



ANNEXURE-A to Enquiry 3261698E dated 15.03.2017

Open Tender for Procurement of Multimedia cleaning device as per our Specification :RAH-512/Rev00

NOTICE INVITING TENDER

Sealed Tenders are invited for the supply of Multimedia cleaning device as per the Specification, Standards and Quantities as listed below.

SCOPE : SUPPLY OF Multimedia cleaning device as per our Specification :RAH-512/Rev00.

Sl No	Material code	Description	Model No	Material Specification	Unit	Qty	Delivery Schedule
01	R52609270001	Multimedia Cleaning device for 27.5 Size RAPH- Hot end	-	RAH-512/Rev00	No	2	24.05.17
02	R52609270002	Multimedia Cleaning device for 27.5 Size RAPH- Cold end	-	RAH-512/Rev00	No	2	24.05.17
03	R52609270003	Common PLC Control System with PLC Panel & Local Control Panel for Sl No 01 & 02	-	RAH-512/Rev00	No	1	24.05.17

The supplier shall follow our Specn:RAH-512/01

Destination : BHEL Stores, Ranipet 632406, Tamil Nadu

SI No 01 to 03 will be procured as a Set. Hence, Composite Price of SI No 01 to 03 as a Set will be considered for arriving at the rank of L1.

BHEL reserves the right that the Price Bid opening will be done through conventional sealed bid opening mode (OR) Reverse Auction method (English method).

New supplier/vendor shall submit SUPPLIER REGISTRRTION FORM (SRF) thro' ONLINE PORTAL. You are requested to visit our Web Site : www.bhel.com and click under heading 'Supplier Registration' and fill up the 'Supplier Registration Form' which is available in the Online Supplier Registration Portal. (or Copy the following URL Link and paste in the web link address: http://www.bhel.com/vender_registration/vender.php and proceed with). After successful submission, a hard copy of the same with all the annexures (as called for) may please be sent to

Mr. K.Jothi Arulanandam, Manager-Purchase, Supplier Development Cell,
email: kj@bhelrpt.co.in, phone: 04172 284474 / 4333
Bharat Heavy Electricals Limited, RANIPET, Tamil Nadu, India. PIN:632 406

Qualifying criteria for the new vendors -Pre-qualification creteria

1. The supply shall be as per our Specification RAH-512 Rev 00 only. Deviation if any, the "deviation summary" shall be submitted for our technical evaluation.
2. The Bidder is required to meet the proven-ness criteria for Multimedia cleaning device for Air Preheater application as per criteria stipulated below.

The Bidder should have previously designed, manufactured and supplied “Partial retractable type multimedia cleaning device” for Air Preheater or Gas to Gas heater application in a Boiler or Flue Gas Desulfurization system. The device should be capable of cleaning the heating elements using High pressure water, Steam & Air.

The device should have been designed for operating not less than 200 Kg/cm²(g) for Water and 14 Kg/cm²(g) for Steam. It shall be in successful operation in at least one (1) plant for a period of not less than one (1) year on the date of techno-commercial bid opening.

3. The following information should be submitted by the vendor where the Multimedia cleaning device has been supplied:
 - a. Name of the customer & Project details where the Cleaning device is supplied.
 - b. Water pressure & Steam pressure for which the device is designed for
 - c. Complete postal address of the customer.
 - d. Name, designation and contact details of the contact person of the customer.
 - e. Month & Year of commissioning.
 - f. Relevant Purchase Order copies
 4. BHEL reserves the right to verify the information (supporting documents for points a to e) and other credentials provided by the Vendor. In case the information provided by vendor is found to be false / incorrect, the offer shall not be considered.
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Bharat Heavy Electricals Ltd
Boiler Auxiliaries Plant
Ranipet-632 406

EDC / AIR PREHEATERS
TECHNICAL SPECIFICATION
Effective Date: 11.02.2017

Specification No : RAH 512

Rev. No : 00

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01 Item : Hot End & Cold End Multimedia Cleaning Devices for 27.5 size RAPH

