Eskom	**Procurement SOW**	**Technology**

Title:	Sandblasting services for Boiler plant during Outages at Majuba Power Station for 5 years.	Revision:	**0**
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PART 3: SCOPE OF WORK

Document reference	Title
	This cover page
C3.1	*Service Manager*'s Service Information
C3.2	*Contractor*'s Service Information

C3.1: *SERVICE MANAGER*'S SERVICE INFORMATION

Contents

1 Description of the *service*

1.1 Executive overview

The scope of work covered by this contract is to supply of component sandblasting or mechanical cleaning services in the Boiler and Main steam piping for Majuba Power station during Outages.

The *Service Manager* will provide the Outage listing for planning purposes and notify the *Contractor* of emergency work as soon as the emergency has been identified.

Standards, specifications and Guidelines
The *Contractor* complies with the following Eskom Standards/Specifications/Guidelines

Standard No	Description
240-60238419	Guideline for detection and management of Flow Accelerated Corrosion in Fossil Fired Power Stations
ISO9712 or SAQCC	Qualifications to be according to ISO9712 or SAQCC and all staff to have Eskom approval

It is the *Contractor*'s responsibility to ensure that he obtains the latest copy of the above standards

The *Contractor* is approved by Eskom to perform NDE services on Eskom plant

1.2 5-Year Outage Plan

The 5-year outage plan is documented in the table below. Due to rescheduling performed on a continuous basis, the plan might change from time-to-time. The latest updates can be obtained from the Service Manager when required.

WEEK 10
5 Year Outage Listing
FromDate 2024/03/05
ToDate 2029/03/04
Export Date 2024/03/05 15:34

OutageID	Outage Code	Uni	Planned/Actual Start Time	Planned/Revised End Time	Outage Description	Status	Planned Duration
19093	MJ06UMO-30-12-2023	6	2024/01/02 11:43:00	2024/04/15 11:42:00	Mini GO and Boiler Scope	EXE	104.00
19096	MJ04UIR-15-11-2024	4	2024/11/15 00:00:00	2024/12/12 23:59:00	Interim Repairs	ROLLSCHED	28.00
19095	MJ05UIR-06-01-2025	5	2025/01/06 00:00:00	2025/02/02 23:59:00	IR	ROLLSCHED	28.00
19097	MJ03UGO-14-02-2025	3	2025/02/14 00:00:00	2025/05/07 23:59:00	GO	ROLLSCHED	83.00
21925	MJ01UGO-05-01-2026	1	2026/01/05 00:00:00	2026/06/03 23:59:00	GO and C&I Upgrade	ROLLSCHED	150.00
21924	MJ06UIR-01-08-2026	6	2026/08/01 00:00:00	2026/08/28 23:59:00	IR	ROLLSCHED	28.00
19098	MJ06UIR-18-12-2026	6	2026/12/18 00:00:00	2027/01/07 23:59:00	IR	ROLLSCHED	21.00
21921	MJ02UGO-04-01-2027	2	2027/01/04 00:00:00	2027/05/03 23:59:00	GO	ROLLSCHED	120.00
21920	MJ05UIR-01-03-2027	5	2027/03/01 00:00:00	2027/03/28 23:59:00	IR	ROLLSCHED	28.00
21930	MJ02UIR-05-09-2025	2	2025/09/05 00:00:00	2025/10/02 23:59:00	IR & Hydro	SCHED	28.00
21927	MJ03UIR-05-11-2026	3	2026/11/05 00:00:00	2026/12/02 23:59:00	IR	SCHED	28.00
21928	MJ04UGO-24-10-2027	4	2027/10/24 00:00:00	2028/02/20 23:59:00	GO and C&I Upgrade	SCHED	120.00
21931	MJ01UIR-02-01-2028	1	2028/01/02 00:00:00	2028/01/29 23:59:00	IR	SCHED	28.00
21929	MJ06UIR-09-03-2028	6	2028/03/09 00:00:00	2028/04/05 23:59:00	IR	SCHED	28.00
21939	MJ04UIR-01-05-2028	4	2028/05/01 00:00:00	2028/06/04 23:59:00	IR & Hydro	SCHED	35.00
21932	MJ05UGO-16-08-2028	5	2028/08/16 00:00:00	2028/12/13 23:59:00	GO and C&I Upgrade	SCHED	120.00
21933	MJ03UIR-17-10-2028	3	2028/10/17 00:00:00	2028/11/13 23:59:00	IR	SCHED	28.00
21936	MJ01UIR-18-01-2029	1	2029/01/18 00:00:00	2029/02/14 23:59:00	IR	SCHED	28.00
21935	MJ06UGO-21-02-2029	6	2029/02/21 00:00:00	2029/06/20 23:59:00	GO	SCHED	120.00

1.3 Sandblasting and Mechanical Cleaning of Areas

All surfaces to be cleaned according to the method of testing required.

1.3.1 Quality Requirements

The following criteria must be followed for Tube SOLO:

1. Data Sheet specifying specifications of abrasive material to be used must be submitted to Tube-SOLO rep for approval (refer to 3.2 in 240-84418020).
2. If the sandblasting *Contractor* is uncertain on quality requirements: we propose they sandblast service exposed tube samples (with bad or severe external scale or slag) from the worst degraded materials prior to the actual sandblasting in the boiler, in order to validate quality and experience required. The sample must be submitted to Eskom Tube-SOLO rep for evaluation.
3. When sandblasting has been completed and confirmed by the outage coordinator on site, a quality check will be conducted by the RT&D approved *Contractor* the inspection will commence on agreed time frames with the outage Tube-SOLO rep or an approved *Contractor* before an inspection can be conducted.
4. If the sandblasting is confirmed to be incorrect i.e.:
   - done on the non-fireside,
   - left a bad/rough surface finish
   - insufficient area for scanning
   - wrong area blasted

   then a report or email detailing the quality will be issued to the following: outage coordinator, outage manager, system engineer and boiler engineering manager by the RT&D Tube-SOLO rep or the approved *Contractor*.
5. Only when the raised non-conformances have been rectified will the inspection commence.
6. If the raised non-conformances are not resolved within the agreed periods, no inspection will be conducted and a formal memo highlighting the affected areas will be issued by the RT&D Tube-SOLO rep to the following: outage coordinator, project leader, outage manager, system engineer and boiler manager. The memo will be issued within one week after the agreed period to resolve non-conformances has lapsed.

