外部委託業者の募集

References: IO/25/OT/10032827/VML

"Supply Contract for Refurbishing of 5 IP I&C Cubicles and Manufacturing of IP I&C Cubicle"

（IP I&C筐体５つの改修と１つの製造の供給契約）

IO 締め切り 2025 年 10 月 7 日(火)

〇はじめに

本事前情報通知（PIN）は、作業契約の入札授与および実行につながる公開入札調達プロセスの最初のステップです。

この文書の目的は、作業範囲および入札プロセスに関する技術的内容の基本的な概要を提供することです。

〇背景

ITER は平和利用の核融合発電の科学的および技術的な実現可能性の実証を目的とした、国際共同研究開発プロジェクトです。ITER 機構の 7 つのメンバーは、;欧州連合（EURATOM が代表）、日本、中華人民共和国、インド、大韓民国、ロシア連邦、および米国です。

ITER の敷地はフランス南東部のブーシュデュローヌ地区にあり、ITER 本社（HQ）もあるフランス CEA サン・ポール・レ・デュランス に近いところに位置しています。詳細については、ITER のウェブサイト http://www.iter.org を参照して下さい。

〇作業範囲

今回の入札プロセスは、IP I&C筐体５つの改修と１つの製造の供給契約を締結することを目的としています。 詳細については、付属書II：技術仕様書 CHVPWX v1.4..を参照してください。

〇調達プロセスと目的

目的は、競争入札プロセスを通じて供給契約を落札することです。

この入札のために選択された調達手続きは公開入札手続きと呼ばれます。

オープン入札手順は、次の 4 つの主要なステップで構成されています。

- ステップ 1-事前情報通知（PIN）

  事前情報通知は公開入札プロセスの第一段階です。IO は、関心のある候補企業に対し、以下の概略日程に示された期日までに担当調達担当官に添付の関心表明フォームで以下の情報を提出し、競争プロセスへの関心を示すよう正式に要請します。

  特に注意:

  関心のある候補企業は、IO Ariba の電子調達ツール 「IPROC」 に登録してください（まだ登録していない場合）。手順については、

  https://www.iter.org/fr/proc/overview

を参照してください。

Ariba (IPROC) に登録する際には、お取引先様に最低 1 名の担当者の登録をお願いします。この連絡担当者は、提案依頼書の発行通知を受け取り、必要と思われる場合は入札書類を同僚に転送することができます。

- ステップ 2-入札への招待

  関心表明提出後、提案依頼書 (RFP) を 「IPROC」 に掲載します。この段階では、担当の調達担当者に関心を示し、かつ IPROC に登録している関心のある候補企業は、RFP が公表された旨の通知を受けることができます。その後、RFP に詳述されている入札説明書に従って提案書を作成し、提出します。

  このツールに登録されている企業のみが入札に招待されます。

- ステップ 3-入札評価プロセス

  入札者の提案は、IO の公平な評価委員会によって評価されます。入札者は、技術的範囲に沿って、かつ、RFP に記載された特定の基準に従って作業を実施するために、技術的遵守を証明する詳細を提供しなければなりません。

- ステップ 4-落札

  認定は、公開されている RFP に記載されている、コストに見合った最適な価格または技術的に準拠した最低価格に基づいて行われます。

〇概略日程

概略日程は以下の通りです：

マイルストーン	暫定日程
事前指示書 (PIN) の発行	2025 年 9 月 26 日
関心表明フォームの提出	2025 年 10 月 7 日
入札会議 (Teams にて)	2025 年 10 月 13 日
明確化のための質問 (もしあれば) と回答	入札提出の 5 日前
入札提出	2025 年 11 月 24 日
契約授与	2025 年 12 月初旬
契約調印	2025 年 12 月

〇契約期間と実行

ITER機構は2025年の12月に供給契約を授与する予定です。予想される契約期間は6か月の予定です。

〇候補

参加は、個人またはグループ/コンソーシアムに参加するすべての法人に開放されます。法人とは、法的権利及び義務を有し、ITER 加盟国内に設立された個人、企業又は機構をいいます。ITER 加盟国は欧州連合(EURATOM メンバー)、日本、中華人民共和国、インド共和国、大韓民国、ロシア連邦、アメリカ合衆国です。

法人は、単独で、またはコンソーシアムパートナーとして、同じ契約の複数の申請または入札に参加することはできません。共同事業体は、恒久的な、法的に確立されたグループ又は特定の入札手続のために非公式に構成されたグループとすることができます。

コンソーシアムのすべての構成員(すなわち、リーダーと他のすべてのメンバー)は、ITER 機構に対して連帯して責任を負います。

コンソーシアムとして許可されるために、その点で含まれる法人はコンソーシアムの各メンバーをまとめる権限をもつリーダーをもたなければなりません。このリーダーはコンソーシアムの各目メンバーのために責任を負わなければなりません。

