



Government of Goa
DIRECTORATE OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
 Shramashakti Bhavan, 3rd Floor, Patto, Panaji-Goa, 403001
 Tel.: (0832)2437059/60; Fax: (0832)2437060.

Website: www.dsde.goa.gov.in

Email: dir-sdct.goa@nic.in

Ref: . 14/BGITI/STR/Welder/2023-24

Date 25.09.2024

BRIEF TENDER NOTICE
 (e-TENDERING MODE ONLY)

The Director, Directorate of Skill Development and Entrepreneurship, Panaji-Goa, hereby invites bids/tenders on behalf of the Governor of Goa from eligible bidders through e-Tendering mode for "Procurement of Augmented Reality Welding Simulator for Welder Trade at Farmagudi Government ITI":-

Sr. No.	e-Tender No.	Name of Work	Estimated Cost (Rs.)	EMD (Rs.)	Tender Form Fee (Non Refundable) (Rs.)	eTender Processing Fee (Non Refundable) (Rs.)
1	DSDE/Projects/e-Tender/ 2024-25/002	"Procurement of Augmented Reality Welding Simulator for Welder Trade at Farmagudi Government ITI"	33,63,000.00/-	84,000.00/-	6,000/-	6,000/-

The Schedule of the e-Tender process and payment details are as below:-

Activity	Time lines
The last date of online submission of Tender	16/10/2024 upto 15:00 hrs.
The date and time of Opening of online Tender	18/10/2024 at 12:00 hrs as mentioned in e-Tender documents
Payment Details	Mode of Payment : ePayment Only
Tender Form Fee (Non Refundable)	<i>Mode of Payment towards Tender Document Fee(TDF), e-Tender Processing Fee(TPF) & Earnest Money Deposit(EMD) to be paid online through e-Payment mode via : (i) National Electronic Fund Transfer (NEFT)/Real-Time Gross Settlement (RTGS).Tenderer requires download pre-printed Challan towards credit of ITG available on e-tender website and make its payment through any of their Bank. (ii) Net Banking: Payment can be made through the Internet Banking of Any Bank.</i>
eTender Processing Fee (Non Refundable)	
Earnest Money Deposit (EMD) As stated above.	
	<i>Any Payments made through NEFT/RTGS will take 24 hours for its reconciliation. Hence the payments through NEFT/RTGS should be made at least TWO BANK WORKING DAYS in advance before any due date and upload the scanned copy of challans in the e-Tender website as a token of payment.</i>

For more details, please visit our website www.dsde.goa.gov.in and for participation in e-Tender please visit our e-Tender website <https://www.eprocure.goa.gov.in>

-Sd-
 Director of Skill Development and Entrepreneurship
 Panaji-Goa



Government of Goa
DIRECTORATE OF SKILL DEVELOPMENT & ENTREPRENEURSHIP

Shramashakti Bhavan, 3rd Floor, Patto-Plaza, Panaji, Goa 403 001

Ph:(0832)2437059/60 | Fax:2437060

Website: www.dsde.gov.goa.in

Email: procurement-sdct.goa@nic.in

Ref No: 14/BGITI/STR/Welder/2023-24

Date: 25/09/2024

Tender Form & Specification of the Tender Item

TENDER NO. :- DSDE/Projects/e-Tender/2024-25/002

NAME OF THE WORK - Procurement of Augmented Reality Welding Simulator for Welder Trade at Farmagudi Government ITI.

ESTIMATED COST- Rs. 33,63,000/-

EMD - Rs. 84,000/-

TENDER SHALL REMAIN VALID TILL - 180 days

DELIVERY PERIOD - 45 days from the date of issue of Supply Order

IMPORTANT : 1) Prescribed Tender Form should be submitted **ONLINE** to the Directorate of Skill Development & Entrepreneurship, Shrama Shakti Bhavan, 3rd Floor, Patto Panaji – Goa digitally signed by the tenderer, otherwise offer will be rejected.

