

BIDDING DOCUMENT

GS-02b: Procurement of Equipment for Interim Campus Workshop- Welding Lab

**Single-Stage: Two-Envelope
Bidding Procedure**

Issued on: 17th November 2023

Invitation for Bids No.: GS-02 b

OCB No.: GS-02 b

Purchaser: Assam Skill Development Mission

C o u n t r y : I n d i a

Preface

This Bidding Document for Procurement of Goods has been prepared by Skill, Employment and Entrepreneurship Department, Govt. of Assam and is based on the Standard Bidding Document for the Procurement of Goods issued by the Asian Development Bank, dated Dec, 2021.

This document reflects the structure and the provisions of the Master Procurement Document for the Procurement of Goods, except where specific considerations within the Asian Development Bank have required a change.

Table of Contents

PART I – Bidding Procedures

Section 1.	Instructions to Bidders	1-1
Section 2.	Bid Data Sheet	2-1
Section 3.	Evaluation and Qualification Criteria	3-1
Section 4.	Bidding Forms	4-1
Section 5.	Eligible Countries.....	5-1

PART II – Supply Requirements

Section 6.	Schedule of Supply.....	6-1
------------	-------------------------	-----

PART III – Conditions of Contract and Contract Forms

Section 7.	General Conditions of Contract	7-1
Section 8.	Special Conditions of Contract	8-1
Section 9.	Contract Forms.....	9-1

Section 1: Instructions to Bidders

Table of Contents

A.	General	1-3
1.	Scope of Bid	1-3
2.	Source of Funds	1-3
3.	Fraud and Corruption	1-3
4.	Eligible Bidders	1-6
5.	Eligible Goods and Related Services	1-8
B.	Contents of Bidding Document.....	1-8
6.	Sections of the Bidding Document	1-8
7.	Clarification of Bidding Document	1-8
8.	Amendment of Bidding Document.....	1-9
C.	Preparation of Bids	1-9
9.	Cost of Bidding	1-9
10.	Language of Bid	1-9
11.	Documents Comprising the Bid	1-9
12.	Bid Submission Sheets and Price Schedules	1-10
13.	Alternative Bids.....	1-10
14.	Bid Prices and Discounts.....	1-10
15.	Currencies of Bid	1-12
16.	Documents Establishing the Eligibility of the Bidder	1-12
17.	Documents Establishing the Eligibility of Goods and Related Services.....	1-13
18.	Documents Establishing the Conformity of the Goods and Related Services to the Bidding Document	1-13
19.	Documents Establishing the Qualifications of the Bidder.....	1-13
20.	Period of Validity of Bids.....	1-14
21.	Bid Security/Bid-Securing Declaration	1-14
22.	Format and Signing of Bid	1-15
D.	Submission and Opening of Bids	1-16
23.	Sealing and Marking of Bids.....	1-16
24.	Deadline for Submission of Bids.....	1-16
25.	Late Bids.....	1-17
26.	Withdrawal, Substitution, and Modification of Bids.....	1-17

27.	Bid Opening	1-17
E.	Evaluation and Comparison of Bids	1-19
28.	Confidentiality.....	1-19
29.	Clarification of Bids	1-20
30.	Deviations, Reservations, and Omissions	1-20
31.	Examination of Bids	1-20
32.	Responsiveness of Technical Bid	1-20
33.	Nonmaterial Nonconformities.....	1-21
34.	Qualification of the Bidder	1-21
35.	Examination of Price Bids	1-22
36.	Correction of Arithmetical Errors	1-22
37.	Conversion to Single Currency	1-22
38.	Domestic Preference	1-22
39.	Evaluation and Comparison of Price Bids.....	1-22
40.	Abnormally Low Bids.....	1-24
41.	Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids	1-24
42.	Notice of Intention for Award of Contract	1-24
F.	Award of Contract	1-25
43.	Award Criteria	1-25
44.	Purchaser's Right to Vary Quantities at Time of Award.....	1-25
45.	Notification of Award	1-25
46.	Signing of Contract.....	1-26
47.	Performance Security.....	1-26
48.	Bidding-Related Complaints	1-26

A. General

- 1. Scope of Bid**
- 1.1 In connection with the Invitation for Bids (IFB) indicated in the Bid Data Sheet (BDS), the Purchaser, as indicated in the BDS, issues this Bidding Document for the supply of Goods and Related Services incidental thereto as specified in Section 6 (Schedule of Supply). The name, identification, and number of lots of the open competitive bidding (OCB) are provided in the BDS.
- 1.2 Throughout this Bidding Document,
- (a) the term “in writing” means communicated in written form and delivered against receipt;
 - (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and
 - (c) “day” means calendar day.
- 2. Source of Funds**
- 2.1 The Borrower or Recipient (hereinafter called “Borrower”) indicated in the BDS has applied for or received financing (hereinafter called “funds”) from the Asian Development Bank (hereinafter called “ADB”) toward the cost of the project named in the BDS. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued.
- 2.2 Payments by ADB will be made only at the request of the Borrower and upon approval by ADB in accordance with the terms and conditions of the Financing Agreement between the Borrower and ADB (hereinafter called the Financing Agreement), and will be subject in all respects to the terms and conditions of that Financing Agreement. No party other than the Borrower shall derive any rights from the Financing Agreement or have any claim to the funds.
- 3. Fraud and Corruption**
- 3.1 ADB requires Borrowers (including beneficiaries of ADB-financed activity) and their personnel, as well as firms and individuals participating in an ADB-financed activity, including but not limited to, Bidders, Suppliers, and Contractors, agents, subcontractors, subconsultants, service providers, subsuppliers, manufacturers (including their respective officers, directors, employees and personnel) under ADB-financed contracts to observe the highest standard of ethics during the procurement and execution of such contracts in accordance with ADB’s Anticorruption Policy (1998, as amended from time to time). In pursuance of this policy, ADB
- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
 - (ii) “fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

- (iii) “coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - (iv) “collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;
 - (v) “abuse” means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;
 - (vi) “conflict of interest” means any situation in which a party has interests that could improperly influence that party’s performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations; and
 - (vii) “integrity violation” is any act, as defined under ADB’s Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB’s Anticorruption Policy, including (i) to (vi) above and the following: obstructive practice, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB’s Anticorruption Policy, including failure to adhere to the highest ethical standard.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award or any of its officers, directors, employees, personnel, subconsultants, subcontractors, service providers, suppliers or manufacturers has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
 - (c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of ADB-financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation, including by failing to inform ADB in a timely manner at the time they knew of the integrity violations;
 - (d) will impose remedial actions on a firm or an individual, at any time, in accordance with ADB’s Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate¹ in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged

¹ Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

- in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and
- (e) will have the right to require that a provision be included in bidding documents and in contracts financed, administered, or supported by ADB, requiring Bidders, suppliers and contractors, consultants, manufacturers, service providers and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, to permit ADB or its representative to inspect the site and their assets, accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB.
- 3.2 All Bidders, consultants, contractors, suppliers, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, are obliged to cooperate fully in any investigation when requested by ADB to do so. As determined on a case by case basis by ADB, such cooperation includes, but is not limited to, the following:
- (a) being available to be interviewed and replying fully and truthfully to all questions asked;
- (b) providing ADB with any items requested that are within the party's control including, but not limited to, documents and other physical objects;
- (c) upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;
- (d) cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB's Information and Communication Technology (ICT) resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);
- (e) cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and
- (f) preserving and protecting confidentiality of all information discussed with, and as required by, ADB
- 3.3 All Bidders, consultants, contractors and suppliers shall require their officers, directors, employees, personnel, agents to ensure that, in its contracts with its subconsultants, Subcontractors and other third parties engaged or involved in ADB-related activities, such subconsultants, Subcontractors and other third parties similarly are obliged to cooperate fully in any investigation when requested by ADB to do so.
- 3.4 The Purchaser hereby puts the Bidder on notice that the Bidder or

any Joint Venture partner of the Bidder (if any) may not be able to receive any payments under the Contract if the Bidder or any of its Joint Venture partners, as appropriate, is, or is owned (in whole or in part) by a person or entity subject to applicable sanctions.

- 3.5 Furthermore, Bidders shall be aware of the provision stated in Subclause 3.2 and Subclause 35.1 (a)(iii) of the General Conditions of Contract.

4. Eligible Bidders

- 4.1 A Bidder may be a natural person, private entity, or government-owned enterprise subject to ITB 4.5-or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture. In the case of a Joint Venture,

- (a) all parties to the Joint Venture shall be jointly and severally liable; and
- (b) the Joint Venture shall nominate a representative who shall have the authority to conduct all businesses for and on behalf of any and all the parties of the Joint Venture during the bidding process and, in the event the Joint Venture is awarded the Contract, during contract execution.

- 4.2 A Bidder, and all parties constituting the Bidder, shall have the nationality of an eligible country, in accordance with Section 5 (Eligible Countries). A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract, including related services.

- 4.3 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if any of, including but not limited to, the following apply:

- (a) they have controlling shareholders in common; or
- (b) they receive or have received any direct or indirect subsidy from any of them; or
- (c) they have the same legal representative for purposes of this Bid; or
- (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the Bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
- (e) a Bidder participates in more than one bid in this bidding process, either individually or as a partner in a Joint Venture, except for alternative offers permitted under ITB 13. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms

- of ITB 4.3 (a)–(d) above, this does not limit the participation of a Bidder as a subcontractor in another bid or of a firm as a subcontractor in more than one Bid; or
- (f) a Bidder, Joint Venture partner, associates, parent company or any affiliated entity, participated as a consultant in the preparation of the design or technical specifications of the goods and services that are the subject of the Bid; or
 - (g) a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Purchaser or Borrower as Project Manager for the contract; or
 - (h) a Bidder would be providing goods, works, or nonconsulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
 - (i) A Bidder that has a financial or familial relationship with staff of the Purchaser including project implementing/executing agency, or of a recipient of a part of the loan who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to ADB throughout the procurement process and execution of the contract.
- 4.4 A firm will not be eligible to participate in any procurement activities under an ADB-financed, -administered, or -supported project while under temporary suspension or debarment by ADB pursuant to its Anticorruption Policy (see ITB 3), whether such debarment was directly imposed by ADB, or enforced by ADB pursuant to the Agreement for Mutual Enforcement of Debarment Decisions. A bid from a temporarily suspended or debarred firm will be rejected and such bid may be in breach of debarment conditions, thereby subject to further ADB's investigation.
- 4.5 Government-owned enterprises in the Purchaser's country shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the Purchaser.
- 4.6 A Bidder shall not be under suspension from Bidding by the Purchaser as a result of the execution of a Bid–Securing Declaration.
- 4.7 Bidders shall provide such evidence of their continued eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.
- 4.8 Bidders shall be excluded if, by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods from, or payments to, a particularly country,

person or entity in respect of goods or services originating in that country. Where the Borrower's country prohibits payments to a particular person or entity or for particular goods or services by such an act of compliance, that firm shall be excluded.

- 5. Eligible Goods and Related Services**
- 5.1 All Goods and Related Services to be supplied under the Contract and financed by ADB, shall have their country of origin in eligible source countries as defined in ITB 4.2, and all expenditures under the Contract will be limited to such Goods and Related Services.
- 5.2 For purposes of this clause, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as insurance, transportation, installation, commissioning, training, and initial maintenance.
- 5.3 The term "country of origin" means the country where the goods have been mined, grown, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its imported components.
- 5.4 The nationality of the firm that produces, assembles, distributes, or sells the goods shall not determine their origin.

B. Contents of Bidding Document

- 6. Sections of the Bidding Document**
- 6.1 The Bidding Document consists of Parts I, II, and III, which include all the sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITB 8.
- PART I Bidding Procedures**
- Section 1 Instructions to Bidders (ITB)
 - Section 2 Bid Data Sheet (BDS)
 - Section 3 Evaluation and Qualification Criteria (EQC)
 - Section 4 Bidding Forms (BDF)
 - Section 5 Eligible Countries (ELC)
- PART II Supply Requirements**
- Section 6 Schedule of Supply (SS)
- PART III Conditions of Contract and Contract Forms**
- Section 7 General Conditions of Contract (GCC)
 - Section 8 Special Conditions of Contract (SCC)
 - Section 9 Contract Forms (COF)
- 6.2 The IFB issued by the Purchaser is not part of the Bidding Document.
- 6.3 The Purchaser is not responsible for the completeness of the Bidding Document and its addenda, if they were not obtained directly from the source stated by the Purchaser in the IFB.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all

information or documentation required by the Bidding Document, may result in the rejection of the Bid.

- | | | |
|---|-----|---|
| 7. Clarification of Bidding Document | 7.1 | A prospective Bidder requiring any clarification on the Bidding Document shall contact the Purchaser in writing at the Purchaser's address indicated in the BDS. The Purchaser will respond in writing to any request for clarification, provided that such request is received no later than 21 days prior to the deadline for submission of Bids. The Purchaser shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Document as a result of a clarification, it shall do so following the procedure under ITB 8 and ITB 24.2. |
| 8. Amendment of Bidding Document | 8.1 | At any time prior to the deadline for submission of the Bids, the Purchaser may amend the Bidding Document by issuing addenda. |
| | 8.2 | Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document directly from the Purchaser in accordance with ITB 6.3. |
| | 8.3 | To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of the Bids, pursuant to ITB 24.2 |

C. Preparation of Bids

- | | | |
|---|------|---|
| 9. Cost of Bidding | 9.1 | The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Purchaser shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. |
| 10. Language of Bid | 10.1 | The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern. |
| 11. Documents Comprising the Bid | 11.1 | The Bid shall comprise two envelopes submitted simultaneously, one containing the Technical Bid and the other the Price Bid, both envelopes enclosed together in an outer single envelope. |

- 11.2 The Technical Bid submitted by the Bidder shall comprise the following:
- (a) Technical Bid Submission Sheet;
 - (b) Bid Security or Bid-Securing Declaration, in accordance with ITB 21;
 - (c) alternative Technical Bid, if permissible, in accordance with ITB 13;
 - (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 22;
 - (e) documentary evidence in accordance with ITB 16, establishing the Bidder's eligibility to bid;
 - (f) documentary evidence in accordance with ITB 17, that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
 - (g) documentary evidence in accordance with ITB 18 and ITB 32, that the Goods and Related Services conform to the Bidding Document;
 - (h) documentary evidence in accordance with ITB 19, establishing the Bidder's qualifications to perform the contract if its Bid is accepted; and
 - (i) any other document required in the BDS.
- 11.3 The Price Bid submitted by the Bidder shall comprise the following:
- (a) Price Bid Submission Sheet and the applicable Price Schedules, in accordance with ITB 12, ITB 14, and ITB 15;
 - (b) alternative Price Bid corresponding to the alternative Technical Bid, if permissible, in accordance with ITB 13; and
 - (c) any other document required in the BDS.
- 12. Bid Submission Sheets and Price Schedules**
- 12.1 The Bidder shall submit the Technical Bid Submission Sheet and the Price Bid Submission Sheet using the form furnished in Section 4 (Bidding Forms). These forms must be completed without any alterations to their format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
- 12.2 The Bidder shall submit, as part of the Price Bid, the Price Schedules for Goods and Related Services, according to their origin as appropriate, using the forms furnished in Section 4 (Bidding Forms) and as required in the BDS.
- 13. Alternative Bids**
- 13.1 Unless otherwise indicated in the BDS, alternative Bids shall not be considered.
- 14. Bid Prices and Discounts**
- 14.1 The prices and discounts quoted by the Bidder in the Price Bid Submission Sheet and in the Price Schedules shall conform to the requirements specified below.

- 14.2 All items in the Schedule of Supply must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. Items not listed in the Price Schedule shall be assumed not to be included in the Bid, and provided that the Bid is substantially responsive, the corresponding adjustment shall be applied in accordance with ITB 33.3. Unit rates and prices for all items in the Schedule of Supply shall be expressed in positive values. If unit rates and prices are expressed in negative values, the bid will be rejected.
- 14.3 The price to be quoted in the Price Bid Submission Sheet shall be the total price of the Bid excluding any discounts offered. Absence of the total bid price in the Price Bid Submission Sheet may result in the rejection of the Bid.
- 14.4 The Bidder shall quote discounts and the methodology for their application in the Price Bid Submission Sheet.
- 14.5 The terms EXW, CIF, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce, at the date of the Invitation for Bids or as specified in the BDS.
- 14.6 Prices proposed in the Price Schedule Forms for Goods and Related Services, shall be disaggregated, when appropriate, as indicated in this sub-clause. This disaggregation shall be solely for the purpose of facilitating the comparison of Bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered
- (a) for Goods offered from within the Purchaser's country:
- (i) the price of the goods quoted EXW (ex works, ex factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of goods quoted ex works or ex factory, or on the previously imported goods of foreign origin quoted ex warehouse, ex showroom, or off-the-shelf;
 - (ii) sales tax and all other taxes applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder; and
 - (iii) the total price for the item.
- (b) for Goods offered from outside the Purchaser's country:
- (i) the price of the goods quoted CIF (named port of destination), or CIP (border point), or CIP (named place of destination), in the Purchaser's country, as specified in the BDS;
 - (ii) the price of the goods quoted FOB port of shipment (or FCA, as the case may be), if specified in the BDS; and

- (iii) the total price for the item.
 - (c) for Related Services whenever such are specified in the Schedule of Supply:
 - (i) the local currency cost component of each item comprising the Related Services; and
 - (ii) the foreign currency cost component of each item comprising the Related Services, inclusive of all customs duties, sales and other similar taxes applicable in the Purchaser's country, payable on the Related Services, if the Contract is awarded to the Bidder.
- 14.7 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, unless otherwise specified in the BDS. A Bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 32. If in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract in accordance with Clause 15.2 of the General Conditions of Contract in Section 7, a Bid submitted with a fixed price will also be treated as nonresponsive and be rejected.
- 14.8 If so indicated in ITB 1.1, Bids are being invited for individual contracts (lots) or for any combination of contracts (packages). Unless otherwise indicated in the BDS, prices quoted shall correspond to 100% of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer any price discount for the award of more than one Contract shall specify in their Price Bids the price discount applicable to each package, or alternatively, to individual Contracts within the package. Price discounts shall be submitted in accordance with ITB 14.4, provided the Price Bids for all lots are submitted and opened at the same time.
- 15. Currencies of Bid**
- 15.1 Bid prices shall be quoted in the following currencies:
- (a) Bidders may express their bid price in any freely convertible currency. If a Bidder wishes to be paid in a combination of amounts in different currencies, it may quote its price accordingly.
 - (b) If some of the expenditures for the Related Services are to be incurred in the borrowing country, such expenditures should be expressed in the Bid and will be payable in the Purchaser's currency.
- 16. Documents Establishing the Eligibility of the Bidder**
- 16.1 To establish their eligibility in accordance with ITB 4, Bidders shall
- (a) complete the eligibility declarations in the Bid Submission Sheet, included in Section 4 (Bidding Forms); and
 - (b) if the Bidder is an existing or intended Joint Venture in accordance with ITB 4.1, submit a copy of the Joint Venture Agreement, or a letter of intent to enter into such an Agreement. The respective document shall be signed by all legally authorized signatories of all the parties to the existing or

intended Joint Venture, as appropriate.

- | | | |
|--|------|---|
| 17. Documents Establishing the Eligibility of Goods and Related Services | 17.1 | To establish the eligibility of the Goods and Related Services, in accordance with ITB 5, Bidders shall complete the Country of Origin Declaration Form included in Section 4 (Bidding Forms). |
| 18. Documents Establishing the Conformity of the Goods and Related Services to the Bidding Document | 18.1 | To establish the conformity of the Goods and Related Services to the Bidding Document, the Bidder shall furnish as part of its Technical Bid documentary evidence that the Goods and Related Services conform to the requirements specified in Section 6 (Schedule of Supply). |
| | 18.2 | The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item-by-item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to those requirements, and if applicable, a statement of deviations and exceptions to the provisions of Section 6 (Schedule of Supply). |
| | 18.3 | Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in Section 6 (Schedule of Supply), are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in Section 6 (Schedule of Supply). |
| 19. Documents Establishing the Qualifications of the Bidder | 19.1 | To establish its qualifications to perform the Contract, the Bidder shall submit as part of its Technical Proposal the evidence indicated for each qualification criteria specified in Section 3 (Evaluation and Qualification Criteria). |
| | 19.2 | If so required in the BDS, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section 4 (Bidding Forms) to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's country. |
| | 19.3 | If so required in the BDS, a Bidder that does not conduct business within the Purchaser's country shall submit evidence that it will be represented by an agent in the country equipped and able to carry out the Supplier's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications. |
| 20. Period of | 20.1 | Bids shall remain valid for the bid validity period specified in the |

- Validity of Bids**
- BDS. The bid validity period starts from the date fixed for the bid submission deadline date prescribed by the Purchaser in accordance with ITB 24.1. A Bid valid for a shorter period shall be rejected by the Purchaser as nonresponsive.
- 20.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB 21, it shall also be extended 28 days beyond the deadline of the extended bid validity period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid.
- 21. Bid Security/
Bid-Securing
Declaration**
- 21.1 Unless otherwise specified in the BDS, the Bidder shall furnish as part of its Bid, in original form, either a Bid-Securing Declaration or a bid security as specified in the BDS. In the case of a bid security, the amount and currency shall be as specified in the BDS.
- 21.2 If a Bid-Securing Declaration is required pursuant to ITB 21.1, it shall use the form included in Section 4 (Bidding Forms). The Purchaser will declare a Bidder ineligible to be awarded a Contract for a specified period of time, as indicated in the BDS, if a Bid-Securing Declaration is executed.
- 21.3 If a bid security is specified pursuant to ITB 21.1, the bid security shall be, at the Bidder's option, in any of the following forms:
- (a) an unconditional bank guarantee (hard copy of the bank guarantee or in the form of SWIFT message MT760), or
 - (b) an irrevocable letter of credit, or
 - (c) a cashier's or certified check.
- all from a reputable source from an eligible country as described in Section 5 (Eligible Countries). In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section 4 (Bidding Forms), or another form acceptable to the Purchaser. The form must include the complete name of the Bidder. The bid security shall be valid for 28 days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 20.2.
- 21.4 Unless otherwise specified in the BDS, any bid not accompanied by a substantially compliant bid security or Bid-Securing Declaration, if one is required in accordance with ITB 21.1, shall be rejected by the Purchaser as nonresponsive.
- 21.5 If a bid security is specified pursuant to ITB 21.1, the bid security of substantially nonresponsive Technical Bids shall be returned before opening the Price Bids. The bid security of unsuccessful Bidders at Price Bid evaluation shall be returned promptly upon the successful Bidder's furnishing of the performance security pursuant to ITB 47.

- 21.6 If a bid security is specified pursuant to ITB 21.1, the bid security of the successful Bidder shall be returned promptly once the successful Bidder has signed the Contract Agreement and furnished the required performance security.
- 21.7 The bid security may be forfeited or the Bid-Securing Declaration executed, if
- (a) notwithstanding ITB 26.3, a Bidder withdraws its bid during the period of bid validity as specified by the Bidder on the Technical Bid Submission Sheet, except as provided in ITB 20.2; or
 - (b) the successful Bidder fails to
 - (i) sign the Contract Agreement in accordance with ITB 46;
 - (ii) furnish a performance security in accordance with ITB 47; or
 - (iii) accept the arithmetical corrections of its bid in accordance with ITB 36.
- 21.8 If a bid security is required as per ITB 21.1, the bid security of a Joint Venture shall be in the name of the Joint Venture that submits the bid. If the Joint Venture has not been legally constituted at the time of bidding, the bid security shall be in the name of any or all of the Joint Venture partners. If a Bid-Securing Declaration is required as per ITB 21.1, the Bid-Securing Declaration of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the Bid-Securing Declaration shall be in the names of all future partners, as named in the letter of intent mentioned in ITB 4.1.
- 22. Format and Signing of Bid**
- 22.1 The Bidder shall prepare one original set of the Technical Bid and one original set of the Price Bid as described in ITB 11 and clearly mark each "ORIGINAL - TECHNICAL BID" and "ORIGINAL - PRICE BID". In addition, the Bidder shall submit copies of the Technical Bid and the Price Bid, in the number specified in the BDS and clearly mark them "COPY NO... - TECHNICAL BID" and "COPY NO.... - PRICE BID". In the event of any discrepancy between the original and the copies, the original shall prevail.
- 22.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. If a Bidder submits a deficient authorization, the Bid shall not be rejected in the first instance. The Purchaser shall request the Bidder to submit an acceptable authorization within the number of days as specified in the BDS. Failure to provide an acceptable authorization within the period stated in the Purchaser's request shall cause the rejection of the Bid. If either the Bid Submission Sheet or the Bid-Securing Declaration (if applicable) is not signed, the Bid shall be rejected.

- 22.3 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person signing the bid.

D. Submission and Opening of Bids

- 23. Sealing and Marking of Bids**
- 23.1 Bidders shall submit their bids as specified in the BDS. Procedures for submission, sealing and marking are as follows:
- (a) Bidders submitting Bids by mail or by hand shall enclose the original of the Technical Bid, the original of the Price Bid, and each copy of the Technical Bid and each copy of the Price Bid, including alternative Bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL - TECHNICAL BID", "ORIGINAL - PRICE BID" and "COPY NO... - TECHNICAL BID" and "COPY NO.... - PRICE BID", as appropriate. These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB 23.2 to ITB 23.6.
 - (b) Bidders submitting Bids electronically shall follow the electronic bid submission procedures specified in the BDS.
- 23.2 The inner and outer envelopes shall
- (a) bear the name and address of the Bidder;
 - (b) be addressed to the Purchaser in accordance with ITB 24.1; and
 - (c) bear the specific identification of this bidding process indicated in the BDS.
- 23.3 The outer envelopes and the inner envelopes containing the Technical Bids shall bear a warning not to open before the time and date for the opening of Technical Bids, in accordance with ITB 27.1.
- 23.4 The inner envelopes containing the Price Bids shall bear a warning not to open until advised by the Purchaser in accordance with ITB 27.2.
- 23.5 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the Bid.
- 23.6 Alternative Bids, if permissible in accordance with ITB 13, shall be prepared, sealed, marked, and delivered in accordance with the provisions of ITB 22 and ITB 23, with the inner envelopes marked in addition "ALTERNATIVE NO...." as appropriate
- 24. Deadline for Submission of Bids**
- 24.1 Bids must be received by the Purchaser at the address and no later than the date and time indicated in the BDS.

- 24.2 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document in accordance with ITB 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 25. Late Bids**
- 25.1 The Purchaser shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 24. Any Bid received by the Purchaser after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.
- 26. Withdrawal, Substitution, and Modification of Bids**
- 26.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 22.2 (except for withdrawal notices, which do not require copies). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be
- (a) prepared and submitted in accordance with ITB 22 and ITB 23 (except for withdrawal notices, which do not require copies), and in addition, the respective inner and outer envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;" and
 - (b) received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB 24.
- 26.2 Bids requested to be withdrawn in accordance with ITB 26.1 shall be returned unopened to the Bidders.
- 26.3 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Technical Bid Submission Sheet or any extension thereof.
- 27. Bid Opening**
- 27.1 The Purchaser shall open the Technical Bids in public at the address, on the date, and time specified in the BDS in the presence of Bidder's designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 23.1, shall be as specified in the BDS.
- 27.2 The Price Bids will remain unopened and will be held in custody of the Purchaser until the time of opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Purchaser. If the Technical Bid and the Price Bid are submitted together in one envelope, the Purchaser may reject the Bid. Alternatively, the Price Bid may be immediately resealed for later evaluation.
- 27.3 First, envelopes marked "WITHDRAWAL" shall be opened, read out, and recorded, and the envelope containing the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal

shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out and recorded at bid opening.

- 27.4 Next, outer envelopes marked "SUBSTITUTION" shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Price Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Price Bid will remain unopened in accordance with ITB 27.2. No envelope shall be substituted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out and recorded at bid opening.
- 27.5 Next, outer envelopes marked "MODIFICATION" shall be opened. No Technical Bid and/or Price Bid shall be modified unless the corresponding modification notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Price Bids, both Original as well as Modification, will remain unopened in accordance with ITB 27.2.
- 27.6 All other envelopes holding the Technical Bids shall be opened one at a time, and the following read out and recorded
- (a) the name of the Bidder;
 - (b) whether there is a modification or substitution;
 - (c) the presence of a bid security or a Bid-Securing Declaration, if required; and
 - (d) any other details as the Purchaser may consider appropriate.

Only Technical Bids and alternative Technical Bids read out and recorded at bid opening shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Technical Bid Submission Sheet are to be initialed by at least three representatives of the Purchaser attending the bid opening. No Bid shall be rejected at the opening of Technical Bids except for late bids, in accordance with ITB 25.1.

- 27.7 The Purchaser shall prepare a record of the opening of Technical Bids that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, modification, or alternative offer; and the presence or absence of a bid security or a Bid-Securing Declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 27.8 At the end of the evaluation of the Technical Bids, the Purchaser will invite bidders who have submitted substantially responsive

Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Purchaser. Bidders shall be given reasonable notice of the opening of Price Bids.

- 27.9 The Purchaser will notify in writing Bidders who have been rejected for submitting nonresponsive Technical Bids and return their Price Bids unopened together with their bid securities, before opening the Price Bids of the substantially responsive Bidders.
- 27.10 The Purchaser shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids, in the presence of Bidders' representatives who choose to attend at the address, on the date, and time specified by the Purchaser. The Bidder's representatives who are present shall be requested to sign a register evidencing their attendance.
- 27.11 All envelopes containing Price Bids shall be opened one at a time and the following read out and recorded
- (a) the name of the Bidder;
 - (b) whether there is a modification or substitution;
 - (c) the Bid Prices, including any discounts and alternative offers; and
 - (d) any other details as the Purchaser may consider appropriate.

Only Price Bids, discounts, and alternative offers read out and recorded during the opening of Price Bids shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Price Bid Submission Sheet and Price Schedules are to be initialed by at least three representatives of the Purchaser attending bid the opening. No Bid shall be rejected at the opening of Price Bids.

- 27.12 The Purchaser shall prepare a record of the opening of Price Bids that shall include, as a minimum: the name of the Bidder, the Bid Price (per lot if applicable), any discounts, and alternative offers. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders who submitted bids on time, and posted online when electronic bidding is permitted.

E. Evaluation and Comparison of Bids

- 28. Confidentiality**
- 28.1 Information relating to the examination, evaluation, comparison, and qualification of Bids, and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until the publication of Contract award.
- 28.2 Any attempt by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and postqualification of the

- Bids or Contract award decisions may result in the rejection of its Bid.
- 28.3 Notwithstanding ITB 28.2, from the time of opening the Technical Bids to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.
- 29. Clarification of Bids**
- 29.1 To assist in the examination, evaluation, comparison and post-qualification of the Bids, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder with regard to its Bid and that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the evaluation of the Price Bids, in accordance with ITB 36.
- 29.2 If a Bidder does not provide clarifications on its Bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.
- 30. Deviations, Reservations, and Omissions**
- 30.1 During the evaluation of Bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Document;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.
- 31. Examination of Technical Bids**
- 31.1 The Purchaser shall examine the Technical Bid to confirm that all documents and technical documentation requested in ITB 11.4 have been provided, and to determine the completeness of each document submitted.
- 31.2 The Purchaser shall confirm that the following documents and information have been provided in the Technical Bid. If any of these documents or information is missing, the offer shall be rejected:
- (a) Technical Bid Submission Sheet in accordance with ITB 12.1;
 - (b) written confirmation of authorization to commit the Bidder;
 - (c) bid security or Bid-Securing Declaration, if applicable; and
 - (d) Manufacturer's Authorization, if applicable.
- 32. Responsiveness of Technical Bid**
- 32.1 The Purchaser's determination of a Technical Bid's responsiveness is to be based on the contents of the Technical Bid itself, as defined in ITB 11.
- 32.2 A substantially responsive Technical Bid is one that meets the requirements of the Bidding Document without material deviation,

reservation, or omission. A material deviation, reservation, or omission is one that,

- (a) If accepted, would
 - (i) affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in Section 6 (Schedule of Supply); or
 - (ii) limits in any substantial way, inconsistent with the Bidding Document, the Purchaser's rights or the Bidder's obligations under the Contract; or
- (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Technical Bids.

32.3 The Purchaser shall examine the technical aspects of the Bid in particular, to confirm that all requirements of Section 6 (Schedule of Supply) have been met without any material deviation, reservation, or omission.

32.4 If a Technical Bid is not substantially responsive to the Bidding Document, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

33. Nonmaterial Non-conformities

33.1 Provided that a Technical Bid is substantially responsive, the Purchaser may waive nonconformities in the Bid that does not constitute a material deviation, reservation, or omission.

33.2 Provided that a Technical Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Technical Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the Price Bid of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

33.3 Provided that a Technical Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities or omissions. To this effect, the Bid Price shall be adjusted during evaluation of Price Bids, for comparison purposes only, to reflect the price of the missing or non-conforming item or component. The adjustment shall be made using the method indicated in Section 3 (Evaluation and Qualification Criteria).

34. Qualification of the Bidder

34.1 The Purchaser shall determine to its satisfaction during the evaluation of Technical Bids whether Bidders meets the qualifying criteria specified in Section 3 (Evaluation and Qualification Criteria).

34.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 19. Unless permitted in the BDS, the determination shall not take into consideration the qualifications of

- other firms such as the Bidder's subsidiaries, parent entities, or affiliates.
- 34.3 An affirmative determination shall be a prerequisite for the opening and evaluation of a Bidder's Price Bid. The Purchaser reserves the right to reject the bid of any bidder found to be in circumstances described in GCC 35.2. A negative determination shall result into the disqualification of the Bid.
- 35. Examination of Price Bids**
- 35.1 Following the opening of Price Bids, the Purchaser shall examine the Price Bids to confirm that all documents and financial documentation requested in ITB 11.3 have been provided, and to determine the completeness of each document submitted.
- 35.2 The Purchaser shall confirm that the following documents and information have been provided in the Price Bid. If any of these documents or information is missing, the offer shall be rejected:
- (a) Price Bid Submission Sheet in accordance with ITB 12.1; and
 - (b) Price Schedules, in accordance with ITB 12, ITB 14, and ITB 15.
- 36. Correction of Arithmetical Errors**
- 36.1 During the evaluation of Price Bids, the Purchaser shall correct arithmetical errors on the following basis:
- (a) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.
 - (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.
 - (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- 36.2 If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its bid security may be forfeited, or its Bid-Securing Declaration executed.
- 37. Conversion to Single Currency**
- 37.1 For evaluation and comparison of Price Bids, the Purchaser shall convert all bid prices expressed in the amounts in various currencies into a single currency, using the selling exchange rates established by the source and on the date specified in the BDS.
- 38. Domestic Preference**
- 38.1 Unless otherwise specified in the BDS, domestic preference shall not apply.
- 39. Evaluation and**
- 39.1 The Purchaser shall use the criteria and methodologies indicated in

**Comparison of
Price Bids**

this clause. No other criteria or methodology shall be permitted.

- 39.2 To evaluate a Price Bid, the Purchaser shall consider the following:
- (a) the bid price as quoted in accordance with ITB 14;
 - (b) price adjustment for correction of arithmetic errors in accordance with ITB 36.1;
 - (c) price adjustment due to discounts offered in accordance with ITB 14.4;
 - (d) adjustment for nonmaterial nonconformities in accordance with ITB 33.3;
 - (e) assessment whether the bid is abnormally low in accordance with ITB 41;
 - (f) price adjustment due to application of the evaluation criteria specified in Section 3 (Evaluation and Qualification Criteria). These criteria may include factors related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services which shall be expressed to the extent practicable in monetary terms to facilitate comparison of bids unless otherwise specified in Section 3; and
 - (g) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 37.
- 39.3 The Purchaser's evaluation of a bid will exclude and not take into account,
- (a) in the case of Goods offered from within the Purchaser's country, all sales tax and all other taxes, applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder;
 - (b) in the case of Goods offered from outside the Purchaser's country, all customs duties, sales tax, and other taxes, applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder; and
 - (c) any allowance for price adjustment during the period of performance of the Contract, if provided in the Bid.
- 39.4 If the Bidding Document allows Bidders to quote separate prices for different lots (contracts), and the award to a single Bidder of multiple lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Price Bid Submission Sheet, is as specified in Section 3 (Evaluation and Qualification Criteria).
- 39.5 The Purchaser shall compare all substantially responsive Bids to determine the lowest evaluated bid, in accordance with ITB 39.

- 40. Abnormally Low Bids**
- 40.1 An abnormally low bid is one where the bid price, in combination with other elements of the bid, appears to be so low that it raises concerns as to the capability of the Bidder to perform the contract for the offered bid price.
- 40.2 When the offered bid price appears to be abnormally low, the Purchaser shall undertake a three-step review process as follows:
- (a) identify abnormally low costs and unit rates by comparing them with the engineer's estimates, other substantially responsive bids, or recently awarded similar contracts;
 - (b) clarify and analyze the bidder's resource inputs and pricing, including overheads, contingencies and profit margins; and
 - (c) decide whether to accept or reject the bid
- 40.3 With regard to ITB 40.2 (b) above, the Purchaser will seek a written explanation from the bidder of the reasons for the offered bid price, including a detailed analysis of costs and unit prices, by reference to the scope, proposed methodology, schedule, and allocation of risks and responsibilities. This may also include information regarding the economy of the manufacturing process; the services to be provided, or the construction method to be used; the technical solutions to be adopted; and any exceptionally favorable conditions available to the bidder for the goods or services proposed.
- 40.4 After examining the explanation given and the detailed price analyses presented by the bidder, the Purchaser may:
- (a) accept the bid, if the evidence provided satisfactorily accounts for the low bid price and costs, in which case the bid is not considered abnormally low;
 - (b) accept the bid, but require that the amount of the performance security be increased at the expense of the bidder to a level sufficient to protect the Purchaser against financial loss. The amount of the performance security shall generally be not more than 20% of the contract price; or
 - (c) reject the bid if the evidence provided does not satisfactorily account for the low bid price, and make a similar determination for the next lowest evaluated bid, if required
- 41. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids**
- 41.1 The Purchaser reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to Contract award, without thereby incurring any liability to the Bidders. In case of annulment, all Bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.
- 42. Notice of Intention for Award of Contract**
- 42.1 If Standstill provisions apply as specified in the BDS, the standstill period shall be defined in the BDS to specify the duration subsequent to notification of intention for award of contract (before making the actual contract award) within which any unsuccessful bidder can challenge the proposed award.