指名されたコンソーシアムのリーダーは、入札段階で、コンソーシアムのメンバーの構成を説明する予定です。その後、候補者の構成は、いかなる変更も ITER 機構に通知することなく変更してはなりません。かかる認可の証拠は、すべてのコンソーシアムメンバーの法的に授権された署名者が署名した委任状の形式で、しかるべき時期に IO に提出しなければなりません。

どのコンソーシアムメンバーも IPROC に登録する必要があります。

【※　詳しくは添付の英語版技術仕様書「**Refurbishing of 5 IP I&C Cubicles and Manufacturing of IP I&C Cubicle**」をご参照ください。】
ITER 公式ウェブ　http://www.iter.org/org/team/adm/proc/overview からもアクセスが可能です。

「核融合エネルギー研究開発部門」の HP：　http://www.fusion.qst.go.jp/ITER/index.html
では ITER 機構からの各募集（IO 職員募集、IO 外部委託、IO エキスパート募集）を逐次更新しています。ぜひご確認ください。

イーター国際核融合エネルギー機構からの外部委託
に関心ある企業及び研究機関の募集について

＜ITER 機構から参加極へのレター＞

以下に、外部委託の概要と要求事項が示されています。参加極には、提案された業務に要求される能力を有し、入札すべきと考える企業及び研究機関の連絡先の情報を ITER 機構へ伝えることが求められています。このため、本研究・業務に関心を持たれる企業及び研究機関におかれましては、応募書類の提出要領にしたがって連絡先情報をご提出下さい。

china eu india japan korea russia usa
Route de Vinon-sur-Verdon - CS 90 046 - 13067 St Paul Lez Durance Cedex - France

PRIOR INDICATIVE NOTICE (PIN)

OPEN TENDER SUMMARY

IO/25/OT/10032827/VML

for

Refurbishing of 5 IP I&C Cubicles and Manufacturing of IP I&C Cubicle

Prior Indicative Notice annexes:
- Annex I: Expression of Interest Form
- Annex II: Technical Specifications CHVPWX v1.4.

IO Contact Persons: Virginie.Michel@iter.org and Andrew.Brown@iter.org

Abstract

The purpose of this summary is to provide prior notification of the ITER Organization's intention to launch a competitive Open Tender process in the coming weeks. This summary provides some basic information about the ITER Organization, the technical scope for this tender, and details for the Refurbishing and Manufacturing of the I&C Cabinets in the buildings 46 and 47.

1 Introduction

This Prior Indicative Notice (PIN) is the first step of an Open Tender Procurement Process leading to the award and execution of a Supply Contract.

2 Background

The ITER project is an international research and development project jointly funded by its seven Members being, 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 is being constructed in Europe at St. Paul–Lez-Durance in southern France, which is also the location of the headquarters (HQ) of the ITER Organization (IO).

For a complete description of the ITER Project, covering both organizational and technical aspects of the Project, visit www.iter.org.

3 Scope of Supply

The scope of this procurement is for refurbishing and manufacturing of the I&C Cabinets in the buildings 46 and 47.
For the full scope of services, please see the attached Technical Specifications, ref. CHVPWX v1.4.

4 Procurement Process & Objective

The objective is to award a Supply Contract through a competitive bidding process.

The Procurement Procedure selected for this Tender is a so-called **Open Tender** procedure.

The Open Tender procedure is comprised of the following four main steps:

- Step 1- Prior Information Notice (PIN)

  The PIN is the first stage of the Open Tender process. The IO formally invites interested Suppliers to indicate their interest in the competitive process by returning to the Procurement Officer in charge the attached "Expression of Interest and PIN Acknowledgement" (Annex I) by the date indicated in the procurement timetable below.

  Special attention:

  Interested tenderers are kindly requested to register in the IO Ariba e-procurement tool called "I-PROC". You can find all links to proceed along with instruction going to: https://www.iter.org/fr/proc/overview.

  When registering in Ariba (I-PROC), suppliers are kindly requested to nominate at least one contact person. This contact person will be receiving the notification of publication of the Request for Proposal and will then be able to forward the Tender documents to colleagues if deemed necessary.

- Step 2 - Invitation to Tender – Request for Proposal (RFP)

  The Request for Proposals (RFP) will be published on our digital tool "Iproc" after the submission of Expression of Interest. This stage allows interested bidders who have indicated their interest to

the Procurement Officers in charge AND who have registered in IPROC to receive the notification that the RFP is published. They will then prepare and submit their proposals in accordance with the tender instructions detailed in the RFP.

Only companies registered in this tool will be invited to the tender.

- Step 3 – Tender Evaluation Process

  Tenderers' proposals will be evaluated by an impartial evaluation committee of the IO. Tenderers must provide details demonstrating their technical compliance to perform the works in line with the technical scope and in accordance with the particular criteria listed in the RFP.

- Step 4 – Contract Award

  One Supply Contract will be awarded on the basis of Best Value for Money with a sharing of 60% for the technical offer and 40% for the financial offer according to the evaluation criteria and methodology described in the RFP.

