

VACANCY NOTICE FOR A TRAINEESHIP

AREA OF ACTIVITY	TOROIDAL FIELD COILS MANUFACTURING
REFERENCE	F4E/TRA/2017/038
START AND END DATE - DURATION	01/10/2017 - 30/06/2018 - 9 MONTHS
LOCATION	BARCELONA (SPAIN)
PUBLICATION DATE	28/03/2017
CLOSING DATE FOR APPLICATIONS	26/04/2017 AT 12:00 PM (BARCELONA TIME)

1. DESCRIPTION OF THE DEPARTMENT/PROJECT UNIT

The mission of the **Magnets Project Team** is to prepare and manage the procurement of the ITER Magnets to be provided as EU in-kind contributions to the project. This includes ensuring manufacturing monitoring and follow-up, participation to design reviews, assessment of test programs and results, definition of preventive and corrective actions, handling of non-conformities, participation to site acceptance tests and also commissioning activities.

2. DESCRIPTION OF TASKS

S/He will support the team in the manufacturing activities of the biggest ever Toroidal Field Coil (TF) which are framed in the projects of the *TF Winding Pack Manufacturing* and the *TF Insertion and Cold Test*, dealing in particular with the Current Center Line (CCL) and the Cold Test.

The CCL is defined as the geometric line where the whole TF Coil Winding Pack (WP) current should flow in order to produce, at a certain distance, the same field produced by the actual WP. This measurement is taken by the WP manufacturer in order to determine via a mathematical model the effective CCL of the completed WP so that the actual shape can be used in a magnetic model of the completed ITER Tokamak. This CCL has to be transfer and monitored during successive manufacturing steps until the final assembly of the TF Coil.

The Cold Test of the TF Coil consists in cooling down the 10 WPs to a target temperature of 80K. The Cold Test facility is based on a heat exchanger that uses Liquid Nitrogen (LN) to cool down the Gas Helium that circulates within the WP at a pressure of 20 bars and re-uses the LN to also cool down an active thermal shield around the WP. Before the start of the cool down, during the cold phase and after the warm up, leak and electrical test are performed to verify the integrity and the properties of the WP.

The Trainee may also support the team in other technical topics, assessment of reports and technical engineering documentation provided by the manufacturing companies or the ITER IO, including 3D models and 2D drawings.

3. ELIGIBILITY CONDITIONS

- Be a national of one of the Member States of the European Union or of a Third state fully associated with the Euratom fusion programme (Switzerland);
- The candidate must have finished his/her university degree at least 3 years attested by a diploma. The university degree must have been obtained within the last 3 years before the closing date for applications;
- In order for the trainee to fully profit from the traineeship and to be able to follow meetings and perform adequately, candidates must have good knowledge of English, the main working language of F4E.

Applications will not be accepted from candidates who:

- have already benefited from any kind of in-service training within a European institution or body, or
- who have had or have any kind of employment within a European institution or body.

4. QUALIFICATIONS REQUIRED

- Bachelor's degree in mechanical, manufacturing, materials, electrical, nuclear, aerospace engineering, or equivalent, corresponding to, at least, three years of study
- Knowledge of engineering software tools (FEA, CAD, CAE, or others)
- Knowledge of programming languages (C++, Python, Tcl/Tk, Visual Basic, or others)
- Knowledge in MS Office package, especially MS Excel.
- Experience in drafting technical reports
- Strong communication skills
- Very Good organizational skills
- Ability to integrate into an international and multicultural environment
- Good command of both written and spoken English, the working language of the ITER Project

5. WHAT WE OFFER

Trainees are awarded a monthly maintenance allowance. The monthly allowance for 2017 amounts to € 1.087,39.

Additionally, trainees may receive a travel allowance, subject to budget availability, to compensate for travel expenses incurred from the place of residence to the seat of F4E and vice versa. Trainees whose place of recruitment is less than 50 km from F4E's offices shall not be entitled to a travel allowance.

Detailed information about the F4E traineeship procedure as well as trainees' rights and duties can be found in the Decision of the Director of 'Fusion for Energy' on the Acceptance of Traineeships published on our website. We strongly recommend applicants to read them carefully.

Accommodation costs will be covered by the trainee.

6. SUBMISSION OF APPLICATIONS

The online application process starts upon clicking "**CLICK TO APPLY**" on the traineeships page: <http://www.fusionforenergy.europa.eu/careers/traineeships.aspx>.

Applicants must register their applications online through the F4E traineeship's tool by creating a valid F4E user account and choosing the vacancy notice they wish to apply to.

Please note that the online traineeship application tool is the *only* acceptable means of sending applications. Applicants are responsible for keeping their e-mail addresses and personal details up to date in their profile in F4E online application tool.

The mandatory fields in the profile marked with an asterisk should be duly filled in. Candidates are requested to submit the following 2 documents:

- A detailed Europass curriculum vitae in **English** (can be obtained at the following address: <http://europass.cedefop.europa.eu/en/documents/curriculum-vitae>)
- A motivation letter of 2 pages maximum in English

Applications must be sent by 26/04/2017 (closing time 12:00 pm Barcelona time).

In case you encounter technical problems when trying to submit your application via the traineeship application tool, please make a screenshot and send it to: traineeships@f4e.europa.eu.

It is the responsibility of the applicant to inform 'Fusion for Energy' about any technical problem without delay within the deadline mentioned above.

Please, do not send any supporting documents (i.e.: copies of your ID-card, educational certificates, etc.) **with your application at this stage if not specified in the Traineeships Notice.**