1.3.2 Abrasive blast cleaning

1. Care shall be taken not to remove excessive material. This requirement is for surface cleaning only.
2. Protective and safety measures to be taken prior to commencement of work.
3. Extent of cleaning required as per detail in 1.3.3 below Extent of Cleaning. Areas of concern to be marked with white permanent marking bands using non-hazardous aerosol cans.
4. Achievement of the desired surface roughness finish are measured by controlled instruments and recorded results.
5. A quality control plan, signed off by the *Service Manager* indicates the completion status in all respective areas of work.
6. The surface area (width) on either side of welds or alongside bends that must be cleaned for NDT must be adhered to and is specified below.
7. The customer on a daily basis will require a progress report, inclusive of work status and the satisfactory achievement of quality results.

1.3.3 Extent of Cleaning

1.1.1.1 Bends

- Bends class A

Width:	25% of axial surface area on the tension surface (extrados of the bend) of the bend i.e. 45° either side of the axial centre line of the bend.
Length:	For bends less than 4m in length. From weld to weld.

Minimum:	In the case of insulation not fully removed from weld to weld. 500mm above 60°and 500mm below 30°.
L1	Bends less than 4m in length.
L2	500 mm above 60° and 500mm below 30°
L3	2m either side of 45°

See figure 1 for graphic definition.

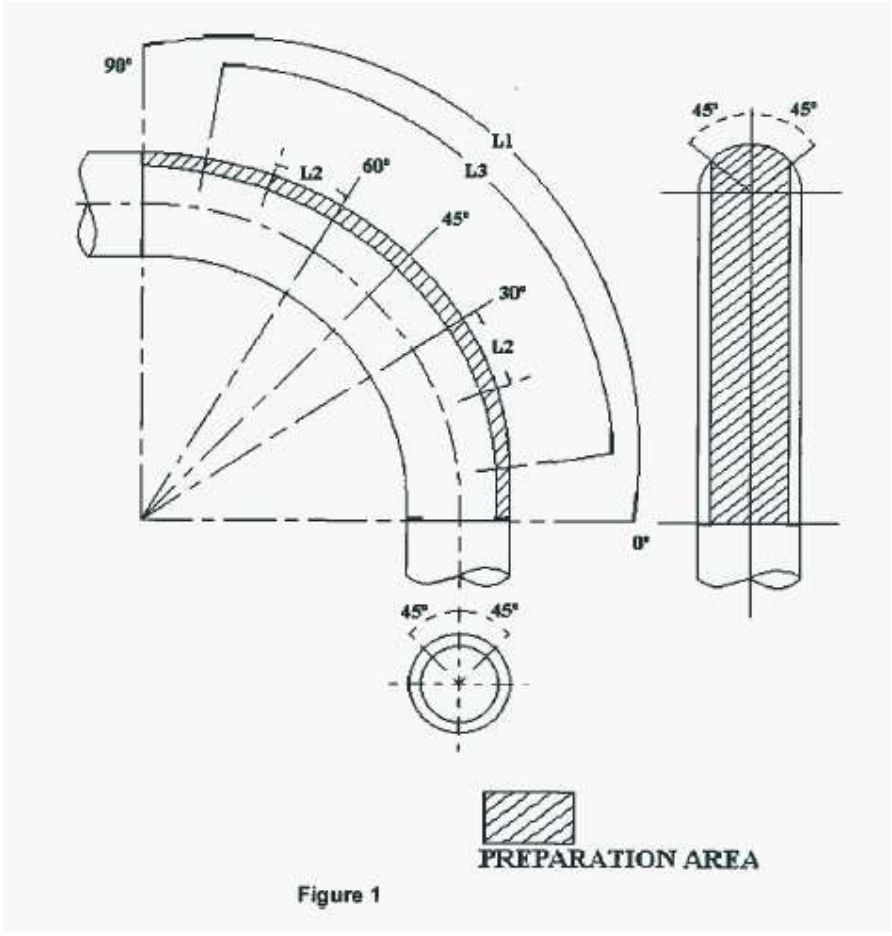


Figure 1

- Bends class B

To include all the requirements of class A and in addition.