F. Award of Contract

- 43. Award Criteria**
- 43.1 The Purchaser shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated Bid and is substantially responsive to the Bidding Document, provided further that the Bidder has remained qualified to perform the Contract satisfactorily.
- 43.2 A Bid shall be rejected if the qualification criteria as specified in Section 3 (Evaluation and Qualification Criteria) are no longer met by the Bidder whose offer has been determined to be the lowest evaluated Bid. In this event the Purchaser shall proceed to the next lowest evaluated Bid to make a similar reassessment of that Bidder's capabilities to perform satisfactorily.
- 44. Purchaser's Right to Vary Quantities at Time of Award**
- 44.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section 6 (Schedule of Supply), provided this does not exceed the percentages indicated in the BDS, and without any change in the unit prices or other terms and conditions of the Bid and the Bidding Document.
- 45. Notification of Award**
- 45.1 Prior to the expiration of the period of bid validity and upon expiry of the standstill period specified in ITB 40.1, or upon satisfactory resolution of a complaint filed within standstill period, if applicable, the Purchaser shall transmit the Notification of Award using the form included in Section 9 (Contract Forms) to the successful Bidder, in writing, that its Bid has been accepted.
- 45.2 Unless standstill period applies, upon notification of award unsuccessful Bidders may request in writing to the Purchaser for a debriefing seeking explanations on the grounds on which their Bids were not selected. The Purchaser shall promptly respond in writing and/or in a debriefing meeting to any unsuccessful Bidder who, after publication of contract award, requests a debriefing.
- 45.3 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.
- 45.4 Within 2 weeks of the award of contract or expiry of the standstill period, where such period applies, or, if a complaint has been filed within the standstill period, upon receipt of ADB's confirmation of satisfactory resolution of the complaint, the borrower shall publish in an English language newspaper or well-known freely accessible website the results identifying the Bid and lot or package numbers as applicable and the following information:
- (a) name of each Bidder who submitted a Bid;
 - (b) bid prices as read out at bid opening;
 - (c) name and evaluated prices of each Bid that was evaluated;
 - (d) name of Bidders whose Bids were rejected and the reasons for their rejection; and
 - (e) name of the winning Bidder, and the price it offered, as well as

- the duration and summary scope of the contract awarded.
- 46. Signing of Contract**
- 46.1 Promptly after notification, the Purchaser shall send to the successful Bidder the Agreement.
- 46.2 Within 28 days of receipt of the Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.
- 47. Performance Security**
- 47.1 Within 28 days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the Performance Security in accordance with the GCC, subject to ITB 40.4, using for that purpose the Performance Security Form included in Section 9 (Contract Forms), or another form acceptable to the Purchaser. If the bank issuing performance security is located outside the Purchaser's country, it shall be counter-guaranteed or encashable by a bank in the Purchaser's country.
- 47.2 Failure of the successful Bidder to submit the abovementioned performance security or sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security or execution of the Bid-Securing Declaration. In that event, the Purchaser may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.
- 48. Bidding-Related Complaints**
- 48.1 The procedures for dealing with Bidding-Related Complaints arising out of this bidding process are specified in the BDS.

Section 2: Bid Data Sheet

A. General	
ITB 1.1	The number of the Invitation for Bids (IFB) is : GS-02 b
ITB 1.1	The Purchaser is: Mission Director, Assam Skill Development Mission(ASDM)
ITB 1.1	The name of the open competitive bidding (OCB) is: Equipment for Interim Campus Workshop- Welding Lab The identification number of the OCB is: GS-02 b The number and identification of lots comprising this OCB is: Not Applicable
ITB 2.1	The Borrower is: Govt. of India
ITB 2.1	The name of the Project is: Assam Skill University Project
B. Contents of Bidding Document	
ITB 7.1	For clarification purposes only, the Purchaser's address is: Attention: Mission Director, Assam Skill Development Mission (ASDM) 3 rd floor, DECT Complex, A.K. Azad road, Rehabari, Guwahati-781008, Assam, India Telephone +91-9733895894 Purchaser: Assam Skill Development Mission E-mail address: asup.assam@gmail.com The Purchaser will also publish the response to clarifications on the web portal: https://assamtenders.gov.in including a description of the inquiry (but without identifying its source).
C. Preparation of Bids	
ITB 10.1	The language of the Bid is: English
ITB 11.2 (i)	The Bidder shall submit with its Technical Bid the following additional documents: <ol style="list-style-type: none"> 1. Checklist with page number and details of documents as per the requirement of ITB 11.2 2. Printed catalogues with make (if any) and detail technical specifications of the offered goods/equipment in as required by the Purchaser. 3. Authorization of manufacturer/affiliate (as the case may be). Authorization should be only from OEM (original equipment manufacturer) for ONLY GSOF (General Shop Outfit Equipment). Any authorization from dealer/distributor will not be accepted. 4. Bidder must submit make & model of each item along with Technical Bid 5. The bidder or each member of Joint Venture/ Intended Joint Venture as the case may be, shall submit their PAN No. (Permanent Account Number) issued by the Department of Income Tax, Government of India with the photocopy of the PAN card; Should the bidder or each/any member of Joint Venture/ Intended Joint Venture have not been issued with such PAN No., the same shall be submitted before signing the Contract; 6. Goods and Service tax registration certificate.

ITB 11.3 (c)	The Bidder shall submit with its Price Bid the following additional documents: Nil
ITB 12.2	In the e-procurement portal, the Bidders will be required to enter only the rates of ea Along with Price Schedules in Excel, the Bidder must sign and submit the scanned copy of Letter of Price Bid in PDF format on the e-procurement portal.
ITB 13.1	Alternative Bids shall not be permitted.
ITB 14.5	The Incoterms edition is: 2020
ITB 14.6 (b) (i)	For Goods offered from within the Purchaser's country, the Bidder shall quote prices using the following Incoterms: <u>CIP-interim campus ASU, Guwahati</u>
ITB 14.6 (b) (ii)	Not Applicable
ITB 14.7	The prices quoted by the Bidder shall not be adjustable.
ITB 14.8	Prices quoted for each lot shall correspond at least to 100 % of the items specified for each lot. Prices quoted for each item of a lot shall correspond at least to 100 % of the quantities specified for this item of a lot.
ITB 19.2	The Bidder is required to submit documentation to substantiate that it is a manufacturer or authorized dealer, distributor or reseller of the goods being procured.
ITB 19.3	The Bidder is not required to include with its bid, evidence that it will be represented by an Agent in the Purchaser's country.
ITB 20.1	The bid validity period shall be 150 days.
ITB 21.1	The Bidder shall furnish a Bid-Securing Declaration.
ITB 21.2	The ineligibility period will be 5 Years
ITB 21.4	No further instruction.
ITB 22.1	In addition to the original Bid, the number of copies is: NIL
ITB 22.2	The written confirmation of Authorization to sign on behalf of the Bidder shall consist of: "An organizational document (a) Power of Attorney (in case the Bidder is a partnership or a sole proprietorship or a Joint Venture); (b) Board Resolution (in case the Bidder is a corporation); (c) Letter of Authorization, written on the Bidder's letterhead, (in case the Bidder is a partnership, sole proprietorship or a Joint Venture) specifying the representative's authority to sign the Bid on behalf of, and to legally bind, the Bidder. If the Bidder is an intended or an existing Joint Venture, the power of attorney should be signed by all partners and specify the authority of the named representative of the Joint Venture to sign on behalf of, and legally bind, the intended or existing Joint Venture. If the Joint Venture has not yet been formed, also include evidence from all proposed Joint Venture partners of their intent to enter into a Joint Venture in the event of a contract award in accordance with ITB 16.1 (b)"
ITB 22.2	The Bidder shall submit an acceptable authorization within 7 days.

D. Submission and Opening of Bids	
ITB 23.1	Bidders shall submit their Bids electronically using Govt of Assam e-procurement portal at following link: https://assamtenders.gov.in
ITB 23.1 (b)	Electronic bidding submission procedures shall be: Bidders shall submit their Bids electronically through the following web portal: https://assamtenders.gov.in Bidder may withdraw, substitute, or modify its Bid –Technical or Price –after it has been submitted only by making such changes to its Bid, and as a complete replacement or withdrawal via e-procurement portal only. Such changes must be made and submitted before the deadline for submission of Bids. All bidders shall have the option of viewing the online opening of bids. Bids shall be submitted through the web portal on or before the deadline stipulated in ITB 24.1.
ITB 23.2 (c)	The identification of this bidding process is:GS02 b
ITB 24.1	Bidders shall submit their Bids electronically at e-procurement portal
ITB 24.1	The deadline for bid submission is: Date: 15 th December 2023 Time: 1400 hours (IST)
ITB 27.1	Online Bid-Opening will take place at the date and time noted below. Date: 15 th December 2023 Time: 1430 hours (IST)
ITB 27.1	The technical bid opening procedure shall be as follows: The Purchaser shall open the Technical Bids at the Employer's e-procurement portal indicated in ITB 23.1 of the BDS In case the opening date is declared as a Holiday then bid will be opened in the immediate next working day at the same time.
E. Evaluation and Comparison of Bids	
ITB 34.2	The qualifications of other firms such as the Bidder's subsidiaries, parent entities, or affiliates shall not be permitted.
ITB 37.1	The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: Indian National Rupees (INR) The source of the selling exchange rate shall be: Not Applicable The date for the selling exchange rate shall be Not Applicable
ITB 38.1	Domestic preference does not apply.
ITB 42.1	Standstill provisions shall not apply.

F. Award of Contract	
ITB 44.1	The maximum percentage by which quantities may be increased is: 25% The maximum percentage by which quantities may be decreased is: 25%
ITB 48.1	The procedures for Bidding-Related Complaints are referenced in the Procurement Regulations for ADB Borrowers (Appendix 7). The Bidder should submit its complaint following these procedures, in writing, to: For the attention: Shri Ankur Jain, Mission Director, Assam Skill Development Mission(ASDM) 3rd floor, DECT Complex, A.K. Azad road, Rehabari, Guwahati-781008, Assam, India E-mail address: asup.ceo@gmail.com

Section 3: Evaluation and Qualification Criteria

Table of Contents

1. Technical Evaluation	Error! Bookmark not defined.3-2
1.1 Technical Criteria	3-2
2. Qualification Criteria.....	3-3
2.1 Eligibility.....	3-3
2.1.1 Nationality.....	3-3
2.1.2 Conflict of Interest	3-3
2.1.3 ADB Eligibility	3-3
2.1.4 Government-Owned Enterprise	3-3
2.1.5 United Nations Eligibility.....	3-3
2.2 Experience and Technical Capacity	3-4
2.2.1 Contractual Experience	3-4
2.3 Financial Situation	3-4
2.3.1 Historical Financial Performance.....	3-4
2.3.2 Size of Operation (Average Annual Turnover) (Optional)	3-5
3 Economic Evaluation	3-6
3.1 Adjustment for Scope	3-6
3.1.1 Local Handling and Inland Transportation	3-6
3.1.2 Minor Omissions or Missing Items	3-6
3.2 Adjustment for Deviations from the Terms of Payment	3-6
3.3 Adjustment for Deviations in the Delivery and Completion Schedule	3-6
3.4 Operating and Maintenance Costs	3-6
3.5 Spare Parts	3-6
3.6 Performance and Productivity of the Goods.....	3-6
3.7 Multiple Lots (Contracts).....	3-6
3.8 Domestic Preference	3-6

1. Technical Evaluation

1.1 Technical Criteria

The cost of all quantifiable deviations or deficiencies from the technical requirements as specified in Section 6 (Schedule of Supply) shall be evaluated. The Purchaser will make its own assessment of the cost of these deviations or deficiencies for the purpose of ensuring fair comparison of Bids.

2. Qualification Criteria

2.1 Eligibility

Criteria	Compliance Requirements			Documents
	Single Entity	Joint Venture		Submission Requirements
All Partners Combined		Each Partner	One Partner	

2.1.1 Nationality

Nationality in accordance with ITB 4.2.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Technical Bid Submission Sheet; Forms ELI – 1 and ELI - 2
---	-----------------------	-----------------------	-----------------------	----------------	---

2.1.2 Conflict of Interest

No conflicts of interest in accordance with ITB 4.3.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Technical Bid Submission Sheet
--	-----------------------	-----------------------	-----------------------	----------------	--------------------------------

2.1.3 ADB Eligibility

Not having been declared ineligible by ADB, as described in ITB 4.4.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Technical Bid Submission Sheet
--	-----------------------	-----------------------	-----------------------	----------------	--------------------------------

2.1.4 Government-Owned Enterprise

Bidder required to meet conditions of ITB 4.5.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Technical Bid Submission Sheet; Forms ELI – 1 and ELI - 2
--	-----------------------	-----------------------	-----------------------	----------------	---

2.1.5 United Nations Eligibility

Not having been excluded by an act of compliance with a United Nations Security Council resolution in accordance with ITB 4.8.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Technical Bid Submission Sheet
--	-----------------------	-----------------------	-----------------------	----------------	--------------------------------

2.2 Experience and Technical Capacity

2.2.1 Contractual Experience

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Successful completion as main supplier within the last five (5) years, (FY 2018-19, 2019-20, 2020-21, 2021-22 and 2022-23 of at least two (2) contracts each valued at INR 32 Million with nature, and complexity similar* to the scope of supply described in Section 6 (Schedule of Supply).	Must meet requirement	Must meet requirement	Not applicable	Not applicable	Form EXP – 1 ^a

^a In addition to the submission of Form EXP-1, the Bidder shall provide the Signed Contract Agreement.

***Note:**

- Bidder is required to submit Purchase orders and Completion certificates from the previous purchaser as a proof.
- Experience certificate of Mixed Product range would be acceptable, provided that it contains equipment of similar nature. The bidder needs to specify the contract value of such similar equipment in the mixed product range and this should meet the contractual experience criteria. For example- In case the vendor has given the purchase order for contractual experience having items of Printer, Furniture & lab Instruments. But if the bidding lot is for furniture, the Purchase order should have minimum value of furniture supplied as per the requirement of the bid document.

2.3 Financial Situation

2.3.1 Historical Financial Performance

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Submission of audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Purchaser, for the last Three (3) years to demonstrate the current soundness of the Bidder's financial position. As a minimum, the Bidder's net worth for the last year calculated as the difference between total assets and total liabilities should	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Form FIN – 1

Criteria	Compliance Requirements			Documents
Requirement	Single	Joint Venture		Submission
be positive.				

2.3.2 Size of Operation (Average Annual Turnover):

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Minimum average annual turnover of INR 80 Million calculated as total payments received by the Bidder for contracts completed or under execution over the last five (5) years,(FY 2018-19, 2019-20, 2020-21, 2021-22 and 2022-23).	Must meet requirement	Must meet requirement	Must meet 25% of the requirement	Must meet 40% of the requirement	Form FIN – 2

3. Economic Evaluation

3.1 Adjustment for Scope

3.1.1 Local Handling and Inland Transportation

Costs for inland transportation, insurance, and other incidental costs for delivery of the goods from the EXW premises, or port of entry, or border point to Project Site as defined in Section 6 (Schedule of Supply), shall be quoted in the Price Schedule for Related Services to Be Offered from Outside and Within the Purchaser's Country provided In Section 4 (Bidding Forms). These costs will be taken into account during bid evaluation. If a Bidder fails to include such costs in its Bid, then these costs will be estimated by the Purchaser on the basis of published tariffs by the rail or road transport agencies, insurance companies, or other appropriate sources, and added to EXW or CIF or CIP price.

3.1.2 Minor Omissions or Missing Items

Pursuant to ITB 33.3, the cost of all quantifiable nonmaterial nonconformities or omissions from the contractual and commercial conditions shall be evaluated. The Purchaser will make its own assessment of the cost of any nonmaterial nonconformities and omissions for the purpose of ensuring fair comparison of Bids.

3.2 Adjustment for Deviations from the Terms of Payment

Deviations from the Terms of Payment as specified in SCC 16.1 are not permitted.

3.3 Adjustment for Deviations in the Delivery and Completion Schedule

Deviations from the Delivery and Completion Schedule specified in Section 6 (Schedule of Supply) are not permitted.

3.4 Operation and Maintenance (O&M) Costs

The total cost of initial three (3) years of operation as indicated in Section-6 (schedule of supply) at unit price quoted in each Bid shall be added to the Bid price.

3.5 Spare Parts

The list of items and quantities of all spare parts, tools, major assemblies, and selected components etc, likely to be required during the initial period for three (3) years of comprehensive maintenance as indicated in Section 6 (Schedule of Supply) shall be considered for evaluation. The total cost of these items at the unit prices quoted in each Bid shall be added to the Bid Price.

3.6 Performance and Productivity of the Goods

NOT APPLICABLE

3.7 Multiple Lots (Contracts)

NOT APPLICABLE

3.8 Domestic Preference

NOT APPLICABLE

Section 4: Bidding Forms

Table of Forms

Technical Bid Submission Sheet.....	4-2
Country of Origin Declaration Form.....	4-6
Price Bid Submission Sheet	4-7
Price Schedule for Goods to Be Offered from Within the Purchaser's Country	4-9
Price Schedule for Goods to Be Offered from Outside the Purchaser's Country.....	4-16
Price Schedule for Related Services to Be Offered from Outside and Within the Purchaser's Country	4-17
Bid-Securing Declaration	4-19
Manufacturer's Authorization	4-20
Bidder's Qualification	4-21
Form ELI – 1: Bidder's Information Sheet	4-22
Form ELI - 2: Joint Venture Information Sheet.....	4-23
Form CON - 1: Historical Contract Nonperformance	4-24
Form EXP - 1: Contractual Experience	4-25
Form FIN - 1: Historical Financial Performance	4-26
Form FIN - 2: Size of Operation (Average Annual Turnover).....	4-27
Form Specifications.....	4-28

Technical Bid Submission Sheet

-- Note --

The Bidder must accomplish the Technical Bid Submission Sheet on its letterhead clearly showing the Bidder's complete name and address.

Date: _____
 Open Competitive Bidding (OCB) No.: _____
 Invitation for Bid (IFB) No.: _____
 Alternative No.: _____

To: [insert complete name of the Purchaser]

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including the Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We acknowledge that we have read and understand ADB's Anticorruption Policy (1998) and Integrity Principles and Guidelines (2015), both as amended from time to time.
- (c) We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule specified in Section 6 (Schedule of Supply), the following Goods and Related Services: [insert a brief description of the goods and related services]
- (d) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of [insert validity period as specified in ITB 20.1 of the BDS] days starts from the date fixed for the bid submission deadline in accordance with ITB 24.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (e) Our firm, including any Subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries in accordance with ITB 4.2.
- (f) We, our directors, key officers, key personnel, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.3.

If there is any conflict of interest, please state details:

- (i) Parties involved in the conflict of interest: _____
- (ii) Details about the conflict of interest: _____
- (g) We are not participating, as a Bidder, either individually or as partner in a Joint Venture, in more than one Bid in this bidding process in accordance with ITB 4.3(e), other than alternative offers in accordance with the Bidding Document.
- (h) Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract, are not subject to, or not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Asian Development Bank or a debarment imposed by the Asian Development Bank in accordance

with the Agreement for Mutual Enforcement of Debarment Decisions between the Asian Development Bank and other development banks.¹

- (i) Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract, are not under ongoing investigation and/or sanctions proceedings by the Asian Development Bank or any multilateral development bank.

If under ongoing investigation and/or sanction proceedings by the Asian Development Bank or any multilateral development bank, please state details:

- (i) Name of the multilateral development bank: _____
 (ii) Reason for the ongoing investigation / allegations: _____

- (j) Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the Contract, are not temporarily suspended, debarred, declared ineligible, or subject to any national and/or international sanctions by any country, any international organization, any multilateral development bank and other donor agency.

If so temporarily suspended, debarred, declared ineligible, or subject to any national and/or international sanctions by any country, any international organization, any multilateral development bank and other donor agency, please state details (as applicable to each Joint Venture partner, their respective direct or indirect shareholders, directors, key officers, key personnel, associate, parent company, affiliate, subsidiaries, Subcontractors, consultants, subconsultants, manufacturers, service providers and/or Suppliers):

- (i) Name of Institution: _____
 (ii) Period of the temporary suspension, debarment, ineligibility, or national or international sanction [*start and end date*]: _____
 (iii) Reason for the temporary suspension, debarment, ineligibility, or national or international sanction: _____

- (k) Our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors consultants, subconsultants, manufacturers, service providers, Suppliers, key officers, directors and key personnel have never been charged or convicted with any criminal offense (including felonies but excluding misdemeanors) or infractions and/or violations of ordinance; nor charged or found liable in any civil or administrative proceedings in the last 10 years; or undergoing investigation for such, or subject to any criminal, civil or administrative orders, monitorship or enforcement actions.

If so charged, convicted/found liable, under ongoing investigation, or subject to orders, monitorship or enforcement actions, please state details:

- (i) Nature of the offense, violation, proceedings, investigation, and/or monitorship or enforcement actions: _____
 (ii) Court, area of jurisdiction and/or the enforcement agency: _____
 (iii) Resolution [i.e. dismissed; settled; or convicted/duration of penalty]: _____
 (iv) Other relevant details [*please specify*]: _____

¹ These institutions include African Development Bank, European Bank for Reconstruction and Development (EBRD), Inter-American Development Bank (IADB), and the World Bank Group. According to paragraph 9 of the Agreement, other international financial institutions may join upon the consent of all Participating Institutions and signature of a Letter of Adherence by the international financial institution substantially in the form provided (Annex B to the Agreement). Upon adherence, such international financial institution shall become a Participating Institution for purposes of the Agreement. Bidders are advised to check www.adb.org/integrity for updates.

- (l) Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers, can make and receive electronic fund transfer payments through the international banking system or otherwise discharge the Employer’s obligation upon initiation of wire transfer.

If unable to make or receive funds through the international banking system or otherwise discharge the Purchaser’s obligation upon initiation of wire transfer, please state the details:

- (i) Nature of the restriction: _____
- (ii) Jurisdiction of the restriction: _____
- (iii) Other relevant details: _____

- (m) Our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers, key officers, directors and key personnel are not from a country which is prohibited to export goods or services to, or receive any payments from the Purchaser’s country and/or are not prohibited to receive payments for particular goods or services by the Purchaser’s country by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

- (n) We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract.²

Name of Recipient	Address	Reason	Amount
.....
.....

- (o) We understand that it is our obligation to notify the Purchaser of any changes in connection with the matters described in paragraphs (f), (h), (i), (j), (k), (l), (m) and (n) of this Technical Bid Submission Sheet.
- (p) [We are not a government-owned enterprise] / [We are a government-owned enterprise but meet the requirements of ITB 4.5].³
- (q) We have not been suspended nor declared ineligible by the Purchaser based on execution of a Bid-Securing Declaration in accordance with ITB 4.6.
- (r) At any time following submission of our Bid, we shall permit, and shall cause our Joint Venture partners, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract to permit ADB or its representative to inspect our site, assets, accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB. We understand that failure of this obligation may constitute obstructive practice that may result in debarment and/or contract termination.
- (s) Regardless of whether the contract will be awarded to us, we shall preserve all accounts, records and other documents related to bid submission for at least 3 years from the date of submission of the bid or the period prescribed in applicable law, whichever is longer.
- (t) If we are awarded the contract, we shall preserve all accounts, records and other documents related to the procurement and execution of the contract for at least 5 years after

² If none has been paid or is to be paid, indicate “None”.

³ Use one of the two options as appropriate.

completing the works contemplated in the relevant contracts or the period prescribed in applicable law, whichever is longer.

- (u) We certify on behalf of the Bidder, that the information provided in the bid has been fully reviewed, given in good faith, and to the best of our knowledge is true and complete. We understand that it is our obligation to inform the Purchaser of any changes to the information as and when it becomes known to us. We understand that any misrepresentation that knowingly or recklessly misleads, or attempts to mislead may lead to the automatic rejection of the Bid or cancellation of the contract, if awarded, and may result in remedial actions, in accordance with ADB's Anticorruption Policy (1998, as amended to date) and Integrity Principles and Guidelines (2017, as amended from time to time).

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Country of Origin Declaration Form

Name of Bidder _____ IFB Number _____ Page ____ of ____

Item	Description	Country of Origin

Price Bid Submission Sheet

-- Note --

The Bidder must accomplish the Price Bid Submission Sheet on its letterhead clearly showing the Bidder's complete name and address.

Date: _____
 Open Competitive Bidding (OCB) No.: _____
 Invitation for Bid (IFB) No.: _____
 Alternative No.: _____

To: *[insert complete name of the Purchaser]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including the Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We acknowledge that we have read and understand ADB's Anticorruption Policy (1998) and Integrity Principles and Guidelines (2015), both as amended from time to time.
- (c) We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule specified in Section 6 (Schedule of Supply), the following Goods and Related Services: *[insert a brief description of the goods and related services]*
- (d) The total price of our Bid, excluding any discounts offered in item (d) below, is

[amount of foreign currency in words], [amount in figures], and [amount of local currency in words], [amount in figures]

The total bid price from the price schedules should be entered by the Bidder inside this box. Absence of the total bid price in the Price Bid Submission Sheet may result in the rejection of the bid.

- (e) The discounts offered and the methodology for their application are as follows:

Discounts: If our Bid is accepted, the following discounts shall apply: *[specify in detail each discount offered and the specific item of the Schedule of Supply to which it applies]*

Methodology of Application of the Discounts: The discounts shall be applied using the following method: *[specify in detail the method that shall be used to apply the discounts]*

- (f) Our bid shall be valid for a period of *[insert validity period as specified in ITB 20.1 of the BDS]* days starts from the date fixed for the submission deadline in accordance with ITB 24.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (g) If our Bid is accepted, we commit to obtain a Performance Security in accordance with the Bidding Documents.
- (h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.

- (i) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (j) At any time following submission of our Bid, we shall permit, and shall cause our Joint Venture partners, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract to permit ADB or its representative to inspect our site, assets, accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB. We understand that failure of this obligation may constitute obstructive practice that may result in debarment and/or contract termination.
- (k) Regardless of whether the contract will be awarded to us, we shall preserve all accounts, records and other documents related to bid submission for at least 3 years from the date of submission of the bid or the period prescribed in applicable law, whichever is longer.
- (l) If we are awarded the contract, we shall preserve all accounts, records and other documents related to the procurement and execution of the contract for at least 5 years after completing the works contemplated in the relevant contracts or the period prescribed in applicable law, whichever is longer.
- (m) We confirm and stand by our commitments and other declarations made in connection with the submission of our Technical Bid Submission Sheet.
- (n) We certify on behalf of the Bidder, that the information provided in the bid has been fully reviewed, given in good faith, and to the best of our knowledge is true and complete. We understand that it is our obligation to inform the Purchaser of any changes to the information as and when it becomes known to us. We understand that any misrepresentation that knowingly or recklessly misleads, or attempts to mislead may lead to the automatic rejection of the Bid or cancellation of the contract, if awarded; and may result in remedial actions, in accordance with ADB's Anticorruption Policy (1998, as amended to date) and Integrity Principles and Guidelines (2015, as amended from time to time).

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Price Schedule for Goods to Be Offered from Within the Purchaser's Country

Name of Bidder _____ IFB Number _____ Page ___ of ___

SN o.	Item	Description	Country of Origin	Domestic Value Added in Percent	Unit of Measurement	Quantity of Measurement	Unit Price EXW Guwahati	Total EXW Guwahati Price per item	GS T, Sales and Other Taxes Per Item	Total Price per Item including Taxes
	1	2	3	4		5	6	7 = 5 x 6	8	9 = 7 + 8
1	Battery Operated Welding System	GSOFF			Pc	2				
2	Compact Synergic Pulse Multi Process Welding System.	GSOFF			Pc	2				
3	400 AMPS Gas Cooled GMAW Welding Machine	GSOFF			Pc	2				
4	300 AMPS Water Cooled AC/DC Smart Welding Machine for Aluminum and Steel Welding Applications	GSOFF			Pc	2				
5	VR/AR technology (displayed in real/real-time environment) with Process MIG/MAG, TIG, MMAW Welding Process	GSOFF			Pc	1				
6	Welding Helmet	PPE			Pc	12				
7	Welding Gloves	PPE			Pc	12				
8	Welding Jackets	PPE			Pc	12				
9	Welding Tables	OSTE			Pc	6				
10	Mobile Tungsten Grinder	OSTE			Pc	12				
11	Pressure Regulators	OSTE			Pc	12				
12	Fume extractor	OSTE			Pc	6				

	system connecting all the Welding booths									
13	Fabrication of Welding Booths	OSTE			Pc	6				
14	Curtains for Welding Booths	OSTE			Pc	6				
15	Gas Manifold system	OSTE			Pc	6				
16	S.S Wire Brush	HT			Nos	12				
17	Spark Lighter	HT			Nos	6				
18	Welding hand shield Fiber	HT			Nos	12				
19	Chipping hammer with metal handle	HT			Nos	12				
20	Chisel cold flat	HT			Nos	12				
21	Centre punch	HT			Nos	12				
22	Dividers	HT			Nos	12				
23	Stainless steel rule	HT			Nos	12				
24	Scriber	HT			Nos	12				
25	Flat Tongs	HT			Nos	12				
26	Hacksaw Frame (fixed)	HT			Nos	12				
27	File Half-round Bastard	HT			Nos	12				
28	File Flat	HT			Nos	12				
29	Hammer ball pane	HT			Nos	12				
30	Tip Cleaner	HT			Nos	12				
31	Try square	HT			Nos	12				
32	Spindle Key	HT			Nos	4				
33	Screwdriver	HT			Nos	1				
34	Number punch	HT			Nos	2				
35	Letter Punch	HT			Nos	2				
36	Magnifying glass	HT			Nos	2				
37	Universal Weld measuring gauge	HT			Nos	2				
38	Spanner D.E.	HT			Set	2				
39	C-Clamps	HT			Set	2				
40	Sledgehammer (double faced)	HT			Nos	1				
41	S.S. tape	HT			Nos	1				
42	Trolley for cylinder (H.P. Unit)	HT			Nos	2				
43	Portable drilling machine	HT			Set	1				
44	Radio graphic reference standard	OSTE			Set	1				
45	Pressure vessel codes (Book or CD) IBR & ASME sec IX	OSTE			Set	1				
46	Structural welding codes D1.1(Book or CD)	OSTE			Set	1				
47	Wall charts, Transparencie s and DVDs	MISC			Set	1				

	related to the trade								
48	Leather Hand Gloves	PPE			Pair	12			
49	Cotton Hand Gloves	PPE			Pair	12			
50	Leather Apron	PPE			Nos	12			
51	Leather Hand Sleeves	PPE			Pair	12			
52	Safety Boot	PPE			Pair	12			
53	Leg guard leather	PPE			Pair	12			
54	Arc Welding Single-colored glasses	PPE			Nos	24			
55	Arc Welding Plain Glass	PPE			Nos	36			
56	Gas welding Goggles with Colour glass	PPE			Nos	24			
57	Safety Goggles (Plain)	PPE			Nos	12			
58	Welding Helmet (Fiber)	PPE			Nos	12			
59	First Aid box	PPE			Set	1			
60	Auto Darkening Welding Helmet	PPE			Set	2			
61	Fire Extinguishers (foam type and CO2 type)	PPE			Set	1			
62	Fire buckets with stand	PPE			Set	1			
63	Metal Rack	FUR			Pair	1			
64	Work Benches with Bench Vices and storage drawers to demonstrate welding equipment	OSTE			Set	2			
65	Chest of drawers	FUR			Pair	1			
66	Rubber Hose Clip	CON			Pair	12			
67	Rubber Hose (for Oxygen)	CON			Set	10			
68	Rubber Hose (for Acetylene)	CON			Set	10			
69	Arc Welding Cable (multi colored) Copper	CON			Set	36			
70	Die penetrant testing kit	CON			Set	5			
71	Insulation ring	CON			Pair	10			
72	Nozzle stock	CON			Pair	15			
73	Spatter guard	CON			Pair	25			
74	Gas nozzle	CON			Pair	50			
75	Contact tip	CON			Pair	15			
76	Contact tip	CON			Pair	15			
77	Bare steel inner liner	CON			Set	15			
78	Bare steel inner liner	CON			Set	15			
79	Clamping piece	CON			Pair	15			
80	Filler Wire Mild	CON			Set	25			

	Steel								
81	Filler Wire Mild Steel	CON			Set	25			
82	Gas Regulator	CON			Pair	4			
83	Electrode	CON			Pack	25			
84	Torch cap long	CON			Pair	15			
85	Torch cap medium	CON			Pair	15			
86	Torch cap short	CON			Pair	15			
87	Clamping sleeve	CON			Pair	15			
88	Head shield	CON			Pair	15			
89	Clamping sleeve	CON			Nos	15			
90	Clamping sleeve	CON			Nos	15			
91	Clamping sleeve case	CON			Pair	15			
92	Clamping sleeve case	CON			Pair	15			
93	Gas nozzle ceramic	CON			Pair	50			
94	Gas nozzle ceramic	CON			Pair	50			
95	Gas nozzle ceramic	CON			Pair	50			
96	Tungsten electrode	CON			Pair	15			
97	Tungsten electrode	CON			Pair	10			
98	Tungsten electrode	CON			Pair	10			
99	Welding Cable	CON			Mtr	10			
100	Steel Plates 5mm	CON			Kg	12			
101	Steel Plates 6mm	CON			Kg	12			
102	Steel Plates 8mm	CON			Kg	12			
103	Steel Plates 10mm	CON			Kg	12			
104	Welding Electrodes	CON			Pack	50			
105	Mig Welding Consumables	CON			Set	12			
106	Tig Welding Consumables	CON			Set	12			
107	AG4 Grinder with Wheels	OSTE			Nos	5			
108	Hacksaw with Blade	OSTE			Nos	12			
109	Earth clamp	CON			Nos	6			
110	Oxy Acetylene Gas Cutting blow pipe	CON			Nos	2			
111	Electrode holder	GSOFF			Set	12			
112	H.P. Welding Torch with 5 Nozzles	GSOFF			Set	2			
113	Welding Transformer with all accessories (400A, OCV 60-100 V, 60% duty cycle)	GSOFF			Set	2			
114	Welding Transformer with all accessories	GSOFF			Set	2			

	(300A , OCV 60 - 100 V, 60% duty cycle)									
115	Inverter based welding Power source	GSOFF			Set	1				
116	D.C Arc welding rectifiers set with all accessories	GSOFF			Set	2				
117	AC/DC GTAW welding machine	GSOFF			Set	1				
118	Spot welding machine to15 kVA with all accessories	GSOFF			Set	1				
119	Gas welding table with firebricks	GSOFF			Set	1				
120	Arc welding table with positioner	GSOFF			Set	1				
121	Oven, electrode drying	GSOFF			Set	1				
122	Table for Gas cutting	GSOFF			Nos	1				
123	Welding Simulator for SMAW / GTAW / GMAW	GSOFF			Set	1				
124	Seam welding Machine(longit udinal) 75 KVA with accessories	GSOFF			Set	1				
125	Welding Motor Generator	GSOFF			Set	1				
126	Welding booth with forced fume extractor, for welding machines listed above	GSOFF			Set	3				
127	Desktop Computer System with latest configuration	ITE			Set	6				
128	UPS	ITE			Nos	6				
129	Document Camera / Visualizer	ITE			Set	1				
130	Laptop with all latest OS	ITE			Set	1				
131	All-in-One Printer	ITE			Set	1				
132	Auto-CAD Software (License version)	ITE			Set	6				
TOTAL Amount										

Note:

1. All minor electrical/ civil works required for the installation and commissioning of Equipment shall be covered under supplier's scope and supplier and shall consider this cost in quoting the rates.

2. Abbreviations used
 GSOE – General Shop Outfit Equipment
 IT - Information Technology Equipment
 OSTE – Other Supporting Training Equipment
 PPE- Personal protective Equipment

Notes:	
Column 4:	In accordance with margin of preference ITB 38, if applicable. Domestic Value Added comprises domestic labor, the domestic content of materials, domestic overheads and profits from the stage of mining the raw material until final assembly.
Column 6:	Incoterm in accordance with ITB 14 Currency in accordance with ITB 15 Price shall include all customs duties and sales and other taxes already paid or payable on the components and raw materials used in the manufacture or assembly of the item or the customs duties and sales and other taxes already paid on previously imported items.
Column 8:	Payable in the Purchaser's country if Contract is awarded

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Price Schedule for Goods to Be Offered from Outside the Purchaser's Country

Name of Bidder _____ IFB Number _____ Page ___ of ___

Item	Description	Country of Origin	Quantity and Unit of Measurement	Unit Price CIF (Guwahati)	Total Price CIF or CIP per Item
1	2	3	4	5	7 = 4 x 5
Total Amount					

Notes:

Columns 5 and 6: Incoterm in accordance with ITB 14
Currency in accordance with ITB 15

Column 6: Only to be used if the Purchaser wishes to reserve transportation and insurance to domestic companies or other designated sources. Identification of the lowest evaluated bid must be on the basis of the CIF or CIP price, but the Purchaser may sign the contract on FOB or FCA terms and make its own arrangement for transportation and/or insurance.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Price Schedule for Related Services to Be Offered from Outside and Within the Purchaser's Country

Name of Bidder _____ IFB Number _____ Page ___ of ___

Item No.	Description	Country of Origin	Quantity and Unit of Measurement	Unit Price		Total Price per Item	
				(a)	(b)	(a)	(b)
				Foreign Currency	Local Currency	Foreign Currency	Local Currency
1	2	3	4	5(a)	5(b)	6(a) = 4 x 5(a)	6(b) = 4 x 5(b)
1.	Related services/works not mentioned in the BoQs but to be performed during Installation & commissioning of Lab/Workshop equipment under General Shop Outfit (GSOF) and Other Supporting Training Equipment (OSTE) category etc, or other related services/works including minor civil, fabrication and/or electrical works at destination/locations.	India	1 no. (Job)				
2.	Installation & commissioning of Computers/Laptops, Printers, Audio Visual equipment, UPS, LAN/Network connections and other ITE related equipment. The related services/works includes installations of hardware/Software at respective locations but not indicated in the BoQ.	India	1 no. (Job)				
3	Installation, testing, commissioning and demonstration of all items under scope of supply	India	1 no. (Job)				
4	Training for ASU Instructor, Faculty and ASUP Officials or any	India	1 no. (Job)				

	others persons as nominated by ASUP on all items under scope of supply for minimum 15 days after commissioning and one more training for 1 week after 3 months of commissioning at installation site.						
5	Warranty for 3 Years Including comprehensive maintenance of supplied goods, equipment and tools. Attending complaint and correct any defects.	India	1 no. (Job)				
Total Amount							

Notes:

1. The above **description** of allied works/services are indicative purpose only; however, Bidders are required to specify/offer for the actual services/works under this contract expected to be performed during installation & commissioning of supplies and not included in the Scope of Supply and allied Works/Services.
2. The scope of related services should also include supply of required items including spares and consumables like lubricants, cutting oil, coolants, grease etc. which are essential for installation & commissioning, testing and operationalization of equipment, at least for three months.
3. Supplier shall consider cost of 3 years warranty including comprehensive maintenance for supplied goods under General shop outfit (GSOF) category. However the standard warranty period of 1 year shall be applicable for all goods supplied. The scope of services during warranty shall also include repairing, maintenance and supply of spare parts.

