

SCOPE OF WORK FOR SUPPLY AND SERVICE OF APH REPLACEMENT :

- 1) Analysis and visit to the site to execute the feasibility assessment of the work is to be done by the party by visiting the site. Design and Engineering is in the scope of the party.
- 2) Methodology of work should be produced by the party and the same has to be approved by CGPP, Vedanta Ltd.
- 3) Supply of required material for APH tube replacement.
- 4) Supplied material to be unloaded at designated area. Its watch and ward is in the scope of the party.
- 5) Shifting of supplied material near erection and fabrication area.
- 6) Cutting of handrails and platform as required.
- 7) Fitment of ferrule on the top of the tubes.
- 8) Prearrangement of all the necessary jobs are to be carried out before starting of job.
- 9) Dismantling of insulation cladding & refractory on specified area for APH.
- 10) Dismantling of APH tubes, modules, bellow, duct, pipe lines, insulation, casing plate etc. are in party's scope.
- 11) Erection and Alignment of new APH modules, bellow, platform, pipelines, duct etc. are in party's scope.
- 12) Erection of casing plates and flowmeter and instruments are in party's scope.
- 13) If any material required at the time of erection like structural material, expansion bellow, supporting beams, Bracing, supporting structure for APH, APH assembly frame supports etc. are in party's scope.
- 14) Cover plate, duct, pipelines, bellow, structures, platforms IBR and arc welding is in party's scope.
- 15) The party is responsible for the welding and repair (if required). The MS plates required for the same is in the scope of the party.
- 16) The supply and installation of insulation and refractory of required thickness in the specified areas lie in the scope of the party.
- 17) Replacement of the previously removed insulation part.
- 18) Fixing of handrails and platform.
- 19) Party has to remove the refractory from scrap module and removal of ash content inside module by hydro jetting
- 20) The removed air preheater modules should be sent as scrap to an identified place by Vedanta inside the boundary. The party is responsible for sending scrap by cutting/dismantling APH modules into small pieces and segregation of heavy & light MS, SS etc as per VL policy. Party shall engage cranes, trailer, hydra and necessary lifting equipments for necessary segregation and logistics arrangement.
- 21) The party is responsible for the commissioning, performance gain test, leakage test and required repair jobs as directed by Vedanta Limited.
- 22) The party has to submit a detailed report concerning the entire process flow of the job along with the results of the performance gain test, leakage test and the repairs that have taken place.
- 23) obtaining the statutory approval from the government is in the scope of the party.
- 24) Disposal of all insulation and refractory at designated place as decided by VL incharge.
- 25) The required dismantled IBR pipeline/bends like eco header, FRS header, Soot blower drain line, impulse line etc to be provided by party along with SR & RT.
- 26) During the entire process, any decision taken by the Vedanta Limited will be considered final

DELIVERY/COMPLETION:

The job has to be completed within 30 days from the date of handover of equipment for repairing.

OTHER TERMS:

1. Job schedule with detail time, targets and bar chart to be submitted in advance after discussion with mechanical team of CGPP, Vedanta Limited.
2. Manpower needs to be mobilized at site 3 days in advance for medical & gate pass formality. However COVID guidelines by state and centre Govt. needs to be fulfilled by the party like quarantine etc.
3. Prearrangement of all the necessary job to carried out before starting job.
4. All the lodging & boarding, to & fro arrangement to be done by the party
5. All the statutory approval like labour license, insurance, approval from Factories & Boiler etc. to be taken by party.