02	Application	Multimedia cleaning device would be used for cleaning the Air Preheater Heating elements 'On Load' with steam and 'Off Load' with high pressure water.	
03	Surroundings	Outdoor installation in dusty, humid and corrosive atmosphere of Coal / Oil fired Utility / Industrial Boilers. Ambient Temperature 50°C.	
		Hot End Multimedia cleaning device	Cold end Multimedia cleaning device
04	Location	At Hot End in the Flue Gas duct as shown in page 03 of 04.	At Cold End in the Flue Gas duct as shown in page 04 of 04.
05	Flue Gas Temperature (Lance exposure Temp.)	Working Condition (Gas Inlet): 350°C Design Condition (Gas Inlet) : 400°C	Working Condition (Gas Outlet): 125°C Design Condition (Gas Outlet): 100°C
06	Flue Gas Pressure (Lance exposure Pre.)	Working Condition (Gas Inlet) : (- 430) mmWC Design Condition (Gas Inlet) : (- 660) mmWC	Working Condition (Gas Outlet) : (- 290) mmWC Design Condition (Gas Outlet) : (- 660) mmWC
07	Lance Design Pressure	250 kg/cm ² (g)	
08	Power Supply	415 V, 3 Ph, 50 Hz, AC	
09	Duty / Duration of operation	Intermittent. Once in a shift of 8 hours or more frequently to suit site requirement.	
10	Blowing Medium	1. Steam with 310 - 350 °C (110 - 150°C superheat) at 14 Kg/cm ² (g) to a maximum of 17 kg/ cm ² (g). 2. In the absence of steam, air at 6.33 Kg/cm ² (g) will be used. 3. Service water at pressure of 100 to 200 Kg/cm ² (g).	
11	Blowing time & traverse speed	Vendor to specify to suit the rotor speed of 1.36 rpm. Speed shall not exceed 50 mm per Minute.	
12	Blowing method	During forward/return travel with incremental movement and dwell periods.	
13	Control Requirement	PLC Control Panel to be interfaced with DCS / DDCMIS.	
14	Local Push Button	Required.	