Notes:

Columns 5 and 6: Currencies in accordance with ITB 15

Prices are to be quoted inclusive of all customs duties, sales and other similar taxes applicable in the Purchaser's country and payable on the Related Services, if the Contract is awarded to the Bidder

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Bid-Securing Declaration

Date: *[insert date (as day, month, and year)]*

Bid No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a bid for an alternative]*

To: *[insert complete name of the Purchaser]*

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Borrower for the period of time of *[insert number of years indicated in ITB 21.2 of the BDS]* starting on the date that we receive a notification from the Purchaser that our Bid-Securing Declaration is executed, if we are in breach of our obligation(s) under the bid conditions, because we

- (a) have withdrawn our Bid during the period of bid validity specified in the Technical Bid Submission Sheet and Price Bid Submission Sheet; or
- (b) do not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB")
- (c) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract Agreement, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the ITB.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder, or (ii) 28 days after the expiration of our Bid.

Signed: *[insert signature of person whose name and capacity are shown]*

In the capacity of *[insert legal capacity of person signing the Bid-Securing Declaration]*

Name: *[insert complete name of person signing the Bid-Securing Declaration]*

Duly authorized to sign the bid for and on behalf of *[insert complete name of the bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Corporate Seal *(where appropriate)*

Manufacturer's Authorization

Date: *[insert date (as day, month, and year) of bid submission]*

OCB No.: *[insert number of bidding process]*

To: *[insert complete name of the Purchaser]*

WHEREAS

We *[insert complete name of the manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of manufacturer's factories]*, do hereby authorize *[insert complete name of the bidder]* to submit a bid the purpose of which is to provide the following goods, manufactured by us *[insert name and/or brief description of the goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions, with respect to the goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of *[insert complete name of the manufacturer]*

Dated on _____ day of _____, _____ *[insert date of signing]*

-- Note --

All italicized text is for use in preparing this form and shall be deleted from the final document.

The bidder shall require the manufacturer to fill out this form in accordance with the instructions indicated. This letter of authorization should be signed by a person with the proper authority to sign documents that are binding on the manufacturer. The bidder shall include it in its bid, if so indicated in the Bid Data Sheet (BDS).

Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section 3 (Evaluation and Qualification Criteria), the Bidder shall provide the following information requested in the corresponding Information Sheets.

Form ELI - 1: Bidder's Information Sheet

Bidder's Information		
	Information of the Bidder	If the Bidder is a subsidiary or branch, information of any parent company/companies
Names	Full legal name(s)	
	Full trading name(s) (if any)	
Addresses	Registered address(es)	
	Trading address(es)	
	Postal address(es) (if different from trading address)	
Type of organization		
Country of constitution/incorporation/registration		
Year of constitution/incorporation/registration		
Corporate or registration number		
In case of a Joint Venture, legal name of each partner		
Bidder's authorized representative (name, address, telephone number(s), fax number(s) and e-mail address)		
Attached are copies of the following documents: <ol style="list-style-type: none"> 1. In case of a single entity, articles of incorporation or constitution and company incorporation/registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2 2. Authorization to represent the firm or Joint Venture named above, in accordance with ITB 22.2 3. In case of a Joint Venture, a letter of intent to form a Joint Venture or Joint Venture agreement, in accordance with ITB 4.1 4. In case of a government-owned enterprise, any additional documents not covered under 1 above required to comply with ITB 4.5 		

Form ELI - 2: Joint Venture Information Sheet

Each member of the Joint Venture must fill out this form separately.

Joint Venture Information			
Bidder's legal name			
		Information of Joint Venture Partner	If any Joint Venture Partner is a subsidiary or branch, information of any parent company/companies
Names	Joint Venture Partner's legal name		
	Full trading name(s) (if any)		
Addresses	Registered address(es)		
	Trading address(es)		
	Postal address(es) (if different from trading address)		
Type of organization			
Country of constitution/incorporation/registration			
Year of constitution/incorporation/registration			
Corporate or registration number			
Joint Venture Partner's authorized representative information (name, address, telephone number(s), fax number(s) and e-mail address)			
<p>Attached are copies of the following documents:</p> <ol style="list-style-type: none"> Articles of incorporation or constitution and company incorporation/registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2 Authorization to represent the firm named above, in accordance with ITB 22.2 In the case of a government-owned enterprise, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB 4.5 			

Form CON – 1: Historical Contract Nonperformance

For Contract type B, each Bidder must fill out this form in accordance with Criteria 2.2.1 and 2.2.3 of Section 3 (Evaluation and Qualification Criteria) to describe any history of nonperforming contracts and pending litigation or arbitration formally commenced against it.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name:

Joint Venture Partner: _____

Table 1: History of Nonperforming Contracts			
<p>Choose one of the following:</p> <p><input type="checkbox"/> No nonperforming contracts.</p> <p><input type="checkbox"/> Below is a description of nonperforming contracts involving the Bidder (or each Joint Venture partner if Bidder is a Joint Venture).</p>			
Year	Description	Amount of Nonperformed Portion of Contract (\$ equivalent)	Total Contract Amount (\$ equivalent)
[insert year]	Contract Identification: [indicate complete contract name/ number, and any other identification] Name of Purchaser: [insert full name] Address of Purchaser: [insert street/city/country] Reason(s) for nonperformance: [indicate main reason(s)]	[insert amount]	[insert amount]

Table 2: Pending Litigation and Arbitration			
<p>Choose one of the following:</p> <p><input type="checkbox"/> No pending litigation, arbitration or any other material events impacting the net worth and/or liquidity of the bidder.</p> <p><input type="checkbox"/> Below is a description of all pending litigation, arbitration involving the Bidder or any other material events impacting the net worth and/or liquidity of the bidder (or each Joint Venture partner if Bidder is a Joint Venture).</p>			
Year	Matter in Dispute	Value of Pending Claim in \$ Equivalent	Value of Pending Claim as a Percentage of Net Worth
[insert year]	Contract Identification, as applicable: [indicate complete contract name/ number, and any other identification] Name of Purchaser, parties involved in the material events impacting the net worth and/or liquidity of the bidder: [insert full name] Address of Purchaser, parties involved in the material events impacting the net worth and/or liquidity of the bidder: [insert street/city/country] Matter of Dispute: [indicate full description of dispute] Party who initiated the dispute: [indicate “Purchaser” or “Contractor”] Status: [indicate status of dispute]	[insert amount]	[insert amount]

- Note -

Table 2 of this form shall only be included if Criterion 2.2.3 (Contract Type B) of Section 3 (Evaluation and Qualification Criteria) is applicable.

Form EXP - 1: Contractual Experience

Fill out one (1) form per contract. Each contract shall be supported by Signed Contract Agreement.

Contractual Experience		
Contract No of	Contract Identification	
Award Date	Completion Date	
Role in Contract	<input type="checkbox"/> Manufacturer <input type="checkbox"/> Supplier <input type="checkbox"/> Subcontractor	
Total Contract Amount	\$	
If partner in a joint venture or subcontractor, specify participation of total contract amount	Percent of Total	Amount
Purchaser's name Address Telephone/Fax Number E-mail		
Description of the Similarity in Accordance with Criteria 2.2.1 (Contract Type A) or 2.3.1 (Contract Type B) of Section 3 (Evaluation and Qualification Criteria)		

- Note -

This form shall only be included if either Criterion 2.2.1 (Contract Type A) or 2.3.1 (Contract Type B) of Section 3 (Evaluation and Qualification Criteria) is applicable.

Form FIN - 1: Historical Financial Performance

Each Bidder must fill out this form.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

Financial Data for Previous ___ Years [\$ Equivalent]		
Year 1:	Year 2:	Year ___:

Information from Balance Sheet

Total Assets (TA)			
Total Liabilities (TL)			
Net Worth = TA-TL			
Current Assets (CA)			
Current Liabilities (CL)			
Working Capital = CA - CL			

Most Recent Working Capital		To be obtained for most recent year and carried forward to FIN - 3 Line 1; in case of Joint Ventures, to the corresponding Joint Venture Partner's FIN - 3.
-----------------------------	--	---

Information from Income Statement

Total Revenues			
Profits Before Taxes			
Profits After Taxes			

- Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last ___ years, as indicated above, complying with the following conditions:
- 1) Unless otherwise required by Section 3 of the Bidding Documents, all such documents reflect the standalone financial situation of the legal entity or entities comprising the Bidder and not the Bidder's parent companies, subsidiaries, or affiliates.
 - 2) Historical financial statements must be audited by a certified accountant.
 - 3) Historical financial statements must be complete, including all notes to the financial statements.
 - 4) Historical financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

- Note -

This form shall only be included if Criterion 2.3.1 (Contract Type A) or 2.4.1 (Contract Type B) of Section 3 (Evaluation and Qualification Criteria) is applicable.

Form FIN - 2: Size of Operation (Average Annual Turnover)

Each Bidder must fill out this form.

The information supplied should be the Annual Turnover of the Bidder or each partner of a Joint Venture for the total certified payments received from the clients for contracts in progress or completed, converted to US dollars at the rate of exchange at the end of the period reported.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

Annual Turnover Data for the Last . . . Years			
Year	Amount Currency	Exchange Rate	\$ Equivalent
Average Annual Turnover			

- Note -

This form shall only be included if Criterion 2.3.2 (Contract Type A) or 2.4.2 (Contract Type B) of Section 3 (Evaluation and Qualification Criteria) is applicable.

Form: Specifications

Each Bidder must fill out this form submitting the detailed technical specifications of proposed goods items to be supplied under this contract.

