

# IO2076 Explosion Safety Analyst SD-027

## General information

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| 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

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| Main job                       | Safety - Security - Nuclear Safety   |
| Title of the position          | Explosion Safety Analyst SD-027  |
| Job family                     | Engineer - 2   |
| Grade                          | P3   |
| Direct employment              | Required   |
| Purpose                        | <p>To perform specific safety analyses so that the design, construction, commissioning and operation of installations comply with all safety cases, including safety features dealing with explosions, combustion or any exothermic phenomena such as hydrogen and dust explosions.</p> <p>To ensure the surveillance of Protection Important Components and Protection Important Activities associated with the systems which are needed to prevent, detect or mitigate exothermic phenomena.</p> <p>To ensure proper change management in safety cases alongside efficient dissemination within the ITER organization.</p> <p>To coordinate the activities related to the control of exothermic phenomena needed for safety demonstrations.</p> <p>To ensure strong interfaces with ITER's responsible officers and domestic agencies, in particular with regards to construction and assembly activities.</p>   |
| Main duties / Responsibilities | <p>Performs specific safety analyses with regards to the compliance of the design, construction, assembly, commissioning and operation with safety cases, in particular for the systems needed to prevent, detect or mitigate exothermic phenomena;</p> <p>Develops documentation related to the propagation of necessary defined requirements for all protection important components and protection important activities with regards to the systems needed to prevent, detect or mitigate exothermic phenomena;</p> <p>Verifies the safety compliance and ensures the surveillance of the propagation of the defined requirements for the design, construction, assembly, commissioning and operation of the Tokamak Machine;</p> <p>Provides expertise, help and guidance to ITER Organization and Domestic Agencies' stakeholders with regards to safety cases and defined requirements;</p> <p>Performs calculations related to the exothermic phenomena needed for safety demonstrations and coordinates any associated R&amp;D;</p> <p>Controls consistency between the input data needed to establish safety cases and those used in the calculations associated with both routine situations, as well as postulated incident and accident scenarios, in particular those associated to thermo-hydraulic / explosion calculations;</p> <p>Provides expertise and analyses related to thermo-hydraulic /explosion phenomena;</p> <p>Drafts and reviews relevant sections of documentation and reports for submission to the French nuclear safety authorities as part of the ITER licensing process;</p> <p>Prepares technical responses to nuclear safety authorities' questions during the examination of the ITER safety files;</p> <p>Promotes strong commitments to the ITER safety approach and enforces them through individual behavior within the Organization;</p> <p>May be required to work outside normal working hours, including nights, weekends and public holidays;</p> <p>May be requested to support any of the project/construction teams and to perform other duties in support of the project schedule;</p> <p>Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, ITER Values (Trust; Loyalty; Integrity; Excellence; Team mindset; Diversity and</p> |

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| Measures of effectiveness | Inclusiveness) and Code of Conduct.   |
|                           | Advise, implement and promote efficiently the surveillance plan to prevent, detect or mitigate exothermic phenomena for the ITER Machine; |
|                           | Effectively perform calculations related to incident and accident analyses;   |
|                           | Contribute to the tasks that ensure the acceptance of ITER safety cases by the French Nuclear Safety Authority;                           |
|                           | Communicate with both internal and external stakeholders, including the French Authorities in a timely and professional manner;           |
|                           | Write clear and concise summaries/syntheses in addition to reports when necessary.  |

## Applicant criteria

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| Level of study                 | At least Master's Degree or equivalent  |
| Diploma                        | Nuclear Engineering or other relevant discipline  |
| Level of experience            | At least 8 years  |
| Technical experience/knowledge | At least 8 years of experience in the establishment of safety cases, safety reports or general safety rules for nuclear facilities to be submitted to a nuclear safety regulator;   |
|                                | French Security clearance required for taking up the position;  |
|                                | Good experience in the definition dissemination and the implementation of the propagation of defined requirements for nuclear facilities;   |
|                                | Significant experience in hydrogen and/or dust explosion calculations or in managing R&D for hydrogen and dust explosion in support of safety analyses;   |
|                                | Basic knowledge and practice of safety codes with regards to thermohydraulics;  |
| General skills                 | Knowledge of fusion technology and experience in analyzing fusion systems would be considered as an advantage;  |
|                                | Familiarity with the principles of nuclear safety and familiarity with the regulatory approach in France would be beneficial;   |
|                                | Ability to make a clear summary or synthesis of documents and to write concise reports.   |
|                                | 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. |
|                                | Ability to dialogue with a wide variety of contributors and build formal and informal relationship networks inside and outside the organization;  |
| Languages                      | Ability to adjust communication content and style to deliver messages to work effectively in a multicultural environment, using convincing arguments to gain the support and commitment of others;                        |
|                                | Ability to persist in the face of challenges to meet deadlines with high standards, also planning and prioritizing work to meet commitments aligned with regulator and organizational goals;                              |
|                                | Ability to gather multiple and diverse sources of information to define problems accurately before moving to proposals;   |
| Others                         | Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.   |
|                                | English (Fluent)<br>French (Working)  |
|                                | French (working) would be advantageous in order to answer to the French regulator;  |
|                                | Competent in running large computer simulations of complex systems, as well as good office computing skills.  |