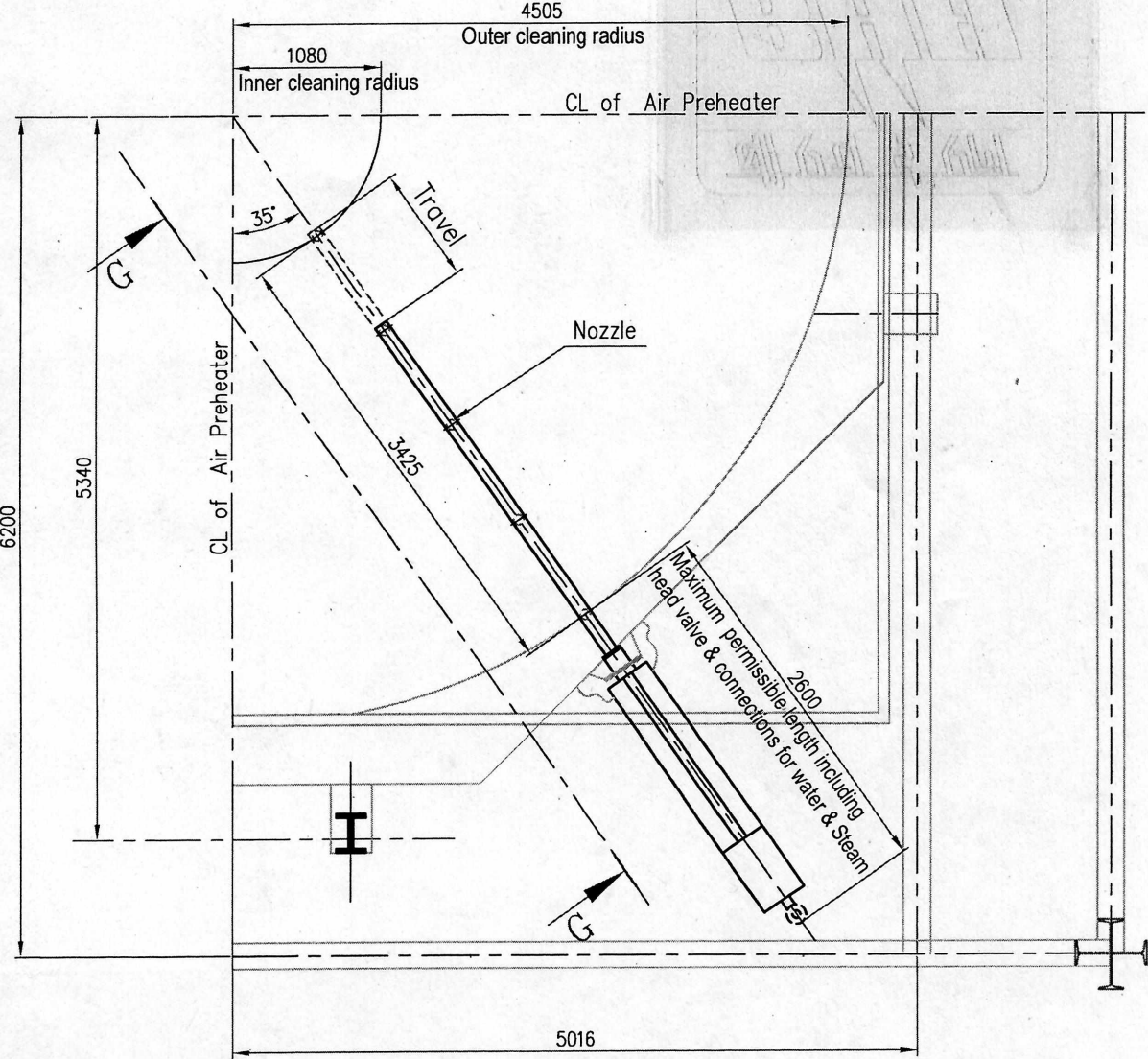
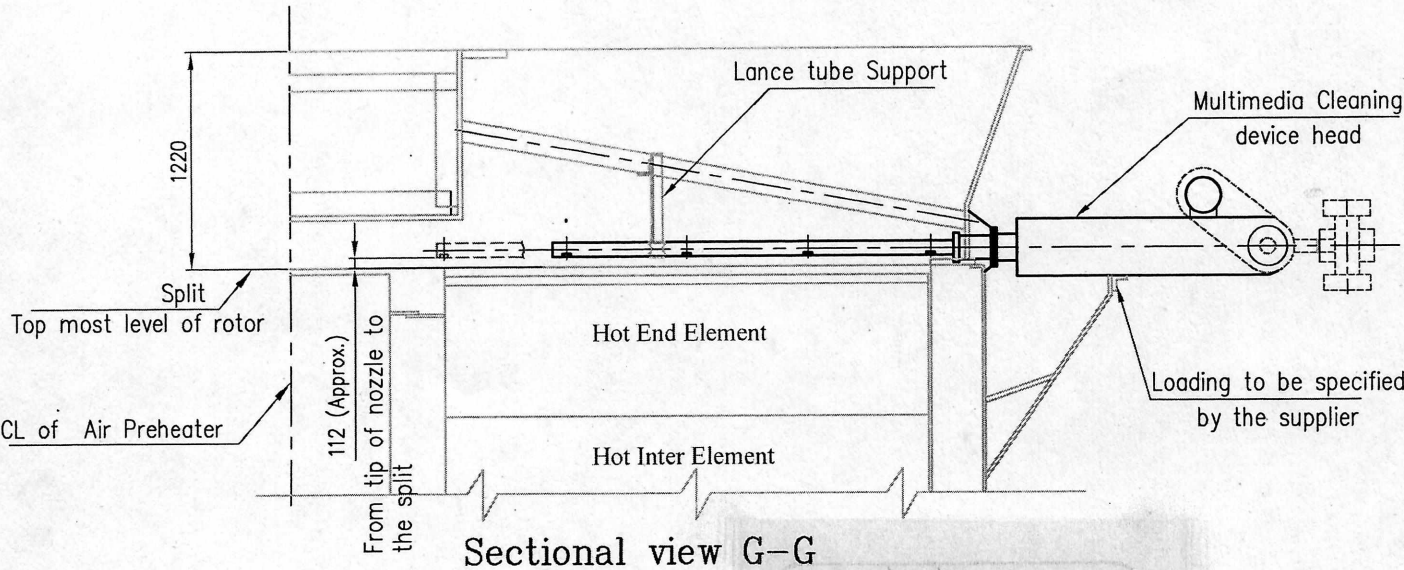
15 Scope of Supply :

