



Mr. Dip Jyoti Dutta
Assistant Registrar

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OFFICE OF THE DEAN OF
RESEARCH & DEVELOPMENT

NIQ Reference Number: IITG/RND/22-23/T83

• To

• Date :23.08.2022

All interested firms/suppliers/vendors

SUBJECT: NOTICE INVITING QUOTATION (NIQ) FOR SUPPLY & INSTALLATION OF Robotic Multi wire plasma arc welding system as per details listed in Annexure IV, FOR THE DEPARTMENT OF Mechanical Engineering (PROJECT NO. xxMESPNSERB00854xxSB004), IIT GUWAHATI.

Dear Sir/ Madam,

The Director, Indian Institute of Technology Guwahati, invites quotations for supply and installation of CPU NODE as per details mentioned in the **CHECK-LIST** attached herewith. The quotation in **double bid [Details as per Check List]** is to be submitted via **<https://mhrd.euniwizarde.com>** on or **before 22.09.2022**.

Please note -

- (i) Intending bidders may download the NIQ documents from the website **<https://mhrd.euniwizarde.com>** directly.
- (ii) **The NIQ is also published at <http://www.iitg.ac.in/home/tender/19> and <https://eprocure.gov.in/>**
- (iii) There is non-refundable Tender / Form fee of **500**.
- (iv) NIQ document is divided into three parts i.e. (1) Instruction to Bidders (2) Terms & Conditions and (3) Annexures
- (v) The bid documents are not transferable and should be digitally signed by the authorized bidder.

Kindly read both the Instructions and Terms properly and see that instructions and terms are fully understood and complied. No correspondence shall be entertained in case your quotation is rejected on ground of not complying with our instructions, terms and conditions. In case of doubt please contact us before 7 working days of the deadline for submission of online bid at 0361 258 3089 or the Indentor / Principal Investigator at 0361 258 2369.

Thanking you.

Yours Sincerely,

INSTRUCTION TO BIDDERS

- A) Important Date and Time :
- | | | |
|--------|--|---------------------------------------|
| (i) | Date of NIQ publishing | : 23.08.2022 |
| (ii) | Bid submission start date | : 23.08.2022 |
| (iii) | Document download start date | : 23.08.2022 |
| (iv) | Document download end date | : 22.09.2022 |
| (v) | Deadline for submission of online bid | : 1200 Hrs (12 o clock) 22.09.2022 |
| (vi) | Time and date for bid opening | : 1500 Hrs (3:00PM) 22.09.2022 |
| (vii) | Time and Date for price bid opening | : 1200 Hrs (12:00 o clock) 30.09.2022 |
| (viii) | Pre-Bid Meeting Date | : N/A |
| (ix) | Venue of Bid opening | : R & D Section |
- B) Quotations will have to be submitted in a **DOUBLE Bid** [Technical Details as per CHECK - LIST].
- C) NIQ documents needs to be downloaded from website only and submission of Techno-Commercial Bid and Financial Bid will be done as per Time Schedule stated in Point – A.
- D) **Submission of bids:** Bids are to be submitted through online to the website <https://mhrd.euniwizarde.com> in two bids, one in Technical bid & the other is Financial bid, before the prescribed date and time using Digital Signature Certificate (DSC). The documents duly digitally signed are to be uploaded.
- D) 1. **Technical Bid:** The technical bid should contain scanned PDF copies (Single pdf file for multiple pages and documents) of the following in **two folders**. The seal and signature of the authorized official of firms must appear on all the documents uploaded.
- D) 1. (a) **Technical Documents:**
- i. Compliance certificate [Annexure –I]
 - ii. Manufacturer's Certificate in case of manufacturer Or Manufacturer Certificate along with Authorized Dealership Certificate on the offered products in case of Agent or Dealer.
 - iii. Details of the technical features of the offered item in the format at Annexure-IV.
 - iv. Standard Technical leaflet/literature on each of the items offered.
 - v. HSN/SAC Number, ISO/ISI Certificate
 - vi. Details of nature and maximum period of warranty offered.
- D) 1. (b) **Other Important Documents (OID):**
- i. Bidder's detail and its Service Centre detail, and TIN number as per format at Annexure-III
 - ii. Character certificate (Undertaking that currently the vendor is not blacklisted by any Government organization / institution)
 - iii. GST Registration Certificate and GST Clearance certificate
 - iv. PAN Detail
 - v. Registration Certificate
 - vi. Banker's Detail
 - vii. Proof of non-refundable Tender / Form fee payment for the requisite amount.
 - viii. List of reputed organizations/institutions, particularly to IIT/Institutes and other Government Organization where similar orders have been executed, if any (copy (s) of the Purchase Orders will have to be uploaded).
- D) 2. **Financial Bid:** The financial bid should contain Bill of Quantities (BOQ) in excel format. The bidder is to quote the rate in the space marked for quoting rate in the BOQ. Only downloaded copy with same file name of BOQ document must be uploaded by the bidder after filling up.
- E) The Financial Bid of the prospective Bidder will be considered only if the Techno-Commercial Bid of the bidder is found qualified by the Purchase Committee. The decision of the Institute will be final and absolute in this respect.
- F) **Query**, if any, may be made before 7 working days of the deadline for submission of online bid at 0361 258 3089 or the Indentor / Principal Investigator at 0361 258 2686.
- G) Evaluation of Process:
1. Opening of Technical Cover: Technical Documents will be opened by Quotation Opening Committee using Digital Signature Certificate (DSC).

