TITLE: Engineer/Analyst for in-vessel components Project Office / System Analysis		PRO 035
REPORTS TO LINE MANAGER: System Analysis Section Leader		
DIRECT EMPLOYMENT:	**GRADE RANGE: P2- NG**	
DATE WRITTEN: October 17, 2006	**DATE REVISED:** October 25, 2006	**DATE REVISED:** JUNE 11, 2007

Purpose:

– Support the System Analysis Section (SAS) of the Project Office (PO) in matters related to the wide structural analyses of ITER components (involving mainly the in-vessel components: blanket, divertor, water cooling manifold, in-port components, etc.) following requirements and priorities defined by the PO management and in support of requests from other divisions.

Major Duties/Responsibilities:

- Perform structural (mechanical and thermal) analyses for the verification of the integrity of the ITER components following requirements and priorities defined by the PO management and in support of requests from other divisions
- Perform structural analyses for the evaluation of the in-vessel components interface loads and boundary conditions.
- Perform analyses to provide input boundary conditions for local detailed structural analyses.
- Provide technical supervision of structural analysis activities provided by DAs on in-vessel components.
- Review and verify analyses performed by other divisions and by DAs.
- Develop programs, macros and software routines for common use across the project.
- Develop and improve the interface of FE programs with CAD system.
- Prepare detailed and summary analysis reports.
- Contribute to the update and record of the FE model developed inside the ITER Organisation and by the DAs (mainly for the in-vessel components).
- Support the definition of detailed load specifications for in-vessel components.

Qualifications and Skill Required:

- University degree in Engineering
- Experience in using finite element programs.
- Some years of experience in the analyses of components of large (scientific or industrial) projects (preference is given to experience on large tokamak machines).
- Knowledge of engineering structural aspects of the analysis of components (material behaviour – linear and non-linear, verification against failure modes of structures, etc.).
- Ability in quick performing analysis and providing solution to structural problems.
- Ability in preparing report documents and in summarising analysis results
- Knowledge of design codes (i.e. ASME)

- Capability of working in a team and interfacing with other groups and divisions.
- Openness to collaboration in a multi-disciplinary and multi-cultural environment.
- Ability in communicating with written and spoken English.
- Likelihood of staying in the project for more than 10 years.

Work Direction and Interfaces:
Report to the Leader of the SAS of the PO. Interface with all other ITER departments and divisions. Maintain communications with other organizations within the ITER collaboration.

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

Measures of Effectiveness:
Successfully support the SAS in achieving the defined objectives.
Provide comprehensive reports and summaries of the performed and revised analyses.
Provide FE models developed for the analyses.
Successfully generate and maintain accurate, up to date information related to the machine technical scope.
Successfully maintains effective communications with all organizations interfacing with ITER.