

Efficient cold production in frame manufacture



Cooling system

Hörmann, Europe's leading manufacturer of doors and gates, produces high-quality steel frames at its plant in Werne, Münsterland. The refrigeration system for surface treatment has now undergone a complete overhaul: with a highly efficient container refrigeration system, a "basic cleaning" of the comprehensive pipework network and a chemical-free, highly effective water treatment system.

The factory requires cold, especially for the surface treatment of the profiles, which was generated for many years by a cooling tower system on the factory roof. A buffer tank in the hall supplied the cooling baths via a large pump.

Initial situation: Alt system was overdimensioned and less efficient

This plant should be renewed for two reasons. Wermleiter Dr Matthias Gauer: "The existing plant was subject to the 42nd BImSchV. We want to avoid the expense that this causes, and our new treatment plants also require significantly less cooling. The refrigeration technology is therefore actually oversized, not very efficient and cannot maintain the necessary cooling water temperatures on hot days."

Benefits: Right choice with energy-saving technology

So there was clear potential for optimization here, which those responsible at Hörmann wanted to exploit as much as possible. As a result, L&R planned a new

wastewater treatment plant with a cooling capacity of 200 kW, which was discharged, as a result, we were able to achieve good line quality with a variable condensation temperature and good heat transfer without having to replace speed-controlled pumps.

and compressors. An important efficiency feature! The free cooler is another feature that ensures permanently high cooling water quality. Chemical-free treatment

the cold required for recooling at cool

The Comprer process should be used in the sense of the lower external temperatures from the environment. The upstream and downstream temperatures of a basic cleaning are already at a good "system temperature of 20 or 25 °C, as it is", corrosion, on the other hand, is not removed by cooling agent R 513A.

is recommended and installed for containerized network.

entire cooling water system was Dr

Matthias Gauer: "This has effectively reduced the conversion time, and we can no longer deposit biofilms in the hall and are discharged via the connected high-performance filter system. The infra-

responsible at Hörmann-Verbraucher.

DN 100 steel mill various outlets.

had accumulated more than likely to have been replaced several times.

Decision in favor of a rinse therefore. Paige results: Gucer return on investment, right. The timing of the process very briefly. The enclosure was chosen so that

It took several weeks - with a minimum of production until - Here it took several weeks - with finer filtration - until all corrosive substances could be removed.

For such projects, L&R works together with Hawmann GmbH, which has developed a chemical-free and highly effective cooling system cleaning method using the Comprer process. - and the initial state of the pipeline network is virtually restored.

Within two and a half days, the entire pipeline network, including the heat transfer and oil coolers rinsed several times. DBS result has exceeded the responsible Dr. Matthias Gauer: "The amount of

the Bauer Pipejet treatment system, which L&R in such cases and for flushing the pipe. The system uses a pulse frequency process.

The pulsating electromagnetic field in the decided in favor of a container installation.

builds. As a result, corrosion and boiler

was however retained for those. This involved several hundred meters of pipes with a nominal diameter of

: after an hour, the chilled water was black.

The cartridge of the L&R high and abrasion in these pipes over the decades was a

Now the cooling water is and remains as clear as pure water can be, and the treatment keeps it at this level permanently - chemical-free and with minimal service costs. Because optimum flow rates and heat transfer are guaranteed, the Neem even pays for itself. As a rule, a Pipejet system pays for itself within one to one and a half years.

Hörmann now not only has a new and highly efficient refrigeration system, the company has also gained space in the production area because the system is installed in a container. Although it has not been renewed, the piping network is in virtually new condition. And the water treatment system ensures consistently high water and network quality.

Provision of process coke Burdie surface treatment of the high-quality frames that Hörmann produces in Weme

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Classification label for Greensteel

The steel industry is facing a major upheaval. The vision: to convert the climate-damaging process of steel production to a process that is as climate-friendly as possible. STAHL StahlService is convinced that this transformation requires transparency and wants to make its contribution as part of the steel supply chain. The steel expert supports its customers with a transparency label in the steel market when it comes to green steel.

"Green Steel" is a response to the demand for a drastic reduction in CO₂ emissions in the steel industry. Steel manufacturers and steel users are looking for clarity in this regard, as steel users are faced with a number of questions as the transition to green steel begins. One crucial question is, for example, which steel grades are available when "green", which manufacturers can supply which quantities when and, above all, at what price. Stahlo does not want to leave its customers and partners alone with this need for information. "As an independent steel service center, we have established excellent contacts with both steel manufacturers and steel users, as well as many years of expertise and consulting competence as a supplier, and can ensure the right quality of decarbonized steel at the best conditions," explains Oliver Sonst, Stahlo's Managing Director.

The company also wants to help its customers find their way with the Eur Green Steel certification label. This is why Stahlo is already making the various solutions offered by steel manufacturers transparent. The company is focusing on the largest C 2 lever, crude steel production. The developed transparency label uses simple symbols to represent the various elements of the production process and divides the resulting CO₂ emissions into a total of seven classes. The steel classification label shows the main differences simply, for example

Class G, for steel from the modern blast furnace process with an emission of 1,800 to 2,200 kg CO₂e per ton of crude steel - up to the best class A, Eur steel with less than 150 kg C 2e per ton of crude steel, which can presumably be implemented in series processes from U2S. If a "+" is added to the wet, it indicates the extended consideration up to the coil, including the rolling and surface processes.

In addition to material-related application advice, Stahlo also offers training courses on the topic of Green Steel with the help of the classification label, thus providing its customers with both orientation in the market and a quick overview of which materials are used.

emission class the steel was produced. More information on the van Stahla classification label is available at www.stahlo.de/de/klassifizierungsetiket.

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