



VIBRANT THERMAL ENGINEERING
CHENNAI - 600056.

CUSTOMER

**JINDAL ALUMINIUM
BHIWADI**

PRODUCT

TROLLEY TYPE AGEING OVEN – 3 MT

OFFER NO

VTE/JINDAL/W027/23-24

DATE

28.06.2023



VIBRANT

THERMAL ENGINEERING

Mfrs. Of Industrial Furnace & Oven
An ISO 9001-2015 Certified Company



HSN CODE :- 85143090, 8417

GSTIN :- 33AFMPV4138F1ZA

Kind attn: Mr. N. Mohan (Senior Associate Purchase)

Dear Sir,

Sub : Your Requirement of AGEING OVEN

This is reference to the Email dated on 28.06.23 regarding on your Requirement of TROLLEY TYPE OVEN

We trust our enclosed offer would be entirely in line with your requirement.

Please feel free to contact us in case of any additional information / clarification.

We assuring our best services and looking forward to the pleasure of your valued order.

For VIBRANT THERMAL ENGINEERING

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TECHNICAL SPECIFICATION OF THE OVEN

EQUIPMENT	INDUSTRIAL OVEN
TYPE	TROLLEY TYPE LPG FIRED TROLLEY OVEN
APPLICATION	AGEING OF ALUMINIUM
OPERATING TEMPERATURE	200 DEG C.
SIZE OF THE OVEN INTERNAL	4600 MM LENGTH 2000 MM WIDTH 1300 MM HEIGHT ABOVE TROLLEY
CAPACITY	3 MT
SKIN TEMPERATURE	AMBIENT + 10 DEG C
BURNER	3 NOS. AUTOMATIC
FUEL	LPG
INSULATION	150 MM THICK ROCKWOOL
NO. OF DOOR	1 NO. VERTICAL RISE AND FALL TYPE COUNTERWEIGHT BALANCED DOOR ARRANGED FOR MOTORIZED OPERATION. MOTOR CAPACITY: 1 HP APPROX.
TROLLEY	LOADING HEIGHT OF TROLLEY 450 MM FROM GROUND LEVEL

TROLLEY DIMENSIONS	4600 X 2000 X 450 MM
NO.OF TROLLEY	1 NO MOTORISED GEARED MOTOR 6 NOS. WHEEL
TRACK FOR TROLLEY	JINDAL SCOPE.
INSTRUMENTATION	PID CONTROL SYSTEM
BURNER CONTROL	ON/OFF
NO. OF ZONES	3
CONTROL PANEL	NEW WITH PLC WITH HMI OUR SCOPE WILL INCLUDE SUPPLY OF 1 NO. SELF-STANDING FACTORY WIRED INSTRUMENT / ELECTRICAL CONTROL PANEL HOUSED WITH PLC, HMI, VARIOUS ELECTRICAL SWITCH GEARS FOR FEEDING AND PROTECTING THE MOTORS WITH NECESSARY CONTACTORS, OVERLOAD RELAYS, FUSES, INDICATING LAMPS, PUSH BUTTONS ETC. AND THE TEMPERATURE CONTROL INSTRUMENTS. THE PANEL WILL ALSO HAVE THE CUT-OUTS FOR THE MOUNTING OF THE INSTRUMENTS.
ALRAM INDICATION	TRIP ALARM WITH HOOTER FOR ALL MOTORS AND BURNERS
POWER SUPPLY	415V, AC, 4 wire system, 50 Hz

	<ul style="list-style-type: none"> • The trolley bottom will be constructed out of 1.5 mm thick MS Sheets, and the wall will be reinforced with suitable structural stability. • Trolley will 6 nos. of wheel
TROLLEY MOVEMENT	Motorized through geared motor 2 hp

RECIRCULATION FAN	<p>3 Nos (1 NO/ZONE). THE FAN IMPELLER AND THE SHAFT WILL BE OF MILD STEEL MATERIAL.</p> <p>THE FAN WILL HAVE MS FABRICATED HOUSING WITH SUCTION OPENING AND CONE MADE OUT OF MILD STEEL.</p> <p>THE FAN SHAFT WILL BE DRIVEN BY AN ELECTRICAL MOTOR OF 5 HP WITH BELT DRIVE ARRANGEMENT. OUR SCOPE WILL BE FOR COMPLETE FAN ASSEMBLY WITH MOTOR AND MOUNTING SYSTEM.</p>
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THERMAL INSULATION

