

DEMO Plasma System Division Head

The Head of the DEMO Plasma System Division in the DEMO Central Team (DCT)¹ manages all aspects of establishing an integrated operational scenario for the conceptual design of DEMO. He/she leads a group of experienced individuals with strong technical skills and competences in the areas needed, i.e. equilibrium and stability, exhaust and plasma-wall interactions (PWIs), transport of energy and particles and scenario integration. The work will strongly rely also on the large expertise available in the EUROfusion Work Packages and the laboratories.

Responsibilities

Major tasks include, but are not limited to, the following:

- Provide required technical physics input to be used for the DEMO Design and organise all required studies to reduce uncertainties.
- Identify and address work in areas where physics uncertainties and knowledge gaps exist, especially those that have significant impact on the feasibility or performance of DEMO.
- Assist the Head of the FTD in establishing the Annual Work Programmes and in the strategic planning of the DEMO Physics Integration activities.
- Manage the execution of the physics assessment in the Work Package WPDES (formerly WPPMI).
- Liaise with other groups working on physics related DEMO activities inside and outside of Europe. In particular, liaise with the Fusion Science Department (FSD) to ensure DEMO R&D priorities are agreed and activities (experiments and simulations) are planned and executed.
- Manage the interfaces between DEMO Physics and relevant Work Packages in FSD and FTD.
- Prepare all the relevant technical documentations, including a DEMO physics basis document, to be updated throughout the execution of the conceptual design work.

Qualifications/ Competencies

- Proven experience in fusion plasma physics experimental and/or theoretical science (> 10 years).
- Broad knowledge of fusion plasma physics in confinement, stability and exhaust with a view to future burning plasma devices.
- Outstanding expertise in tokamak scenario integration, including control aspects.
- Broad knowledge of the EU and worldwide fusion programmes.
- Proven leadership and ability to work and communicate with an interdisciplinary team of engineers, technologists and physicists
- Multi-year experience in managing targeted scientific R&D
- Ability to make sound technical/economic decisions that maximise project value
- Good experience in working with a diverse range of senior stakeholders and external partners, ideally with an element of public funding

The post holder will work in Garching, Germany, and will report to the Head of the Fusion Technology Department.

¹ In FP9, the DCT is foreseen to advance the design basis (physics and technology) of a DEMO fusion power plant, by implementing and agile architectural design capability, impartial analysis of options, and quick access to the expertise distributed in the EU fusion laboratories, universities and industry. This is needed to ensure the rapid convergence towards a feasible DEMO plant architecture (see G. Federici, C. Baylard, DEMO Project Charter Proposal, IDM reference: 2P3ZEP. April 2020).

Date of Job Vacancy: January 1st, 2021

Application Deadline: September 15th, 2020

The applicant will ideally already have a work contract with a EUROfusion Beneficiary and will be seconded to the EUROfusion Programme Management Unit (PMU) in Garching. Otherwise, she/he will have to secure a work contract with one of the Beneficiaries, to be seconded to the PMU in Garching.

The EUROfusion secondment will ideally run until the end of the Horizon Europe framework period (31 December 2027), but the actual labour contract might be subject to the rules, regulations and conditions of the Beneficiary that employs the applicant.

EUROfusion strives for diversity and inclusion, and explicitly encourages members of minority groups, and females, to apply for this position.

In case the candidate is shortlisted, the interviews will take place by the mid of October. Please send your completed application including CV, cover letter and examples of your past-related work experience to: anne.graebner@euro-fusion.org.

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