

# IO1993 Thermo-Mechanical Engineer PED-226

## General information

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| Job category | Standard                                   |
| Status       | Published                                  |
| Department   | PED / Plant Engineering Department         |
| Division     | PED / Cooling Systems Engineering Division |
| Section      | PED / CSED / Cooling Water System Section  |

## Job description

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| Main job                       | Engineering - Mechanics  |
| Title of the position          | Thermo-Mechanical Engineer PED-226   |
| Job family                     | Engineer - 2   |
| Grade                          | P3   |
| Direct employment              | Not required   |
| Purpose                        | <p>To perform and to lead thermo-mechanical analyses of piping systems and relevant supporting structures in addition to the equipment of the Cooling Water System (CWS).<br/>To assess and to justify the structural loads from the CWS systems to the interfaces with buildings and steel frames.<br/>To prepare the Engineering Work Packages of the CWS for the relevant construction as planned in the installation sequence and time schedule for the ITER staged approach.<br/>To be the Technical Responsible Officer of procurement/service contracts.</p>  |
| Main duties / Responsibilities | <p>Performs and/or leads thermo-mechanical analyses of CWS piping systems in order to assess and/or to justify the loads on piping due to the new Floor Response Spectra whilst also considering the piping routing modifications as induced by several Project Change Requests (PCRs);</p> <p>Performs and/or leads structural analyses of CWS piping supporting structures in order to assess and/or to justify the loads on civil structures whilst considering the impact of the new Floor Response Spectra and the CWS piping routing modifications induced by several PCRs;</p> <p>Performs preliminary structural analyses of anchor plates of the CWS piping supporting structures for both Embedded Plates and Post Drilled Plates according to the available tools;<br/>Checks and verifies design reports on structural analyses issued by the relevant DA and/or by other external subcontractors;<br/>Prepares Technical Specifications for thermo-mechanical design activities and for the procurements of CWS piping and supports (both primary and secondary) on behalf of the ITER Organization (IO) (), collaborate closely with Procurement &amp; Contracts Division (PCD) whilst also acting as TRO for the relevant CWS procurements;<br/>Collaborates with other PED Divisions ; and other IO Departments/Divisions regarding the construction and potential field changes of the CWS piping systems;<br/>Supports the CWS Section Leader for any other task related to the CWS thermo-mechanical design (e.g. for the completion of new PCRs);<br/>May be required to work outside ITER Organization reference working hours, including nights, weekends and public holidays;<br/>May be requested to be part of any of the project/construction teams and to perform other duties in support of the project schedule;<br/>Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.</p> <p>Reports to the CWS Section Leader;<br/>Interfaces with other ITER Technical Departments/Division as required;<br/>Maintains communication with the CWS relevant IN DA and with other potential subcontractors;<br/>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 that cannot be handled by the concerned line management and may jeopardize the achievement of the Project's objectives.</p> |

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| Measures of effectiveness | <p>Efficiently implement issues of the piping and supports stress reports;</p> <p>Assures the on time preparation and completion of Engineering Work Package (EWP) for the relevant construction activities in Balance of Plant and Tokamak Complex as according to the installation baseline time schedule;</p> <p>Produce real time calculations for piping and supports to resolve in field design changes or in field non conformities;</p> <p>Manages effectively and efficiently the installation and procurement contracts related to CWS;</p> <p>Issues regular and accurate reports;</p> |
|                           | <p>Project Construction Phase</p> <p>SAP ID: 50000715</p>   |

**Applicant criteria**

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| Level of study                 | At least Master's Degree or equivalent  |
| Diploma                        | Mechanical or Nuclear Engineering   |
| Level of experience            | At least 8 years  |
| Technical experience/knowledge | <p>At least 8 years' experience in thermo-mechanical design and analyses of piping systems for either Oil and Gas or Nuclear installations;</p> <p>Excellent experience in piping and structural design according to ASME B 31.3 and AISC, ASCE or European codes.</p> <p>Relevant experience in mechanical design and sizing of equipment for plant systems, nuclear facilities etc;</p> <p>Good Project Management experience is required;</p> <p>Good knowledge and aptitude to work with Quality Assurance and Quality Control requirements;</p> <p>Extensive experience in similar jobs (involving similar work responsibilities) and/or additional training certificates in relevant domains may be considered a reasonable substitute for the required educational degree.</p> |
|                                | Social skills   |
| General skills                 | <p>Ability to facilitate dialogue with a wide variety of contributors and stakeholders;</p> <p>Ability to adjust communication content and style to deliver messages;</p> <p>Ability to persist in the face of challenges to meet deadlines with high standards;</p> <p>Ability to apply high standards of team mind-set, trust, excellence, loyalty and integrity.</p>   |
| Languages                      | English (Fluent)  |
| Specific skills                | CATIA, MS Office standard (Word, Excel, PowerPoint, Outlook)  |
| Others                         | <p>Knowledge and experience in the use of computer software commonly used for design of CWS systems (e. g. CAESAR II, Staad Pro, etc.)</p> <p>Experience and knowledge of ANSYS computational tool is an advantage.</p> <p>MS Office standard (Word, Excel, PowerPoint, Outlook);</p> <p>Knowledge of AVEVA (E3D and Diagrams), CATIA (ENOVIA) and SMART PLANT is preferable.</p>   |
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