DEMO Plant Integration Engineer

Job Description

The DEMO Plant Integration Engineer supports the Project and Integration Office Head for the plant-level design integration (both functional and geometrical) and system engineering activities. The DEMO Project and Integration Office (PIO) in the DEMO Central Team (DCT)\(^1\) is an office merging the following essential functions: integration, system engineering (SE), project management (PM) and R&D coordination.

Main Responsibilities

Major tasks include (but are not limited to):

- Develop strategies & procedures for plant level integration at conceptual stage (to manage technical margins and interfaces, trade off requirements, etc.). In this context,
  - Support the PIO head to establish these processes, and then, control and review these processes and establish progress reporting
  - Support interface and requirement managers by providing a technical review of their documentation (interface sheets, requirements documents, etc.)
- Participate to integration design tasks in close collaboration with the Plant System Design Division (PSDD)
- Lead or participate to task forces as required (to coordinate plant integration design work but also, if needed, provide expertise and support concerning plant layout, Divertor, Magnets, port integration, piping, etc.)
- Support DCT leadership to converge toward a feasible DEMO plant baseline. In this context,
  - Propose studies and sprints as required to solve relevant integration issues
  - Follow-up integration related issues and risks
  - Support the PIO to implement an “optioneering” method to support the impartial assessment and down selection of design options.
  - Support the PIO head to ensure the consistency of the baseline (from an integration point of view)
  - Support the PIO head in his mission to collect and manage high-quality project documentation, in particular the baseline documentation
  - Issue, when required, technical documentation

Required / desired qualifications and competencies

- University Master degree, preferably PhD in Engineering or equivalent discipline
- Minimum 3 years of experience in design activities for complex projects in a technical field
- Minimum 3 years of experience in integration activities of complex projects in a technical field
- Background in nuclear and/or fusion project implementation is highly desirable
- Basic knowledge in systems engineering is highly desirable
- Good knowledge of overall architecture and design of large tokamaks such as ITER & DEMO is highly desirable
- Ability to work effectively as part of a cross-functional, project-oriented team is essential.
- Excellent communication skills (both written and verbal) in English are essential

The post holder will work in Garching, Germany and will report to the PIO Head. It should be noted that during the conceptual design phase, the organization of the DEMO project may evolve. A re-organization and reallocation of these positions (with corresponding adaptation of the tasks and duties) are possible.

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\(^1\) In FP9, the DCT is foreseen to advance the design basis (physics and technology) of a DEMO fusion power plant, by implementing an 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: June 1st, 2021 or earlier

Application Deadline: April 9th, 2021

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 within 2-3 weeks after the application deadline.

Please send your completed application including CV, cover letter and examples of your past-related work experience to: gianfranco.federici@euro-fusion.org

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