6. All safety PPE and consumables are in line with VL VSS safety standards.
7. Any sort of safety violation will be penalized by Vedanta Limited.
8. One safety officer is to be present in the site from the party round the clock.
9. All lifting tools & tackles, electrical equipment, welding machine should be certified by competent authorized agencies in line with factories Act of respective state.
10. All Food, snacks, refreshments, drinking water provision at site, tea facility as well as accommodation near plant will be in party scope.
11. The party should follow the permit system as per M/s VL policy.
12. The Party shall abide by all safety rules of the Vedanta Limited. Safety gears such as safety helmets, safety shoes, goggles, coveralls, gloves, nose mask etc. for their personnel entering the plant and all personal protective equipment's (PPE) relevant for the required job will be in the scope of party.
13. Consumables, gases, welding machine, electrode, nut bolts, lifting tools tackle, crane, hydra, Trailer etc. will be in the party's scope.
14. Party should submit the report both in soft and hard copy and should be certified from VL Engineer.
15. For APH job, 24 welding machines are required, 16 cutting set, IBR welder-4 nos required.
16. VL will provide electric connection at 2 to 3 location near the vicinity of boiler (40m Radius) for multiple usage, party has to carry out necessary arrangements i.e., power cable and movable distribution box arrangement. Junction box for welding machine and other electrical connection are to be arranged by party. ELCB of 30mA leakage current should be available in the individual welding machine and distribution box. There should not be any joints/cracks in the welding cable. Ideally welding cable should be properly connected with help of connectors to avoid short circuit in the joint portion. All temporary cables should be routed through insulated hooks with the support of pipe/stand arrangement.
17. AGT and Gas testing machine – 4nos required for confined space job.
18. Safety lifeline must be more than 20 nos to be provided by party.
19. LOTO key 200 nos required, however depending on no of manpower, this no can be further increased.
20. Confined exhaust fan – 8nos, 24 DC transformer-15 nos, 24 V DC LED bulb-100 nos along with connections are to be mobilized.
21. The crane required for this job (400 Ton) to be arranged by party.

Safety Points :

1. For Work at height jobs, vendor to arrange:
 - a. Safety harnesses
 - b. Fall arrester block, rescue rope
 - c. Poly amide rope lifeline / lifeline installed and tested at site
 - d. Competent rescuer
 All this equipment should have valid test certificates.
2. Standard Scaffolding material to be used, certified by competent scaffolder. All the scaffolder must be certified by STI as authorized by VL
3. Power tools, welding machines and other Electrical equipment should have healthy ELCB/RCCB connection, VRD inbuilt, double body earthing, dead-man switch, joint-free cables. Authorization of these equipment will be subject to fitness clearance by Vedanta Electrical department.
4. Mobilization of any vehicles such as trucks, trailers, cranes etc. shall be subject to fitness clearance from Vedanta Vehicle & driving team and Crane & lifting committee respectively, with all sought documentation.
5. Mobilization of gas-cutting sets and gas cylinders shall be subject to fitness clearance from Vedanta with all sought documentation.
6. Party should abide by Vedanta standards and procedures, shared before deployment at site.

Any HSE related violations will be actionable as per VLL consequence management procedure.

7. All workers involved in the job should go for one day training session on Work at Height and Confined Space Entry as per Vedanta Standard in order to be authorized for execution of the job.

