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| TITLE: SUPERCONDUCTOR SYSTEMS AND AUXILIARIES | | TKM 011 |
| GROUP LEADER | | |
| Tokamak / Magnets | | |
| REPORTS TO LINE MANAGER: Magnet Division Head | | |
| DIRECT EMPLOYMENT: NOT REQUIRED | GRADE RANGE: P4 ~P5 | |
| DATE WRITTEN: October , 2006 | DATE REVISED: DECEMBER 6, 2006 | DATE REVISED: |

Purpose:

Manage the ITER Superconducting systems and auxiliaries group: design and procurement of the ITER conductors and auxiliaries (feeders, CTBs, instrumentation and current leads), including work organization and schedules. Manage interfaces to ITER participants responsible for procurement and their industries, analysis, and performance prediction of the superconducting coils.

Major Duties/Responsibilities:

- Provide effective leadership for the ITER SS&A group, ensuring that team members are motivated and constantly developing their skills and experience.
- Develop the coil auxiliaries (feeders, instrumentation, CTBs and current leads) towards construction. Monitor R&D in institutes and industry, ensure the results are implemented in the design. Ensure proper qualification testing of the design is implemented at appropriate points during the fabrication.
- Oversee analysis work on the superconducting and structural performance of the magnets, ensuring appropriate quality controls and qualification standards are set based on the results.
- Monitor the auxiliaries manufacture, ensure that quality controls are properly implemented, take effective action where quality problems are found
- Prepare and maintain conductor and auxiliary system documentation, including design and analysis, drawings.
- Oversee and contribute to design work on the auxiliary systems (feeders, instrumentation, CTBs and current leads), maintaining update controls on drawings and CAD models, and responsible for issuing feeder coil drawings.
- Responsible officer for the auxiliary systems (feeders, instrumentation, CTBs and current leads) procurement, including preparation of the procurement specifications.
- Monitor auxiliary systems procurement costs, time scales and resources planned/used. Highlight potential delays in good time for corrective action to be applied
- Report on the SS&A coil group activities.

Qualifications Required:

- Advanced university degree (DrIng or PhD) in engineering or physics (mechanical or electrical)
- At least 15 years post graduate experience, 10 of them specifically in superconductor and cryogenic system design, analysis and manufacturing
- Good knowledge of high voltage engineering issues at cryogenic temperatures
- Experience with superconducting coil instrumentation
- Ability to communicate clearly and write technical reports and specifications in English.
- Experience with project management in a large magnet project

Work Direction and Interfaces:

Reports to the Magnet Division Head. Interfaces extensively with other groups in the magnet division. Interfaces with other departments as required by the magnet design, in particular to the CAD office and ITER configuration control. Interfaces with the Field Teams and their industries regarding auxiliary systems procurement.

Authority/Approval Levels:

Has authority and approval levels generally defined by the tokamak DDG for his/her scope of work.

Measures of Effectiveness:

Completes the design of ITER auxiliary systems and corresponding procurement packages. Completes and documents performance assessment of ITER magnets. Completes the procurement of the ITER auxiliaries and conductor to within defined cost and schedule.