2. **Technical Documents [Ref. Sl. No.: D) 1. (a)] and Other Important Documents [Ref. Sl. No.: D) 1. (b)] will be opened. If there is any deficiency/discrepancy in the Documents, the bidder may summarily be rejected.**
 3. Decrypted (transformed into readable formats) documents of the covers will be downloaded and handed over to the Purchase Committee.
 4. Summary list of technically qualified bidders will be uploaded online.
 5. During evaluation, the Committee may summon the bidders and seek clarification/information or additional documents or original hard copy of any of the documents already submitted & if these are not produced within the stipulated time frame, their proposals will be liable for rejection.
 6. The Financial offer of the prospective bidder (BOQ) will be considered only if the Technical Bid of the bidder is found qualified by the Purchase Committee.
- H) **Bid not transferable:** The bid documents are not transferable under any circumstance.
- I) **Award:** The Final Award will be given to the technically qualified firm/supplier/vendor, selected by the Purchase Committee on the lowest quote basis.

TERMS & CONDITIONS

(Please note the term 'both foreign & indigenous' wherever mentioned means the term is applicable to both foreign & indigenous purchase)

01. **Rates:** Rates quoted for items should be on **FOR IIT Guwahati, on DOOR DELIVERY basis. Price (Incl. all taxes) should be quoted as per BOQ sheet, failing which the bid shall be disqualified.**
Note: Vague terms like "packing, forwarding, transportation etc. extra" without mentioning the specific amount will not be accepted. Such offers shall be treated as incomplete and rejected. Bidders shall indicate their rates in clear/visible figures as well as in words and shall not alter/overwrite/make cutting in the quotation. In case of a mismatch, the rates written in words will prevail.
02. **Validity of Quotation:** Quoted rates must be valid for **120 days** from the last date of submission of quotation.
03. **Warranty:** Please refer to annexure IV.
04. **Late Quotation:** Any Quotation uploaded after the deadline for submission of Quotations will be rejected.
05. **Amendments:** At any time prior to the deadline of submission of Quotations, the purchaser, for any reason may modify the NIQ documents by amendment.
06. **Literature a must:** All the quotations must be supported by the printed technical leaflet/literature and the specifications mentioned in the quotation must be reflected/ supported by such printed technical leaflet/ literature. The model and specifications quoted should **invariably be highlighted** in the leaflet/literature for easy reference.
07. **After Sales Service:** In case of imported goods, vendors should clearly state the available nearest after sales service centre and detail address in India, without which their offers shall be liable for rejection.
08. **Dealership Certificate:** Dealers or Agents quoting on behalf of Manufacturer must enclosed valid dealership certificate.
09. **Quality Certificates:** Valid certificate to prove that the products are genuine and of International standard, as mentioned below, must be enclosed:
 - (a) Manufacturer's certificate ;
 - (b) ISO/ISI certificate.
10. **Performance Bank Guarantee (PBG):** In case of quotations having quoted value Rupees five lacs (INR 5,00,000/-) and above, the successful bidder shall furnish an unconditional PBG (as per format at **ANNEXURE III**) valid till 60 days after the warranty period from a scheduled Bank of India for 3% of the Purchase Order value within 21 days of placement of order. Where the PBG is obtained by a foreign bank, it shall be got confirmed by a Schedule Indian bank and shall be governed by Indian Laws and be subject to the jurisdiction of courts at Guwahati. In exceptional case or on the request of the Indenting Officer competent authority may allow starting of PBG Period from the date of installation, in which case submission of PBG valid till 60 days after the warranty period may be made within 21 days from the date of installation.

