

Materials and Processes Engineer

Job Req ID: 12843

Closing Date: 25 February 2022

Publication: Internal & External

Vacancy Type: Permanent

Date Posted: 28 January 2022

Vacancy in the Directorate of Technology, Engineering and Quality.

ESA is an equal opportunity employer, committed to achieving diversity within the workforce and creating an inclusive working environment. We therefore welcome applications from a qualified candidates irrespective of gender, sexual orientation, ethnicity, beliefs, age, disability or other characteristics. Applications from women are encouraged.

This post is classified A2-A4 on the Coordinated Organisations' salary scale.

Location

ESTEC, Noordwijk, Netherlands

Description

Materials and Processes Engineer in the Materials and Processes Section, Structures, Mechanisms and Materials Division, Mechanical Department, Directorate of Technology, Engineering and Quality.

The Materials and Processes Section provides functional support to ESA projects and carries out technological research (R&D) in the area of materials and associated manufacturing processes.

Duties

Reporting to the Head of Section and within the technical fields described above, your main tasks and responsibilities will include:

- providing expert technical support and consultancy to ESA projects, programmes and general studies in the field of materials and processes throughout all project phases, with a particular focus on, but not limited to, composite and metallic materials related bonding and joining processes, material/process relationships, predictive performance modelling, process/product verification, defect analysis, etc.;
- participating in feasibility studies, project reviews and evaluation of procurement proposals;
- supporting the selection of materials, mechanical parts and processes for ESA programmes in the framework of the Materials and Processes Review Boards;
- identifying critical development problems and assisting in their resolution;
- contributing to the definition of technology development requirements and work plans for the Agency's technology programmes;
- defining, initiating and managing R&D activities covering both long- and short-term needs;

- applied processes and stimuli and drafting of relevant reports;
- liaising and collaborating with other engineering disciplines;
- developing test and modelling methodologies for the evaluation of materials and for verifying processes against application requirements;
- participating in the definition, drafting, implementation and updating of the ECSS standards relevant to the Section's domain of competence;
- supporting the implementation of the ESA Advanced Manufacturing Cross-Cutting Initiative as well as proposing new batches of associated activities by reviewing and assessing the (advanced) manufacturing technologies including digitalisation and virtual manufacturing, and ensuring synergy with other industrial high-end technology domains (for example, aeronautics, nuclear, automotive or medical);
- monitoring applicable scientific and technological trends and maintaining state-of-the-art expertise;
- contributing to the dissemination of the results of the activities performed and the transfer of knowledge across the Agency.

Your duties may also include supporting other activities within your field of competence.

Technical competencies

General background and specific experience in the technical domains covered by the position

Experience with the design, development and application of product assurance tools and methods

Understanding of related technologies, R&D trends and the industrial landscape

Project support experience in a relevant domain

Experience in the preparation of procurement activities for technology development and innovation (statements of work, proposal evaluation, etc)

Experience in the management and monitoring of industrial activities, including participation in reviews

Experience with Space Engineering Standards and their preparation and implementation

Behavioural competencies

Result Orientation

Operational Efficiency

Fostering Cooperation

Relationship Management

Continuous Improvement

Forward Thinking

Education

A Master's degree in materials engineering or science, or another related field is required for this post. Preference will be given to those applicants with a PhD.

Additional requirements

At least 4 years of experience in general engineering and science of materials and related manufacturing processes.

Proven experience in advanced manufacturing (additive manufacturing/3D printing, etc.)

A good knowledge of materials performance and processing is required.

Knowledge of Digital Twin and virtual testing would be an asset.

Proven experience in the space industry will be considered an asset

The working languages of the Agency are English and French. A good knowledge of one of these is required. Knowledge of another Member State language would be an asset.

The Agency may require applicants to undergo selection tests.

At the Agency we value diversity and we welcome people with disabilities. Whenever possible, we seek to accommodate individuals with disabilities by providing the necessary support at the workplace. The Human Resources Department can also provide assistance during the recruitment process. If you would like to discuss this further please contact us via email contact.human.resources@esa.int.

Please note that applications are only considered from nationals of one of the following States: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, the United Kingdom and Canada, Latvia, Lithuania and Slovenia.

According to the ESA Convention the recruitment of staff must take into account an adequate distribution of posts among nationals of the ESA Member States. When short-listing for an interview, priority will first be given to internal candidates and secondly to external candidates from under-represented Member States.

(<https://esamultimedia.esa.int/docs/careers/NationalityTargets.pdf>)

In accordance with the European Space Agency's security procedures and as part of the selection process, successful candidates will be required to undergo basic screening before appointment.

Recruitment will normally be at the first grade in the band (A2); however, if the candidate selected has little or no experience, the position may be filled at A1 level.