PRIMA Solutions for Aerospace

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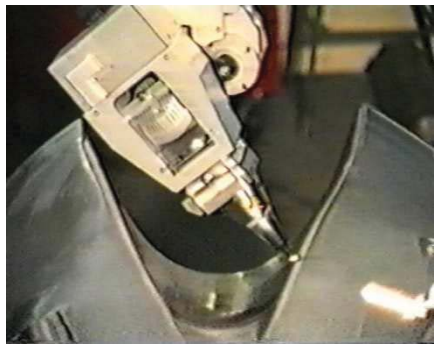
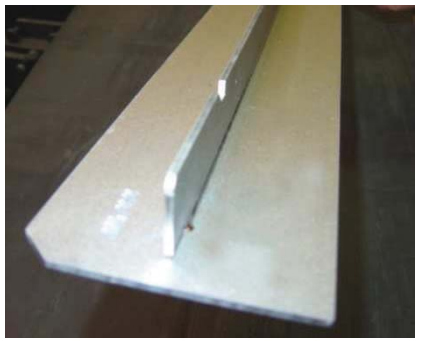
Laser Welding and Cladding





Aerostructures: Fuselage Ribs

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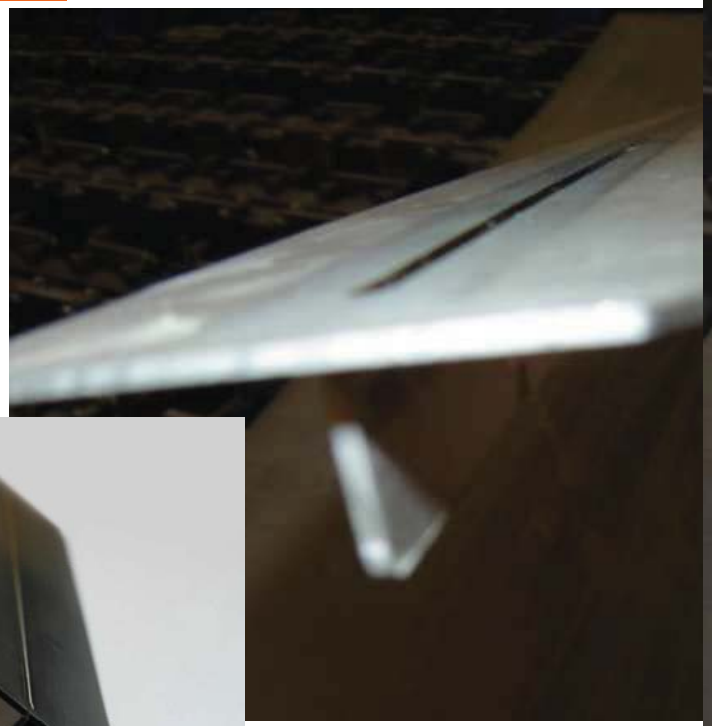
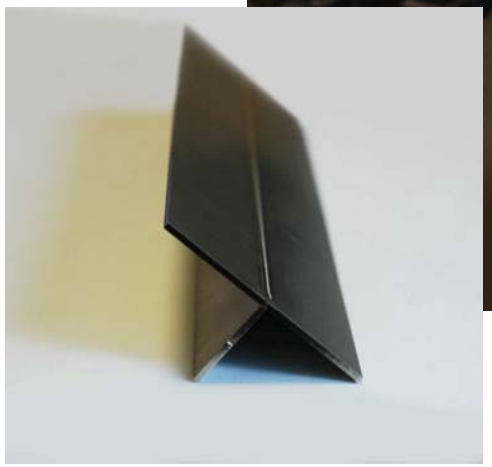
PROCESS: Welding of fuselage ribs (T-section)

MATERIAL: Titanium (2 mm)

MACHINE: RAPIDO/LASERDYNE 795





Aerostructures: Frames/Fittings/Brackets

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PROCESS: Welding of Frames/Fittings/Brackets

MATERIAL: Titanium

RESULT: Buy To Fly Cost savings
Machined from Block / Laser Welded = 10/1

Laser-welded component. The part was originally machined from plate with a buy to fly ratio of 30:1. The laserwelded part shown had a buy-to-fly ratio of 3:1.