The Performance Bank Guarantee (PBG) guarantees that,

- (a) the Supplier / Vendor guaranteed satisfactory operation of the Equipment & components against poor workmanship, bad quality of materials used, faulty designs and performance.
- (b) the Supplier / Vendor shall at his own cost rectify the defects/replace the items supplied, for defects identified during the period of guarantee.
- (c) this guarantee shall be operative from the date of installation till 60 days after the warranty period.

11. Delivery:

- a) **Time Limit:** Maximum within 45 (forty-five) days from the date of issue of purchase order.
- b) **Safe Delivery:** All aspects of safe delivery shall be the exclusive responsibility of the vendor. At the destination site, the package will be opened only in the presence of IIT user/representative and vendor's representative. The intact condition of the package and the seal/indicators for not being tampered with shall form the basis for certifying the receipt in good condition.
- c) **Insurance:** The supplier is to establish 'All Risk Transit Insurance' coverage till door delivery at IIT Guwahati.
- d) **Part Delivery:** Part delivery is not allowed.
- e) **Penalty Delay delivery:** The date of delivery should be strictly adhered to otherwise the Director, IITG reserves the right not to accept delivery in part or full and penalty imposed as per Terms & Conditions No. 16 of this NIQ.

12. **Genuine Pricing:** Vendor is to ensure that quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold, particularly to IIT/Institutes and other Government Organization. Copy of the latest price list for the quoted item, applicable in India, must be enclosed with the offer.

13. **Conditional Quotation not acceptable:** All the terms and conditions mentioned herein must be strictly adhered to by all the vendors. Conditional Quotations shall not be accepted on any ground and shall be rejected straightway. Printed conditions mentioned in the bids submitted by vendors will not be binding on IITG.

14. **Way Bill:** E-Way Bill shall be issued on request as applicable for delivery of materials against receipt of copy(ies) of Order Acknowledgement and Proforma Invoice in case of domestic purchase and Bill of Entry and Transporter Details, etc. in case of foreign purchase.

15. Goods and Service Tax (GST):

- a) Up-to-date Sales Tax clearance certificate, **GST Registration** number of the firm will have to accompany the quotation.
- (b) GST Deduction at source as per Order/ notification of the Govt.
- (c) GST No of IIT Guwahati is 18AAAJI0130P1Z8.
- (d) HSN / SAC No of the items must be clearly mentioned in the quotation along with GST No.
- (e) **As per Notification No. 45/2007- Central Tax (Rate) dated 14.11.2017 and 47/2017-Integrated Tax (Rate) dated 14.11.2017, issued by Ministry of Finance, IIT Guwahati will avail 5% GST rate, on the items, as mentioned in the Notification.**

16. Payment:

- (a) 100% Payment within 45 days from the date of successful delivery, installation and commissioning/ acceptance of goods at IIT Guwahati, generally through A/c payee cheque.
OR
- (b) 90% Payment against delivery and 10% payment after successful installation and/ or commissioning of the ordered goods at site.

Please note as per Institute's norm advance payment is not allowed for indigenous purchase.

17. PENALTY FOR DELAYED DELIVERY:

In case of supply order for the scientific equipments/ apparatus, the date of delivery should be strictly adhered to. In the event of delayed delivery, installation & commissioning i.e. after the expiry of the period as agreed by both the parties, the vendor shall be liable for a penalty deduction at a percentage of the value of the undelivered equipment subject to a maximum of 10% (ten percent) as detailed below:

- @1% up to one week;
- @2.5% up to two weeks;
- @5% up to three weeks;
- @10% for four weeks and above

For the purpose of this clause, part of the week is considered as a full week. In case of delayed delivery, the Director, IIT Guwahati reserves the right not to accept the subject consignment.

