

RAMPF Further Improves Environmental Footprint of Mineral Casting

New filler material replaces hard coal fly ash in high-performance machine bed and construction material EPUMENT[®]

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Wangen (Göppingen), Germany, May 25, 2021. The world's largest producer of mineral casting, RAMPF Machine Systems, is manufacturing its EPUMENT[®] material without the addition of hard coal fly ash. This is a further step in the consequent improvement of the environmental footprint of the machine bed and construction material.



Instead of hard coal fly ash, RAMPF Machine Systems is using a new filler that is manufactured using a special process based on extremely pure, natural calcium carbonate. While both the material properties and the price of EPUMENT[®] mineral casting remain unchanged, its environmental effectiveness is further improved.

Dr. Thomas Abel, Director of Laboratory at RAMPF Machine Systems – “Improving the ecological balance of our materials has always been a strong focus of our R&D efforts. The use of hard coal fly ash is no longer appropriate due to the CO₂ emissions resulting from the extraction and combustion of hard coal. In addition, the increase of CO₂ prices as part of the European Green Deal will lead to a rise in production costs. In the search for an adequate alternative, we therefore put particular emphasis on both the extraction process of the raw material and its regional availability.”

The new raw material supplier is located in the immediate vicinity of RAMPF Machine Systems' headquarters, which minimizes both the economic and ecological transport costs. In contrast to hard coal fly ash, whose medium and long-term availability could be impaired by warmer winters, the new filler is always available in the same high quality. In addition, mining is less expensive than with hard coal, as no digging is required.

RAMPF Machine Systems has been making a significant contribution to more sustainable production processes for decades:

- > The manufacture of both EPUMENT[®] mineral casting and EPUDUR ultra-high performance concrete 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

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processing machinery. CO₂ emissions are approximately 50 percent lower when precision surfaces are applied rather than milled.

- > Machine beds and machine bed components made from mineral casting and ultra-high performance concrete (UHPC) can be disposed of in the same way as normal construction materials and used as recycled feedstock in road building, industrial construction, landfill surface sealing, and the building of green spaces.

Marc Dizdarevic, CEO of RAMPF Machine Systems – “Our ash-free recipe supports our customers in further improving the ecological footprint of their products. With our materials we set both ecological and technical standards – unbeatable vibration damping, outstanding thermal stability, high functional integration, maximum design freedom, as well as optimal static and dynamic stiffness guarantee the production of high-performance and ultra-precise machine tools and production machines.”

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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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