Engines: Cladding

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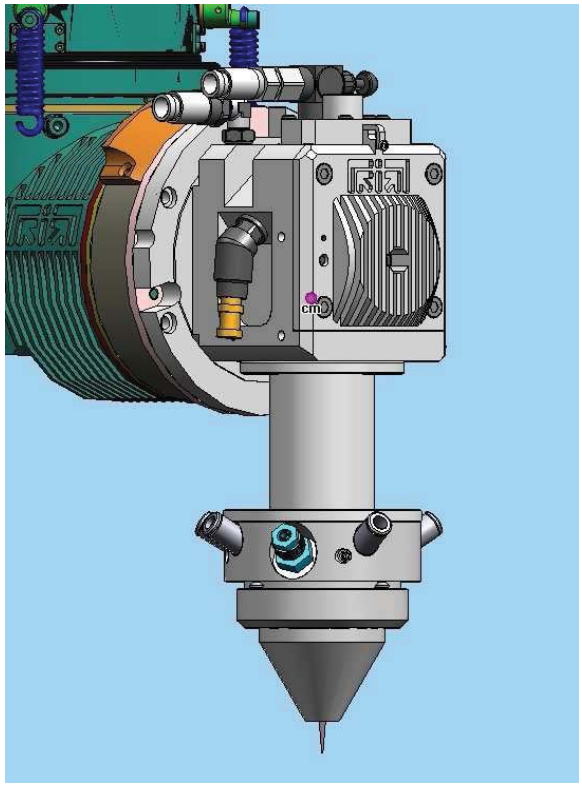
PROCESS: Cladding of engine parts

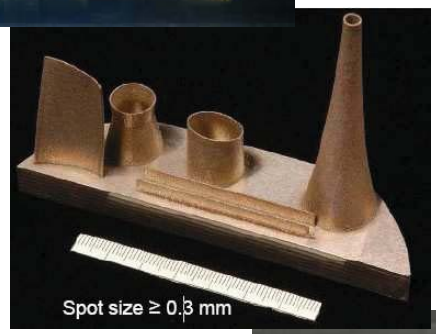
MATERIAL: Super-alloys, Titanium

MACHINE: RAPIDO/LASERDYNE



Repair

Generation



Coating
Hardfacing

Engines: Cladding

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Moulds and tools repairing

Materials:

- Stellite
- Nickel alloys
- Aluminium alloys
- Titanium alloys
- AlMg5 on magnesium alloy

Engines: Cladding

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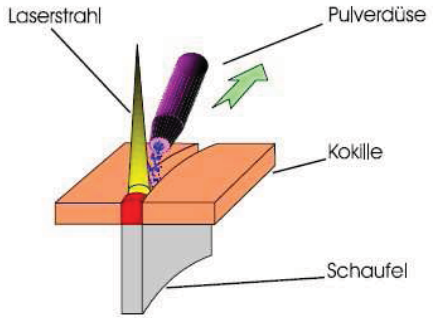
Turbine blades and aeronautical components repairing



Materials:

- Titanium alloys
- Nickel alloys
- Iron alloys
- Cobalt alloys
- Aluminium alloys
- Magnesium alloys alloy

