**Section II: Schedule of Requirements**

**eSourcing reference:** ITB/2024/53060

1. **Summary of Requirements**

* **Lot 1- HDPE welding machine with generator and tools (4 items)**

1. **Technical specifications for Goods and Comparative Data Table**

**Lot 1- HDPE welding machine with generator and tools (4 items)**

| **Item No** | **UNOPS minimum technical requirements** | **Qty** | **Is the bid compliant?** Bidder to complete | **Details of goods offered.** Bidder to complete |
| --- | --- | --- | --- | --- |
| **1** | **SUPPLY, TESTING AND DELIVER HYDRAULIC BUTT FUSION WELDING MACHINE WITH ALL ACCESSORIES** | **26** |  | Insert details of goods offered, including specifications and brand/model offered |
|  | **Overviews of the Machines** |  |  |  |
|  | On-Site Manual Hydraulic Butt Fusion Welding Machines are self-align and designed to butt weld HDPE pipes and fittings, such as elbows, tees, wyes, and flange necks, by adjusting the clamp's drag bar without needing extra equipment. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Machine Components: Basic frame, heating plate, Planning tool/Milling cutter, hydraulic unit, a complete set of reduction insert clamps and Flange neck, Pipe roller, Support for heating & milling tools, Wrench, Pipe rollers |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **Manual Hydraulic Butt Fusion Welding Machine with an Outer Diameter of 90 to 315mm** |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **Heating Plate**: Detachable, PTFE coated aluminium with digital temperature control |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **Trimmer/Planer**: Electrical, for pipe end preparation and Equipped with a safety switch |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **Hydraulic Unit**: Integrated or separate, with hoses and pressure gauges and control valves |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **Frame Material**: Aluminium alloy or steel |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Accurate Pressure Metre: Equipped with a highly accurate, shockproof pressure metre for reliable operation |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Bead gauge, Pipe end cover and has a Shield |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **Welding Capacity**: Outer Diameter 90mm to 315mm |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **Heating Plate Temperature Range**: 250°C to 300°C (482°F to 572°F) with deviation in Temperature Control Accuracy: ±5°C |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Power Supply: 220 - 240V, 50Hz |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Total Power Consumption: ≤6 kW |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Hydraulic Pressure Range: 0 to 160 bar (Adjustable) |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Safety Features: Overheat Protection, Pressure Relief Valve, Emergency Stop Button, Temperature Control and safety interlocks |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **List OF SPARE PARTS** |  |  |  |
|  | 4pcs of Blades |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | 4pcs of Outer clamp, Screws & clamps bolt |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Warranty: One year comprehensive warranty should be provided from the manufacturer |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **CERTIFICATION** |  |  |  |
|  | Certification: Manufacturer ISO 9001 and CE (Conformity of Europeans via notified body or declaration of conformity) certificate |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Certification of ISO 12176 OR equivalent for HDPE Fusion Welding OR Joining Thermoplastic Equipment |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 1.2 | **SUPPLY, TESTING AND DELIVER 6 kW Outdoor and Weatherproof Diesel Generator** | 26 |  | Insert details of goods offered, including specifications and brand/model offered |
|  | Rated Power: at least 6 kW |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Maximum Power Output: 7 kW |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Engine Type: 4-stroke, air-cooled diesel engine |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Starting System: Electric starting system |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Charging System: Inbuilt 12V AC to DC battery charger |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Fuel Tank Capacity: ≥ 13 litres |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Handles: Foldable or retractable handles for easy transport |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Housing Material: Weatherproof, rust-resistant steel or aluminium enclosure |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Control Panel: Digital or Analog control panel with voltmeter, frequency metre, hour metre and various protection features like overcurrent and Overvoltage protection, |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **ALTERNATOR** |  |  |  |
|  | Rated Output Voltage: AC 220 VAC, +/-10V; &380VAC +/-10V, Rated Frequency 50 Hz |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Outlets: More than one AC outlets of single phase or 3-phase |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Alternator: AVR (Automatic Voltage Regulation) |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Power Factor: ≥ 0.8 |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Control Panel: Digital or Analog control panel with voltmeter, frequency metre, hour metre and various protection features like overcurrent and Overvoltage protection, |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Handles: Foldable or retractable handles for easy transport |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **Safety Features:**  Overload Protection, Low Oil Shutoff, Circuit Breaker, Ground Fault Circuit Interrupter (GFCI) |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | **CERTIFICATION** |  |  |  |