18. **Enquiry during the course of evaluation not allowed:** No enquiry shall be made by the bidder(s) during the course of evaluation of the Bids till final decision is uploaded / published in the e-procurement website. However, the Purchase Committee or its authorized representative (IIT Guwahati) can make any enquiry/seek clarification from the bidders. In such a situation, the agency shall extend full co-operation. The bidders may also be asked to arrange demonstration of the offered items, in a short period notice, as such the bidders have to be ready for the same.
19. The acceptance of the quotation will rest solely with the Director, IITG, who in the interest of the Institute is not bound to accept the lowest quotation and reserves the right to himself to reject or partially accept any or all the quotations received without assigning any reasons.
20. **Force Majeure:** If the performance of the obligation of either party is rendered commercially impossible by any of the events hereafter mentioned that party shall be under no obligation to perform the agreement under order after giving notice of 15 days from the date of such an event in writing to the other party, and the events referred to are as follows:
- I) any law, statute or ordinance, order action or regulations of the Government of India,
 - II) Any kind of natural disaster, and
 - III) Strikes acts of the Public enemy, war, insurrections, riots, lockouts, sabotage.
21. **Termination for default:** Default is said to have occurred -
- (a) If the equipment or any of its component is found having poor workmanship, faulty designs, poor performance and bad quality of materials used.
 - (b) If the supplier fails to deliver any or all of the services within the time period(s) specified in the purchase order or any extension thereof granted by IITG.
 - (c) If the supplier fails to perform any other obligation(s) under the contract.
 - (d) Under the above circumstances IITG may terminate the contract / purchase order in whole or in part and forfeit the PBG as applicable. In addition to above, IITG may at its discretion also take the following actions:
IITG may procure, upon such terms and in such manner, as it deems appropriate, goods similar to the undelivered items/products and the defaulting supplier shall be liable to compensate IITG for any extra expenditure involved towards goods and services obtained.
22. **Applicable Law:**
- (a) The contract shall be governed by the laws and procedures established by Govt. of India and subject to exclusive jurisdiction of Competent Court and Forum in Guwahati or India only.
 - (b) Any dispute arising out of this purchase shall be referred to the Director IIT Guwahati, and if either of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of an Arbitrator, who should be acceptable to both the parties, to be appointed by the Director of the Institute. The decision of such Arbitrator shall be final and binding on both the parties.

ADDITIONAL TERMS FOR IMPORTED GOODS

Following terms besides the fore mentioned terms will be applicable in case of foreign purchases:

23. **Rates :** Prices quoted must be for destination including freight and insurance charges inclusive of **delivery up to the door of department/centre IIT Guwahati premises. Price should be quoted as per BOQ sheet, failing which the bid shall be disqualified.**
- Note: Vague terms like “packing, forwarding, transportation etc. extra” without mentioning the specific amount will not be accepted. Such offers shall be treated as incomplete and rejected.
Rate of Foreign Exchange shall be the rate prevailing on the date of quotation opening.*
24. **After Sales Service:** In case of imported stores, foreign manufacturing firms should indicate facilities available for after sales service in India without which their offers are liable to be ignored.
25. **Delivery :**
- (a) Delivery of goods at IIT Guwahati, will have to be maximum within 95(ninety-five) days from the date of issue of the Purchase Order.
 - (b) **Delivery at IIT Guwahati only.**
 - (c) While transshipment will be allowed, part shipment will not be allowed.

26. **Payment :**

(a) **Above INR 5 Lacs :** By an irrevocable letter of Credit at DAP/DDP IIT Guwahati or CIF/CIP Kolkata value negotiable of through any overseas branch State Bank of India/ AXIS Bank with unrestricted provision.

