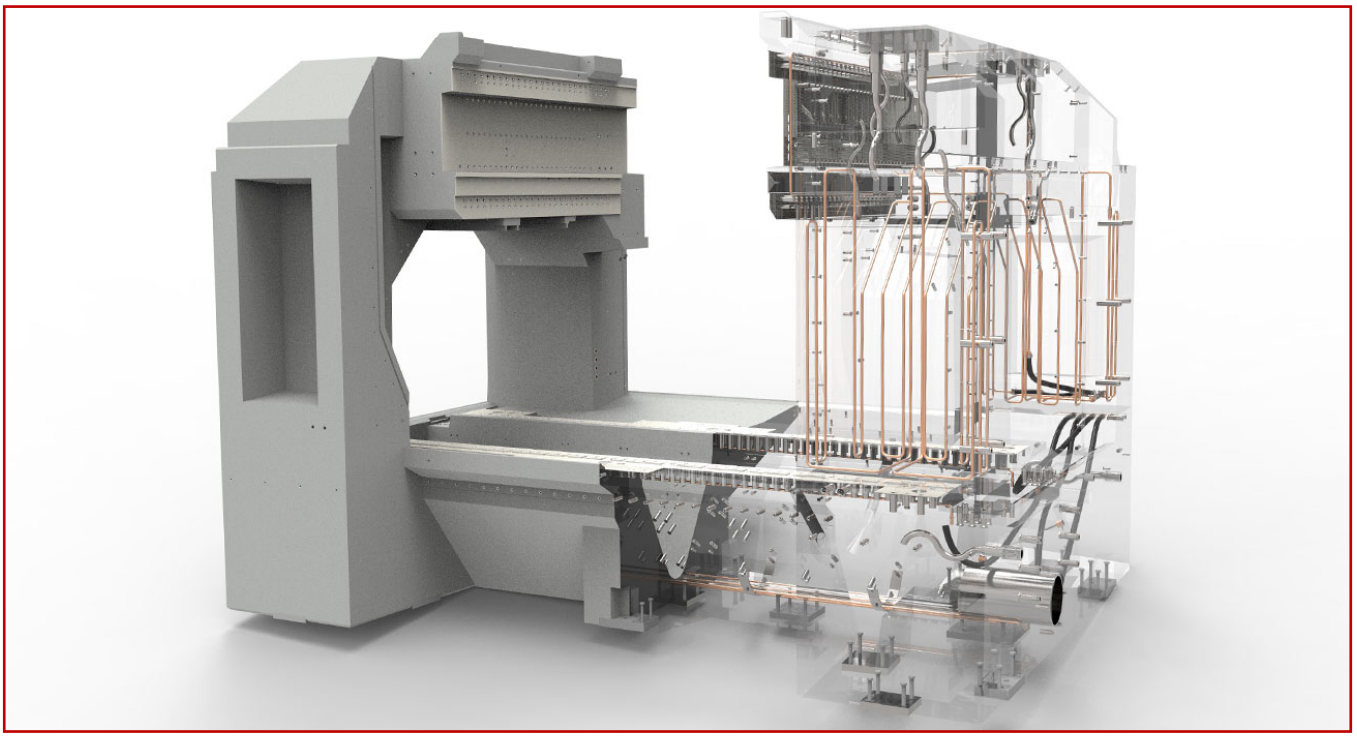
Press Release

EPUMENT® Mineral Casting – Minimal CO_2 Emissions, Maximum Vibration Damping

RAMPF Machine Systems to give keynote speech at “Green Shift – Cutting Emissions” digital event tomorrow, March 10

Wangen (Göppingen), Germany, March 9, 2021. With its innovative EPUMENT® mineral casting and EPUDUR ultra-high performance concrete machine bed materials, RAMPF Machine Systems has for decades played a key role in ensuring low-carbon production in high-tech mechanical engineering. In a keynote speech at the “Green Shift – Cutting Emissions” digital event tomorrow, March 10, Sales Manager Kacper Lasetzki will be showing how the mineral casting pioneer is combining sustainability and strictest technical requirements.



