



INTEGREX i **AM** SERIES

ADDITIVE MANUFACTURING



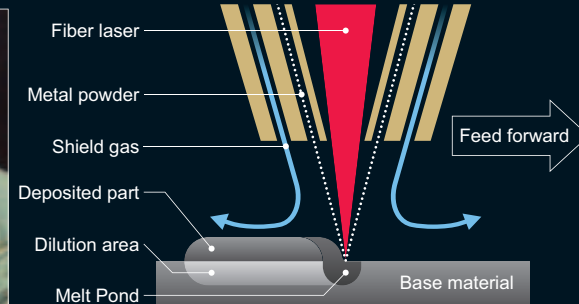
The integration of 3D additive manufacturing (3D printer) and multi-tasking machine INTEGREX series

Hybrid Multi-tasking machine – A fusion of the next-generation technologies and Mazak’s extensive multi-tasking experience

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3D additive manufacturing (3D printer)

As metal powder is discharged from the nozzle tip, the fiber laser melts the material which solidifies to clad or coat the target surface.



3D cladding of different kinds of metal

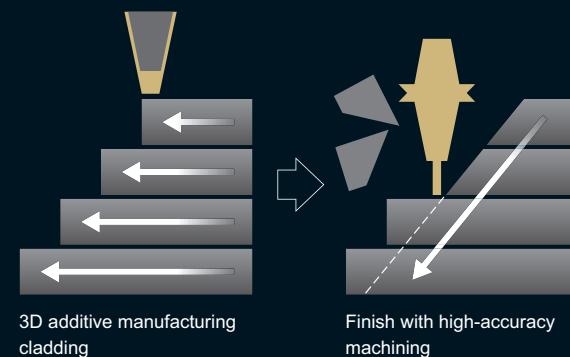
High density build-up of one material on another.

Micro-composition of 3D additive manufacturing used for aerospace component - Superalloy Inconel 718 on Inconel 738 base material.



Near net shape cladding and high-accuracy machining

After cladding of damaged surface, part can be machined to required tolerance in same workpiece setup by utilizing Mazak multi-tasking technology.



Automatic changing of 3D cladding heads

The cladding heads are stored in the tool magazine and loaded on the turret by the automatic tool changer. The cladding heads are selected according to the type of process to be performed and the type of metal powder to be utilized.



Process from 3D additive manufacturing to high-accuracy machining



3D additive manufacturing cladding



Finish with high accuracy machining



INTEGREX i-400 AM with optional equipments.

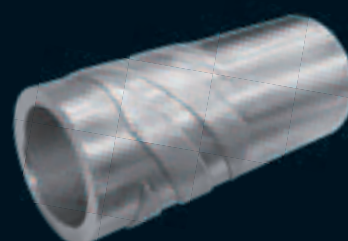
Additive manufacturing applications are found in a wide variety of industries



Repair of turbo impeller for large diesel engine
 - Inconel 713 parent material
 - Inconel 718 deposition material



Helical deposition (Near net shape)
 - Steel substrate parent material
 - Inconel 718 deposition material



Surface coating
 - 316 Stainless parent material
 - Inconel 718 deposition material



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Mazak

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- Specifications are subject to change without notice.
- This product is subject to all applicable export control laws and regulations.
 The accuracy data and other data presented in this catalogue were obtained under specific conditions.
- They may not be duplicated under different conditions. (room temperature, workpiece materials, tool material, cutting conditions, etc.)

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