

# IO2121 Thermo-Hydraulic Safety Analyst SD-034

## General information

Job category	Standard
Status	Published
Department	SD/ Safety Department
Division	SD / Environmental Protection & Nuclear Safety Division
Section	SD / EPNS / Safety Analysis & Assessment Section

## Job description

Main job	Safety - Security - Generalist
Title of the position	Thermo-Hydraulic Safety Analyst SD-034
Job family	Engineer - 1
Grade	P2
Direct employment	Required
	<p>To perform thermo-hydraulic and release calculations concerning hypothetical incident and accident scenarios as associated with ITER safety cases;</p> <p>To prepare documentation in support of safety calculations for the ITER licensing process;</p> <p>To assess or verify safety analyses' models and codes and related validations.</p>
	<p>Background:</p>
Purpose	<p>Safety Analysis and Assessment activities deal with the Environmental Protection and Nuclear Safety Division which is in charge of the safety demonstration of ITER. It also provides guidance to ITER Organization and Domestic Agencies' stakeholders to facilitate compliance with safety requirements and related regulations.</p>
	<p>Please note that an organizational restructuring is planned in accordance with the needs of the organization and the evolution of the project phases. In this context, the unit of assignment of the present position may be updated in late 2019, early 2020.</p>
Main duties / Responsibilities	<p>Performs thermo-hydraulic and release calculations, particularly for the modeling of incident and accident scenarios using MELCOR code;</p> <p>Assesses design aspects, helps to integrate safety functions, and assesses construction or operation changes against safety cases' assumptions &amp; requirements in support of the ITER Preliminary Safety Report (RPrS) development ; in collaboration with ITER Organization designers and staff in charge of construction aspects;</p> <p>Proposes and defines hypothetical scenarios, sets up and uses computational models of the ITER systems in the analysis of potential consequences of these scenarios,</p> <p>Develops, reviews and updates documentation to support calculations,</p> <p>Validates the codes and models used for the safety analysis, in particular for the MELCOR code;</p> <p>Collaborates and exchanges on issues, scenarios and calculations with other safety analysts in charge of thermo-hydraulic calculations and technical responsible officers of the systems involved in the thermo-hydraulic scenarios, in particular tokamak cooling water systems, building systems and fuel cycle systems;</p> <p>May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;</p> <p>May be required to work outside ITER Organization reference working hours, including nights, weekends and public holidays.</p>
Measures of effectiveness	<p>Provides high quality and accurate calculations and related documents and in a timely manner;</p> <p>Provides an efficient contribution to the acceptance of ITER safety cases by the French Nuclear Safety Authority and technical support organizations.</p>

## Applicant criteria

Level of study	Master or equivalent degree
Diploma	Nuclear Engineering, Thermo-Hydraulic or other

Level of experience	At least 5 years
Technical experience/knowledge	<p>At least 5 years' experience in the analysis of nuclear systems, including safety analyses;  Good experience in computation, validation and verification of computer codes for thermo-hydraulic analyses such as MELCOR, ASTEC, etc.;</p> <p>Proven experience applying the principles of nuclear safety and understanding their application together with safety standards to a nuclear project;</p> <p>Propagation of nuclear safety requirements;</p> <p>Familiarity with the nuclear safety regulatory approach in one of the ITER Members' country;</p> <p>Ability to run large computer thermo-hydraulic simulations of complex systems;</p> <p>Ability to understand, review technical instructions, synthesize documents and to write clear reports;</p> <p>Comprehensive technical knowledge of fusion technology and experience in analyzing fusion systems to be gradually acquired after onboarding.</p>
General skills	<p>Collaborate: Ability to dialogue with a wide variety of contributors and stakeholders;</p> <p>Communicate Effectively: Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;</p> <p>Drive results: Ability to face difficulties with resilience and cope with challenges to meet deadlines with high standards;</p> <p>Manage Complexity: Ability to gather multiple and diverse sources of information to thoroughly understand problems before moving to proposals;</p> <p>Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.</p>
Languages	<p>English (Fluent)</p> <p>French (Working)</p>
Others	<p>The ability to read and write in French would be considered as an advantage.</p> <p>The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or additional training certificates in relevant domains.</p>