

## ITER 국제기구 공모 직위 직무기술서 (제200차)

### ○ 1개 직위

구분	분야	소속	직위	Job No.	등급
①	플랜트 엔지니어링 (PED)	Plant Engineering Department Cooling Systems Engineering Division	Hydrogen Process Engineer	PED-084	P3

# IO1847 Hydrogen Process Engineer - PED-084

## General information

Job category	Standard
Status	Published
Department	PED / Plant Engineering Department
Division	PED / Cooling Systems Engineering Division

## Job description

Main job	Engineering - Nuclear Power
Title of the position	Hydrogen Process Engineer - PED-084
Job family	Engineer - 2
Grade	P3
Direct employment	Not required
Purpose	<p>To perform design and oversee manufacturing of ITER hydrogen management systems, and plan their testing, commissioning, operation, maintenance and decommissioning. The work involves performing requirements specification, technical trade studies, system design (including control), value engineering, interface management, document preparation, contract management and lifecycle planning. This is followed by fabrication and procurement of the designed system. Work is performed in a formal, quality assured environment consistent with a nuclear facility requirements.</p>
Main duties / Responsibilities	<ul style="list-style-type: none"><li>-Processes engineering design and produces calculations, Process &amp; Instrumentation Diagram (P&amp;IDs), Control Schemes, Operation Description, Material Balances, takes part in Hazard and Operability Study (HAZOP)/Safety analysis, writes process descriptions.</li><li>-Performs functional analysis and optimization of system requirements and design solutions considering safety, risks, costs, and other constraints;</li><li>-Produces installation sequence, testing procedures, commissioning specifications, operation procedures, operational maintenance plans &amp; guidelines and decommissioning strategies;</li><li>-Produces and maintains design basis documentation and supporting documents;</li><li>-Manages functional and physical interfaces ensuring systems consistency and process efficiency with the goal of harmonized and practical operation;</li><li>-Provides support for safety basis development and documentation;</li><li>-As much of the design/build work is performed by Domestic Agencies (DAs) or contractors, duties include monitoring contract and procurement;</li><li>-Provides design, operation and maintenance advice to others responsible for ITER systems which handle hydrogen;</li><li>-Performs other duties in support of the project schedule;</li><li>-May be requested to be part of any of the project/construction teams and to perform other duties;</li><li>-Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics.</li></ul>
Measures of effectiveness	<ul style="list-style-type: none"><li>-Under the supervision of the Plant Engineering Department Deputy, reports to the head of Cooling Systems Engineering Division;</li><li>-Manages the System interfaces together with responsible officers for interfacing systems;</li><li>-Interfaces with DAs and contractors;</li><li>-In response to requests from the Director-General and/or Head of the Plant Engineering Department (PED), or proactively, informs the DG/Head of PED 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.</li><li>-Delivers work and works collaboratively with relevant stakeholders to achieve on-time delivery and ensure quality of end solution and process optimization.</li><li>-Anticipates future needs and pre-emptively takes action to achieve goals;</li><li>-Finds practical, cost-effective, manageable and efficient solutions to issues;</li><li>-Communicates efficiently with personnel associated with interfacing systems and management;</li><li>-Assesses performance and coordinates of activities with Contractors.</li><li>-Performs work safely and with regard for safety in designs.</li></ul>

## Applicant criteria

Technical experience/knowledge	Level of study	Master or equivalent degree
	Diploma	Chemical/Nuclear Eng. with Chemical background
	Level of experience	At least 8 years
		At least 8 years' experience relevant to industrial design, integration, installation, commissioning and operation of critical process safety systems of a nuclear facility; Expert knowledge of safe hydrogen handling practices with specific experience of hydrogen management during dynamic transient conditions is required;
		Knowledge and practical experience of hydrogen processing technology in particular recombiners, instrumentation and confinement systems would be an advantage;
		Experience in a systematic and controlled design process would be an advantage;
		Good technical project management experience is required.
	Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
	General skills	Excellent understanding of process engineering and capability to produce process engineering design; process basis document, calculations, P&IDs, process simulation modeling, material and energy balances, HAZOP reports, consequence analysis, process control schemes, operating descriptions and design descriptions all meeting the expectations of the nuclear industry; -Ability to provide line management with verbal and written reports -Ability to communicate and negotiate within a team environment; 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.
	Languages	English (Fluent)
	Specific skills	Computer Aided Design, MS Office standard (Word, Excel, PowerPoint, Outlook) -Microsoft Word, Excel and PowerPoint;
	Others	-Ability to perform computer modelling of hydrogen unit operations including process control using ASPEN is beneficial; -CAD software (e.g. AVEVA Diagrams, E3D and Engineering tools) proficiency.