Learn about Additive Manufacturing

Customer Event Steam Turbine and Generators 2023



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Wire-Arc-Additive-Manufacturing

SIEMENS Energy in Goerlitz is industrializing Wire-Arc-Additive-Manufacturing (WAAM)

Scheme of the process workflow



Application established

- welding technologies
- industry standards
- precursor materials

Utilization of a bi-directional meander-welding strategy



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Industrialisation for serial production

Driving industrialization of WAAM to

- ↘ Minimize product costs
- ↘ Shorten product lead times
- ↘ Minimize raw material stock volumes
- ↗ Develop and optimize WAAM technology
- ↗ Using KI for automated analysis of quality data

Develop potentials for further optimizations by

- → WAAM design
- → Hollow structures
- → Hybrid material applications
- → Multi material applications

SIEMENS Energy Goerlitz & international partners are driving new ways of digitalization and manufacturing

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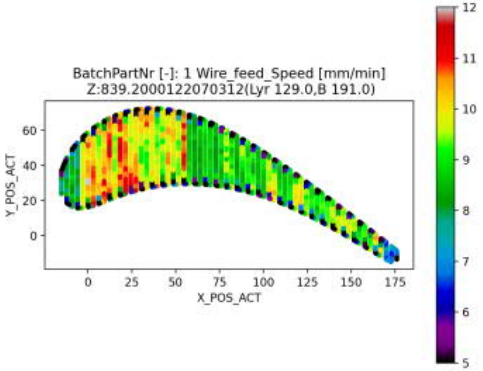






GEFERTEC ARC403

- 3-axis CNC device
- Building space of 0,8 x 0,9x1m
- Up to 800kg load capacity



GEFERTEC ARC605

- 5-axis
- Building room Ø0,9x0,7m high
- < 500kg load capacity

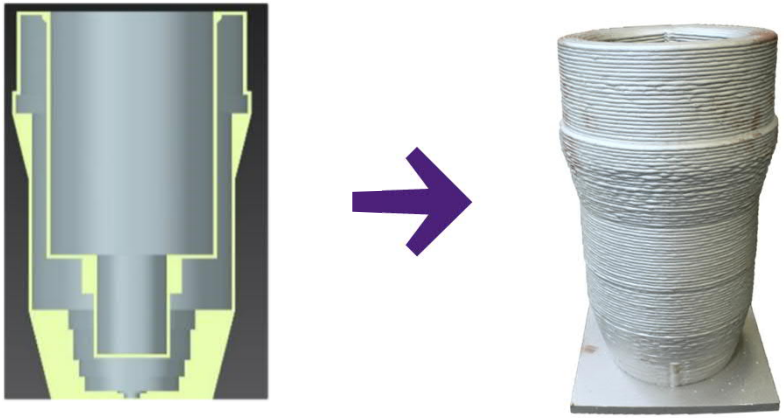
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Industrialisation for serial production

- Manufacturing of guide vanes started in 2022
- Establishment of a stable series production
- Implementation of a dynamic quality assurance system
- Material properties comparable to conventional parts



Small series production of service parts

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GEFÖRDERT VOM
Bundesministerium für Bildung und Forschung

SIEMENS energy

Industrialization - Outlook

Additional sensors for complementary process monitoring

XIRIS welding microphone



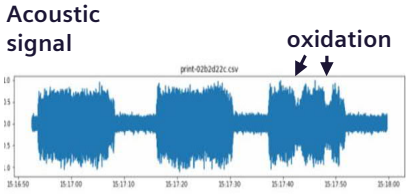
DIAS thermal imaging cameras



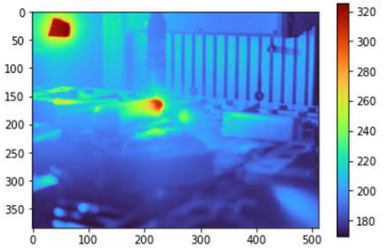
Welding Camera Cavitar C300



Audio welding monitoring



Thermal welding monitoring



Visual welding monitoring



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Key Take Away – WAAM

Your competitive location

In addition to space and infrastructure, we offer low costs and high public funding rates.

Your future-oriented location

You benefit from the cooperation between politics, science and economy at the Innovation Campus Goerlitz and have all the options for future expansions.

Your success is our promise

Your settlement is welcomed and supported by the site management, the employees, the city of Goerlitz and the Free State of Saxony.

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