

Tender Sub: Aluminizing of 75 Mtrs.Boiler Chimney (Ref.No.M&S/P&C/2017/45)

DETAILED SCOPE OF WORK (Annexure- A)

For Aluminization of 75 meters height chimney connected to 20&30TPH Boilers, Aluminization of strakes,platforms and connected equipment like ladders up to a total area of 540 square meters.

S.No	Description	Vendors Acceptance (YES/NO)
1.	<p>SCOPE OF WORK:</p> <p>The scope includes Alluminization of 75 meters height chimney connected to 20 & 30 TPH Boilers, Aluminization of strakes,platforms and connected equipment like ladders up to a total area of 540 square meters.</p> <p>The scope includes,</p> <ul style="list-style-type: none"> - Scaffolding (Mild Steel,Cup Lock or clamping type) arrangement (on returnable basis) - Surface preparation by Grit blasting to SA 2 ½. - Two coats of HR aluminium paint with DFT 20 microns per coat totalling 40 microns. 	
2.	<p>GUARANTEE:</p> <p>The bidder shall give 5 years guarantee from the date of successful completion of aluminization.</p> <p>REGARDING QUALITY OF MATERIAL SUPPLIED:</p> <p>a) Bidder shall ensure guarantee for the quality of the materials used and implementation of standards for the aluminization.</p> <p>b) The Contractor shall guarantee to rectify or repeat the aluminization free of cost at the BHEL site, if the material identified to be defective. In the event of the supplier's not complying with the above within a reasonable time, BHEL will have the option to rectify on its own after giving one-week notice to the contractor and recover the cost from the contractor. The contractor shall not dispute the liability in any form.</p>	
3.	<p>INSPECTION:</p> <p>a) The equipment/critical items shall be inspected at the manufacturer's works or the purchaser's site by the BHEL at its discretion or its consultants' representatives. For this purpose, the supplier shall inform BHEL office/works 7 days in advance of the readiness of the stores for inspection. However, this inspection shall in no way absolve the supplier of his over-all responsibility of workmanship, quality and performance guarantee offered by the supplier. All dispatch documents shall accompany Inspection Certificates, if any, issued by the Inspecting Authority.</p> <p>b) The material on receipt of the factory/project will be inspected. The contractor shall have to replace the materials, if any, found defective at site on free of cost basis.</p>	

S.No	Description	Vendors Acceptance (YES/NO)
4.	<p>WORK TO BE CARRIED OUT DURING RUNNING OF 20 & 30 TPH Boilers.</p> <p>20 & 30 TPH Boilers connected to the chimney may be operated depends upon plant requirements. Bidder shall ensure the aluminization work can be done during the above period or contractor shall accept the timings given by BHEL to perform the job.</p>	
5.	<p>Bidder will have to make his own arrangements for tools & tackles, Safety equipment required for the work and the BHEL will not supply any tools and tackles unless otherwise specified.</p>	
6.	<p>The contractor must take all safety precautions as per the annexure-C to avoid all accidents. He shall be responsible for all damages and accidents caused due to the negligence on his part.</p>	
7.	<p>Mobilization, Transportation and Local commutation of manpower (skilled, Unskilled) & Equipment, and supervision required for the job will be in the scope of vendor.</p>	
8.	<p>Mobilization period of manpower : Within 15days of work awardal. Bidder only shall arrange lodging and boarding of manpower.</p>	
9.	<p>Work shall be carried out on working days only from 7.00 Hrs to 17.00 Hrs. Completion period: 4months</p>	
10.	<p>Suitable Scaffolding, sand/grit blasting, Aluminizing will be in vendor scope.</p>	
11.	<p>Storage facility for the equipment and consumables will be arranged by BHEL.</p>	
12.	<p>Thickness measurement gauge for joint inspection of the thickness is to be arranged by vendor.</p>	
13.	<p>Clearance Certificate: Should be obtained from HR/ IR Section on application by showing evidence that recoveries have been affected to the staff/ workers engaged, PF & ESI matching Contributions fulfilled by the contractor for bill claim release.</p>	
14.	<p>Guarantee period: 5 years Bidder has to submit Security Deposit as per BHEL terms and conditions and this amount will be released after successful completion of guarantee period.</p>	
15.	<p>Penalty Clause: 0.5% of the contract value per week or part there of up to a maximum of 10% of the contract value shall be levied beyond the scheduled completion time.</p>	
16.	<p>Final quality inspection will be done by M&S/BHEL executives along with bidder.</p>	

