

Topic : Elaboration and characterization of architecture metallic composite

Keywords : metallurgy, foundry, powder metallurgy, rapid prototyping

Host laboratory : Unité Matériaux Et Transformations (UMET) / CNRS

<http://umet.univ-lille1.fr/MPGM/index.php?lang=en>

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Level of studies :

Bachelor's level (undergraduate)

Master's level (postgraduate)     x

Duration :

3 months   

4 months   

5 months   

Type of evaluation

Written report and oral defense

Project description:

In recent studies, we have realize by rapid prototyping an open cells metals like describe in the fig. 1.

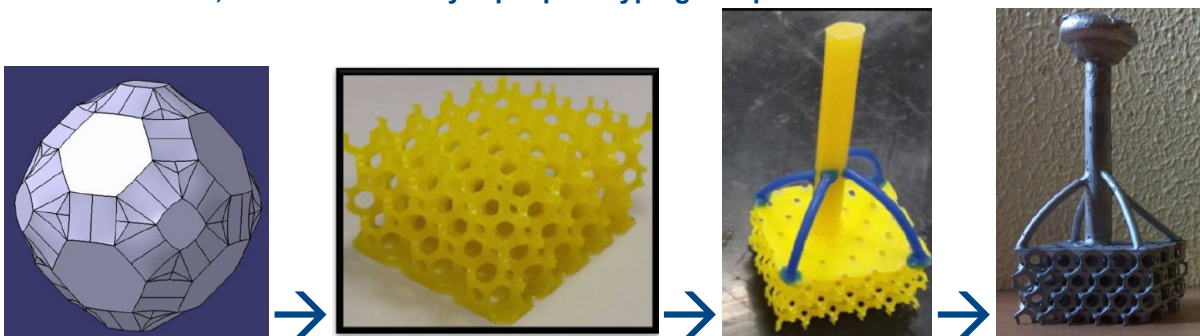


Fig. 1 some steps of the rapid prototyping process (CAD, 3D printing, mold preparation, casting)

In a second phase, we try to fill this open cells structure by another material with different properties, like a polymer or a metal with higher melting point.

The object of this work, is to continue the work on the production of smaller structures and to start the filling by others materials, namely by powder metallurgy.

No funding available from the laboratory.