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. <i>(to be filled by the Bidder)</i>
1	Battery Operated Welding System	Set	2	<p>Open-circuit voltage ≥ 91 V, 65A / 100% ED [Hybrid] 100A or more, 50% ED [Hybrid] @ Welding current / Duty cycle [10min/40°C], Operating voltage- 0-91 Volt, Battery capacity: ≥ 380 Wh or equivalent, Battery Type -Lithium Iron Phosphate battery with low self-discharge and no memory effect, Battery Charger Output: Voltage range 28 to 65 V DC or equivalent. Test symbol CE.</p> <p>Other Features/Parameter: Battery type Lithium-ion and must be in-built in the Power source and Capacity of battery should be 400 ± 20 Wh. Power source can be charged simultaneously with welding operation. Shall have following features in SMAW: Electrode welding, Hot Start, Soft Start, anti-stick, Dynamic Arc force. Welding current ≥ 90 A at 25% duty cycle and ≥ 35 A at maximum (100%) duty cycle in Shielded Metal Arc Welding (SMAW). Rapid charging within 40 minutes or less. Battery capacity should be 7.5 AH or more. Digital display of all the parameters. Welding current range in between 10-130 A OR better for SMAW and in between min 3 to 140 Amps or more for TIG welding. Charging current in between 8 A to 12 A or less in normal mode and in between 17 A to 25 A or equivalent in quick mode. Open Circuit Voltage (OCV) in between 80V To 100 V or equivalent. Protection Class IP-23 or better and charger shall have protection Class IP-43S or better. Equipped with system to monitor uniform charging & discharging and ensure uniform voltage & temperature of all battery cell. Display of battery capacity exhausted & over temperature. Displayed in case of</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>polarity reversal, supply cable faulty, over / under voltage. Safety feature to switch off the device after 5 minutes of inactivity to conserve the battery and after 3 seconds (approx.) in the event of under voltage. Provide the details of battery make, model, and capacity. Battery nominal voltage in between 50 -60 V or better. Battery standard charging time 60 minutes or less and rapid charging time ≤ 40 Min or equivalent. Input voltage of charger 220 - 240 V and 50 Hz frequency of charger. Efficiency 85% or more and machine dimension (l x w x h)- 435 x 160 x 310 mm. Scope of supply should also include Power Source including charger, Ground Cables 16mm² 3m, electrode holder 16mm² 4m, hand shield, slag hammer, wire brush, welding gloves.</p>	
2	Compact Synergic Pulse Multi Process Welding System.	Pc	2	<p>300 Amps Pulse Synergic Multi Process Welding Machine. Power Source Mains voltage 380 / 400V or equivalent tolerance: -10 / +15%, Welding current range 10 Amps - 300 Amps. Welding current at 10 min / 40 °C. at duty Cycle 60% at 270 Amps or more, maximum (100%) at 230 Amps or equivalent. Open circuit voltage 59V to 65 V. Apparent power at 400 V AC ≤ 12 KVA, or equivalent. Safety symbols - S, CE, CSA. Overall Dimensions (approx.) -747(L) x 300(W) x 497(H) mm. Wire Speed 1 to 25 m/min or equivalent. Idle state power consumption at 400 ≤ 37 W or better. Power source efficiency at 300 A / 32 V $\geq 88\%$ or equivalent. Protection Class IP23 or better.</p> <p>Other Key Features/Parameters: Machines should have the facility of documentation of welding data of 57 or more new pulse characteristics in total in Pulse process. Universal and color coated Feeder Roller. Maximum (160 or equivalent) Welding, Characteristics, Synchro Pulse Program. Pulse Controlled Spray for ARC, Spot Welding Mode, Stitch Mode. Automatic wire threading without opening the wire-feed</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. <i>(to be filled by the Bidder)</i>
				unit. Ignition Time out, Intermediate arc indicator, Automatic End crater filling. Error code display on problems. measurement of R & L. Control Panel locking function. Automatic burn back control. USB, Thumb Drive Export Function. Capable for Manual MIG/MAG, Synergic MIG/MAG, Pulse, PCS, Synchro pulse and MMAW and GTAW Pulse Welding processes. Welding Torch should have Led Light. Machine should have Intermediate arc indicator, Hold Indicator, Unit indicators, Gas Test Button, Material Setting Button, Wire Diameter Setting Button, Shielding Gas Setting Button, Process Button for Manual and Synergic MIG/MAG, DC TIG and Stick Button. The GMAW Spot welding time (0.3 – 5 or equivalent), Spot pause time (OFF, 0.3 – 10 or equivalent). Interval setting possible in 2T (2-step), 4T (4-step), TIG Pulse frequency (1 – 980) Hz or better. DC Pulse Tacking second (0.1 - 9.9 or better) function. Option of saving Easy Job parameters upto 5 or equivalent. Safety features for users include length of wire that is fed before the safety cut-out is triggered. Special Synergic Programmed Root, Dynamic and Universal and self-shielded wire programmed, and space to upgrade special wire Grade and Gas. Provision of Thermostat controlled Fan / Over temperature protection with Polarity reverser and Universal roller geometry optimized for hard and soft wires. Machine should be capable for displaying the energy applied during the welding operation and displaying the software version, operating time. • Machine should be Error Code Display Facility for Easier Fault Diagnosis and Earth Leakage monitoring facility and Measurement of Resistance and Inductance is possible. Digital Display shows value of Arc Length Correction/Dynamic, Thickness, Wire Feed Speed, Current and Voltage displayed. Provisions to set Pre flow, Post Flow, Final current, Slop Time,	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>start current duration and Feeder inching speed.</p> <p>Scope of supply should also include Power Source 300 Amps inbuild wire feeder, Feeder Roller 0.8 & 1.2 MM, MIG/MAG Welding Torch 3-meter length, Earth cable 4 meter with clamp, 5 Meter Input Cable.</p>	
3	400 AMPS Gas Cooled GMAW Welding Machine	Pc	2	<p>400 AMPS Gas Cooled Modular Intelligent Welding Machine. Power Source Intelligent Microprocessor Digitally Controlled Linux/Windows based IGBT Inverter (latest generation), Heavy-duty CC/CV type power source for Synergic MIG/MAG, MMAW Welding Process with Pulse/ Pulse Multi Control advance welding process. Current Range – MIG/MAG Process (3- 400 A or equivalent), MMAW 10 -400 A or equivalent, Main Voltage 400V/415V ±15%, kVA rating @ maximum (100%) Duty Cycle should be 13 kVA or equivalent, Less than 32W, Duty Cycle @ 60% at 350 Amp or more and 100% at 310 Amp or More @ 10 Minutes, 40 degree cent., Open Circuit Voltage – 70- 75 Volt , Efficiency should be more than 80%, Protection Class IP 23 or better , Power Factor ≥ 0.90 to 0.98, Program Memory can save ≥ 900 Nos or equivalent, Machine feedback Speed 100 Mbit/s or equivalent, Mark of conformity- S, CE, Standards- IEC60974-1 & IEC60974-10.</p> <p>Wire Feeder: Wire feed range- 1- 24 meter/Min or better, 4 Feed rolls should be geared and grooved, Input Current from Power Source - 1.7 A or equivalent, Standards- IEC60974-5, Mark of conformity- S, CE, CSA, Degree of Protection: IP23 or better.</p> <p>Welding gun/ Torch: Current rating-310 Amps or more at 100% duty cycle with Argon and CO2 mix Gas at 10 min/40o C, Length of Torch – 3 Meter or more, Torch Handle- Non-slip, Rubber anti-kink at the grip with ball joint, Gas Nozzle Connection- Screw-on</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>gas nozzle, Filler wires range -0.8 – 1.6 MM.</p> <p>Other Features/Parameters: 16 Bit or equivalent full-color display resistive 7 Inch Touch screen with 800 x 400 or better resolution. Microprocessor controlled with 532 MHz & ≥32-bit CPU. Welding Torch can be rotated through 360° for optimal component accessibility, equipped with LED light and Current up down function. Function to control the starting arc ignition as spatter free. Wire feeder with 4 roll or equivalent drive with different color code & different wire of size for easy identification. Inbuilt welding data monitoring system to automatically save welding current, welding voltage, wire feed speed, Heat input, time of welding in one stop & store for 30 days in machine itself. Data transfer through LAN cable, Pen Drive or Online. Fully Industrial 4.0 compliance. The machine should have at least 300 or equivalent pre-programmed Synergic Curves for MIG/MAG & Pulsed MIG processes in the memory. The set arc length remains the same in spite of a change in the welding torch position which helps to weld out of position and ease of operation. The welding machine is constant potential type with touch screen control unit / panel with English & Hindi language GUI interface including burn back control, crater fill, wire feed speed control, gas control with gas saving device, with infinitely variable pulse control synchronization of the wire feed speed with current pulse & inbuilt data logger. Necessary diagnostic software for fault recognition and analysis is pre-loaded in the welding machine.</p> <ul style="list-style-type: none"> • Should have in-built feature of power source with current, voltage, energy input as parameter for each welding instance. Locking and unlocking parameters through RFID and key to	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>control accessibility. Machine should have Switching facilities between pulsed and dip transfer arc to do vertical up direction welding without weaving and switching smoothly between pulsed arc and spray arc. Ethernet Based communication with 100 Mbit/s or better data transmission rate. Machine should have ≥ 900 memory location and IP Address for communication with laptop / PC. 2/4 step & Special 2/4 step torch switch triggering modes should be available which should control from power source control panel. Provision to lock & unlock by NFC card & having different management modes. Measure & display the Resistance & Inductance of the total welding circuit for every job. Special 2/4 step torch switch triggering modes.</p> <p>Scope of supply should also include Interconnection cable 5-meter, wire feeder, welding torch minimum 3-meter, Copper earth cable with clamp, Gas Regulator.</p>	
4	300 AMPS Water Cooled AC/DC Smart Welding Machine for Aluminum and Steel Welding Applications	Pc	2	<p>Mains voltage: 3 x 400 V +/-15 %, Welding current 3 Amps to 300 Amps or equivalent. Duty cycle [10min/40°C] 100% at 230 AMPS or better, 60% at 250AMPS or better, Open-circuit voltage ≥ 95 V or equivalent, Degree of protection IP 23 or better, Max. primary current ≤ 20 A, Safety symbols S, CE. Power source efficiency at 300 A / 32.0 V ≥ 80 or better.</p> <p>Other Key Features/Parameters:</p> <ul style="list-style-type: none"> • 6 Inch color display with plain text display and touchscreen. Full screen display with multi-language selection. Automatic Tungsten Electrode Cap shaping and cap overloading function. Upgradable DC Pulse frequency up to 10,000 Hz and AC frequency 40 -250 Hz or more. Machine should have available Sync Mode for double side TIG welding. Ignition timeout: safety cut-out 0.1 -9.9s or better. Machine Should have Triangular, Sinusoidal, Rectangular waveform IN AC TIG Process. Reverse Polarity Ignition (RPI) 	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>Facility for Quicker, reproducible ignition. Automatic gas post-flow (dep. on welding current). Cycle Tig Function for Controlled Heat inputs and outstanding weld appearance. Features to reduced current - Intermediate lowering of the welding current in order to prevent any local overheating of the base material. Electrode overload indicator. Special Mode for Aluminum welding applications. Ready for Industry 4.0 WLAN to Bluetooth and NFC Automatic gas post-flow, Ethernet and Speed net as standard must be available. Machine must save Easy Job (1-5) and capable to store ≥ 900 Jobs.</p> <p>Welding Torch Specifications: Multilocked System i.e. easily replace of torch neck and torch hose pack and 360 degree neck rotation and Adjust the essential parameters such as main current, lowering current, or final current, programmed no. or saved job directly on the welding torch with LED can be used to light up the welding area. Torch Length 4 meters or equivalent. Provision for Screwable Gas nozzle mounting.</p> <p>Cooling Unit Specifications: Current consumption ≤ 0.9 A or equivalent. Max. delivery head 30 Meter or more, Max. pump pressure 4 Bar or equivalent. Centrifugal Type Pump with approx. service life of 9000 Hours or equivalent, Coolant capacity 5 Ltrs or more, Degree of protection IP23 or better, Mark of conformity CE. Scope of supply should include Power Source 300 AMPS AC/DC, Water Cooling Unit, Welding Torch Water Cooled 4 Meter, Earth Clamp with 4-meter copper cable, 5-meter Input Cable.</p>	
5	VR/AR technology (displayed in real/real-time	Pc	1	Input supply Single Phase 230V, Current range SMAW 10 – 500A for 4.0mm electrodes, Voltage & Current range GMAW 10V - 45V & 20A - 500A (1.0, 1.2 wire diameter), Current range GTAW 3A -	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
	environment) with Process MIG/MAG, TIG, MMAW Welding Process			<p>500A (2.4, -mm tungsten electrode, 2.0 mm filler rod)</p> <p>Operation: The Simulator to use to perform virtual training, to learn theory. Simulated processes SMAW, GMAW AND GTAW, Arc types GMAW: Different arc types should be simulated including short arc, spray arc, pulsed arc, Process variants. GTAW: Should be possible to use DC and AC, Process variants MMA: Electrode holder has to be physically connected to correct polarity DC+, DC-</p> <p>Joint configuration - Butt Y-Groove, Butt I-Groove, Pipe to Pipe with Y-Groove, Pipe to Pipe with I-Groove. Pipe to Plate, Corner Joint, Overlap Joint, Customized Workpiece.</p> <p>Welding positions: 1G to 6G ,1F to 6F (Welding positions have to be detected from the simulator (to prevent cheating from trainee).</p> <p>Welding simulation: provision for red hot molten welding puddle and cooling down simulation. Workpiece positioning: Flexibility to position the workpieces freely on either a height adjustable, tiltable workpiece holder or position it freely on an adequate surface. Simulated workpiece thickness 3mm, 6mm and 10mm thickness of base material, Visualized workpiece thickness Visualized workpiece thickness should correspond to simulated workpiece thickness, Torch control: GMAW 2 and 4 step mode, Parameters for special 4-step mode. GMAW: Should be selectable, Torch control. GTAW: 4-step mode, Parameters for 4-step mode – GTAW: Should be selectable, Cap shaping of tungsten electrode: Automatic cap shaping function for tungsten electrode in GTAW AC process variant, Interaction with torch: The provided torch should be used to interact with virtual elements</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>before, during and after welding, Virtual interaction devices: GMAW Torch: Real welding torch to be used with leading industry standard FSC-connection/Euro connection. GTAW Torch: Real welding torch to be used with leading industry standard FSC-connection, GTAW Torch: Real welding torch to be used with industry standard bayonet connection, Grounding Clamp: Real grounding clamp to be used with industry standard bayonet connection, Electrode holder: Polarity of electrode holder to be connected like real electrode holder with connection to the power supply as per industry standard, Polarity selection: Should be done physically by plugging in the corresponding industry-standard connectors rather than via settings in menu, Torch detection: It should be detected if the correct torch is connected, Screen: Simulator must have separated Display that can be used both during virtual exercises and for theory learning. Workpiece visualization: Simulate the workpieces from all sides. Including underside and backside, Workpiece interaction: able to see the workpieces through the visualization device and be able to touch / rotate / adjust the work pieces, also during welding, SMAW Welding practice: During SMAW welding virtual consumable or retracting electrode to be used, GMAW Welding practice: GMAW welding should accommodate short and long stick out, GTAW welding practice: GTAW welding should have skill guidance for work and travel angle, Types of work pieces, Guidance for parameters: Student should be able to use</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>guidance for parameters. Guidance should be provided visually.</p> <p>Parameter settings: The welding parameters should be set on a user interface which looks and behaves like a real welding machine,</p> <p>Start Current: Welding start current should be selectable,</p> <p>Parameter settings during welding: The welding parameters should be changeable during welding without taking off the visualization device,</p> <p>Welding modes: For GMAW a manual welding mode and a synergic mode for standard and pulse should be available, Gas setup: Should support shielding gas selection like Argon, CO₂ and various mixtures, Gas settings: Gas post flow should be selectable,</p> <p>Machine Setup: The interaction with the welding simulator should be like with a real welding power source. Ground clamp, real user interface and gas regulator are mandatory,</p> <p>Welder view: Welder should be able to see the workpiece and environment through the helmet, Additional information during welding: Welder should be able to see additional information, like WFS, Voltage and Amperage in the helmet during welding,</p> <p>Darkening in welding helmet: The shades of the darkening during welding should be adjustable, Resolution of Augmented-/Virtual Reality</p> <p>Visualization device: Resolution of at least 4320 x 2160 px mandatory,</p> <p>Welding Sounds: Adaptive welding sounds with changeable character per eg. welding process, welding material, characteristic, changes of environment,</p> <p>Welding Sound output: Output of adaptive 3D welding sound in the VR/AR visualization device, at external monitor and near</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				input-device, External monitor: An external monitor should be connectable via 4k HDMI output, Guidance and skill analysis of GTAW Torch, GMAW Torch and MMA electrode holder: Guidance and analysis of arc length, work angle, travel angle, speed, and path, Guidance and skill analysis of GTAW filler rod: Guidance and analysis of work angle and travel angle, Evaluation via VR/AR visualization device. Video Playback with visualization in VR/AR visualization device with the option to rotate the viewed workpiece by moving the head, Evaluation on screen: Should be possible using video with interaction, graphs and numerical values (points and/or percentage), Analysis of weld seam: Should include welding speed, stick-out, CTWD, welding angle, work angle, Macro cut of welded seam: Noto Sans, Weld defects analysis: The weld defect analysis should include of the root has been penetrated, Student access: On Simulator and/or via external devices, Student login: Should be with an identifiable username and a password, set by the student, Trainer access: Trainer should use same software and user-interface as student but has additional settings Creation of WPS: Should be possible with the system and with an external device. WPS should be displayed per welding task, Software: Necessary management software should be accessible without the need for installation. Safety regulation: Simulator should be certified by CE and FCC	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>regulations. Certificate to be enclosed, Welding Software: All software must be supplied with a lifetime license, Data security: Inbuilt security system to protect user data and administration. Trainees must set their password by themselves. Scope of Supply: Simulator with all accessories required for GMAW GTAW & MMAW Welding Training.</p>	
6	Welding Helmet	Pc	12	Fiber-Metal Pipeline Fiberglass Welding Helmet with Rubber Headband. Pipeline Welding Helmet features a 2" x 4" Shade 10 lens for clear viewing of weld puddle; filters out 100% of UV and IR wavelengths for maximum eye protection	
7	Welding Gloves	Pair	12	Heat Resisting, Fully Lined and Kevlar Stitched, Made of Hard-Wearing Superior Quality Leather. Hand Gloves plain or Double Palm Patch with five fingers in various sizes from 10" to 22" long. Should meet the requirements of EN 388 / Cat. II	
8	Welding Jackets	Pc	12	The leather welding jacket is made from split calf leather as per EN ISO 11611:2015, class 2, A1. The jacket features a button facing with Velcro fasteners. Size as per standard 42.1 x 12 x 1 inch (approx.). Easy wipe cleanable, Leather Apron, Welding Apron. Heat and moisture resistant. Kevlar stitched and reinforced with rivets. Leather straps are provided for Additional strength. Standard. Free size "L" or "M". neck strap and the adjustable buckle on the back strap ensure comfort fit.	
9	Welding Tables	Pc	6	Dimensions – 2.0 x 2.0 x 2.0 Meter or equivalent. Sound Insulating Partitioning MS Welding Booth UV radiation inhibiting coating. Consisting of various system elements on the modular. Principle Panel / Cassette width should be 50 mm thick with Soundproofing Bio Soluble Mineral Wool in it which is DIN 4102 approved and Noncombustible, MS Pillar should be 60 x 60 x 03 MM Grouting Base Plate 08 mm with laser cut. MS Material	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				should be nicely powder coated. Cassette connected with C Profile with each other Modular cassette / Panels	
10	Mobile Tungsten Grinder/ Hand Grinder	Set	6	Tungsten grinder ESG. The best solution for a precise and fast preparation of tungsten electrodes. The perfect hand-held grinder for cutting, grinding and planing electrodes which are used in WIG/TIG welding machines, Grinding head for electrodes Ø 1.0 - 1.6 - 2.0 - 2.4 - 3.2 - 4.0 mm or (0.04" - 1/16" - 0.08" - 3/32" - 1/8" - 5/32"), Grinding head for grinding angle 15° - 18° - 22.5° - 30° No Load RPM at least 27,000 RPM or better, Auxiliary Handle, Inner (Clamping) Flange, Outer (Round Nut) Flange, Spanner Wrench, Abrasive Grinding Wheel Mains voltage: 230 V / 50 - 60 Hz. Output: 500 W, Speed: 27,000 rpm or equivalent. Scope of supply: device with grinding head 1,6 mm, 2,0mm, 2,4mm, 3,2 mm, electrode holder for short electrodes, tool (hex wrench and flat spanner), holding bracket, suction adapter.	
11	Pressure Regulators	Set	3 each	Oxygen / Argon / CO2: Max. Inlet Pressure: 150/200 bar / 2900 psi. Max. Outlet Pressure: 10 /15 bars / 145 psi regulator double stage. Max. Inlet Pressure: 10 bar/ 145 psi. Max. Outlet Pressure: 1.5 bar / 22 psi. Stable Outlet Pressure. Steady Flow of Gas. Better Pressure Regulation. Forged Brass Body & Housing Cap. Sintered Filter at the inlet. Stainless Steel Sintered Central Micro Filter Acetylene Pressure Reducer Regulator Gas Meter Pressure Gauge. Inlet: 0-400 PSI, Outlet pressure: 0-30 PSI, Inlet thread: CGA 510 female. Diameter gauges: 2-5/8 in. Body made from forged brass. R. H connection for oxygen & L. H. connection for acetylene. Flow- 10m ³ /h(150lit/min) or equivalent. Confirming to IS 6901:2009 or equivalent. CO2 Gas pressure: Max. Inlet Pressure: 150/200 bar / 2900 psi. Max. Outlet Pressure: 10 /15 bars / 145 psi. DA: Max. Inlet	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>Pressure: 10 bar/ 145 psi. Max. Outlet Pressure: 1.5 bar / 22 psi. Confirming to EN ISO-2503. Stable Outlet Pressure. Steady Flow of Gas. Better Pressure Regulation. Forged Brass Body & Housing Cap. Sintered Filter at the inlet. Stainless Steel Sintered Central Micro Filter. Teflon Coated Valve Seat. Fire Retardant valve seat material. Diaphragm: Thick NBR supported by large backup plate & Teflon ring in Periphery regulator, with flow meter Argon Gas pressure: Max. Inlet Pressure: 150/200 bar / 2900 psi. Max. Outlet Pressure: 10 /15 bars / 145 psi. DA: Max. Inlet Pressure: 10 bar/ 145 psi. Max. Outlet Pressure: 1.5 bar / 22 psi. Confirming to EN ISO-2503. Stable Outlet Pressure. Steady Flow of Gas. Better Pressure Regulation. Forged Brass Body & Housing Cap. Sintered Filter at the inlet. Stainless Steel Sintered Central Micro Filter. Teflon Coated Valve Seat. Fire Retardant valve seat material. Diaphragm: Thick NBR supported by large backup plate & Teflon ring in Periphery regulator, with flow meter</p>	
12	Fume extractor system connecting all the Welding booths	Pc	6	<p>Fume Extractor Complete with ducting and Fume Extraction System which includes as below: CENTRIFUGAL FAN: - Exhaust Fan 13000 CMH . Voltage – 3 x 400V x 50 Hz ±10%, Motor Power – 15 kw, Static Pressure – 300 mm WC, Total Pressure – 322 mm WC, FAN rated RPM – 2880, Air Handling Quality – Dust Load (<10mg/Nm3), Current Consumption 20.2 A, RPM 2910 / Min. Transition piece – Rectangular Ø 450 mm. Flexible Exhaust Arm: Flexible Exhaust KEMPER Arm, Length 3 Meter. Arm Dia. 150 mm or equivalent. Flexible Exhaust Arm a fiber glass hose with a PVC coating and an internal steel wire spiral. Arm Should be with interior parallelogram, there should not be any outside support. 1 No. Joint Arm Only. Self-Supported with internal springs. With 360-degree rotatable swivel joint from mounting point. Exhaust Arm Weight - Approx. 20 Kg. Exhaust Hood: Rhombus shaped, for</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				max. capturing area, Hood Size -250 x 300 mm or equivalent. 360° Rotatable Hood. Protective mesh on Hood. Manual Damper should be inbuilt with hood. Ducting: - GI Spiral Ducting,275 gsm, 22 gauge - Duct Dia. as per requirement, Duct Length - as per site visit	
13	Fabrication of Welding Booths	Pc	6	Welding Booths Dimensions – 2.0 x 2.0 x 2.0 Meter or equivalent as per layout size. Sound Insulating Partitioning MS Welding Booth UV radiation inhibiting coating. Consisting of various system elements on the modular principal Panel / Cassette width should be 50 mm thick with Soundproofing Bio Soluble Mineral Wool in it which is DIN 4102 approved and Noncombustible, MS Pillar should be 60 x 60 x 03 MM. Grouting Base Plate 08 mm with laser cut. MS Material should be nicely powder coated. Cassette connected with C Profile with each other Modular cassette / Panels	
14	Curtains for Welding Booths	Pc	6	Curtains for Welding Booths and Posters: Lateral Sliding Strip Curtain mechanism. Curtain should be as welding protection PVC strips - 33% Overlapping PVC Strip Curtain with 200 mm Strips - Strip should be 2 mm thick. Curtains should be as per EN 1598 standard. PVC Strip Should be UV protected.	
15	Gas Manifold system	Pc	6	2 + 2 Gas Cylinder Manifold System for Argon, Co2, ACM Gases suitable for 12 working stations. 1/2" SS 304 Seamless pipe/tube with fittings total length 300-meter, safety relief valve, Other Features/Parameters: Set the outlet pressure as per requirement with outlet press Regulator. Inlet Pressure Gauge: 2 nos. of 0 – 210 Kg Gauge or equivalent. Open outlet valve to use as per requirement.	
16	S.S Wire Brush	Nos	12	Wire Brush with stainless steel bristles. 4 x 16 SS Wire Rows with wooden Handle. Bristle Length at least one Inch or equivalent. Overall Length 300MM (12 Inch) or equivalent. Width 30MM or	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				equivalent.	
17	Spark Lighter	Nos	6	Standard Spark Lighter for Gas Cutting & Welding applications. Single Cup with single flint.	
18	Welding hand shield Fiber	Nos	12	Light weight, Main Body Alloy High Glass PVC. Cartridge size: 90 mm x 110 mm, Viewing area: 96 mm x 46 mm, Light shade: DIN 3, Dark shade: DIN 9 – 13 or equivalent	
19	Chipping hammer with metal handle	Nos	12	Generally Conforming to IS 841-1983. Partially Hardened up to 55 - 58 HRC on Striking surfaces needed as functional requirements for all types of hammers. Drop forged from high grade carbon steel. Phosphate and painted to provide anti rusting properties. Resharpen the point or chisel edge from time to time when it gets blunt. The hammer features a cone-shaped nose with a sharp, flattened point and a dual beveled tail. Hanging hook at one end so the tool hangs easily from a peg board or nail. Handle made from high quality Steel and fixed firmly to hammer head. Weight at least 250 Grams, Overall Length at least 12-Inches.	
20	Chisel cold flat	Nos	12	Flat Type. Differential heat treatment for cutting edge, and striking end. Drop forged from high grade carbon steel. Hardened & tempered & toughness. Hardness: 55 - 57 HRC on cutting edge. 35 - 45 HRC on striking portion. Cutting edges are ground accurately to appropriate angle conforming to IS 5663-1970. Overall Length not less than 150MM(6-Inch). Cutting edge width not less than 20MM. or metal cutting. With Rubber Grip.	
21	Centre punch	Nos	12	Made out of high-grade Chrome steel accurately machined and heat treated. Deep knurling on the body ensures firm grip. Black phosphate finish. Conforming to IS 7177-1999 or equivalent. Length at least 150MM x Diameter 10MM	
22	Dividers	Nos	12	Fully hardened and tempered joints, spring, washers and divider points. Divider points are hardened 50-55 HRC for increased wear	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				resistance. With Quick Adjustment Nut. Contact ends fully rounded to give accurate dimensions. The legs pivot on a roller and are tensioned by bow spring. Range not less than 200MM(8-Inch) mm. Confirming to IS: 4084- 1964 or equivalent.	
23	Stainless steel rule	Nos	12	Easy-Read Metric/Inch Stainless Steel Etched Ruler with zero at the edge. Top edge is graduated in 1 mm increments with numbers in mm value. Bottom edge is graduated in inches. First two inches are in 1/32" increments, third inch is in 1/64" increments, the rest of the ruler is graduated in 1/16" increments. Rulers have conversion tables on the reverse. Conforming to IS 9193-1988. Length at least 300MM (12-Inch), High-Quality Stainless-Steel Rulers (no cork backing) with Acid etched graduations filled with black ink.	
24	Scriber	Nos	12	Double-ended, hardened steel engineer's scriber for marking or scoring metal. One end straight and another end 90°. • Scriber size :150 mm double point • Type: Straight & Knurled at center position Material high carbon steel, is a hand tool.	
25	Flat Tongs	Nos	12	350mm - Flat Tong Mouth Tip Length(mm) 65MM or equivalent. OAL - 350mm. Long heavy duty. Forged. Material S45C or equivalent.	
26	Hacksaw Frame (fixed)	Nos	12	Fixed Type Frame. Hacksaw frame 300 mm, aluminum die cast handle. Overall Length at least 440MM x Width 130MM x Bow Depth at least 103MM. Conforming to IS 2594-2003 or equivalent. With one set of Hacksaw Blade each 18TPI and 24TPI	
27	File Half-round Bastard	Nos	12	Half-round second cut. Length 300MM (12 Inch) or equivalent. Made from carbon steel. With rubber grip/Wooden handle. Generally Conforming to IS 1931-2000	
28	File Flat	Nos	12	Flat File 300MM (12 Inch) Length, made from Carbon Steel with rubber grip/Wooden handle. Generally Conforming to IS 1931-2000. Hardness 60 to 64 HRC or equivalent	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
29	Hammer ball pane	Nos	12	Weight 900gm, Generally Conforming to IS 841-1983. Partially Hardened up to 55 - 58 HRC on Striking surfaces needed as functional requirements for all types of hammers. Drop forged from high grade carbon steel. Phosphate and painted to provide anti-rusting properties. Handle made from high quality axle wood and fixed firmly to hammer head.	
30	Tip Cleaner	Nos	12	Large and Small 13 Wire Oxy-Acetylene Tip Cleaner Set for Cleaning Welding Cutting Nozzles/Tips. Kit should include one 130mm (5") and one 75mm (3") Tip Cleaner. Each Welding Tip Cleaner includes 13 Wire Files (49 to 77) at different lengths (4-1/3" or 2-1/3"). Includes a flat file. Wires are Made from Quality Stainless Steel and enclosed in a sturdy Aluminium casing.	
31	Try square	Nos	12	Heavy duty 52 HRC head. Hardened spring steel blades are permanently fixed to the stock by means of tapered self-locking rivets. Both the blade and stock are precisely ground. Working edges of the blades are lapped. groove on the inner corner of the stock aids in the clearance of burr or dirt. Blade Length at least 100MM(4-Inch). Straightness of blade edges 12micron or better. Flatness of working faces of stock 8micron or better. Squareness of blade edges to working faces to stock 24micron or better. Internal & External Squareness as per BS 939 Grade B or equivalent	
32	Spindle Key	Nos	4	Cylinder Opener Key, Rust Proof, 65 mm	
33	Screwdriver	Nos	1	6 X 300MM blade and 6 X 250MM blade Hardness on tip: 55 to 58 HRC. Should be hardened and tempered to resist wear, bending and meet high torque requirement. Should be made up of Silicon - Manganese steel. The blade tip should be magnetized to lift small screw.	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
34	Number punch	Nos	2	Set of 9Pcs, 10 MM (3/8 inch) Number Punch Set 9 Numbers (0 to 9). With Induction Hardened (58 -62HRc) Ends. Stamp Size: 4MM (5/32") or equivalent. It has chamfered and 35-42 HRC tempered striking end Supplied in a Plastic Box.	
35	Letter Punch	Nos	2	Letter Punch Set of A-Z Letters. Stamping end is Hardened at 58-62 HRC. Letter Stamp Set with Induction Hardened Ends, Stamp Size 5MM or equivalent. Confirms to administrative and technical requirements of the ANSI/ESD S20.20:2014 and BS EN 61340-5-1:2007 Electrostatic Control Standards.	
36	Magnifying glass	Nos	2	Hi-Quality Hand-Held Magnifier Lens or magnifying glass with Handle. Optical grade at least 8X or better Magnification Capacity. Lens Diameter at least Dia 80MM or equivalent. Length - 195mm approx.	
37	Universal Weld measuring gauge	Nos	2	Measuring gauge for Crown height, fillet weld leg height, misalignment (high-low), undercut depth, fillet weld throat size, angle of preparation, length, 45-degree angle.	
38	Spanner D.E.	Set	2	Forged from Chrome Vanadium Steel. Double Ended metric spanner. Size ranging from 6x7, 8x9, 10x11, 12x13, 14x15, 16x17, 18x19, 20x22, 21x23, 24x27, 25x28, 30x32 MM. Length as per standard, ranging from 95MM to 250MM depending upon size. Chrome plated for corrosion protection with heads sets at 15 degree. Conforming to IS 2028-2004 or equivalent. Made of high-quality chrome vanadium steel or carbon steel	
39	C-Clamps	Set	2	Body hot drop forged from high grade steel. All parts are fully heat treated and black Phosphated. Length at least 100MM(4-Inch), 150MM(6-Inch) and 200MM(8-Inch). Throat Length (Clamping Gap) not less than 55MM. Conforming to IS 9181-1988 or equivalent. 10 cm and 15 cm cast iron	
40	Sledgehammer (double faced)	Nos	1	Sledgehammer with Hickory Handle. Weight 5.44 KG (12lb), Length 30 Inch or equivalent. Partially Hardened up to 55 - 58	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				HRC on Striking surfaces. Drop forged from high grade carbon steel. Phosphate and painted to provide anti rusting properties. Generally Conforming to IS 841-1983.	
41	S.S. tape	Nos	1	Swollen Case on both sides. Compact and Round ABS Case. High quality carbon steel with acrylic resin/Nylen coating Tape. Length atleast 5-Meter and retractable type. Tape Width: Not less than 13mm Metric/English tape• Tape Material: Tempered Steel. with Belt Clip with Self compensation tip to set Zero. Conforming to IS 1269-2 or latest., Class II Accuracy	
42	Trolley for cylinder (H.P. Unit)	Nos	2	One Oxygen + One LPG Cylinder Handling & Lifting Trolley for gas cylinder with heavy duty lockable wheels and pull arrangement with cylinder clamping and stand.	
43	Portable drilling machine	Set	1	Wattage 500 watts, No-load speed 0 – 2,600 rpm, Voltage: 220-230V, Frequency: 50-60 Hz, Material plastic, Rotating brush plate for constant power in reverse and forward rotation. Dynamic load rated ball bearing for long life. Drill spindle connecting thread 3/8"-24 UNF, Chuck capacity, min./max.: 1 – 10 mm, Impact rate at no-load speed 0 – 41,600 bpm Drilling in concrete 13mm, Speed 0-2600, RPM 0-25700 or equivalent.	
44	Radio graphic reference standard	Set	1	Document Package Only: Certificate of Conformance, CAD Drawings, Test Sheets and Radiographs Film Set Contains: 16 Radiographs of 20 flaws and 6 Processing Defects. Radiographs are of 10 carbon steel, Plates: 0.375"T, 0.625"T, Tee: 0.375"T, Pipe: 4" Sch80 (0.337") wall	
45	Pressure vessel codes (Book or CD) IBR & ASME sec IX	Set	1	Pressure vessel codes (Book or CD) IBR & ASME sec IX	
46	Structural welding codes D1.1(Book or CD)	Set	1	Structural welding codes D1.1(Book or CD)	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
47	Wall charts, Transparencies and DVDs related to the trade	Set	1	Wall charts for welding trade: Types of welding joints, Electric resistance welding, Spot welding, Seam welding, Flash welding, Electric Arc welding, Submerged Arc welding, Thermit Arc welding, Oxy-Acetylenes Torch, Gas flames, Basic weld symbols, Supplementary weld symbols, Laser beam welding, atomic hydrogen welding, TIG & MIG welding, Welding torch and Electroslag welding	
48	Leather Hand Gloves	Pair	12	Soft leather material - with reinforcement and good dexterity, not fall off. Thicker and heavier than had a long cuff in a decorative pattern gloves Used of Special Handling - Anti-skid scrub treatment, amazing grip and excellent dexterity. Durable, anti-skid, anti-oil, acid and alkali. Sweat absorption and dry. Suitable for Welding. Size 14-Inches or equivalent.	
49	Cotton Hand Gloves	Pair	12	Pure Cotton Hand Gloves, re-usable, Washable, to Protect from fine dust, Air-Pollution. Wet and Dry Glove Set. Size 8-Inch or equivalent	
50	Leather Apron	Nos	12	Easy wipe cleanable, Leather Apron, Welding Apron. Heat and moisture resistant. Kevlar stitched and re-enforced with rivets. Leather straps are provided for Additional strength. Standard. Free size "L" or "M". neck strap and the adjustable buckle on the back strap ensure comfort fit.	
51	Leather Hand Sleeves	Pair	12	Size 16-Inch or equivalent. Heat Resistance Up to 150 C degree Celsius. Should protect your hands from welding sparks, heat and UV rays. Cuff type Velcro.	
52	Safety Boot	Pair	12	Black Color Industrial Shoes/Boot with Steel Toe cap designed for Welders. S1P safety shoes with additional protection against oil and slip resistance. Heat resistance to over 300 Degree Celsius.	
53	Leg guard leather	Pair	12	Welding 20 CM (8 Inches) Long Leg Guard. Made of Split Leather Shoe Protector, Heat and Abrasion Resistant Welding Spats Shoes Cover, Welder Working Tool. Stitching with fire resistant	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				thread provides spark and abrasion resistance.	
54	Arc Welding Single-colored glasses	Nos	24	Welding Glass, Size - 108 x 82 x 3 MM (4.25 x 3.25 Inch) or equivalent. As per DIN 11 A and 12A or equivalent	
55	Arc Welding Plain Glass	Nos	36	Welding Glass, Size - 108 x 82 x 3 MM (4.25 x 3.25 Inch) or equivalent	
56	Gas welding Goggles with Colour glass	Nos	24	IR-11 lens, Lens material Polycarbonate, Hard-coated for Scratch-Resistance, High Impact Resistant. Lenses as per DIN 3 or 4A or equivalent standard. Frame made up of cellulose acetate, the glass thickness of 2.8mm with a tolerance of ± 0.2 MM or better. Should be suitable for Gas Welding up to 70 Liters Acetylene/Hour, Flame Cutting up to 900 Liters Oxygen/ Hour or better.	
57	Safety Goggles (Plain)	Nos	12	Eye Protection Glasses with Clear Lens, Transparent. provides 99.9% or better UVA/UVB protection. Adjustable, elastic cloth head strap with ventilation channels.	
58	Welding Helmet (Fiber)	Nos	12	Size: 83 x 108 mm. Helmet complete with outer protection lens, shade 11 mineral glass and internal protection glass. Should have 3 flip fronts.	
59	First Aid box	Set	1	Easy To Carry Handle and Buckle Lock Shuts the Lid Keeping the Items Safely Inside. Made with BPA-Free and Durable Plastic. It is Easy to Open, Close Wash and Clean. Inner removable Tray and Deep Storage area offer Flexible Storage and Increases Storage Space. First Aid Kit equipped with all essential elements required to handle a quick emergency. Package Content: 10 pcs Safety Pin, 10 pcs Cotton Tip Applicator, 25 pcs Adhesive Plaster 19x72mm, 10 pcs Adhesive Plaster 25x72mm, 5 pcs Adhesive Plaster Round, 3 pcs Adhesive Plaster Square, 2 pcs Adhesive Plaster Knuckle, 5 pcs Wound Cleaning Wipes, 5 pcs Antiseptic Wipes BZK, 2 pcs Sterile Burn Dressing 10cm, 1 pc	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>Micropore Tape 1.25x5m, 1 pc Antiseptic Cream 10gm, 5 pcs Wound Cleaning Wipes, 5 pcs Antiseptic Wipes BZK, 3 pcs Sterile Gauze Swab 10cm, 3 pcs Sterile Gauze Swab 7.5cm, 2 pcs Sterile Adhesive Plaster 6x10cm, 3 pcs Elastic Gauze Bandage 6x1m, 2 pcs Gauze Bandage 7.5x3m, 1 pc Sterile Wound Dressing Large. 1 pc Sterile Wound Dressing Medium</p> <p>General Medicines: 1 pc Dusting Powder 10gms, 1 pc Tincture Iodine 20ml, 1 pc Burn Cream 15gms, 1 pc Eye/Ear Drops 5ml, 1 pc Crystal Violet 5ml, 5 pcs Electrolyte Powder 4.2g, 10 pcs Paracetamol Tablet 500mg, 14 pcs Aspirin 75 mg Tablets</p> <p>General Items: 1 pc Scissor 5.5" Tough Cut, 1 pc Antiseptic Lotion 100ml 1 pc Tweezer Plastic, 1 pc Absorbent Cotton 20gms, 1 pc Triangbrar Bandage, 1 pc Tourniquet, 1 pc Instant Cold Compress, 1 pc Penlight, 1 pc CPR Mouth Barrier with Gloves, 1 pc First Aid Guide, 2 pcs Sterile Oval Eye Pad, 2 pcs Wooden Splint, 2 pcs Examination Gloves</p>	
60	Auto Darkening Welding Helmet	Set	2	Shade level range (4/9-13), Switchover time / darken (0,22 ms), Switching time dark / light (0,05-1,0 sec), Cartridge size [l x b x h] : 90x110x9,5 mm or better, Weight : 0.5 KG, Continuous opening delay regulator: 0,05 s – 1,0 s , Classification: 1/1/1/2, length/Width/Height(L XWXH) ≤ 290 X 240 X 240,	
61	Fire Extinguishers (foam type and CO2 type)	Set	1	CO2 type Fire Extinguisher of 4.5Kgs. Capacity, made from brand new seamless cylinder, as per IS: 7285 and CCE approved, fitted with hose and horn and Squeeze Grip Valve with initial Charge of CO2 Gas conforming to IS 15222 or equivalent and Extinguisher as per BIS:15683:2006 or equivalent. specification with ISI Mark along with mounting Bracket and PESO certificate for cylinders. Foam Type: Foam fire extinguisher shall be Squeeze Grip.	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				Cartridge type of 9 Ltr capacity having rating of 34B fitted with gunmetal cap, CO2 gas cartridge and hose with squeeze grip nozzle with ISI mark and mounting brackets. Initial charge of 270ml AFFF 3% foam compound shall be supplied in separate container. Spare cap assembly including all accessories such as gas tube siphon tube, safety pin, and discharge tube and co2 cartridge.	
62	Fire buckets with stand	Set	1	Standard Size for Sand/Water with Stand. Size of the Fire Bucket shall be minimum nine (9) liters. Fire Buckets: The material of construction shall be Galvanized Iron with anti-corrosive treatment. Outside of the Fire Bucket shall be painted with primer and Fire Red Colour. the word "FIRE" shall be written outside the bucket in bold black letters. The inside of the Fire Bucket shall be painted with primer and white.	
63	Metal Rack	Pair	1	Iron Rack Shelf for Storage Engineered Wood Shelf - 63 (H) x 24(W) x 12(D) Inch.	
64	Work Benches with Bench Vices and storage drawers to demonstrate welding equipment	Set	2	Size 3400 (L) x 1200(W) x 750(H) MM with Two (02) Bench Vice fitted on Top (diagonally opposite) Vices of 150MM (6 Inch) Jaw opening, fitted on wooden Top (at least 50MM Thick). Metal Frame, heavy duty structure and powder coated with industry specific color (Opel Green or equivalent). Table Frame of 50 x 50 x 6 MM angle with 50MM wooden top. Fitted with 2-Shelves metallic Drawer/Tool Cabinet 200MM (8 Inch) or equivalent depth with Lock and Key	
65	Chest of drawers	Pair	1	Chest of 4 drawers, white - Smooth running drawers with pull-out stop. Particleboard, Acrylic paint.	
66	Rubber Hose Clip	Pair	12	Worm Drive Hose Clamps (Stainless Steel), Size 1/2 Inch or equivalent, Band Width 12.70 mm or equivalent, Band Thickness 0.60 mm or better.	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
67	Rubber Hose (for Oxygen)	Set	10	Size: Diameter 8MM, as per BIS, meets or exceed IS 447 / BS EN 559. Oxygen hose with invariably green/blue color. Inner tube: Gas-Oil resistant synthetic rubber. Reinforcement: Single layer braid high tensile steel wire hose. Outer cover: Weather / Ozone/ Abrasion resistant synthetic rubber. Temperature range: (-) 20° C to (+) 70° C. Burst Pressure 70 bar or better.	
68	Rubber Hose (for Acetylene)	Set	10	Size: Diameter 8MM, as per BIS, meets or exceed IS 447 / BS EN 559. Oxygen hose with invariably red color. Inner tube: Gas-Oil resistant synthetic rubber. Reinforcement: Single layer braid high tensile steel wire hose. Outer cover: Weather / Ozone/ Abrasion resistant synthetic rubber. Temperature range: (-) 20° C to (+) 70° C. Burst Pressure 70 bar or better.	
69	Arc Welding Cable (multicolored) Copper	Set	36	Current Rating at a Maximum Duty Cycle 400/ 600 AMP as per BIS. excellent heat resistance and flame retarding ability. HOFR or TRs Welding cables confer to IS: 9857 or latest. Preferably black color. Annealed high conductivity copper wires comply in with IS 8130:1984. Covering - general service normal duty elastomeric compound shall be Type SE 1 confirming to the requirements of IS 6380:1984. The heat resisting, oil resisting and flame retardant (HOFR) normal duty elastomeric compound shall be Type SE 3 confirming to the requirements of IS 6380:1984.	
70	Die penetrant testing kit	Set	5	Highly efficient three pack N.D.T System, Suitable for checking welds and Stressed machine parts for cracks and flaws, before and after welding or machining. Specification - Great for most metals, plastics and other Solid Surface. Good coverage. Easy applied. Portable. Sulphur and chlorine free. Nontoxic and Non - corrosive.	
71	Insulation ring	Pair	10	ø20,5 / ø12,15x8mm	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
72	Nozzle stock	Pair	15	M8x1,5 / SW11x44,5	
73	Spatter guard	Pair	25	Ø11,2/Ø20,2x22	
74	Gas nozzle	Pair	50	Ø15 / Ø25x75 CT M23x2	
75	Contact tip	Pair	15	0,8 / M8x1,5 / Ø10x32	
76	Contact tip	Pair	15	1,2 / M8x1,5 / Ø10x32	
77	Bare steel inner liner	Set	15	0,8 / 5m	
78	Bare steel inner liner	Set	15	1,2 / 5m	
79	Clamping piece	Pair	15	0,8 Fe / CrNi	
80	Filler Wire Mild Steel	Set	25	ER70S6 1.2 MM (15 KG)	
81	Filler Wire Mild Steel	Set	25	ER70S6 0.8 MM (15 KG)	
82	Gas Regulator	Pair	4	Gas Regulator for Oxygen Acetylene	
83	Electrode	Pack	25	Packet of 100 Sticks	
84	Torch cap long	Pair	15	Suitable for above Quoted Machines	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
85	Torch cap medium	Pair	15	Suitable for above Quoted Machines	
86	Torch cap short	Pair	15	Suitable for above Quoted Machines	
87	Clamping sleeve	Pair	15	4,0/ø11,5x56 suitable for above Quoted Machines	
88	Head shield	Pair	15	standard ø20/ø10,1x7 suitable for above Quoted Machines	
89	Clamping sleeve	Nos	15	2,4/ø4,5x25 suitable for above Quoted Machines	
90	Clamping sleeve	Nos	15	3,2/ø4,5x24,3 suitable for above Quoted Machines	
91	Clamping sleeve case	Pair	15	2,4/ø9,5x20,6 suitable for above Quoted Machines	
92	Clamping sleeve case	Pair	15	3,2/ø9,5x20,6 suitable for above Quoted Machines	
93	Gas nozzle ceramic	Pair	50	ø6,3/ø14,2x29,5 suitable for above Quoted Machines	
94	Gas nozzle ceramic	Pair	50	ø9,5/ø14x30 suitable for above Quoted Machines	
95	Gas nozzle ceramic	Pair	50	ø11,2/ø16,2x29,5 suitable for above Quoted Machines	
96	Tungsten electrode	Pair	15	WC20/ø2,4x175 suitable for above Quoted Machines	
97	Tungsten electrode	Pair	10	WC20/ø3,2x175 suitable for above Quoted Machines	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
98	Tungsten electrode	Pair	10	WC20/ø4,8x175 suitable for above Quoted Machines	
99	Welding Cable	Mtr	10	Welding Cable Wrapping 50 Sq/mm 10 Mtr. Material copper	
100	Steel Plates 5mm	Kg	12	MS plates for welding practice 5mm X 100mm X50mm	
101	Steel Plates 6mm	Kg	12	MS plates for welding practice 6mm X 100mm X50mm	
102	Steel Plates 8mm	Kg	12	MS plates for welding practice 8mm X 100mm X50mm	
103	Steel Plates 10mm	Kg	12	MS plates for welding practice 10mm X 100mm X50mm	
104	Welding Electrodes	Pack	50	Welding 2.5 mm x 350 mm Mild Steel	
105	Mig Welding Consumables	Set	12	Glove – MIG Heavy duty Gloves for MIG/MAG/MMA Welding made of heavy chrome leather for robust wear yet comfortable feel. Full five finger welder's gauntlet <ul style="list-style-type: none"> • One piece back 35 cm (14 inch). • Fully welted, no exposed seams • Kevlar® sewn throughout • Comfortable soft full lining • Approved to EN 388 and EN 12477 type A 	
106	Tig Welding Consumables	Set	12	TIG Gloves Nappa Grain leather palm and fingers ensure high dexterity • 15cm leather cuff provides robust protection	
107	AG4 Grinder with Wheels	Nos	5	Ag4 Grinding Disc 4-inch 100 x 60 x 16 mm Grinding Wheel (Black)	
108	Hacksaw with Blade	Nos	12	HSS Hand Hacksaw Steel Blades (300 X 12.5 X 0.63 mm) 18TPI and 24 TPI pack of 10nos.	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
109	Earth clamp	Nos	6	Earth clamp zinc coated steel and copper plated jaws for contact with the work piece. Jaws should be opened up to 60mm or more.	
110	Oxy Acetylene Gas Cutting blow pipe	Nos	2	Suitable for cutting of metals, ISI Certified, B-1/16" gas cutting nozzle, Die forged brass body, Length: 22 Inch or equivalent.	
111	Electrode holder	Set	12	Capacity 600Amp., Insulation resistant above 1 mega ohm and dielectric strength up to 3000 volts ensures enhanced safety. This holder should be suitable for cables up to Al120/Cu70 sq.mm. and CE certified as per European standard EN60974-11.	
112	H.P. Welding Torch with 5 Nozzles	Set	2	Suitable for welding/brazing/heating of ferrous metals with oxy-fuel gas, ISI Certified.	
113	Welding Transformer with all accessories (400A, OCV 60-100 V, 60% duty cycle)	Set	2	400 AMPS Pulse Synergic Welding Machine: Digitally Controlled IGBT Inverter Based, Cc/Cv Power Source, Input Voltage-380 / 400V \pm 10%, 50 Hz, Ac 3 Phase, Apparent power at 400 V AC / 400 A / 40% ED2) \leq 21 KVA Max At 40% Dc At 400 Amps., Arc Current Range (Output)- 10 Amps to 400 Amps or More, O.C.V- 54 to 66 V Output Should Be Nearly Ripple Free, Power Factor \geq 0.98, Insulation Class-B or better, Protection Class- IP-23 or Better, Efficiency \geq 87%, Power Source Weight \leq 35 Kg, Protection Against-Single Phasing, Short Circuiting, Supply Over Voltage, Thermal Over-Loading Etc., Duty Cycle- At 100% Duty Cycle at 330 or more Amps and At 60% Duty Cycle 360 Amps or more, Pollution Level-3, Manual and Synergic, Pre-program setting for various amps/volts, metals gas combination. The machine should have inbuilt Pulse Synergic mode for steel, Pulse Controlled spray arc characteristics for steel for deep and narrow penetration, steel with Root characteristics for Root passes, Dynamic Characteristics for faster and deeper penetration welding and speed, and universal arc characteristic for conventional welding. The machine should have Synchro/ Pulse for a scaled appearance in welding joints. The precision setting	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>should be in the accuracy range of 1.0 amps & 0.1 volt. The interface should be operator friendly for controlling various operations. Facility to be present like gas pre-flow and post flow, arc length control, hot start, soft start, crater filling, 2t/4t, memory set up function, 5 easy jobs save option The machine programmed synergic curves for MIG/MAG and Pulsed MIG process. Should have energy-saving stand-by facility for auto idling of fan. A machine should have the facility of documentation of welding data, and more than 55 new pulse characteristics must be available in Pulse Process, Feeder Roller should be Universal and color coated, more than 165 Welding Characteristics, Synchro Pulse Program, Pulse Controlled Spray arc special arc, Spot Welding Mode, Stitch Mode, Automatic wire threading without opening the wire-feed unit, ignition time out setting should available in the machine, Intermediate arc indicator must be available, automatic End crater filling, Error code display on problems, measurement of R & L, Machine should have Control Panel locking function, Automatic burn back control, USB, Thumb Drive Export Function.</p>	
114	Welding Transformer with all accessories (300A , OCV 60 - 100 V, 60% duty cycle)	Set	2	<p>350 amps CC/CV Synergic Welding Machine: Mains voltage -10 / + 15% (380 -460 V), Wire Feed Speed 1- 25 m/Min, Welding Current Range (MMW ,GMAW,GTAW) – 10 Amps -350 Amps or more, primary power ≤ 16 KVA, Duty Cycle (MMAW,GMAW,GTAW process- 10min/40°C : more than 29 0A / 60% ,Duty cycle [10min/40°C] : more than 240A / 100% Open Circuit Voltage :55 to 65Vo lt ,Dimension (l x b x h) ≤ 760 x 320 x 510 ,Power source efficiency at 350 A / 34 V ≥ 90%, Power Factor ≥ 0.98, Power Source Weight ≤ 38 K.G., Safety symbols - S, CE, CSA, EMC device class –A ,Pollution degree according to IEC60664- 3, Protection Class- IP-23 or Better, Insulation class-</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>B. The machine should have Features: Manual MIG/MAG, Synergic MIG/MAG, Lift Arc Ignition TIG with Pulse and Tacking Function in DC TIG and MMAW Welding process. Wire feed and power source are integrated into one housing with 2 shielding gas connection sockets. The machine should have intermediate arc indicator, hold indicator, gas test button, material setting Button, Wire Diameter Setting Button, Shielding Gas Setting Button, Process, Button for Manual and Synergic MIG/MAG, DC, TIG, and Stick Button. The machine Should have Synergic Programmed Root, Dynamic and Universal and Self shielded wire programmed, and space to upgrade special wire Grade and Gas, 5 Easy Job parameter saving, and the torch should withstand under 100 KG load. SPOT, Stitch welding (with time setting option) and 2 STEP & 4 STEP and Special 4 STEP Mode welding operations, Digital Display with Arc Length Correction/Dynamic, Thickness, Wire Feed Speed, Current and Voltage displayed. Automatic wire threading without opening the wire-feed unit without losses of gas. The machine. Universal and color-coated rollers as per diameter. length of wire that is fed before the safety cut-out is triggered out safety features must be available for welders. The machine should have Facilities to set Pre flow, Post Flow, End Current Time, Slop Time, burn back Correction and Start Ignition. Machine should be Thermostat controlled Fan / Over temperature protection with Polarity reverser. Machine should be Earth Leakage monitoring facility and Measurement of Resistance and Inductance is possible. Machine should be DC TIG Tack (Setting range: OFF, 0.1 - 9.9) Welding and Spot welding (Setting range: OFF, 0.3 - 5), Spot Pause Time Setting range: OFF, 0.3 - 10 (in 0.1 s increments) programmed. Machine should be TIG Pulsed Arc (Setting range: 1 - 990 Hz) facility. MMAW Mode with Hot start</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>current (100 -200%), Hot Current Time (0.0 - 2.0 Second), Anti stick (ON/OFF), Arc-force dynamic and Unit indicators. Machines have an option for the opportunity to the lock control panel via a key lock switch in future and are capable of displaying the energy applied during the welding operation. The machine should be Error Code Display Facilities for Easier Fault Diagnosis and Display the software version, and operating time. The machine should be a Power Source a with CE mark & S mark which is permission of welding in confined spaces in conditions of enhanced electrical hazards. The machine welding torch must have a LED Light.</p> <p>Scope of supply should include : Power Source (In built Wire Feeder), Feeder Roller – 0.8 -1.2 MM, MIG/MAG welding torch 3-meter length, Earth cable 4 meter with clamp,5 Meter Input Cable.</p>	
115	Inverter based welding Power source	Set	1	<p>300 Amps Pulse Synergic Multi Process Machine: Mains voltage - 380 / 400V, Mains voltage tolerance: -10 / +15%, Welding current range: 10 Amps - 300 Amps, Welding current at 10 min / 40 °C Duty Cycle : 60% at 270 Amps or more ,100% at 230 Amps or more, Open circuit voltage-59V to 65 V, Apparent power at 400 V AC ≤ 12 KVA, or Better, Safety symbols-S, CE, CSA, Dimensions (l x w x h)mm -747 x 300 x 497 mm, Weight ≤ 37 KG. Wire speed-1 - 25 m/min, Idle state power consumption at 400 ≤ 37 W, Power source efficiency at 300 A / 32 V ≥ 88% Protection Class: IP23 or Better Other Key Features/Parameters: Machine should have the facility of documentation of welding data, more than 57 new pulse characteristics in total in Pulse process, Universal and color coated Feeder Roller, More than 167 Welding Characteristics, Synchro Pulse Program, Pulse Controlled Spray ARC, Spot Welding Mode, Stitch Mode, Automatic wire threading</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. <i>(to be filled by the Bidder)</i>
				<p>without opening the wire-feed unit, Ignition Time out, Intermediate arc indicator, Automatic End crater filling, Error code display on problems, measurement of R & L, Machine should have Control Panel locking function, Automatic burn back control, , USB, Thumb Drive Export Function. Machine should be capable for Manual MIG/MAG, Synergic MIG/MAG, Pulse, PCS, Synchro pulse and MMAW and GTAW Pulse Welding process and welding torch should have Led Light. Machine should have Intermediate arc indicator, Hold Indicator, Unit indicators, Gas Test Button, Material Setting Button, Wire Diameter Setting Button, Shielding Gas Setting Button, Process Button for Manual and Synergic MIG/MAG, DC TIG and Stick Button. Machine should have GMAW Spot welding time (0.3 – 5), Spot pause time (OFF, 0.3 – 10), Interval setting possible in 2T (2-step), 4T (4-step), TIG Pulse frequency (1 – 980) Hertz, DC Pulse Tacking second (0.1 - 9.9) function. Wire feed and power source are integrated in one housing and 5 Easy Job parameter saving option. Machine should have 2 step & 4 step and Special 4 step mode operations. Machine should have safety features for users (length of wire that is fed before the safety cut-out is triggered). Machine should have Special Synergic Programmed Root, Dynamic and Universal and self-shielded wire programmed, and space to upgrade special wire Grade and Gas. Machine should be Thermostat controlled Fan / Over temperature protection with Polarity reverser and Universal roller geometry optimized for hard and soft wires. Machine to have the capability -If there is no "Wire threading" button, the torch trigger can be used in the same way. Machines have an option for opportunity to lock control panel via key lock switch. Machine should be capable for displaying the energy applied during the welding operation and displaying the software version, operating</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>time. Machine should be Error Code Display Facility for Easier Fault Diagnosis and Earth Leakage monitoring facility and Measurement of Resistance and Inductance is possible. Machine should be Digital Display shows value of Arc Length Correction/Dynamic, Thickness, Wire Feed Speed, Current and Voltage displayed. Machine should have Facilities to set Pre flow, Post Flow, Final current, Slop Time, start current duration and Feeder inching speed.</p> <p>Scope of supply should include Power Source 300 Amps inbuild wire feeder, Feeder Roller: 0.8 & 1.2 MM, MIG/MAG welding torch 3-meter length, Earth cable 4 meter with clamp, 5 Meter Input Cable.</p>	
116	D.C Arc welding rectifiers set with all accessories	Set	2	<p>Open-circuit voltage ≥ 91 V, 65A / 100% ED [Hybrid] 100A or more, 50% ED [Hybrid] @ Welding current / Duty cycle [10min/40°C], Operating voltage- 0-91 Volt, Battery capacity: ≥ 380 Wh, Battery Type -Lithium Iron Phosphate battery with low self-discharge & no memory effect, Battery Charger Output-voltage range-28 - 65 V DC. Battery Charger Weight -approx. 2.5 kg or Less, Test symbol: CE. Battery type Lithium-ion and must be in-built in the Power source and Capacity of battery should be 400 ± 20 Wh. Power source can be charged simultaneously with welding operation. Other Features: in SMAW: Electrode welding, Hot Start, Soft Start, Anti-stick, Dynamic Arc force. Should have welding current ≥ 90 A at 25% duty cycle and ≥ 35 A at 100% duty cycle in Shielded metal arc welding.</p> <p>Rapid charging within 40 minutes or less option must be available. Battery capacity should be 7.5 AH or more. Should have a digital display of all the parameters to be set. Should have welding current range in between 10-130 A OR More for Shielded metal arc welding and in between min 3 to 140 Amps or more for TIG</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>welding. Should have charging current in between 8 A to 12 A or less in normal mode and in between 17 A to 25 A or less in quick mode. Open Circuit Voltage (OCV) in between 80V To 100 V. protection Class IP-23 or better and charger shall have protection Class IP-43S or better. Equipped with system to monitor uniform charging & discharging and ensure uniform voltage & temperature of all battery cell. Provision for display of battery capacity exhausted & over temperature.</p> <p>Should have displayed in case of polarity reversal, supply cable faulty, over / under voltage. Safety feature to switch off the device after 5 minutes of inactivity to conserve the battery and after 3 seconds in the event of under voltage. Battery nominal voltage in between 50 -60 V or equivalent. Battery standard charging time 60 minutes or less and battery rapid charging time ≤ 40 minutes or better. Input voltage of charger in between 220 - 240 V and 50 Hz frequency of charger. Efficiency 85% or better.</p> <p>Scope of supply includes Power Source, Including charger, Ground Cables 16mm² 3m, electrode holder 16mm² 4m, hand shield, slag hammer, wire brush, welding gloves.</p>	
117	AC/DC GTAW welding machine	Set	1	<p>Mains voltage: 3 x 400 V, Mains voltage tolerance: +/-15 %, Welding current min.: 3 Amps to Welding current max : 300 Amps and more, Duty cycle [10min/40°C] :100% at 230 Amps or better ,60% at 250 or better, Open-circuit voltage ≥ 95 V, Degree of protection: IP 23 or Better, Dimensions(l x w x h): Length ≤ 750 mm, Width ≤ 320mm Height ≤ 750mm, Weight ≤ 70 kg, Max. primary current ≤ 20 A, Safety symbols : S, CE, Power source efficiency at 300 A / 32.0 V ≥ 80, Machine should have more than 6" color display with plain text display and touchscreen can also be used when wearing gloves and Full screen mode: Display is around 40% or more bigger and Over 30 languages can be</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. <i>(to be filled by the Bidder)</i>
				<p>selected. Machine should have Automatic Tungsten Electrode Cap shaping and cap overloading function. DC Pulse frequency must be upgradable up to 10,000 hz and AC frequency 40 -250 hz or more. The tacking function should be available for the TIG DC welding process pulsed welding current is present that makes the weld pool run together better when two parts are being tacked and Tacking (TAC) indicator lights up in the status bar on the if a value has been set.</p> <p>Machine should have available Sync Mode for double side tig welding.</p> <p>Ignition timeout: safety cut-out 0.1 -9.9s or better. Machine Should have Triangular, Sinusoidal, Rectangular waveform IN AC TIG Process. Machine should have Reverse Polarity Ignition (RPI) Facility for Quicker, reproducible ignition. Machine should have Automatic gas post-flow (dep. on welding current). Machine should have Cycle Tig Function for Controlled Heat inputs and outstanding weld appearance. Machine should have features to reduced current - Intermediate lowering of the welding current in order to prevent any local overheating of the base material (4-step mode). Machine should be Electrode overload indicator. Machine should be Special 4-Step Mode for Aluminum welding applications. HF ignition should be compulsory for perfect start without touching the tungsten electrode. Ready for Industry 4.0: WLAN to Bluetooth and NFC Automatic gas post-flow, Ethernet and Speed net as standard Must be available. Machine must save Easy Job (1-5) and capable to store ≥ 900 Jobs.</p> <p>Welding Torch Specifications: Multilocked System i.e. easily replace of torch neck and torch hose pack and 360 degree neck rotation and Adjust the essential parameters such as main current, lowering current, or final current, programmed no. or saved job</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>directly on the welding torch with LED can be used to light up the welding area. Torch Length: 4 meters or more. Gas nozzle mounting: Screwable or equivalent Cooling Unit Specifications: Current consumption: ≤ 0.9 A, Max. delivery head: 30 Meter or more, Max. pump pressure: 4 Bar and more, Pump Type : Centrifugal , Pump service life: approx. 9000 hrs or more , Coolant capacity : 5 L or more, Degree of protection : IP23 or Better , Mark of conformity: CE. Scope of supply: Power Source 300 AMPS AC/DC, Water Cooling Unit, Welding Torch Water Cooled 4 Meter, Earth Clamp with 4-meter copper cable, 5-meter Input Cable.</p>	
118	Spot welding machine to 15 kVA with all accessories	Set	1	<p>Phase Single Phase & Two Phase, Throat Depth 450mm, Brass Steel Thickness 0.9mm / 0.1mm Max/Min, External Water Supply 3 at Max Temp. 30C. (Ltr/Min), Stainless Steel Thickness 1.8 / 0.25 mm Max/Min, Delayed Action Fuse Rating 20 A, KVA Rating 8 @50% duty cycle (kVA). Input Supply 230 / 440 V, Insulation Class A (Cu.), Max Electrode Stroke 40mm, Nominal Electrode Force 100 kg., Max Available short circuit current 7.5 K. Amps.</p>	
119	Gas welding table with firebricks	Set	1	<p>Welding Training Table – - Dimensions-1200 x 1200 x 800 mm - MS Welding Training Table with Top side MS Grating - Side Extraction Provision also available - Electrode Holder, Water Tank and Tool tray with training table with firebricks.</p>	
120	Arc welding table with positioner	Set	1	<p>Welding Training Table – - Dimensions-1200 x 1200 x 800 mm - MS Welding Training Table with Top side MS Grating - Side Extraction Provision also available - Electrode Holder, Water Tank and Tool tray with training table</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				with positioner.	
121	Oven, electrode drying	Set	1	Input Voltage: Single Phase, 230V AC, 50Hz., 2.25kW. Output Temperature: ambient +5-to-370-degree C. Capacity - 25 KG of Electrodes or better. Overall Size 490(L) x 450(W) x 440(H) MM or equivalent. Thermostat temperature controller with electronic controller and digital temperature indicator.	
122	Table for Gas cutting	Nos	1	Dimensions-1200 x 1200 x 800 mm. MS Welding Training Table with Top side MS Grating. Side Extraction Provision also available Electrode Holder, Water Tank and Tool tray with training table	
123	Welding Simulator for SMAW / GTAW / GMAW	Set	1	<p>SIMULATOR PARAMETERS:</p> <p>Input supply: Single Phase 230V, Current range – SMAW: 10 – 500A for 4.0mm electrodes, Voltage & Current range – GMAW: 10V - 45V & 20A - 500A (1.0, 1.2 wire diameter), Current range – GTAW: 3A - 500A (2.4, -mm tungsten electrode, 2.0 mm filler rod),</p> <p>Operation: The Simulator must only be blocked by students to perform a virtual training. It must not be used by students to learn theory, Simulated processes: SMAW, GMAW AND GTAW, Arc types GMAW: Different arc types should be simulated including short arc, spray arc, pulsed arc, Process variants GTAW: Should be possible to use DC- and AC, Process variants MMA: Electrode holder has to be physically connected to correct polarity DC+, DC-, Joint configuration: Butt Y-Groove, Butt I-Groove, Pipe to Pipe with Y-Groove, Pipe to Pipe with I-Groove. Pipe to Plate, Corner Joint, Overlap Joint, Customized Workpiece, Welding positions: 1G to 6G ,1F to 6F (Welding positions have to be detected from the simulator (to prevent cheating from trainee), Welding simulation: It should provide red hot molten welding puddle and cooling down simulation, Workpiece positioning: Flexibility to position the workpieces freely on eighter a height adjustable,</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. <i>(to be filled by the Bidder)</i>
				tiltable workpiece holder or position it freely on an adequate surface, Simulated workpiece thickness: 3mm, 6mm & 10mm thickness of base material, Visualized workpiece thickness: Visualized workpiece thickness should correspond to simulated workpiece thickness, Torch control – GMAW: 2-step mode, 4-step mode, Special 4-step mode, Parameters for special 4-step mode – GMAW: Should be selectable, Torch control – GTAW: 4-step mode, Parameters for 4-step mode – GTAW: Should be selectable, Cap shaping of tungsten electrode: Automatic cap shaping function for tungsten electrode in GTAW AC process variant, Interaction with torch: The provided torch should be used to interact with virtual elements before, during and after welding, Virtual interaction devices: Additional virtual menu should be available for interaction before, during and after simulation, GMAW Torch: Real welding torch to be used with leading industry standard FSC-connection/Euro connection, GTAW Torch: Real welding torch to be used with leading industry standard FSC-connection, GTAW Torch: Real welding torch to be used with industry standard bayonet connection, Grounding Clamp: Real grounding clamp to be used with industry standard bayonet connection, Electrode holder: Polarity of electrode holder to be connected like real electrode holder with connection to the power supply as per industry standard, Polarity selection: Should be done physically by plugging in the corresponding industry-standard connectors rather than via settings in menu, Torch detection: It should be detected if the correct torch is connected, Torch detection mode: The effect of a false connected torch should be customizable by the trainer per training, Technology: Augmented Reality, Simulation methodology: Green learning with no real arc or real fumes, Weld bead simulation: Continuous arc	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>with weld bead formation, Welding practice: Practice on workpiece – minimum 10-inch-long weld bead, SCREEN: Simulator must have separated Display that can be used both during virtual exercises and for theory learning, Weight: Weight of Welding Simulator should be above 15 Kg but less than 20 Kg without Torches. Workpiece visualization: It should be able to simulate the workpieces from all sides. Including underside and backside, Workpiece interaction: The user must be able to see the workpieces through the visualization device and be able to touch / rotate / adjust the work pieces, also during welding, SMAW Welding practice: During SMAW welding virtual consumable or retracting electrode to be used, GMAW Welding practice: GMAW welding should accommodate short and long stick out, GTAW welding practice: GTAW welding should have skill guidance for work and travel angle, Types of work pieces, Guidance for parameters: Student should be able to use guidance for parameters. Guidance should be provided visually, Parameter settings: The welding parameters should be set on a user interface which looks and behaves like a real welding machine, Start Current: Welding start current should be selectable, Parameter settings during welding: The welding parameters should be changeable during welding without taking off the visualization device, Welding modes: For GMAW a manual welding mode and a synergic mode for standard and pulse should be available, Gas setup: Should support shielding gas selection like Argon, CO2 and various mixtures, Gas settings: Gas post flow should be selectable, Machine Setup: The interaction with the welding simulator should be like with a real welding power source. Ground clamp, real user interface and gas regulator are mandatory, Guidance for skills: Simulator should guide the student</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				by showing him stick out, welding speed, position, and torch angle throughout all processes, Welder view: Welder should be able to see the workpiece and environment through the helmet, Additional information during welding: Welder should be able to see additional information, like WFS, Voltage and Amperage in the helmet during welding, Darkening in welding helmet: The shades of the darkening during welding should be adjustable, Resolution of Augmented-/Virtual Reality Visualization device: Resolution of at least 4320 x 2160 px mandatory, Weight of Augmented-/Virtual Reality Visualization device: Center of gravity should be in the middle of the head. Not back-/front-heavy, Welding Sounds: Adaptive welding sounds with changeable character per eg. welding process, welding material, characteristic, changes of environment, Welding Sound output: Output of adaptive 3D welding sound in the VR/AR visualization device, at external monitor and near input-device, External monitor: An external monitor should be connectable via 4k HDMI output, Guidance and skill analysis of GTAW Torch, GMAW Torch and MMA electrode holder: Guidance and analysis of arc length, work angle, travel angle, speed, and path, Guidance and skill analysis of GTAW filler rod: Guidance and analysis of work angle and travel angle, Evaluation via VR/AR visualization device: Video Playback with visualization in VR/AR visualization device with the option to rotate the viewed workpiece by moving the head, Evaluation on screen: Should be possible using video with interaction, graphs and numerical values (points and/or percentage), Threshold pass / not passed: Trainer should be able to set the threshold of pass / not-passed individually per training, Analysis of weld seam: Should include welding speed, stick-out, CTWD, welding angle, work angle, Macro cut of welded seam: Noto Sans, Weld defects	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>analysis: The weld defect analysis should include of the root has been penetrated, Student access: On Simulator and/or via external devices, Student login: Should be with an identifiable username and a password, set by the student, Trainer access: Trainer should use same software and user-interface as student but has additional settings, Definition of welding task: Should be possible with the system and with an external device, Creation of WPS: Should be possible with the system and with an external device. WPS should be displayed per welding task, Light influences on tracking system: Should be non-sensitive to lighting situations over 1500 lumen directly on tracking device, Tracking system reliability: The area, which is trackable for workpieces and/or torches should be wider than the depicted area in the VR/AR visualization device, Light calibration: No calibration for visualization device or cameras should be necessary, Software: Necessary management software should be accessible without the need for installation, Following activities to be carried out with the system, on external PC, Tablet and Smartphone: Manage students, Manage courses, Manage modules, Manage Theory documents in PDF file formats, Evaluation of individual student progress, Evaluation of course progress, Management of systems, License management, Software should be compatible with common operating systems and mobile accessible, Safety regulation: Simulator should be certified by CE and FCC regulations. Certificate to be enclosed, Welding Software: All software must be supplied with lifetime license, Data security: Inbuilt security system to protect user data and administration. Trainees must set their password by themselves.</p>	
124	Seam welding Machine(longitudina	Set	1	Longitudinal Seam Welding Machine Input supply: 415±15% (2 Lines of 3 Phase), Nominal rating @ 50% duty cycle 75KVA,	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
	l) 75 KVA with accessories			Throat depth standard 460mm, Throat gap (min) 300mm, Standard stroke 100mm, Air pressure 3-6Kg/cm ² , Electrode force at 5 kg/cm ² 450KGF, Water supply at 2.5 kg/cm ² 30 Ltr./min, Air consumption/stroke (Max) 1.6+Ltr., Drive motor DC 1HP, Welding capacity mild steel 1.25+1.25mm, stainless steel 1+1mm, Working height 900mm, Dimensions (H x W x L) 1900x900x1050 mm approx.	
125	Welding Motor Generator	Set	1	3 Phase,415 volt,50Hz,power 15.5KW,Speed (synchronous)3000 Rpm, Star/Delta type Starting,TP-40 Recommended Switch Fuse Rating, Protection To Machine Single Phasing, Undervoltage (340 V) /Overvoltage (480 V),Thermal, Output Open Circuit Voltage 100V DC, Welding Current Range 35-320 Amp,@ 60% duty cycle 320Amp,@ 100% duty cycle 250 Amp, Welding Electrode Size 2.5, 3.15, 4.0,.5.0 And 6.3,Enclosure Totally Enclosed Type, Ingress Protection Ip44 (excluding Fan Side) Class, Forced Air Type cooling class Insulation, Dimensions (L X W X H) 1065 X 540 X840.	
126	Welding booth with forced fume extractor, for welding machines listed above	Set	3	Fume Extraction System which includes as Welding Booths: - Dimensions – 2.0 x 2.0 x 2.0 Meter - Sound Insulating Partitioning MS Welding Booth UV radiation inhibiting coating. - Consisting of various system elements on the modular principle - Panel / Cassette width should be 50 mm thick with Soundproofing Bio Soluble Mineral Wool in it which is DIN 4102 approved and Noncombustible, - MS Pillar should be 60 x 60 x 03 MM - Grouting Base Plate 08 mm with laser cut. - MS Material should be nicely powder coated. - Cassette connected with C Profile with each other - Modular cassette / Panels Curtains for 20 Welding Booths: - - Lateral Sliding Strip Curtain mechanism - Curtain should be as welding protection PVC strips - 33% Overlapping PVC Strip Curtain with 200 mm Strips - Strip should be 2 mm thick - Curtains	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>should be as per EN 1598 standard - PVC Strip Should be UV protected Fume Extractor Total 20 booths required. Each 10 booths connected with each other, and suitable Fume Extractor required for 20 booths. Fume Extraction System which includes as CENTRIFUGAL FAN: - 02 Nos. - Exhaust Fan 10000 CMH for the set of 10 welding booth - Voltage – 3 x 400V x 50 Hz ±10% - Motor Power – 15 kw - Static Pressure – 300 mm WC - Total Pressure – 322 mm WC - FAN rated RPM – 2880 - Air Handling Quality – Dust Load (<10mg/Nm3) - Current Consumption 20.2 A - RPM 2910 / Min - Transition piece – Rectangular Ø 450 mm Flexible Exhaust Arm: - 20 Nos. - Flexible Exhaust Arm, Length 3 Meter - Arm Dia. 150 mm - Flexible Exhaust Arm a fiber glass hose with a PVC coating and an internal steel wire spiral. - Arm Should be with interior parallelogram, there should not be any outside support - 1 No. Joint Arm Only - Self Supported with internal springs - With 360-degree rotatable swivel joint from mounting point - Exhaust Arm Weight - Approx. 20 Kg Exhaust Hood: - 20 Nos. - Rhombus shaped, for max. capturing area - Hood Size -250 x 300 mm - 3600 Rotatable Hood - Protective mesh on Hood - Manual Damper should be inbuilt with hood.</p>	
127	Desktop Computer System with latest configuration	Set	6	<p>Operating System Windows 11 or latest Home Single Language in S mode. Intel® Processor Core™ i7-12700 (up to 4.9 GHz with Intel® Turbo Boost Technology, 25 MB L3 cache, 12 cores, 20 threads). Processor Six (6) Multi-core. 16 GB Memory DDR4-3200 MHz RAM (1 x 8 GB). Two (02) DIMM Memory Slots. Memory Transfer rates up to 3200 MT/s. Hard Drive Description 512GB PCIe® NVMe™ M.2 SSD. Hard Drive (2nd) 1TB 7200RPM SATA HDD. Storage Type: SSD; HDD. With Optical Drive. Cloud Service 25 GB Dropbox storage atleast for 36 months. Intel® UHD Graphics 770. Monitor 23.8 Inch or equivalent FHD Non-touch,</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				<p>FHD camera, UMA, 160W Bronze Power Supply. Expansion Features - I/O Port Location Front 4 Ports Super Speed USB Type-A 5Gbps signaling rate; One (1) headphone/microphone combo. I/O Port Location Rear Ports 4 USB 2.0 Type-A; 1 audio-in; 1 audio-out; 1 RJ-45; Serial Port Adapter. Expansion Slots - 2 M.2; 1 PCIe x16; 1 PCIe x1, Video Connectors 1 VGA; 1 HDMI-out 1.4b. TFT monitor 17 Inch or equivalent with required cables and accessories. Input Devices - Pointing Device 125 USB Black Wired Mouse, Keyboard - 125 USB Black Wired Keyboard. Communications - Network Interface Integrated 10/100/1000 GbE LAN. Wireless - Realtek RTL8822CE 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 combo Pre-Installed Software - Microsoft Office Home and Student, Antivirus software (Lifetime) Supply should also include set of LAN/Networking equipment Cables, Routers and connectors.</p>	
128	UPS	Nos	6	<p>Compact Design UPS with Load Capacity of 660Watts / 1100VA. Five 6A, 2/3 Pin Indian Power Socket (4 Battery Backed-up & Surge Protected plus 1 Surge Only Protected Outlet). Automatic Voltage Regulator (AVR) with Wide Input Voltage Range 145-290V. 2x7.2Ah Battery provides 30 - 90 min. Back-Up time as per the load."</p>	
129	Document Camera / Visualizer	Set	1	<p>Image Sensor - 2 Mega Pixel HD CMOS Active Pixels Digital Image Sensor. Resolution Max - 1600x1200. Support Resolution - 320X240, 640X480, 800X600, 1280X960, 1280X1024, 1600X1200. Light Source - Integrated white LED or ambient light. Capture Size - A4 or equivalent. Image Output - White Black, Grayscale, Color. Image Adjustment Color (R/G/B) and Brightness Adjustment, Gamma Correction, Hue, Exposure, Sharpness</p>	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				Adjustment and Gain Control. With Auto White Balance. Image Process - Zoom, Rotate, Mirror, Rectangle select, Cut, Create PDF, OCR and etc. File Formats - JPEG, BMP, PNG, TIF, J2K, JP2, JPC, RAS, TGA. Power Supply - (5V) USB powered, no External Power Required. Power Consumption - 150mW at maximum data rate,3.3V. Communication Interface - USB2.0 UVC. Operating System - Windows XP (32 64 bit); Windows Vista (32 64 bit); Windows 7(32 64 bit). System Requirements - 1GHz Pentium,512MB RAM, USB2.0 port, CD-ROM Drive. Size - Folded Size: 240*80*92MM. Working Size: 240*80*240MM. Supplied with Manual, USB2.0 Cable, Scan mat.	
130	Laptop with all latest OS	Set	1	12th Generation Intel® Core™ i7 processor. Windows 11 Home. FHD screen size 39.6 cm (15.6 Inch) diagonal. 16 GB RAM (2x8GB), DDR4-3200 MHz. ROM - 512 GB PCIe® NVMe™ M.2 SSD. Intel® Iris® X ^e Graphics.; 1 headphone/microphone combo. Intel Core i7 Quad-core processor (Intel 12 th Generation or latest Core i7 or newer, minimum 2.9 gigahertz) or Intel Core i9 Six-core processor (Intel 11th Generation Core i9 or newer, minimum 2.9 gigahertz) or AMD Ryzen 7 or 9 Hexa-core (AMD 6000 series Ryzen or newer, minimum 2.9 gigahertz). 32 GB RAM or equivalent (DDR4 SDRAM or newer). 500 GB or equivalent SSD. Dedicated Graphics card (minimum 4GB GDDR5 or GDDR6). Monitor 15.6 Inch or better screen (or larger, minimum resolution of 1920 x 1080). IEEE 802.11 wireless capability (ac, g, or n are the most used). HDMI output (integrate or through an adapter). An integrated webcam. 1 SuperSpeed USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 2 SuperSpeed USB Type-A 5Gbps signaling rate; 1 HDMI 2.1; 1 AC smart pin. A headset microphone (handy if the class or office hours are delivered via web conferencing tools).	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. (to be filled by the Bidder)
				Minimum Four-year warranty with support (a warranty that provides on-site services provides better continuity of use than a warranty that requires the device to be shipped for service). 1 GB minimum USB Flash Drive (thumb drive, memory stick, etc.). Minimum 5 hours or better battery life. Operating System: Windows 12 or higher. For security reasons Office Productivity Software: Pre-installed with life-time license Microsoft Office 365, where Word, Excel, and PowerPoint can be run through a browser regardless of the machine's OS. DevOps Tools: Microsoft Visio and Microsoft Project. Antivirus software: Windows Defender comes with Microsoft Windows and provides the necessary protection. Virtualization Software: VMware Workstation Pro 16 license.	
131	All-in-One Printer	Set	1	All-in-One Printer with Print-Copy-Scan Features. Output up to 100 PPM or better. Standard Output Capacity (Transparencies) - Up to 75 sheets. Media Type and Capacity, Tray 1 Sheets: 150; envelopes: 10. Paper Handling Input, Standard - 150-sheet input tray. Input Capacity - Up to 150 sheets. Paper Handling Output, Standard - 100-sheet face-down bin. Standard Output Capacity (Envelopes) - Up to 10 envelopes. Maximum Input Capacity (Sheets) - Up to 150 sheets. Display - LED.	
132	Auto-CAD Software (License version)	Set	6	License AutoCAD 2024 – with the newest features in AutoCAD® 2024 software, including industry-specific toolsets, new automation, and insights. Revit® BIM software helps architecture, engineering and construction (AEC) teams create high-quality buildings and infrastructure. Use Revit to: Model shapes, structures and systems in 3D with parametric accuracy, precision and ease. Streamline documentation work, with instant revisions to plans, elevations, schedules and sections as projects change. Empower multi-disciplinary teams with	

