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Report

Summary Technical Specifications - Vacuum Engineering Support 2018

Summary for Call for Tender

| <i>Approval Process</i> | | | |
|--|--|---------------------------|-------------------------------|
| | <i>Name</i> | <i>Action</i> | <i>Affiliation</i> |
| <i>Author</i> | Worth L. | 17 Jan 2020:signed | IO/DG/CNST/MCD/TCD/VDI |
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| <i>Read Access</i> | LG: FCED DH, LG: Sergio Orlandi, LG: PA 3.1.P4.US.01 DA PA PT, LG: Contracts, LG: Nuclear Safety Inspectors, AD: ITER, AD: IO_Director-General, AD: OBS - Configuration Management Division (CMD) - EXT, AD: OBS - Configuration Management Division (CMD), AD: External Management Advisory Board, AD: OBS ... | | |

Change Log

Summary Technical Specifications - Vacuum Engineering Support 2018 (WP7RNN)

| <i>Version</i> | <i>Latest Status</i> | <i>Issue Date</i> | <i>Description of Change</i> |
|----------------|----------------------|-------------------|------------------------------|
| v1.0 | Signed | 05 Jun 2018 | |
| v1.1 | Signed | 17 Jan 2020 | New Version for CFN |



Summary: Framework Contract for the Supply of Construction and Vacuum Engineering Support to the ITER Project.

1 Introduction

[ITER](#) will be the largest and most complex vacuum system yet to be built. Situated in Southern France, adjacent to the French CEA Cadarache site, the ITER facility covers approximately 190 hectares and is designed to study the fusion reaction between the hydrogen isotopes tritium and deuterium.

As the project moves from design to construction, there is a requirement to augment to ITER resources with external support in the areas of;

- Construction definition/ documentation
- Vacuum qualification (leak testing) of components/ systems
- Vacuum Engineering (design of vacuum systems including vacuum pipework)

2 Scope

Under the scope of this Framework contract, suitably experienced personnel shall be made available to the ITER Organisation (IO) to provide services such as:

Construction Definition and Vacuum Testing Support

- Design of test fixtures and fittings required for validation of leak testing procedures
- Analysis of designs with respect to vacuum acceptance testing
- Analysis of ITER system design(s) with respect to installation leak testing
- Development of pressure / leak testing procedures
- Practical validation performance of pressure / leak test procedures
- Vacuum testing support (At IO and Supplier premises)
- Preparation of vacuum test equipment
- Preparation of construction documentation (detailed Engineering Work Packages, Assembly Sequences, Line & Equipment Lists etc.)

Vacuum Engineering Support

- Perform design of vacuum systems (for example vacuum pipework systems)
- Prepare technical specifications for the procurement of vacuum components/ systems.

3 Work Location

It is envisaged that the Contractors staff performing the work will be sited at the ITER site, Cadarache, France. Some travel to perform tasks at ITER members sites¹ is to be expected.

4 Required Skills and Experience

The required skills/experience for each type of resource required are outlined in Table 1.

¹ India, Korea, Russia, USA, European Union, China

Table 1 Required Skills/Experience

| | |
|--|--|
| <i>Construction Definition and Vacuum Testing Support</i> | Certified to COFREND level 2/3 or equivalent |
| | At least 5 years practical experience in leak detection, developing procedures, tools and performing tests |
| | Good command of English (written and spoken) |
| <i>Vacuum Engineering Support</i> | At least 5 years experience in the specification and procurement of vacuum components/systems |
| | At least 5 years experience in the design of vacuum systems including systems of vacuum pipework |
| | CAD (CATIA/Enovia) experience would be considered as advantageous. |
| | Knowledge of design codes (ASME B31.3, EN13445) experience would be considered as advantageous. |
| | Good command of English (written and spoken) |

5 Deliverables

The implementation details of deliverables and priorities of the studies will be agreed between the Contact Persons under each separate task order. No element of work or activity shall begin without the prior written notification by the IO in the form of a Task Order.

6 Contract Duration and Timetable

The contract is scheduled to come into force in the last quarter of 2020 and last for 4 years with an option to extend yearly up to 6 years. It is expected that the resource required fulfilling the task orders will be equivalent to 2 to 3 Full Time Equivalent(FTE) / year at the ITER site.

The actual level of effort required will be defined on a year to year basis depending of the requirements of the project.

The IO shall be under no obligation to place Task Orders summing up to the estimated amount of working days indicated in these technical specifications. It shall be noted that the framework contract may be continued after each year only after a funding appropriation has been granted by the ITER Council. The IO explicitly reserves the right to decide whether or not to extend the contract.

7 Schedule

| Action | Tentative date(s) |
|-----------------|--------------------------|
| Call for tender | March 2020 |

| | |
|----------------------|--|
| Tender submission | June 2020 |
| Contract award | July 2020 |
| Start of contract | August 2020 |
| 1st Task Order start | September 2020 |
| End of contract | August 2023 (extension option to 2026) |

8 Candidature

Participation is open to any legal entity either an individual or a group (consortium) which is established in an ITER Member State. A legal entity cannot participate individually or as a consortium partner in more than one application or tender. A consortium may be 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 IO.

The consortium groupings shall be presented at the pre-qualification stage. The tenderer's composition cannot be modified without the approval of the ITER Organization after the pre-qualification.

Legal entities belonging to the same legal grouping are allowed to participate separately if they are able to demonstrate independent technical and financial capacities. Candidates (individual or consortium) must comply with the selection criteria. The IO reserves the right to disregard duplicated reference projects and may exclude such legal entities from the pre-qualification procedure