

बिहार सरकार
श्रम संसाधन विभाग
प्राचार्य का कार्यालय, औद्योगिक प्रशिक्षण संस्थान, मुंगेर

निविदा आमंत्रण सूचना संख्या- 517

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औद्योगिक प्रशिक्षण संस्थान, मुंगेर में वित्तीय वर्ष 2017-18 के लिए गैर योजनान्तर्गत मशीनों के आद्युनिकीकरण के अन्तर्गत चल रहे वेल्डर व्यवसाय में कौशल विकास के लिए प्रशिक्षणार्थियों के प्रशिक्षण के निमित्त मशीनों के क्रय हेतु वस्तु एवं सेवाकर (Goods & Service Tax) के अन्तर्गत निबंधित एवं अधिकृत प्रतिष्ठानों/आपूर्तिकर्ताओं तथा निर्माताओं से द्विलिफाफा पद्धति के माध्यम से मोहर बंद निविदा आमंत्रित की जाती है।

निविदा की शर्तें :-

1. निविदादाता को निविदा के प्रत्येक पैकेज का रू0 100000/- (एक लाख) मात्र अग्रधन के रूप में जमा करना होगा, जिसका बैंक ड्राफ्ट प्राचार्य, औद्योगिक प्रशिक्षण संस्थान, मुंगेर के पदनाम से मुंगेर में भुगतान हो, संलग्न करना अनिवार्य है।
2. निविदा दो प्रतियों में (क) तकनिकी निविदा (ख) वित्तीय निविदा अलग-अलग मुहरबंद कर उस पर कमशः तकनिकी निविदा एवं वित्तीय निविदा लिखकर दोनों लिफाफों को एक तीसरे लिफाफे में मुहरबंद रहना अनिवार्य होगा।
3. तकनिकी निविदा के साथ बैंक ड्राफ्ट, प्रतिष्ठान निबंधन प्रमाण पत्र, आयकर एवं वस्तु एवं सेवा कर (Goods & Service Tax) का अद्यतन प्रमाण पत्र संलग्न करना अनिवार्य होगा।
4. तकनिकी निविदा के साथ समानों का नाम (मेक सहित पूर्ण विवरण के साथ) गारंटी/वारंटी, प्रतिष्ठान काली सूची में दर्ज नहीं है या किसी प्रकार का मामला न्यायालय में विचाराधीन नहीं हो, के संबंध में शपथ-पत्र संलग्न करना अनिवार्य होगा। आपूर्ति किये गये सामानों पर पांच वर्षों का Comprehensive Maintenance का शर्त पूरा करना होगा। इससे संबंधित विवरणी निविदादाता द्वारा हस्ताक्षरित होना अनिवार्य है।
5. वित्तीय निविदा में वस्तु एवं सेवाकर (Goods & Service Tax) एवं अन्य कर तथा सामग्रियों को संस्थान तक पहुँचाने का भाड़ा सम्मिलित होगा। किसी प्रकार का अन्य कर अलग से देय नहीं होगा।
6. वित्तीय निविदा में जिन सामानों का दर अंकित किया जाना है उन सामानों का दर के साथ कम्पनी का मेक स्पष्ट होना चाहिए।
7. न्यूनतम दर का निर्धारण प्रत्येक आईटम पर अंकित मूल्य के आधार पर किया जाएगा।
8. निविदादाता को सभी सामग्रियों का दर क्रमानुसार अंकित करना अनिवार्य होगा।