Procurement Timetable

The tentative timetable is as follows:

Milestone	Date
Publication of the Prior Indicative Notice (PIN)	26 September 2025
Submission of expression of interest form	No later than 7 October 2025
Request for Proposal launched on I-PROC	No later than 13 October 2025
Clarification Questions (if any) and Answers	5 days before submission deadline
Tender Submission	24 November 2025
Contract Award	Early December 2025
Contract Signature	December 2025

5 Quality Assurance Requirements

The Candidate shall have ISO 9001 or shall submit to the IO for approval its "Quality Assurance Program'' in the Tender Submission for the IO's review and acceptance.

6 Contract Duration and Execution

The IO shall award the Contract around December 2025. The Time for Completion is 6 months.

7 Candidature

Participation is open to all legal entities participating either individually or in a grouping/consortium. A legal entity is an individual, company, or organization that has legal rights and obligations and is established within an ITER Member State, being: the European Union (represented by EURATOM), Japan, the People's Republic of China, India, the Republic of Korea, the Russian Federation and the USA.

Legal entities cannot participate individually or as a consortium partner in more than one application or Tender of the same contract. 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.

In order for a consortium to be acceptable, the individual legal entities included therein shall have nominated a leader with authority to bind each member of the consortium, and this leader shall be authorised to incur liabilities and receive instructions for and on behalf of each member of the consortium.

It is expected that the designated consortium leader will explain the composition of the consortium members in its offer. Following this, the Candidate's composition must not be modified without notifying the IO of any changes. Evidence of any such authorisation shall be submitted to the IO in due course in the form of a power of attorney signed by legally authorised signatories of all the consortium members.

All consortium members shall be registered in I-PROC.

8 Sub-contracting Rules

Subcontracting is limited to 40 % of the contract value and up to level 2.
All sub-contractors who will be taken on by the Contractor shall be declared with the Tender submission in I-PROC. Each sub-contractor will be required to complete and sign forms including technical and administrative information which shall be submitted to the IO by the Tenderer as part of its Tender.

All declared sub-contractors must be established within an ITER Member State in order to participate.

The IO reserves the right to approve (or disapprove) any sub-contractor which was not notified in the Tender and request a copy of the sub-contracting agreement between the Tenderer and its subcontractor(s). Rules on sub-contracting are indicated in the RFP itself.

ANNEX I

EXPRESSION OF INTEREST & PIN ACKNOWLEDGEMENT

To be returned by e-mail to: Virginie.Michel@iter.org with Andrew.Brown@iter.org in cc

Tender reference: **IO/25/OT/10032827/VML**
Description: **Refurbishing of 5 IP I&C Cubicles and Manufacturing of IP I&C Cubicle**
Procurement Officer: **Virginie Michel - Procurement Division ITER Organization**

☐ WE ACKNOWLEDGE HAVING READ THE PIN NOTICE FOR THE ABOVE-MENTIONED TENDER

☐ WE INTEND TO SUBMIT A TENDER

Are you registered in Iproc (only entities registered in iPROC will be invited to tender):

☐ YES

Please indicate your registration number: ……

☐ NO, but we shall register before the indicated tender launch date

Please list the users of ARIBA/IPROC that you wish to add as response team for this tender:

Name	E-mail
…	…

Signature:

COMPANY STAMP

Name: .....

Position: .....

Tel: .....

E-mail .....

Date: .....

IDM UID
CHVPWX

VERSION CREATED ON / VERSION / STATUS
08 Sep 2025 / 1.4 / Approved

EXTERNAL REFERENCE / VERSION

Technical Specifications (In-Cash Procurement)

Specification for Refurbishing of 5 IP I&C Cubicles and Manufacturing of IP I&C Cubicle

Specification for refurbishing of 5 IP I&C cubicles

SUPPLY

Table of Contents

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1 Preamble

This Technical Specification is to be read in combination with the General Management Specification for Service and Supply (GM3S) – Ref [1] that constitutes a full part of the technical requirements.

In case of conflict, the content of the Technical Specification supersedes the content of Ref [1].

2 Purpose

This document is the Technical Specification for the Refurbishing and Manufacturing of the I&C Cabinets in the buildings 46 and 47 because of new design and obsolescence of the components.

3 Acronyms & Definitions

3.1 Acronyms

Abbreviation	Description
MTO	Material Take Off
CRO	Contract Responsible Officer
GM3S	General Management Specification for Service and Supply
IO	ITER Organization
PRO	Procurement Responsible Officer
CODAC	Control, Data Access and Communication
I&C	Instrumentation & Control
I/O	Input / Output
LV	Low Voltage
PCDH	Plant Control Design Handbook
PLC	Programmable Logic Controller
SSEN	Steady State Electrical Network

3.2 Definitions

Refurbishing: based on the new design updating the configuration of existing cubicle.

Manufacturing: based on the new design creating the new cubicle.

Contractor: shall mean an economic operator who have signed the Contract in which this document is referenced.