2) Detailed Technical specifications are given below:-

Sr. No.	Description/Specification of Items	Qty.	Unit
	Refer Annexure –I and II		

(Signature of Tenderer)

TENDER SCHEDULE & IMPORTANT DATES

Please Note: All bid related activities (Process) like Tender Document Download, Bid Preparation, bid submission and submission of other documents will be governed by the time schedule given under Key Dates below:

Activity	Time Schedule
Online submission of Tender Document	25/09/2024 to 16/10/2024 up to 15:00 hrs
Pre-bid meeting	07.10.2024 at 12:00 hrs
Online opening of Technical bid	18.10.2024 at 12:00 hrs
Online opening of Financial bid	Will be communicated later

INSTRUCTIONS TO BIDDERS

1. GENERAL INSTRUCTIONS:-

- 1.1 To view- Tender Notice, Detailed Time Schedule, Tender Document for this Tender and subsequently purchase the Tender Document and its supporting documents, kindly visit following e-Tendering website of Government of Goa: <https://eprocure.goa.gov.in>
- 1.2 If any assistance is required regarding e-Tendering (registration /upload / download) please contact e-procure help desk on following numbers: 9834889836, 7972854213, 7822039673, 7972871944, e-tender.goa@gov.in
- 1.3 Bidders to quote for items of leading brand with ISO certification, wherever applicable.

2 PURCHASE AND DOWNLOADING OF TENDER FORM:-

- 2.1 The tender document is uploaded / released on Government of Goa, e-tendering website <https://eprocure.goa.gov.in>. Tender document and supporting documents have to be purchased on-line and downloaded from following link of Directorate of Skill Development & Entrepreneurship on e-Tendering website of Government of Goa, <https://eprocure.goa.gov.in> by making online payments for Tender document and tender processing fee.

Mode of Payment towards Tender Document Fee(TDF), e-Tender Processing Fee(TPF) & Earnest Money Deposit(EMD) to be paid online through e-Payment mode via : (i) National Electronic Fund Transfer (NEFT) / Real-Time Gross Settlement (RTGS). Tenderer requires download pre-printed Challan towards credit of ITG available on e-tender website and make its payment through any of their Bank (ii). Net Banking: Payment can be made through the Internet Banking of Any Bank. Any Payments made through NEFT/RTGS will take 24 hours for its reconciliation. Hence the payments through NEFT/RTGS should be made at least TWO BANK WORKING DAYS in advance before any due date and upload the scanned copy of challans in the e-Tender website as a token of payment.

- 2.2 Tender forms will not be sold / issued manually from Directorate of Skill Development & Entrepreneurship, Shram Shakti Bhavan, 3rd Floor, Patta Panaji – Goa.
- 2.3 Only those Tender offers shall be accepted for evaluation for which non-refundable Tender document Fee (non-refundable), Tender processing fee (non-refundable) and EMD (refundable) as mentioned in the tender document is received online on or before scheduled date given in TIME SCHEDULE AND IMPORTANT DATES of the tender.

3. SUBMISSION OF BIDS

- 3.1 Both the Bids (Technical and Financial) shall have to be submitted online **only**. Bids not submitted online will not be entertained.
- 3.2 **Bidder shall strictly quote for all the items with specified brand/ make OR equivalent brand as evaluation shall be done for Total Value of the bid and not item wise for award of contract.**
1. **Manufacturer Authorization:** Wherever Authorised Distributors/service providers are submitting the bid, Authorisation Form /Certificate with OEM/Original Service Provider details such as name, designation, address, e-mail Id Phone no: and the tender number are required to be furnished along with the bid.
- 3.3 Bidders shall quote for the entire scope of contract on an “overall responsibility” basis such that the total bid price covers Bidder’s all obligations mentioned in the bidding documents in respect of providing the services.
- 3.4 The bidder should quote all the items as part of the BoQ.
- 3.5 The bidder should supply all the items as part of the BoQ and should be as per the specification mentioned in the tender.
- 3.6 Offer should be inclusive of all taxes, F.O.R. Destination (GST, packing & forwarding, freight upto destination, loading unloading, insurance charges & other charges, if any).

