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Route de Vinon-sur-Verdon - CS 90 046 - 13067 St Paul Lez Durance Cedex - France

ITER Chief Engineer - Deputy Director-General (DDG) level IO0131

Unit of Assignment (Domain; Department/Office; Division; Section; Group): Director-General	**Grade:** DDG **Job Family:** Line Management & Group Leader **Benchmark Role:** Deputy Director-General
Date Written: January 2023	**Date Revised:**

Purpose

As ITER Chief Engineer (CE)/ Deputy Director-General (DDG) level, you will lead and manage the engineering resources, strategy, and capacity to support the Director-General (DG) and Construction Project Leader (CPL)/DDG level of the ITER Organization (IO) to achieve the ITER Project's objectives.

This includes acting as delegated Architect and Integrator of the ITER Plant as a nuclear fusion installation, to ensure implementation of systems engineering, configuration management, and the overall coherence of functional and safety performance of the Project.
This work is performed in accordance with the ITER regulations, IO rules, and aligned with the precise technical baseline management and engineering activities requirements for assembly, installation, integrated commissioning, and operation phases.

You will represent the organization internally and externally at a senior level, modelling the "one Project – one team" spirit of the Project in a matrix organization to streamline engineering transversal functions, as well as deputizing for the DG when requested.

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Background

The ITER Organization (IO) was established in 2007 by a formal agreement among seven Members (People's Republic of China, European Union, Republic of India, Japan, Republic of Korea, Russian Federation, and United States of America), for the joint implementation of the ITER Project. The ITER Headquarters is located at the ITER Project Site in St Paul-lez-Durance, France, and its staff of over 1,000 people come from the seven ITER Members.

ITER's mission is to demonstrate the scientific and technological feasibility of fusion energy for peaceful purposes, an essential feature of which would be achieving sustained fusion power generation.

The IO is an international independent legal entity, which as the Design Authority and Owner-Operator of the ITER facility is responsible to the French Nuclear Safety Authority (ASN) for compliance with all French laws and regulations that govern nuclear safety. The IO and its industrial contractors are presently engaged in the overall construction of the ITER facility, which is truly a "mega-Project" that involves not only an enormous scale of civil construction, but also the assembly and installation of various contributions of technically sophisticated components, mostly first-of-a-kind, and equipment provided by the ITER Members.

Once the ITER facility commences research operations, the IO will transition to being responsible for carrying out, together with researchers from the seven Members, the ITER Research Plan to achieve its science and technological mission.

Key Duties, Scope, and Level of Accountability

- Develops the strategy for overall engineering activities, in close collaboration with senior management team in accordance with Project strategy;
- Manages capacity and provides engineering resources to Construction Project Leader to meet with their team's needs to deliver Projects as Resources Provider;
- Provides effective leadership for their scope, ensuring that managers and team members are motivated and constantly developing their skills and experience;
- Serves as ITER's Architect delegated by the DG to assure the ITER Plant functional and safety performance, in accordance with Project functional and safety requirements, and Licensing conditions;
- Chairs the Configuration Control Board and provides regular reports to the Executive Project Board;
- Develops, maintains and shares engineering expertise on ITER, jointly with DAs, for operation phase and next generations;
- Ensures the design integration and systems engineering processes in compliance with interfaces & safety requirements;
- Implements the Technical Baseline in all Configuration Items, and controls & mitigates technical risks and issues;
- Directs, coordinates & performs integral and functional analysis to verify the Project requirements are properly met in the developed design, addresses issues during each phase of the Project, and proposes & implements solutions;
- Establishes & controls the implementation of the IO's quality processes, for configuration management, documents and records, design control, identification and control of items, software control and model development, ensuring staff training, and audit execution of processes;
- Develops technical specifications and coordinates with Information Technology team for the development of engineering tools (PLM and others), and maintains procedures & instructions required for the implementation of tools and ensures training and utilization;
- Coordinates engineering support in mechanical and plant areas, defining & maintaining CAD strategy for the Project (processes, infrastructure, resources, production, collaboration with Domestic Agencies (DAs), and QA/QC) to provide services based on Project priorities;
- Exercises strategic vision and sets major priorities for the IO from an engineering perspective;
- Fosters further collaboration and integration between the IO and Members' DAs in the spirit of "one Project – one team";
- Responds to emerging issues and opportunities with timely, pragmatic, and effective solutions;
- Analyzes and alerts the DG promptly on any issues that would jeopardize the on-time accomplishment of major construction schedule milestones, scope, or impact to quality and nuclear safety requirements, while implementing appropriate risk mitigation strategies for the Project in a pragmatic and proactive manner;
- May be required to work outside IO reference working hours, including nights, week- ends and public holidays.

