Description of the *service*.

Duvha Boilers, HP Piping and components, FAC Components (Flow Accelerated Corrosion), are inspected regularly at a predetermined interval to assess their structural integrity to ensure safe operation and to avoid failures. These plants are inspected using non-destructive testing (NDT), however surface preparation is required on certain plant components in order to conduct NDT

Scope

This scope of work documents entails sandblasting on Boiler, HP Piping and components, FAC Components (Flow Accelerated Corrosion), for Maintenance and Outages at Duvha Power Station on an "as and when" required basis.

The scope of work includes the supply of manpower, consumables and working tools during planned inspection outages, philosophy outages (IN, IR and GO outages) and opportunity maintenance (defects) in between outages to provide surface preparation service on Duvha Plant components as below.

- Sandblasting Boiler Pressure part: As per NEC Works Information
- Sandblasting High Pressure Piping components: As per NEC Works Information
- Sandblasting FAC &RBI components: As per NEC Works Information
- Sandblasting Sootblower components: As per Works Information
- Sandblasting Turbine/Boiler Aux components: As per NEC Works Information

Definitions.

Definition	Description
Company/contractor	Entity which applies the sandblasting process which may include sub contracted service entities.
Sandblasting	Is the process of erosion of a surface by shooting particles of an abrasive material at high speed using compressed air. These particles cause the surface to chip and thereby produce the frosted effect. Also called Abrasive blasting: is the operation of forcibly propelling a stream of abrasive material against a surface under high pressure to smooth a rough surface, roughen a smooth surface, shape a surface, or remove surface contaminants.
Grit	A measure of texture, is calculated by running sand through a sieve. The size of the sieve is called its mesh
Microgrit sandblasting	Micro-abrasive blasting is dry abrasive blasting process that uses small nozzles (typically 0.25 mm to 1.5 mm diameter) to deliver a fine stream of abrasive accurately to either a small part (mm size) or a small area on a larger part. Generally the area to be blasted is from about 1 mm to only a few cm at most. Also known as pencil blasting, the fine jet of abrasive is accurate enough to write directly on glass and delicate enough to cut a pattern in an eggshell

On an "AS AN WHEN REQUIRED" basis

EMPLOYER'S REQUIREMENTS FOR THE SERVICE

- Sandblasting grit (silica free) to be supplied by the Contractor, a data sheet must be handed in before starting the work. ***(Blastrite B60 Grid.)***
- Contractor to supply own compressed air and equipment i.e. lead lights, DB boxes etc. **Please note boiler and piping height is 76m. Compressors to be able to supply the correct flow to carry out sandblasting at these heights from Zero level, (more than 4 pots at a time during GO'sat these levels)**
- Sandblasting to be disposed at Duvha Lay Down areas, **and removal of such grid is for the Contractors own cost.(Tipper truck with crane to lift sandblasting bags containing waste grit/ Bobcat)**
- A waste disposal certificate to hand in with each safety file assessment**. (Mandatory for Technical Requirements during tender phase)**
- A dumping certificate from place of dumping site, to be handed to Outage Management after each dumping activity done during course of Outage**.**
- Waste Bins supplied and cleaned by Roshcon(Not for Sandblasting waste grit)
- Contractor to bring own containers to temporary store sandblasting grit
- All sandblasting grit and dust caused during sandblasting must be contained to the immediate area
  where sandblasting takes place and the sandblasting **grit to be cleaned during and after each and every shift.**
- Starting and completion dates: Scheduled outage dates will be communicated after approval of successful tender. Specific outage scheduled starting and completion dates, for HP Pipework cleaning, will be confirmed by Eskom Project Manager before task orders are processed. Sandblasting & cleaning activities will be scheduled i.e. the critical path activities.
- Shifts: Two 12 hr shifts per day or as per pre-arranged communication through Project manager. Sandblasting & cleaning activities will be scheduled i.e. the critical path activities.
- Please note that for GO Outages, continuous 24 hr shifts required(Incl Cleaning after each shift) For the Boiler internal, duration will be 7 days and 7 noghts.
- **Eskom Supervision: Please note that Eskom Outage Management, will appoint a QA Person from the Main Boiler Serve Contractor on Duvha Site(Steinmuller)to be in control of all Quality, Marking out and final approval for ANY Sandblasting activities as well as checking cleaning done correctly after each shift.**

General

- All the Technical and General Procedures must be submitted and accepted by the Project Manager
  And the release note must accompany the tender. An Audit will be conducted while the project is in progress
- All General technical Procedures in the woks information must be linked to the contract price list (Scope of work)
- No work shall commence until the scope of work has been finalized and accepted by both Project Managers(Eskom and Contractor)
- All work to be done under the Construction Regulation requirements
- Contactor must make sure that persons are qualified and skilled to do tasks as per scope of work
- Any incident leading to standing time must be corresponded within one hour to the Project Manager (this includes the names of the people affected) standing time will be paid for normal time only. If this occurs during overtime it will result in the end of that shift

- The "work" required is the supply of all :

    - Management

- Supervision
- Labours
- Consumables
- Lifting equipment
- Tools
- Warehousing
- Storage
- Safety Officer
- Quality Controllers
- Blasters/operators
- Semi skill workers(General)

And any other item, either normal or otherwise, deemed necessary by the Employer for the proper execution of the whole of the works covered by the enquiry or arising.

