

Détail de l'offre : Mechanical Engineering Thesis Offer

<b>Partenaire</b>	Ecole Nationale d'Ingénieurs de Brest - ENIB
<b>Adresse</b>	Technopôle Brest-Iroise – CS 73862
<b>Code postal</b>	29238
<b>Ville</b>	Brest Cedex 3
<b>Référence</b>	22D1652709579
<b>Titre</b>	Mechanical Engineering Thesis Offer
<b>Description du poste</b>	Characterization and modeling of the needling of fibrous structures based on oxidized Polyacrylonitrile for an aeronautical application.

Objectives:

With the objective mentioned, a thesis taking place at the Dupuy de Lôme Research Institute (iRDL) in Brest and with the support of both Safran Landing System (Villeurbanne) and Safran Ceramics (Bordeaux) will aim to understand the main mechanical/chemical/thermal phenomena that govern the interaction of fibers and needles during the realization by the needling process of the textile structure to different layers (cables, unidirectional layers and multidirectional layers). This thesis will also be intended to develop a multi-scale modeling approach to the needling process. The models put in place will have the dual objective of improving the understanding of the process parameters but also of going back to the material health of the preform at the end of needling.

**Type de contrat**

Thèse

**Métier** Etudes/ R&D / Qualité

Production / Fabrication / Construction

**Société** École nationale d'Ingénieurs de Brest (ENIB), Safran

**Localisation**

Brest

**Pays**

France

**Profil recherché**

Diploma required:

Bac + 5 in mechanical engineering, materials engineering.

Nationality requirement:

Applicants must hold a nationality of a country of the European Union.

Skills in demand:

In the first place, the candidate must have an appetite for manufacturing processes as well as for the realization, development and analysis of mechanical and computational mechanics of materials. In addition, the following skills are expected:

- Knowledge of methods for characterizing the mechanical behavior of materials.
- Knowledge of continuous media mechanics, materials mechanics and nonlinear mechanics.
- Very good level in English (B2 minimum).
- Ability to work in a research team with different partners.

Requested documents:

- CV
- Cover letter
- Copy of the candidate's identity document
- Transcript of grades for the last two years

Duration:

36 months from October 2022.

Financing:

SAFRAN Group.

Localization of theses:

Research Institute Dupuy de Lôme – Ecole Nationale d'Ingénieur de Brest, France.

**Secteur**

Aéronautique - Spatial - Matériels de transport

Ingénierie  
Recherche et développement

**Disponibilité** 3 mois et plus

**Langues** Anglais