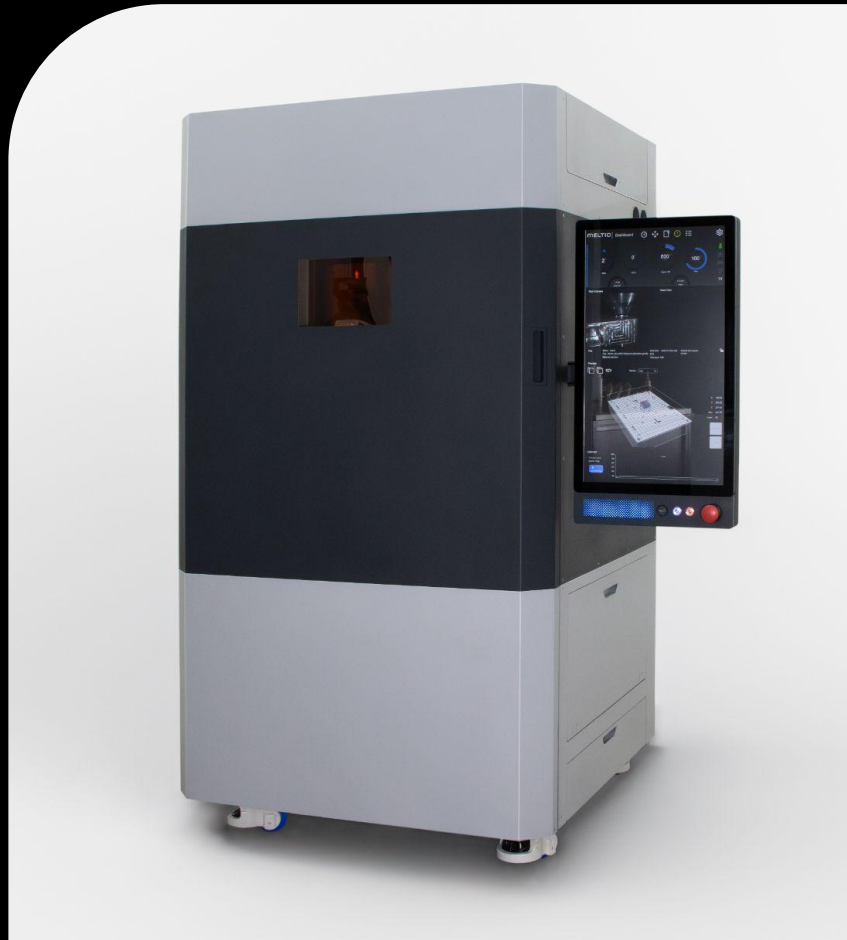
MELTIO

M600 Applications

M600 Launch Event



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Engine Bracket

1. Material: SS316LSi.

2. Purpose:

- Support and Mounting.
- Vibration Isolation.
- Alignment.
- Structural Integrity.

3. Meltio Super Power:

- Design Flexibility.
- Intricate shape obtained through topology optimization.
- Lightweight Construction.
- Assembly Consolidation.
- On-Demand Production.

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Turbine Rear Vane

1. Material: SS316LSi.

2. Purpose: Also known as a turbine stator, is a crucial component in the turbine section of a gas turbine engine. Its primary function is to guide and redirect the flow of hot gases exiting the turbine rotor blades. As high-pressure, high-temperature gases pass through the turbine rotor blades, they impart rotational energy to the turbine, driving the engine's power-producing components.

3. Meltio Super Power:

- Maximization of the Design Flexibility.
- Reduced Material Waste.
- Weight Reduction.
- Material Options.

Exhaust Nozzle

1. Material: SS316LSi.

2. Purpose: The exhaust nozzle is essential in the propulsion system of a jet engine. Its primary purpose is to manage and control the flow of exhaust gases expelled from the engine during the combustion process.

3. Meltio Super Power:

- Design Flexibility.
- Reduced weight through complex geometries.
- Improved efficiency in fuel combustion.
- Potential cost savings in production.

Naval Bracket

1. Material: ErCuNiAl (Marine Bronze).

2. Purpose:

- Structural Support.
- Equipment Mounting.
- Cable and Piping Support.
- Safety Railings.
- Hull and Deck Reinforcement.

3. Meltio Super Power:

- Material Options with Corrosion Resistance.
- Rapid manufacturing in contrast to stamping and casting methods.
- Assembly Consolidation.

Universal Joint

1. Material: SS316LSi.

2. Purpose: Connects two shafts at an angle and transmits rotational motion between them. It is a flexible coupling that allows for power transmission while accommodating variations in alignment and angle between the shafts.

3. Meltio Super Power:

- Customization.
- Assembly Consolidation.
- Rapid Prototyping.

Glass Mold

1. Material: SS316LSi.

2. Purpose: Mold used for shaping and forming molten glass into a bottle shape.

3. Meltio Super Power:

- Customization.
- Reduced Lead Times.
- Cost-Effective for Low Volumes.
- Implementation of Conformal Cooling Channels.

Geared Hub

1. Material: SS316LSi.

2. Purpose: Provides a mechanism for changing speeds or gears in some mechanical systems.

3. Meltio Super Power:

- Customization.
- Assembly Consolidation.
- Rapid Prototyping.
- Rapid manufacturing in contrast to stamping and casting methods.

