



2019-PTT-G-000-012750

**Membrane bulge testing and video
extensometry based on digital image
correlation**

<p>Position for:</p> <p>Trainee</p>	<p>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.</p> <p>The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: http://www.jrc.ec.europa.eu</p> <p><u>Short description of activity:</u></p> <p>The JRC is involved in international projects with the aim to develop new methodologies for (micro-)mechanical testing of materials performance at various temperatures, and in different test environments. In this context, we are looking for a trainee to assist in the preparation and validation testing of a new test set-up for membrane bulge testing of metallic sheet material. This includes optical extensometry based on digital image correlation. The work will consist in exploiting an optical extensometry system in operation, apply it to the measurement of the deformation induced during the bulging of metallic membranes, and analyse the measurement capabilities and accuracy of the system. A significant share of the work will be carried out in the laboratory followed by numerical analysis of data.</p> <p><u>Qualifications:</u></p> <p>We are looking for a trainee who has at least a bachelor degree in physics, materials science, mechanical engineering or a similar subject. If there is interest and with the agreement of the candidate's university faculty, the work could be carried out in the framework of a master thesis.</p>
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	<p>Essential: Knowledge of physics, materials science, or engineering. Good knowledge of English (B2 level).</p> <p>Advantage: Knowledge in mechanical testing or mechanical properties of materials. Knowledge of metallographic preparation or microstructural analysis.</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>G.I.4 - Nuclear Reactor Safety and Emergency Preparedness Directorate G – Nuclear Safety and Security</p> <p>Further information: https://ec.europa.eu/jrc/en</p>
Indicative duration	5 months
Preferred starting date	From 01/01/2020
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>