Conversion coating and E-coating interaction for martensitic stainless steel dedicated to automotive structure

The project:

Aperam has developed MaX grades, a new family of martensitic stainless steels for automotive structures. This grade is design for hot stamping applications, leading to oxidized surface. The material has to follow the complete ED coating process (surface treatment(s) and ED-coating). The aim of the project is to study the influence of each step of this process, to understand the mechanisms involved during the surface treatments and to investigate the possible optimizations.

The partners:

Aperam is a global player in stainless steel in Europe and Brazil with almost 10000 coworkers. Aperam has also a strong research network with 3 research centers and more than 150 employees. Aperam R&D is also collaborating with worldwide leading academic groups such as SURF from VUB. This partnership between industry and academic brings large perspectives to improve knowledge and to develop material direct applications.

Applicant background:

Applicants must hold a master in materials or chemistry (or equivalent), with knowledge on metals, polymers, electrochemistry or corrosion. The applicant must be self-driven and highly motivated with excellent English level. He/she must exhibit human skills to work within a motivated team of technicians and researchers.

Benefit:

The PhD study will benefit of:

- a challenging, dynamic and stimulating work in an internationally renowned research group in partnership with a leading producer of stainless steel;
- a multicultural and international work environment;
- an international network dealing with state-of-the-art research;
- working in Brussels, the Capital of Europe, one of the most cosmopolitan cities of the world.

Starting date: January 2018, project of 4 years, with a starting contract of one year

Application:

Please send a resume + motivation letter to the e-mail addresses below.

Herman TERRYN (SURF)  
herman.terryn@vub.be  

Clément BOISSY (Aperam)  
clement.boissy@aperam.com