4 Applicable Documents & Codes and standards

4.1 Applicable Documents

This is the responsibility of the Contractor to identify and request for any documents that would not have been transmitted by IO, including the below list of reference documents.

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This Technical Specification takes precedence over the referenced documents. In case of conflicting information, this is the responsibility of the Contractor to seek clarification from IO.

Upon notification of any revision of the applicable document transmitted officially to the Contractor, the Contractor shall advise within 4 weeks of any impact on the execution of the contract. Without any response after this period, no impact will be considered.

Ref	Title	IDM Doc ID	Version
1	General Management Specification for Service and Supply (GM3S)	82MXQK	1.4
2	ITER Abbreviations	2MU6W5	1.17
3	ITER catalogue for I&C products - Cubicles	35LXVZ	4.2
4	Siemens Reference List	AWYQ5G	3.7
5	Plant Control Design Handbook	27LH2V	7.0
6	ITER Numbering System for Components and Parts	28QDBS	5.0
7	I&C cubicle internal configuration	4H5DW6	4.1
8	I&C signal interface	3299VT	5.0
9	Plant system I&C Integration plan	3VVU9W	4.6
10	ITER catalogue for I&C products - Cubicles	35LXVZ	4.2
11	PLC Software Engineering Handbook	3QPL4H	3.1
12	Plant Systems Factory Acceptance Plan for I&C Systems	3VVU9W	1.5

4.2 Applicable Codes and Standards

This is the responsibility of the Contractor to procure the relevant Codes and Standards applicable to that scope of work.

Ref	Title	Doc Ref.	Version
CS1	Low Voltage Directive	2014/35/EU	20.04.2016
CS2	EMC Directive	2014/30/EU	26.02.2014

5 Scope of Work

This section defines the specific scope of work, in addition to the contract execution requirement as defined in Ref [1].

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5.1 Refurbishment of cubicles 43CCCI-CU-0001, 43CCCI-CU-0002, 43CCCI-CU-0003, 43CCCI-CU-0004, 43CCCI-CU-0005

5.1.1 Description

In buildings 46 and 47, there are 5 PBS43 PLC and Marshalling cabinets with remote I/O installed inside for signal acquisition.

The updated drawings:

ITER_D_C5F8UC - Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0001
ITER_D_BXPYMH - Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0002
ITER_D_BXQC42 - Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0003
ITER_D_BXQFZ3 - Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0004
ITER_D_BXQGTE - Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0005
ITER_D_EJN3ZF - Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0006

- Receiving of 5 cubicles from ITER to contractor workshop;
- Dismounting obsolete and not applicable components inside cubicles regarding the drawings above;
- Purchase the components dedicated in the drawings above;
- Installation of new components regarding the drawings above;
- Installation and connection of wires between new components regarding the drawings above;
- Manufacturing of one cubicle 43CCCI-CU-0006;
- Installation of necessary Software of PLC with monitoring functions;
- Performing the FAT;
- Shipping of 6 cubicles to ITER back;

5.2 Manufacturing of cubicle 43CCCI-CU-0006

5.2.1 Description

IP PBS43 PLC cabinet for signal acquisition to be manufactured.

The drawing:

ITER_D_ - Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0006

- Manufacturing of one cubicle 43CCCI-CU-0006;
- Installation of necessary Software of PLC with monitoring functions;
- Performing the FAT;
- Shipping of 6 cubicles to ITER back;

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5.3 Technical Requirements

5.3.1 General Requirements

- Refurbishing of cubicles consists of hardware Network Switches, Terminal Blocks, Protective devices, Isolating devices, mounting hardware and Internal wiring.
- The Cubicle has Safety Class: non-SIC, Quality Class: 3.
- The equipment shall be capable of maintaining continuous satisfactory operation over a long period of time with minimum attention. Workmanship shall be in accordance with high grade industrial practice, adequate to ensure satisfactory operation over a period of 30 years and service life in accordance with the provisions of this specification.
- All equipment supplied should be COTS(Commercial off-the-shelf)
- The hardware used shall be capable of functioning under ambient temperature of +15 to +25ºC @ max 60% RH related the requirement of the room.
- The Electronic devices, Peripherals, Power Supplies, Cables etc. used for building the cubicles and the assembled cubicle itself shall comply with the European directives 2006/95/EC (Low Voltage Directive) and 2004/108/EC (EMC Directive) etc. and relevant Industrial standards as applicable.
- The cubicle power circuit & protective devices shall be designed in compliance with the requirements of French regulation NFC 15-100 (Installations électriques en basse tension).