8. The workers shall follow the site procedure on Work at Height, Confined Space Entry, Hot Work (if any), Site Isolation and LOTO, Site Electrical Procedure (including temporary connection procedure), Site Permit to Work Procedure and Vehicle & Driving safety standard and procedure.
9. The vendor shall also provide emergency plan and rescue service (including rescue devices) for credible emergency scenarios in the fills replacement work.
 10. All employees of the vendor shall comply with site PPE requirement and procedure from Plant Main Gate and comply with pedestrian pathway rule.
 11. All hand tools, lifting tools and tackles, portable access ladders, electrically powered equipment, industrial mobile equipment and vehicles are required to be fit for use before entry to plant.
 12. There shall not be any provision of bypassing the Dead man switch on portable tools and devices.
 13. Welding machine shall have OEM recommended VRD inbuilt in it.
 14. Inspection checklists of all portable powered devices, tools and tackles are attached herewith. Lifting tools and tackles shall also be fit (certified by Odisha DFB approved competent person).
 15. All PPE's should be provided to person involved in job should be as per Vedanta standard by contractor and damaged PPE's will be replaced immediately by the contractor.
 16. Vendor should compliance the Vedanta work at height and confined space safety procedure
 17. Any deviation in safety standards or observations will lead to penalization along with deduction in score card. Any repetitive violation will lead to heavy penalty, cancellation of contract or awarding of the contract to other vendors with risk and cost to original vendor.
 18. Under no condition the employees of vendor shall take rest without PPEs in area other than rest container.
 19. Penalty will be deducted if any infrastructure damage occurred by vendor vehicle/Person. Consequence management will be applicable as per the site's consequence management procedure.
 20. One dedicated supervisor and one dedicated confined space watch must be present at all times during execution of work as per Vedanta standard.
 21. If any supervisor or Confined space watch person goes on leave or getting sick, vendor needs to provide replacement of the same before existing manpower leaves site along with all authorization/training.
 22. All the confined space entries must be hard barricaded.
 23. Job area must be hard barricaded and warning signage to be displayed.
 24. For confined space , rectifier for 24 V DC , LED lights of 24 V DC to be used and provided by party

SCOPE OF WORK SUPPLY AND SERVICE OF ECONOMISER COIL REPLACEMENT:

- 1) Analysis and visit to the site to execute the feasibility assessment of the work is to be done by the party by visiting the site. Design and Engineering is in the scope of the party.
- 2) Methodology of work should be produced by the party and the same has to be approved by CGPP, Vedanta Ltd.
- 3) Supply of required material for Economizer tube replacement.
- 4) Supplied material to be unloaded at designated area. Its watch and ward is in the scope of the party.
- 5) Shifting of supplied material near erection and fabrication area.
- 6) Cutting of handrails and platform as required.
- 7) Prearrangement of all the necessary jobs are to be carried out before starting of job.
- 8) Dismantling of insulation cladding & refractory on specified area for Economizer.
- 9) Dismantling of Eco tubes and casing plate
- 10) Erection and Alignment of new Economizer coil.
- 11) Erection of casing plates
- 12) If any material required at the time of erection like structural material, supporting beams, Bracing, supporting structure for Economizer, etc. are in party's scope.
- 13) Cover plate welding
- 14) The party is responsible for the welding and repair (if required). The MS plates required for the same is in the scope of the party.
- 15) The supply and installation of insulation and refractory of required thickness in the specified areas lie in the scope of the party.
- 17) Replacement of the previously removed insulation part.
- 17) Fixing of handrails and platform.
- 18) Party has to remove the shield from scrap coil and removal of ash content outside coil by hydro jetting
- 19) The removed Economizer coil should be sent as scrap to an identified place by Vedanta inside the boundary. The party is responsible for sending scrap by cutting/dismantling coils into small pieces and segregation of heavy & light MS, SS etc. as per VL policy. Party shall engage cranes, trailer, hydra and necessary lifting equipment for necessary segregation and logistics arrangement.
- 20) The party is responsible for the commissioning, performance gain test, leakage test and required repair jobs as directed by Vedanta Limited.
- 21) The party has to submit a detailed report concerning the entire process flow of the job along with the results of the performance gain test, leakage test and the repairs that have taken place.
- 22) Obtaining the statutory approval from the government is in the scope of the party.
- 23) Disposal of all insulation and refractory at designated place as decided by VL incharge.
- 24) The required dismantled IBR pipeline/bends like eco header, drain line, impulse line etc to be provided by party along with SR & RT.
- 25) Replacement of all the Economizer headers to be carried out by party.
- 26) 100% TIG joint and RT to be carried out for all the welding.
- 27) During the entire process, any decision taken by the Vedanta Limited will be considered final
- 28) All the SS shields of Eco coil is of 180 deg and having 2.5 mm thickness. Shield material : SS304
- 29) There are 350 coils in each boiler. The 20/350 coils shielding are to be done side wise for full length of coil. The coils bend shields must be provided for inner and outer bends.
- 30) The fins of length are 600m to be provided.
- 31) 200 nos. of 90 deg bend needs to be provided.