High-performance material with outstanding environmental credentials – leading mechanical engineering companies use EPUMENT® mineral casting from RAMPF Machine Systems to manufacture vibration-damping and thermally stable machine beds and machine bed components.

EPUMENT® mineral casting and EPUDUR ultra-high performance concrete from RAMPF Machine Systems are used around the world to manufacture machine beds and machine bed components – not only in applications in conventional machine tool construction but also in the semi-conductor, laser, medical, and packaging industries.

The key advantages of these innovative materials over gray cast iron and welded constructions are, firstly, the considerably enhanced damping, which ensures the machine bed has greater dynamic stability in ultrafast and high-precision production machinery.

Secondly, mineral casting and ultra-high performance concrete (UHPC) stand out thanks to their resource-efficient manufacture and environmentally friendly disposal and recycling:

> EPUMENT® and EPUDUR are cold cast in molds made from wood, steel, or plastic. As the manufacturing process does not require any heat, it consumes up to 30 percent less primary energy than the smelting of gray cast iron and steel.

> The high casting precision, combined with highly accurate RAMPF in-house replication technology, eliminates the need for transportation to external processors and reduces/avoids the use of processing machinery. CO_2 emissions are approximately 50 percent lower when precision surfaces are applied rather than milled.

> EPUMENT® and EPUDUR are made of over 90 percent naturally occurring minerals and stones, plus a binding agent based on epoxy resin in the case of EPUMENT® and cement in the case of EPUDUR.

> The recycling of disused machines is possible without any problems, as the materials of the machine beds and machine bed components can be disposed of in the same way as normal construction materials. Trials have been run on the use of large-scale shredder plants to break down mineral casting and UHPC to chippings and on separating out integrated metal components. Chippings from mineral casting are used as recycled material in road building, industrial construction, landfill surface sealing, and creating green spaces. Mineral castings are virtually 100 percent recyclable.

Technical and cost benefits

Kacper Lasetzki, Sales Manager at RAMPF Machine Systems – “Mineral casting and UHPC are the number one choice, both in terms of protecting the climate and thanks to their technical and cost benefits. These benefits are set to become increasingly important in the years ahead, as the German government has currently fixed the CO_2 price at 25 euros per ton and will increase it to 55 euros in 2025. A price range of at least 55 and at most 65 euros is planned for 2026.”

RAMPF Machine Systems is a long-established manufacturer of machine beds made from mineral casting and UHPC on the international markets, counting the world’s largest mechanical engineering com-

panies among its customers, and achieving an annual production volume of 5,000 machine beds and a casting volume of 15,000 metric tons per year. The full service provided by the company ranges from material-specific design and engineering, production, and assembly to replication, grinding, and lapping processes at its in-house grinding center.

What does the road to CO_2-free production look like? Experts from the worlds of business, science, and politics will be discussing this question tomorrow at the “Green Shift – Cutting Emissions” digital event from the “Curve@VCC Würzburg” starting at 9 a.m.

www.rampf-group.com

RAMPF Machine Systems GmbH & Co. KG, based in Wangen (Göppingen), Germany, is the leading supplier and development partner for system solutions, trunk machines, and basic machines, as well as multi-axis positioning and moving systems based on high-precision machine beds and machine bed components made from alternative materials.

The portfolio of high-performance materials includes mineral casting, ultra-high performance concrete (UHPC), natural hard stone, metal foam, and fiber composites. These materials provide a solid basis for ultra-precise and high-performance machine beds and machine bed assemblies.

The full range of services provided by the company includes everything from engineering to production, as well as assembly, system solutions, customer-specific multi-axis positioning and moving systems, and basic machines – from single-piece to series production in customized supply chain solutions.

Using innovative casting, grinding, and lapping processes, as well as high-performance assembly and testing equipment in temperature-controlled production environments, exceptional accuracy of machine bases and basic machines is guaranteed.

RAMPF Machine Systems is a company of the international **RAMPF Group** based in Grafenberg, Germany.

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