Hamm: Sustainable solutions at every level

Active environmental protection in compaction technology, production and service

A year after receiving environmental certification according to ISO 14001, it is clear that Hamm AG, based in Tirschenreuth, is in a good position in terms of environmental protection. For many years now, the company has handled finite resources responsibly thanks to modern production processes and sustainable solutions in the areas of service and spare part supply. This philosophy is also reflected in the current product range.

The highest environmental standards at the plant

For many years, compaction specialist Hamm has been actively promoting environmental protection through sustainable solutions, and is continuously reducing its carbon footprint. Achieving the ISO 14001 environmental certification at the end of 2020 marked a milestone. Dr Stefan Klumpp, member of the Executive Board of Hamm AG, describes the company's motivation: "Protecting the environment is vital for us. This applies not only to our operations as a manufacturing company, but also to our products. It goes without saying that we therefore comply with the statutory regulations. Through our environmental management system, we have also identified further potential for improvement that will enable us to reduce our consumption of resources and energy." One of the flagship projects to date is the construction of a geothermal system. It has been heating and cooling the administration building since 2013, yielding savings of around 86 t of CO2 per year. At the plant in Tirschenreuth, the energy demand for lighting was almost halved in 2019 by switching to LED lights. This also saves over 80 t of carbon dioxide every year. Optimisations in the compressed air cycle also reduce the electricity/energy demand by 50,000 kWh. That corresponds to close to 5 t of CO2.

All divisions under the magnifying glass

Since 2018, an environmental protection manager has been advancing the further minimisation of raw material and energy consumption, waste, packaging and emissions of solvents (VOCs) and placing all divisions under the magnifying glass. In this way, Hamm is improving its ecological footprint through large-scale measures as well as numerous finely detailed projects. At the moment, the energy demand for heating is also being drastically reduced, as well as the consumption of fresh water in production. There are also very high standards regarding waste water and low noise emissions from the plant. Alongside this, paperless production is to be introduced in the near future.

Recycling and recuperation

Waste is also a key focus. "By implementing numerous individual measures, by 2023 we will have reduced the waste per produced machine by approximately 20% compared with 2019," explains plant manager Dirk Pressgott. In production, an innovative painting process reduces the amount of paints and solvents used while offering the same paint quality. Hamm also recycles the solvents used for cleaning the painting systems. Internal logistics also saves energy by optimising routes and also uses quiet electric forklift trucks. Shortly before the rollers leave the plant, the brake energy is recovered via recuperation at the test bench, which all machines pass.

Intelligent solutions instead of materials

In general, "intelligent solutions instead of materials" applies in purchasing and logistics at Hamm. Special transport racks therefore render much of the packaging superfluous. And, thanks to a 4PL strategy, there are virtually no empty runs when supplying purchased parts and semi-finished products. In addition to these measures, suppliers are selected based on their environmental certification and training of employees with a view to environmental protection. Through dialogue with the Design and Production departments, Hamm has also been continuously reducing excess packaging and optimising transport capacity for many years. Recycled plastics are also used wherever possible for constructing rollers.

Environmentally friendly products and compaction solutions

With regard to products, Hamm follows the objective of "developing low-consumption machinery and machine control systems that ensure an efficient and, therefore, resource-friendly work process on the construction site," explains Dr Axel Römer, Head of Research and Development. Specific examples of this are compaction with oscillation, which emits little noise and conserves resources; process optimisation through digital tools and networking; and consumption-reducing technologies in the area of the power train. Hamm rollers can also be operated with non-fossil fuels such as biodiesel or hydrotreated vegetable oil (HVO). Today, many machines can already work with these types of fuels, and applications are being expanded. Biodegradable hydraulic oils are also part of the standard supply range.

Environmentally friendly operation and service for long machine life

Durable products are especially sustainable. This is where Hamm's telematics system comes in to play, as the service life of the rollers is extended through regular maintenance – and with optimal availability. The long service life of Hamm rollers is also reflected in the spare part philosophy. Hamm still supplies customers with spare parts for all models ever built. Moreover, most spare parts can be ordered separately – not just in assemblies.

Sustainable shipping

Hamm relies on sustainable materials when shipping spare parts. Films and plastic are avoided as far as possible, and polystyrene packing chips are taboo. Instead, Hamm packages spare parts in cardboard; packing paper acts as a fill material and padding. Moreover, Hamm receives a large portion of spare parts and wear parts already ready to ship with the corresponding packaging. Material-intensive repackaging – quite common in the sector – is therefore not required.

Wave goodbye to paper consumption

A shift can also be seen in machine documentation – it has been completely moved to data carriers. In its in-house documentation centre, Hamm prints documents only upon request based on the "print on demand" principle. It has therefore been possible to reduce the need for paper by more than 70%.

Photos:

  
HAMM\_environmental protection\_01

A plant with the highest environmental standards: For many years, Hamm has handled finite resources responsibly across all areas of the company.

  
HAMM\_environmental protection\_02

The role of digital systems and tools in Production and Logistics is constantly increasing at Hamm. The consequence is that paperless working will soon be a reality in these divisions.

*Note: These photographs are only intended as a preview. For printing in publications, please use the photographs in 300 dpi resolution that are available for download from the Wirtgen Group websites.*

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