Width:	25% of the surface area of the compression surface (intrados of the bend) of the bend.
Length:	From 30° to 60°
L1	Bends less than 4m in length.
L2	500 mm above 60° and 500mm below 30°
L3	2m either side of 45°
L4	From 30° to 60°

See figure 2 for graphic definition

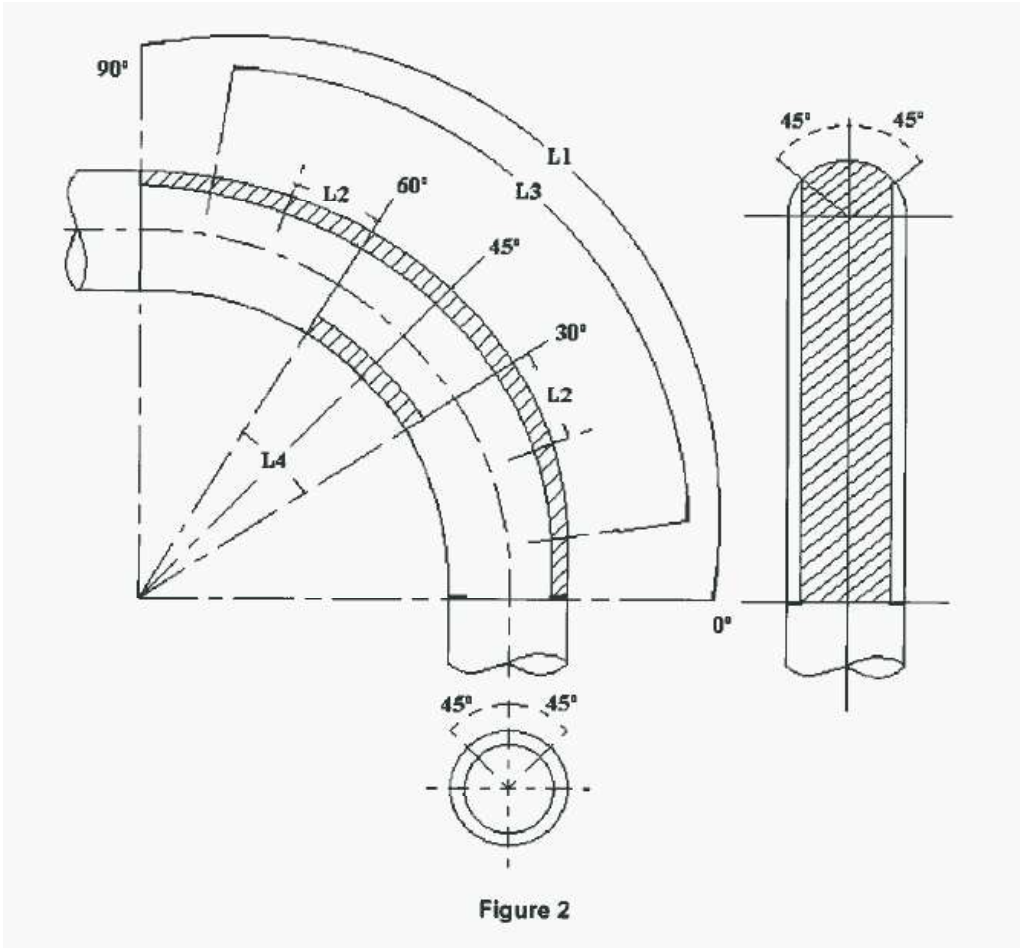


Figure 2

- Bends class C

Width	100% of the circumferential surface of the bend
Length	As for Class A
L1	Bends less than 4m in length.
L2	500mm above 60° and 500mm below 30°
L3	2m either side of 45°

See figure 3 for graphic definition.

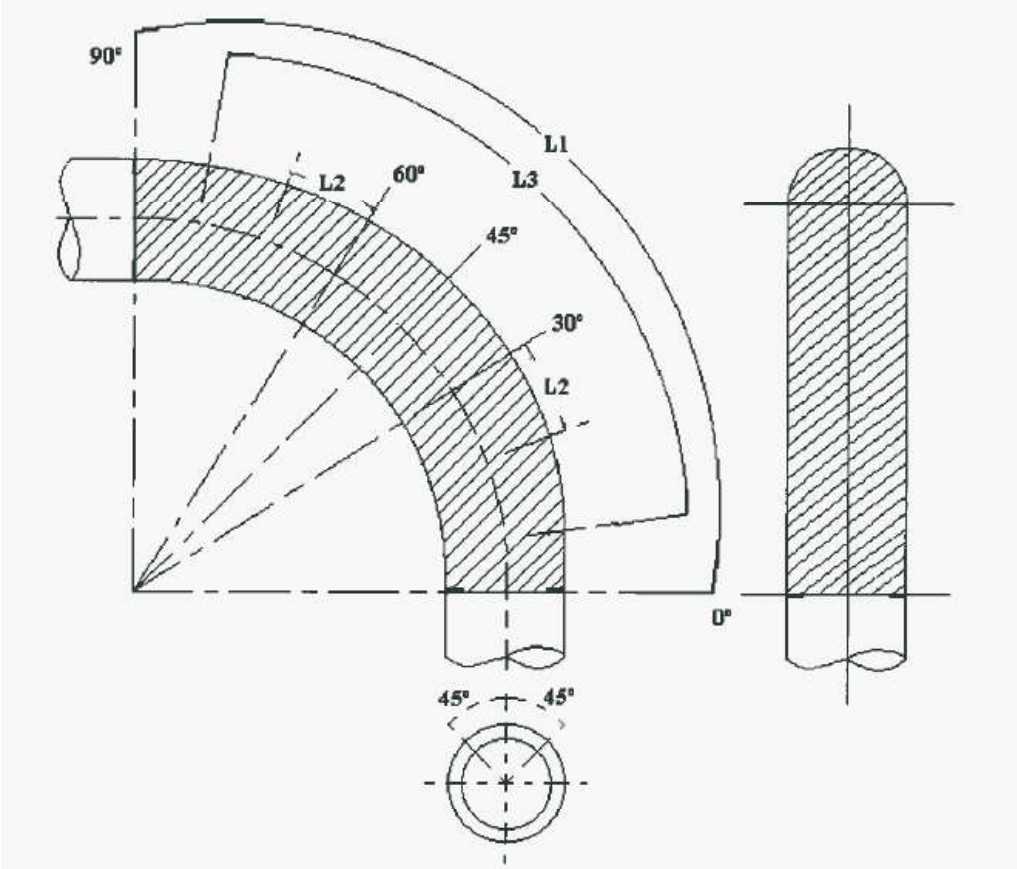


Figure 3

1.1.1.2 Butt welds- Horizontal, angled or vertical

- Butt welds class A

Standard:	The complete circumferential surface area extending to 25mm each side of the weld is cleaned.
L1	25mm

- Butt welds class B

Standard:	The complete circumferential surface area extending to 300mm each side of the weld is cleaned.
L1	300mm

See figure 4 for graphic definition.