TECHNICAL (Annexure-B)

Item	Work Description	Vendors Acceptance (YES/NO)
1.	<p><u>Process of Aluminisation</u> Alluminization of 75 meters height chimney connected to 20 & 30 TPH Boilers, Aluminization of strakes,platforms and connected equipment like ladders up to a total area of 540 square meters.</p> <p>The scope includes,</p> <ul style="list-style-type: none"> - Scaffolding (Mild Steel,Cup Lock or clamping type) arrangement (on returnable basis). - Surface preparation by Grit blasting to SA 2 ½(Near white metal). - Two coats of HR aluminium paint with DFT 20 microns per coat totalling 40 microns. 	
2.	<p><u>Standards to be followed</u> Abrasive blasting : Grit blasting to SA 2 ½(Near white metal). Aluminizing with :- Heat Resistant aluminium paint IS13183 Gr.II</p>	
3.	<p><u>Blasting</u> Surface preparation before aluminization shall be done by Grit blasting for removal of all traces of oxides. Grit blasting to SA 2 ½(Near white metal).</p>	
4.	<p><u>Repair of damaged portions if required</u> On site repair to be done for the damaged portions of chimney if required.</p>	
5.	<p><u>Consumables used</u> All the materials required like coating consumables, Abrasive and sealants etc to be arranged by vendor.</p>	
6.	<p><u>Coating thickness</u> Minimum 40 Microns.(Two coats of 20 microns each)</p>	
7.	<p><u>Extra scope/payment</u> Final Billing will be done on actual surface area(Square metres) on which aluminization has been done. No further payment will be made for more than 540 square meters surface area. Vendor has to visit the site to understand the scope of work and then quotation has to be submitted accordingly.</p>	
8	<p><u>Air/Power Supply</u> Dry compressed air at 5-6 Kg/cm², 3-phase power supply shall be provided near site free of cost by BHEL.</p>	