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards	Offered Technical specification. <i>(to be filled by the Bidder)</i>
				specialty toolsets and a unified project environment. Design and annotate 2D geometry and 3D models with solids, surfaces and mesh objects. Automate tasks such as comparing drawings, replacing blocks, counting objects, creating schedules and more. Create a customized workspace to maximize productivity with add-on apps and APIs Design and annotate 2D geometry and 3D models with solids, surfaces and mesh objects. Automate tasks such as comparing drawings, counting objects, adding blocks, creating schedule.	

Section 5: Eligible Countries

This section contains the list of eligible countries.

- 1 Afghanistan
- 2 Armenia
- 3 Australia
- 4 Austria
- 5 Azerbaijan
- 6 Bangladesh
- 7 Belgium
- 8 Bhutan
- 9 Brunei Darussalam
- 10 Cambodia
- 11 Canada
- 12 Cook Islands
- 13 Denmark
- 14 Federated States of Micronesia
- 15 Fiji
- 16 Finland
- 17 France
- 18 Georgia
- 19 Germany
- 20 Hong Kong, China
- 21 India
- 22 Indonesia
- 23 Ireland
- 24 Italy
- 25 Japan
- 26 Kazakhstan
- 27 Kiribati
- 28 Kyrgyz Republic
- 29 Lao People's Democratic Republic
- 30 Luxembourg
- 31 Malaysia
- 32 Maldives
- 33 Marshall Islands
- 34 Mongolia
- 35 Myanmar
- 36 Nauru

37	Nepal
38	Netherlands
39	New Zealand
40	Niue
41	Norway
42	Pakistan
43	Palau
44	Papua New Guinea
45	People's Republic of China
46	Philippines
47	Portugal
48	Republic of Korea
49	Samoa
50	Singapore
51	Solomon Islands
52	Spain
53	Sri Lanka
54	Sweden
55	Switzerland
56	Taipei,China
57	Tajikistan
58	Thailand
59	Timor-Leste
60	Tonga
61	Türkiye
62	Turkmenistan
63	Tuvalu
64	United Kingdom
65	United States
66	Uzbekistan
67	Vanuatu
68	Viet Nam

Section 6: Schedule of Supply

Contents

1.	List of Goods and Related Services	6-2
2.	Delivery and Completion Schedule	6-8
3.	Technical Specifications	6-12
4.	Drawings	6-39
5.	Packaging	6-40
6.	Testing and Inspection	6-40

1. List of Goods and Related Services

Item No.	Name of Goods or Related Services	Description/ Category	Unit of Measur ement	Quantity
1	Battery Operated Welding System	GSOF	Pc	2
2	Compact Synergic Pulse Multi Process Welding System.	GSOF	Pc	2
3	400 AMPS Gas Cooled GMAW Welding Machine	GSOF	Pc	2
4	300 AMPS Water Cooled AC/DC Smart Welding Machine for Aluminum and Steel Welding Applications	GSOF	Pc	2
5	VR/AR technology (displayed in real/real-time environment) with Process MIG/MAG, TIG, MMAW Welding Process	GSOF	Pc	1
6	Welding Helmet	PPE	Pc	12
7	Welding Gloves	PPE	Pc	12
8	Welding Jackets	PPE	Pc	12
9	Welding Tables	OSTE	Pc	6
10	Mobile Tungsten Grinder	OSTE	Pc	12
11	Pressure Regulators	OSTE	Pc	12
12	Fume extractor system connecting all the Welding booths	OSTE	Pc	6
13	Fabrication of Welding Booths	OSTE	Pc	6
14	Curtains for Welding Booths	OSTE	Pc	6
15	Gas Manifold system	OSTE	Pc	6
16	S.S Wire Brush	HT	Nos	12
17	Spark Lighter	HT	Nos	6
18	Welding hand shield Fiber	HT	Nos	12
19	Chipping hammer with metal handle	HT	Nos	12
20	Chisel cold flat	HT	Nos	12
21	Centre punch	HT	Nos	12
22	Dividers	HT	Nos	12
23	Stainless steel rule	HT	Nos	12

Item No.	Name of Goods or Related Services	Description/ Category	Unit of Measur ement	Quantity
24	Scriber	HT	Nos	12
25	Flat Tongs	HT	Nos	12
26	Hacksaw Frame (fixed)	HT	Nos	12
27	File Half-round Bastard	HT	Nos	12
28	File Flat	HT	Nos	12
29	Hammer ball pane	HT	Nos	12
30	Tip Cleaner	HT	Nos	12
31	Try square	HT	Nos	12
32	Spindle Key	HT	Nos	4
33	Screwdriver	HT	Nos	1
34	Number punch	HT	Nos	2
35	Letter Punch	HT	Nos	2
36	Magnifying glass	HT	Nos	2
37	Universal Weld measuring gauge	HT	Nos	2
38	Spanner D.E.	HT	Set	2
39	C-Clamps	HT	Set	2
40	Sledgehammer (double faced)	HT	Nos	1
41	S.S. tape	HT	Nos	1
42	Trolley for cylinder (H.P. Unit)	HT	Nos	2
43	Portable drilling machine	HT	Set	1
44	Radio graphic reference standard	OSTE	Set	1
45	Pressure vessel codes (Book or CD) IBR & ASME sec IX	OSTE	Set	1
46	Structural welding codes D1.1(Book or CD)	OSTE	Set	1
47	Wall charts, Transparencies and DVDs related to the trade	MISC	Set	1
48	Leather Hand Gloves	PPE	Pair	12

Item No.	Name of Goods or Related Services	Description/ Category	Unit of Measur ement	Quantity
49	Cotton Hand Gloves	PPE	Pair	12
50	Leather Apron	PPE	Nos	12
51	Leather Hand Sleeves	PPE	Pair	12
52	Safety Boot	PPE	Pair	12
53	Leg guard leather	PPE	Pair	12
54	Arc Welding Single-colored glasses	PPE	Nos	24
55	Arc Welding Plain Glass	PPE	Nos	36
56	Gas welding Goggles with Colour glass	PPE	Nos	24
57	Safety Goggles (Plain)	PPE	Nos	12
58	Welding Helmet (Fiber)	PPE	Nos	12
59	First Aid box	PPE	Set	1
60	Auto Darkening Welding Helmet	PPE	Set	2
61	Fire Extinguishers (foam type and CO2 type)	PPE	Set	1
62	Fire buckets with stand	PPE	Set	1
63	Metal Rack	FUR	Pair	1
64	Work Benches with Bench Vices and storage drawers to demonstrate welding equipment	OSTE	Set	2
65	Chest of drawers	FUR	Pair	1
66	Rubber Hose Clip	CON	Pair	12
67	Rubber Hose (for Oxygen)	CON	Set	10
68	Rubber Hose (for Acetylene)	CON	Set	10
69	Arc Welding Cable (multi colored) Copper	CON	Set	36
70	Die penetrant testing kit	CON	Set	5
71	Insulation ring	CON	Pair	10
72	Nozzle stock	CON	Pair	15
73	Spatter guard	CON	Pair	25

Item No.	Name of Goods or Related Services	Description/ Category	Unit of Measurement	Quantity
74	Gas nozzle	CON	Pair	50
75	Contact tip	CON	Pair	15
76	Contact tip	CON	Pair	15
77	Bare steel inner liner	CON	Set	15
78	Bare steel inner liner	CON	Set	15
79	Clamping piece	CON	Pair	15
80	Filler Wire Mild Steel	CON	Set	25
81	Filler Wire Mild Steel	CON	Set	25
82	Gas Regulator	CON	Pair	4
83	Electrode	CON	Pack	25
84	Torch cap long	CON	Pair	15
85	Torch cap medium	CON	Pair	15
86	Torch cap short	CON	Pair	15
87	Clamping sleeve	CON	Pair	15
88	Head shield	CON	Pair	15
89	Clamping sleeve	CON	Nos	15
90	Clamping sleeve	CON	Nos	15
91	Clamping sleeve case	CON	Pair	15
92	Clamping sleeve case	CON	Pair	15
93	Gas nozzle ceramic	CON	Pair	50
94	Gas nozzle ceramic	CON	Pair	50
95	Gas nozzle ceramic	CON	Pair	50
96	Tungsten electrode	CON	Pair	15
97	Tungsten electrode	CON	Pair	10
98	Tungsten electrode	CON	Pair	10

Item No.	Name of Goods or Related Services	Description/ Category	Unit of Measur ement	Quantity
99	Welding Cable	CON	Mtr	10
100	Steel Plates 5mm	CON	Kg	12
101	Steel Plates 6mm	CON	Kg	12
102	Steel Plates 8mm	CON	Kg	12
103	Steel Plates 10mm	CON	Kg	12
104	Welding Electrodes	CON	Pack	50
105	Mig Welding Consumables	CON	Set	12
106	Tig Welding Consumables	CON	Set	12
107	AG4 Grinder with Wheels	OSTE	Nos	5
108	Hacksaw with Blade	OSTE	Nos	12
109	Earth clamp	CON	Nos	6
110	Oxy Acetylene Gas Cutting blow pipe	CON	Nos	2
111	Electrode holder	GSOFF	Set	12
112	H.P. Welding Torch with 5 Nozzles	GSOFF	Set	2
113	Welding Transformer with all accessories (400A, OCV 60-100 V, 60% duty cycle)	GSOFF	Set	2
114	Welding Transformer with all accessories (300A , OCV 60 - 100 V, 60% duty cycle)	GSOFF	Set	2
115	Inverter based welding Power source	GSOFF	Set	1
116	D.C Arc welding rectifiers set with all accessories	GSOFF	Set	2
117	AC/DC GTAW welding machine	GSOFF	Set	1
118	Spot welding machine to15 kVA with all accessories	GSOFF	Set	1
119	Gas welding table with firebricks	GSOFF	Set	1
120	Arc welding table with positioner	GSOFF	Set	1
121	Oven, electrode drying	GSOFF	Set	1
122	Table for Gas cutting	GSOFF	Nos	1
123	Welding Simulator for SMAW / GTAW / GMAW	GSOFF	Set	1

Item No.	Name of Goods or Related Services	Description/ Category	Unit of Measur ement	Quantity
124	Seam welding Machine(longitudinal) 75 KVA with accessories	GSOF	Set	1
125	Welding Motor Generator	GSOF	Set	1
126	Welding booth with forced fume extractor, for welding machines listed above	GSOF	Set	3
127	Desktop Computer System with latest configuration	ITE	Set	6
128	UPS	ITE	Nos	6
129	Document Camera / Visualizer	ITE	Set	1
130	Laptop with all latest OS	ITE	Set	1
131	All-in-One Printer	ITE	Set	1
132	Auto-CAD Software (License version)	ITE	Set	6

Note:

1. All minor electrical/ civil works required for the installation and commissioning of Equipment shall be covered under supplier's scope and supplier shall consider this cost while quoting the rates.
2. Supplier shall consider cost of 3 years warranty including comprehensive maintenance of all supplied goods, equipment and tools while quoting the rates.
3. Abbreviations used
GSOF – General Shop Outfit Equipment
IT – Information Technology Equipment
OSTE – Other Supporting Training Equipment
PPE- Personal protective equipment

2. Delivery and Completion Schedule

Item No.	Description of Goods or Related Services	Delivery and Installation/ services Schedule (Duration)	Location	Required Arrival Date of Goods or Completion Date for Related Services
1	Machine Model: Accu Pocket 150/400 Battery Operated Welding System	T*+ 2 Months	Interim campus, Guwahati	Completion date as per delivery schedule
2	Compact Synergic Pulse Multi Process Welding System.	T*+ 2 Months	- do -	- do -
3	400 AMPS Gas Cooled GMAW Welding Machine	T*+ 2 Months	- do -	- do -
4	300 AMPS Water Cooled AC/DC Smart Welding Machine for Aluminum and Steel Welding Applications	T*+ 2 Months	- do -	- do -
5	VR/AR technology (displayed in real/real-time environment) with Process MIG/MAG, TIG, MMAW Welding Process	T*+ 2 Months	- do -	- do -
6	Welding Helmet	T*+ 2 Months	- do -	- do -
7	Welding Gloves	T*+ 2 Months	- do -	- do -
8	Welding Jackets	T*+ 2 Months	- do -	- do -
9	Welding Tables	T*+ 2 Months	- do -	- do -
10	Mobile Tungsten Grinder	T*+ 2 Months	- do -	- do -
11	Pressure Regulators	T*+ 2 Months	- do -	- do -
12	Fume extractor system connecting all the Welding booths	T*+ 2 Months	- do -	- do -
13	Fabrication of Welding Booths	T*+ 2 Months	- do -	- do -
14	Curtains for Welding Booths	T*+ 2 Months	- do -	- do -
15	Gas Manifold system	T*+ 2 Months	- do -	- do -
16	S.S Wire Brush	T*+ 2 Months	- do -	- do -
17	Spark Lighter	T*+ 2 Months	- do -	- do -
18	Welding hand shield Fiber	T*+ 2 Months	- do -	- do -
19	Chipping hammer with metal handle	T*+ 2 Months	- do -	- do -
20	Chisel cold flat	T*+ 2 Months	- do -	- do -
21	Centre punch	T*+ 2 Months	- do -	- do -
22	Dividers	T*+ 2 Months	- do -	- do -
23	Stainless steel rule	T*+ 2 Months	- do -	- do -
24	Scriber	T*+ 2 Months	- do -	- do -
25	Flat Tongs	T*+ 2 Months	- do -	- do -
26	Hacksaw Frame (fixed)	T*+ 2 Months	- do -	- do -
27	File Half-round Bastard	T*+ 2 Months	- do -	- do -
28	File Flat	T*+ 2 Months	- do -	- do -
29	Hammer ball pane	T*+ 2 Months	- do -	- do -

30	Tip Cleaner	T*+ 2 Months	- do -	- do -
31	Try square	T*+ 2 Months	- do -	- do -
32	Spindle Key	T*+ 2 Months	- do -	- do -
33	Screwdriver	T*+ 2 Months	- do -	- do -
34	Number punch	T*+ 2 Months	- do -	- do -
35	Letter Punch	T*+ 2 Months	- do -	- do -
36	Magnifying glass	T*+ 2 Months	- do -	- do -
37	Universal Weld measuring gauge	T*+ 2 Months	- do -	- do -
38	Spanner D.E.	T*+ 2 Months	- do -	- do -
39	C-Clamps	T*+ 2 Months	- do -	- do -
40	Sledgehammer (double faced)	T*+ 2 Months	- do -	- do -
41	S.S. tape	T*+ 2 Months	- do -	- do -
42	Trolley for cylinder (H.P. Unit)	T*+ 2 Months	- do -	- do -
43	Portable drilling machine	T*+ 2 Months	- do -	- do -
44	Radio graphic reference standard	T*+ 2 Months	- do -	- do -
45	Pressure vessel codes (Book or CD) IBR & ASME sec IX	T*+ 2 Months	- do -	- do -
46	Structural welding codes D1.1(Book or CD)	T*+ 2 Months	- do -	- do -
47	Wall charts, Transparencies and DVDs related to the trade	T*+ 2 Months	- do -	- do -
48	Leather Hand Gloves	T*+ 2 Months	- do -	- do -
49	Cotton Hand Gloves	T*+ 2 Months	- do -	- do -
50	Leather Apron	T*+ 2 Months	- do -	- do -
51	Leather Hand Sleeves	T*+ 2 Months	- do -	- do -
52	Safety Boot	T*+ 2 Months	- do -	- do -
53	Leg guard leather	T*+ 2 Months	- do -	- do -
54	Arc Welding Single-colored glasses	T*+ 2 Months	- do -	- do -
55	Arc Welding Plain Glass	T*+ 2 Months	- do -	- do -
56	Gas welding Goggles with Colour glass	T*+ 2 Months	- do -	- do -
57	Safety Goggles (Plain)	T*+ 2 Months	- do -	- do -
58	Welding Helmet (Fiber)	T*+ 2 Months	- do -	- do -
59	First Aid box	T*+ 2 Months	- do -	- do -
60	Auto Darkening Welding Helmet	T*+ 2 Months	- do -	- do -
61	Fire Extinguishers (foam type and CO2 type)	T*+ 2 Months	- do -	- do -
62	Fire buckets with stand	T*+ 2 Months	- do -	- do -
63	Metal Rack	T*+ 2 Months	- do -	- do -
64	Work Benches with Bench Vices and storage drawers to demonstrate welding equipment	T*+ 2 Months	- do -	- do -
65	Chest of drawers	T*+ 2 Months	- do -	- do -
66	Rubber Hose Clip	T*+ 2 Months	- do -	- do -

67	Rubber Hose (for Oxygen)	T*+ 2 Months	- do -	- do -
68	Rubber Hose (for Acetylene)	T*+ 2 Months	- do -	- do -
69	Arc Welding Cable (multi colored) Copper	T*+ 2 Months	- do -	- do -
70	Die penetrant testing kit	T*+ 2 Months	- do -	- do -
71	Insulation ring	T*+ 2 Months	- do -	- do -
72	Nozzle stock	T*+ 2 Months	- do -	- do -
73	Spatter guard	T*+ 2 Months	- do -	- do -
74	Gas nozzle	T*+ 2 Months	- do -	- do -
75	Contact tip	T*+ 2 Months	- do -	- do -
76	Contact tip	T*+ 2 Months	- do -	- do -
77	Bare steel inner liner	T*+ 2 Months	- do -	- do -
78	Bare steel inner liner	T*+ 2 Months	- do -	- do -
79	Clamping piece	T*+ 2 Months	- do -	- do -
80	Filler Wire Mild Steel	T*+ 2 Months	- do -	- do -
81	Filler Wire Mild Steel	T*+ 2 Months	- do -	- do -
82	Gas Regulator	T*+ 2 Months	- do -	- do -
83	Electrode	T*+ 2 Months	- do -	- do -
84	Torch cap long	T*+ 2 Months	- do -	- do -
85	Torch cap medium	T*+ 2 Months	- do -	- do -
86	Torch cap short	T*+ 2 Months	- do -	- do -
87	Clamping sleeve	T*+ 2 Months	- do -	- do -
88	Head shield	T*+ 2 Months	- do -	- do -
89	Clamping sleeve	T*+ 2 Months	- do -	- do -
90	Clamping sleeve	T*+ 2 Months	- do -	- do -
91	Clamping sleeve case	T*+ 2 Months	- do -	- do -
92	Clamping sleeve case	T*+ 2 Months	- do -	- do -
93	Gas nozzle ceramic	T*+ 2 Months	- do -	- do -
94	Gas nozzle ceramic	T*+ 2 Months	- do -	- do -
95	Gas nozzle ceramic	T*+ 2 Months	- do -	- do -
96	Tungsten electrode	T*+ 2 Months	- do -	- do -
97	Tungsten electrode	T*+ 2 Months	- do -	- do -
98	Tungsten electrode	T*+ 2 Months	- do -	- do -
99	Welding Cable	T*+ 2 Months	- do -	- do -
100	Steel Plates 5mm	T*+ 2 Months	- do -	- do -
101	Steel Plates 6mm	T*+ 2 Months	- do -	- do -
102	Steel Plates 8mm	T*+ 2 Months	- do -	- do -
103	Steel Plates 10mm	T*+ 2 Months	- do -	- do -
104	Welding Electrodes	T*+ 2 Months	- do -	- do -
105	Mig Welding Consumables	T*+ 2 Months	- do -	- do -
106	Tig Welding Consumables	T*+ 2 Months	- do -	- do -
107	AG4 Grinder with Wheels	T*+ 2 Months	- do -	- do -
108	Hacksaw with Blade	T*+ 2 Months	- do -	- do -

109	Earth clamp	T*+ 2 Months	- do -	- do -
110	Oxy Acetylene Gas Cutting blow pipe	T*+ 2 Months	- do -	- do -
111	Electrode holder	T*+ 2 Months	- do -	- do -
112	H.P. Welding Torch with 5 Nozzles	T*+ 2 Months	- do -	- do -
113	Welding Transformer with all accessories (400A, OCV 60-100 V, 60% duty cycle)	T*+ 2 Months	- do -	- do -
114	Welding Transformer with all accessories (300A , OCV 60 - 100 V, 60% duty cycle)	T*+ 2 Months	- do -	- do -
115	Inverter based welding Power source	T*+ 2 Months	- do -	- do -
116	D.C Arc welding rectifiers set with all accessories	T*+ 2 Months	- do -	- do -
117	AC/DC GTAW welding machine	T*+ 2 Months	- do -	- do -
118	Spot welding machine to15 kVA with all accessories	T*+ 2 Months	- do -	- do -
119	Gas welding table with firebricks	T*+ 2 Months	- do -	- do -
120	Arc welding table with positioner	T*+ 2 Months	- do -	- do -
121	Oven, electrode drying	T*+ 2 Months	- do -	- do -
122	Table for Gas cutting	T*+ 2 Months	- do -	- do -
123	Welding Simulator for SMAW / GTAW / GMAW	T*+ 2 Months	- do -	- do -
124	Seam welding Machine(longitudinal) 75 KVA with accessories	T*+ 2 Months	- do -	- do -
125	Welding Motor Generator	T*+ 2 Months	- do -	- do -
126	Welding booth with forced fume extractor, for welding machines listed above	T*+ 2 Months	- do -	- do -
127	Desktop Computer System with latest configuration	T*+ 2 Months	- do -	- do -
128	UPS	T*+ 2 Months	- do -	- do -
129	Document Camera / Visualizer	T*+ 2 Months	- do -	- do -
130	Laptop with all latest OS	T*+ 2 Months	- do -	- do -
131	All-in-One Printer	T*+ 2 Months	- do -	- do -
132	Auto-CAD Software (License version)	T*+ 2 Months	- do -	- do -