Vertical CNC Fixture

1. Material: SS316LSi.

2. Purpose: Holds and positions a workpiece during machining or manufacturing processes conducted on a CNC machine.

3. Meltio Super Power:

- Customization.
- Fast Production.
- Increase of CNC capacity by optimizing their usage primarily for production of more parts that generate revenue.

Steering Knuckle

1. Material: Titanium Grade 5.

2. Purpose: The steering knuckle is a key component in a vehicle's front suspension and steering system. It serves as a connection point between the wheel and the vehicle's suspension components. This one supports the wheel, provides a pivot for steering and connects to the suspension and braking systems.

3. Meltio Super Power:

- Enhance of car’s handling by the reduction of the unsprung mass (weight of components that are not supported by the vehicle's suspension system, such as wheels, tires, and control arms).
- Reduction of fuel consumption.
- Increase of the performance of the braking.

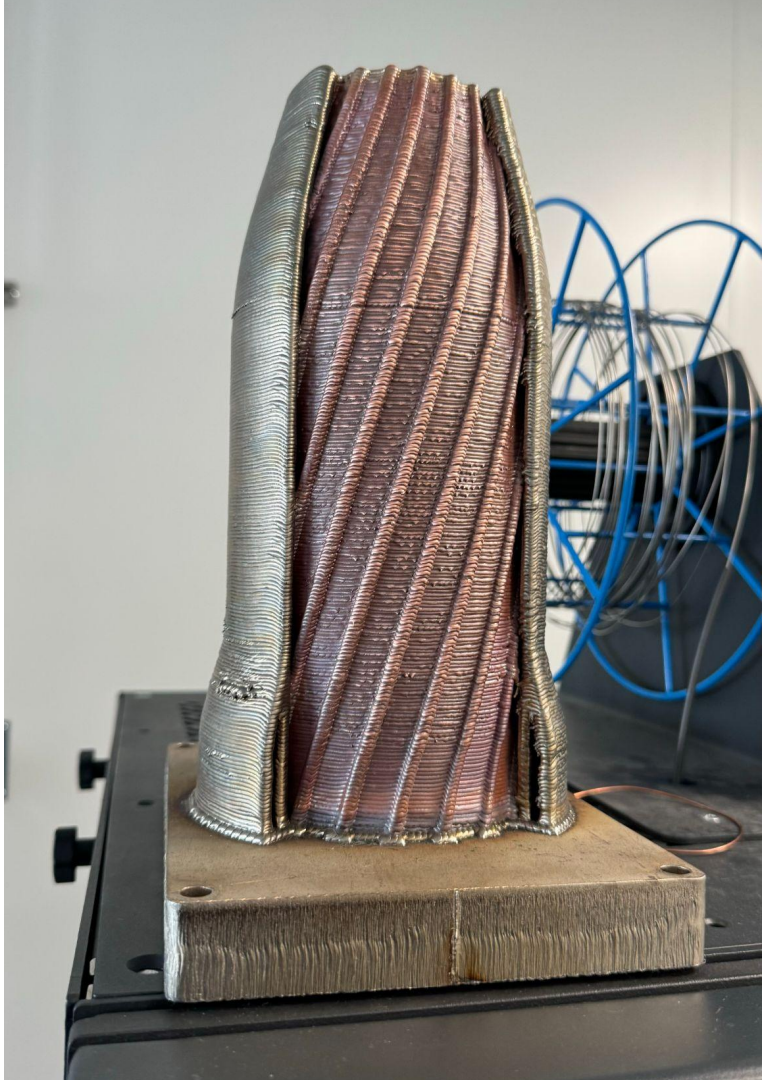
Combustion Chamber / Rocket Nozzle

1. Material: Copper (CuCrZr) and Nickel 718.

2. Purpose: It is the component of a rocket engine where the combustion of propellants takes place. It is the location where fuel and oxidizer are mixed and react to generate a large amount of heat and high-pressure gases.

3. Meltio Super Power:

- Complex Geometry.
- Dual Wire Printing.
- Material Option: Copper is an excellent material for heat exchange purposes.



Demonstration Piece

1. Material: SS316LSi.

2. Purpose: Demonstrate certain system capabilities. The future goal is to utilize the M600 to print each tube in a distinct material.

3. Meltio Super Power:

- Complex Geometry.
- Hollow Component.
- Multi-Material Printing.

Demonstration Piece

1. **Material:** SS316LSi.
2. **Purpose:** Torture Test.
3. **Meltio Super Power:**
   - Continuous operation of the machine for extended hours without the need for operator intervention, evaluating its overall reliability and precision.
   - Capability of printing full dense components.

Suspension Arm Top

1. Material: Aluminum 5183.

2. Purpose: The suspension arm top, often referred to as the upper control arm or wishbone, is a component of a vehicle's suspension system. It helps define and control the geometric configuration of the suspension system and also hauxiliates to control the vertical movement of the wheel.

3. Meltio Super Power:

- Lightweight Design.
- Reduced Production Time.
- Cost-Effective Prototyping.

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