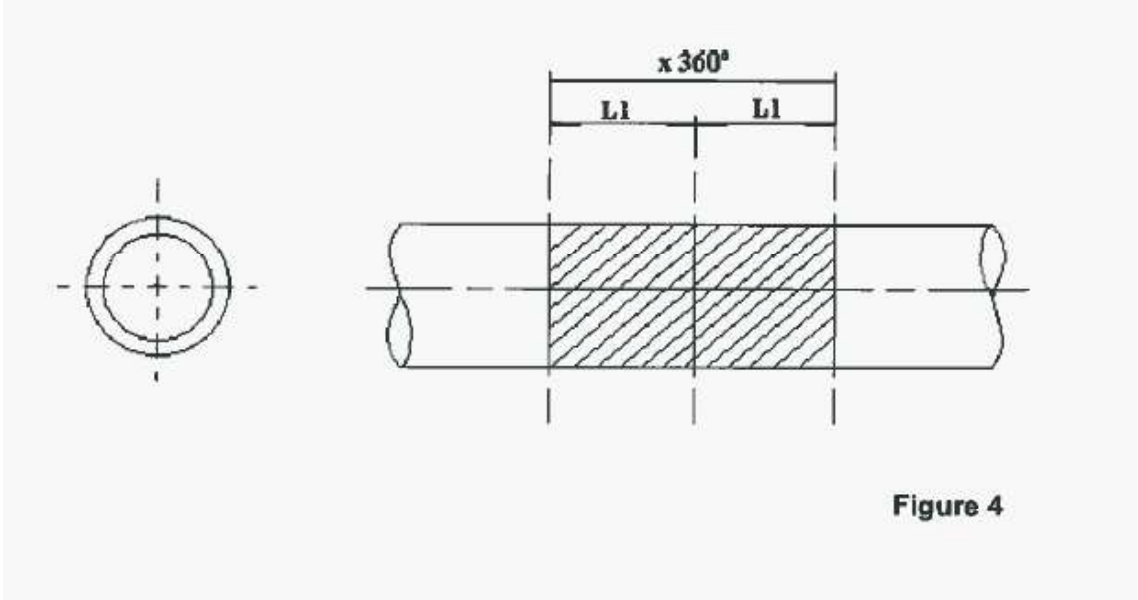


Figure 4

1.1.1.3 Branch Welds- Small Welds

- Small branches class A

Definition	Small branches are considered for this procedure to be those with an O.D. equal to or less than 20% of the main pipe O.D.
Standard 1:	The main pipe shall be cleaned over a surface area extending 25 mm, completely around the O.D. of the branch pipe weld.
Standard 2:	The branch pipe shall be cleaned completely around the circumference to a length of 25mm extending from the main pipe weld.
L1	25mm

- Small branches class B

Definition	Small branches are considered for this procedure to be those with an O.D. equal to or less than 20% of the main pipe O.D.
Standard 1:	The main pipe shall be cleaned over a surface area extending 300 mm, completely around the O.D. of the branch pipe weld.
Standard 2:	The branch pipe shall be cleaned completely around the circumference to a length of 300mm extending from the main pipe weld.
L1	300mm

