



MULTI-FUN

ENABLING MULTI-FUNCTIONAL
PERFORMANCE THROUGH
MULTI-MATERIAL ADDITIVE
MANUFACTURING



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SPEEDTECH- FORUMS

RHP Technology



Pier Paolo Curti

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www.multi-fun.eu



Technologies @RHP

- ✓ RHP Technology is a solution provider for advanced materials and manufacturing methods
- ✓ RHP has a focus on powder technological processing and additive manufacturing
- ✓ RHP has own developed material IP portfolio (e.g. DiaCool[®], Tiger-Metals) and for processing methods (e.g. Plasma Metal Deposition – PMD[®])
- ✓ Main contribution in MULTI-FUN is the combination of DiaCool[®] materials with PMD[®] processing to create a multimaterial
- ✓ Focus is on high thermal conductive inserts with low coefficient of thermal expansion which are inserted in moulds fabricated by PMD



Expertise & Strengths



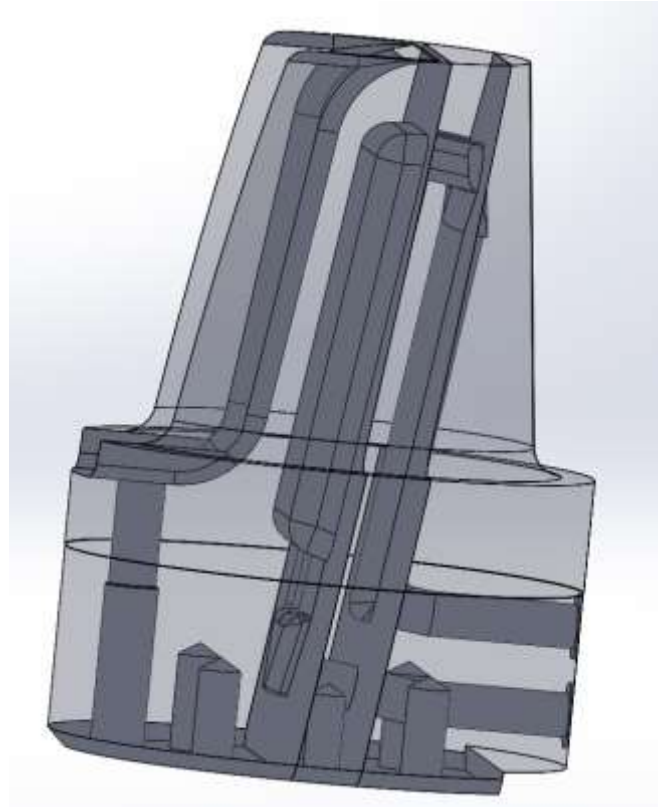
- Development of innovative materials and processing solutions
- Manufacturing of prototypes
- Upscaling and ramp up of production including technology transfer to companies/partners
- RHP has an own spin-off (AT Space GmbH) which is producing successfully components for propulsion systems used in satellites
- More than 400 satellites are equipped with products developed at RHP Technology

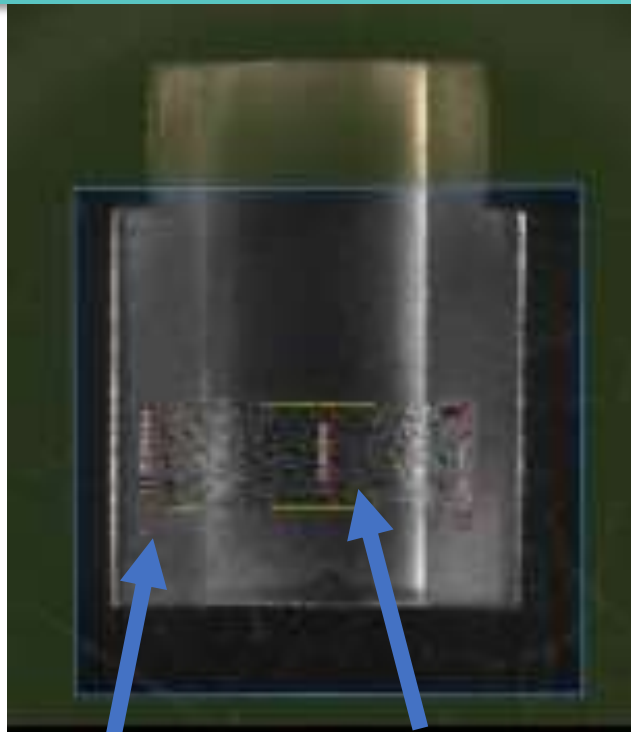
Main Contributions to MULTI-FUN

- Identification and optimisation of suitable Metal-Diamond Material grades
- Modification of equipment to enable a multimaterial manufacturing (.e.g combine wire and powder feeding)
- Determine best compatibility between diamond containing materials and steel
- Using of PMD processing for the manufacturing of steels with inserts from high thermal conductive materials



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Diamond containing insert

Steel encapsulation

Multi-Material Processing allows to integrate functionalities such as

- Low coefficient of thermal expansion
- High thermal conductivity
- Design flexibility by using AM methods
- Good thermal interface was demonstrated on test sample
- Ongoing work is focusing on the upscaling and integration of the insert in a mould

OPEN HOUSE

20. October - Smart Materials
21. October - Additive Manufacturing

Forschungszentrum A-2444 Seibersdorf

Registration: www.think-additive.com

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RHP
TECHNOLOGY

SBI
ADDITIVE

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Thank You!

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