|  | CE (Conformity of Europeans via notified body or declaration of conformity) certificate |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Manufacturer ISO 9001: - For Quality management |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Warranty: One year comprehensive warranty should be provided from the manufacturer |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Should have a local agent/dealer to support in testing and after sales services required. If not, it has to commit/agree to arrange a local agent/dealer within three weeks after award. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Manuals: One set of operation manual and service manual (English language) should be supplied with the HDPE Welding machine and generator. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2 | **ELECTRO MECHANICAL TOOLKIT** |  |  | Insert details of goods offered, including specifications and brand/model offered |
| 2.1 | Tool Storage: Mechanics tool box with 3 cabinets, each tool in its own carrying case. | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.2 | **Long arm hex key Metric Sizes (Allen head wrenches): (2-24mm)**  **Made of Chrome Vanadium stainless steel**  Sizes: 2mm, 3mm, 4mm, 5mm, 6mm, 7mm, 8mm, 9mm, 10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 20mm, 21mm, 22mm, 23mm, 24mm | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.3 | **Standard Open-End Spanners (6-32mm):**  • Made of Chrome Vanadium stainless steel.  • Sizes: 6x7mm, 8x9mm, 10x11mm, 12x13mm, 14x15mm, 16x17mm, 18x19mm, 20x22mm, 21x23mm, 24x27mm, 30x32mm | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.4 | **Bi-Hexagon Ring Spanners (6-32mm):**  • Made of Chrome Vanadium stainless steel.  • Includes 10 double ring spanners: 6×7mm, 8×9mm, 10×11mm, 12×13mm, 14×15mm, 16×17mm, 18×19mm, 20x22mm, 21x23mm, 24x27mm, 25x28mm, 30x32mm. | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.5 | **Combined Ring and Open-End Spanners: (26 pieces)**  • Made of Chrome Vanadium stainless steel.  • Metric Sizes: 6 - 7mm , 8 - 9mm, 10 - 11mm, 12 - 13mm, 14 - 15mm, 16 - 17mm, 18 - 19mm, 20 - 21mm, 22 - 23 mm- 24 - 25mm, 26 - 27mm, 28 -29mm, 30 - 32 mm | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.6 | **Socket wrenches, hexagon, square drive with accessories 10-32mm** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| • Material: Type: Chrome-vanadium steel  • Reversible Ratchet: Size: 1/2"  • Spark Plug Socket: Size: 1/2"  • Socket Extension: Size: 1/2"  • Sliding T-bar: Size: 1/2”  • Universal Joint: Size: 1/2”  • Socket Size:10mm, 11mm, 12mm, 13mm, 14mm, 15mm, 16mm, 17mm, 18mm, 19mm, 21mm, 22mm, 24mm, 27mm, 30mm, 32mm.  • Carrying Case | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.7 | Spark plug spanner. | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.8 | Universal Metal Hacksaw with 5 Different Hacksaw Blades, | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.9 | **Adjustable wrenches: Chrome plating:**  • 10-inch adjustable wrench.  • 12-inch adjustable wrench. | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.10 | **Set of Universal Pliers and Standard Pliers** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| The set includes: Long Nose Pliers, Diagonal Cutting Pliers, Groove Joint Pliers, Slip Joint Pliers, and Linesman Pliers with carrying cases or pouches | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.11 | **Screwdriver Set (PH+SL) 6-Piece** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| The set includes  Slotted Screwdrivers:  • Sizes: 3 mm, 5.5 mm, 6.5 mm  Phillips Screwdrivers:  • Sizes: PH 0, PH 1, PH 2 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.12 | Machinist hammer: 500g, | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.13 | Machinist hammer: 1000g | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.14 | **5pc File Set:**  • 1pc Flat File, 1pc Angular File, 1pc Round File, 1pc Square File, 1pc Half-Round File | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.15 | **Chisel Set** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| **The Set includes**  • Set includes 1/4", 3/4", and 1" chisels, and case  • Cold Chisel 3/8”, 1/2″, 5/8” | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.16 | **Battery Service Kit** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| • Battery Hydrometer  • Battery Filler Bottle  • Battery Charger and Tester  • Battery Terminal Cleaner wire brush | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.17 | **Set of Feeler Gauges with minimum 10 blades** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.18 | **Wire brushes,** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.19 | **Vernier Caliper with Carrying Case** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.20 | **Steel tape rule, 5 m** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.21 | **Straight edges and string lines for aligning on street lines** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.22 | **Heavy Duty Bearing Puller/Extractor with 3 Leg Jaws; diameter 65mm and 120mm** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| • Pulling design internal, external and reversible  • Pulling diameter: ≥65 mm and ≥120 mm | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.23 | **Combination Wrench (6- 32mm)** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Combination Ratchet Wrench Set *(the ring has tooth Gear Design for clockwise / anti-clockwise rotation)* with Carry Case/pouch  Material: corrosion resistant Chrome Vanadium finish  **Metric Sizes: 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27, 30, 32 