



2018-PTT-G-000-010506

**Environmental testing of nuclear materials
 in heavy liquid metals**

Position for:

Trainee

As the science and knowledge service of the Commission, the mission of Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in five Member States (Belgium, Germany, Italy, the Netherlands, and Spain). Further information is available at: <https://ec.europa.eu/jrc/en>

Short description of activity:

Environmentally Assisted Degradation (EAD) such as stress-corrosion cracking (SCC), liquid metal embrittlement (LME), general corrosion, and corrosion-creep are key life limiting and safety-related factors for nuclear components. In the frame of the current European collaborative projects, such as GEMMA and WELLMET, and institutional activities, such as PreMaCoR and IntAg-LWR, general corrosion and LME issues in liquid lead environments will be investigated through dedicated research activities in the LILLA and AMALIA facilities. These include experiments on LME of ferritic/martensitic steels, austenitic stainless steels and their welded joints, and qualification of new steels in representative conditions for the next-generation heavy liquid metal cooled reactor concepts. These activities are conducted in support to the European Sustainable Nuclear Industrial Initiative (ESNII) and European & international collaborations within EERA JPNM and Generation IV International Forum (GIF), respectively. The selected candidate will be involved in all of the above-mentioned activities and in the set-up and calibration of autoclave loading systems (test sections), which will be used for LME / SSC and corrosion tests in liquid lead environments.

Qualifications:

The candidate should be of type 1 or 2 (as stipulated in the Rules governing the Traineeship Scheme). Background in the fields

	<p>of nuclear engineering, material science, physics, mechanical engineering or chemistry. Prior experimental experience and knowledge of corrosion phenomenology are assets. Good knowledge of spoken and written English (B2 level) is required. In addition, excellent work ethics, team-working as well as good communication skills are essential.</p> <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p>
Unit /Directorate	<p>Directorate G - Nuclear Safety and Security</p> <p>Unit G.I.4 - Nuclear Reactor Safety and Emergency Preparedness</p> <p>Further information: https://ec.europa.eu/jrc/en/science-area/nuclear-safety-and-security</p>
Indicative duration	5 months
Preferred starting date	as soon as possible
JRC Site	Petten
Country	THE NETHERLANDS
<u>JRC contact details</u>	<p>For any technical problems with your application, please contact: HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu</p>