5.3.2 Enclosure

- The enclosure for remote I/O stations shall be selected from IO Cubicle products catalogue (ITER_D_35LXVZ).
- The enclosure shall be Self-standing type 800 x 800 x 2200 with cable entry from top and shall have access from front and rear with lockable doors with 180° hinges.
- The enclosure shall be so designed to protect the devices mounted inside from mechanical shock and vibration.
- The enclosure shall have degree of protection IP 55 or better as per IEC 60529. The enclosure shall provide resistance to mechanical impact IK10 or better according to IEC 62262.
- The cubicle shall include minimum of following items/accessories:
- Device mounting hardware
- Terminal Blocks and accessories for wiring with fixing brackets and cable clamps
- Dedicated cable ducts/trays for signal and power cables
- Cable glands
- Copper earthing bars separate for Signal earth and Safety earth
- Force Ventilation Fans
- Mains Switch
- Cubicle health monitoring including Temperature Sensor, Door Switches for Both
- Doors and Health Indictor (Green-230 VAC & Red-24 VDC)
- Cubicle lighting arrangement (CE certified) on both door side
- Socket strip (French Socket) with RCCB for protection (as per French Regulation).
- Cubicle temperature monitoring system
- Lifting Eye Bolts (4 Nos)
- Document Support on Front/Rear Door
- Name Plate on Front Door & Tag Plate on Rear Door

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5.3.3 Power Supply & Earthing

- The incoming power supply for the cubicle shall be 230V Class II AC ± 10%, 50 Hz ± 1%, 1 kW. The necessary protective devices shall be added in cubicle for protection.
- The auxiliaries power supply for the cubicle shall be 230V Class IV AC ± 10%, 50 Hz ± 1%, 1 kW. The necessary protective devices shall be added in cubicle for protection.
- The incoming power supply for network devices responsible for providing IEC 61850 protocol shell be 48 V DC Battery.
- For other voltage ranges that are needed, for instance 24 V DC etc., this must be generated internally by power supply modules.
- Design of the power distribution shall be such that minor failures can be localized for easy rectification.
- Appropriate Earthing arrangement shall be provided for signal & power in the cubicle.
- Dedicated PE terminals per terminal block or earth strips in parallel to the terminal blocks shall be provided for field cable shield termination.
- Earth strips shall be in pre-drilled condition with appropriate fasteners.

5.3.4 Cabling & Wiring

- All the cables used for internal wiring shall meet following requirements:
- Reduced flame propagation according to IEC 60332-3 –flame spread for cable bunches
- Flame retardant according to IEC 60332-1 – flame propagation on single cables
- Low smoke according to IEC 61034
- Zero Halogen according to IEC 60754-1
- Non toxicity according to IEC 60754-2
- Incoming and outgoing cables shall terminate at terminal blocks in the cubicle. All internal wiring, termination and interconnection between terminal blocks, the signal modules, interposing relays etc. shall be executed on the factory.
- Terminal assignment of the Field wiring TB shall be done strictly as per the terminal plans provided along with this specification.
- All the wiring termination shall be carried out with appropriate lugs/connectors.
- The Cubicle shall have separate cable trays for internal & field wires. The field cable tray shall have adequate space to accommodate & facilitate the wiring on site.
- Ferruling shall be done at both end of a wire to identify to identify incoming and outgoing connection.

The communication cubicle shall be supplied with all Internal components fully wired. The cubicle shall be in ready-to-install state so as to easily connect it to the field wiring,

5.3.5 Inspection and Testing Requirement

- The contractor shall be responsible for and shall perform all tests and carry out all inspection specified herein and as may further be necessary to ensure that the material and workmanship of the system are of the degree of excellence required by this specification and to demonstrate that the system supplied by him will perform as specified herein and to the satisfaction of ITER Organization.
- ITER Organization or his authorized representative shall have access to the manufacturer’s premises at all reasonable times, to the extent necessary to assess compliance with the provisions of this specification.
- ITER Organization or his authorized representative shall carry out stage inspection and testing of the finished product as specified in the detailed Manufacturing and Inspection Plan (MIP) as submitted by the contractor and approved by ITER Organization.

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- ITER Organization shall reserve the right to conduct at his own expense any additional inspection or testing deemed necessary by him.
- The contractor shall provide all the test equipment required. ITER Organization or his authorized representative shall have access to the calibration certificates of the test equipment proposed.
- In the event of failure of any test thereof to fully meet the requirements, the
- The contractor shall obtain permission from ITER Organization before repair or subsequent use of such device or its part. If the repair including redesign are likely to affect the results of tests or work previously completed, appropriate re-inspection and retesting shall be conducted at the cost of the contractor.

5.3.6 Factory Acceptance Tests (FAT)

- The FAT is intended to fully demonstrate that the Cubicles have been made correctly and completely in accordance with all manufacturing, assembly and configurations as per the specifications.
- The approved versions of all 'as-built' drawings and the documents specified in the chapter- 10 and elsewhere in these specifications shall be available before going for FAT.
- The contractor shall prepare detailed FAT procedures encompassing all physical and functional aspect of the components. All the tests shall be exclusively defined with comprehensive test procedures, requirements of the test, details of test setups and equipment.

