

CONTRACT TECHNICAL SPECIFICATION

**Engineering Support
for the ITER Toroidal Field Coil Structures
Procurement Arrangement**

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Revision history

| Date | Rev. | Note |
|-----------------|----------|--------------|
| 30 January 2012 | Rev. 1.1 | |
| 2 February 2012 | Rev 1.2 | Travel added |
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1 Abstract

This technical specification describes engineering services to the ITER Organization (IO) related to monitoring the implementation by the Japan Domestic Agency (JADA) and its suppliers of Phase II - Qualification and Optimization and Phase III - First-of-Series Manufacture of the Procurement Arrangement (PA) for 19 Toroidal Field Coil Structures (TFCS).

2 Background and Objectives

In 2008, IO and JADA signed the TFCS PA based on Built-to-Print Specifications. JADA is currently completing Phase II and preparing to start Phase III of the PA. The objective of this contract is to assist the IO Technical Responsible Officer in supporting, monitoring and checking the corresponding activities of JADA and its suppliers to achieve compliance with the PA technical and schedule requirements

3 Work Description

The Scope of Work includes the following activities in support of the on-going Phase II / III TFCS PA execution and for the launch of Phase IV (for the series production):

- i. Supervision of the evolution of the IO specifications, drawings and supporting calculations.
- ii. Detailed study of the manufacturing tolerances and impact on the finished TF coil assembly.
- iii. Structural mechanical assessment of welds in static and fatigue on structures at cryogenic temperature. Active participation in definition of weld categorization and magnet design criteria on partial weld calculation.
- iv. Preparation/assessment and follow-up of design and manufacturing Deviation Requests and Project Change Requests through the review, approval and implementation process.
- v. Rapid review, assessment and follow-up of PA deliverables such as Detailed Working Schedule updates, Monthly Reports, Progress Reports, Manufacturing Drawings, Final Manufacturing Plan, Final Reports, Manufacturing and Inspection Plans (MIPs), Acceptances Tests and component Fabrication Documents through the review and approval process.
- vi. Rapid review, assessment and processing of Non Conformity Reports.
- vii. General support to the IO TRO in following-up JADA and suppliers activities.

These support activities will require travel to Italy and regular travel to Japan where most of the activities of JADA and its suppliers is concentrated.

4 Duration

The framework contract duration shall be two years. This duration shall be split into 2 annual periods to conform to IO annual budget release, the second year being optional, as subject to agreement at the end of the first year. The IO may extend these services for a maximum of one year. ITER Organization shall establish the request for services on ad hoc basis and relative to the respective annual work plan.

5 Deliverables and Time Schedule

An activity summary report has to be submitted every months to IO, including approximate time spent. It is expected that this activity requires ~220 working days / year.

6 Acceptance Criteria (including rules and criteria)

The acceptance of the work is based on the examination of the content of each of the specified reports in accordance with the description of the work given in Section 3.

7 Payment schedule / Cost and delivery time breakdown

The payments shall be granted on a monthly basis following invoicing for actual work performed. No payment shall be made before the report corresponding to the invoiced work is delivered to IO. In case of travel, the IO shall reimburse all travel costs including transportation, accommodation, and meals within the IO guidelines that apply for travel missions.

8 Experience

The staff proposed by the bidder to carry out the work described in Section 3 must have proven experience in the following areas:

- engineering review and manufacturing follow-up of heavy welded stainless-steel structures designed to operate at cryogenic temperatures,
- application of construction codes (including RCC-MR, ASME and JSME) to such structures.
- technical review of build-to-print drawings and specifications,
- structural calculations and calculations reports,
- proposal, review, implementation and control of design changes in international nuclear reactor projects,
- review and assessment of deliverable manufacturing and testing documents,
- fluent written and spoken English,
- ability to plan, conduct and report on technical and project meetings with international partners.

A Curriculum Vitae showing evidence of the above experience is required. An interview may also be required.

9 Work condition

- A work plan shall be established and agreed by IO every two months. Travelling and missions shall be only upon agreement with IO;
- This contract shall be executed by one sole staff. Splitting it into parts and sharing those between several parties or individuals are not permitted;
- The staff working on this contract shall be available full time and be based at IO site in St Paul-lez-Durance, France.
- A tentative planning of missions is scheduled for two missions in Europe (2 x 2 days) and two in Japan (2 x 5 days).

10 Timetable

The tentative timetable is as follows:

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|--------------------|---------------|
| Call for Expertise | February 2012 |
| Contract Award | March 2012 |

11 Candidature

Participation is open to all individuals, companies or consortia which are legally registered in one or more of the ITER Member States. A consortium may be either a permanent, legally-established grouping or a grouping which has been constituted informally for a specific tender procedure. All members of a consortium (i.e. the leader and all other members) are jointly and severally liable to the ITER Organization.

The consortium groupings shall be presented at the tender submission stage. The consortium cannot be modified later without the approval of the ITER Organization.