3.7 Technical Bid shall contain following documents (in the form of PDF files / Scanned images). These documents need to be digitally signed by individual tenderer's digital signature and uploaded during online bid preparation stage: -

- 1) No Deviation Certificate in detail in the prescribed proforma should be submitted for each item separately, wherever there is no deviation.
- 2) The Bidder should furnish **document** to support that he has the financial capacity to perform the contract. For this the bidder should have the minimum turnover of Two times the estimated amount of this e-Tender average last three Financial years(i.e. FY 2020-21, FY 2021-22, FY 2022-23).In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria. A certificate issued by the Chartered Accountant (Showing the Annual Turnover of last three years) with their Signature, registration No. & Seal must be submitted along with the bid.
- 3) Annual Turnover (Total of the last 3 years) shall be equal or more than 6 Crores. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria. A certificate issued by the Chartered Accountant (Showing the Annual Turnover of last three years) with their Signature, registration No. & Seal must be submitted along with the bid.
- 4) Manufacturer's Catalogue / Leaflet / Circuit-diagram / Layout-diagram for each equipment should be attached with the offer, wherever applicable.
- 5) Valid registration Certificate of the company / firm.
- 6) PAN CARD copy.
- 7) The product may be quoted with the ISO Certification wherever applicable.
- 8) Partnership deed in case of partnership firm
- 9) In case the bidder is a Proprietorship Firm : - Certified copy of Shop establishment/ Professional Tax Certificate
- 10) Undertaking for service after sales and warranty for minimum 1 year should be given along with tender.
- 11) Undertaking of delivery period within 45 days is to be submitted.
- 12) Undertaking for providing validity of quoted rates for one year from the date of opening of bid.
- 13) Undertaking for delivery at various institutes/Centers, including demonstration, installation, satisfactory trial at free of cost and service during warranty period.

- 14) Undertaking duly signed by the tenderer regarding acceptance of penalty clause, risk purchase clause and fall clause.
- 15) Undertaking to provide AMC/CMC on demand.
- 16) Undertaking that Bidder has not been blacklisted for any default in supply by any Govt. agency. The bidder must have to submit a Declaration on INR 100 Judicial Stamp duly notarized for not having been debarred/blacklisted either by the any Bid Inviting Authority or by any organization functional under Central/ State government. The bid will be rejected without this document. This statement ought to be current as of the date the bid was published
- 17) An affidavit of non – bankruptcy insolvency of bidder, duly attested by the Notary public must be enclosed.
- 18) Undertaking that the bidder is fully conversant with terms and conditions of tender for the supply of machinery / equipment's / tools in ITI college Goa.
- 19) Affidavit: The bidder shall furnish an affidavit on stamp paper duly notarized having value of INR 100 to the effect that the correct information has been furnished in the tender and the bidder shall be solely responsible for furnishing wrong/false information in the bid. The bid will be rejected without this document.
- 20) The net worthy of the bidder in last financial year i.e. 2022-23, should be positive (document to support this).
- 21) The Bidder /OEM company shall be an ISO 9001:2015, 14001:2015 certified company. A copy of valid ISO certification should be enclosed with the bid.

22) Experience criteria-

OEM/Bidder {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization/Private limited companies for last Two Financial years before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the financial year.

For fulfilling the experience criteria any one of the following documents may be considered as valid proof

1. Purchase Order copy along with Invoice(s) with self-certification by the bidder that supplies against the invoices have been executed.

23) Past Performance:

OEM/Bidder {themselves or through re-seller(s)} should have executed a single order amount of Rs. 20 Lacs or above for same or similar Category Products, in at least one of the last two financial years to any Central / State Govt Organization/Private limited company.

For fulfilling the Past Experience criteria any one of the following documents may be considered as valid proof

1. Purchase Order copy with self-certification by the bidder that supplies against the invoices have been executed.

24) Bidder should submit the manufacturing documents of OEM- Factory Licence / MSME Certificate, in absence of manufacturing documents the Bid will be rejected.

3.8 In case, during the scrutiny of the bids of any bidder, if it is revealed that the documents submitted by the bidder is/ are unauthentic, then such bid/s shall be summarily rejected and further course of action on the said bidder/s shall be initiated as per rules, including forfeiture of the EMD.