See figure 5 for graphic definition

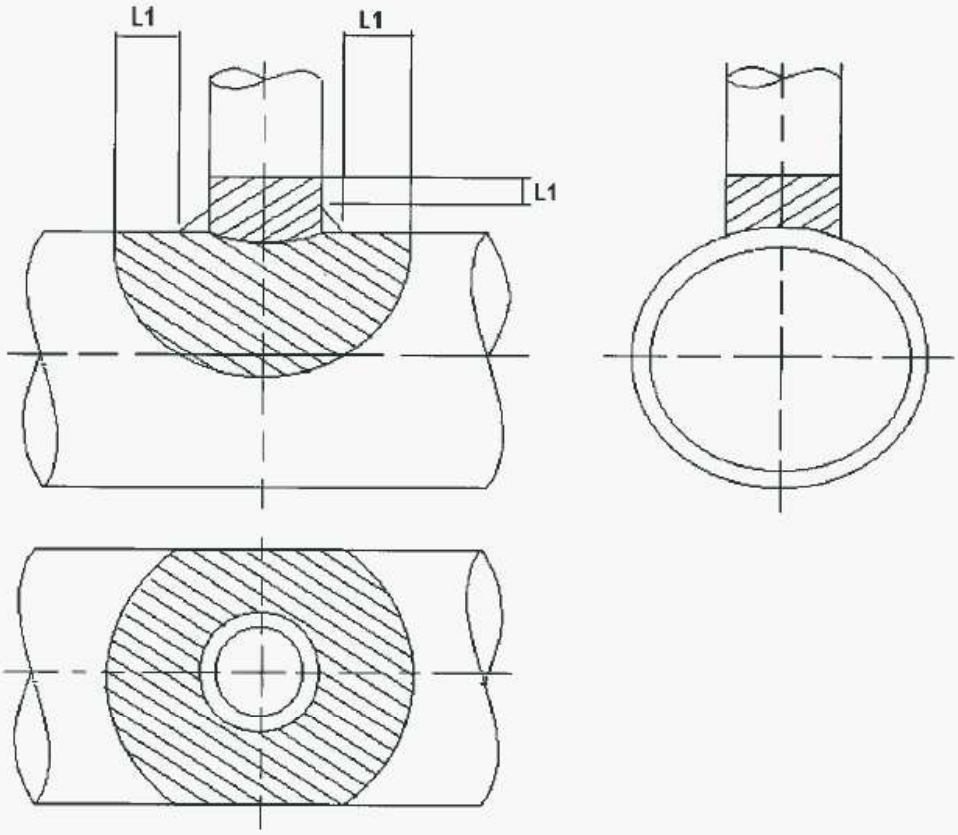


Figure 5

1.1.1.4 Branch Welds - Large Branches

- Large Branches Class A

Definition	Large branches are considered for this procedure to be those with an O.D. greater than 20% of the main pipe O.D.
Standard 1:	The main pipe shall be cleaned over a surface area extending 25mm from the weld completely around the O.D. of the branch pipe.
Standard 2:	The branch pipe shall be cleaned completely around the circumference to a length of 25mm extending from the branch pipe weld
L1	25mm

- Large Branches Class B

Definition	Large branches are considered for this procedure to be those with an O.D. greater than 20% of the main pipe O.D.
Standard 1:	The main pipe shall be cleaned over a surface area extending 300mm from the weld completely around the O.D. of the branch pipe.
Standard 2:	The branch pipe shall be cleaned completely around the circumference to a length of 300 mm extending from the branch pipe weld.
L1	300mm

See figure 6 for graphic definition.

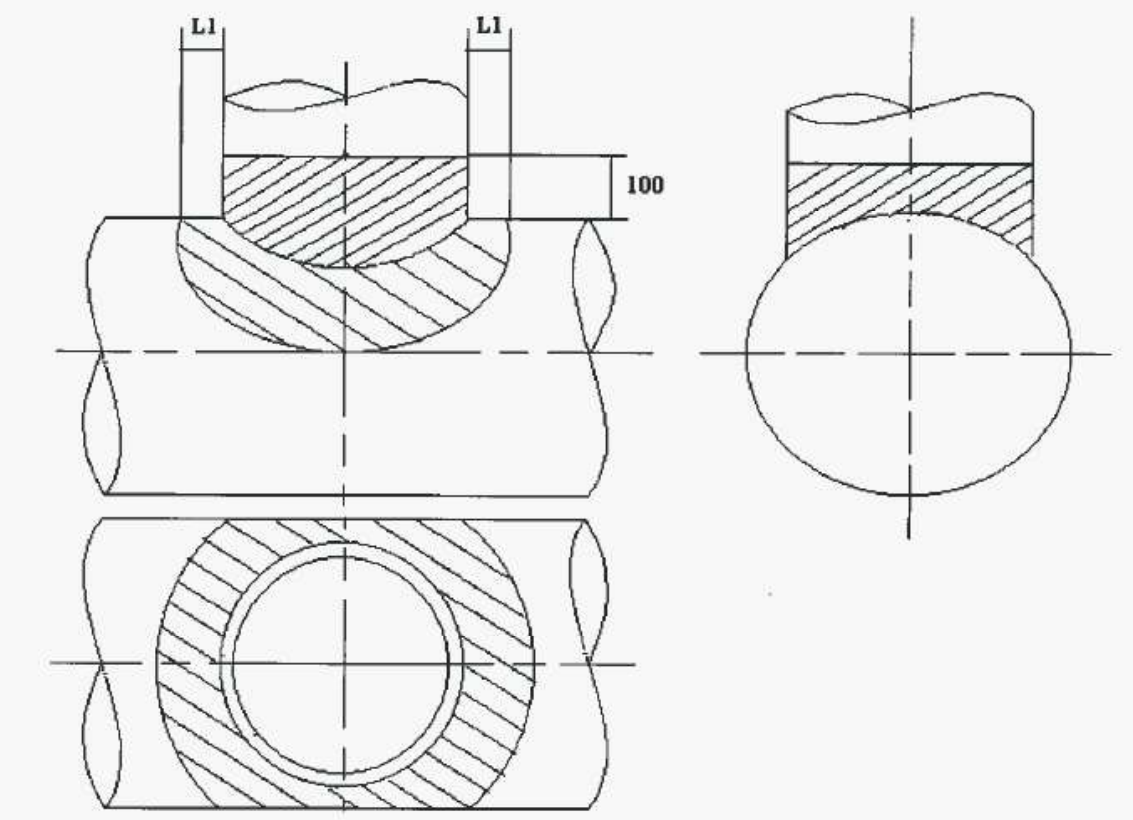


Figure 6

Note In certain instances such as branches to spherical headers, the cleaned areas will overlap. In such cases, particular care should be taken not to remove excessive material at the overlap

1.1.1.5 Valve Bodies

- Valve Bodies - Class A

Standard 1:	The valve body shall be cleaned completely around the circumferential surface area in the two locations each side of centre where the change in section occurs. These two areas shall be cleaned to a dimension of 100mm axially and 100mm vertically up and down the body.
Standard 2:	The upper centre section of the valve body (adjacent to the operation mechanism) shall be cleaned completely around the circumferential surface area for a length of 100m from the top