Constraints on how the Contractor Provides the Works

The contractor will be required to attend all site meetings called by the project manager.

No recruitment shall be conducted on Tutuka Power Station property.

Accessible space for performance of the works but subject to interfaced activities of other contractors. (Indicate your requirements)

Security check points daily on personnel and equipment

Task order approval.

A unique SOW will be submitted for various unit outages as per Task Orders per Outage (IN, IR, GO Outages)

1.1.2 Special Requests

- All work will be issued via SAP Maintenance system.
- Risk Assessment must be completed before each task.
- Eskom Lifesaving rules to be adhered to.
- The contractor must provide Quality Control Plan documents for approval by Eskom Supervisor prior performing any activity.
- The contractor to provide proof of experience (cv) and qualifications for all personnel and must be part of tender returnable.
- In periods of absence a negotiated substitute must maintain the plant.
- Rigging tools and electrical equipment to be inspected regularly and filled as per OHSACT requirement.
- All PPE to be provided by the Contractor and SABS approved
- Good housekeeping to be maintained at all times. The Contractor must clean and remove all debris after completing a task.
- Minimum tools and equipment as per scope of work.
- All Eskom required training will be provided by Eskom.
- All correspondence must be printed and filed on Project Manager’s file.
- Provide SABS approved safety harnesses as per Eskom Safety Requirements.
- Workshop portable tools to be provided by the Contractor.
- Quality control plan and contract Quality plan approval process standards as per QM58 to be used.
- Transport to be provided by Contractor and included in cost.

- All ventilation equipment needed to do sandblasting and painting to be supplied by Contractor.
- Activities to comply with Construction Regulations
- All pressurized equipment to be tested and certified to be safe every 3 months
- All overtime worked must comply with Eskom rest period requirements.
- During normal maintenance the Contractor will be informed and must react within 24hrs.
- During forced outages the Contractor will be informed and must react within 8hrs
- During emergency the Contractor will be informed and must react within 4hrs
- Eskom safety meetings and regulations to be adhered to
- The contractor will be authorized in Eskom (PSR) Plant Safety Regulations permit within 6 months
- All telephone accounts on Contractors account
- All cabins and LV equipment will comply within the Eskom standards(COC)
- Site condition will be according to the Eskom and Safety regulations standards
- Audit on Contractor will be done on frequent basis
- Contractor to make use of Eskom ablution facilities
- Transport to be provided by contractor
- Eskom Transport procedures to be adhered to
- Safety (Zero harm policy)
- Contractor staff to be Authorised and found competent in writing to work at Heights.
- All work done under a Plant safety permit to work at all times.

Site information

- The site is Duvha Power Station unit 1-6 as and when required
- Access is limited and controlled by Plant Safety Regulation requirements
- No employee will be allowed to access the plant or work without access permit issued
- All persons to work on the plant must be registered on the Worker's Register by the Responsible Person, authorised supervisor
- All personnel must attend induction before working on site and they must obtain gate permits via the Employer' Representative
- Unauthorised access to site is prohibited. The personnel are expected to be at their working site area at all times, as and when required
- No recruitment on site or at the main access gates

Failing to comply with all above may result on termination of the Contract

Specifications

Title	Date of revision	Tick if publicly available
Sandblasting grit, silica free, afrigrit sand grade AGT1		
Occupational Health and Safety Act, Act 85 of 1993		
QM58 – Quality requirements		
ENVP 0016: Procedure for environmental handling of waste including redundant and obsolete equipment.		
Environment Conservation Act (Act 73 of 1989)		
Atmospheric Pollution Prevention (Act 45 of 1965)		

Occupational Health and Safety Act (Act 85 of 1993)		
Tube Solo procedure 32-1107		
Road Traffic Act (29 of 1989)		
Health Act (Act 63 of 1977)		
Hazardous Substances Act (Act 15 0f 1973)		
Environmental Management Policy		
Air Quality Management Policy		
Waste Management Policy and Strategy		
Investigation of Major incidents		

Interpretation and terminology