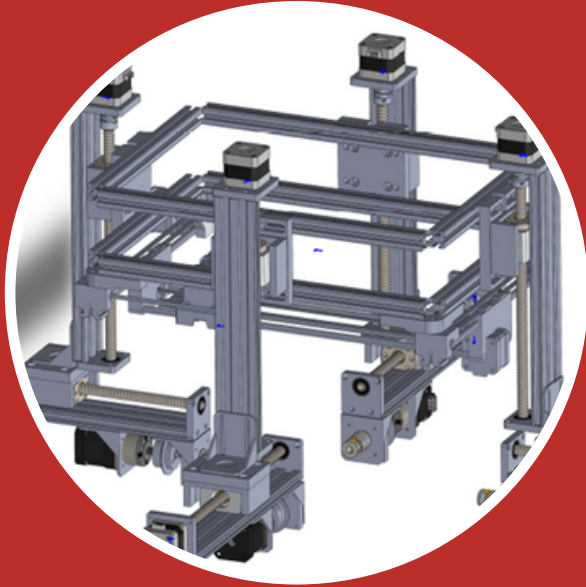


3D PRINTER AND RELATED PRINTING PROCESS

ALMA MATER STUDIORUM-UNIVERSITÀ DI BOLOGNA



Mobile 3D printer for manufacturing tubular objects of variable cross-section without length constraint, and capable to move and print along the object without any external support. The system's capabilities are enabled by the mobility component coupled with a gripping system integrated into the object.

Protection: Italy, with the possibility to extend internationally

Inventors: Palermo Michele, Palli Gianluca, Trombetti Tomaso, Arrè Lidiana, Govoni Andrea

INVENTION

The robot is a 3D printer capable of printing a structure and moving on it using a guidance and movement system without the use of any external support during the printing process. This system therefore makes possible to create tubular objects of variable section (within the maximum printing area allowed by the frame, X/Y plane) and of theoretically unlimited length (along the Z direction orthogonal to the X/Y plane).

ADVANTAGES

- Flexibility and adaptability of the system;
- absence of external supports;
- integrated gripping system;
- system mobility along the object;
- versatility of the 3D printed geometry.

APPLICATIONS

- 3D printing in-situ of mechanical components and structural elements;
- 3D printing of mechanical components;
- 3D printing of structural elements for the construction sector;
- 3D printing of structural elements for offshore applications.

CONTACTS

Knowledge Transfer Office

www.unibo.it/brevetti

+39 051 20 80 635 - 751

kto@unibo.it



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA