

# TECHNICAL SPECIFICATIONS AND OTHER ALLIED REQUIREMENT

SI No.	Description of items	Quantity
PUR/511/AMF/BB/E/2019-20		
1	SUPPLY INSTALLATION TESTING AND COMMISSIONING OF VIRTUAL WELDING SIMULATOR WITH SMAW,FCAW,MIG and TIG SIMULATION FACILITY	1

## 1. INSTALLATION, COMMISSIONING AND TRAINING

- 1.1. The ordered goods are required to be installed within 15 days of receipt of goods at final destination. Installation should be carried out only by expert engineers of Supplier / Manufacturer. During the course of installation, necessary training on operation and maintenance of the goods shall be imparted to Institute's, Scientist / Engineers/Technicians.

## 2. WARRANTY

- 2.1. Comprehensive on-site warranty for a period of one year must be provided to be effective from the date of completion of installation and commissioning and final acceptance of the items / equipment at the user's laboratory / Institute.

## 3. QUALIFICATION REQUIREMENT

- 3.1. Bidder must be the original equipment manufacturer [OEM] of the model offered by them. Bidder shall furnish necessary documentary evidence in this regard.

## WELDING SIMULATOR TECHNICAL SPECIFICATIONS

SL.NO.	DESCRIPTION	SPECIFICATION
1	Input power supply	230V $\pm$ 20V ,50Hz, Single Phase
2	Simulation method	Extended Reality / Augmented Reality / Virtual Reality. No real arc or smoke or consumables
3	Weight	50 kg Maximum
4	Power consumption	800 Watt Maximum
5	PC configuration	Minimum GeForce 1060 graphics card and above; Minimum 3 GB graphics memory Minimum 8 GB system RAM
6	Welding current /voltage Range	50 A - 250 A 10V - 32V
7	Display monitor	HD monitor 21" or above
8	Process	GMAW, SMAW & GTAW with filler rod
9	Welding positions supported	1G,2G,3G,4G,5G & 6G 1F,2F,3F,4F, 5F
10	Joint types supported	BUTT joint ,TEE joint ,LAP joint
11	Simulator workpiece practice length	300 mm Minimum
12	Workpiece thicknesses	3mm – 15 mm
13	Live feedback	Live feedback of all the parameters of Welding :- Welding path, Speed, Travel Angle, Weld Angle, Arc Length / Stick out Measurement during the training.
14	Green welding simulator	No real arc or Fumes for simulation
15	Cut Section View	The Cut section of the welded plate at any location desired by the user in both axis
16	Weld Analysis	Porosity, Spatters, Penetration, Fusion, Weld Bead Size etc.
17	Replay option	The replay of the welders training session
18	Display Helmet	3D view through helmet, full HD resolution for each eye

## WELDING SIMULATOR TECHNICAL SPECIFICATIONS

SL.NO.	DESCRIPTION	SPECIFICATION
19	Types of Metal supported	Mild Steel, Stainless Steel, and Aluminium.
20	Gas options	GMAW - CO <sub>2</sub> , Argon + CO <sub>2</sub> (mix) GTAW - Argon, Argon + Helium (mix)
21	Voiceover	English and Regional languages Voiceover user guidance
22	Multiple Language Support	English and Regional languages
23	Reports of training	User reports of training and their scores with graphical reports.
SL.NO.	ACCESSORIES	QUANTITY
1	3D helmet	1 No.
2	Welding Gloves	1 Set
3	GMAW,SMAW and GTAW torch and accessories	1 each
SL.NO.	MANUALS	QUANTITY
1	User Operation Manual	1 No.
2	Trainer Manual	1 No.
ADDITIONAL REQUIREMENTS		
1	The installation and commissioning of the welding simulator shall be done by the welding simulator manufacturer / Supplier.	
2	Free training shall be provided to operator/user for one week for the operation to the welding simulator.	
3	The Welding Simulator shall be internet enabled with facilities for auto up-dation of new version of operating system software	
4	All Technical Support and services shall be provided free of cost for initial one year after successful commissioning of the welding simulator.	