(b) **Below INR 5 Lacs by FDD/Wire Transfer as given below:**

(i) **Advance payment Against Bank Guarantee:** 90% of the price will be paid in advance **against equivalent bank guarantee** from a scheduled bank provided by the supplier/Indian Agent. The remaining 10% shall be released only after receipt and acceptance of materials in good condition or after satisfactory installation and commissioning of the equipment.

or

(ii) **Payment Against Proof of Despatch:** 90% of the price will be paid against delivery with receipt of proof of dispatch such as AWB, Invoice, Packing List, Insurance certificate, etc. The remaining 10% shall be released only after receipt and acceptance of materials in good condition or after satisfactory installation and commissioning of the equipment.

or

(iii) **100% Payment Basis:** On request by the supplier/s 100% payment by FDD will be made. In this case on receipt of your Order Acknowledgement an FDD will be established for total ordered value, thereupon, a Xerox copy of the FDD will be sent to you which will enable you to send the materials. On satisfactory receipt and acceptance of the materials or satisfactory installation and commission of the equipment the Original FDD will be sent to you.

Note: Please note FDD/LoC will not be opened unless and until Letter of Acknowledgement in original is received at IIT Guwahati, directly from the principal (Even in case of firms having subsidiary office in India). The Indian agents are therefore advised to submit quotation after consultation with their respective principals).

27. **Customs Duty:** The Institute is generally **exempted** from payment of Customs Duty vide GOI Notification No.51/96-Customs, dated 23.07.96, with Regn. No. TU/V/RG-CDE (351)/2006, dated 14.09.2006. [CUSTOMS DUTY EXEMPTION CERTIFICATE WILL BE MADE AVAILABLE BY THE INSTITUTE IN REGARD TO QUOTES IN FOREIGN CURRENCY ONLY [NOT AGAINST QUOTES MADE BY A FIRM IN INDIAN CURRENCY, UNLESS THE CONCERNED FIRM IS A FOREIGN HOLDING COMPANY WITH 'FDI' CERTIFICATE ISSUED BY THE MINISTRY OF FINANCE, GOVT. OF INDIA].
28. **Agency Commission:** The percentage of ex-works value to be paid to Indian agent in equivalent Indian currency as agency commission as applicable will have to be clearly stated in the quotation.
29. **After Sales Service:** For equipment to be imported the quotation will have to clearly state the available nearest after sales service centre and contact no. in India.
30. **Country of Origin:** While Country of Origin Certificate will not be insisted, the same however will have to be stated in the Original Invoice for payment through LoC.
31. **LoC Amendment:** LoC/FDD amendment charges due to mistake on the part of the supplier, if any, will have to be borne by the supplier.

Asstt. Registrar (R&D)

Encl.: CHECK LIST

Encl.: ANNEXURES

CHECK - LIST

FOR THE DEPARTMENT OF ME (PROJECT NO. xxMESPNSERB00854xxSB004):

<u>S.N.</u>	<u>Item Name & NIQ Ref. No.</u>	<u>Bid Type</u>
<u>01</u>	<i>Item: Robotic Multi wire plasma arc welding system Details: As per description in Annexure IV</i> <i>[For any technical clarification required please contact Ph. No: 0361-258- 2686 before 7 working days of last date of submission of bids.]</i> NIQ Ref. No.: IITG/RND/22-23/T83, dated 23.08.2022	<u>DOUBLE Bid</u>

ANNEXURE -I

NIQ Reference Number: IITG/RND/21-22/T83

COMPLIANCE CERTIFICATE

(A certificate of compliance to NIQ term to be enclosed in the Technical bid)

Sl. No.	NIQ Terms and Conditions	Yes / No
01	Rate quoted as per instruction	
02	AMC rate after warranty provided	
03	Validity of quoted rate for 120 days agreed	
04	PBG term agreed	
05	Payment term agreed	
06	Delivery terms agreed	
07	Warranty period agreed	
08	Literature: Printed Literature provided	
09	Dealership / distributorship certificate (in case of dealers/agents) provided	
10	Sales Service: address of after Sales Service centre in India provided	
11	Manufacturer certificate provided	
12	ISO/ ISI certification provided	
13	Applicable law terms agreed	
14	Additional Terms for Imported Goods (in case of foreign goods) agreed	

Sign. :.....

Vendor : M/s.....

Official seal of the vendor

Annexure – II

NIQ Reference Number: IITG/RND/21-22/T83

PERFORMANCE BANK GUARANTEE

To:

Registrar,
Indian Institute of Technology,
Guwahati- 781 039

WHEREAS (Name of Supplier) hereinafter called "the Supplier" has undertaken , in pursuance of Contract No:, dated: 20... to supply
..... (Description of Goods and Services) hereinafter called "the order".