OVEN DOOR TROLLEY	<p>Oven and door will be insulated rockwool slab of 125 mm</p> <p>25 MM CERAMIC FIBRE ON HOT FACE</p>
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<p>Temperature Control</p>	<p>The temperature of the oven is measured by 'K' type thermocouple (6 Nos.) located in the chamber and the digital control output from the PID CONTROLLER will operate the burner</p> <p>PID CONTROLLER - 3 NOS.</p> <p>SAFETY CONTROLLER - 3 NOS</p>
<p>AUTOMATIC TEMPERATURE CONTROL SYSTEM</p>	<p>The temperature of the Oven is measured by 'K' type thermocouples located in each zone and the pid control will actuate the solenoid vale of the burners. Our scope of supply will include the following temperature control instruments:</p> <ul style="list-style-type: none"> • PID control • Overshoot temperature protection safety control • 6 Nos. "K"/ type thermocouples and compensating cables.
<p>SAFETY ALARM SYSTEM</p>	<p>Burner trip alarm with hooter & Tower Light will be provided for the operator to attend immediately in case of flame failure.</p>

COMBUSTION, GAS TRAIN AND SAFETY SYSTEM

1	BURNER MAKE:CONTI / EQ FUEL: LPG BURNER CAPACITY: 8 - 10 KG/HR TOTAL LOAD 30 KG/HR MAX BURNER ASSEMBLY INCLUDES BURNER BLOCK GAS FLOW ADJUSTING VALVE AIR ADJUSTMENT VALVE	3 NOS
2	FLASH BACK ARRESTORS	3 NOS
3	AUTO IGNITION SYSTEM AND FLAME MONITORING SYSTEM IGNITION TRANSFORMER WITH HT CABLE BURNER SEQUENCE CONTROLLER FLAME ROD	3 NOS
4	AIR GAS RATIO REGULATING SYSTEM	3 NOS
5	GAS TRAIN SYSTEM MAKE: VANAZ / MADAS INLET BALL VALVE INLET PRESSURE GAUGE GAUGE ISOLATION VALVE GAS FILTER PRESSURE REGULATOR LOW PRESSURE GAS SWITCH HIGH PRESSURE GAS SWITCH AIR PRESSURE SWITCH SAFETY RELIEF VALVE OUTLER PRESSURE GAUGE OUTLET BALL VALVE	1 NO.
6	SAFETY SYSTEM FAST ACTING SOLENOID VALVE	1 NO.
7	INSTRUMENTATION THERMOCOUPLE - 6 NOS - K TYPE	1 NO.
8	CONTROL PANEL WITH BURNER MANAGEMENT SYSTEM	1 NO.
9	SIEMENS / EQ PLC WITH 7" HMI	1 NO.

10	<p>RC FAN</p> <p>CENTRIFUGAL FAN SUITABLE FOR THE OPERATING TEMPERATURE, DRIVEN BY 5 HP MOTOR EACH. LOCATION OF RC FAN : ROOF MOUNTED. AIR CIRCULATION BAFFLES : BOTH SIDES WILL BE PROVIDED WITH BAFFLES FOR HOT AIR CIRCULATION ACROSS THE WIDTH. PERFORATIONS IN THE SIDE WALL BAFFLES WILL BE MADE ACROSS THE HEIGHT OF THE BAFFLES FOR UNIFORM DRYING OF THE PRODUCT. THE DIRECTION OF AIR FLOW WILL ALTERNATE IN EVERY SUCCESSIVE ZONE.</p>	3 NOS.
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MAKES OF MAJOR ITEMS:

