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JOB DETAIL

Ref. IO1751 - 8/23/2016

Magnet Analyst - TED-016

Main job	Design
Department	TED / Tokamak Engineering Department
Section	TED / MAG / Superconductor Systems & Auxiliaries Section
Job Family	Engineer - 2
Application Deadline (MM/DD/YYYY)	10/02/2016
Grade	P3
Direct employment	Not required
Purpose	-To perform the detailed structural, thermohydraulic and electromagnetic design and analyses of the In-Vessel Coils and other critical magnet components; -To contribute to the design and analyses of shipping and assembly tooling for the In-Vessel Coils and other critical magnet components; -To review drawings, technical specifications and manufacture procedures of procurement-related documents in cooperation with related staff, Domestic Agencies (DAs) and suppliers. -To follow up manufacturing activities for the In-Vessel Coils. -To develop performance simulation models for magnet components.
Main duties / Responsibilities	-Performs the detailed analysis of the In-Vessel Coils system and other critical magnet system components in the areas of structures, thermal, hydraulic and electromagnetism and develops suitable models to simulate critical operational modes and assembly activities; -Selects or develops appropriate design criteria and carries out performance assessment based on them; -Collaborates on design and assessment of testing activities for the In-Vessel Coils and other magnet components; -Develops the detailed engineering design and reviews the manufacturing/as-built designs of the In-Vessel Coils and of other critical magnet system components; -Reviews manufacturing plans and procedures for of In-Vessel Coils and of other critical magnet components; -Contributes to the design and analysis of the shipment and assembly tooling for the In-Vessel Coils and for other critical magnet components; -Contributes to the development/reviews of installation and assembly plans and detailed procedures for on-site assembly of In-Vessel Coils and other critical magnet components; -Follows up testing and manufacturing contracts, collaborating in the resolution of design deviations and non-conformances which can occur during manufacture; -Develops operational performance prediction models for magnet components in the areas of structures, thermo-hydraulics and electromagnetism; -Performs other duties in support of the project schedule as described in the Detailed Work Schedule and the Strategic Management Plan; -May be requested to be part of any of the project team and perform other duties upon management request; -Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics. -Reports to the Superconductor Systems & Auxiliaries Section Leader; -Acts as an interface with all other groups within the ITER Organization;
Measures of effectiveness	-In response to requests from the Director-General and/or Head of Tokamak Engineering Department (TED), or proactively, informs the DG/TEDHead of any important and urgent issues that cannot be handled by the concerned line management and may jeopardize the

	achievement of the Project's objectives. -Timely delivery of analysis reports; -Develops workable design solutions in a timely way; -Timely delivery of design and analysis reports for shipping and assembly tooling for In-Vessel Coils and other critical magnet components; -Implements cooperation working processes with the DAs and suppliers. Project Construction Phase ID SAP 50000165
Level of study	Master or equivalent degree
Diploma	Mechanical or Fluids Engineering, Physics
Level of experience	At least 8 years
Technical experience/knowledge	-Master degree or equivalent in Mechanical or Fluids Engineering, Physics or a related discipline; -PhD will be considered as an advantage; -Knowledge of structural failure modes and experience in their practical application; -Knowledge and experience of main design aspects of superconducting and normal conducting coils; -Extensive experience in similar jobs (involving similar work responsibilities) and/or additional training certificates in relevant domains may be considered a reasonable substitute for the required educational degree. -At least 8 years' experience in the use of state of the art mechanical, thermal and electromagnetic analysis codes; -At least 3 years' experience in the use of the Ansys set of codes to solve a range of both non-linear and multiphysics fusion related engineering problems;
Social skills	Ability to work effectively in a multi-cultural environment Ability to work in a team and to promote team spirit Ability to communicate effectively
Specific skills	Ansys MS Office standard (Word, Excel, PowerPoint, Outlook)
General skills	-To have taken the lead role in structural analysis and assessment of components with complex mechanical properties (sliding, bellows, anisotropy for example) is an advantage; -Demonstrated knowledge of codes and standards and their practical application; -Experience in checking drawings; -Good Project Management experience is required.
Others	-Ability to write and read documentation in English. -Good communication skills enabling effective collaboration with other staff and DAs; -High level knowledge of commercial Finite Element Analysis codes, like ANSYS; -Good command of the Microsoft Office package.
Languages	English (Fluent)

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