mm** | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.24 | **Hexagonal deep Socket set with 1/2" Drive Sockets,** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Hexagonal deep Socket set with 1/2" Drive Sockets,  • Material: Chrome-vanadium steel  • Reversible Ratchet size ½”  • T-bar, Universal swivel Joint  • Socket head type: hexagonal  • Size: 10 – 30mm 10mm,11mm,12mm,13mm,14mm,15mm,16mm,17mm,18mm,19mm,21mm,24mm,30mm | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.25 | **Insulated Open Spanners** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Open End Wrench, 1000V Insulated  8mm, 10mm, 13mm, 14mm, 17mm, 19mm, 22mm, 24 with carrying case/ tool roll bag has | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.26 | **Soldering Iron Kit with accessories** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| a. Electric Soldering Iron  • Power: 100 watts max, 230 VAC  • Temperature Range: Variable temperature soldering tips  o Tip Types: Conical, Bevel, and Chisel  b. Solder Wire  • Type: Lead-tin flux cored soldering wire  • Diameter: Comes in various diameters ranging from 0.5 mm  o Three different diameters of solder wires  c. Solder Sucker  • Vacuum Power: Typically operates at a vacuum power of 30 kPa to 60 kPa  • Nozzle Size: Comes with different nozzle sizes to suit various soldering applications  • Material: Made of high-quality, heat-resistant plastic or metal for durability and repeated use  d. Soldering Station  • Type: Thermally controlled soldering station with hot air gun and soldering iron  • Power Rating: 1500 watts  • Temperature Range: Hot Air Gun: 100-500°C  • Temperature Control: Digital temperature control with the option to set and store temperature presets for different applications  • Included Accessories:  o A range of nozzles for the hot air gun  o Interchangeable soldering tips | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Included Component: Soldering Iron Stand, Desoldering Pump, Tweezers, Cleaning Sponge, Soldering Iron Cleaning Ball, Carry Case: | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.27 | Electrician scissors | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.28 | Tweezing | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.29 | Magnetic tools (Magnetic Pick Up Tool Set) | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.30 | **INSPECTION TOOLS FOR THE ELECTROMECHANICAL TOOLKIT IN A WATER SUPPLY PROJECT TYPICALLY INCLUDE:** |  |  |  |
| **Digital Multimeter** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| • Measures voltage, current, resistance, continuity, and diode test  • Measuring Range: 600V, 10A  • Power Supply: 9V Alkaline battery,  • Kit includes digital multimeter, pairs of probes, carrying case | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.31 | **Digital Insulation Resistance Tester** | 27 | ☐ Yes ☐ No |  |
| • Digital Insulation Resistance Tester, Resistance Megohmmeter, Voltage Tester AC/DC,  • Kit Includes: Digital Insulation Tester, 2 x Test leads, 2 x Crocodile clips, Shoulder strap, batteries, User Manual[English], | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 2.32 | **Digital Tachometer** | 27 | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| o Measuring the rotational speed of machinery such as pumps, turbines, motors, and engines  o Power Supply: 9V battery/ rechargeable battery pack  o Kit includes: Reflective Tape (for non-contact measurement), Carrying Case, User Manual (languages English) | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
|  | Shall meet CE (Conformity of Europeans via notified body or declaration of conformity) and Manufacturer ISO 9001 quality standard for all tools |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 3 | **HEAVY DUTY RATCHET PIPE CUTTER, THREADER KIT WITH CARRYING CASE** | 40 |  | Insert details of goods offered, including specifications and brand/model offered |
| Portable Manual Hand-Held 1/2” to 3” Ratchet Pipe Threader Set Kit with Pipe threader set (threader die heads), Pipe vise, Pipe cutter and Tripod stand | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Portable Manual Hand-Held Ratchet Pipe Threader Set Kit | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Accessories: Includes necessary tools such as threader die heads, pipe vise, pipe cutter, and tripod stand for comprehensive pipe threading tasks. | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| **Pipe Threader and Pipe Cutter Set** |  |  |  |
| Type: Manual ratchet-operated with interchangeable die heads for threading pipes. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Adjustable length for different size up to 3 inches. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Tap dies Range: ½” to 3” |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Manual driven pipe threading wrench set kits: tripod stand, pipe vise, pipe threader set (threader die heads), pipe cutter |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Shall comply with ASME B31 |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| 4 | **Heavy Duty Pipe Wrench** | 40 |  | Insert details of goods offered, including specifications and brand/model offered |
| • Material: Constructed from Ductile Aluminum with iron cast alloys I-beam handle and C60 high carbon steel jaw.  • Heat-treated and high-frequency quenched teeth  • Precisely machined for a tight and secure grip on workpieces.  • Jaw Opening: Manually adjustable size from 1.25 to 5 inches (31.75 to 127 mm).  • Length: ≥36 inches (914.4 mm). |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |
| Jaw Surface: Fine teeth and dense chrome coating for corrosion protection and wear resistance. |  | ☐ Yes ☐ No | Insert details of goods offered, including specifications |