DELIVERY/COMPLETION:

The job has to be completed within 40 days from the date of handover of equipment for repairing.

OTHER TERMS:

1. Job schedule with detail time, targets and bar chart to be submitted in advance after discussion with mechanical team of CGPP, Vedanta Limited.
2. Manpower needs to be mobilized at site 3 days in advance for medical & gate pass

- formality. However, COVID guidelines by state and center Govt. needs to be fulfilled by the party like quarantine etc.
3. Prearrangement of all the necessary job to be carried out before starting job.
 4. All the lodging & boarding, to & for arrangement to be done by the party
 5. All the statutory approval like labor license, insurance, approval from Factories & Boiler etc. to be taken by party.
 6. All safety PPE and consumables are in line with VL VSS safety standards.
 7. Any sort of safety violation will be penalized by Vedanta Limited.
 8. One safety officer is to be present in the site from the party round the clock.
 9. All Lifting tools & tackles, electrical equipment, welding machine should be certified by competent authorized agencies in line with factories Act of respective state.
 10. All Food, snacks, refreshments, drinking water provision at site, tea facility as well as accommodation near plant will be in party scope.
 11. The party should follow the permit system as per M/s VL policy.
 12. The Party shall abide by all safety rules of the Vedanta Limited. Safety gears such as safety helmets, safety shoes, goggles, coveralls, gloves, nose mask etc. for their personnel entering the plant and all personal protective equipment's (PPE) relevant for the required job will be in the scope of party.
 13. Consumables, gases, welding machine, electrode, nut bolts, lifting tools tackle, crane, hydra, Trailer etc. will be in the party's scope.
 14. Party should submit the report both in soft and hard copy and should be certified from VL Engineer.
 15. For Economizer job, sufficient welding machines are required, cutting set, IBR welder-10 no's required.
 16. VL will provide electric connection at 2 to 3 location near the vicinity of boiler (40m Radius) for multiple usage, party has to carry out necessary arrangements i.e., power cable and movable distribution box arrangement. Junction box for welding machine and other electrical connection are to be arranged by party. ELCB of 30mA leakage current should be available in the individual welding machine and distribution box. There should not be any joints/cracks in the welding cable. Ideally welding cable should be properly connected with help of connectors to avoid short circuit in the joint portion. All temporary cables should be routed through insulated hooks with the support of pipe/stand arrangement.
 17. AGT and Gas testing machine – 4nos required for confined space job.
 18. Safety lifeline must be more than 20 nos to be provided by party.
 19. LOTO key 200 nos required, however depending on no of manpower, this no can be further increased.
 20. Confined space exhaust fan – 8nos, 24 DC transformer-15 nos, 24 V DC LED bulb-100 nos along with connections are to be mobilized.

Safety Points :

2. For Work at height jobs, vendor to arrange:
 - a. Safety harnesses
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10. Mobilization of gas-cutting sets and gas cylinders shall be subject to fitness clearance from Vedanta with all sought documentation.
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9. The vendor shall also provide emergency plan and rescue service (including rescue devices) for credible emergency scenarios in the replacement work.
 1. All employees of the vendor shall comply with site PPE requirement and procedure from Plant Main Gate and comply with pedestrian pathway rule.
 2. All hand tools, lifting tools and tackles, portable access ladders, electrically powered equipment, industrial mobile equipment and vehicles are required to be fit for use before entry to plant.
 3. There shall not be any provision of bypassing the Dead man switch on portable tools and devices.
 4. Welding machine shall have OEM recommended VRD inbuilt in it.
 5. Inspection checklists of all portable powered devices, tools and tackles are attached herewith. Lifting tools and tackles shall also be fit (certified by Odisha DFB approved competent person).
 6. All PPE's should be provided to person involved in job should be as per Vedanta standard by contractor and damaged PPE's will be replaced immediately by the contractor.
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