3.9 The bidders shall submit physical copies of above documents in sealed envelopes for verification, if required, during the bid evaluation process.

3.10 Bidder should have no legal / financial irregularity case pending against them for which charges stand framed and trial commenced in any court of law and affidavit to this effect shall have to be filled by the bidder.

Note: If, during online bid preparation, any need arises to upload additional documents, apart from the above mentioned documents, an option to upload additional documents has been provided in the e-Tendering software which will be available to bidders during online bid preparation stage.

4.0 COMMERCIAL BID :

1. All financial offers must be prepared and submitted online (An online form will be provided, during online bid preparation stage) and signed using individual's digital certificate.
2. The bidder should quote all the items of the Bid. "NQ" or "Zero" value entered will not be considered and bid will be rejected accordingly.
3. The bidder should not quote his offer anywhere directly or indirectly in Technical bidding failing which the Commercial bid shall not be opened and his tender shall stand rejected.

5.0 OPENING OF BID :-

5.1 TECHNICAL BID: Technical bid will be opened online through e-Tendering procedure, to verify its contents as per requirements, on the date specified in Tender document in presence of tenderer/s or their authorized Representative. Authorized Representative to produce letter of Authorization from the Company/Establishment during his presence.

If the various documents contained in this Technical Bid do not meet the requirements, a note will be recorded accordingly by the tender opening authority and the said tenderer's commercial bid will not be considered for further action but the same will be recorded. Decision of the tender opening authority shall be final in this regard.

5.2 COMMERCIAL BID:

The tenderer s qualifying technically are only eligible for opening of commercial bid. The commercial bid will be opened in the presence of tenderer or their authorised representative at a date which will be notified later. **Authorized Representative to produce letter of Authorization from the Company/Establishment during his presence.** This bid shall be opened online through e-Tendering procedure only. The commercial bids shall not be opened till the completion of evaluation of technical bids by the Technical Bid Evaluation Committee. Commercial Bids of only technically qualified Bidders will be opened.

The Commercial bid must be filled online using individual's digital certificate. (An online form will be provided to bidders for Price Schedule during online bid preparation stage).

Offer should be inclusive of all taxes, F.O.R. Destination (excise duty, sales tax, packing & forwarding, freight upto destination, loading unloading, insurance charges & other charges, if any).

6.0 Evaluation of Bid:

Technical Evaluation Committee will evaluate Technical Bid first and only those bids which are Technically Qualified shall be considered for opening of Commercial Bid.

The bid will be evaluated for Total Value of the bid and the lowest bid (i.e. L-1) will be considered for placing supply order.

7.0 EARNEST MONEY DEPOSIT (EMD):

The tenderer shall have to furnish Earnest Money Deposit (E.M.D.) **payable** through online payment Gateway on portal <https://eprocure.goa.gov.in>

Mode of Payment towards Tender Document Fee(TDF), e-Tender Processing Fee(TPF) & Earnest Money Deposit(EMD) to be paid online through e-Payment mode via : (i) National Electronic Fund Transfer (NEFT) / Real-Time Gross Settlement (RTGS). Tenderer requires download pre-printed Challan towards credit of ITG available on e-tender website and make its payment through any of their Bank (ii). Net Banking: Payment can be made through the Internet Banking of Any Bank. Any Payments made through NEFT/RTGS will take 24 hours for its reconciliation. Hence the payments through NEFT/RTGS should be made at least TWO BANK WORKING DAYS in advance before any due date and upload the scanned copy of challans in the e-Tender website as a token of payment.

The tenders without Earnest Money Deposit will summarily be rejected. The Earnest Money Deposit of unsuccessful tenderer shall be refunded. The E.M.D. of the successful tenderer will be refunded or adjusted against Security Deposit, after the tender is accepted and agreement is executed. The Earnest Money shall be forfeited to the Government Treasury in case of breach of any of the conditions governing the supply. If any tenderer withdraws the tender after submission, his / her EMD will be forfeited to Government Treasury.

