

AICHELIN Delivers Heat Treatment Plant with CO₂-neutral Heating to Hirschvogel

Mödling, 15th December 2022: Hirschvogel Group, one of the world's largest manufacturers of solid-formed and further refined components made of steel and aluminum, recently commissioned a new heat treatment plant from AICHELIN at its main plant in Denklingen/Upper Bavaria. This fully automatic chamber furnace line is a special beacon in Hirschvogel's decarbonization strategy, as the heating is CO₂-neutral.

Hirschvogel Group has not only set its sights on a CO₂-neutral future but has already translated it into concrete action. For the expansion of the hardening facility at Hirschvogel Umformtechnik GmbH, for example, the company opted for a heat treatment facility with electric heating that is operated exclusively with green electricity. The system was supplied by AICHELIN, one of the world's leading manufacturers in the heat treatment industry. The fully automatic double continuous chamber furnace line ensures high output with maximum flexibility and is impressive in many respects.

The size alone of around 900 m² of installation area is considerable. This includes pre- and post-cleaning systems, a preheating furnace, two high-temperature furnaces and two tempering furnaces, as well as two endothermic gas generators, including all the necessary tables and tracks. The technical design of the plant is the foundation for meeting the challenging requirements of CQI-9. The maximum batch size with a mass of up to 2,200 kg should also be emphasized. The entire plant is controlled fully automatically and can thus be operated with minimum staff. In addition, AICHELIN's FOCOS 4.0 process control system contributes to optimal operation by assisting in the creation of heat treatment programs. FOCOS 4.0 then communicates these to the process controllers and issues a tamper-proof heat treatment certificate.

"A supplier's technical expertise has utmost priority for us in the decision-making process. AICHELIN easily met the requirements and was reliably available to our project team almost around the clock. Also, with regard to our Green Lean Smart strategy, AICHELIN's technical solutions align with our goals," explains Stefan Lube, Head of the Semi-Hot Forming Profit Center at Hirschvogel. Another criterion was intelligent networking, which AICHELIN covers with the digital assistant #jakob. "With this predictive maintenance solution, which is unique on the market, we benefit from high plant availability. As a result, we also provide the corresponding supply reliability for our customers," concludes Lube.

The complete coverage of the heating power requirement by electrical heating presented a particular challenge due to the limited space available. AICHELIN took on this challenge and implemented the task perfectly together with its sister company NOXMAT. Specially developed band heating elements with up to 22.2 kW power per element are used to transmit the required 340 kW heating power per system. The design of the components achieves a surface load of just 1,89 W/cm², which has a positive effect on the plant's lifetime. All this underlines Hirschvogel's 'green' ambitions. The reduction of CO₂ is an important focus in the sustainability management of the family-owned business. Since the beginning of the year 2022, electricity for the German sites has been sourced exclusively from renewable sources. What's more is the coverage of electricity needs with energy from regional, renewable sources.

"We are very proud to be able to implement this prestigious project together with Hirschvogel. The decarbonization ambitions of our companies complement each other well and we are already working together on further promising developments in this area," Michael Reisner, Managing Director of AICHELIN Ges.m.b.H., is pleased to report.

Image Caption:



5288 / 3987 / 4064: Hirschvogel Group commissioned at its main plant in Denklingen/Upper Bavaria a new heat treatment plant with CO₂-neutral heating from AICHELIN.



5429: The size alone of around 900 m² of installation area is considerable.



5548 / 5769: The electric heating is operated exclusively with green electricity.

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About Hirschvogel Group

The Hirschvogel Group is a development partner and manufacturing specialist for automotive components made of steel and aluminum as well as for product solutions in the areas of electronic systems and micromobility. The independent, family-owned Group has approx. 6,000 employees worldwide. Total sales in 2021 amounted to 1.2 billion euros. The parent company is Hirschvogel Holding GmbH, based in Denklingen, Upper Bavaria. The Holding unites nine production companies and two affiliated companies for managing shareholdings.

In the components business, the nine production companies on three continents make Hirschvogel one of the world's largest manufacturers of forged and machined parts made of steel and aluminum. The product portfolio ranges from powertrain components for all drive technologies to transmission and chassis components as well as parts for the vehicle body and frame. These products are used in passenger cars, commercial vehicles, and in the micromobility and bike sectors. www.hirschvogel.com

Hirschvogel Industries GmbH brings together partner companies in which Hirschvogel holds a majority stake. These companies include Automotive Synergies GmbH and Usaneers GmbH. Hirschvogel New Ventures GmbH combines the minority shareholdings.

About AICHELIN Ges.m.b.H.

AICHELIN Ges.m.b.H., with its headquarters in Mödling near Vienna, is one of the leading European companies for atmosphere-based industrial furnaces and systems for the heat treatment of metal components. The Austrian company has 100 employees and focuses not only on the production of industrial furnaces, but also on control and automation systems, industry-4.0 solutions and their servicing and maintenance. Its furnaces are primarily used in the fastener, bolts and roller bearings industries, in the industry for precision and bulk parts, in the electrical components industry, in commercial heat treating operations as well as in the automotive and automotive supplier industry. www.aichelin.at

About NOXMAT

NOXMAT is a specialist for industrial heating technology, and develops, manufactures, and produces industrial gas burners as well as electric heating systems for thermal processing technology. NOXMAT's product spectrum includes, among other things, recuperator and high-speed burners, control units for burner technology, radiant tubes for the heating of industrial furnaces, electric heating elements as well as the construction of a customer-specific switch cabinet. NOXMAT offers consulting and support for companies in over 35 countries all over the world, with great expertise and extensive service offers in the construction and optimization of heating elements for industrial thermal processing plants as well as maintenance and modernization to increase energy efficiency. NOXMAT was founded in 1992 in Oederan/Germany and has subsidiaries in China and India. www.noxmat.com

About AICHELIN Group

As part of Berndorf AG, AICHELIN Group is a leading provider of heat treatment solutions, such as industrial furnaces, induction hardening plants, industrial gas burners systems, control and automation systems, industry-4.0 solutions as well as services. The AICHELIN headquarters are located in Mödling near Vienna. The company's roots date back to 1868. The long-established brand AICHELIN, as well as AFC-HOLCROFT, EMA Indutec, SAFED, BOSIO, and NOXMAT, make up the group and together employ more than 1,200 people. AICHELIN Group ranges among the world's top 3 heat treatment companies. AICHELIN's subsidiaries in Europe are located in Austria, France, Germany, Slovenia, and Switzerland; the worldwide presence of the company includes subsidiaries and branch offices in China, India, and the US, as well as a sales network in 22 more countries. www.aichelin.com

