



Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT / CAPITAL EQUIPMENT

An ISO 9001
Company

ENQUIRY – Corrigendum 1

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NIT No. 33610	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
	2601700043	10.07.2017	03.08.2017

You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order

Please note that under any circumstances both **delayed offer** and **late offers** will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the date of tender opening

Item Description: Argon Gas Purging Equipment used for Pipe to Pipe / Fittings Butt Welding Applications

Details of Corrigendum

AMENDMENT TO CLAUSE Nos.2.5 & 6.0 of Technical Specification

Sl No of the Specification	BHEL Requirement (Existing)	BHEL Requirement (New) Amended as
2.5 of Technical Specification	Tube Sizes [All Dimensions are in millimeters] (The diameter was not cleared weather OD or ID)	The dimensions given for the tubes are Outer Diameter x Wall Thickness [OD x T] in millimeters
6.0 of Technical Specification	Purge Gas Quality Measurement Gauge for a 100 PPM of dissolved Oxygen or better with technical details	The Gas Quality Measurement Gauge sensitivity shall be upto 1 PPM of Dissolved Oxygen

Note: Vendors shall submit their offers by taking the above into consideration on or before the Tender due date. Alternatively above shall be complied with in the final scope of supply (after tender opening) and necessary price impact shall be submitted by that time.

All other terms and conditions and specifications as published in the NIT 33610 remain unaltered.

BHEL's General guidelines / instructions (refer MM / CE / GENL / 001 - EMD) including bank guarantee formats and list of consortium banks, commercial terms compliance form can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under above Enquiry reference.

Tenders should reach us before 14:00 hours on the due date
Tenders will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED


DGM / MM / Capital Equipment

TECHNICAL SPECIFICATIONS FOR 'PIPE GAS PURGING EQUIPMENT' USED FOR PIPE TO PIPE / FITTINGS BUTT WELDING APPLICATIONS

S. No.	PARTICULARS / SPECIFICATIONS		VENDOR'S OFFER
1.0	PURPOSE & APPLICATION		
1.1	a) High quality circumferential butt-welding of pipes with other pipes, requires inert gas to be used inside the bore to prevent oxidation and notching of the root penetration weld bead b) The spinal tube carries the gas to inflate the purge dams and the low profile valve to release the gas gently, to purge the inter-space without turbulence c) The pipe purging equipment is intended to supply the purging gas to pipe to pipe, pipe to end cover for similar and dissimilar material. d) The pipe purging equipment is intended to withstand the temperature required to preheat the joint before welding. e) The pipe purging equipment is intended to withstand the temperature reach during the welding operation. f) The pipe purging system is intended to minimize the area to be purged and reduced the volume of purging gas required. g) The purging system is to be used for both tubes and pipes, which involve welding of tube bends and fittings (like ELBOWs, TEEs, Flat & Dished End Covers) also, with suitable gas purging equipment h) The purging systems shall be suitable for regular fabrication shop floor needs and for the project site applications also.		
2.0	JOB DIMENSIONS & MATERIALS		
2.1	Pipe Sizes	1. ID x thickness : (315 mm x 95 mm) 2. ID x thickness : (610 mm x 38 mm) 3. ID x thickness : (250 mm x 76 mm) 4. ID x thickness : (550 mm x 137 mm) 5. ID x thickness : (320 mm x 150 mm) 6. ID x thickness : (250 mm x 137 mm)	[Bidder may quote for sizes of suitable range of Pipe IDs, from which BHEL will make the selection of sizes]
2.2	Pipe Material Specifications	High Nickel Alloys, Titanium Alloys, Stainless Steel – Super / Duplex, Gr.91	
2.3	Pipe ID Tolerance	(+0 mm, - 2mm) for All Sizes of Pipes	