1. **Delivery requirements and Comparative Data Table**

| **UNOPS Requirements** | | **Is the bid compliant?** Bidder to complete | **Details**  Bidder to complete |
| --- | --- | --- | --- |
| **Delivery time Lot 1** | Bidder shall deliver the goods FCA within 60 days after Contract signature. | ☐ Yes ☐ No | Insert details |
| Bidder shall deliver the goods DAP within 120 days after Contract signature. | ☐ Yes ☐ No | Insert details |
| **Delivery place and Incoterms rules** | Ethiopia, DAP 2020 including customs clearance at the destination. | ☐ Yes ☐ No | Insert details |
| FCA as per Incoterms 2020 after Contract signature. | ☐ Yes ☐ No | Insert details |
| **Consignee details** | Ministry of Water and Energy, Addis Ababa, Ethiopia | ☐ Yes ☐ No | Insert details |
| **UNOPS Right to vary requirements** | At the time the Contract is awarded, UNOPS reserves the right to vary the quantity of the goods and associated services specified above, provided this does not exceed +/-20% , without any change in the unit prices or other terms and conditions of the ITB. | ☐ Yes ☐ No | Insert details |

1. **Inspections and tests**

The following inspections and tests shall be performed:

The vendor must have the goods inspected in the manufacturer’s works by a competent authority and submit a test certificate and also a guarantee/warranty certificate that the goods conform to written specifications.

UNOPS or its representative shall inspect and/or test any or all items of the goods to confirm their conformity to the contract, prior to dispatch from the manufacturer’s premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the goods on receipt at destination.

If the goods fail to meet the laid down specifications, the supplier shall take immediate steps to remedy the deficiency or replace the defective goods to the satisfaction of the purchaser.