Aerostructures: Components

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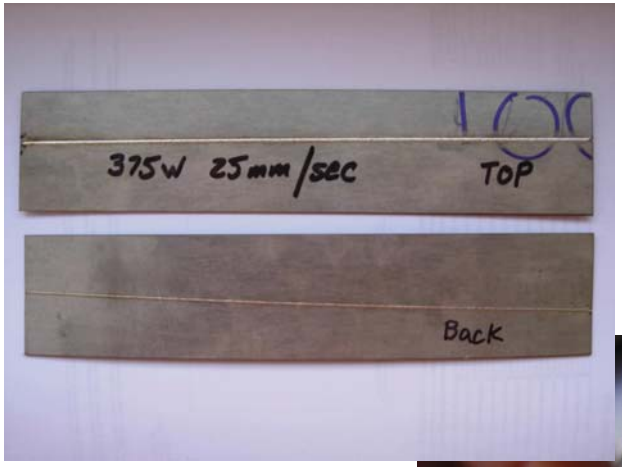
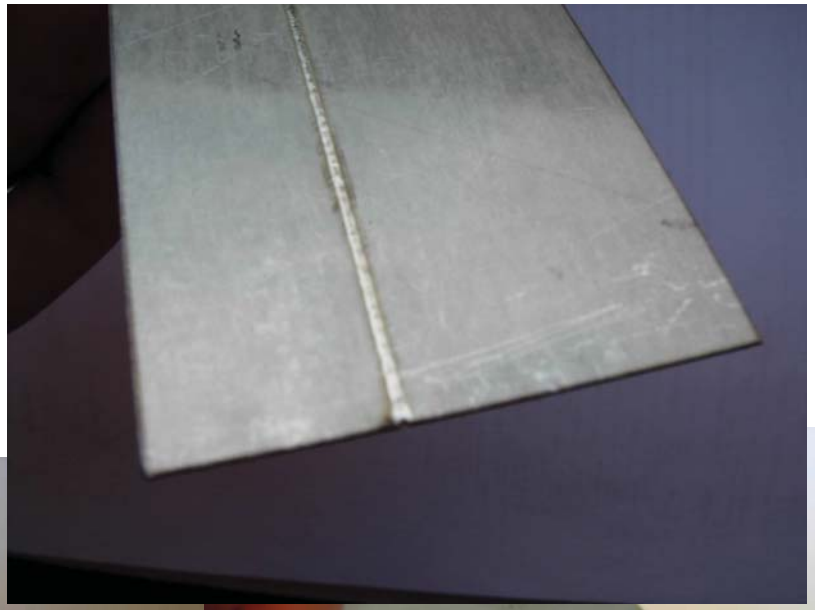
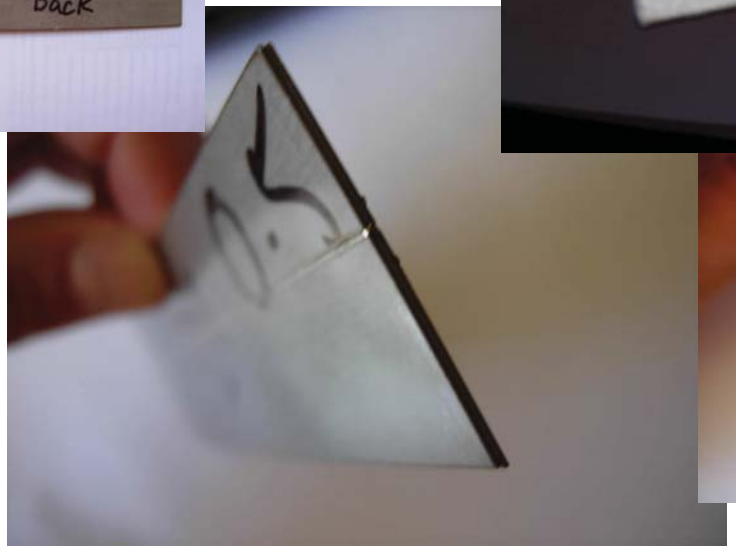
PROCESS: Welding aerostructures/engines components

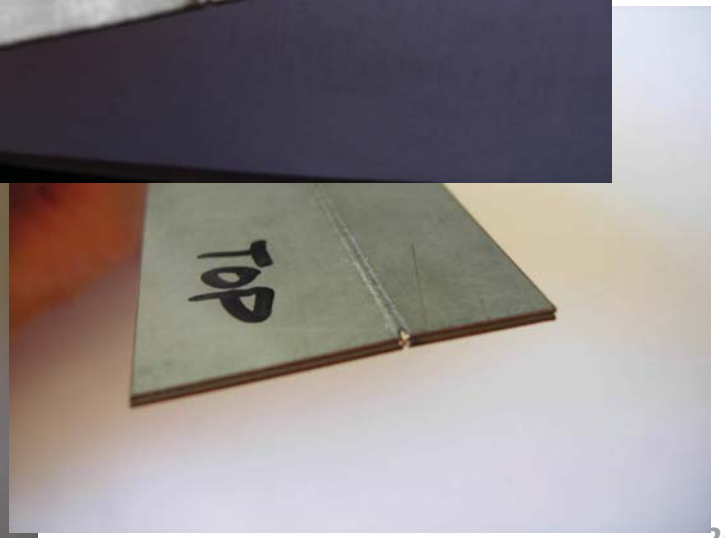
MATERIAL: Stainless Steel - Nickel based alloys 1 mm

MACHINE: RAPIDO/LASERDYNE









Aerostructures: Chemical Mill Maskant Scribing

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PROCESS: Maskant scribing

MACHINE: OPTIMO/LASERDYNE 795

Process: cut through rubber maskant without damaging the base material (Al, Ti, Ni-alloys)

- 15 to 50 W average power CO2 laser; high beam quality
- Synchronous Laser Pulsing
- Pogo stick tooling to accommodate large, complex shaped parts