S. No.	PARTICULARS / SPECIFICATIONS		VENDOR'S OFFER
2.4	Length of Pipes used	600 mm to 6000 mm (in various combinations)	
2.5	Tube Sizes [All Dimensions are in millimeters]	44.5 x 7.6	Tube Sizes denote Outer Diameter x Wall Thickness (OD x T)
		38.1 x 9.0	
		50.8 x 8.6	
		63.5 x 6.5	
		50.8 x 11.2	
		76.2 x 7.6	
		54 x 12.2	
		52 x 9.5	
		52 x 15.2	
		41.3 x 8.2	
		69.85 x 4.6	
		69.85 x 6.4	
2.6	Tube Material Specifications	Alloy 617, Grade 91, Titanium Alloys, Stainless Steel – Super / Duplex, etc.	
2.7	Tolerance for Tube Wall Thickness	0 to 10 % of Wall Thickness [All Tubes OD controlled]	
2.8	Length of Tubes used	200 mm to 10,000 mm (in various combinations)	
3.0	OPERATING CONDITIONS		
3.1	Job (Pipe & Tube) Surface Temperature	Max. 300 Degree C	
3.2	Type of Purging Gas	Argon or Nitrogen	
3.3	Welding Processes Adopted	SMAW, MIG , MAG, GTAW using manual and/or mechanized welding systems – operated continuously	
3.4	Job Position in Welding	In all positions (including vertical axis) Either job fixed or job rotating	[Bidder to confirm suitability & to furnish technical details]
3.5	Purging Gas Supply Source	Through gas bottles or through supply lines from gas tankers/vessels	
4.0	GAS PURGING SYSTEMS		
4.1	System Configuration	Offered system to have baffles/dams, gas diffusers, sheathed gas conduits, seal discs, flow control valves, gas inlet & outlet nozzles, excess pressure vent, flexible arm for bends/elbows, pull cables, end couplings, etc.	[Bidder to confirm suitability and to furnish technical details for the pipe and tube sizes listed under Clause No. 2.1 and 2.5]
4.2	Material Specification	The materials of construction for the above listed elements (Clause No.4.1) to be described with safety features	
4.3	Gas Flow Rate	Bidder to specify the range applicable	
4.4	Heat Resistance Capacity & Time Cycle	Bidder to specify the range applicable	

S. No.	PARTICULARS / SPECIFICATIONS		VENDOR'S OFFER
4.5	Connection System	Bidder to specify the types of connecting means/ modes with the extension hoses	
5.0	Pressure and Flow Measurement	Bidder to offer a suitable Purging Gas Flow & Pressure Measurement Gauge with technical details	
6.0	Gas Quality Measurement	Bidder to offer a suitable Purge Gas Quality Measurement Gauge for a 1 PPM of dissolved Oxygen with technical details	(2 Nos. are required)
7.0	SPARES :- BIDDER has to supply all necessary spares for two years of continuous operation.		
8.0	DOCUMENTATION :- Three set of documentation hard copy along with soft copy to be provided		
9.0	INSTALLATION :- BHEL desires to have the Installation & Demonstration of the Offered System, by the Supplier's Representative at BHEL Works		
10.0	GAURANTEE :- Performance of the Offered Equipment & Components are to be guaranteed for a minimum period of TWELVE months from the date of installation or EIGHTEEN months from the date of dispatch whichever is earlier		
11.0	OPTIONAL ITEMS		
11.0	BIDDER has to quote for the following OPTIONAL ITEMS, which are also used for Gas Purging Systems for Pipe/Tube welding applications : a) Inflatable Pipe Stoppers b) Pre-Formed, Self Adhesive Water Soluble Purge Dams c) Halogen and Fluorocarbon Free Purge gas retaining tape d) Water soluble socket weld spacer rings e) Fiberglass weld backing tape f) High temperature resistant, fully coated aluminium tape		
12.0	PRE-QUALIFICATION REQUIREMENTS		
12.1	The BIDDER / OEM (Original Equipment Manufacturer) should have minimum FIVE Years of experience in the field of design and manufacture & supply of Gas Purging Systems to various industries across the GLOBE .		
12.2	The BIDDER should give the list of customers (with contact details) for whom Gas Purging Systems of identical/similar design (offered to BHEL through this tender) are/were supplied in the last five years. BHEL might contact these customers for getting the performance feedback of such Gas Purging Systems		