8. JURISDICTION:

The legal jurisdiction is Panaji – Goa.

9. ACCEPTANCE / REJECTION OF BIDS:

The Directorate of Skill Development & Entrepreneurship reserves the right for any changes / cancellation / rejection of any/all offers, without assigning any reason what-so-ever.

10. PRE-DISPATCH INSPECTION:

Pre-dispatch Inspection will be carried out from the representative of this Directorate, if required by the Department. However inspection charges will be borne by the tenderer.

11. SCHEDULE OF REQUIREMENTS :-

Bidder is required to undertake the scope of work for ITI as mentioned in the Tender Documents. The scope of work of tender will include the supply of listed machinery / equipments / tools in ITI.

12. DELIVERY OF GOODS :-

The successful tenderer shall arrange to supply the material at places mentioned in the supply order without any additional charges towards packaging, forwarding, freight,etc. The Tenderer should obtain acknowledgement and issue delivery challan for the material supplied.

13. TIME LIMIT FOR SUPPLY :-

The materials should be delivered within the stipulated period specified in the supply order or within short notice depending upon the situation. Any of the materials received in broken or damaged condition the same will have to be replaced by the successful tenderer without any additional cost & within the stipulated period. Any cost incurred on transportation of damaged goods will have to be borne by the supplier

14. INSTALLATION:

Installation and free working trial is to be given to all consignees at their sites, wherever applicable.

15. WARRANTY:

Warranty should be minimum one year for machines as well as for its accessories.

16. PAYMENT TERMS:-

100% of the payment shall be released immediately after acceptance, installation and commissioning of goods the equipments and Machinery.

17. PERFORMANCE GUARANTEE :-

Performance Guarantee / Security Deposit equivalent to 3% of the value of materials/equipment ordered to be submitted within 15 days of the date of supply order by way of Demand Draft/Bank Guarantee in favour of the Directorate of Skill Development & Entrepreneurship, payable at Panaji – Goa valid till a period of 60 days after the date of expiry of defect liability period or the guarantee/ warranty period, as the case may be.

Place : Panaji – Goa

-sd/-
Director,
Directorate of Skill Development & Entrepreneurship
Panaji-Goa

Sr No. 3 (3.7) (1)

No Deviation Certificate

Sr. No.	Specification of Equipment mentioned in Tender Enquiry	Specification of Equipment offered by the tenderer with make and model	Whether there are deviation from the tender specification Yes / No	If yes indicate clear which are the deviation

(Signature of Tenderer)

Sr No. 3(3.2)&(3.6)

PRICE STRUCTURE

Amount in Rs.

Sr No	Description of item offered	Make	Qty	Unit	Rate	GST (if applicable in percent age)	GST Amount	Total Amount without taxes	Total Amount with taxes

<u>ANNEXURE-I</u>			
Procurement of Equipments			
Sr.no	Description	Total QTY	Unit
1	Supply and Commissioning of Augmented Reality Welding Simulator as per specification given in Annexure-II	1	Nos

ANNEXURE-II
Detail specification of Welding Simulator with Additional Conditions

SPECIFICATION OF WELDING SIMULATOR	
GENERAL	
Vision Technology	Augmented Reality
Simulation Methodology	Green learning with no real arc or fumes
Process Simulated	SMAW, GMAW, FCAW (Option for Gas & Self shielding) and GTAW
Welding Position possibilities	1F to 6F & 1G to 6G positions
Physical Workpieces	Butt, Fillet, Lap, Pipe to pipe and Pipe to plate joints
Workpiece thickness selection	3mm, 6mm & 10mm
Workpiece weld length	10" long weld bead practice.
Welding Pattern / Weave	Straight, Triangle, Convex, Zigzag & Circle
Defect Analysed	Porosity, Spatter & Slag inclusion
Parameter Adjustment possibilities	Current, Voltage , Wire feed speed & Gas pressure
Parameter options	SMAW - 50A - 240A.
	GMAW - 10V - 32V & 25A - 270A.
	GTAW - 25A - 270A.
Consumables options	2.5, 3.15 & 4mm for SMAW electrode
	0.8, 1.0, & 1.2 dia for GMAW wires
	2.0 & 2.4mm for GTAW filler rod
Torch control - GMAW & GTAW	2 step & 4 step controls
Input Power supply	Single phase , 230v
Weight of Simulation unit	Less than 15Kgs
Simulator Design	Simulator to be made of steel structure and not from non metal (Wood , Plastic)