AND WHEREAS it has been stipulated by you in the said order that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the order.

AND WHEREAS we have agreed to give the Supplier a Guarantee:
THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of (Amount of the Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the order and without cavil or argument, any sum or sums within the limit of (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the day of 20.....

Signature and Seal of Guarantors

.....
.....

Date.....20....

Address:.....

.....
.....

All correspondence with reference to this guarantee shall be made at the following address:

Registrar,
Indian Institute of Technology,
Guwahati- 781 039, Assam.

Attention: Asst. Registrar (R&D)

ANNEXURE-III

NIQ Reference Number: IITG/RND/21-22/T83

BIDDERS DETAIL

Sl. No.	Name of the company/Firm	To be filled by vendor (Documentary Proof must be attached as applicable)
01	Registered office Name & Address Details of contact person Name designation Telephone number e-mail	
02	Name & Address of service centre in Guwahati city Contact person/s Name designation Telephone number e-mail	
03	Is the company/firm a registered company/firm? If yes, mention year and place of the establishment of the company and submit documentary proof.	
04	Is the company/firm registered for GST? If yes, submit valid registration certificate.	
05	List the major clients with whom your organization has been associated and submit documentary proof/PO.	

Note: Document/s if attached to the NIQ compliance Certificate the same may be referred to in the remark column above

Sign. :.....
Vendor : M/s.....

Official seal of the vendor

ANNEXURE-IV

NIQ Reference Number: IITG/RND/21-22/T83**Technical Specifications****Robotic Multi Wire Plasma Welding System**

S. No.	Item	Specification
1.	Plasma Power Source	
2.	Machine should have separate module for Plasma power source & TIG Power source.	
3.	Power Source Type:	Digital Microprocessor Controlled inverter Based DC Power Source incorporating Power Factor Control device.
4.	Mains voltage	230 V
5.	Mains voltage tolerance	-20% / +15%
6.	Mains fuse protection (slow-blow)	16 A
7.	Primary continuous power (100% DC)	0.9 kVA
8.	Power factor	0.99
9.	Pilot current range	3.0 - 30.0 A
10.	Pilot current at 10 min / 40°C (104°F)	100% DC 30 A
11.	Plasma-TIG Welding Current At 45% Duty Cycle At 100% Duty Cycle	400A (at 40°C ambient and 10min. duty cycle.) 310A (at 40°C ambient and 10min. duty cycle.)
12.	Plasma Gas flow rate	0.2 – 10 Ltr/min
13.	Open-circuit voltage	88 V
14.	Standardized working voltage	10.1 - 11.2 V
15.	Striking voltage (Up)	9.5 kV
16.	Protection	IP 23
17.	Weight	Not more than 15 kg
18.	Marks of conformity -	S, CE
19.	High Frequency Ignition (Without touching the tungsten the substrate)	
	TIG Power Source	
20.	Power source Type	Digital Microprocessor Controlled inverter Based AC/DC Power Source incorporating Power Factor Control device.
21.	Input Supply	400V AC (-15 /+15%), 50Hz, Three Phase
22.	Max Input KVA Rating @100% Duty Cycle	15.5 KVA
23.	Output Current Range	3A – 400A
24.	Welding Current At 45% Duty Cycle At 100% Duty Cycle	400A (at 40°C ambient and 10min. duty cycle.) 310A (at 40°C ambient and 10min. duty cycle.)
25.	Power Factor	0.99