T* - Contract commencement Date

3. Technical Specifications

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
1	Battery Operated Welding System	Set	2	<p>Open-circuit voltage ≥ 91 V, 65A / 100% ED [Hybrid] 100A or more, 50% ED [Hybrid] @ Welding current / Duty cycle [10min/40°C], Operating voltage- 0-91 Volt, Battery capacity: ≥ 380 Wh or equivalent, Battery Type -Lithium Iron Phosphate battery with low self-discharge and no memory effect, Battery Charger Output: Voltage range 28 to 65 V DC or equivalent. Test symbol CE.</p> <p>Other Features/Parameter: Battery type Lithium-ion and must be in-built in the Power source and Capacity of battery should be 400 ± 20 Wh. Power source can be charged simultaneously with welding operation. Shall have following features in SMAW: Electrode welding, Hot Start, Soft Start, anti-stick, Dynamic Arc force. Welding current ≥ 90 A at 25% duty cycle and ≥ 35 A at maximum (100%) duty cycle in Shielded Metal Arc Welding (SMAW). Rapid charging within 40 minutes or less. Battery capacity should be 7.5 AH or more. Digital display of all the parameters. Welding current range in between 10-130 A OR better for SMAW and in between min 3 to 140 Amps or more for TIG welding. Charging current in between 8 A to 12 A or less in normal mode and in between 17 A to 25 A or equivalent in quick mode. Open Circuit Voltage (OCV) in between 80V To 100 V or equivalent. Protection Class IP-23 or better and charger shall have protection Class IP-43S or better. Equipped with system to monitor uniform charging & discharging and ensure uniform voltage & temperature of all battery cell. Display of battery capacity exhausted & over temperature. Displayed in case of polarity reversal, supply cable faulty, over / under voltage. Safety feature to switch off the device after 5 minutes of inactivity to conserve the battery and after 3 seconds (approx.) in the event of under voltage. Provide the details of battery make, model, and capacity. Battery nominal voltage in between 50 -60 V or better. Battery standard charging time 60 minutes or less and rapid charging time ≤ 40 Min or equivalent. Input voltage of charger 220 - 240 V and 50 Hz frequency of charger. Efficiency 85% or more and machine dimension (l x w x h)- 435 x 160 x 310 mm. Scope of supply should also include Power Source including charger, Ground Cables 16mm² 3m, electrode holder 16mm² 4m, hand shield, slag hammer, wire brush, welding gloves.</p>
2	Compact Synergic Pulse Multi Process Welding System.	Pc	2	<p>300 Amps Pulse Synergic Multi Process Welding Machine. Power Source Mains voltage 380 / 400V or equivalent tolerance: -10 / +15%, Welding current range 10 Amps - 300 Amps. Welding current at 10 min / 40 °C. at duty Cycle 60% at 270 Amps or more, maximum (100%) at 230 Amps or equivalent. Open circuit voltage 59V to 65 V. Apparent power at 400 V AC ≤ 12 KVA, or equivalent. Safety symbols - S, CE, CSA. Overall Dimensions (approx.) -747(L) x 300(W) x 497(H) mm. Wire Speed 1 to 25 m/min or equivalent. Idle state power consumption at 400 ≤ 37 W or better. Power source efficiency at 300 A / 32 V $\geq 88\%$ or equivalent. Protection Class IP23 or better.</p> <p>Other Key Features/Parameters: Machines should have the facility of documentation of welding data of 57 or more new pulse characteristics in total</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>in Pulse process. Universal and color coated Feeder Roller. Maximum (160 or equivalent) Welding, Characteristics, Synchro Pulse Program. Pulse Controlled Spray for ARC, Spot Welding Mode, Stitch Mode. Automatic wire threading without opening the wire-feed unit. Ignition Time out, Intermediate arc indicator, Automatic End crater filling. Error code display on problems. measurement of R & L. Control Panel locking function. Automatic burn back control. USB, Thumb Drive Export Function. Capable for Manual MIG/MAG, Synergic MIG/MAG, Pulse, PCS, Synchro pulse and MMAW and GTAW Pulse Welding processes. Welding Torch should have Led Light. Machine should have Intermediate arc indicator, Hold Indicator, Unit indicators, Gas Test Button, Material Setting Button, Wire Diameter Setting Button, Shielding Gas Setting Button, Process Button for Manual and Synergic MIG/MAG, DC TIG and Stick Button. The GMAW Spot welding time (0.3 – 5 or equivalent), Spot pause time (OFF, 0.3 – 10 or equivalent). Interval setting possible in 2T (2-step), 4T (4-step), TIG Pulse frequency (1 – 980) Hz or better. DC Pulse Tacking second (0.1 - 9.9 or better) function. Option of saving Easy Job parameters upto 5 or equivalent. Safety features for users include length of wire that is fed before the safety cut-out is triggered. Special Synergic Programmed Root, Dynamic and Universal and self-shielded wire programmed, and space to upgrade special wire Grade and Gas. Provision of Thermostat controlled Fan / Over temperature protection with Polarity reverser and Universal roller geometry optimized for hard and soft wires. Machine should be capable for displaying the energy applied during the welding operation and displaying the software version, operating time. • Machine should be Error Code Display Facility for Easier Fault Diagnosis and Earth Leakage monitoring facility and Measurement of Resistance and Inductance is possible. Digital Display shows value of Arc Length Correction/Dynamic, Thickness, Wire Feed Speed, Current and Voltage displayed. Provisions to set Pre flow, Post Flow, Final current, Slop Time, start current duration and Feeder inching speed.</p> <p>Scope of supply should also include Power Source 300 Amps inbuild wire feeder, Feeder Roller 0.8 & 1.2 MM, MIG/MAG Welding Torch 3-meter length, Earth cable 4 meter with clamp, 5 Meter Input Cable.</p>
3	400 AMPS Gas Cooled GMAW Welding Machine	Pc	2	<p>400 AMPS Gas Cooled Modular Intelligent Welding Machine. Power Source Intelligent Microprocessor Digitally Controlled Linux/Windows based IGBT Inverter (latest generation), Heavy-duty CC/CV type power source for Synergic MIG/MAG, MMAW Welding Process with Pulse/ Pulse Multi Control advance welding process. Current Range – MIG/MAG Process (3- 400 A or equivalent), MMAW 10 -400 A or equivalent, Main Voltage 400V/415V ±15%, kVA rating @ maximum (100%) Duty Cycle should be 13 kVA or equivalent, Less than 32W, Duty Cycle @ 60% at 350 Amp or more and 100% at 310 Amp or More @ 10 Minutes, 40 degree cent., Open Circuit Voltage – 70-75 Volt , Efficiency should be more than 80%, Protection Class IP 23 or better , Power Factor ≥ 0.90 to 0.98, Program Memory can save ≥ 900 Nos or equivalent, Machine feedback Speed 100 Mbit/s or equivalent, Mark of conformity- S, CE, Standards- IEC60974-1 & IEC60974-10.</p> <p>Wire Feeder: Wire feed range- 1- 24 meter/Min or better, 4 Feed rolls should be geared and grooved, Input Current from Power Source - 1.7 A or equivalent, Standards- IEC60974-5, Mark of conformity- S, CE, CSA, Degree of</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>Protection: IP23 or better.</p> <p>Welding gun/ Torch: Current rating-310 Amps or more at 100% duty cycle with Argon and CO2 mix Gas at 10 min/40o C, Length of Torch – 3 Meter or more, Torch Handle- Non-slip, Rubber anti-kink at the grip with ball joint, Gas Nozzle Connection- Screw-on gas nozzle, Filler wires range -0.8 – 1.6 MM.</p> <p>Other Features/Parameters: 16 Bit or equivalent full-color display resistive 7 Inch Touch screen with 800 x 400 or better resolution. Microprocessor controlled with 532 MHz & ≥32-bit CPU. Welding Torch can be rotated through 360° for optimal component accessibility, equipped with LED light and Current up down function. Function to control the starting arc ignition as spatter free. Wire feeder with 4 roll or equivalent drive with different color code & different wire of size for easy identification. Inbuilt welding data monitoring system to automatically save welding current, welding voltage, wire feed speed, Heat input, time of welding in one stop & store for 30 days in machine itself. Data transfer through LAN cable, Pen Drive or Online. Fully Industrial 4.0 compliance. The machine should have at least 300 or equivalent pre-programmed Synergic Curves for MIG/MAG & Pulsed MIG processes in the memory. The set arc length remains the same in spite of a change in the welding torch position which helps to weld out of position and ease of operation. The welding machine is constant potential type with touch screen control unit / panel with English & Hindi language GUI interface including burn back control, crater fill, wire feed speed control, gas control with gas saving device, with infinitely variable pulse control synchronization of the wire feed speed with current pulse & inbuilt data logger. Necessary diagnostic software for fault recognition and analysis is pre-loaded in the welding machine.</p> <ul style="list-style-type: none"> • Should have in-built feature of power source with current, voltage, energy input as parameter for each welding instance. Locking and unlocking parameters through RFID and key to control accessibility. Machine should have Switching facilities between pulsed and dip transfer arc to do vertical up direction welding without weaving and switching smoothly between pulsed arc and spray arc. Ethernet Based communication with 100 Mbit/s or better data transmission rate. Machine should have ≥ 900 memory location and IP Address for communication with laptop / PC. 2/4 step & Special 2/4 step torch switch triggering modes should be available which should control from power source control panel. Provision to lock & unlock by NFC card & having different management modes. Measure & display the Resistance & Inductance of the total welding circuit for every job. Special 2/4 step torch switch triggering modes. <p>Scope of supply should also include Interconnection cable 5-meter, wire feeder, welding torch minimum 3-meter, Copper earth cable with clamp, Gas Regulator.</p>
4	300 AMPS Water Cooled AC/DC Smart Welding	Pc	2	Mains voltage: 3 x 400 V +/-15 %, Welding current 3 Amps to 300 Amps or equivalent. Duty cycle [10min/40°C] 100% at 230 AMPS or better, 60% at 250AMPS or better, Open-circuit voltage ≥ 95 V or equivalent, Degree of protection IP 23 or better, Max. primary current ≤ 20 A, Safety symbols S, CE. Power source efficiency at 300 A /

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
	Machine for Aluminum and Steel Welding Applications			<p>32.0 V \geq 80 or better.</p> <p>Other Key Features/Parameters:</p> <ul style="list-style-type: none"> • 6 Inch color display with plain text display and touchscreen. Full screen display with multi-language selection. Automatic Tungsten Electrode Cap shaping and cap overloading function. Upgradable DC Pulse frequency up to 10,000 Hz and AC frequency 40 -250 Hz or more. Machine should have available Sync Mode for double side TIG welding. Ignition timeout: safety cut-out 0.1 -9.9s or better. Machine Should have Triangular, Sinusoidal, Rectangular waveform IN AC TIG Process. Reverse Polarity Ignition (RPI) Facility for Quicker, reproducible ignition. Automatic gas post-flow (dep. on welding current). Cycle Tig Function for Controlled Heat inputs and outstanding weld appearance. Features to reduced current - Intermediate lowering of the welding current in order to prevent any local overheating of the base material. Electrode overload indicator. Special Mode for Aluminum welding applications. Ready for Industry 4.0 WLAN to Bluetooth and NFC Automatic gas post-flow, Ethernet and Speed net as standard must be available. Machine must save Easy Job (1-5) and capable to store \geq 900 Jobs. <p>Welding Torch Specifications: Multilocked System i.e. easily replace of torch neck and torch hose pack and 360 degree neck rotation and Adjust the essential parameters such as main current, lowering current, or final current, programmed no. or saved job directly on the welding torch with LED can be used to light up the welding area. Torch Length 4 meters or equivalent. Provision for Screwable Gas nozzle mounting.</p> <p>Cooling Unit Specifications: Current consumption \leq 0.9 A or equivalent. Max. delivery head 30 Meter or more, Max. pump pressure 4 Bar or equivalent. Centrifugal Type Pump with approx. service life of 9000 Hours or equivalent, Coolant capacity 5 Ltrs or more, Degree of protection IP23 or better, Mark of conformity CE. Scope of supply should include Power Source 300 AMPS AC/DC, Water Cooling Unit, Welding Torch Water Cooled 4 Meter, Earth Clamp with 4-meter copper cable, 5-meter Input Cable.</p>
5	VR/AR technology (displayed in real/real-time environment) with Process MIG/MAG, TIG, MMAW Welding Process	Pc	1	<p>Input supply Single Phase 230V, Current range SMAW 10 – 500A for 4.0mm electrodes, Voltage & Current range GMAW 10V - 45V & 20A - 500A (1.0, 1.2 wire diameter), Current range GTAW 3A - 500A (2.4, -mm tungsten electrode, 2.0 mm filler rod)</p> <p>Operation: The Simulator to use to perform virtual training, to learn theory. Simulated processes SMAW, GMAW AND GTAW, Arc types GMAW: Different arc types should be simulated including short arc, spray arc, pulsed arc, Process variants.</p> <p>GTAW: Should be possible to use DC and AC, Process variants MMA: Electrode holder has to be physically connected to correct polarity DC+, DC-</p> <p>Joint configuration - Butt Y-Groove, Butt I-Groove, Pipe to Pipe with Y-Groove, Pipe to Pipe with I-Groove. Pipe to Plate, Corner Joint, Overlap Joint, Customized Workpiece.</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>Welding positions: 1G to 6G ,1F to 6F (Welding positions have to be detected from the simulator (to prevent cheating from trainee).</p> <p>Welding simulation: provision for red hot molten welding puddle and cooling down simulation. Workpiece positioning: Flexibility to position the workpieces freely on either a height adjustable, tiltable workpiece holder or position it freely on an adequate surface. Simulated workpiece thickness 3mm, 6mm and 10mm thickness of base material, Visualized workpiece thickness Visualized workpiece thickness should correspond to simulated workpiece thickness, Torch control: GMAW 2 and 4 step mode, Parameters for special 4-step mode. GMAW: Should be selectable, Torch control. GTAW: 4-step mode, Parameters for 4-step mode – GTAW: Should be selectable, Cap shaping of tungsten electrode: Automatic cap shaping function for tungsten electrode in GTAW AC process variant, Interaction with torch: The provided torch should be used to interact with virtual elements before, during and after welding, Virtual interaction devices: GMAW Torch: Real welding torch to be used with leading industry standard FSC-connection/Euro connection. GTAW Torch: Real welding torch to be used with leading industry standard FSC-connection, GTAW Torch: Real welding torch to be used with industry standard bayonet connection,</p> <p>Grounding Clamp: Real grounding clamp to be used with industry standard bayonet connection,</p> <p>Electrode holder: Polarity of electrode holder to be connected like real electrode holder with connection to the power supply as per industry standard,</p> <p>Polarity selection: Should be done physically by plugging in the corresponding industry-standard connectors rather than via settings in menu,</p> <p>Torch detection: It should be detected if the correct torch is connected,</p> <p>Screen: Simulator must have separated Display that can be used both during virtual exercises and for theory learning.</p> <p>Workpiece visualization: Simulate the workpieces from all sides. Including underside and backside,</p> <p>Workpiece interaction: able to see the workpieces through the visualization device and be able to touch / rotate / adjust the work pieces, also during welding,</p> <p>SMAW Welding practice: During SMAW welding virtual consumable or retracting electrode to be used,</p> <p>GMAW Welding practice: GMAW welding should accommodate short and long stick out,</p> <p>GTAW welding practice: GTAW welding should have skill guidance for work and travel angle, Types of work pieces,</p> <p>Guidance for parameters: Student should be able to use guidance for parameters. Guidance should be provided visually.</p> <p>Parameter settings: The welding parameters should be set on a user interface which looks and behaves like a real welding machine,</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>Start Current: Welding start current should be selectable, Parameter settings during welding: The welding parameters should be changeable during welding without taking off the visualization device,</p> <p>Welding modes: For GMAW a manual welding mode and a synergic mode for standard and pulse should be available, Gas setup: Should support shielding gas selection like Argon, CO₂ and various mixtures, Gas settings: Gas post flow should be selectable,</p> <p>Machine Setup: The interaction with the welding simulator should be like with a real welding power source. Ground clamp, real user interface and gas regulator are mandatory,</p> <p>Welder view: Welder should be able to see the workpiece and environment through the helmet, Additional information during welding: Welder should be able to see additional information, like WFS, Voltage and Amperage in the helmet during welding,</p> <p>Darkening in welding helmet: The shades of the darkening during welding should be adjustable, Resolution of Augmented-/Virtual Reality</p> <p>Visualization device: Resolution of at least 4320 x 2160 px mandatory,</p> <p>Welding Sounds: Adaptive welding sounds with changeable character per eg. welding process, welding material, characteristic, changes of environment,</p> <p>Welding Sound output: Output of adaptive 3D welding sound in the VR/AR visualization device, at external monitor and near input-device,</p> <p>External monitor: An external monitor should be connectable via 4k HDMI output,</p> <p>Guidance and skill analysis of GTAW Torch, GMAW Torch and MMA electrode holder: Guidance and analysis of arc length, work angle, travel angle, speed, and path,</p> <p>Guidance and skill analysis of GTAW filler rod: Guidance and analysis of work angle and travel angle, Evaluation via VR/AR visualization device.</p> <p>Video Playback with visualization in VR/AR visualization device with the option to rotate the viewed workpiece by moving the head,</p> <p>Evaluation on screen: Should be possible using video with interaction, graphs and numerical values (points and/or percentage),</p> <p>Analysis of weld seam: Should include welding speed, stick-out, CTWD, welding angle, work angle, Macro cut of welded seam: Noto Sans,</p> <p>Weld defects analysis: The weld defect analysis should include of the root has been penetrated, Student access: On Simulator and/or via external devices,</p> <p>Student login: Should be with an identifiable username and a password, set by the student,</p> <p>Trainer access: Trainer should use same software and user-interface as student but has additional settings</p> <p>Creation of WPS: Should be possible with the system and with an external device. WPS should be displayed per welding task,</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>Software: Necessary management software should be accessible without the need for installation. Safety regulation: Simulator should be certified by CE and FCC regulations. Certificate to be enclosed, Welding Software: All software must be supplied with a lifetime license, Data security: Inbuilt security system to protect user data and administration. Trainees must set their password by themselves. Scope of Supply: Simulator with all accessories required for GMAW GTAW & MMAW Welding Training.</p>
6	Welding Helmet	Pc	12	Fiber-Metal Pipeline Fiberglass Welding Helmet with Rubber Headband. Pipeline Welding Helmet features a 2" x 4" Shade 10 lens for clear viewing of weld puddle; filters out 100% of UV and IR wavelengths for maximum eye protection
7	Welding Gloves	Pair	12	Heat Resisting, Fully Lined and Kevlar Stitched, Made of Hard-Wearing Superior Quality Leather. Hand Gloves plain or Double Palm Patch with five fingers in various sizes from 10" to 22" long. Should meet the requirements of EN 388 / Cat. II
8	Welding Jackets	Pc	12	The leather welding jacket is made from split calf leather as per EN ISO 11611:2015, class 2, A1. The jacket features a button facing with Velcro fasteners. Size as per standard 42.1 x 12 x 1 inch (approx.). Easy wipe cleanable, Leather Apron, Welding Apron. Heat and moisture resistant. Kevlar stitched and re-enforced with rivets. Leather straps are provided for Additional strength. Standard. Free size "L" or "M". neck strap and the adjustable buckle on the back strap ensure comfort fit.
9	Welding Tables	Pc	6	Dimensions – 2.0 x 2.0 x 2.0 Meter or equivalent. Sound Insulating Partitioning MS Welding Booth UV radiation inhibiting coating. Consisting of various system elements on the modular. Principle Panel / Cassette width should be 50 mm thick with Soundproofing Bio Soluble Mineral Wool in it which is DIN 4102 approved and Noncombustible, MS Pillar should be 60 x 60 x 03 MM Grouting Base Plate 08 mm with laser cut. MS Material should be nicely powder coated. Cassette connected with C Profile with each other Modular cassette / Panels
10	Mobile Tungsten Grinder/ Hand Grinder	Set	6	Tungsten grinder ESG. The best solution for a precise and fast preparation of tungsten electrodes. The perfect hand-held grinder for cutting, grinding and planing electrodes which are used in WIG/TIG welding machines, Grinding head for electrodes Ø 1.0 - 1.6 - 2.0 - 2.4 - 3.2 - 4.0 mm or (0.04" - 1/16" - 0.08" - 3/32" - 1/8" - 5/32"), Grinding head for grinding angle 15° - 18° - 22.5° - 30° No Load RPM at least 27,000 RPM or better, Auxiliary Handle, Inner (Clamping) Flange, Outer (Round Nut) Flange, Spanner Wrench, Abrasive Grinding Wheel Mains voltage: 230 V / 50 - 60 Hz. Output: 500 W, Speed: 27,000 rpm or equivalent. Scope of supply: device with grinding head 1,6 mm, 2,0mm, 2,4mm, 3,2 mm, electrode holder for short electrodes, tool (hex wrench and flat spanner), holding bracket, suction adapter.
11	Pressure Regulators	Set	3 each	Oxygen / Argon / CO2: Max. Inlet Pressure: 150/200 bar / 2900 psi. Max. Outlet Pressure: 10 /15 bars / 145 psi regulator double stage. Max. Inlet Pressure: 10 bar/ 145 psi. Max. Outlet Pressure: 1.5 bar / 22 psi. Stable Outlet Pressure. Steady Flow of Gas. Better Pressure Regulation. Forged Brass Body & Housing Cap. Sintered Filter at the inlet. Stainless Steel Sintered Central Micro Filter Acetylene Pressure Reducer Regulator Gas Meter Pressure Gauge. Inlet: 0-400 PSI, Outlet pressure: 0-30 PSI,

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>Inlet thread: CGA 510 female. Diameter gauges: 2-5/8 in. Body made from forged brass. R. H connection for oxygen & L. H. connection for acetylene. Flow- 10m³/h(150lit/min) or equivalent. Confirming to IS 6901:2009 or equivalent. CO2 Gas pressure: Max. Inlet Pressure: 150/200 bar / 2900 psi. Max. Outlet Pressure: 10 /15 bars / 145 psi. DA: Max. Inlet Pressure: 10 bar/ 145 psi. Max. Outlet Pressure: 1.5 bar / 22 psi. Confirming to EN ISO-2503. Stable Outlet Pressure. Steady Flow of Gas. Better Pressure Regulation. Forged Brass Body & Housing Cap. Sintered Filter at the inlet. Stainless Steel Sintered Central Micro Filter. Teflon Coated Valve Seat. Fire Retardant valve seat material. Diaphragm: Thick NBR supported by large backup plate & Teflon ring in Periphery regulator, with flow meter</p> <p>Argon Gas pressure: Max. Inlet Pressure: 150/200 bar / 2900 psi. Max. Outlet Pressure: 10 /15 bars / 145 psi. DA: Max. Inlet Pressure: 10 bar/ 145 psi. Max. Outlet Pressure: 1.5 bar / 22 psi. Confirming to EN ISO-2503. Stable Outlet Pressure. Steady Flow of Gas. Better Pressure Regulation. Forged Brass Body & Housing Cap. Sintered Filter at the inlet. Stainless Steel Sintered Central Micro Filter. Teflon Coated Valve Seat. Fire Retardant valve seat material. Diaphragm: Thick NBR supported by large backup plate & Teflon ring in Periphery regulator, with flow meter</p>
12	Fume extractor system connecting all the Welding booths	Pc	6	<p>Fume Extractor Complete with ducting and Fume Extraction System which includes as below: CENTRIFUGAL FAN: - Exhaust Fan 13000 CMH . Voltage – 3 x 400V x 50 Hz ±10%, Motor Power – 15 kw, Static Pressure – 300 mm WC, Total Pressure – 322 mm WC, FAN rated RPM – 2880, Air Handling Quality – Dust Load (<10mg/Nm3), Current Consumption 20.2 A, RPM 2910 / Min. Transition piece – Rectangular Ø 450 mm. Flexible Exhaust Arm: Flexible Exhaust KEMPER Arm, Length 3 Meter. Arm Dia. 150 mm or equivalent. Flexible Exhaust Arm a fiber glass hose with a PVC coating and an internal steel wire spiral. Arm Should be with interior parallelogram, there should not be any outside support. 1 No. Joint Arm Only. Self-Supported with internal springs. With 360-degree rotatable swivel joint from mounting point. Exhaust Arm Weight - Approx. 20 Kg. Exhaust Hood: Rhombus shaped, for max. capturing area, Hood Size -250 x 300 mm or equivalent. 360⁰ Rotatable Hood. Protective mesh on Hood. Manual Damper should be inbuilt with hood. Ducting: - GI Spiral Ducting,275 gsm, 22 gauge - Duct Dia. as per requirement, Duct Length - as per site visit</p>
13	Fabrication of Welding Booths	Pc	6	<p>Welding Booths Dimensions – 2.0 x 2.0 x 2.0 Meter or equivalent as per layout size. Sound Insulating Partitioning MS Welding Booth UV radiation inhibiting coating. Consisting of various system elements on the modular principal Panel / Cassette width should be 50 mm thick with Soundproofing Bio Soluble Mineral Wool in it which is DIN 4102 approved and Noncombustible, MS Pillar should be 60 x 60 x 03 MM. Grouting Base Plate 08 mm with laser cut. MS Material should be nicely powder coated. Cassette connected with C Profile with each other Modular cassette / Panels</p>
14	Curtains for Welding Booths	Pc	6	<p>Curtains for Welding Booths and Posters: Lateral Sliding Strip Curtain mechanism. Curtain should be as welding protection PVC strips - 33% Overlapping PVC Strip Curtain with 200 mm Strips - Strip should be 2 mm thick. Curtains should be as per EN 1598 standard. PVC Strip Should be UV protected.</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
15	Gas Manifold system	Pc	6	2 + 2 Gas Cylinder Manifold System for Argon, Co2, ACM Gases suitable for 12 working stations. 1/2" SS 304 Seamless pipe/tube with fittings total length 300-meter, safety relief valve, Other Features/Parameters: Set the outlet pressure as per requirement with outlet press Regulator. Inlet Pressure Gauge: 2 nos. of 0 – 210 Kg Gauge or equivalent. Open outlet valve to use as per requirement.
16	S.S Wire Brush	Nos	12	Wire Brush with stainless steel bristles. 4 x 16 SS Wire Rows with wooden Handle. Bristle Length at least one Inch or equivalent. Overall Length 300MM (12 Inch) or equivalent. Width 30MM or equivalent.
17	Spark Lighter	Nos	6	Standard Spark Lighter for Gas Cutting & Welding applications. Single Cup with single flint.
18	Welding hand shield Fiber	Nos	12	Light weight, Main Body Alloy High Glass PVC. Cartridge size: 90 mm x 110 mm, Viewing area: 96 mm x 46 mm, Light shade: DIN 3, Dark shade: DIN 9 – 13 or equivalent
19	Chipping hammer with metal handle	Nos	12	Generally Conforming to IS 841-1983. Partially Hardened up to 55 - 58 HRC on Striking surfaces needed as functional requirements for all types of hammers. Drop forged from high grade carbon steel. Phosphate and painted to provide anti rusting properties. Resharpener the point or chisel edge from time to time when it gets blunt. The hammer features a cone-shaped nose with a sharp, flattened point and a dual beveled tail. Hanging hook at one end so the tool hangs easily from a peg board or nail. Handle made from high quality Steel and fixed firmly to hammer head. Weight at least 250 Grams, Overall Length at least 12-Inches.
20	Chisel cold flat	Nos	12	Flat Type. Differential heat treatment for cutting edge, and striking end. Drop forged from high grade carbon steel. Hardened & tempered & toughness. Hardness: 55 - 57 HRC on cutting edge. 35 - 45 HRC on striking portion. Cutting edges are ground accurately to appropriate angle conforming to IS 5663-1970. Overall Length not less than 150MM(6-Inch). Cutting edge width not less than 20MM. or metal cutting. With Rubber Grip.
21	Centre punch	Nos	12	Made out of high-grade Chrome steel accurately machined and heat treated. Deep knurling on the body ensures firm grip. Black phosphate finish. Conforming to IS 7177-1999 or equivalent. Length at least 150MM x Diameter 10MM
22	Dividers	Nos	12	Fully hardened and tempered joints, spring, washers and divider points. Divider points are hardened 50-55 HRC for increased wear resistance. With Quick Adjustment Nut. Contact ends fully rounded to give accurate dimensions. The legs pivot on a roller and are tensioned by bow spring. Range not less than 200MM(8-Inch) mm. Confirming to IS: 4084- 1964 or equivalent.
23	Stainless steel rule	Nos	12	Easy-Read Metric/Inch Stainless Steel Etched Ruler with zero at the edge. Top edge is graduated in 1 mm increments with numbers in mm value. Bottom edge is graduated in inches. First two inches are in 1/32" increments, third inch is in 1/64" increments, the rest of the ruler is graduated in 1/16" increments. Rulers have conversion tables on the reverse. Conforming to IS 9193-1988. Length at least 300MM (12-Inch), High-Quality Stainless-Steel Rulers (no cork backing) with Acid etched graduations filled with black ink.

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
24	Scriber	Nos	12	Double-ended, hardened steel engineer's scriber for marking or scoring metal. One end straight and another end 90°. • Scriber size :150 mm double point • Type: Straight & Knurled at center position Material high carbon steel, is a hand tool.
25	Flat Tongs	Nos	12	350mm - Flat Tong Mouth Tip Length(mm) 65MM or equivalent. OAL - 350mm. Long heavy duty. Forged. Material S45C or equivalent.
26	Hacksaw Frame (fixed)	Nos	12	Fixed Type Frame. Hacksaw frame 300 mm, aluminum die cast handle. Overall Length at least 440MM x Width 130MM x Bow Depth at least 103MM. Conforming to IS 2594-2003 or equivalent. With one set of Hacksaw Blade each 18TPI and 24TPI
27	File Half-round Bastard	Nos	12	Half-round second cut. Length 300MM (12 Inch) or equivalent. Made from carbon steel. With rubber grip/Wooden handle. Generally Conforming to IS 1931-2000
28	File Flat	Nos	12	Flat File 300MM (12 Inch) Length, made from Carbon Steel with rubber grip/Wooden handle. Generally Conforming to IS 1931-2000. Hardness 60 to 64 HRC or equivalent
29	Hammer ball pane	Nos	12	Weight 900gm, Generally Conforming to IS 841-1983. Partially Hardened up to 55 - 58 HRC on Striking surfaces needed as functional requirements for all types of hammers. Drop forged from high grade carbon steel. Phosphate and painted to provide anti-rusting properties. Handle made from high quality axle wood and fixed firmly to hammer head.
30	Tip Cleaner	Nos	12	Large and Small 13 Wire Oxy-Acetylene Tip Cleaner Set for Cleaning Welding Cutting Nozzles/Tips. Kit should include one 130mm (5") and one 75mm (3") Tip Cleaner. Each Welding Tip Cleaner includes 13 Wire Files (49 to 77) at different lengths (4-1/3" or 2-1/3"). Includes a flat file. Wires are Made from Quality Stainless Steel and enclosed in a sturdy Aluminium casing.
31	Try square	Nos	12	Heavy duty 52 HRC head. Hardened spring steel blades are permanently fixed to the stock by means of tapered self-locking rivets. Both the blade and stock are precisely ground. Working edges of the blades are lapped. groove on the inner corner of the stock aids in the clearance of burr or dirt. Blade Length at least 100MM(4-Inch). Straightness of blade edges 12micron or better. Flatness of working faces of stock 8micron or better. Squareness of blade edges to working faces to stock 24micron or better. Internal & External Squareness as per BS 939 Grade B or equivalent
32	Spindle Key	Nos	4	Cylinder Opener Key, Rust Proof, 65 mm
33	Screwdriver	Nos	1	6 X 300MM blade and 6 X 250MM blade Hardness on tip: 55 to 58 HRC. Should be hardened and tempered to resist wear, bending and meet high torque requirement. Should be made up of Silicon - Manganese steel. The blade tip should be magnetized to lift small screw.
34	Number punch	Nos	2	Set of 9Pcs, 10 MM (3/8 inch) Number Punch Set 9 Numbers (0 to 9). With Induction Hardened (58 -62HRc) Ends. Stamp Size: 4MM (5/32") or equivalent. It has chamfered and 35-42 HRC tempered striking end Supplied in a

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				Plastic Box.
35	Letter Punch	Nos	2	Letter Punch Set of A-Z Letters. Stamping end is Hardened at 58-62 HRC. Letter Stamp Set with Induction Hardened Ends, Stamp Size 5MM or equivalent. Confirms to administrative and technical requirements of the ANSI/ESD S20.20:2014 and BS EN 61340-5-1:2007 Electrostatic Control Standards.
36	Magnifying glass	Nos	2	Hi-Quality Hand-Held Magnifier Lens or magnifying glass with Handle. Optical grade at least 8X or better Magnification Capacity. Lens Diameter at least Dia 80MM or equivalent. Length - 195mm approx.
37	Universal Weld measuring gauge	Nos	2	Measuring gauge for Crown height, fillet weld leg height, misalignment (high-low), undercut depth, fillet weld throat size, angle of preparation, length, 45-degree angle.
38	Spanner D.E.	Set	2	Forged from Chrome Vanadium Steel. Double Ended metric spanner. Size ranging from 6x7, 8x9, 10x11, 12x13, 14x15, 16x17, 18x19, 20x22, 21x23, 24x27, 25x28, 30x32 MM. Length as per standard, ranging from 95MM to 250MM depending upon size. Chrome plated for corrosion protection with heads sets at 15 degree. Conforming to IS 2028-2004 or equivalent. Made of high-quality chrome vanadium steel or carbon steel
39	C-Clamps	Set	2	Body hot drop forged from high grade steel. All parts are fully heat treated and black Phosphated. Length at least 100MM(4-Inch), 150MM(6-Inch) and 200MM(8-Inch). Throat Length (Clamping Gap) not less than 55MM. Conforming to IS 9181-1988 or equivalent. 10 cm and 15 cm cast iron
40	Sledgehammer (double faced)	Nos	1	Sledgehammer with Hickory Handle. Weight 5.44 KG (12lb), Length 30 Inch or equivalent. Partially Hardened up to 55 - 58 HRC on Striking surfaces. Drop forged from high grade carbon steel. Phosphate and painted to provide anti rusting properties. Generally Conforming to IS 841-1983.
41	S.S. tape	Nos	1	Swollen Case on both sides. Compact and Round ABS Case. High quality carbon steel with acrylic resin/Nylen coating Tape. Length atleast 5-Meter and retractable type. Tape Width: Not less than 13mm Metric/English tape• Tape Material: Tempered Steel. with Belt Clip with Self compensation tip to set Zero. Conforming to IS 1269-2 or latest., Class II Accuracy
42	Trolley for cylinder (H.P. Unit)	Nos	2	One Oxygen + One LPG Cylinder Handling & Lifting Trolley for gas cylinder with heavy duty lockable wheels and pull arrangement with cylinder clamping and stand.
43	Portable drilling machine	Set	1	Wattage 500 watts, No-load speed 0 – 2,600 rpm, Voltage: 220-230V, Frequency: 50-60 Hz, Material plastic, Rotating brush plate for constant power in reverse and forward rotation. Dynamic load rated ball bearing for long life. Drill spindle connecting thread 3/8"-24 UNF, Chuck capacity, min./max.: 1 – 10 mm, Impact rate at no-load speed 0 – 41,600 bpm Drilling in concrete 13mm, Speed 0-2600, RPM 0-25700 or equivalent.
44	Radio graphic reference standard	Set	1	Document Package Only: Certificate of Conformance, CAD Drawings, Test Sheets and Radiographs Film Set Contains: 16 Radiographs of 20 flaws and 6 Processing Defects. Radiographs are of 10 carbon steel, Plates: 0.375"T, 0.625"T, Tee: 0.375"T, Pipe: 4" Sch80 (0.337") wall

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
45	Pressure vessel codes (Book or CD) IBR & ASME sec IX	Set	1	Pressure vessel codes (Book or CD) IBR & ASME sec IX
46	Structural welding codes D1.1(Book or CD)	Set	1	Structural welding codes D1.1(Book or CD)
47	Wall charts, Transparencies and DVDs related to the trade	Set	1	Wall charts for welding trade: Types of welding joints, Electric resistance welding, Spot welding, Seam welding, Flash welding, Electric Arc welding, Submerged Arc welding, Thermit Arc welding, Oxy-Acetylenes Torch, Gas flames, Basic weld symbols, Supplementary weld symbols, Laser beam welding, atomic hydrogen welding, TIG & MIG welding, Welding torch and Electroslag welding
48	Leather Hand Gloves	Pair	12	Soft leather material - with reinforcement and good dexterity, not fall off. Thicker and heavier than had a long cuff in a decorative pattern gloves Used of Special Handling - Anti-skid scrub treatment, amazing grip and excellent dexterity. Durable, anti-skid, anti-oil, acid and alkali. Sweat absorption and dry. Suitable for Welding. Size 14-Inches or equivalent.
49	Cotton Hand Gloves	Pair	12	Pure Cotton Hand Gloves, re-usable, Washable, to Protect from fine dust, Air-Pollution. Wet and Dry Glove Set. Size 8-Inch or equivalent
50	Leather Apron	Nos	12	Easy wipe cleanable, Leather Apron, Welding Apron. Heat and moisture resistant. Kevlar stitched and re-enforced with rivets. Leather straps are provided for Additional strength. Standard. Free size "L" or "M". neck strap and the adjustable buckle on the back strap ensure comfort fit.
51	Leather Hand Sleeves	Pair	12	Size 16-Inch or equivalent. Heat Resistance Up to 150 C degree Celsius. Should protect your hands from welding sparks, heat and UV rays. Cuff type Velcro.
52	Safety Boot	Pair	12	Black Color Industrial Shoes/Boot with Steel Toe cap designed for Welders. S1P safety shoes with additional protection against oil and slip resistance. Heat resistance to over 300 Degree Celsius.
53	Leg guard leather	Pair	12	Welding 20 CM (8 Inches) Long Leg Guard. Made of Split Leather Shoe Protector, Heat and Abrasion Resistant Welding Spats Shoes Cover, Welder Working Tool. Stitching with fire resistant thread provides spark and abrasion resistance.
54	Arc Welding Single-colored glasses	Nos	24	Welding Glass, Size - 108 x 82 x 3 MM (4.25 x 3.25 Inch) or equivalent. As per DIN 11 A and 12A or equivalent
55	Arc Welding Plain Glass	Nos	36	Welding Glass, Size - 108 x 82 x 3 MM (4.25 x 3.25 Inch) or equivalent
56	Gas welding Goggles with Colour glass	Nos	24	IR-11 lens, Lens material Polycarbonate, Hard-coated for Scratch-Resistance, High Impact Resistant. Lenses as per DIN 3 or 4A or equivalent standard. Frame made up of cellulose acetate, the glass thickness of 2.8mm with a tolerance of ± 0.2 MM or better. Should be suitable for Gas Welding up to 70 Liters Acetylene/Hour, Flame Cutting