9. जिस निविदादाताओं कि निविदा स्वीकृत की जाएगी, उन्हें आपूर्ति आदेश मिलने के 30 दिनों के अन्दर सभी सामग्रियों को आपूर्ति करना अनिवार्य होगा। अन्यथा जमानत की राशि जब्त कर ली जाएगी।
10. निविदादाता को सभी सामग्रियों को आपूर्ति करने के पश्चात् ही भुगतान किया जाएगा।
11. सभी निविदा टंकित प्रति में स्वीकार की जाएगी। सामानों के दर में किसी प्रकार का ओभर राईटिंग या संशोधन नहीं होना चाहिए।
12. सामग्रियों की सूची एवं विस्तृत जानकारी अद्योहस्ताक्षरी के कार्यालय में सभी कार्य दिवस पूर्वाह्न 10:30 बजे से सायं 5:00 बजे के बीच माँग पत्र समर्पित कर प्राप्त की जा सकती है। यह संस्थान के सूचनापट्ट एवं विभागीय वेबसाईट www.labour.bih.nic.in पर उपलब्ध है, जिसे देखा जा सकता है।
13. निविदा दिनांक 08.12.2017 को अपराह्न 5:00 बजे तक अद्योहस्ताक्षरी के कार्यालय में निबंधित डाक/स्पीड पोस्ट से प्राप्त किया जायेगा। हाथों-हाथ कोई भी निविदा स्वीकार नहीं होगा, तथा बाद में प्राप्त निविदा पर विचार नहीं किया जायेगा और न ही उस संबंध में कोई पत्राचार होगा।
14. इस संस्थान में क्रय समिति की बैठक दिनांक 12.12.2017 को होगी। इस बैठक में निविदादाता या उसके प्रतिनिधि भाग ले सकते हैं। तकनिकी निविदा स्वीकृती के बाद ही वित्तीय निविदा खोली जायेगी। जिन निविदादाताओं की तकनिकी निविदा अस्वीकृत हो जायेगी, उनके वित्तीय निविदा विधिवत नहीं खोली जायेगी।
15. निविदा स्वीकृत होने के उपरान्त सामग्रियों की आपूर्ति/मशीनों की गुणवत्ता की जाँच, मशीनों का अधिष्ठापन आपूर्तिकर्ता द्वारा किये जाने के उपरान्त राशि उपलब्धता के अनुसार 5% Performance Security (प्रदर्शन प्रर्तिभूति) को काटकर भुगतान किया जायेगा, जिसे बाद में Performance के आधार पर भुगतान कर दिया जायेगा। तकनिकी जाँच के क्रम में खराब पाये गये सामानों को स्यंव के खर्च पर वापस ले जाने की जिम्मेवारी संबंधित प्रतिष्ठान की होगी।
16. पैकेज में अंकित सामग्रियों के क्रम में ही निविदा देना अनिवार्य होगा।
17. प्रत्येक सामग्री का निविदा E-5 Document में अलग-अलग भर कर जमा करना अनिवार्य होगा।
18. किसी भी निविदादाता को बिना कारण बताये निविदा को पूर्णतः/अंशतः अस्वीकृत करने का अधिकार क्रय समिति को सुरक्षित होगा।
19. निविदा से संबंधित किसी प्रकार के विवाद का न्यायिक क्षेत्र मुंगेर होगा।