See figure 7 for graphic definition

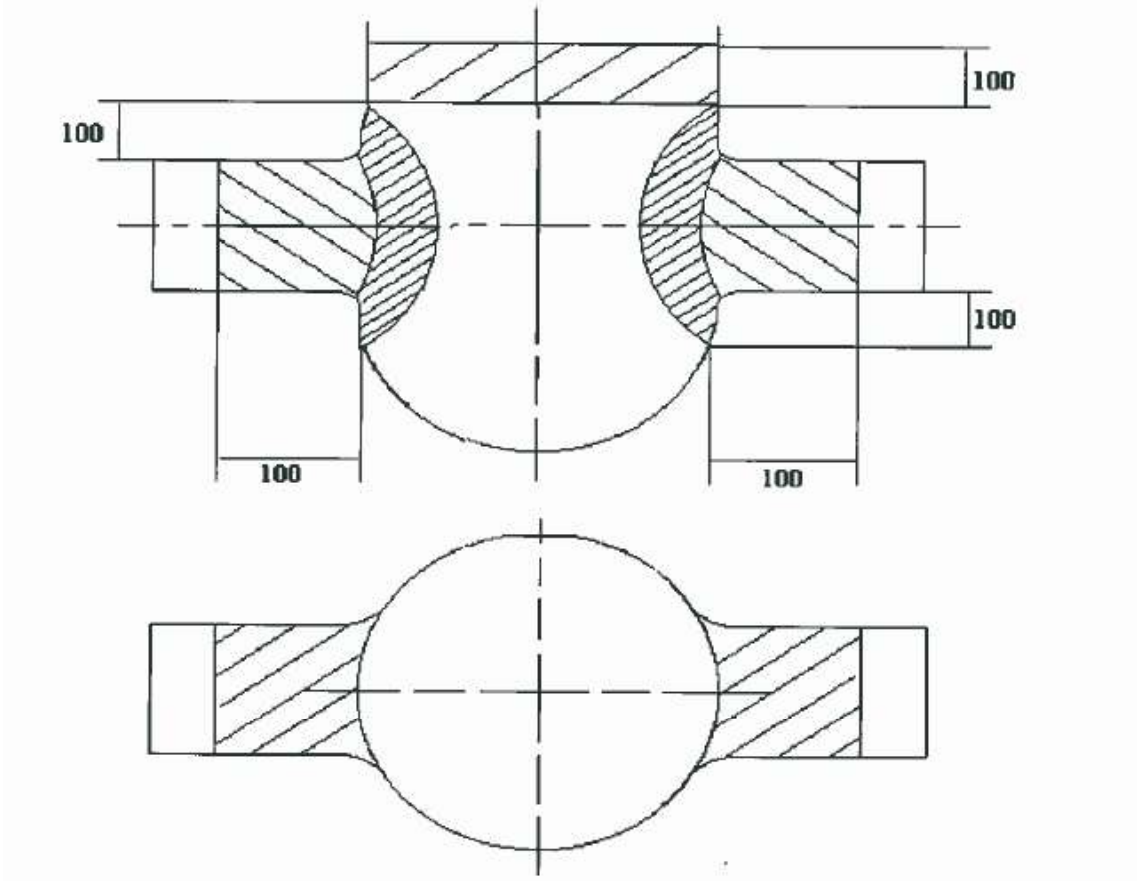


Figure 7

- Valve Bodies - Class B

Standard 1:	The valve body shall be cleaned completely.

See figure 8 for graphic definition

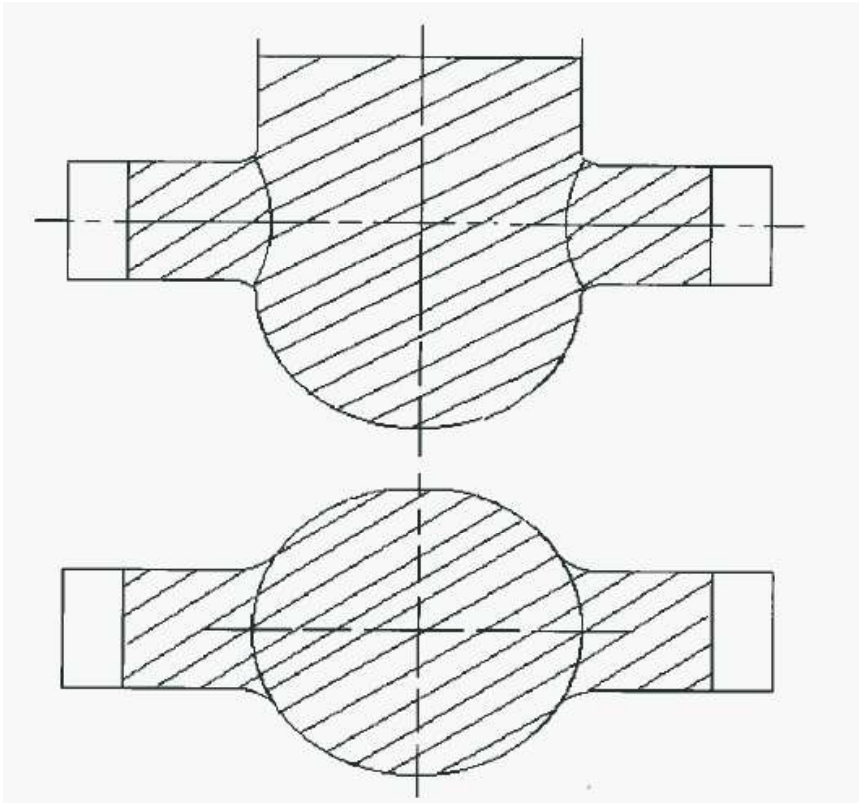
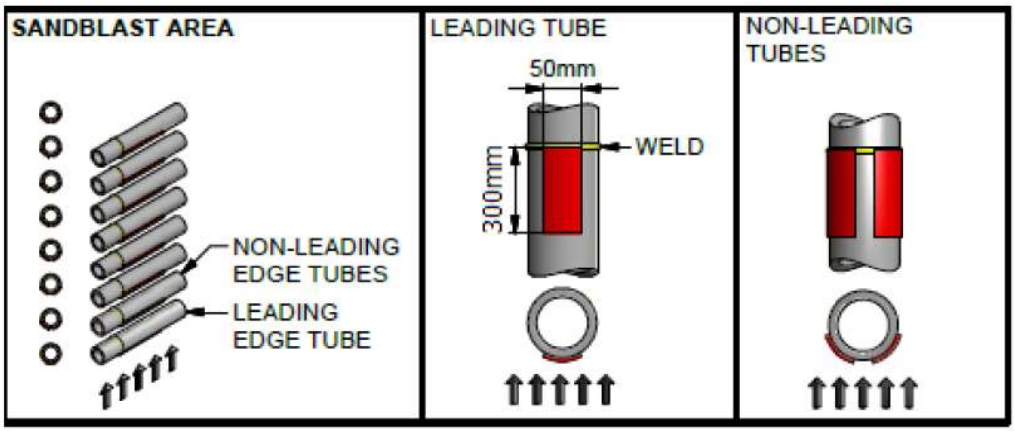


