrated package, which included our high-performance roller leveller, the upgrade of EMW's existing process control system and our safety-enhancing concept for the entry section of the No. 2 multi-blanking line."

**700 words including the introduction**

### **About Heinrich GEORG Maschinenfabrik**

GEORG is a worldwide well-reputed partner for reliable and powerful high-tech engineering and process optimization solutions. The company's cutting-edge finishing lines and machine tools as well as production lines, machines and equipment for the transformer industry are in operation in numerous renowned companies around the world.

With its encompassing product and service offers and its worldwide network of sales and service branches, the family-owned company, which employs almost 500 people and is now in its third generation, supplies its products to markets as challenging as energy, mobility and industrial.



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## Figures and captions

**High-resolution image files are available for downloading at:**  
[press photos Georg](#)

<p><b>Fig. 1:</b> The new roller leveller during assembly.          File name:          Georg_f0624640.jpg</p>	
<p><b>Fig. 2:</b> The semi-automatic quick-change system reduces the time needed for a cassette change to just 15 to 25 min.          File name:          GEORG_Richtmaschine_Baustelle.jpg</p>	

Photos by Heinrich Georg Maschinenfabrik