BURNER : CONTI / EQ

GAS VALVE TRAIN : MADAS (ITALY) EQ

RECIRCULATION FAN : CONTINENTAL / NEAT / NADI / EQ MAKE

MOTORS : BHARAT BIJLEE/ SIEMENS/ EQUIVALENT

THERMOCOUPLE : ELECTRX/ EQUIVALENT

PLC/HMI : SIEMENS / EQ

ROCKLOYD SLAB : ROCKWOOL / EQ

**ANNEXURE C
PRICE**

SL NO	DESCRIPTION	COST
1	OUR OFFER FOR SUPPLY ERECTION AND COMMISSIONING OF TROLLEY TYPE AGEING OVEN AS PER ANNEXURE A & B	Rs. 53,21,111/-

TERMS AND CONDITIONS

PRICE	EX-WORKS, CHENNAI
GST	@18%
DELIVERY	16 - 20 WEEKS DELIVERY PERIOD STARTS AFTER RECEIPT OF ADVANCE.
DESPATCH	WITHIN 7 DAYS AFTER RECEIPT OF 95% PAYMENT
PAYMENT	50% ADVANCE AGAINST P.O 45% + FULL TAXES AGAINST PROFORMA INVOICE within 15 days 5% AFTER COMMISSIONING.
PACKING	@2%
INSURANCE	YOUR SCOPE
TRANSPORT	YOUR SCOPE
WARANTEE	12 MONTHS FROM THE DATE OF COMMISSIONING IF ANY DEFECTIVE IN MANUFACTURING OR ITEMS PROCURED. ONE YEAR SERVICE WILL BE FREE OF COST. IF ANY PARTS DAMAGED DUE TO WRONG OPERATION PARTS WILL BE REPLACED BY ADDITIONAL COST. IN CASE OF MALFUNCTIONING/FAILURE OF SOPHISTICATED INSTRUMENTS LIKE CONTROLLERS, RECORDERS, CONTACTORS ETC., DUE TO VOLTAGE FLUCTUATION, THE SAME WILL BE REPAIRED/REPLACED ONLY AFTER ACCEPTANCE OF THE REPAIR CHARGES BY THE CUSTOMER.
VALIDITY	30.07.2023

ANNEXURE D

VIBRANT SCOPE OF WORK	JINDAL SCOPE OF WORK
The oven will be properly packed and loaded on to your transporters vehicle at our works	All civil work will be in your scope and we will provide detailed civil drawing.
At your site we will carry out the complete erection of the Oven	While we will spare no efforts to erect the oven, if we require any heavy material handling equipment, like crane, hoist, etc. you should provide the same FREE OF COST You should provide air, compressed air, and water and power FREE OF COST
Supply of Complete oven,door and trolley	Welding m/c, welding rod, consumables at site and gas cutting set should be provided by you FREE OF COST
	UNLOADING of Oven at your site will be carried out by you at your cost
	Transportation charges and Insurance will be to your account
	You should provide a switch fuse unit near our control panel Incoming power to our control panel.
Platform with ladder for climbing the Oven and top	LPG pipe line till our gas train your scope. Pressure 1.5 – 2 bar
	Rail supply and foundation
Chimney 10 mtr.	Chimney hole provision at the roof Chimney erection and tie with rope your scope
	Supply of complete electrical cables from Oven to control panel. Electrical cable providing and laying till the field equipment your scope
	Any additional work apart from the mentioned work will carried out by jindal inclusive of material and labour

MAKE OF BROUGHT OUT ITEMS

SL NO	DESCRIPTION	MAKE
1	BURNER	CONTI / EQ
2	M.S PLATES	TATA/SAIL/JINDAL
3	CIRCULATION FAN	VIBRANT
4	CONTROL PANEL	SIEMENS SWITCH GEAR/EQ
5	BEARING	SKF/FAG/NTN/NACHI
6	PLUMMER / PILLOW BLOCK	NTN/FAG/SKG/EQ
7	CHAIN SIMPLEX / DUPLEX 1" FOR DOOR	TI/EQ
8	MOTORS	SIEMENS/BBL/EQ
9	GEAR BOX	BAUER / SEW/BONFIG/EQ
10	ROCKWOOL	SAINT GOBAIN
11	DRIVES	DANFOSS / EQ
12	THERMOCOUPLE K TYPE 500 MM LONG	ELECTRX
13	PID CONTROLLER	EUROTHERM / FUJI
14	SAFETY CONTROLLER	EUROTHERM / FUJI
15	PLC AND HMI	SIEMENS / EQ