- Multimedia Cleaning device main assembly including steam lance & high pressure water lance complete with minimum 3 nozzles / maximum 4 nozzles, Carriage / Drive mechanism, Limit Switches etc.
- Wallbox / Sleeve assembly.
- Poppet valve assembly with connecting tube.
- Companion flange together with gaskets studs and nuts, for connecting the blowing medium supply piping to the poppet valve inlet flange.
- 2 x 90deg elbows and mating connections for extension exclusively for Cold end Multimedia cleaning device.
- Air relief / scavenging valve.
- Pressure switch and Pressure Gauge with isolating valve.

00	11.02.17				FRESH ISSUE
Rev.No	Date	Prepared	Checked	Approved	Record of Revisions.

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	h) Support arrangement. i) Common PLC Control System with PLC Panel and Local Contactor Panel. The incoming supply of 3 Phase, 415 V, 50 Hz will be provided. Supplier shall provide all applicable wiring of the equipment. Local stop/Emergency push button is to be provided by supplier along with equipment. j) Erection & Commissioning supervision.	
16	General : a) Codes & Standards applicable for Mechanical, Electrical components and Protection of equipment against climatic condition also shall be specified. Only latest revision shall be referred for all the Standards specified. b) The vendors shall submit the detailed technical offer separately for Hot end & Cold end Multimedia cleaning device along with following details. i) Detailed scope of supply and exclusions. ii) Vendor shall specify No. of nozzles and the travel length. iii) Materials of construction for various components like drive components, lances, nozzles, PLC Panel etc. iv) Preliminary drawing of the equipment along with terminal points. v) Weight of major items shall be indicated in the drawing. vi) Motors KW rating. vii) Write-up indicating the working principle. viii) Steam consumption details @ 14 kg/cm² superheated steam and air consumption @ 6.33 kg/cm². ix) Water consumption details @ 200 kg/cm² and 100 kg/cm² c) The vendor shall submit the following, after placement of order for our approval. i) Power & control schematics & wiring diagram. ii) General arrangement drawing of the equipment with bill materials and weight detail and Terminal point details. iii) Support Requirement & Loading details. d) Quality plan. e) 6 copies of Erection and O & M manual. f) List of Recommended Spares for three years of operation. g) Special tools list.	
17	Painting : a) All external surfaces requiring painting shall be cleaned by Power Tool as per surface preparation standard St3 (SSPC – SP3). b) Then 2 coats of Red Oxide Zinc Phosphate (IS : 12744) primer paint shall be applied to have a dry film thickness of 60 microns. c) Finally, 2 coats of synthetic enamel (IS : 2932) finish paint of colour Verdigris Green - Shade No : 280 of IS : 5 shall be applied to have a dry film thickness of 40 microns. d) Total dry film thickness shall be 100 microns (minimum) after final coat.	
18	Inspection : a) Inspection by BHEL. b) Necessary Test & Material Compliance Certificates shall be submitted.	
19	Soot Blower General Arrangement details, Location, & Support Arrangement : Refer page 03 of 04 for Hot end & page 04 of 04 for Cold end.	

Hot end Multimedia cleaning device Arrangement
details, Location & support Arrgt.



Cold end Multimedia cleaning device Arrangement details, Location & support Arrgt.