प्रभारी प्राचार्य
औद्योगिक प्रशिक्षण संस्थान, मुंगेर।

Tender Pre-qualification Criterion (Welding Simulator)

The Purpose of buying the welding simulator is for proper education of students & make them employable in Industry. Hence the equipment availability & reliability should be in high order. In order to ensure flaw less service back up and 100% Equipment availability without any down time is necessary. Also the Knowledge transfer should be easily available without any hidden cost. To ensure all these Criteria, a reliable source of supplier required which calls for the following points to be fulfilled and these are the Pre-Qualifying criteria to be met 100% and without fail.

- **The OEM should be in the field of design and manufacturing of Welding Equipment for minimum last 10 years from date of opening of tender.**
- The offered Model of OEM must be working in Indian Conditions, for the past 4 years and should be working without any Problems. Minimum 2 performance reports to be submitted
- Company should have Experience in installation, Service and Training of such welding simulators of 50 No's at least in Indian Environment. Detailed list to be submitted.
- **OEM should have a own welding School/ training centre with all the facility to Train the Trainer** , Service Bench for repairing the Equipment's, Proper ware house for the Machine spares with proper proof in India.
- Only OEM/ OEM's Indian subsidiary/ OEM's authorized dealers can quote.
- **The Firms reliability in providing service in longer duration is a key criterion and hence they should have a properly registered Company with Employees Strength of minimum 30.**
- The tenderer should have there own registered patents of welding simulators.
- Only magnetic tracking system for precise weld tracking.
- The simulation must be 100% virtual meaning thereby, no consumables (wire, gas, metal plates) should be required.
- The tenderer shall provide the list of customers to whom he has already supplied such welding simulators in India.
- The tenderer should be able to provide support for hardware components and for the software for a minimum period of 10 years from the date of commissioning.
- The tenderer should provide free updates for the software installed time to time. 'ADDON" to the software for the other processes shall be intimated to the institute with the cost involved as and when a new development takes place in future.

SCOPE OF SUPPLY

Virtual trainer set including display and CPU	1 NO
GMAW ,MMAW and GTAW Torch SET	1 NO each
Software DVD or CD	1 NO with free updates
Butt weld ,Fillet weld ,Pipe weld Haptic plates	1 No
Virtual Reality head gear	1 NO

NOTE-ALL COMPONENTS TO MEET BELOW SPECIFICATIONS (Page no. 1)

Technical Specifications:

Welding Simulator for SMAW/GTAW/GMAW

Technical Specification:

PURPOSE: Virtual Simulation Device for Welding Trade; A Device must be able to train student MMAW, GMAW, and GTAW welding virtually and must not produce any real arc and real fume.

Vision technology	Virtual reality
Input supply	Single phase 110 – 230V, 50 – 60 Hz , 0.5 – 11A
Learning concepts	BUTT, FILLET, Pipe to pipe and Pipe to Plate
Welding position - basic	1G TO 4G (up to overhead), 5G for pipe
Skills learned	Stick out, speed, torch angle
Type of work pieces	Haptic work pieces (non-metallic)
Work stand	Facility to fix the job in all positions
Analysis modes reports	Video playback with option of viewing from different angles
Evaluation Methodology	Objective (score) / graphical (trends) evaluation
Viewing points	On helmet, simulator screen
System Construction	Welding simulator system should be supplied as a single unit with integrated display screen.(Easy installation and mobility is a must). No external steel parts permitted for safety reasons.
Input Method and Graphic User Interface	Touch Screen and Easy to understand and use GUI
Menu Language	Hindi and English mandatory
Display screen	20 inch and above with touch screen facility
Protection Against	Over current , Under voltage , Over voltage , Short Current
Tracking system	Only magnetic for precise weld tracking
Simulation	100% virtual
Evaluation	Every weld bead to be evaluated by the simulator
Guidance for ideal vision during welding	Continuous
Maintenance and update	Online
Networking of simulators	Possible
Simulator Compliance	CE and FCC regulation
Certification	ISO for Quality and environment management
Software to be supplied	With lifetime license including main OS such as windows and upgradeable
Ability to rack complete history	By personal login ID
Learning method	Didactic and trainer guidance
Administrative and trainer login	Must be available to monitor and evaluate students activity Data backup and calibration facility
RFID Based card access system	Inbuilt for enhance data security and administration of machine
Machine Alerts	Wrong parameter selection , touching work piece during didactic learning
Evolution results	Marks or graphs or both. Software must suggest pass/fail after completion of each course
Machine Display	Must be able to play E-learning videos/various audio visuals related to welding and safety
Machine up gradation (Hardware and software)	Robotic arm simulation facility for GMAW welding ,3D view form the helmet
GMAW and GTAW process	2-step and 4-step
Recording /Playback	Each welding seam must be recorded and played with ghost for evaluation propose
Warranty/Guarantee	2 years
Training	On site training of end user destination
After sales service	Through OEM or dealer across India

WELDING PLANT MIG/MAG PULSE SYNERGIC - 400A

1. The scope covers supply & commissioning of Intelligent MIG-MAG Synergic Pulse Linux based IGBT Welding Plant with air cooled torch for welding steel plates of thickness ranging from 2mm to 20mm, having powder coated sheet metal body and consisting of inverter based power source, wire feeder unit, torch gun, Co2/Argon regulator, in-built digital ammeter & voltmeter & interconnecting cables, along with all the standard accessories and items to make the unit fully functional. The machine shall have following broad technical parameters.

