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Ref. IO1701 - 4/14/2016

Mechanical Engineer TED-054

Main job	Mechanics
Department	TED / Tokamak Engineering Department
Division	TED / Heating & Current Drive Division
Section	TED / HCD / Neutral Beam Section
Job Family	Engineer - 2
Application Deadline (MM/DD/YYYY)	05/15/2016
Grade	P3
Direct employment	Not required

Purpose

- To be the technical responsible of the Neutral Beam Duct Liner and the Connecting Duct Liner.
- To be responsible in coordinating the mechanical design activities for the Duct Liner and the Connecting Duct Liner. To ensure the mechanical interface management with the vacuum vessel and remote handling systems and ensure the interface management with cooling system in order to ensure the components will be properly cooled. - To follow up on the manufacturing design and
- manufacturing and testing activities which is directly relevant to the above components.
- Prepares technical documentation necessary for Procurement Arrangement for the Duct Liner and Connecting Duct Liner;
- Oversees the design activities covering the manufacturing design and manufacturing activities of the Duct Liner and Connecting Duct Liner, ensuring that this is carried out within cost and defined schedule;
- Supports the Neutral Beam section leader in the preparation of the CAD work plan related to design activities for the Duct Liner and Connecting Duct Liner;
- Provides any mechanical engineering task (design follow up, mechanical analyses...) supporting the activities of the

Main duties /

- Coordinates and direct design activities performed by the Responsibilities ITER Organization (IO) for the above components;
 - Manages all documentation to be delivered by the manufacturer during manufacturing phase according to IO Quality Assurance (QA) procedure;
 - Identifies and updates the interfaces within the section and with other systems;
 - Provides mechanical and seismic analyses for the Duct Liner and Connecting Duct Liner;
 - Provides thermos-mechanical analyses for the Duct Liner and Connecting Duct Liner;
 - Provides some hydraulic analyses for the Duct Liner and Connecting Duct Liner;
 - Assures the Remote Handling (RH) compatibility of the Duct Liner and Connecting Duct Liner liaising with IO RH
 - section. - Proposes effective decisions on the mechanical design of the injectors in close collaboration with the section leader;
 - Ensures the production and the checking of the 2D drawings for Design review and Manufacturing Design Review and manufacturing phases;
 - Collaborates with others to contribute to the project activities related to Heating and Current Drive (H&CD);
 - 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 performs other duties upon management request;
 - Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics
 - Reports to Neutral Beam Section Leader;
 - Acts as an interface between Neutral Beam section and other sections on the design of the mechanical

components of the Duct Liner and Connecting Duct Liner especially for interfaces aspects;

- In response to requests from the Director-General and/or Head of Tokamak Engineering Department (TED), or proactively, informs the DG/ TED Head 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.

Measures of effectiveness

- Ensures the completion of the mechanical design of the Duct Liner and Connecting Duct Liner and the follow-up of the mechanical aspects of their manufacturing;
- Ensures the mechanical integration of the Duct Liner and Connecting Duct Liner in the tokamak and ensures correct interfaces with remote handling systems;
- · Provides effective support in the development of effective installation plans;
- Provides accurate ANSYS analyses for all neutral beam systems (seismic, fire loads, etc.) and other analyses for regulatory issues within the defined schedule;
- Supports efficiently the section in preparation of design review for duct liner.

Project construction phase

Level of study Master or equivalent degree

Diploma Mechanical eng. field or other relevant discipline

Level of experience At least 8 years

experience/knowledge

- Technical At least 8 years' experience mechanical design experience and/or design on Heating and Current Drive system(s);
 - At least 5 years' experience in technical integration of complex mechanical systems;
 - At least 5 years' experience in mechanical engineering in areas relevant to the ITER environment (e.g. Remote handling, Ultra High Vacuum environment, nuclear environment, high heat flux components);
 - Knowledge of Remote Handling system and technology is an advantage;
 - Knowledge of international and French industrial codes and standards (RCC-MR, ASME 8, SDC-IC, etc...) and good appreciation of quality assurance procedures;
 - Experience in the technical design of Neutral beam injectors or tokamak components is considered an advantage;
 - Experience in manufacturing follow up & basic Project Management experience is required.

Social skills

Ability to work effectively in a multi-cultural environment Ability to work in a team and to promote team spirit

Specific skills

CATIA

MS Office standard (Word, Excel, PowerPoint, Outlook)

General skills

- Fluent in English (written and spoken)
- French language skills would be an advantage to prepare documents on regulatory issues.

- Others MS Office
 - CAD software including ANSYS proficiency. Knowledge of Catia V5 is an advantage

Languages English (Fluent)

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