WELDING SKILL REQUIREMENT	
Fixture Skill Training	Provision to place the workpiece on a fixed stand to enable student learn to weld using fixtures.
Fabrication Skill Training	Provision to place the workpiece on a work table at various places without any locators to enable student learn to weld as in fabrication shop
Industrial Torches for ergonomics	Simulator must be designed to use Industrial euro connector torches for real feel of weight & ergonomics (any reputed make like TBI , Esab or Binzel). No additional gadgets apart from Nozzle must to be fitted on the torch as it could vary the torch weight and make it imbalanced.

WELDING SIMULATION REQUIREMENT	
Weld bead simulation	Simulation software must replicate the weld bead, molten metal and spatter.
Environment Simulation	100% Real environment seen through the Reality helmet during welding . Virtual environment is not accepted.
SMAW Welding practice	In SMAW welding practice, Physical electrode (hardware) to be used and the physical electrode must retract simulating the electrode consumption
Display	The front panel must have feather switches for ease of operation . Provision to connect the simulator to LCD projector or a monitor must be available.

WELDING GUIDANCE REQUIREMENT	
Reality welding AR Helmet	HD vision AR helmet- Users with spectacles (Power glasses) must be able to use the AR Reality welding helmet without any visual disturbances. Goggles , head gear or head set are not acceptable
Skill Guidance	Guidance through didactic signals for learning Arc length, Stickout, Welding Path, Welding speed, Torch work angle, Torch travel angle, GTAW Filler work angle and travel angle.
Guidance for Parameters	The simulator must guide the student to check the parameters, if they are correct or wrong while welding and must have the provision to alter it during welding
Guidance for Head position	The simulator must continuously provide didactic guidance for the Ideal head position so that the operator is always able to see the molten weld pool.
Welder View	Welder will be able to see the real workpiece from inside the helmet. At any point during the welding, he must be able to touch/ rotate / adjust the workpiece in all possible angles to gain comfort
Welding sound in process	The simulator must produce distinct welding sounds during practice of SMAW, GMAW, FCAW and GTAW process. The sound produced in the simulator must match the sound produced during real time welding..
Welding sound in metal transfer	The simulator must replicate the real welding sounds while practicing metal transfer modes in GMAW Process (Short circuit, globular and spray metal transfers) during the simulation training. Change in stickout must result in change in the sound.

FEEDBACK ANALYSIS	
Dual Access	Student to do welding practice on the simulator. Trainer must be simultaneously able to access (online) the reports from an external PC. Both at the same time. At no point the simulator must be stopped. for analysing. This is to ensure 100% utility of the simulator for training .
Trainer access	Offline access of the trainer for evaluation, analysis, data feeding etc, while the student is practicing
Reports	The simulator must provide video, graphical and percentile reports for analysis purpose.wise. Provision to analyse the job, by moving horizontally , rotating 180 degree & by zooming the workpiece. The complete printed report must have the details and photographs

Skill feedback for hand position	Individual report for Arc length, Stickout, Welding Path, Welding speed, Work angle and Travel angle for Torch and Work angle and Travel angle for TIG Filler.
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ACCESS FROM EXTERNAL PC	
Following activities to be carried out from external PC.	Add , Edit & Delete Student names
	Add , Edit & Delete Courses
	Add , Edit & Delete Modules
	Upload of PDF documents
	Creating own WPS
	Evaluation of student performance