26.	Open Circuit Voltage	Not more than 90V DC
27.	Pulse Frequency	0.2 Hz – 2 KHz.
28.	Pulse Ratio	10 – 90% of base current
29.	Starting Current	0% - 200% of welding current
30.	End current	0% - 100% of welding current (for better crater filling)
31.	Weight	Not more than 60 Kgs.
32.	Degree of Protection	IP 23
33.	EMC emission class (in accordance with EN/IEC 60974-1)	A
34.	Standardized operating voltage :	10.1 – 26 VDC
35.	Safety Mark	S & CE
36.	High Frequency Ignition (Without touching the tungsten the substrate)	
Other Required Features of the TIG Power Source		
37.	Power source should have High open circuit voltage and ample power reserves improve HF ignition behaviour	
38.	Pulse welding functions, slope up & slop down time (0-9.9s) etc.	
39.	Automatic gas Pre flow & post flow facility	
40.	Gas testing function	
41.	2 Track /4 Track operation	
42.	Over temperature protection	
43.	Hot start/soft start	
44.	Crater Fill current function	
45.	Arc Force control	
46.	Continuously adjustable welding current	
47.	Step less control of current settings.	
48.	In-built safety measures against open circuit, short circuit or phase fault etc.	
49.	The machine should have facility to store minimum 100 no welding parameters/job once established and activate these stored data during repetitive type welding.	
50.	Machine should have provision to select the AC welding wave cycle in Sine, Triangle & Rectangular form in Aluminium TIG welding.	
51.	The ideal cap for the specified diameter of the tungsten electrode is formed during welding start-up in AC Tig welding. Machine should have a function to make tungsten ball shape automatically for Aluminium welding.	
52.	Machine should have AC frequency setting range of 40-250Hz for AC TIG welding.	
53.	The machine should have function selection for following processes: a. DC Plasma b. AC/DC TIG c. AC/DC Pulsed TIG d. TIG Tacking	
54.	The machine should be fully protected against overloading/prevent damage due to operations at higher current range than specified, through built in tripping device.	

55.	The welding current and welding voltage should be displayed in the front panel to know actual value of welding current and welding voltage.	
The Front Panel Should have LED Display with Following Features		
56.	Welding voltage & current	
57.	Operating mode	
58.	Welding parameter values like Gas pre-flow and post flow time, Starting & Ending current, down slope and up-slope time, Pulse time, duty cycle, ignition current, main current etc	
59.	Set Values & Real Values of Welding parameters	
60.	Main voltage- Over voltage & Under Voltage indications	
61.	Over temperature indication	
62.	Error display	
Wire Feeder		
63.	Rated Supply voltage	230V AC, 50Hz
64.	Power Consumption	1.2A
65.	Main fuse	2A
66.	Wire diameter range	0.8-1.6mm
67.	Wire feeding speed	0.2 – 10 m/min
68.	Weight	20 Kg or Less
69.	Drive	4 Roller
70.	Hose + liner	4m or more
71.	Wire feeder should have provision to control externally via 0-10 VDC for offline programming	
Water Cooled Plasma Welding Torch		
72.	Power range	3-350A
73.	Current Capacity @ At 100% Duty Cycle	350A
74.	Pilot Arc current	30A
75.	Plasma gas/shielding gas	Argon
Chiller Unit		
76.	Suitable Chiller Unit should be supplied for cooling the Plasma Torch system including suitable stabilizer / UPS if required	
Consumables		
77.	A set of 2Nos. suitable consumables such as nozzles, universal liner, wire feeding rollers required for processing steel and aluminum each	
Other Features		
78.	This system should be capable for defect free Welding of Thin Sheet Metals and for Wire Arc Additive Manufacturing for multiple types of filler metal	
79.	No Deviation will be allowed in the Major Specification & Parameters. For every point tenderer should have to write the exact value. "complied", "agreed", "accepted" such words will not be allowed & such tender will be disqualified	
80.	The system will be demonstrated at IIT Guwahati for Aluminum welding on a robotic arm without interfacing. The robot detail will be provided.	

81.	The bidder should have supplied at-least 01 no. and OEM should have supplied at-least 02nos of plasma system to premier institutes like IIT's, NIT's, CSIR lab's etc. on a Pan- India basis with in last 5 years. The PO copies should be submitted along with offer	
82.	The committee may ask the vendor to give a live demonstration of the quoted system. If the vendor fails to give demonstration of the system such tender will be disqualified	
	Scope of Supply	
83.	400 Amps AC/DC TIG Power Source	1 no.
84.	Plasma Module	1 no.
85.	4m long 350A Plasma Torch	1 no.
86.	4m long 350A TIG Torch	1 no.
87.	4m long 50mm ² Ground Cable	1 no.
88.	Chiller unit for Cooling	1 no.
89.	External Wire Feeders	2 nos.
90.	Argon Pressure Regulator	2 nos.