Power Source :

Technology	Intelligent Microprocessor Digitally Controlled Linux based IGBT Inverter (latest generation), Heavy-duty constant potential type power source for MIG/MAG, Synergic MIG, and Synergic Pulse/Pulse Multi Control MIG welding applications.
Type of Inverter	IGBT
Current Range	3–400A
Main Voltage	400V/415V \pm 10%, 3 phase, 50 Hz \pm 3%, 3/4 wire system
Mains Frequency	50 / 60 Hz
Welding Current @ 60% Duty Cycle	360A (10 min/40°C (104°F) 60% d.c.)
Welding Current @100% Duty Cycle	320A (10 min/40°C (104°F) 100% d.c.)
Type of cooling	Forced Air Cooled
Open Circuit Voltage	65 -80 Volts
Efficiency	88%
Protection Class	Drip proof and conforming to IP23 or better.
Power Factor	Not less than 0.97
Weight	Less than 40 Kg

Wire Feeder :

Feed Mechanism	4 - Roll filler wire drive mechanism for the wire feeder. All 4 Feed rolls should be geared and grooved and should be adapted to all wire sizes.
Wire feed range	1.0 to 25 m/min
Wire filler diameter	0.8 – 1.6 mm (All dia roller not to be supply)
Gun connector	Euro
Degree of Protection	IP 23

Welding gun/ Torch :

Type	Euro
Current rating	360 Amps. at 60% duty cycle with Argon and CO ₂ mix Gas at 10 min/40 ^o C.
Length of Torch	3.5 mtrs (Min)

Filler wires	0.8–1.6mm
Cable construction	Integrated type duly armoured.

2. Interconnection cable assembly of 5m comprising of 70mm² power cable to carry welding current of 400A fitted with copper cable connectors, gas hose & electrical control cable of 5m each between power source and wire feeder unit. These cables shall be inserted in flexible heat resistance hose/ sleeve to avoid damage to cables.
3. The machine shall have following features.
 - i. Adjustable Arc force, crater current, crater voltage, welding current & voltage
 - ii. 2/4 step welding modes switch
 - iii. Welding current and voltage should be pre-set and displayed digitally
 - iv. The welding machine shall be constant potential type with touch screen control unit (GUI in English & Hindi)/ panel complete including burn back control, crater fill, wire feed speed control, gas control with gas saving device and with infinitely variable pulse control synchronization of the wire feed speed with current pulse. Also it should be capable to work in normal MIG/MAG, Synergic MIG and Synergic Pulsed MIG / Pulse Multi Control mode (for overhead welding). Necessary diagnostic software for fault recognition and analysis should be pre-loaded in the welding machine
 - v. The power source should be completely digital microprocessor controlled IGBT/MOSFET based inverter of latest generation and should have step-less control of current and voltage. The frequency of inversion should be above 40 kHz. The communication from power source to peripheral devices like wire feed drive, welding gun, remote control unit etc. must take place via speed net cable, with high speed of 100 MBPS.
 - vi. The power source should be pre-programmed for various thicknesses of jobs/filler wire sizes. It should have the facility to store different programs in the memory (min 500 program locations) and it should be possible to retrieve the programs from the panel.
 - vii. The machine should have at least 300 pre-programmed Synergic Curves for MIG/MAG as well as Pulsed MIG processes in the memory and should also have at least 10 empty memory slots for adding new or customized programs.
 - viii. It should have 4 Roll Drive system with all powered and grooved feed rolls so as to have minimum slippage and maximum efficiency and positive wire feeding. The feed roller and gear wheel should be made of **Hardened Steel** material and should be adequately insulated. It should be with one wire feed motor fitted with tacho-generator. All the rolls should be geared. The wire feeder motor should have digital speed net feed back system at 100 MBPS to maintain desired speed at the time of welding.
 - ix. A step-less regulation shall be provided for accurate selection of wire feeder speed (for welding current) and a separate knob for welding voltage control,