ACCREDITATION OF SAFETY, QUALITY, VALIDATION AND AUTHENTICITY (Qualification Criteria)	
Safety confirmity	Certificate of compliance to be enclosed for CE & FCC safety regulations.
Quality Certificate	ISO 9001 and ISO 14001 certificate from the OEM to be enclosed.
Software Accreditation	From any recognised Government international welding body of any country (IIW, AWS, DVS, IWS, etc...) to be enclosed. Certification from Private institute or members are not acceptable
Robotic Interface	Simulator must have Robotic interface possibility.
User Reliability	Augmented Reality model offered must be in Market for atleast 5 Years . Customer List (At least 5). Can enclose OEM or other distributors order copies as proof .
Authorisation letter from OEM	Tender specific authorisation letter from OEM to be enclosed

ADDITIONAL OPTIONAL PROVISIONS	
Custom workpieces	Provision to design custom workpieces and provide hardware & software . To provide photos of 3 workpieces.
World skill workpiece	Availability as per the world skill requirements. To provide photos of 3 workpieces.

SCOPE OF SUPPLY	
DESCRIPTION	QTY (Nos)
Augmented Reality Welding Simulator	1
HD Screen reality helmet	1
SMAW holder	1
Physical SMAW electrode	1
GMAW torch with nozzle	1
GTAW torch with nozzle	1
Physical GTAW Filler wire	1
Lap,Butt, Fillet, Pipe to pipe & Pipe to plate Joint	1 set
Welding stand for 6G & 6F positions	1
Software for Online access in pendrive	1

HDMI cable 5m	1
Wi Fi antenna	1

ADDITIONAL CONDITIONS

- * Technical compliance must be provided against each and every specifications
- * Manufacturing test report must be enclosed.
- * Demonstration, if required at site, must be provided to prove the technical compliance as per the tender requirement.
- * The Simulator must be of Augmented Reality technology.
- * The simulator should have all 4 processes (GMAW, FCAW, GTAW & SMAW)
- * The simulator should have positional welding possibility up to 6G and 6F
- * The student must be able to hold the job in hand, lift, rotate, turn and see the welding from all possible angles through the helmet to evaluate visually.
- * Real environment must be visible from the welding helmet. Tracking device or virtual environment is not acceptable .
- * Online Dual axis possibility: Student to do welding practice on the simulator and the trainer must be able to access simultaneously the reports from the external PC. Both should happen at the same time.
- * The simulator must have the following skill training possibility – In SMAW: Welding path, Welding speed, Travel angle, Work angle & arc length. In GTAW: Work angle and Travel angle skill guidance also must be provided to the Filler rod.
- * The simulator should have HD screen for vision to make it easy for students with spectacles to operate. No Goggles or head gears are acceptable. A photo of the Welding helmet must be enclosed.
- * The GTAW & GMAW torches must be of Industrial type. To get a real feel of real weight and ergonomics. No additional gadgets to be mounted on the torches, which would make the torch weight vary or imbalance. Also, these should be of euro connector type. The GMAW & GTAW torches supplied must be able to perform actual GMAW & GTAW welding when connected to a GMAW and GTAW machine and GMAW and GTAW simulation when connected to Welding simulator. A photo of the torches should be enclosed.
- * In SMAW practice, the physical electrode must retract during welding practice, simulating the consumption of welding electrode. Virtual electrode is not acceptable. A photo of Welding holder and electrode must be enclosed
- * The following workpieces must be supplied along with the simulator: Lap, Butt, Fillet, Pipe to pipe & Pipe to plate joints.
- * The simulator must have a provision for robotic interface. A detailed literature of the Robotic interface must be enclosed. Proof of at least one installation in India along with the installation report must be enclosed
- * The simulator should have a Wi Fi connectivity to provide remote support.
- * Provision to place the workpiece on a fixed stand to enable the student to learn to use weld fixtures. Provision to place the workpiece on worktable to enable the student to learn to weld as in actual workshop conditions. Both provisions must be available and a photo of both the operations being performed must be enclosed.
- * Simulator must have an option to design custom workpieces. Detailed literature must be provided.
- * Provision to use world skill workpieces (Apart from Lap, butt, Fillet , Pipe to pipe & pipe to plate) must be available. Photos of the workpieces must be enclosed.
- * The simulator should have feather switches on the front panel and the screen should be of 9” and above