Figure 8

1.1.1.6 Cleaning Tubes for Tube Solo



1. The minimum size of the cleaned surface on each tube is approximately 50mm X 300mm for the leading tube (figure 9).
2. For all locations other than the leading edge tube, the cleaned surface area should be from a 3 o'clock right through to the 9 o'clock position of the tube in line with the gas flow. For the leading-edge tube, the cleaned surface area should be directly in line with the bulk gas flow (figure 9).
3. Below are specific areas where sandblasting for Tube SOLO has to be done:

    - **Superheater 3**

Elm 1 to 40, Tube A:
SH3A - Inlet leg between sling tubes E and F on tube section 2 closer to sling E (on stage 2). (Sandblast 300mm on fireside).

Elm 9 to 11 and 31 to 33, Tube A to Q:
SH3B - Outlet Leg between sling row D & E both side of the weld (covering stage 2 & 3). (Sandblast 500mm covering both sides of the weld, on the fireside).

Elm 9 to 11 and 31 to 33, Tube A to Q:
SH3C - Outlet Leg between sling row B & C both side of the weld (covering stage 3 & 4). (Sandblast 500mm on both sides of the weld, on the fireside).

Elm 1 to 40, Tube P and Q:
SH3C - Outlet Leg between sling row B & C both side of the weld (covering stage 3 & 4). (Sandblast 500mm covering both sides of the weld, on the fireside).

Elm 1 to 40, Tube A, B and Q:
SH3D - Outlet Leg between sling row A & front wall on the side of the weld closer to sling row A. (sandblast 300mm on stage 4 side of the weld, on the fireside).

Elm 9 to 11 and 31 to 33, Tube A to Q:
SH3D - Outlet Leg between sling row A & front wall on the side of the weld closer to sling row A. (sandblast 300mm on stage 4 side of the weld, on the fireside).

Elm 1 to 40, Tube A and B:
SH3E - Superheater 3 outlet outside the furnace in the dead space against the front wall. (Sandblast 300mm from the wall at the bottom of the tube).

Elm 9 to 11 and 31 to 33, Tube A to Q:
SH3E - Superheater 3 outlet outside the furnace in the dead space against the front wall. (Sandblast 300mm from the wall at the bottom of the tube).

- **Superheater 2**

Element 1 to 18, Tube A – B:
SH2A - Superheater 2 outlet tubes close to the evaporator wall. (Sandblast 300mm from the weld towards the sling rows A on the fireside).

Every 2nd Element from Elm 1, Tube A – Z:
SH2A - Superheater 2 outlet tubes close to the evaporator wall. (Sandblast 300mm from the weld towards the sling rows A on the fireside).

- **Reheater 2**

Outlet Area 4 Tube A and B:
RH2A - Outlet Leg between sling rows C & D on the side of the weld closer to sling row C (on stage 3) (sandblast 300mm on stage 3 side of the weld on the fireside).

Outlet Area 7 Tube A and B:
RH2B - Outlet Leg between sling row F & and rear wall on the side of the weld closer to sling row F (on stage 4) (sandblast 300mm on stage 4 side of the weld on the fireside).

Outlet Area 7 Tube J and K:
(Elm 9, 10, 11, 30, 31 & 32)
RH2B - Outlet Leg between sling row F & and rear wall on the side of the weld closer to sling row F (on stage 4) (sandblast 300mm on stage 4 side of the weld on the fireside).

Deadspace Tube A and B:
RH2C - Outlet Leg outside the furnace against the rear wall. (Sandblast 300mm from the wall).

- **Reheater 1**

Outlet Lower, Area 7, Tube A & B:
RH1 A - Reheater 1 outlet tubes between sling rows F and the rear wall. (Sandblast 300mm from the weld towards the sling rows F on the fireside).

- **Evaporator Wall**

Y-Pieces for micro-UT.

Helical to vertical transition.

Wall blowers.

Sling strap attachment.

