

Support the design and progression of the Diagnostics Active Spectroscopy Systems on ITER

Contract Specifications

	<i>Version 1.0</i>	<i>Date: 13/05/2011</i>
	<i>Name</i>	<i>Affiliation</i>
<i>Author</i>	R. BARNSLEY	CHD / DIAGNOSTICS
<i>Reviewers</i>	M. WALSH	CHD/ DIAGNOSTICS
<i>Approver</i>	D. BORA	CHD

Table of Contents

1	Abstract	3
2	Background and Objectives	3
3	Scope of Work	3
4	Estimated Duration.....	3
5	Work Description	3
6	List of deliverables and due dates	4
7	Acceptance Criteria	4
8	Specific requirements and conditions.....	4
9	Work Monitoring / Meeting Schedule	5
10	Payment schedule / Cost and delivery time breakdown.....	5
	Quality Assurance (QA) requirement	5
11	References / Terminology and Acronyms	6

1 Abstract

This document describes technical needs for support the design and progression of the diagnostics and especially the Active Spectroscopy Systems on ITER.

2 Background and Objectives

ITER is a major new device that is under construction in Cadarache in Provence, France. This device will study the Fusion concept on a scale previously unequalled on earth.

To study the behaviour of this device, a set of monitoring systems (called Diagnostics) are required. They will provide all the information to show and understand the performance of the tokamak.

3 Scope of Work

The objective of this contract is to provide an individual to support the Diagnostics Responsible Officers in the preparation of the Diagnostic systems for ITER construction.

4 Estimated Duration

The duration shall be up to 24 months (440 days) from the starting date of the contract, and will be fully based at IO.

5 Work Description

- Supports the design and progression of the diagnostics and especially the active spectroscopy systems on ITER, and to work with the ITER Domestic Agencies in the specification and realisation of various systems.
- Supports the Division Head or his appointed experts in all matters related to the diagnostic systems for ITER construction;
- Oversees and manages various technical aspects of these systems;
- Develops detailed project implementation plans for all related work, and monitors and controls all related activities;
- Effectively interfaces with other ITER Organization Departments and with ITER Domestic Agencies as necessary to achieve successful implementation;
- Assists in the development of appropriate documentation as needed;

6 List of deliverables and due dates

Subtask	Deliverable	Dates
1	Progress report	At the end of each month
2	Final report	End of contract

7 Acceptance Criteria

The selection will be done taking into account the following criteria and an interview:

- | | |
|--------------|-----|
| 1) Expert CV | 60% |
| 2) Price | 40% |

8 Specific requirements and conditions

Experience

The staff proposed by the bidder to carry out the work described in Section 5 must have proven experience in following areas:

- At least 3 years of relevant experience in Experimental Physics and diagnostic systems and especially those mentioned above;
- Experience in the project initiation, management, design, installation and operation of diagnostic systems on magnetic fusion devices;
- Ability to work effectively in a multi-cultural environment , ability to work in a team and to promote team spirit.

Skills

Knowledge and experience working with appropriate software tools to meet the technical requirements, for example IDL (Interactive Data Language) or MATLAB;

Knowledge of special codes for the Active spectroscopy field would be a big benefit.

- Experience with formal project management system;
- Excellent presentational skills;
- Project planning tools.

Information Technology

IT hardware and services will be provided by the ITER Organization.

9 Work Monitoring / Meeting Schedule

Meetings and progress reports

The work will be managed by means of Progress Meetings and/or formal exchange of documents transmitted by emails which provide detailed progress. Progress Meetings will be called by the ITER Organization, to review the progress of the work, the technical problems, the interfaces and the planning.

The main purpose of the Progress Meetings is to allow the ITER Organization/Diagnostics Division and the Contractor Technical Responsible Officers to:

- a) Allow early detection and correction of issues that may cause delays;
- b) Review the completed and planned activities and assess the progress made;
- c) Permit fast and consensual resolution of unexpected problems;
- d) Clarify doubts and prevent misinterpretations of the specifications.

In addition to the Progress Meetings, if necessary, the ITER Organization and/or the Contractor may request additional meetings to address specific issues to be resolved.

For all Progress Meetings, a document describing tasks done, results obtained, blocking points must be written by the engineer. Each report will be stored in the ITER IDM in order to ensure traceability of the work performed.

Every 3 months, the Contractor shall submit to ITER Organization a Progress Report to be issued five working days before the each Progress Meeting so that the report can be reviewed prior to, and discussed at, that Meeting.

The quarterly Progress Report shall illustrate the progress against the baseline work plan and indicate variances that should be used for trending. Performance indicators suitable to measure the progress of the work as compared to the approved work plan shall also be reported in the Monthly Progress Report.

10 Payment schedule / Cost and delivery time breakdown

Interim monthly payments upon the submission of IO approved timesheets.

11 Quality Assurance (QA) requirement

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

The general requirements are detailed in ITER document [ITER Procurement Quality Requirements \(22MFG4\)](#)

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 in the study; any anticipated sub-contractors; and giving details of who will be the independent checker of the activities.

Prior to commencement of any manufacturing, a Manufacturing & Inspection Plan [Manufacturing and Inspection Plan \(22MDZD\)](#) must be approved by ITER who will mark up any planned interventions.

Deviations and Non-conformities will follow the procedure detailed in IO document [MQP Deviations and Non Conformities \(22F53X\)](#)

Prior to delivery of any manufactured items to the IO Site, a Release Note must be signed [MQP Contractors Release Note \(22F52F\)](#).

Documentation developed as the result of this task shall be retained by the performer of the task or the DA organization for a minimum of 5 years and then may be discarded at the direction 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 \(258LKL\)](#).

12 References / Terminology and Acronyms