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Menzerna MELT Technology: Automated Process for Feeding Solid Compounds Launched Successfully at Fittings Manufacturer Hansgrohe

MELT (Menzerna Liquefaction Technology) is a method of applying solid compounds using automated polishing equipment – and was developed by Menzerna in conjunction with SM Klebetechnik. MELT combines the benefits of emulsions and solid compounds. Solid compounds are stored in a 200-liter container, melted on the surface, and pumped to a dispensing head on the polishing ring via heated pipes. The first pilot system has just gone operational in November 2017 at fittings and shower head manufacturer Hansgrohe, immediately delivering a significant reduction in processing times per workpiece.



Figure 1: the MELT system at the Hansgrohe plant in Schiltach West

Perfection in polishing. Made in Germany.

Menzerna has been specializing in the development of polishing processes and the production of polishing compounds for industry and automotive trades ever since 1888. With its innovative technologies, Menzerna optimizes polishing processes and delivers sparkling results.

When it came to the automated polishing of its brass fittings, the Hansgrohe Group previously relied on polishing emulsions. However, the existing, emulsion-based process has now reached its productivity limit. Up to now, it had not been possible to use solid compounds cost-effectively in an automated process. "Our vision was to cut cycle times even further, reduce the amount of manual labor, and enhance the brilliance of the parts even further. As an innovative company, we are open to new ideas and were soon impressed by the MELT process from Menzerna," explains Hakan Zahal, Head of Sanding and Polishing at the Hansgrohe Group.

Rudi Messmer, Head of Products and Applications at Menzerna: "We are delighted that we have found the ideal partner in the Hansgrohe Group for this innovative process. They are working with us to test and further develop the technology and will be able to boost productivity as a result."

Menzerna MELT technology now allows Hansgrohe to feed solid compounds into its polishing systems over an extended period of time. Compared with emulsions, solid compounds guarantee higher surface quality, can be stored for longer, and enable significant reductions in processing and cleaning times.



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Figure 2: an AXOR fitting on the polishing wheel

The system was incorporated into the existing polishing equipment at Hansgrohe in conjunction with the companies SHL and SM Klebetechnik, a specialist in hot-melt systems. Two polishing stations – which operate on a three-shift pattern – are supplied via a container, with a heated pressure plate melting the upper layer of the compound within this container. A pump then channels the viscous compound through a heated piping system to a dispensing head, where it is applied to the polishing ring. The dispensing head replaces the spray pistol/compound feeding device and supplies the polishing workpiece at preset intervals. A displacement pump presses the compound onto the polishing ring through a nozzle on the dispensing head. The feeding interval, amount of compound, and other parameters can be precisely calibrated using the control unit. As a result, MELT can achieve considerable productivity and quality improvements in terms of automated polishing processes. "Even after the first rough optimization, we were able to achieve a double-digit percentage reduction in cycle times with MELT," explains Jürgen Nähr, a technologist in the Hansgrohe Group polishing works at the Schiltach West plant. In other words, the technology harbors even more potential. The Metal Technology department – with departmental head Thomas Wöhrle and project manager Daniel Singler – played the lead role at the Hansgrohe Group in terms of organizing and implementing the MELT project.

Menzerna will perform further optimizations in conjunction with Hansgrohe, thus making the process even more cost-effective. Also, the team at the Hansgrohe polishing works soon realized that "MELT is clean, too. There is a lot less dirt in the polishing cell, which significantly reduces the amount of cleaning required."

The pilot phase, which is scheduled to run for six months, will soon provide reliable data on the productivity improvements achieved with MELT. If the pilot phase continues to run successfully, Hansgrohe may gradually switch all polishing systems to MELT. Watch this space.