

## EUROPEAN SPACE AGENCY

### Vacancy in the Directorate of Technical and Quality Management

The European Space Agency is an equal opportunity employer  
and encourages applications from women

#### **POST**

Advanced Manufacturing Processes Engineer in the Materials Technology Section, Components Technology and Space Materials Division, Product Assurance and Safety Department, [Directorate of Technical and Quality Management](#).

This post is classified in the A2/A4 grade band of the Coordinated Organisations' salary scale.

#### **LOCATION**

ESTEC, Noordwijk (Netherlands).

#### **DUTIES**

The postholder will report to the Head of the Materials Technology Section and will undertake technical support activities for ESA projects and technology programmes in the fields of metallic materials and electronic assemblies.

The main duties will consist in:

- providing expertise in the field of additive manufacturing (AM), also known as 3D printing, and other new manufacturing technologies, covering key disciplines which include material/process relationships, modelling, process/product verification, design tools, surface finishing, defect mapping, compatibility with other manufacturing processes, etc.;
- developing test methodologies for the evaluation of materials and for verifying processes against application requirements;
- developing qualification methodologies for parts made using AM technologies as well as for qualifying AM suppliers of space-level products; supporting the related ECSS standardisation activities;
- assessing the effect of the space environment on spacecraft hardware made by AM technologies as well as by other advanced manufacturing processes;
- performing tasks related to the metallurgical assessment of materials in pristine and processed conditions, including metallurgical laboratory evaluations (covering, for example, mechanical, corrosion and thermal testing, among others) and drafting relevant reports;
- performing failure analysis using a variety of laboratory tools (e.g. acoustic, optical, confocal or electron microscopy, x-ray diffraction, x-ray computer tomography, non-contact 3D stress-strain measurements, etc.);
- reviewing and assessing AM as well as other advanced manufacturing technologies currently being used in the European research and technology landscape and ensuring synergy with other industrial high-end technology domains (for example, aeronautics, nuclear, automotive or medical);
- proposing and managing the technology research and development (R&D) activities in the field of AM and other advanced manufacturing technologies in line with the overall strategy of the Section and Division, monitoring procurement implementation,

evaluating and reporting on the achieved results and lessons learned to the relevant ESA directorates and key partners;

- providing specialist advice to ESA programmes in the field of metallic materials and related manufacturing processes including participating in project meetings, reviews and audits;
- reviewing Materials, Mechanical Parts and Processes Lists of ESA Programmes in the framework of the Materials and Processes Review Boards.

## QUALIFICATIONS

Applicants for this post should have a Master's degree or equivalent qualification in materials engineering and science, materials physics/metallurgy or other related field, as well as several years of industrial experience preferably covering aerospace hardware and R&D.

Candidates should have demonstrated hands-on experience of additive manufacturing and other advanced manufacturing processes. They should demonstrate a sound knowledge of materials, processes, modeling and verification-related aspects for high-end technology domains (for example, aeronautics, nuclear, automotive or medical).

Candidates should have good interpersonal and communication skills. They should have the ability to work autonomously, effectively and cooperatively in a diverse and international team environment and to define and implement solutions in line with team and individual objectives and project deadlines in a multi-project environment. In addition, they should have good analytical, project management, communication and reporting skills, a proactive attitude to solving problems and an interest in innovative technologies.

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

## CLOSING DATE

The closing date for applications is **14 May 2014**.

Applications from external candidates for this post should preferably be made [online](#) from the ESA website ([www.esa.int/careers](http://www.esa.int/careers)). Those unable to apply online should submit their CV to Human Resources, ESTEC, Keplerlaan 1, 2201 AZ Noordwijk ZH, The Netherlands.

ESA staff members wishing to apply for this post should fill in the [Internal Application Form](#) and email it to [Apply2ESTEC](#).

The Agency may require applicants to undergo selection tests.

---

**Under ESA Regulations, the age limit for recruitment is 55. Please note that applications are only considered from nationals of one of the following States: Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, the United Kingdom and Canada.**

**Priority will first be given to internal candidates and secondly to external candidates from under-represented Member States.**

**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.**