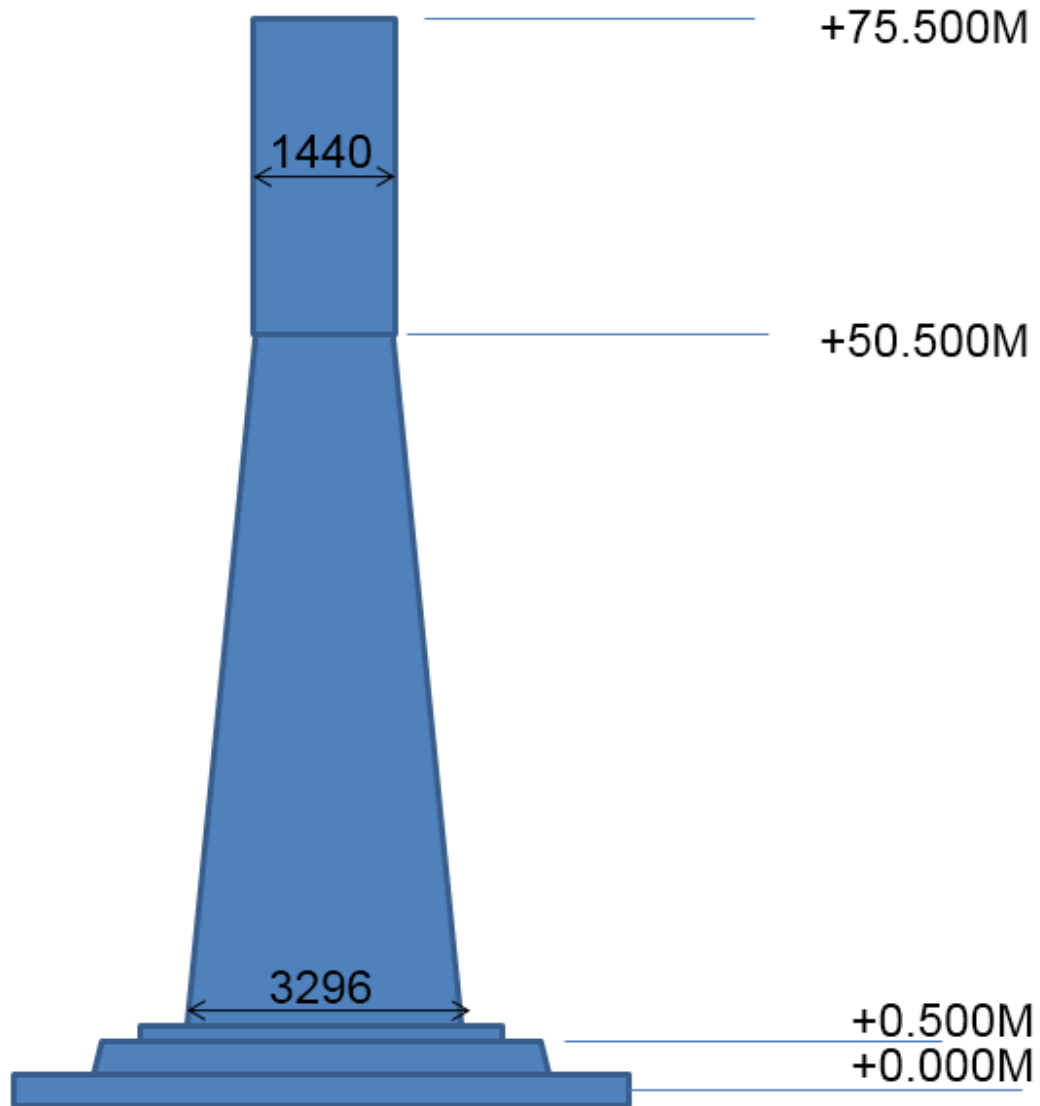
Annexure- C

(SPECIAL CONDITIONS – SAFETY)

SAFETY PRECAUTIONS TO BE FOLLOWED AT SITE

S.N o	Safety guideline to be followed	Vendors Acceptance (YES/NO)
1	Statutory requirements as per the sec-32 of FACTORIES ACT, 61-c of APF rules, for working at heights.	
2	Scaffolding arrangement for total height or Safety net is to be provided surrounding the existing chimney to protect the persons while painting at heights.	
3	Daily work permit is to be issued and has to be closed daily before 5PM	
4	Bidder shall take care of the people working at heights in all respect. BHEL is not responsible for any incidents happen due to lack of proper safety precautions by bidder.	
5	Safety belts, safety shoes and helmets are to be provided to workmen.	
6	Adequate arrangements for anchorage of the safety belt to be provided.	
7	A separate lifeline tied to safety belt with proper anchorage is to be provided additionally as a precautionary measure.	
8	Adequate illumination is to be provided.	
9	Barricading is to be provided around the chimney.	
10	The work area should be clear and safe from overhead electrical lines/other protecting structures.	
11	Ensure usage of personal protective Equipments for painting like face mask, hand gloves etc..	
12	The persons working in the painting works should obtain a Medical Fitness certificate for working at height and they should not have any height phobia	
13	All employees involved have to be informed all the precautions	
14	Work shall be closed before sunset.	
15	Work has to be carried out under continuous supervision.	
16	“Men at Work” Caution Boards are to be displayed while the job in progress.	
17	After finalization of work order, all involved men shall be imparted for safety training.	

CHIMNEY DRAWING



- Total Surface area coming out to be as 540 m².
- On the top portion of the chimney, strakes are there for 25 meters length.
- Platforms and Ladders are also there through out height of the chimney.
- Platforms,ladders and strakes are also to be painted along with chimney.