TITLE: Microwave Engineer		CHD-049
REPORTS TO LINE MANAGER: Head of Heating and Current Drive Division Department for CODAC&IT, H&CD and Diagnostics		
DIRECT EMPLOYMENT: NOT REQUIRED		**GRADE RANGE:** P3 – P4
Date Written: June 2008	**Date Revised:**	**Date Revised:**

Purpose:

The Electron Cyclotron (EC) system is designed to inject 20 MW of power in the plasma at a frequency of 170 GHz and will comprise several sub-systems compatible with the transmission of high power (≥1MW) from the sources (gyrotrons) to the plasma. A microwave engineer is required in order to manage the interfaces associated with the EC sub-systems, in particular the gyrotrons to transmission lines (TL) and TL to launchers. In addition, the individual will be responsible for writing the technical aspects associated with the procurement arrangements (PA) for these subsystems. The individual will then be responsible for interacting with each Domestic Agency (DA) to ensure compliance and be responsible for managing the interfaces with the auxiliary systems requiring a good understanding of mechanical and fluid dynamics. The successful candidate should have sufficient experience to immediately contribute to the design activities and be capable of following the project through installation and operation pending a successful contract extension.

Major Duties/Responsibilities:

- Is responsible for establishing technical requirements for microwave sub-systems, in particular TL and launchers to be detailed in PA;
- Is responsible for the control systems and interlocks of the above-mentioned sub-systems and support in preparation of the interface documentation and keeping it up to date;
- Interfaces with other relevant ITER groups and industries involved in the development of the microwave TL and launchers;
- Assists the responsible officer (RO) in the preparation of relevant procurement packages and associated documentation;
- Is responsible for the management of the technical scope, schedule and cost of procurement of the above-mentioned sub-systems and supporting hardware through the specified procurement packages;
- Participates in tests and technical control of the TL and launchers before and during procurement;
- Assists technical control in the preparations for the installation of the EC system on ITER;
- Reports variances on all technical, cost and schedule aspects immediately to the Division Head and supports effective risk identification and management;
- Maintains a strong commitment to the implementation and perpetuation of the ITER safety program, values and ethics.

Qualifications and Experience

- **Education**: Post-graduate Degree in Microwave Engineering or equivalent
- **Experience**:
    - At least 7 years' experience working with the design, installation and operation of high power microwave systems in the frequency range of 80 to 200 GHz. Experience with both guided and free space propagation;
    - A clear understanding of the problems linked to the control of RF systems in large experimental device at high power levels would be an advantage. An ability to work in an international environment should be demonstrated.
- **Language requirements**: Good working knowledge of spoken and written English is essential.

Work Directions and Interfaces:
Reports to the Head of Heating and Current Drive Division.

Authority/Approval Levels:
Has authority and approval levels defined by the Division Head for his/her scope of work.

Measures of Effectiveness:

- Successfully develops the methodology for technical control of RF systems;
- Successfully contributes with technical controls of EC specifications of allocated procurement packages;
- Successfully manages procurement of systems / components through procurement packages;
- Successfully controls the technical aspects of EC system installation on ITER;
- Successfully supports the RF needs of the project.