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				up to 900 Liters Oxygen/ Hour or better.
57	Safety Goggles (Plain)	Nos	12	Eye Protection Glasses with Clear Lens, Transparent. provides 99.9% or better UVA/UVB protection. Adjustable, elastic cloth head strap with ventilation channels.
58	Welding Helmet (Fiber)	Nos	12	Size: 83 x 108 mm. Helmet complete with outer protection lens, shade 11 mineral glass and internal protection glass. Should have 3 flip fronts.
59	First Aid box	Set	1	<p>Easy To Carry Handle and Buckle Lock Shuts the Lid Keeping the Items Safely Inside. Made with BPA-Free and Durable Plastic. It is Easy to Open, Close Wash and Clean. Inner removable Tray and Deep Storage area offer Flexible Storage and Increases Storage Space. First Aid Kit equipped with all essential elements required to handle a quick emergency. Package Content:</p> <p>10 pcs Safety Pin, 10 pcs Cotton Tip Applicator, 25 pcs Adhesive Plaster 19x72mm, 10 pcs Adhesive Plaster 25x72mm, 5 pcs Adhesive Plaster Round, 3 pcs Adhesive Plaster Square, 2 pcs Adhesive Plaster Knuckle, 5 pcs Wound Cleaning Wipes, 5 pcs Antiseptic Wipes BZK, 2 pcs Sterile Burn Dressing 10cm, 1 pc Micropore Tape 1.25x5m, 1 pc Antiseptic Cream 10gm, 5 pcs Wound Cleaning Wipes, 5 pcs Antiseptic Wipes BZK, 3 pcs Sterile Gauze Swab 10cm, 3 pcs Sterile Gauze Swab 7.5cm, 2 pcs Sterile Adhesive Plaster 6x10cm, 3 pcs Elastic Gauze 8andage 6x1m, 2 pcs Gauze Bandage 7.5x3m, 1 pc Sterile Wound Dressing Large. 1 pc Sterile Wound Dressing Medium</p> <p>General Medicines:</p> <p>1 pc Dusting Powder 10gms, 1 pc Tincture Iodine 20ml, 1 pc Burn Cream 15gms, 1 pc Eye/Ear Drops 5ml, 1 pc Crystal Violet 5ml, 5 pcs Electrolyte Powder 4.2g, 10 pcs Paracetamol Tablet 500mg, 14 pcs Aspirin 75 mg Tablets</p> <p>General Items:</p> <p>1 pc Scissor 5.5" Tough Cut, 1 pc Antiseptic Lotion 100ml 1 pc Tweezer Plastic, 1 pc Absorbent Cotton 20gms, 1 pc Triangbrar Bandage, 1 pc Tourniquet, 1 pc Instant Cold Compress, 1 pc Penlight, 1 pc CPR Mouth Barrier with Gloves, 1 pc First Aid Guide, 2 pcs Sterile Oval Eye Pad, 2 pcs Wooden Splint, 2 pcs Examination Gloves</p>
60	Auto Darkening Welding Helmet	Set	2	Shade level range (4/9-13), Switchover time / darken (0,22 ms), Switching time dark / light (0,05-1,0 sec), Cartridge size [l x b x h] : 90x110x9,5 mm or better, Weight : 0.5 KG, Continuous opening delay regulator: 0,05 s – 1,0 s , Classification: 1/1/1/2, length/Width/Height(L XWXH) ≤ 290 X 240 X 240,
61	Fire Extinguishers (foam type and CO2 type)	Set	1	CO2 type Fire Extinguisher of 4.5Kgs. Capacity, made from brand new seamless cylinder, as per IS: 7285 and CCE approved, fitted with hose and horn and Squeeze Grip Valve with initial Charge of CO2 Gas conforming to IS 15222 or equivalent and Extinguisher as per BIS:15683:2006 or equivalent. specification with ISI Mark along with mounting Bracket and PESO certificate for cylinders. Foam Type: Foam fire extinguisher shall be Squeeze Grip. Cartridge type of 9 Ltr capacity having rating of 34B fitted with gunmetal cap, CO2 gas cartridge and hose with squeeze grip

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				nozzle with ISI mark and mounting brackets. Initial charge of 270ml AFFF 3% foam compound shall be supplied in separate container. Spare cap assembly including all accessories such as gas tube siphon tube, safety pin, and discharge tube and co2 cartridge.
62	Fire buckets with stand	Set	1	Standard Size for Sand/Water with Stand. Size of the Fire Bucket shall be minimum nine (9) liters. Fire Buckets: The material of construction shall be Galvanized Iron with anti-corrosive treatment. Outside of the Fire Bucket shall be painted with primer and Fire Red Colour. the word "FIRE" shall be written outside the bucket in bold black letters. The inside of the Fire Bucket shall be painted with primer and white.
63	Metal Rack	Pair	1	Iron Rack Shelf for Storage Engineered Wood Shelf - 63 (H) x 24(W) x 12(D) Inch.
64	Work Benches with Bench Vices and storage drawers to demonstrate welding equipment	Set	2	Size 3400 (L) x 1200(W) x 750(H) MM with Two (02) Bench Vice fitted on Top (diagonally opposite) Vices of 150MM (6 Inch) Jaw opening, fitted on wooden Top (at least 50MM Thick). Metal Frame, heavy duty structure and powder coated with industry specific color (Opel Green or equivalent). Table Frame of 50 x 50 x 6 MM angle with 50MM wooden top. Fitted with 2-Shelves metallic Drawer/Tool Cabinet 200MM (8 Inch) or equivalent depth with Lock and Key
65	Chest of drawers	Pair	1	Chest of 4 drawers, white - Smooth running drawers with pull-out stop. Particleboard, Acrylic paint.
66	Rubber Hose Clip	Pair	12	Worm Drive Hose Clamps (Stainless Steel), Size 1/2 Inch or equivalent, Band Width 12.70 mm or equivalent, Band Thickness 0.60 mm or better.
67	Rubber Hose (for Oxygen)	Set	10	Size: Diameter 8MM, as per BIS, meets or exceed IS 447 / BS EN 559. Oxygen hose with invariably green/blue color. Inner tube: Gas-Oil resistant synthetic rubber. Reinforcement: Single layer braid high tensile steel wire hose. Outer cover: Weather / Ozone/ Abrasion resistant synthetic rubber. Temperature range: (-) 20° C to (+) 70° C. Burst Pressure 70 bar or better.
68	Rubber Hose (for Acetylene)	Set	10	Size: Diameter 8MM, as per BIS, meets or exceed IS 447 / BS EN 559. Oxygen hose with invariably red color. Inner tube: Gas-Oil resistant synthetic rubber. Reinforcement: Single layer braid high tensile steel wire hose. Outer cover: Weather / Ozone/ Abrasion resistant synthetic rubber. Temperature range: (-) 20° C to (+) 70° C. Burst Pressure 70 bar or better.
69	Arc Welding Cable (multicolored) Copper	Set	36	Current Rating at a Maximum Duty Cycle 400/ 600 AMP as per BIS. excellent heat resistance and flame retarding ability. HOFr or TRs Welding cables confer to IS: 9857 or latest. Preferably black color. Annealed high conductivity copper wires comply in with IS 8130:1984. Covering - general service normal duty elastomeric compound shall be Type SE 1 confirming to the requirements of IS 6380:1984. The heat resisting, oil resisting and flame retardant (HOFr) normal duty elastomeric compound shall be Type SE 3 confirming to the requirements of IS 6380:1984.
70	Die penetrant testing kit	Set	5	Highly efficient three pack N.D.T System, Suitable for checking welds and Stressed machine parts for cracks and flaws, before and after welding or machining. Specification - Great for most metals, plastics and other Solid Surface.

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				Good coverage. Easy applied. Portable. Sulphur and chlorine free. Nontoxic and Non - corrosive.
71	Insulation ring	Pair	10	ø20,5 / ø12,15x8mm
72	Nozzle stock	Pair	15	M8x1,5 / SW11x44,5
73	Spatter guard	Pair	25	Ø11,2/Ø20,2x22
74	Gas nozzle	Pair	50	ø15 / ø25x75 CT M23x2
75	Contact tip	Pair	15	0,8 / M8x1,5 / ø10x32
76	Contact tip	Pair	15	1,2 / M8x1,5 / ø10x32
77	Bare steel inner liner	Set	15	0,8 / 5m
78	Bare steel inner liner	Set	15	1,2 / 5m
79	Clamping piece	Pair	15	0,8 Fe / CrNi
80	Filler Wire Mild Steel	Set	25	ER70S6 1.2 MM (15 KG)
81	Filler Wire Mild Steel	Set	25	ER70S6 0.8 MM (15 KG)
82	Gas Regulator	Pair	4	Gas Regulator for Oxygen Acetylene
83	Electrode	Pack	25	Packet of 100 Sticks
84	Torch cap long	Pair	15	Suitable for above Quoted Machines

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
85	Torch cap medium	Pair	15	Suitable for above Quoted Machines
86	Torch cap short	Pair	15	Suitable for above Quoted Machines
87	Clamping sleeve	Pair	15	4,0/ø11,5x56 suitable for above Quoted Machines
88	Head shield	Pair	15	standard ø20/ø10,1x7 suitable for above Quoted Machines
89	Clamping sleeve	Nos	15	2,4/ø4,5x25 suitable for above Quoted Machines
90	Clamping sleeve	Nos	15	3,2/ø4,5x24,3 suitable for above Quoted Machines
91	Clamping sleeve case	Pair	15	2,4/ø9,5x20,6 suitable for above Quoted Machines
92	Clamping sleeve case	Pair	15	3,2/ø9,5x20,6 suitable for above Quoted Machines
93	Gas nozzle ceramic	Pair	50	ø6,3/ø14,2x29,5 suitable for above Quoted Machines
94	Gas nozzle ceramic	Pair	50	Ø9,5/Ø14x30 suitable for above Quoted Machines
95	Gas nozzle ceramic	Pair	50	ø11,2/ø16,2x29,5 suitable for above Quoted Machines
96	Tungsten electrode	Pair	15	WC20/ø2,4x175 suitable for above Quoted Machines
97	Tungsten electrode	Pair	10	WC20/ø3,2x175 suitable for above Quoted Machines
98	Tungsten electrode	Pair	10	WC20/ø4,8x175 suitable for above Quoted Machines
99	Welding Cable	Mtr	10	Welding Cable Wrapping 50 Sq/mm 10 Mtr. Material copper

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
100	Steel Plates 5mm	Kg	12	MS plates for welding practice 5mm X 100mm X50mm
101	Steel Plates 6mm	Kg	12	MS plates for welding practice 6mm X 100mm X50mm
102	Steel Plates 8mm	Kg	12	MS plates for welding practice 8mm X 100mm X50mm
103	Steel Plates 10mm	Kg	12	MS plates for welding practice 10mm X 100mm X50mm
104	Welding Electrodes	Pack	50	Welding 2.5 mm x 350 mm Mild Steel
105	Mig Welding Consumables	Set	12	Glove – MIG Heavy duty Gloves for MIG/MAG/MMA Welding made of heavy chrome leather for robust wear yet comfortable feel. Full five finger welder's gauntlet <ul style="list-style-type: none"> • One piece back 35 cm (14 inch). • Fully welted, no exposed seams • Kevlar® sewn throughout • Comfortable soft full lining • Approved to EN 388 and EN 12477 type A
106	Tig Welding Consumables	Set	12	TIG Gloves Nappa Grain leather palm and fingers ensure high dexterity • 15cm leather cuff provides robust protection
107	AG4 Grinder with Wheels	Nos	5	Ag4 Grinding Disc 4-inch 100 x 60 x 16 mm Grinding Wheel (Black)
108	Hacksaw with Blade	Nos	12	HSS Hand Hacksaw Steel Blades (300 X 12.5 X 0.63 mm) 18TPI and 24 TPI pack of 10nos.
109	Earth clamp	Nos	6	Earth clamp zinc coated steel and copper plated jaws for contact with the work piece. Jaws should be opened up to 60mm or more.
110	Oxy Acetylene Gas Cutting blow pipe	Nos	2	Suitable for cutting of metals, ISI Certified, B-1/16" gas cutting nozzle, Die forged brass body, Length: 22 Inch or equivalent.
111	Electrode holder	Set	12	Capacity 600Amp., Insulation resistant above 1 mega ohm and dielectric strength up to 3000 volts ensures enhanced safety. This holder should be suitable for cables up to Al120/Cu70 sq.mm. and CE certified as per European standard EN60974-11.
112	H.P. Welding Torch with 5 Nozzles	Set	2	Suitable for welding/brazing/heating of ferrous metals with oxy-fuel gas, ISI Certified.

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
113	Welding Transformer with all accessories (400A, OCV 60-100 V, 60% duty cycle)	Set	2	<p>400 AMPS Pulse Synergic Welding Machine: Digitally Controlled IGBT Inverter Based, Cc/Cv Power Source, Input Voltage-380 / 400V ± 10%, 50 Hz, Ac 3 Phase, Apparent power at 400 V AC / 400 A / 40% ED2) ≤ 21 KVA Max At 40% Dc At 400 Amps., Arc Current Range (Output)- 10 Amps to 400 Amps or More, O.C.V- 54 to 66 V Output Should Be Nearly Ripple Free, Power Factor ≥ 0.98, Insulation Class-B or better, Protection Class- IP-23 or Better, Efficiency ≥ 87%, Power Source Weight ≤ 35 Kg, Protection Against-Single Phasing, Short Circuiting, Supply Over Voltage, Thermal Over-Loading Etc., Duty Cycle- At 100% Duty Cycle at 330 or more Amps and At 60% Duty Cycle 360 Amps or more, Pollution Level-3, Manual and Synergic, Pre-program setting for various amps/volts, metals gas combination. The machine should have inbuilt Pulse Synergic mode for steel, Pulse Controlled spray arc characteristics for steel for deep and narrow penetration, steel with Root characteristics for Root passes, Dynamic Characteristics for faster and deeper penetration welding and speed, and universal arc characteristic for conventional welding. The machine should have Synchro/ Pulse for a scaled appearance in welding joints. The precision setting should be in the accuracy range of 1.0 amps & 0.1 volt. The interface should be operator friendly for controlling various operations. Facility to be present like gas pre-flow and post flow, arc length control, hot start, soft start, crater filling, 2t/4t, memory set up function, 5 easy jobs save option The machine programmed synergic curves for MIG/MAG and Pulsed MIG process. Should have energy-saving stand-by facility for auto idling of fan. A machine should have the facility of documentation of welding data, and more than 55 new pulse characteristics must be available in Pulse Process, Feeder Roller should be Universal and color coated, more than 165 Welding Characteristics, Synchro Pulse Program, Pulse Controlled Spray arc special arc, Spot Welding Mode, Stitch Mode, Automatic wire threading without opening the wire-feed unit, ignition time out setting should available in the machine, Intermediate arc indicator must be available, automatic End crater filling, Error code display on problems, measurement of R & L, Machine should have Control Panel locking function, Automatic burn back control, USB, Thumb Drive Export Function.</p>
114	Welding Transformer with all accessories (300A , OCV 60 - 100 V, 60% duty cycle)	Set	2	<p>350 amps CC/CV Synergic Welding Machine: Mains voltage -10 / + 15% (380 -460 V), Wire Feed Speed 1- 25 m/Min, Welding Current Range (MMW ,GMAW,GTAW) – 10 Amps -350 Amps or more, primary power ≤ 16 KVA, Duty Cycle (MMAW,GMAW,GTAW process- 10min/40°C : more than 29 0A / 60% ,Duty cycle [10min/40°C] : more than 240A / 100% Open Circuit Voltage :55 to 65Vo It ,Dimension (l x b x h) ≤ 760 x 320 x 510 ,Power source efficiency at 350 A / 34 V ≥ 90%, Power Factor ≥ 0.98, Power Source Weight ≤ 38 K.G., Safety symbols - S, CE, CSA, EMC device class –A ,Pollution degree according to IEC60664- 3, Protection Class- IP-23 or Better, Insulation class- B. The machine should have Features: Manual MIG/MAG, Synergic MIG/MAG, Lift Arc Ignition TIG with Pulse and Tacking Function in DC TIG and MMAW Welding process. Wire feed and power source are integrated into one housing with 2 shielding gas connection sockets. The machine should have intermediate arc indicator, hold indicator, gas test button, material setting Button, Wire Diameter Setting Button, Shielding Gas Setting Button, Process, Button for Manual and Synergic MIG/MAG, DC, TIG, and Stick Button. The machine Should have Synergic Programmed Root, Dynamic and Universal and Self shielded wire programmed, and space to upgrade special wire</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>Grade and Gas, 5 Easy Job parameter saving, and the torch should withstand under 100 KG load. SPOT, Stitch welding (with time setting option) and 2 STEP & 4 STEP and Special 4 STEP Mode welding operations, Digital Display with Arc Length Correction/Dynamic, Thickness, Wire Feed Speed, Current and Voltage displayed. Automatic wire threading without opening the wire-feed unit without losses of gas. The machine. Universal and color-coated rollers as per diameter. length of wire that is fed before the safety cut-out is triggered out safety features must be available for welders. The machine should have Facilities to set Pre flow, Post Flow, End Current Time, Slop Time, burn back Correction and Start Ignition. Machine should be Thermostat controlled Fan / Over temperature protection with Polarity reverser. Machine should be Earth Leakage monitoring facility and Measurement of Resistance and Inductance is possible. Machine should be DC TIG Tack (Setting range: OFF, 0.1 - 9.9) Welding and Spot welding (Setting range: OFF, 0.3 - 5), Spot Pause Time Setting range: OFF, 0.3 - 10 (in 0.1 s increments) programmed. Machine should be TIG Pulsed Arc (Setting range: 1 - 990 Hz) facility. MMAW Mode with Hot start current (100 -200%), Hot Current Time (0.0 - 2.0 Second), Anti stick (ON/OFF), Arc-force dynamic and Unit indicators. Machines have an option for the opportunity to the lock control panel via a key lock switch in future and are capable of displaying the energy applied during the welding operation. The machine should be Error Code Display Facilities for Easier Fault Diagnosis and Display the software version, and operating time. The machine should be a Power Source a with CE mark & S mark which is permission of welding in confined spaces in conditions of enhanced electrical hazards. The machine welding torch must have a LED Light.</p> <p>Scope of supply should include : Power Source (In built Wire Feeder), Feeder Roller – 0.8 -1.2 MM, MIG/MAG welding torch 3-meter length, Earth cable 4 meter with clamp,5 Meter Input Cable.</p>
115	Inverter based welding Power source	Set	1	<p>300 Amps Pulse Synergic Multi Process Machine: Mains voltage - 380 / 400V, Mains voltage tolerance: -10 / +15%, Welding current range: 10 Amps - 300 Amps, Welding current at 10 min / 40 °C Duty Cycle : 60% at 270 Amps or more ,100% at 230 Amps or more, Open circuit voltage-59V to 65 V, Apparent power at 400 V AC ≤ 12 KVA, or Better, Safety symbols-S, CE, CSA, Dimensions (l x w x h)mm -747 x 300 x 497 mm, Weight ≤ 37 KG. Wire speed-1 - 25 m/min, Idle state power consumption at 400 ≤ 37 W, Power source efficiency at 300 A / 32 V ≥ 88% Protection Class: IP23 or Better</p> <p>Other Key Features/Parameters: Machine should have the facility of documentation of welding data, more than 57 new pulse characteristics in total in Pulse process, Universal and color coated Feeder Roller, More than 167 Welding, Characteristics, Synchro Pulse Program, Pulse Controlled Spray ARC, Spot Welding Mode, Stitch Mode, Automatic wire threading without opening the wire-feed unit, Ignition Time out, Intermediate arc indicator, Automatic End crater filling, Error code display on problems, measurement of R & L, Machine should have Control Panel locking function, Automatic burn back control, , USB, Thumb Drive Export Function. Machine should be capable for Manual MIG/MAG, Synergic MIG/MAG, Pulse, PCS, Synchro pulse and MMAW and GTAW Pulse Welding process and welding torch should have Led Light. Machine should have Intermediate arc indicator, Hold Indicator, Unit indicators, Gas Test Button, Material Setting</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>Button, Wire Diameter Setting Button, Shielding Gas Setting Button, Process Button for Manual and Synergic MIG/MAG, DC TIG and Stick Button. Machine should have GMAW Spot welding time (0.3 – 5), Spot pause time (OFF, 0.3 – 10), Interval setting possible in 2T (2-step), 4T (4-step), TIG Pulse frequency (1 – 980) Hertz, DC Pulse Tacking second (0.1 - 9.9) function. Wire feed and power source are integrated in one housing and 5 Easy Job parameter saving option. Machine should have 2 step & 4 step and Special 4 step mode operations. Machine should have safety features for users (length of wire that is fed before the safety cut-out is triggered). Machine should have Special Synergic Programmed Root, Dynamic and Universal and self-shielded wire programmed, and space to upgrade special wire Grade and Gas. Machine should be Thermostat controlled Fan / Over temperature protection with Polarity reverser and Universal roller geometry optimized for hard and soft wires. Machine to have the capability -If there is no "Wire threading" button, the torch trigger can be used in the same way. Machines have an option for opportunity to lock control panel via key lock switch. Machine should be capable for displaying the energy applied during the welding operation and displaying the software version, operating time. Machine should be Error Code Display Facility for Easier Fault Diagnosis and Earth Leakage monitoring facility and Measurement of Resistance and Inductance is possible. Machine should be Digital Display shows value of Arc Length Correction/Dynamic, Thickness, Wire Feed Speed, Current and Voltage displayed. Machine should have Facilities to set Pre flow, Post Flow, Final current, Slop Time, start current duration and Feeder inching speed. Scope of supply should include Power Source 300 Amps inbuilt wire feeder, Feeder Roller: 0.8 & 1.2 MM, MIG/MAG welding torch 3-meter length, Earth cable 4 meter with clamp, 5 Meter Input Cable.</p>
116	D.C Arc welding rectifiers set with all accessories	Set	2	<p>Open-circuit voltage ≥ 91 V, 65A / 100% ED [Hybrid] 100A or more, 50% ED [Hybrid] @ Welding current / Duty cycle [10min/40°C], Operating voltage- 0-91 Volt, Battery capacity: ≥ 380 Wh, Battery Type -Lithium Iron Phosphate battery with low self-discharge & no memory effect, Battery Charger Output-voltage range-28 - 65 V DC. Battery Charger Weight -approx. 2.5 kg or Less, Test symbol: CE. Battery type Lithium-ion and must be in-built in the Power source and Capacity of battery should be 400 ± 20 Wh. Power source can be charged simultaneously with welding operation. Other Features: in SMAW: Electrode welding, Hot Start, Soft Start, Anti-stick, Dynamic Arc force. Should have welding current ≥ 90 A at 25% duty cycle and ≥ 35 A at 100% duty cycle in Shielded metal arc welding. Rapid charging within 40 minutes or less option must be available. Battery capacity should be 7.5 AH or more. Should have a digital display of all the parameters to be set. Should have welding current range in between 10-130 A OR More for Shielded metal arc welding and in between min 3 to 140 Amps or more for TIG welding. Should have charging current in between 8 A to 12 A or less in normal mode and in between 17 A to 25 A or less in quick mode. Open Circuit Voltage (OCV) in between 80V To 100 V. protection Class IP-23 or better and charger shall have protection Class IP-43S or better. Equipped with system to monitor uniform charging & discharging and ensure uniform voltage & temperature of all battery cell. Provision for display of battery capacity exhausted & over temperature. Should have displayed in case of polarity reversal, supply cable faulty, over / under voltage. Safety feature to switch</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>off the device after 5 minutes of inactivity to conserve the battery and after 3 seconds in the event of under voltage. Battery nominal voltage in between 50 -60 V or equivalent. Battery standard charging time 60 minutes or less and battery rapid charging time ≤ 40 minutes or better. Input voltage of charger in between 220 - 240 V and 50 Hz frequency of charger. Efficiency 85% or better.</p> <p>Scope of supply includes Power Source, Including charger, Ground Cables 16mm² 3m, electrode holder 16mm² 4m, hand shield, slag hammer, wire brush, welding gloves.</p>
117	AC/DC GTAW welding machine	Set	1	<p>Mains voltage: 3 x 400 V, Mains voltage tolerance: +/-15 %, Welding current min.: 3 Amps to Welding current max : 300 Amps and more, Duty cycle [10min/40°C] :100% at 230 Amps or better ,60% at 250 or better, Open-circuit voltage ≥ 95 V, Degree of protection: IP 23 or Better, Dimensions(l x w x h): Length ≤ 750 mm, Width ≤ 320mm Height ≤ 750mm, Weight ≤ 70 kg, Max. primary current ≤ 20 A, Safety symbols : S, CE, Power source efficiency at 300 A / 32.0 V ≥ 80, Machine should have more than 6" color display with plain text display and touchscreen can also be used when wearing gloves and Full screen mode: Display is around 40% or more bigger and Over 30 languages can be selected. Machine should have Automatic Tungsten Electrode Cap shaping and cap overloading function. DC Pulse frequency must be upgradable up to 10,000 hz and AC frequency 40 -250 hz or more. The tacking function should be available for the TIG DC welding process pulsed welding current is present that makes the weld pool run together better when two parts are being tacked and Tacking (TAC) indicator lights up in the status bar on the if a value has been set.</p> <p>Machine should have available Sync Mode for double side tig welding.</p> <p>Ignition timeout: safety cut-out 0.1 -9.9s or better. Machine Should have Triangular, Sinusoidal, Rectangular waveform IN AC TIG Process. Machine should have Reverse Polarity Ignition (RPI) Facility for Quicker, reproducible ignition. Machine should have Automatic gas post-flow (dep. on welding current). Machine should have Cycle Tig Function for Controlled Heat inputs and outstanding weld appearance. Machine should have features to reduced current - Intermediate lowering of the welding current in order to prevent any local overheating of the base material (4-step mode). Machine should be Electrode overload indicator. Machine should be Special 4-Step Mode for Aluminum welding applications. HF ignition should be compulsory for perfect start without touching the tungsten electrode. Ready for Industry 4.0: WLAN to Bluetooth and NFC Automatic gas post-flow, Ethernet and Speed net as standard Must be available. Machine must save Easy Job (1-5) and capable to store ≥ 900 Jobs.</p> <p>Welding Torch Specifications: Multilocked System i.e. easily replace of torch neck and torch hose pack and 360 degree neck rotation and Adjust the essential parameters such as main current, lowering current, or final current, programmed no. or saved job directly on the welding torch with LED can be used to light up the welding area. Torch Length: 4 meters or more.</p> <p>Gas nozzle mounting: Screwable or equivalent</p> <p>Cooling Unit Specifications:</p> <p>Current consumption: ≤ 0.9 A, Max. delivery head: 30 Meter or more, Max. pump pressure: 4 Bar and more, Pump</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				Type : Centrifugal , Pump service life: approx. 9000 hrs or more , Coolant capacity : 5 L or more, Degree of protection : IP23 or Better , Mark of conformity: CE. Scope of supply: Power Source 300 AMPS AC/DC, Water Cooling Unit, Welding Torch Water Cooled 4 Meter, Earth Clamp with 4-meter copper cable, 5-meter Input Cable.
118	Spot welding machine to 15 kVA with all accessories	Set	1	Phase Single Phase & Two Phase, Throat Depth 450mm, Brass Steel Thickness 0.9mm / 0.1mm Max/Min, External Water Supply 3 at Max Temp. 30C. (Ltr/Min), Stainless Steel Thickness 1.8 / 0.25 mm Max/Min, Delayed Action Fuse Rating 20 A, KVA Rating 8 @50% duty cycle (kVA). Input Supply 230 / 440 V, Insulation Class A (Cu.), Max Electrode Stroke 40mm, Nominal Electrode Force 100 kg., Max Available short circuit current 7.5 K. Amps.
119	Gas welding table with firebricks	Set	1	Welding Training Table – - Dimensions-1200 x 1200 x 800 mm - MS Welding Training Table with Top side MS Grating - Side Extraction Provision also available - Electrode Holder, Water Tank and Tool tray with training table with firebricks.
120	Arc welding table with positioner	Set	1	Welding Training Table – - Dimensions-1200 x 1200 x 800 mm - MS Welding Training Table with Top side MS Grating - Side Extraction Provision also available - Electrode Holder, Water Tank and Tool tray with training table with positioner.
121	Oven, electrode drying	Set	1	Input Voltage: Single Phase, 230V AC, 50Hz., 2.25kW. Output Temperature: ambient +5-to-370-degree C. Capacity - 25 KG of Electrodes or better. Overall Size 490(L) x 450(W) x 440(H) MM or equivalent. Thermostat temperature controller with electronic controller and digital temperature indicator.
122	Table for Gas cutting	Nos	1	Dimensions-1200 x 1200 x 800 mm. MS Welding Training Table with Top side MS Grating. Side Extraction Provision also available Electrode Holder, Water Tank and Tool tray with training table
123	Welding Simulator for SMAW / GTAW / GMAW	Set	1	SIMULATOR PARAMETERS: Input supply: Single Phase 230V, Current range – SMAW: 10 – 500A for 4.0mm electrodes, Voltage & Current range – GMAW: 10V - 45V & 20A - 500A (1.0, 1.2 wire diameter), Current range – GTAW: 3A - 500A (2.4, -mm tungsten electrode, 2.0 mm filler rod), Operation: The Simulator must only be blocked by students to perform a virtual training. It must not be used by students to learn theory, Simulated processes: SMAW, GMAW AND GTAW, Arc types GMAW: Different arc types should be simulated including short arc, spray arc, pulsed arc, Process variants GTAW: Should be possible to use DC- and AC, Process variants MMA: Electrode holder has to be physically connected to correct polarity DC+, DC-, Joint configuration: Butt Y-Groove, Butt I-Groove, Pipe to Pipe with Y-Groove, Pipe to Pipe with I-Groove. Pipe to Plate, Corner Joint, Overlap Joint, Customized Workpiece, Welding positions: 1G to 6G , 1F to 6F (Welding positions have to be detected from the simulator (to prevent cheating from trainee), Welding simulation: It should provide red hot molten welding puddle and cooling down

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>simulation, Workpiece positioning: Flexibility to position the workpieces freely on either a height adjustable, tiltable workpiece holder or position it freely on an adequate surface, Simulated workpiece thickness: 3mm, 6mm & 10mm thickness of base material, Visualized workpiece thickness: Visualized workpiece thickness should correspond to simulated workpiece thickness, Torch control – GMAW: 2-step mode, 4-step mode, Special 4-step mode, Parameters for special 4-step mode – GMAW: Should be selectable, Torch control – GTAW: 4-step mode, Parameters for 4-step mode – GTAW: Should be selectable, Cap shaping of tungsten electrode: Automatic cap shaping function for tungsten electrode in GTAW AC process variant, Interaction with torch: The provided torch should be used to interact with virtual elements before, during and after welding, Virtual interaction devices: Additional virtual menu should be available for interaction before, during and after simulation, GMAW Torch: Real welding torch to be used with leading industry standard FSC-connection/Euro connection, GTAW Torch: Real welding torch to be used with leading industry standard FSC-connection, GTAW Torch: Real welding torch to be used with industry standard bayonet connection, Grounding Clamp: Real grounding clamp to be used with industry standard bayonet connection, Electrode holder: Polarity of electrode holder to be connected like real electrode holder with connection to the power supply as per industry standard, Polarity selection: Should be done physically by plugging in the corresponding industry-standard connectors rather than via settings in menu, Torch detection: It should be detected if the correct torch is connected, Torch detection mode: The effect of a false connected torch should be customizable by the trainer per training, Technology: Augmented Reality, Simulation methodology: Green learning with no real arc or real fumes, Weld bead simulation: Continuous arc with weld bead formation, Welding practice: Practice on workpiece – minimum 10-inch-long weld bead, SCREEN: Simulator must have separated Display that can be used both during virtual exercises and for theory learning, Weight: Weight of Welding Simulator should be above 15 Kg but less than 20 Kg without Torches. Workpiece visualization: It should be able to simulate the workpieces from all sides. Including underside and backside, Workpiece interaction: The user must be able to see the workpieces through the visualization device and be able to touch / rotate / adjust the work pieces, also during welding, SMAW Welding practice: During SMAW welding virtual consumable or retracting electrode to be used, GMAW Welding practice: GMAW welding should accommodate short and long stick out, GTAW welding practice: GTAW welding should have skill guidance for work and travel angle, Types of work pieces, Guidance for parameters: Student should be able to use guidance for parameters. Guidance should be provided visually, Parameter settings: The welding parameters should be set on a user interface which looks and behaves like a real welding machine, Start Current: Welding start current should be selectable, Parameter settings during welding: The welding parameters should be changeable during welding without taking off the visualization device, Welding modes: For GMAW a manual welding mode and a synergic mode for standard and pulse should be available, Gas setup: Should support shielding gas selection like Argon, CO2 and various mixtures, Gas settings: Gas post flow should be selectable, Machine Setup: The interaction with the welding simulator should be like with a real welding power source. Ground clamp, real user interface and gas regulator are mandatory, Guidance for skills: Simulator</p>

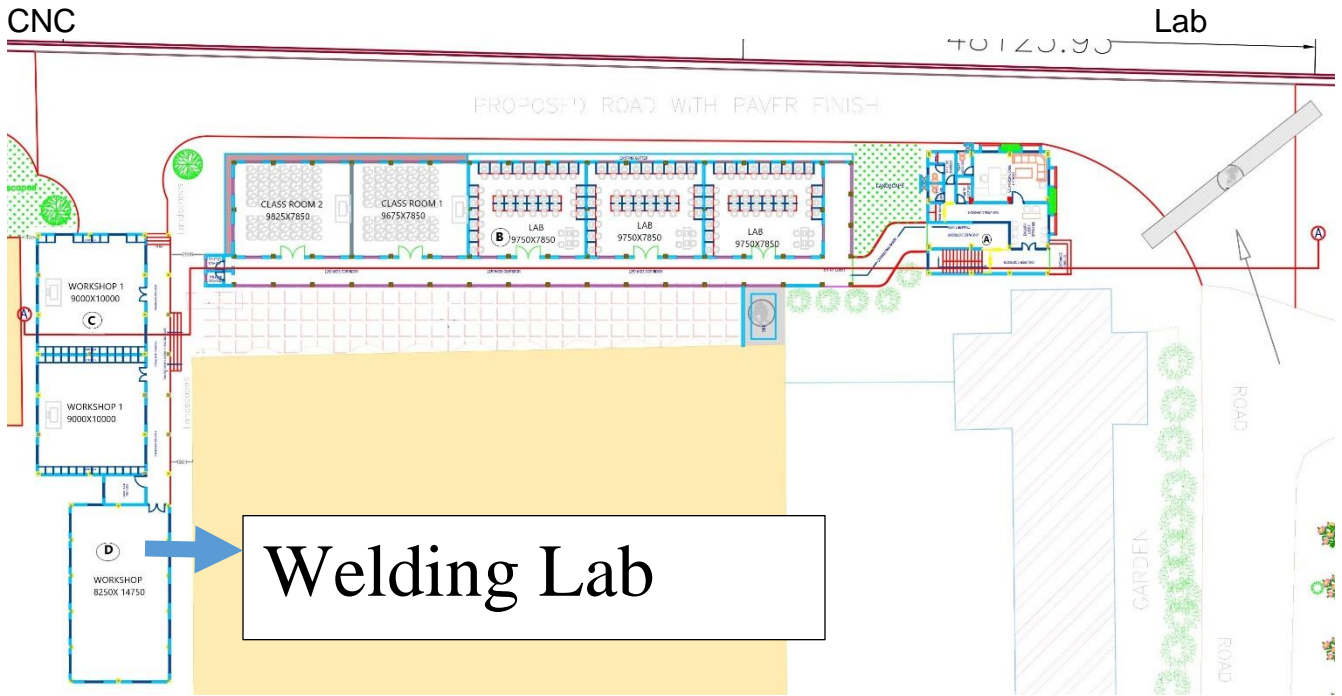
SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>should guide the student by showing him stick out, welding speed, position, and torch angle throughout all processes, Welder view: Welder should be able to see the workpiece and environment through the helmet, Additional information during welding: Welder should be able to see additional information, like WFS, Voltage and Amperage in the helmet during welding, Darkening in welding helmet: The shades of the darkening during welding should be adjustable, Resolution of Augmented-/Virtual Reality Visualization device: Resolution of at least 4320 x 2160 px mandatory, Weight of Augmented-/Virtual Reality Visualization device: Center of gravity should be in the middle of the head. Not back-/front-heavy, Welding Sounds: Adaptive welding sounds with changeable character per eg. welding process, welding material, characteristic, changes of environment, Welding Sound output: Output of adaptive 3D welding sound in the VR/AR visualization device, at external monitor and near input-device, External monitor: An external monitor should be connectable via 4k HDMI output, Guidance and skill analysis of GTAW Torch, GMAW Torch and MMA electrode holder: Guidance and analysis of arc length, work angle, travel angle, speed, and path, Guidance and skill analysis of GTAW filler rod: Guidance and analysis of work angle and travel angle, Evaluation via VR/AR visualization device: Video Playback with visualization in VR/AR visualization device with the option to rotate the viewed workpiece by moving the head, Evaluation on screen: Should be possible using video with interaction, graphs and numerical values (points and/or percentage), Threshold pass / not passed: Trainer should be able to set the threshold of pass / not-passed individually per training, Analysis of weld seam: Should include welding speed, stick-out, CTWD, welding angle, work angle, Macro cut of welded seam: Noto Sans, Weld defects analysis: The weld defect analysis should include of the root has been penetrated, Student access: On Simulator and/or via external devices, Student login: Should be with an identifiable username and a password, set by the student, Trainer access: Trainer should use same software and user-interface as student but has additional settings, Definition of welding task: Should be possible with the system and with an external device, Creation of WPS: Should be possible with the system and with an external device. WPS should be displayed per welding task, Light influences on tracking system: Should be non-sensitive to lighting situations over 1500 lumen directly on tracking device, Tracking system reliability: The area, which is trackable for workpieces and/or torches should be wider than the depicted area in the VR/AR visualization device, Light calibration: No calibration for visualization device or cameras should be necessary, Software: Necessary management software should be accessible without the need for installation, Following activities to be carried out with the system, on external PC, Tablet and Smartphone: Manage students, Manage courses, Manage modules, Manage Theory documents in PDF file formats, Evaluation of individual student progress, Evaluation of course progress, Management of systems, License management, Software should be compatible with common operating systems and mobile accessible, Safety regulation: Simulator should be certified by CE and FCC regulations. Certificate to be enclosed, Welding Software: All software must be supplied with lifetime license, Data security: Inbuilt security system to protect user data and administration. Trainees must set their password by themselves.</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
124	Seam welding Machine(longitudinal) 75 KVA with accessories	Set	1	Longitudinal Seam Welding Machine Input supply: 415±15% (2 Lines of 3 Phase), Nominal rating @ 50% duty cycle 75KVA, Throat depth standard 460mm, Throat gap (min) 300mm, Standard stroke 100mm, Air pressure 3-6Kg/cm ² , Electrode force at 5 kg/cm ² 450KGF, Water supply at 2.5 kg/cm ² 30 Ltr./min, Air consumption/stroke (Max) 1.6+Ltr., Drive motor DC 1HP, Welding capacity mild steel 1.25+1.25mm, stainless steel 1+1mm, Working height 900mm, Dimensions (H x W x L) 1900x900x1050 mm approx.
125	Welding Motor Generator	Set	1	3 Phase,415 volt,50Hz,power 15.5KW,Speed (synchronous)3000 Rpm, Star/Delta type Starting,TP-40 Recommended Switch Fuse Rating, Protection To Machine Single Phasing, Undervoltage (340 V) /Overvoltage (480 V),Thermal, Output Open Circuit Voltage 100V DC, Welding Current Range 35-320 Amp,@ 60% duty cycle 320Amp,@ 100% duty cycle 250 Amp, Welding Electrode Size 2.5, 3.15, 4.0,.5.0 And 6.3,Enclosure Totally Enclosed Type, Ingress Protection Ip44 (excluding Fan Side) Class, Forced Air Type cooling class Insulation, Dimensions (L X W X H) 1065 X 540 X840.
126	Welding booth with forced fume extractor, for welding machines listed above	Set	3	Fume Extraction System which includes as Welding Booths: - Dimensions – 2.0 x 2.0 x 2.0 Meter - Sound Insulating Partitioning MS Welding Booth UV radiation inhibiting coating. - Consisting of various system elements on the modular principle - Panel / Cassette width should be 50 mm thick with Soundproofing Bio Soluble Mineral Wool in it which is DIN 4102 approved and Noncombustible, - MS Pillar should be 60 x 60 x 03 MM - Grouting Base Plate 08 mm with laser cut. - MS Material should be nicely powder coated. - Cassette connected with C Profile with each other - Modular cassette / Panels Curtains for 20 Welding Booths: - - Lateral Sliding Strip Curtain mechanism - Curtain should be as welding protection PVC strips - 33% Overlapping PVC Strip Curtain with 200 mm Strips - Strip should be 2 mm thick - Curtains should be as per EN 1598 standard - PVC Strip Should be UV protected Fume Extractor Total 20 booths required. Each 10 booths connected with each other, and suitable Fume Extractor required for 20 booths. Fume Extraction System which includes as CENTRIFUGAL FAN: - 02 Nos. - Exhaust Fan 10000 CMH for the set of 10 welding booth - Voltage – 3 x 400V x 50 Hz ±10% - Motor Power – 15 kw - Static Pressure – 300 mm WC - Total Pressure – 322 mm WC - FAN rated RPM – 2880 - Air Handling Quality – Dust Load (<10mg/Nm ³) - Current Consumption 20.2 A - RPM 2910 / Min - Transition piece – Rectangular Ø 450 mm Flexible Exhaust Arm: - 20 Nos. - Flexible Exhaust Arm, Length 3 Meter - Arm Dia. 150 mm - Flexible Exhaust Arm a fiber glass hose with a PVC coating and an internal steel wire spiral. - Arm Should be with interior parallelogram, there should not be any outside support - 1 No. Joint Arm Only - Self Supported with internal springs - With 360-degree rotatable swivel joint from mounting point - Exhaust Arm Weight - Approx. 20 Kg Exhaust Hood: - 20 Nos. - Rhombus shaped, for max. capturing area - Hood Size -250 x 300 mm - 3600 Rotatable Hood - Protective mesh on Hood - Manual Damper should be inbuilt with hood.
127	Desktop Computer System with latest configuration	Set	6	Operating System Windows 11 or latest Home Single Language in S mode. Intel® Processor Core™ i7-12700 (up to 4.9 GHz with Intel® Turbo Boost Technology, 25 MB L3 cache, 12 cores, 20 threads). Processor Six (6) Multi-core. 16 GB Memory DDR4-3200 MHz RAM (1 x 8 GB). Two (02) DIMM Memory Slots. Memory Transfer rates up to 3200 MT/s. Hard Drive Description 512GB PCIe® NVMe™ M.2 SSD. Hard Drive (2nd) 1TB 7200RPM SATA HDD.