Measure of Effectiveness

- Provides solid leadership, builds-up and manages the team to maximize human capital/people's commitment to achieving the Project goals;
- Manages efficiently the overall engineering resources within the defined quality, scope, cost and schedule needed to construct ITER facility;
- Solves efficiently high level technical and quality control issues, mitigating risks for the Project;
- Actively represents and propagates the spirit of "one Project – one team" and ensures a highly collaborative approach with the IO senior management and DAs leaders in order to manage and propel the whole ITER Project forward;

- Designs KPIs for Project progress and prioritizes standards of performance, anticipating and solving major issues of engineering activities;
- Models the values and vision of the ITER Project including expectations from the Code of Conduct.

Experience & Profile

- ***Professional Experience:***
  - Demonstrated engineering and system integration capacity in the fusion/fission nuclear field, management abilities and successful experience within large construction, scientific or technical international Projects from design, construction, installation, testing, commissioning and operation of a facility and all associated systems within complex international environments or Projects.
  - Ability to obtain and maintain French Security clearance.
- ***Education:***
  - Masters' or PhD degree or equivalent in engineering or physics field or other relevant discipline;
  - The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or additional training certificates in relevant domains.
- ***Language requirements:***
  - Fluent in English (written and spoken).
- ***Technical competencies and demonstrated experience in:***
  - Management of Project(s) engineering resources in a matrixed organization;
  - Change and transformation including identifying, influencing, setting strategy, and leading implementation;
  - Design and construction of research infrastructures, preferably in the nuclear fusion field to support nuclear licensing process;
  - Project engagement in large construction Project with multi-national collaboration;
  - Inclusive leadership (maintaining healthy working environment), with a high level of headship for motivating and developing staff;
  - Creating an inclusive environment that promotes cross-functional analysis and effective decision making so that leaders are empowered to place decision making at the most appropriate level; Building strong partnerships and working collaboratively positively with all Project stakeholders, being force of proposal & solutions' oriented to reach consensus applied to large nuclear, fusion, fission or highly technical Projects in compliance with quality, safety, security and technical applicable standards;
  - Coordinating and overseeing complex construction Projects from design to operation phases while providing effective leadership and management structures in international or intergovernmental settings;
  - High-level strategic negotiations, using influence with multi-national internal and external partners, including the ability and willingness to solicit and consider varying inputs and opinions and make appropriate recommendations and tough decisions aligned with the ITER Project's objectives;
  - Leading Quality Control (QC) within a heavily regulated nuclear environment would be beneficial;
  - Driving a Project culture that underpins and maintains safe and secure working conditions, and enforces the highest standard of safe, healthy, and secure work practice;
  - Technical knowledge of Tokamak machine, fusion, and facilities would be considered a strong advantage;
  - Knowledge of the ITER Project would be considered a strong advantage.
- ***IO Core Behavioral Competencies:***

- Collaborate: Ability to facilitate dialogue with a wide variety of contributors and stakeholders;
- Communicate Effectively: Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;
- Drive results: Ability to persist in the face of challenges to meet deadlines with high standards;
- Manage Complexity: Ability to analyze multiple and diverse sources of information to understand/define problems accurately before moving to proposals;
- Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.

- ***Additional Behavioral Competencies:***
  - Proven top-level executive managerial skills characterized by approachability, accessibility, openness/transparency, personal integrity, persuasiveness, and the charisma to inspire loyalty of his/her subordinates and reach consensus with stakeholders;
  - Courage: stepping up to address difficult issues, saying what needs to be said;
  - Decision Quality and Accountability: using judgment to make timely decisions move the organization forward, holding self and others accountable to meet commitments;
  - Drive Engagement, Vision and Purpose: creating a climate where people are motivated to do their best to help the organization achieve its objective, by painting a compelling picture of the vision and strategy that inspires others to action;
  - Organizational Savvy: maneuvering comfortably through complex policy, process, and people related organizational dynamics to remove obstacles that affect Project performance, move work forward, and engage teams and stakeholders at all levels;
  - Strategic Mindset: seeing ahead to future possibilities and translating them into breakthrough strategies.