3D Coat

Functional Printing/Coating on 3D AM parts to reduce roughness and add innovative coatings/prints

What challenge or problem are you addressing? What is the need for the project?

Currently, post-treatment is often performed by subtractive techniques as grinding or laser (ablation) techniques. Some, as spray or laser coating, have been applied but the material usage is too high and the added layer is too thick. The focus in this project will be on SLS printed polymer 3D parts.

We aim to study the application of **functional** coatings on 3D AM parts along with the following aspects :

- Ink formulation
- Printing/coating mechanism
- Post-treatment of the coated layer
- Interaction between all of these components

Objective of the project:

Ultrasonic Spray Coating for thin (200nm) coatings and aerosol jet printing (AJP) for fine structures (10um), super-hydrophobic coatings or water repellence. Scratch resistance, by polymeric coating. Laser-based post-treatment technique to fix and dry.

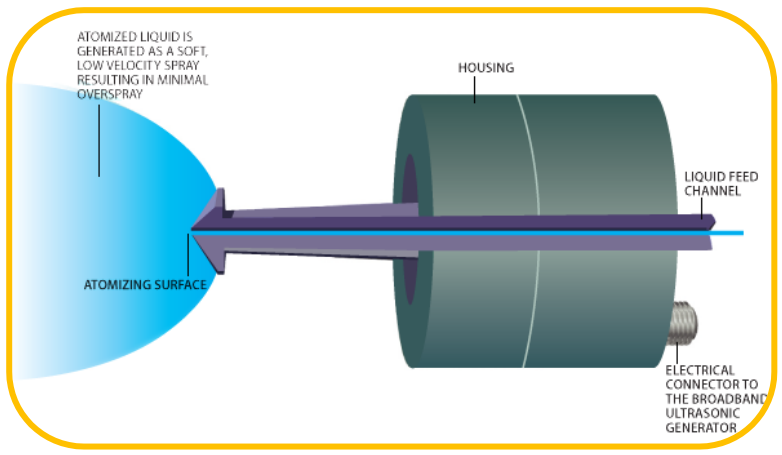
Why do you need transnational cooperation?

Additive manufacturing and coating activities, cannot all be found in Flanders, e.g. materials, equipment, expertise for in line production and integration.

Types of partners:

Research partners in the field of Additive Manufacturing and coating, ink formulations.

Companies, in case SMEs but also large companies, in the field of materials, consulting, equipment of additive manufacturing and coating. Users of the technology. Production integration.



Your contact details

Name	De Doncker Lieve; Wim Deferme
Organisation	UHasselt; imo-imomec
Region	Limburg
Country	Belgium
Telephone number	32/491/903605
Email	lieve.dedoncker@uhasselt.be
Website	www.uhasselt.be/imo