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>Storage Type: SSD; HDD. With Optical Drive. Cloud Service 25 GB Dropbox storage atleast for 36 months. Intel® UHD Graphics 770. Monitor 23.8 Inch or equivalent FHD Non-touch, FHD camera, UMA, 160W Bronze Power Supply.</p> <p>Expansion Features - I/O Port Location Front 4 Ports Super Speed USB Type-A 5Gbps signaling rate; One (1) headphone/microphone combo. I/O Port Location Rear Ports 4 USB 2.0 Type-A; 1 audio-in; 1 audio-out; 1 RJ-45; Serial Port Adapter. Expansion Slots - 2 M.2; 1 PCIe x16; 1 PCIe x1, Video Connectors 1 VGA; 1 HDMI-out 1.4b. TFT monitor 17 Inch or equivalent with required cables and accessories.</p> <p>Input Devices - Pointing Device 125 USB Black Wired Mouse, Keyboard - 125 USB Black Wired Keyboard.</p> <p>Communications - Network Interface Integrated 10/100/1000 GbE LAN. Wireless - Realtek RTL8822CE 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 5 combo</p> <p>Pre-Installed Software - Microsoft Office Home and Student, Antivirus software (Lifetime)</p> <p>Supply should also include set of LAN/Networking equipment Cables, Routers and connectors.</p>
128	UPS	Nos	6	<p>Compact Design UPS with Load Capacity of 660Watts / 1100VA. Five 6A, 2/3 Pin Indian Power Socket (4 Battery Backed-up & Surge Protected plus 1 Surge Only Protected Outlet). Automatic Voltage Regulator (AVR) with Wide Input Voltage Range 145-290V. 2x7.2Ah Battery provides 30 - 90 min. Back-Up time as per the load."</p>
129	Document Camera / Visualizer	Set	1	<p>Image Sensor - 2 Mega Pixel HD CMOS Active Pixels Digital Image Sensor. Resolution Max - 1600x1200. Support Resolution - 320X240, 640X480, 800X600, 1280X960, 1280X1024, 1600X1200. Light Source - Integrated white LED or ambient light. Capture Size - A4 or equivalent. Image Output - White Black, Grayscale, Color. Image Adjustment Color (R/G/B) and Brightness Adjustment, Gamma Correction, Hue, Exposure, Sharpness Adjustment and Gain Control. With Auto White Balance. Image Process - Zoom, Rotate, Mirror, Rectangle select, Cut, Create PDF, OCR and etc. File Formats - JPEG, BMP, PNG, TIF, J2K, JP2, JPC, RAS, TGA. Power Supply - (5V) USB powered, no External Power Required. Power Consumption - 150mW at maximum data rate, 3.3V. Communication Interface - USB2.0 UVC. Operating System - Windows XP (32 64 bit); Windows Vista (32 64 bit); Windows 7(32 64 bit). System Requirements - 1GHz Pentium, 512MB RAM, USB2.0 port, CD-ROM Drive. Size - Folded Size: 240*80*92MM. Working Size: 240*80*240MM. Supplied with Manual, USB2.0 Cable, Scan mat.</p>
130	Laptop with all latest OS	Set	1	<p>12th Generation Intel® Core™ i7 processor. Windows 11 Home. FHD screen size 39.6 cm (15.6 Inch) diagonal. 16 GB RAM (2x8GB), DDR4-3200 MHz. ROM - 512 GB PCIe® NVMe™ M.2 SSD. Intel® Iris® Xe® Graphics.; 1 headphone/microphone combo.</p> <p>Intel Core i7 Quad-core processor (Intel 12th Generation or latest Core i7 or newer, minimum 2.9 gigahertz) or Intel Core i9 Six-core processor (Intel 11th Generation Core i9 or newer, minimum 2.9 gigahertz) or AMD Ryzen 7 or 9 Hexa-core (AMD 6000 series Ryzen or newer, minimum 2.9 gigahertz). 32 GB RAM or equivalent (DDR4 SDRAM or newer). 500 GB or equivalent SSD. Dedicated Graphics card (minimum 4GB GDDR5 or GDDR6). Monitor 15.6 Inch or better screen (or larger, minimum resolution of 1920 x 1080). IEEE 802.11 wireless capability (ac, g, or n are the most used). HDMI output (integrate or through an adapter). An integrated webcam. 1 SuperSpeed USB Type-C®</p>

SNo.	Name of Goods Or Related Services	UoM	Qty to be Procured	Technical Description, Specifications, and Standards
				<p>10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 2 SuperSpeed USB Type-A 5Gbps signaling rate; 1 HDMI 2.1; 1 AC smart pin. A headset microphone (handy if the class or office hours are delivered via web conferencing tools). Minimum Four-year warranty with support (a warranty that provides on-site services provides better continuity of use than a warranty that requires the device to be shipped for service). 1 GB minimum USB Flash Drive (thumb drive, memory stick, etc.). Minimum 5 hours or better battery life.</p> <p>Operating System: Windows 12 or higher. For security reasons</p> <p>Office Productivity Software: Pre-installed with life-time license Microsoft Office 365, where Word, Excel, and PowerPoint can be run through a browser regardless of the machine's OS. DevOps Tools: Microsoft Visio and Microsoft Project. Antivirus software: Windows Defender comes with Microsoft Windows and provides the necessary protection. Virtualization Software: VMware Workstation Pro 16 license.</p>
131	All-in-One Printer	Set	1	<p>All-in-One Printer with Print-Copy-Scan Features. Output up to 100 PPM or better. Standard Output Capacity (Transparencies) - Up to 75 sheets. Media Type and Capacity, Tray 1 Sheets: 150; envelopes: 10. Paper Handling Input, Standard - 150-sheet input tray. Input Capacity - Up to 150 sheets. Paper Handling Output, Standard - 100-sheet face-down bin. Standard Output Capacity (Envelopes) - Up to 10 envelopes. Maximum Input Capacity (Sheets) - Up to 150 sheets. Display - LED.</p>
132	Auto-CAD Software (License version)	Set	6	<p>License AutoCAD 2024 – with the newest features in AutoCAD® 2024 software, including industry-specific toolsets, new automation, and insights. Revit® BIM software helps architecture, engineering and construction (AEC) teams create high-quality buildings and infrastructure. Use Revit to:</p> <p>Model shapes, structures and systems in 3D with parametric accuracy, precision and ease. Streamline documentation work, with instant revisions to plans, elevations, schedules and sections as projects change. Empower multi-disciplinary teams with specialty toolsets and a unified project environment. Design and annotate 2D geometry and 3D models with solids, surfaces and mesh objects. Automate tasks such as comparing drawings, replacing blocks, counting objects, creating schedules and more. Create a customized workspace to maximize productivity with add-on apps and APIs Design and annotate 2D geometry and 3D models with solids, surfaces and mesh objects. Automate tasks such as comparing drawings, counting objects, adding blocks, creating schedule.</p>

4. Drawings



5. Packaging

- (1) The supplied Goods shall be packed by standard protective measures. Such packing shall be suitable for long distance transportation and well protected against dampness, moisture, shock, rust and rough handling so as to ensure that the Goods will safely arrive at the designated site without any damage due to the above mentioned reasons, and In each package, there shall be one copy each of the detailed packing list and the quality certificate.
- (2) The Supplier shall mark the following on the four adjacent sides of each package with indelible paint in conspicuous English printed words:
 - A. CONSIGNEE
 - B. CONTRACT NO.
 - C. SHIPPING MARK
 - D. CONSIGNEE CODE
 - E. DESTINATION
 - F. NAME OF GOODS AND ITEM NO., CASE NO.
 - G. GROSS/NET WEIGHT (Kg)
 - H. MEASUREMENT (LENGTH x WIDTH x HEIGHT IN CM)
- (3) If any package weighs two (2) tons or more, the Supplier shall mark on two sides of each package in English and with appropriate transportation marks to show the "center of gravity" and "points of slinging" in order to facilitate loading, discharging and handling. According to the characteristics of the Goods and the different requirements in transportation, packages shall be marked legibly by the Supplier with words "Handle with Care", "Right Side Up", "Keep Dry", etc., and with other appropriate marks.

6. Testing and Inspection

1. Supplier shall arrange Pre-delivery inspection by purchaser to their factory as per requirements of Purchaser. Supplier shall also present readiness of the goods at the time of inspection which should be consistent with delivery schedule.
2. Supplier shall submit Quality Assurance Plan (QAP) indicating all tests to be carried out and witnessed by purchaser at different stages of manufacturing and raise inspection call in advance. The inspection of tests shall be in accordance to agreed QAP, which shall include the following information:

Goods: _____

Type of Test: _____

Time or Milestone: _____

Place: _____

Address: _____

Country: _____

Section 7: General Conditions of Contract

Table of Clauses

1.	Definitions	7-2
2.	Contract Documents	7-3
3.	Fraud and Corruption	7-3
4.	Interpretation.....	7-6
5.	Language.....	7-6
6.	Joint Venture.....	7-7
7.	Eligibility.....	7-7
8.	Notices.....	7-7
9.	Governing Law	7-7
10.	Settlement of Disputes	7-7
11.	Scope of Supply	7-7
12.	Delivery.....	7-8
13.	Supplier's Responsibilities.....	7-8
14.	Purchaser's Responsibilities.....	7-8
15.	Contract Price.....	7-8
16.	Terms of Payment	7-8
17.	Taxes and Duties.....	7-8
18.	Performance Security	7-9
19.	Copyright	7-9
20.	Confidential Information.....	7-9
21.	Subcontracting.....	7-10
22.	Specifications and Standards.....	7-10
23.	Packing and Documents.....	7-11
24.	Insurance	7-11
25.	Transportation.....	7-11
26.	Inspections and Tests.....	7-11
27.	Liquidated Damages.....	7-12
28.	Warranty	7-12
29.	Patent Indemnity.....	7-13
30.	Limitation of Liability	7-14
31.	Change in Laws and Regulations.....	7-14
32.	Force Majeure.....	7-14
33.	Change Orders and Contract Amendments	7-15
34.	Extensions of Time	7-15
35.	Termination.....	7-16
36.	Assignment.....	7-17
37.	Respectful Work Environment.....	7-17

1. Definitions

- 1.1 The following words and expressions shall have the meanings hereby assigned to them:
- (a) "Contract" means the Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendixes, and all documents incorporated by reference therein.
 - (b) "Contract Documents" means the documents listed in the Agreement, including any amendments thereto.
 - (c) "Contract Price" means the price payable to the Supplier as specified in the Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
 - (d) "Day" means calendar day.
 - (e) "Delivery" means the transfer of the Goods from the Supplier to the Purchaser in accordance with the terms and conditions set forth in the Contract.
 - (f) "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
 - (g) "Eligible Countries" means the countries and territories eligible as listed in Section 5.
 - (h) "GCC" means the General Conditions of Contract.
 - (i) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
 - (j) "Purchaser's Country" is the country specified in the Special Conditions of Contract (SCC).
 - (k) "Purchaser" means the entity purchasing the Goods and Related Services, as specified in the SCC.
 - (l) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other similar obligations of the Supplier under the Contract.
 - (m) "SCC" means the Special Conditions of Contract.
 - (n) "Subcontractor" means any natural person, private or government entity, or a combination of the above, including its legal successors or permitted assigns, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
 - (o) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as

such in the Agreement, and includes the legal successors or permitted assigns of the Supplier.

(p) "ADB" is the Asian Development Bank.

(q) "The Site," where applicable, means the place named in the SCC.

2. Contract Documents

2.1 Subject to the order of precedence set forth in the Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory.

3. Fraud and Corruption

3.1 If the Purchaser determines, based on reasonable evidence, that the Supplier has engaged in corrupt, fraudulent, collusive or coercive practices, or other integrity violations, including the failure to disclose any required information which constitutes a fraudulent practice, in competing for or in executing the Contract, then the Purchaser may, after giving 14 days' notice to the Supplier, terminate the Contract and expel him from the Site, and the provisions of Clause 35 shall apply as if such termination had been made under Sub-Clause 35.1(a) (iii) [Termination].

3.2 ADB requires Borrowers (including beneficiaries of ADB-financed activity) and their personnel, as well as firms and individuals participating in an ADB-financed activity, including but not limited to, Bidders, Suppliers, and Contractors, agents, subcontractors, subconsultants, service providers, subsuppliers, manufacturers (including their respective officers, directors, employees and personnel) under ADB-financed contracts to observe the highest standard of ethics during the procurement and execution of such contracts in accordance with ADB's Anticorruption Policy (1998, as amended from time to time). In pursuance of this policy, ADB

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

(ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(iv) "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;

(v) "abuse" means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;

- (vi) "conflict of interest" means any situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations; and
 - (vii) "integrity violation" is any act, as defined under ADB's Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB's Anticorruption Policy, including (i) to (vi) above and the following: obstructive practice, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy, including failure to adhere to the highest ethical standard.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award or any of its officers, directors, employees, personnel, subconsultants, subcontractors, service providers, suppliers or manufacturers has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
 - (c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of ADB-financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation, including by failing to inform ADB in a timely manner at the time they knew of the integrity violations;
 - (d) will impose remedial actions on a firm or an individual, at any time, in accordance with ADB's Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate¹ in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and
 - (e) will have the right to require that a provision be included in bidding documents and in contracts financed, administered, or supported by ADB, requiring Bidders, suppliers and contractors, consultants, manufacturers, service providers and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, to permit ADB or its representative to inspect the site and their assets, accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed

¹ Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

by ADB.

- 3.3 All Bidders, consultants, contractors, suppliers, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities and their respective officers, directors, employees and personnel, are obliged to cooperate fully in any investigation when requested by ADB to do so. As determined on a case by case basis by ADB, such cooperation includes, but is not limited to, the following:
- (a) being available to be interviewed and replying fully and truthfully to all questions asked;
 - (b) providing ADB with any items requested that are within the party's control including, but not limited to, documents and other physical objects;
 - (c) upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;
 - (d) cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB's Information and Communication Technology (ICT) resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);
 - (e) cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and
 - (f) preserving and protecting confidentiality of all information discussed with, and as required by, ADB.
- 3.4 All Bidders, consultants, contractors and suppliers shall require their officers, directors, employees, personnel, agents to ensure that, in its contracts with its subconsultants, Subcontractors and other third parties engaged or involved in ADB-related activities, such subconsultants, Subcontractors and other third parties similarly are obliged to cooperate fully in any investigation when requested by ADB to do so.
- 3.5 The Supplier shall permit ADB or its representative to inspect the Supplier's site, assets, accounts and records and other documents relating to the bid submission and contract performance of the Supplier and to have them audited by auditors appointed by ADB, if so required by ADB.
- 3.6 The Supplier undertakes that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the bid, have been given or received in connection with the procurement

process or in the contract execution.²

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

- (a) The meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.
- (b) EXW, CIF, CIP, and other similar terms, shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce at the date of the Invitation for Bids or as specified in the SCC.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations, and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

- (a) Subject to GCC Subclause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity, or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the SCC. Supporting

² The undertaking also applies during the period of performance of the contract.

documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the SCC, in which case, for purposes of interpretation of the Contract, this translation shall govern.

5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.

6. Joint Venture 6.1 If the Supplier is a Joint Venture all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the Joint Venture. The composition or the constitution of the Joint Venture shall not be altered without the prior consent of the Purchaser.

7. Eligibility 7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.

7.2 All Goods and Related Services to be supplied under the Contract and financed by ADB shall have their origin in Eligible Countries. For the purpose of this clause, "country of origin" means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its imported components.

8. Notices 8.1 Any Notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term "in writing" means communicated in written form with proof of receipt.

8.2 A Notice shall be effective when delivered or on the Notice's effective date, whichever is later.

9. Governing Law 9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser's country, unless otherwise specified in the SCC.

10. Settlement of Disputes 10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

10.2 If the parties fail to resolve such a dispute or difference by mutual consultation within 28 days from the commencement of such consultation, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the SCC.

11. Scope of Supply 11.1 Subject to the SCC, the Goods and Related Services to be supplied shall be as specified in Section 6 (Schedule of Supply).

- 11.2 Unless otherwise stipulated in the Contract, the Scope of Supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Delivery and Completion of the Goods and Related Services as if such items were expressly mentioned in the Contract.
- 12. Delivery**
- 12.1 Subject to GCC Subclause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Section 6 (Schedule of Supply). The details of shipping and other documents to be furnished by the Supplier are specified in the SCC.
- 13. Supplier's Responsibilities**
- 13.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 11, and the Delivery and Completion Schedule, as per GCC Clause 12.
- 14. Purchaser's Responsibilities**
- 14.1 Whenever the supply of Goods and Related Services requires that the Supplier obtain permits, approvals, and import and other licenses from local public authorities, the Purchaser shall, if so required by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.
- 14.2 The Purchaser shall pay all costs involved in the performance of its responsibilities, in accordance with GCC Subclause 14.1.
- 15. Contract Price**
- 15.1 The Contract Price shall be as specified in the Agreement subject to any additions and adjustments thereto, or deductions therefrom, as may be made pursuant to the Contract.
- 15.2 Prices charged by the Supplier for the Goods delivered and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the SCC.
- 16. Terms of Payment**
- 16.1 The Contract Price shall be paid as specified in the SCC.
- 16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 12 and upon fulfillment of all the obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Purchaser, no later than 60 days after submission of an invoice or request for payment by the Supplier, and the Purchaser has accepted it.
- 16.4 The currency or currencies in which payments shall be made to the Supplier under this Contract shall be specified in the SCC.
- 17. Taxes and Duties**
- 17.1 For goods supplied from outside the Purchaser's country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's country.

- 17.2 For goods supplied from within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
- 17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- 18. Performance Security**
- 18.1 The Supplier shall, within 28 days of the notification of Contract award, provide a Performance Security for the due performance of the Contract in the amounts and currencies specified in the SCC.
- 18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 18.3 The Performance Security shall be denominated in the currencies of the Contract, or in a freely convertible currency acceptable to the Purchaser, and shall be in one of the forms stipulated by the Purchaser in the SCC, or in another form acceptable to the Purchaser.
- 18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than 28 days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.
- 19. Copyright**
- 19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 20. Confidential Information**
- 20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.
- 20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the Contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the design, procurement, or other work and services required for the performance of the

Contract.

20.3 The obligation of a party under GCC Subclauses 20.1 and 20.2 above, however, shall not apply to information that

- (a) the Purchaser or Supplier needs to share with ADB or other institutions participating in the financing of the Contract;
- (b) now or hereafter enters the public domain through no fault of that party;
- (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
- (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. Subcontracting

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the Bid. Subcontracting shall in no event relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and Standards

22.1 Technical Specifications and Drawings

- (a) The Supplier shall ensure that the Goods and Related Services comply with the technical specifications and other provisions of the Contract.
- (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
- (c) The Goods and Related Services supplied under this Contract shall conform to the standards mentioned in Section 6 (Schedule of Supply) and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the country of origin of the Goods.

22.2 Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Section 6 (Schedule of Supply). During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

23. Packing and Documents

23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination of the Goods and the absence of heavy handling facilities at all points in transit.

23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the SCC, and in any other instructions ordered by the Purchaser.

24. Insurance

24.1 Unless otherwise specified in the SCC, the Goods supplied under the Contract shall be fully insured, in a freely convertible currency from an eligible country, against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the SCC.

25. Transportation

25.1 Unless otherwise specified in the SCC, obligations for transportation of the Goods shall be in accordance with the Incoterms specified in Section 6 (Schedule of Supply).

26. Inspections and Tests

26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in Section 6 (Schedule of Supply).

26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the final destination of the Goods, or in another place in the Purchaser's country as specified in the SCC. Subject to GCC Subclause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.

26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Subclause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the

place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.

- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications, codes, and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Subclause 26.4.
- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Subclause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.

27. Liquidated Damages

- 27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC of the Contract Price for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 28.2 Subject to GCC Subclause 22.1, the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.

- 28.3 Unless otherwise specified in the SCC, the warranty shall remain valid for 12 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for 18 months after the date of shipment or loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give Notice to the Supplier, stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such Notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. Patent Indemnity

- 29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Subclause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of
- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
 - (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

- 29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Subclause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

- 29.3 If the Supplier fails to notify the Purchaser within 28 days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- 29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.
- 29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30. Limitation of Liability

- 30.1 Except in cases of gross negligence or willful misconduct,
- (a) neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort, or otherwise, shall not exceed the amount specified in the SCC, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Supplier to indemnify the Purchaser with respect to patent infringement.

31. Change in Laws and Regulations

- 31.1 Unless otherwise specified in the Contract, if after the date of the Invitation for Bids, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

32. Force Majeure

- 32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other

failure to perform its obligations under the Contract is the result of an event of Force Majeure.

32.2 For purposes of this clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

33. Change Orders and Contract Amendments

33.1 The Purchaser may at any time order the Supplier through Notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery and Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within 28 days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

34. Extensions of Time

34.1 If at any time during performance of the Contract, the Supplier or its Subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 12, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which

case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 27, unless an extension of time is agreed upon, pursuant to GCC Subclause 34.1.

35. Termination

35.1 Termination for Default

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by Notice of default sent to the Supplier, may terminate the Contract in whole or in part,
- (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34; or
 - (ii) if the Supplier fails to perform any other obligation under the Contract.
 - (iii) if the Supplier, in the judgment of the Purchaser has engaged in integrity violations, as defined in GCC Clause 3, in competing for or in executing the Contract.
- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency

The Purchaser may at any time terminate the Contract by giving Notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

35.3 Termination for Convenience

- (a) The Purchaser, by Notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The Notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

- (b) The Goods that are complete and ready for shipment within 28 days after the Supplier's receipt of the Notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect
- (i) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

36. Assignment

36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

37. Respectful Work Environment

37.1 The Contractor shall ensure that its employees and Subcontractors observe the highest ethical standards and refrain from any form of bullying, discrimination, misconduct and harassment, including sexual harassment and shall, at all times, behave in a manner that creates an environment free of unethical behavior, bullying, misconduct and harassment, including sexual harassment. The Contractor shall take appropriate action against any employees or Subcontractors, including suspension or termination of employment or sub-contract, if any form of unethical or inappropriate behavior is identified.

37.2 The Contractor shall conduct training programs for its employees and Subcontractors to raise awareness on and prevent any form of bullying, discrimination, misconduct, and harassment including sexual harassment, and to promote a respectful work environment. The Contractor shall keep an up to date record of its employees and subcontractors who have attended and completed such training programs and provide such records to the Purchaser at their first written request.

Section 8: Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1(j)	The Purchaser's country is: India
GCC 1.1(k)	The Purchaser is Mission Director, Assam Skill Development Mission(ASDM) 3rd floor, DECT Complex, A.K. Azad road, Rehabari, Guwahati-781008, Assam, India Email Address- asup.assam@gmail.com
GCC 1.1 (q)	The Site is: Interim campus, Industrial Training Institute, Birubari Guwahati
GCC 4.2 (b)	The version of Incoterms shall be: Year 2020
GCC 5.1	The language shall be: English The language for translation of supporting documents and printed literature is: English
GCC 8.1	For notices , the Purchaser's address shall be: Attention: Shri Ankur Jain, Mission Director, Assam Skill Development Mission(ASDM) 3rd floor, DECT Complex, A.K. Azad road, Rehabari, Guwahati-781008, Assam, India E-mail address: asup.ceo@gmail.com
GCC 9.1	The governing law shall be: India
GCC 10.2	The formal mechanism for the resolution of disputes shall be : For a contract with a Foreign Supplier: In the case of a dispute between the Purchaser and the Supplier, the dispute shall be settled by international arbitration conducted in accordance with the Arbitration Rules of the Singapore International Arbitration Centre (SIAC). The arbitration procedure shall be administered by the Singapore International Arbitration Centre (SIAC). Place of arbitration: The place of arbitration shall be: the place of the institution administering the arbitration. For a contract with a Local Supplier: In the case of a dispute between the Purchaser and the Supplier, the dispute shall be settled by arbitration in accordance with the provisions of the local arbitration procedures in the Purchaser's country. Place of arbitration: Guwahati

GCC 11.1	The Scope of Supply shall be defined in: Section 6 (Schedule of Supply)
GCC 12.1	<p>Details of shipping and documents to be furnished by the Supplier shall be:</p> <p>For Goods supplied from abroad as per Incoterms CIF or CIP: Upon shipment, the Supplier shall notify the Purchaser and the Insurance Company by email the full details of the shipment, including Contract number, description of Goods, quantity, the vessel, the bill of lading number and date, port of loading, date of shipment, port of discharge, etc. The Supplier shall send the following documents to the Purchaser, with a copy to the Insurance Company:</p> <ul style="list-style-type: none"> (a) 03 copies of the Supplier's invoice showing the description of the Goods, quantity, unit price, and total amount; (b) original and 02 copies of the negotiable, clean, on-board bill of lading marked "freight prepaid" and 02 copies of nonnegotiable bill of lading; (c) 02copies of the packing list identifying contents of each package; (d) insurance certificate; (e) Manufacturer's or Supplier's warranty certificate; (f) inspection certificate, issued by the nominated inspection agency, and the Supplier's factory inspection report; and (g) certificate of origin. The Purchaser shall receive the above documents at least 1 week before arrival of the Goods at the port or place of arrival and, if not received, the Supplier will be responsible for any consequent expenses. <p>For Goods from within the Purchaser's country as per Incoterm EXW: Upon delivery of the Goods to the transporter, the Supplier shall notify the Purchaser and send the following documents to the Purchaser:</p> <ul style="list-style-type: none"> (a) copies of the Supplier's invoice showing the description of the Goods, quantity, unit price, and total amount; (b) delivery note, railway receipt, or truck receipt; (c) Manufacturer's or Supplier's warranty certificate; (d) inspection certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and (e) Certificate of origin. <p>The Purchaser shall receive the above documents before the arrival of the Goods and, if not Received, the Supplier will be responsible for any consequent expenses.</p>
GCC 15.2	The price adjustment shall be: Not applicable

GCC 16.1	<p>Payment of the Contract Price shall be made in the following manner: For Goods and Related Services supplied from within the Purchaser's country:</p> <p>(a) Advance Payment: 10% of the Contract Price within 28 days of signing of the Contract.</p> <p>Payment shall be made provided the Supplier presents a request for payment accompanied by an Advance Payment Security in the form of a bank guarantee for an amount equal to the amount of the payment, and that shall be valid until the Goods are delivered. The security shall be in the form as specified in Section 9 (Contract Forms).</p> <p>(b) On Completion of Delivery, Installation, Commissioning and Successful completion of 1st training on site after commissioning: The Purchaser shall pay the Supplier 75% of the Contract Price of the Goods upon submission of documents specified in SCC Clause 12.1.</p> <p>(c) 5% of the Contract Price of Goods received shall be paid after completion of successful maintenance for 1 year after receipt of the Goods</p> <p>(d) 5% of the Contract Price of Goods received shall be paid after completion of successful maintenance for 2nd year after receipt of the Goods</p> <p>(e) 5% of the Contract Price of Goods received shall be paid after completion of successful maintenance for 3rd year after receipt of the Goods</p>
GCC 16.4	The currencies for payments shall be: Same as currency of the bid
GCC 18.1	The Supplier shall provide a Performance Security of five percent (5%) of the Contract Price. The Performance Security shall be denominated in the following currency: Indian Rupees
GCC 18.3	The forms of acceptable Performance Security are: bank guarantee issued by a reputable bank located in the Purchaser's country or abroad, acceptable to the Purchaser, in the format included in Section 9 (Contract Forms)
GCC 18.4	<p>50% of Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than 28 days after completion of the Supplier's performance obligations (except for warranty and maintenance obligations) under the Contract.</p> <p>Remaining 50% of Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than 28 days following the date of completion of the Supplier's performance obligations under warranty and maintenance.</p>

GCC 23.2	<p>The packing, marking, and documentation within and outside the packages shall be:</p> <p>Packing: (1) The supplied Goods shall be packed by standard protective measures. Such packing shall be suitable for long distance transportation and well protected against dampness, moisture, shock, rust and rough handling so as to ensure that the Goods will safely arrive at the designated site without any damage due to the above mentioned reasons, and</p> <p>(2) In each package, there shall be one copy each of the detailed packing list and the quality certificate.</p> <p>Marking:(1) The Supplier shall mark the following on the four adjacent sides of each package with indelible paint in conspicuous English printed words:</p> <p>A. CONSIGNEE B. CONTRACT NO. C. SHIPPING MARK D. CONSIGNEE CODE E. DESTINATION F. NAME OF GOODS AND ITEM NO., CASE NO. G. GROSS/NET WEIGHT (Kg) H. MEASUREMENT (LENGTH x WIDTH x HEIGHT IN CM)</p> <p>(2) If any package weighs two (2) tons or more, the Supplier shall mark on two sides of each package in English and with appropriate transportation marks to show the "center of gravity" and "points of slinging" in order to facilitate loading, discharging and handling. According to the characteristics of the Goods and the different requirements in transportation, packages shall be marked legibly by the Supplier with words "Handle with Care", "Right Side Up", "Keep Dry", etc., and with other appropriate marks.</p>
GCC 24.1	<p>The insurance coverage shall be in accordance with:</p> <p>Pursuant to GCC, Subclause 24.1, the Supplier must insure the Goods in an amount equal to 110% of the CIF, CIP or EXW price of the Goods from "Warehouse" to "Warehouse" on "All Risks" basis, including War Risks and Strikes.</p>
GCC 25.1	<p>Obligations for transportation of the Goods shall be in accordance with:</p> <p>In accordance with Incoterms</p>

GCC 26.2	<p>Tests and Inspections specified in Section 6 (Schedule of Supply), shall be carried out at the following times or milestones, and places:</p> <ol style="list-style-type: none"> 1. Supplier shall arrange Pre-delivery inspection by purchaser to their factory as per requirements of Purchaser. Supplier shall also present readiness of the goods at the time of inspection which should be consistent with delivery schedule. 2. Supplier shall submit Quality Assurance Plan (QAP) indicating all tests to be carried out and witnessed by purchaser at different stages of manufacturing and raise inspection call in advance. The inspection of tests shall be in accordance to agreed QAP, which shall include the following information: Goods: _____ Type of Test: _____ Time or Milestone: _____ Place: _____ Address: _____ Country: _____ 3. Testing and Inspection shall also be carried out at Interim campus, Industrial Training Institute, Birubari Guwahati
GCC 27.1	The applicable rate for liquidated damages for delay shall be: 0.5% per week or part thereof
GCC 27.1	The maximum amount of liquidated damages shall be: 10% of the contract price
GCC 28.3	<p>The period of validity of the Warranty shall be: 3 Years.</p> <p>The place of final destination shall be: Interim campus, Industrial Training Institute, Birubari Guwahati.</p>
GCC 28.5	The Supplier shall correct any defects covered by the Warranty within 5 working days of being notified by the Purchaser of the occurrence of such defects. _
GCC 30.1 (b)	The amount of aggregate liability shall be: 100% of the Contract price
GCC 33.1	<p>Add following after (d) :</p> <p>(e) the increase or decrease in the quantity of Goods and Related Services by 25% percentages.</p>

Section 9: Contract Forms

Table of Forms

Notice of Intention for Award of Contract	9-4
Notification of Award	9-3
Contract Agreement	9-4
Performance Security	9-6
Advance Payment Security	9-7

Notice of Intention for Award of Contract

[on letterhead paper of the Purchaser]

[date of notification]

To: [name of the Bidder]
 Attention: [insert name of the Bidder's authorized representative]
 Address: [insert address of the Bidder's authorized representative]
 Telephone/Fax numbers: [insert telephone/fax numbers of the Bidder's authorized representative]
 E-mail Address: [insert e-mail address of the Bidder's authorized representative]

This is to notify you of our intention to award the contract [insert name of the contract and identification number, as given in the Bid Data Sheet]. You have [insert number of days as specified in ITB 42.1 of the BDS] days from the date of this notification to (i) request for a debriefing in relation to the evaluation of your Bid; and/or (ii) submit a bidding-related complaint in relation to the intention for award of contract, in accordance with the procedures specified in ITB 48.1.

The summary of the evaluation are as follows:

1. List of Bidders

Name of Bidder	Bid Price as Read Out at Opening	Evaluated Bid Price

2. Reason/s Why Your Bid Was Unsuccessful

.....

3. The Successful Bidder

Name of Bidder:	
Address:	
Contract Price:	
Duration of Contract:	
Scope of the Contract Awarded:	
Amount Performance Security Required:	

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Notification of Award

[on letterhead of the Purchaser]

Letter of Acceptance

[date]

To: [name and address of the supplier]

Subject: Contract No. [please specify]

This is to notify you that your Bid dated [date] for execution of the [name of the contract and identification number, as given in the Bid Data Sheet] for the Accepted Contract Amount of the equivalent of [amount in words and figures and name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract and any additional security required as a result of the evaluation of your bid, using for that purpose the Performance Security Form included in Section 9 (Contract Forms) of the Bidding Document.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made on the *[insert date]* day of *[insert month]*, *[insert year]*, between *[insert complete name of the purchaser]* of *[insert complete address of the Purchaser]* (hereinafter "the Purchaser"), of the one part, and *[insert complete name of the supplier]* of *[insert complete address of the supplier]* (hereinafter "the Supplier"), of the other part:

WHEREAS the Purchaser invited Bids for certain Goods and Related Services, viz., *[insert brief description of the goods and related services]* and has accepted a Bid by the Supplier for the supply of those Goods and Related Services in the sum of *[insert currency or currencies and amount of contract price in words and figures]* (hereinafter "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) Letter of Acceptance;
 - (b) Bid Submission Sheet and the Price Schedules submitted by the Supplier;
 - (c) Addenda Nos. *[insert addenda numbers if any]*¹
 - (d) Special Conditions of Contract;
 - (e) List of Eligible Countries that was specified in Section 5 of the Bidding Document;
 - (f) General Conditions of Contract;
 - (g) Schedule of Supply; and
 - (h) any other documents shall be added here.

This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.

3. In consideration of the payments to be made by the Purchaser to the Supplier as indicated in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Related Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Related Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[indicated name of country]* on the day, month, and year indicated above.

¹ Information contained in the addenda and or addendum should preferably be included in the contract documents to avoid potential ambiguities during contract implementation. If however, unavoidable priority should be decided depending on the nature of information provided in the addenda/addendum.

Signed by *[insert authorized signature for the Purchaser]* (for the Purchaser)

Signed by *[insert authorized signature for the supplier]* (for the Supplier)

Advance Payment Security

[insert complete name and number of contract]

To: [insert complete name of the Purchaser]

In accordance with the payment provision included in the Contract, in relation to advance payments, [insert complete name of the supplier] (hereinafter called "the Supplier") shall deposit with the Purchaser a security consisting of [indicate type of security], to guarantee its proper and faithful performance of the obligations imposed by said Clause of the Contract, in the amount of [insert currency and amount of guarantee in words and figures].

We, the undersigned [insert complete name of the guarantor], legally domiciled in [insert full address of the guarantor] (hereinafter "the Guarantor"), as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligor and not as surety merely, the payment to the Purchaser on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding [insert currency and amount of guarantee in words and figures].

This security shall remain valid and in full effect from the date of the advance payment being received by the Supplier under the Contract until [insert date (as day, month, year)].

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revisions, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.¹

Name: [insert complete name of person signing the Security]

In the capacity of [insert legal capacity of person signing the Security]

Signed: [insert signature of person whose name and capacity are shown above]

Duly authorized to sign the security for and on behalf of [insert seal (where appropriate) and complete name of the guarantor]

Date: [insert date of signing]

-- Note to Bidder --

If the bank issuing advance payment security is located outside the Purchaser's country, it shall be counter-guaranteed or encashable by a bank in the Purchaser's country.

¹ Or the purchaser may use "Uniform Rules for Demand Guarantees (URDG), ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded" as appropriate.