in normal MIG/MAG operation. The Touch screen Function Panel should have step-less regulation of welding power (welding current & welding voltage controls simultaneously) in Synergic MIG operation. The function panel should also have facility for Arc Length control Stabilizer, Penetration Stabilizer welding dynamics control, etc.

4. The Accessories as mentioned under shall be supplied along with each machine.

4 core 4 mm² copper cable flexible PVC insulated & sheathed 4 m conforming to IS 694 or latest, for input connection from main power supply point to the plant

Earthing copper cable ISI marked 50 mm ² with heavy duty clamps	4 m
Auto Darkening Helmet for welding	1 No
Co2/Argon Gas regulator	1 No

5. The scope covers supply of the following consumables for the torch.

Gas Nozzle/Nozzle Holder	2 Nos
Contact tip 0.8 mm & 1.2 mm	10 nos. each
Gas diffuser/Insulator	5 Nos
Tip Holder	5 Nos
Liner for steel 0.8 mm & 1.2 mm	3 Nos Each

MW3000 TIG SPECS (AC-DC GTAW welding machine)

Welding power source	Portable digital process controlled microprocessor based CC based MOSFET controlled power source with switching frequency more that 70KHz having active wave resonant technology
Mains voltage	400V , 3 phase 50/60 Hz +/- 15%
Welding current range	3 to 300A (GTAW) 10 to 300 A (MMAW)
Duty cycle	
at 35%	300 A
at 100%	190 A
Protection class	IP23
Dimensions (in mm)	560 X 250 X 430
Weight	Less than 30 Kgs for portability
Standard safety	CE(S) factor of Safety
Power factor	0.99
OCV	89 V
Operating voltage	10.1 - 22.0 V
Type of cooling	FORCED AIR WITH AUTO CUT
Power consumption	Less than 6 KVA (at 100%d.c) for higher energy savings

WATER COOLING UNIT

Max delivery rate	3.5 L / MIN
Coolant volume	4 L
Dimensions (in mm)	625 X 240 X 225
Weight	Les than 10 KGS for portability
PROTECTION	IP23

WATER COOLED TIG TORCH

TORCH	Water cooled 300 AMPS,with remote control facility on torch handle, ergonomically designed preferably of the same make as machine suitable for electrode 0.8 to 3.2 mm uniformly variable
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ESSENTIAL FEATURES

Digital control	With DSP
Active Wave	For superquiet and highly stable arc with AC Balance
Panel locking feature	Keyboard lock for protection of parameters
Job storage	Should be able to store 100 programs
Electrode Ignition	RPI Function (reverse polarity ignition)
TAC function	for TAC welding programmable and adjustable
Scratch start and HF	Adjustable HF time
Pulsing	Inbuilt adjustable from 0.2Hz to 2000 Hz
Automatic cap shaping	Adjustable for various tungsten diameters
Active wave tech	for lower sound levels in AC
Digital display 2 nos	separately for current and voltage
Ac wave balancing	adjustable sine / square / triangular , rectangular wave shapes
protection	under / overvoltage protection
Hotstart feature	programmable
Arc force	Adjustable
Error diagnosis	display of all posible faults of machine in front panel display
Background current	adjustable
Ac frequency adjustable	40 to 100Hz
Earth Leakage	Earth leakage prevention thru inbuilt relay
Spot welding	Facility available for 0 to 9.9 Secs
POLARITY REVERSAL	Automatic Change of Polarity as per Job Settings,fix position for torch and earth cable
Nolise Level	Less than 80 dbA