

# IO1648 Piping & Support Structural Engineer PED-030 & 031

## General information

Job category	Standard
Status	Published
Department	PED / Plant Engineering Department

## Job description

Main job	Engineering - Mechanics
Title of the position	Piping & Support Structural Engineer PED-030 & 031
Job family	Engineer - 1
Grade	P2
Direct employment	Not required
Purpose	<p>Two openings.</p> <p>To produce the piping stress analysis for piping layout configuration inside the ITER Project buildings according to the ASME ANSI B31.3 Codes as well as RCC-MR; To manage in field design changes during construction phase according to Safety and Quality Assurance (QA) rules getting resolution of technical issues in real time to support progress in construction activities without affecting the time schedule; To perform the Final Design and Analysis of the structural supports for all the piping systems considering properly the primary and secondary loads according to ANSI / AISC and Eurocodes; To produce piping isometric drawings and associated spooling with supports locations and supports detailed drawings as required for construction work packages preparation using AVEVA PDMS 3 Models.</p>
Main duties / Responsibilities	<p>Supports the resolution of in-field design changes generated during construction activities and promote resolution in real time properly satisfying Safety and Quality Assurance rules as well as space management integration requirements through the Central Integration Office (CIO) supervision; Supports the management of the Project Change Requests generated during the construction activities according to Safety Rules as well as under the CIO supervision;</p> <p>Produces static and dynamic stress analysis and associated stress reports of the piping systems and associated supports as well as for equipment; Produces structural evaluation comprehensive of linear and non-linear buckling analysis; Performs the selection of constant and variable springs as well as dynamic shock absorbers or gapped supports, issues the procurements technical specifications for constant /variable springs, dynamic shock absorbers and gapped supports.</p> <p>Participates to the design and conformity assessment of the pressure equipment in charge of different systems according to the French regulations (ESP/ESPN) and following required design codes and standards as per Licensing Design Basis; Participates to the manufacturing of piping, supports, steel frames and equipment; Produces all the required documentation in completing the stress report as isometric drawings with supports location, supports detailed drawings, technical specifications for procurement dynamic shock absorbers, constant and variable springs, steel frames supports, gapped supports;</p> <p>May be requested to be part of any of the project team dealing with the above activities and perform other duties upon management request; Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.</p> <p>Reports to the Section Leader; Interacts on a regular basis with the Central Integration Office; Acts as an interface with other internal and external resources for the design of the piping systems and associated supports , flexible joints and steel frames; In response to requests from the Director-General and/or Plant Engineering Department (PED) Head, or proactively, informs the DG/ PED Head of any important and urgent issues to be properly managed not to jeopardize the achievement of the Project's objectives.</p>

Measures of effectiveness	<p>Performs the stress analysis reports of the piping systems and supporting structure in a timely manner;</p> <p>Issues the Construction Work Packages to support construction activities;</p> <p>Issues the technical procurement specifications for piping, on line components, steel frames, steel supports, constant and variable springs, dynamic shock absorbers, flexible joints;</p> <p>Supports efficiently design and manufacturing activities;</p> <p>Assures satisfaction of safety and functional requirements flow down.</p>
	Project Construction Phase

## Applicant criteria

Technical experience/knowledge	Level of study	Master or equivalent degree
	Diploma	Nuclear or Mechanical Engineering
	Level of experience	At least 5 years
		<p>Good knowledge of large piping system and support design;</p> <p>Good knowledge of linear and non-linear structural analysis comprehensive of buckling analysis;</p> <p>Excellent knowledge of structural design codes AISC, Eurocode, etc. &amp; knowledge of ASME III related chapters as well as RCC-MR is also be appreciated;</p>
		<p>At least 5 years' experience in nuclear or mechanical engineering,</p> <p>Experience in management of in-field design changes generated during construction activities;</p> <p>Experience in the seismic design of piping systems /supports and steel structures for Nuclear Facilities,</p> <p>Knowledge of the EU Pressure Equipment Directive or French ESP/ESPN regulations and practical application will be considered advantageous;</p>
	Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
	Languages	<p>English (Fluent)</p> <p>French (Basic)</p>
	Others	<p>Excellent Knowledge of Caesar II / CAE Pipe piping structural analysis software and GT Strudl, Staad Pro or similar software</p> <p>Good knowledge of Finite Element Method analysis software (ANSYS)</p> <p>Good knowledge of 2D-3D CAD software (AVEVA PDMS and Catia).</p>