5.3.7 Physical Checks / Tests

Following checks/tests shall be carried out by the contractor on cubicle of SCSU as a part of FAT.

a) Verification of component inventory

b) Visual Checks of Cubicles including at least:

i. Structural Rigidity of Enclosure
ii. Mounting of hardware and Equipment
iii. Mechanical Functionality of Doors, Door locks & keys
iv. Paint quality
v. Device Assemblies & Labelling
vi. Continuity & Correctness of circuit wiring

c) Tests as applicable to demonstrate compliance to Directive 2006/95/EC (Low Voltage Directive)

d) Tests as applicable to demonstrate compliance to Directive 2004/108/EC (EMC Directive)

5.3.8 Functional Tests

Following tests/checks shall be carried out by the contractor to ensure proper functioning of the system and components.

a) Cubicle power up & Indicator function test
b) Protective device test
c) Cubicle monitoring component function test
d) I/O modules functional test with simulation of field signals

The results of FAT shall be recorded and retained in the lifetime records of the ITER plant. Any failures during FAT shall be investigated and the cause and rectification of the failure shall be documented in the FAT report.

SUPPLY

Satisfactory completion of FAT shall be the prerequisite for shipping clearance. Materials and items covered under the scope of this specification shall be despatched only after shipping clearance in writing by ITER Organization.

5.3.9 Resources

The Contractor shall have the sufficient resources to provide the services, including human resources, to perform the activities in accordance with this Technical Specification.

The Contractor shall comply in performing the contract, with applicable laws, decrees, circulars and standards.

The Contractor shall comply with French construction Standards or to European construction standards if such European standards exist and are equivalent to those French standards. Unified Technical Documents (DTUs) and DTU Specifications and Calculation Rules shall be considered as industry practices and are applicable to the contract.

The Contractor shall be responsible for all requests for administrative authorisations and declarations that are required by virtue of applicable regulations. For all products and materials subject to quality standards, the Contractor must only use products and materials that comply with said standards.

Prior to the start of any works on the ITER site, a Work Authorisation must be obtained in accordance with the Work Authorisation Procedure (7K66XB).

5.4 Requirements For Labelling, Cleaning, Packaging, Handling, Shipment and Storage

5.4.1 Scope of application

- The following generic requirements apply both for the shipment of equipment, etc. from the manufacture/assembly site to the ITER Site or to any intermediate site.
- Suitable precautions shall be taken to avoid damage to the equipment. The components shall be fitted with the required accelerometers or other sensors and shall be packed as defined below.
- The equipment shall be subject to control and inspection, as defined below.

5.4.2 Labelling and Traceability

All components and the main subcomponents shall be clearly marked in a permanent way and in a visible place with the IO official numbering system according to the document “ITER Numbering System for Components and Parts” [24]. A detailed ‘IO component identification standard’ together with printed label templates and RFID tagging standards will be provided by IO.

5.4.3 Cleaning

- During cleaning, particular attention shall be given to the removal of weld spatter, debris and other foreign matter, particularly from the coolant passages and sealing surfaces. Final cleaning shall ensure effective cleaning without damage to the surface finish, material properties or metallurgical structure of the materials. The Supplier shall submit to the IO the proposed cleaning procedure for approval/acceptance.
- The demonstration of meeting the above cleaning requirements represents a Hold Point (HP).

5.4.4 Packaging and Handling

- Any special IO or regulatory transportation requirements shall be documented and provided to the Supplier prior to shipment.
- Subsequent to the Factory Acceptance Test, the components shall be partially disassembled to the maximum size that can be shipped. All components requiring re-assembly at the ITER Site shall be clearly labelled and tagged.
- The supplier shall design and supply appropriate packaging, adequate to prevent damage during shipping lifting and handling operations. Where appropriate, accelerometers or other sensors shall be fitted to ensure that limits have not been exceeded. When accelerometers are used, they shall be fixed onto each box and shall be capable of recording the acceleration along three perpendicular directions. Shock absorbing material shall be used. Seaworthy Packing is mandatory.
- Each shipment shall be accompanied by a Delivery Report shall be prepared by the Supplier, stating as a minimum:
  a. The packing date;
  b. The full address of the place of delivery and the name of the person responsible to receive the package, as well as of the Supplier's name and full address;
  c. Bill of Materials
  d. Security Measures
  e. Release Note;
  f. Packing List;
  g. Material Safety Sheet;
  h. The declaration of integrity of the package;
  i. The declaration of integrity of the components;
  j. Any additional relevant information on the status of the components.
- The Delivery Report shall be signed by a representative of the IO and its Supplier. The signature by the IO of the Delivery Report prior to shipment represents a Hold Point (HP).
- The Manufacturing Dossier shall be provided as part of Deliverables.
- Following is the list of documents that comprises Manufacturing Dossier:
  - Contractor Release Note
  - Quality Plan
  - Testing Procedures, Specifications and Reports
  - Material Control Reports, incl. Certificates, Inspections, Concessions etc..,
  - Manufacturing Documentation, incl. Manufacturing procedures, Non-Destructive Testing (NDT) Procedures, Process specifications etc..,
  - Records of approved Non-Conformances (NCR) and Deviation Requests (DR)

6 Location for Scope of Work Execution

The locations for work implementation for each part of the Scope is out of ITER Organization.

