Call for Expertise

Site Logistics Support for the Machine Assembly and Installation Section

Technical Specifications

ABSTRACT

This contract covers the provision of specialised Site Logistics support for the ITER Machine Assembly and Installation (MAI) Section.
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1. ABSTRACT

This contract covers the provision of specialist Site Logistics support for the ITER Machine Assembly and Installation (MAI) Section.

2. BACKGROUND AND OBJECTIVE

2.1 The ITER project

The ITER project aims to demonstrate the scientific and technological feasibility of fusion power for peaceful purposes and to gain the knowledge necessary for the design of the next-stage device, DEMO, or the DEMOnstration fusion power plant.

Receiving 50MW of input power, the ITER Machine is designed to produce 500 MW of fusion power for extended periods of time. This represents ten times more than the input power needed to keep the plasma at temperature. It will therefore be the first fusion experiment to produce net energy. It will also test a number of key technologies, including heating, control, and the diagnostics and remote maintenance that will be needed for DEMO.

Further information can be found on the ITER website (http://www.iter.org) and also at the web pages of the ITER Parties that can be accessed via the ITER website.

2.2 The ITER Organization

ITER is a joint international research and development project for which initial construction activities have recently started.

The seven Members of the ITER Organization are the European Union (represented by EURATOM), Japan, The People’s Republic of China, India, the Republic of Korea, the Russian Federation and the USA. ITER will be constructed in Europe, at Cadarache, in southern France, where the ITER Organization (IO) has its headquarters.

The Members of the ITER Organization will bear the cost of the project through its 10-year construction phase, and its 20-year operational phase before decommissioning. With respect to the construction of the ITER machine, most of the components will be contributed by the Members as in-kind contributions. The remaining investment will be via cash contributions from the members.

2.3 Machine Assembly and Installation section – The Mission

The mission of the Machine Assembly and Installation section (MAI) is to assemble the ITER machine, to provide planning, oversight and to undertake the installation of plant systems. In detail, the MAI section is charged to:

- provide design direction and advice, and be responsible for the approval of all plant system designs from the aspect of assembly and installation,
- design assembly tools, write procedures and prepare schedules for the assembly of the machine, undertake the assembly of the machine, undertake the Tokamak system installations, ensuring close coordination with the relevant Department and system Responsible Officers;
- define the integrated assembly and installation plan and approve plant system installation procedures and plans,
define and implement a global alignment and metrology plan for ITER, including an appropriate site datum network,

- define and coordinate the implementation of an Integrated Logistics Support strategy for ITER to ensure lifecycle management of plant systems, components, spares and facilities: from design, through construction, operation and maintenance,

- co-ordinate the global transport, reception, handling and storage of plant system components, spares and tools.

### 2.4 Objective of the Contract

The objective of this contract is to provide the MAI section with specialist Site Logistics support, in the form of an appropriately qualified and experienced Site Logistics expert (hereafter known as the Logistics Engineer). The Logistics Engineer will be deployed in close support on the ITER site, Cadarache, France, to complete the scope of work as described in section 3.

Under this contract the Logistics Engineer will also provide expertise and guidance on general Logistics matters. With reference to the Mission Statement contained in section 2.3 of this document, guidance could be required in support of any of the charges of the section, or in respect of any Logistics related matter required by the Technical Responsible Officer mentioned in the contract.

### 3. SCOPE OF WORK

The scope of work includes, but shall not necessarily be limited to:

- Provide advice and expertise on any aspects related to Site Logistics as required by the Technical Responsible Officer mentioned in the contract, or his authorized deputy;

- Estimate and manage space allocation plan for reception/storage/pre-assemble/laydown of the different systems on the ITER Site & in off-site auxiliary facilities as deemed necessary during installation. Develop space allocation plan and schedule, in compliance with the ITER Rules and Regulations.

- Estimate and manage requirements for utility services (electricity, potable water, compressed air etc.) at the different areas on the ITER Site during installation.

- Define a process for the coordination of the handling and transport of components on the ITER Site during installation, including definition of handling requirements and interfacing with the different system TROs.

- Define and manage requirements for accessibility of vehicular circulation, including any special requirements for large loads and heavy cranes, on the ITER Site in cooperation with BSI.

- Prepare technical specifications and participate in the tendering of relevant contracts;

- Participate in the development of Assembly/Installation Strategies, Plans, and Procedures;

- Co-ordinate with security department on the requirements necessary for protection and security of components from arrival on site or storage until they are handed over to installation Contractor.

- Coordinate as necessary with safety department.
4. ESTIMATED DURATION

The contract duration shall be for an initial period of 12 months with an option for an additional 12 months, and shall cover 220 working days per year, in accordance with the working practices of ITER.

5. WORK ARRANGEMENTS AND ASSIGNMENTS

The Logistics Engineer’s full-time presence at the ITER site is necessary for the effective performance of his duties.

Details of work to be performed by the Logistics Engineer will be specified as needs arise by the Technical Responsible Officer mentioned in the contract, or his authorized deputy.

Each work task will be individually specified in consultation with the contract Logistics Engineer and a deliverable date will be agreed.

6. LIST OF DELIVERABLES AND DUE DATES

Each package of work to be performed will be discussed with the Logistics Engineer before its commencement, and a specification for the work package, schedule and form of deliverables agreed.

A monthly progress report shall be submitted and it shall reflect the agreed deliverables for that month.

7. ACCEPTANCE CRITERIA

All deliverables will be subject to the approval of the Technical Responsible Officer mentioned in the contract, or his authorized deputy.

8. WORK MONITORING / MEETING SCHEDULE

Completion of work items will be confirmed by the Technical Responsible Officer mentioned in the contract, or his authorized deputy. For longer tasks an interim monitoring point may be defined.

9. REQUIRED QUALIFICATIONS AND EXPERIENCE

The contracted Logistics Engineer shall have:

- A University Degree in Mechanical Engineering or a related discipline, or combination of qualifications and experience acceptable by ITER;
- Recent relevant experience (ideally a minimum of 10 years) in technical coordination/logistics management within large scale Construction Management Projects;
- Knowledge of Quality Assurance systems and their practical application;
- Fluent in the English language, written and spoken;
- Demonstrated ability to develop innovative solutions to complex problems;
• Ability to communicate effectively and to write clear and concise reports in English;
• Good interpersonal, communication and organizational skills;
• Ability to work independently when required;
• Good planning, organization, communication and negotiation skills;
• Good computer skills, usage of databases would be an advantage;
• Excellent team player while capable of working independently;
• Ability to work effectively in a multi-cultural environment.

10. QUALITY ASSURANCE (QA) REQUIREMENT

The Contractor shall work in accordance with the standards set out by ITER QA.

The organisation conducting these activities must have an ITER approved QA Program or an ISO 9001 accredited quality system.

Prior to commencement of the task, a Quality Plan Quality Plan (22MFMW) must be submitted for IO approval giving evidence of the above and describing the organisation for this task; the skill of workers involved; and any anticipated sub-contractors.

Deviations and Non-conformities will follow the procedure detailed in IO document MQP Deviations and Non Conformities (22F53X).

Documentation developed as the result of this task shall be retained by the performer of the task for a minimum of 5 years and then may be discarded at the discretion of the IO. The use of computer software to perform a safety basis task activity such as analysis and/or modelling, etc. shall be reviewed and approved by the IO prior to its use, it should fulfil IO document on Quality Assurance for ITER Safety Codes Quality Assurance for ITER Safety Codes (258LKL).