

TECHNICAL SPECIFICATIONS AND OTHER ALLIED REQUIREMENTS

SI No.	Description of items	Quantity
PUR/358/NDT/RK/E/2021-22		
1	SUPPLY AND INSTALLATION OF AIR-LESS SHOT PEENING MACHINE (DETAILED SPECIFICATION AS PER ANNEXURE – I)	1 No.

1. DELIVERY AND INSTALLATION:

The ordered goods are to be delivered and installed at CSIR-CMERI, Durgapur within 05 months of receipt of Purchase Order. Installation should be carried out only by expert engineers of Supplier / Manufacturer.

2. WARRANTY

- 2.1. Standard OEM warranty will be provided by the supplier from the date of satisfactory installation of ordered goods.

3. BID SECURITY DECLARATION

- 3.1. Bid Securing Declaration in Company's Letter Head and duly signed by the authorized personal of the Bidder shall be provided by the supplier as per our format.

4. Manufacturer Authorisation Form

- 4.1 MAF will be provided by the supplier

5. PERFORMANCE SECURITY:

- 5.1. Performance Security @3% of Invoice value is to be furnished by the supplier within 21(twenty-one) days from the date of Purchase Order and it should remain valid for a period of 60 (sixty) days beyond the contract period.

6. PAYMENT TERM:

- 6.1 100% payment shall be paid within 30 days after delivery and satisfactory installation of ordered goods upon submission of the Performance Security.

7. BID SECURING DECLARATION:

- 7.1 Bid Securing Declaration is to be submitted by the Bidder as per the format prescribed in the tender document.

8. CERTIFICATE FOR LOCAL CONTENT:

- 8.1 Certificate for local content to be provided by the supplier in form 14 (Format attached along with Tender Document). Percentage of value addition & Name and address of the factory where the value addition was made should be mentioned clearly in the Form 14.

Annexure-I

Air-less Shot Peening Machine

A. Technical Specification of Rotor		
S.No.	Description	Parameter/Unit
1.	Number of Rotor (Blast Wheel)	One or Two
2.	Blast Wheel Size	Wheel size minimum of 2.5 inch width and 19.5 inch diameter
3.	Number of Rotor Blade	6 to 8
4.	H.P of Rotor	15 H.P. or above
5.	RPM of Rotor (min.)	2600 to 2800 RPM
6.	Hardness of Control cage, Impeller and other parts of Rotor	50 to 60 HRC
7.	Hardness of Rotor Blade/ Blade Impeller	60 to 70 HRC

B. Technical Specification of Shot Flow		
S.No.	Description	Parameter/Unit
1.	Shot Flow Rate (min.)	5000 to 8000 Kg/Hr
2.	Shot Velocity	70 to 80 Mtr/Sec
3.	Initial Fill Requirement of Shots	200 to 500 Kg
4.	Provision to use different Shot Sizes	Diameter- 1 to 4 mm
5.	Shot Separator	For separating small (1 mm) and large size shots (4 mm), dust and other ingredients.

C. Peening Chamber Requirement		
S.No.	Description	Parameter/Unit
1.	Diameter of Swing Table	Minimum 1200 mm
2.	Swing Table specification	Minimum 8 mm thickness with austenitic Manganese steel liner (Ni-Hard./Hi-Chrome/ Mn-Steel)
3.	Working height of above the Table	Minimum 600 mm
4.	Manganese steel/Ni-Hard./Hi-Chrome liner inside peening cabinet with Single Door	8 to 12 mm thickness (it should be in hardened condition in order to resist any wear & tear during peening operation)

Padge

5.	Loading capacity of Swing Table	Upto 800 kg <i>or higher</i> <i>Radhe</i>
6.	RPM of the Swing Table	2 to 5 RPM
7.	Peening Chamber	It should be dust proof; no dust/powder should come out from the chamber.

<i>D.</i> Filter System		
S.No.	Description	Parameter/Unit
1.	Type of Dust Collector	Fabric Bag/ Cotton (woven) Bag/Polyester Felt Bag/ Nylon felt Bag or any.
2.	CFM of Dust Collector	1500 to 2000 CFM (Cubic Feet per Minute)
3.	Number of Bags	20 Nos. or Higher
4.	Bag Shaking Arrangement	Auto Shaking Arrangement/Auto-mechanical/Motorized Shaker
5.	Drive for Shaker Motor	1 HP or above
6.	Compressed Air Requirement (to control the flow of shots)	5 to 20 CFM
7.	Noise Level	≤ 85 dB at 1 meter of distance
8.	Dust emission level	≤ 80 Mg/m ³

<i>E.</i> Electric Power		
S.No.	Description	Parameter/Unit
1.	Total Power Requirement with single door m/c (Includes Blast Wheel, Drive for Shaker Motor, Dust Collector Unit, Feeding arrangement)	15 to 25 HP

<i>F.</i> Additional Accessories/Safety Feature	
S.No.	Description
1.	PLC Automated Controller system/Automatic Time Control with HMI.
2.	Emergency switch to turn off the machine.
3.	Window for monitoring the operating condition of the workpiece.
4.	Blast wheel would start only after closing the door.

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