7 IO Documents & IO Free issue items

No free issue item is expected from IO.

SUPPLY

7.1 IO Documents:

Under this scope of work, IO will deliver the following documents by the stated date:

Ref	Title	Doc ID	Expected date
1	Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0001	C5F8UC	T0
2	Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0002	BXPYMH	T0
3	Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0003	BXQC42	T0
4	Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0004	BXQFZ3	T0
5	Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0005	BXQGTE	T0
5	Cubicle Layout and Electrical Wiring Diagrams for 43CCCI-CU-0006	EJN3ZF	T0

8 Deliverables and Schedule Milestones

8.1.1 Schedule for delivery

Reference ID	Description	UOM	Quantity	Delivery Time*	Comment
43CCCI-CU-0001	*I&C Cubicle*	*Piece*	*1*	*T0+6 months*	*Individual Packing*
43CCCI -CU-0002	*I&C Cubicle*	*Piece*	*1*	*T0+6 months*	*Individual Packing*
43CCCI -CU-0003	*I&C Cubicle*	*Piece*	*1*	*T0+6 months*	*Individual Packing*
43CCCI -CU-0004	*I&C Cubicle*	*Piece*	*1*	*T0+6 months*	*Individual Packing*
43CCCI -CU-0005	*I&C Cubicle*	*Piece*	*1*	*T0+6 months*	*Individual Packing*
43CCCI -CU-0006	*I&C Cubicle*	*Piece*	*1*	*T0+6 months*	*Individual Packing*

The maximum expected duration from the contract signature to the supply of the scope of work is 6 months.

8.1.2 List of deliverable documentation

The Supplier shall provide IO with the documents and data required in the application of this technical specification, the GM3S Ref [1] and any other requirement derived from the application of the contract.

You can find here below a minimum list of documentation, but not limited to, that are required within the expected timing:

Category	Document Type	Further Description	Expected Timing (T0+x) *
Contract Management	Quality Assurance Plan	Kick off meeting	T0

SUPPLY

Bill Of Material-BOM	Item Type List	Design review	T0+6
Installation Drawing	Assembly Configuration Drawing	Design review	T0+6
Assembly or Component Definition Drawing	Assembly Drawing	Design review	T0+6
Assembly or Component Definition Drawing	Cubicle Drawing	Design review	T0+6
Electrical Diagram	Detailed Wiring Diagram-WD	Design review	T0+6
Other Manufacturing Input	Data Sheet	Manufacturing Readiness Review	T0+6
Other Manufacturing Input	Manufacturing Plan	Manufacturing Readiness Review	T0+6
Acceptance Instruction or Procedure	Factory Acceptance Test Procedure	FAT readiness review	T0+6
Acceptance Record or Report	Factory Acceptance Test Report-FATR	Delivery Readiness Review (DRR)	T0+6
Shipping or Logistics Record	Delivery Report	Delivery Readiness Review (DRR)	T0+6
Software or Programming Code	Software Configuration		T0+6

(*) T0 = Commencement Date of the contract ; X in months.

Supplier shall prepare their document schedule based on the above and using the template available in the GM3S Ref [1] appendix II (click here to download).

9 Quality Assurance requirements

The Quality class under this contract is 4, [Ref 1] GM3S section 8 applies in line with the defined Quality Class.

10 Safety requirements

10.1 Nuclear class Safety

ITER is a Nuclear Facility identified in France by the number-INB-174 (“Installation Nucléaire de Base”).

For Protection Important Components and in particular Safety Important Class components (SIC), the French Nuclear Regulation must be observed, in application of the Article 14 of the ITER Agreement.

In such case the Suppliers and Subcontractors must be informed that:

- The Order 7th February 2012 applies to all the components important for the protection (PIC) and the activities important for the protection (PIA).
- The compliance with the INB-order must be demonstrated in the chain of external contractors.

SUPPLY

- In application of article II.2.5.4 of the Order 7th February 2012, contracted activities for supervision purposes are also subject to supervision done by the Nuclear Operator.

For the Protection Important Components, structures and systems of the nuclear facility, and Protection Important Activities the contractor shall ensure that a specific management system is implemented for his own activities and for the activities done by any Supplier and Subcontractor following the requirements of the Order 7th February 2012 (see Safety Guides section in Chapter 4).

10.2 Seismic class

No specific safety requirement related to PIC and/or PIA and/or PE/NPE components apply.

11 Special Management requirements

11.1 CAD design requirements

For the contracts where CAD design tasks are involved, the following shall apply:

The Supplier shall provide a Design Plan to be approved by the IO. Such plan shall identify all design activities and design deliverables to be provided by the Contractor as part of the contract.

