



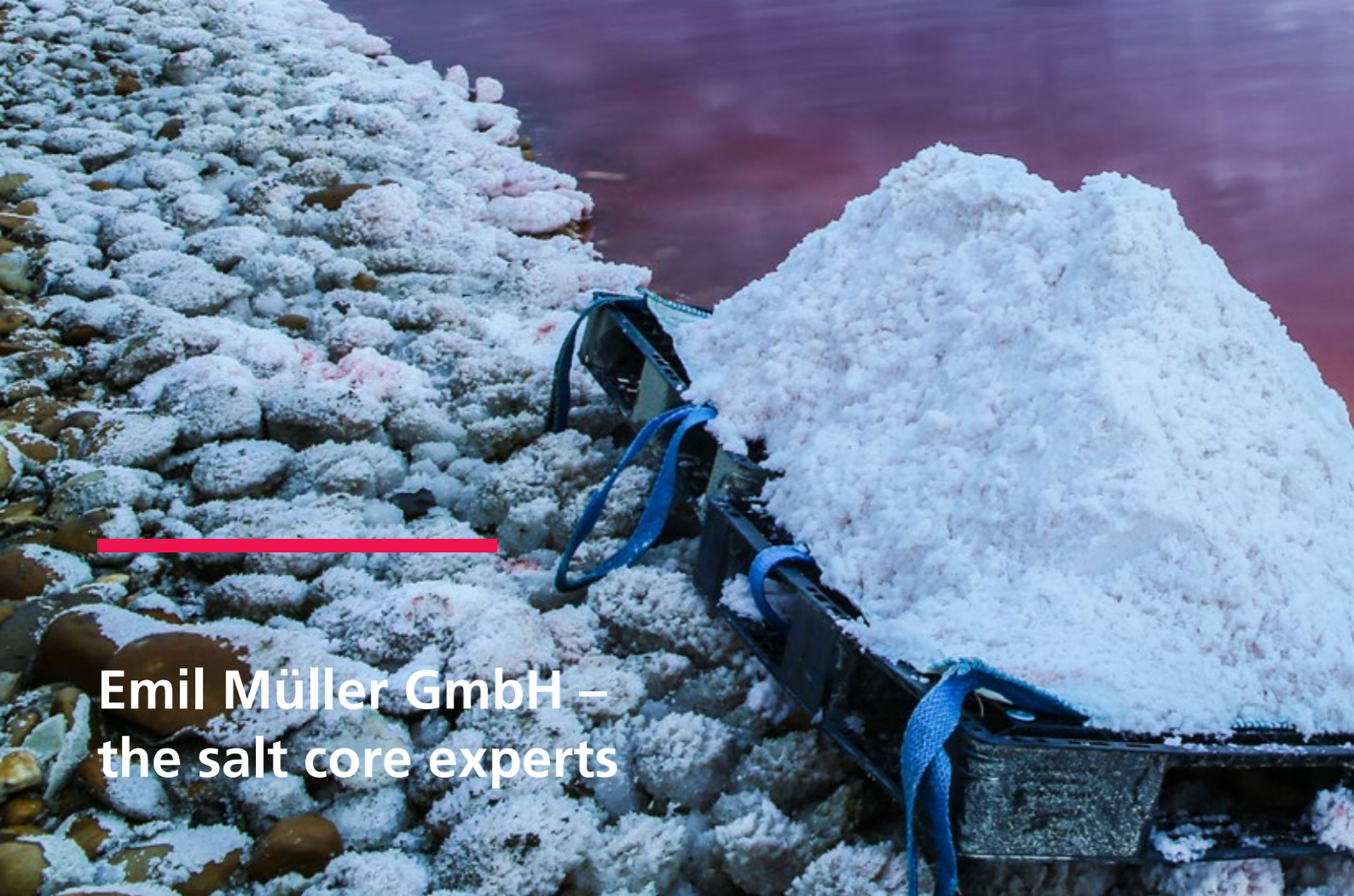
EMIL MÜLLER

Lost cores for aluminum casting

Saltcore Technology

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Emil Müller GmbH – the salt core experts

Emil Müller GmbH was founded in 1921 for the production of sheet metal packaging and established itself in the following years with stamped and bent parts as a permanently reliable automotive supplier. For more than 40 years now, Emil Müller GmbH in Wilhermsdorf has successfully produced approx. 40 million salt cores per year for piston casting as well as complex salt core geometries for customer-specific applications.

With our specialized and profound know-how, we have opened up new markets worldwide and founded subsidiaries in Poland, Brazil, Mexico and India. As a result, the Emil Müller Group, a wholly owned subsidiary of CeramTec, now comprises more than 220 employees.



The headquarters of the Emil Müller Group in Wilhermsdorf



Lost cores for the foundry technology

Advantages for the casting process

- Residue-free removal of core after casting
- Increased surface quality ($R_z = 5-25 \mu\text{m}$) of cast parts
- Salt cores offer high mechanical strength ($\sigma_b \sim 20 \text{ MPa}$)
- State of the art and economic production techniques
- High long-term stability of sintered cores during storage

Lost cores in high pressure die casting

- Extended design freedom
- Casting of under-cuts and inner cavities
- Elimination of complex slide technology
- Savings in mechanical post-processing
- Near net-shape casting

Raw material: Salt (sodium chloride)

- Unlimited availability
- Eco-friendly
- Applicable to well-proven production methods
- Good water solubility
- No corrosion



Design guidelines

- Design criteria analogue to technical ceramic parts
- No under-cuts in salt core
- Draft angles ($1,5^\circ - 3^\circ$) required
- Maximum salt core weight approx. 3.000 g
- Maximum dimensions: 100 x 200 x 100 mm