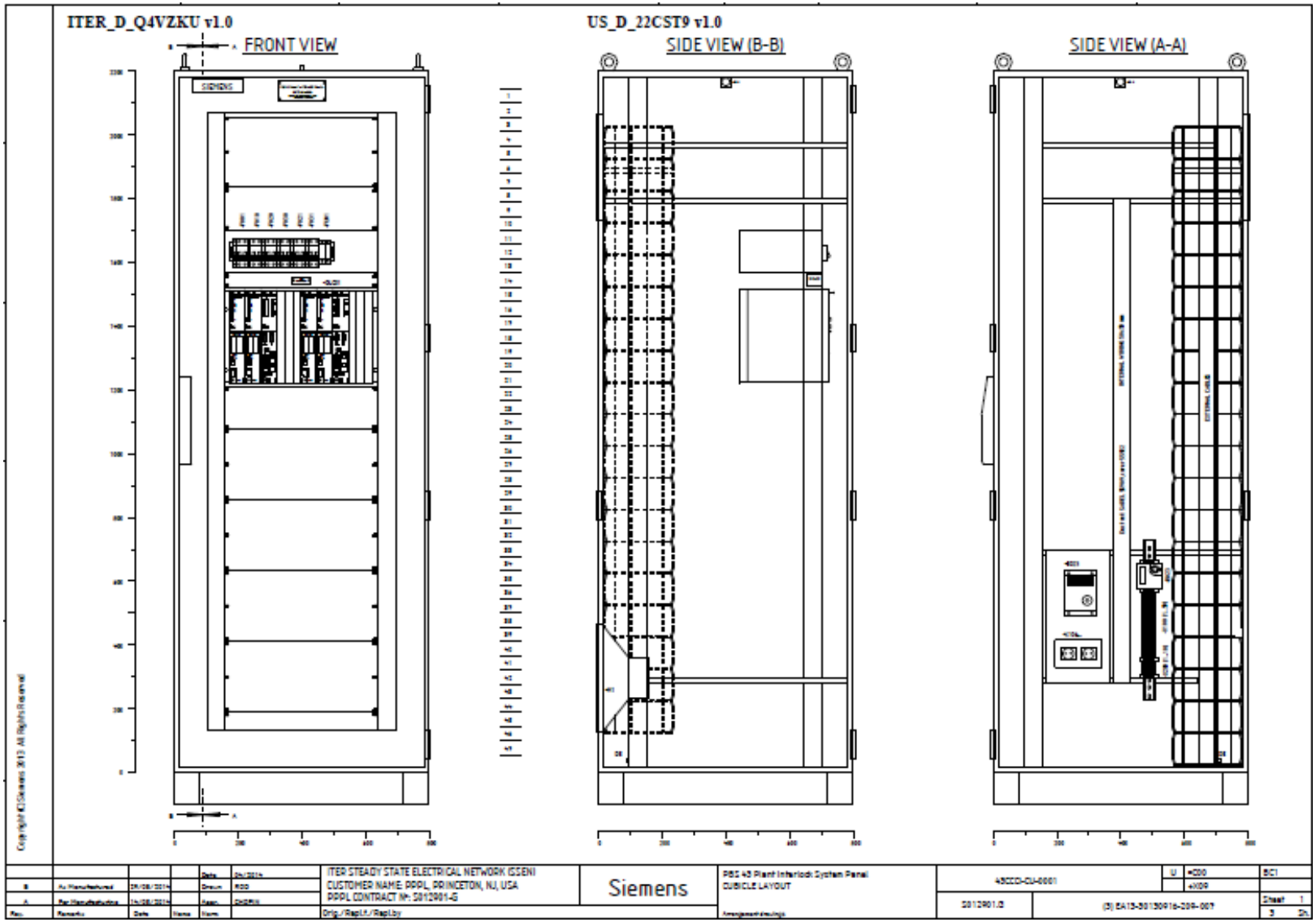
The Supplier shall ensure that all designs, CAD data and drawings delivered to IO comply with the Procedure for the Usage of the ITER CAD Manual (2F6FTX), and with the Procedure for the Management of CAD Work & CAD Data (Models and Drawings 2DWU2M).

The reference scheme is for the Supplier to work in a fully synchronous manner on the ITER CAD platform (see detailed information about synchronous collaboration in the ITER (P7Q3J7) - Specification for CAD data production in ITER Contracts.). This implies the usage of the CAD software versions as indicated in CAD Manual 07 - CAD Fact Sheet (249WUL) and the connection to one of the ITER project CAD data-bases. Any deviation against this requirement shall be defined in a Design Collaboration Implementation Form (DCIF) prepared and approved by DO and included in the call-for-tender package. Any cost or labour resulting from a deviation or non-conformance of the Supplier with regards to the CAD collaboration requirement shall be incurred by the Supplier. The contractor shall submit the drawings and diagram in the SMDD for the IO approval according to the procedure for the Management of Diagrams and Drawings in pdf Format Using the SMDD Application (KFMK2B).

12 Appendices

Appendix Number	Appendix Name
I	Obsolete Layout for 43CCCI-CU-0001
II	Updated Layout for 43CCCI-CU-0001

Appendix I – Obsolete Layout for 43CCCI-CU-0001



Appendix I – Updated Layout for 43CCCI-CU-0001