- **HP Pipework**

Item	Description
5000	Butts
900	Branches
500	Attachments
510	Straights
1500	Bends

- **Boiler Headers**

Item	Description
310	Stubs
200	Circ Weld
50	Centre Weld

- **Turbine Loop-Pipework**

Item	Description
1400	Butts
100	Branches
100	Attachments
100	Straights
100	Bends

- **Boiler Circ Pump**

Item	Description
100	External
100	Internal
100	Mechanical Cleaning (Internal)

- **FAC and RBI**

Item	Description
1000	Straights
1000	Bends
1000	T-Pieces
1000	Vessels
1000	Mechanical Cleaning

- **Boiler Internal and Boiler Auxiliaries**

Item	Description
100	Straights
100	Bends

- **Turbine Condensate Plant**

Item	Description
1400	Butts
400	Branches
600	Attachments
500	Straights
1900	Bends

Condensate Pipework

Item	Description
1800	Butts
1000	Branches
200	Attachments
1300	Straights
4300	Bends

Bled Steam Pipework

Item	Description
9200	Butts
4500	Branches
800	Manifolds
4500	Straights
4000	Bends

Vessels

Item	Description
500	LP HEATER 10
500	LP HEATER 20
500	LP HEATER 30
500	HP HEATER 5A
500	HP HEATER 5B
500	HP HEATER 6A
500	HP HEATER 6B
500	DST
500	TCT
500	Flash box Tank

Condensate Drains

Item	Description
1200	Butts
140	Branches
500	Manifolds
480	Straights
680	Bends

Turbine Feedwater Plant

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends

BOILER FEED PUMP SUCTION - PURGE SUPPLY

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends

BFP LEAK-OFF & ATTEMPERATOR SPRAY

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends

BFP DISCHARGE AND HP FEED

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends

HP HEATER BLED STEAM

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends

HP HEATER DRAINS

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends

HP HEATER RELIEVE VALVE PIPEWORK

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends

Turbine Auxiliaries

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends

Turbine Centreline

Item	Description
1500	Butts
100	Branches
200	Manifolds
260	Straights
600	Bends
1500	Stubs

1.4 Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
BCEA	Basic Conditions of Employment Act
CARAB	Boiler Health Monitoring program
CIOID	Compensation for occupational injuries and diseases
GO	General Overhaul
IN	Boiler Inspection
IR	Intermediate Repairs
MGO	Mini General Overhaul
NEC	New Engineering Contract
MS	Microsoft
NDT	Non Destructive Testing
OD	Outside Diameter
SOW	Scope of Work
TBA	To be advised

2 Management strategy and start up.

2.1 Flexibility with the start of outages

1 The outage start-date, is stated on the Task Order.
2 Movement to Outage dates can take place due to the country's demand for electricity.
3 Any movement to Outage dates is to be communicated in writing by the *Service Manager* at least 24 Hours before the start date. Notification of change to the outage date to the *Contractor* before 48 Hours to the outage will have no claims for compensation.
4 The *Contractor* will be entitled to claim actual accommodation, travel and staff expenses incurred, if the *Contractor* received notification of outage movement within 48 hours of the actual start date of the outage as agreed upon in the latest Task Order revision.

2.2 The Contractor's plan for the service

The *Contractor* submits a program in Primavera format (confirmation required upfront)
The program includes:

- Activities
- Durations in hours
- Predecessors
- Successors
- Total float
- No constraints (linking to be done properly)
- No resources

- No unnecessary calendars (remove all)
- No empty lines

Daily feedback on progress required for duration of each task order program.

2.3 Management meetings

1. Regular meetings of a general nature may be convened and chaired by the *Service Manager* as follows:

Title and purpose	**Approximate time & interval**	**Location**	**Attendance by:**
Overall Outage contract progress and feedback	TBA	Majuba Power Station, Specific conference room TBA	*Service Manager*, *Contractor* and Supervisors
Daily outage meeting	Daily at 10:00 (During outage)	Majuba Power Station, Production boardroom (U4 16m level)	Site Manager, System Engineer, Outage coordinator and Quality Inspectors
Outage Post mortem meeting	At task order completion	Majuba Power Station, Specific conference room TBA	Site Manager, System Engineer, Outage coordinator and Quality Inspectors
Outage Scope clarification meetings	As when required	Majuba Power Station, Specific conference room TBA	Site Manager, System Engineer, Outage coordinator and Quality Inspectors
Outage Kick-off meeting	Week before the start of the outage	Majuba Power Station, Specific conference room TBA	Site Manager, Outage coordinator
Assessment meeting	30 days after start of outage	Majuba Power Station, Specific conference room TBA	Site Supervisor/manager, Service manager,

2. Meetings of a specialist nature may be convened at times and locations to suit the Parties.
3. Records of these meetings are submitted to the *Service Manager* by the person convening the meeting within five days of the meeting.
4. All meetings are recorded using minutes or a register prepared and circulated by the person who convened the meeting.
5. Such minutes or register is not used for confirming actions or instructions under the contract as these are done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

2.4 Contractor's management, supervision and key people

The key persons are:

Key persons of *Contractor*				
Name				
Designation				
Qualification				
Experience				
Contact Details				

1. The *Contractor*'s Site Manager ensures that only competent persons be allowed to work on plant. The *Service Manager*'s Service Manager is entitled to verify the qualifications of the *Contractor*.
2. The *Contractor*'s supervisors must be knowledgeable about the conditions and scope of work contained in this contract and capable of executing the scope of work.
3. The *Service Manager* may, having stated reasons, instruct the *Contractor* to remove a key person. The *Contractor* then arranges that, after one day, the key person has no further connection with the work included in this contract.
4. The *Contractor* may not replace any of the key persons, without prior written request and approval thereof from the *Service Manager*.

2.5 Police clearance

1. All *Contractor* personnel to undertake Police clearance.
2. Certificates to be provided to the Service Manager at least 2 weeks before commencement of work.
3. The Service Manager reserves the right to refuse entry to all persons whose criminal records indicate that their presence on site might create an unsafe and insecure environment to Majuba Power Station.
4. The following website can be used to guide the process. http://www.saps.gov.za/services/applying_clearence_certificate.php

2.6 Supplier Development and Localisation Requirements

2.6.1 Recruitment of General Labour

1. The *Contractor* recruits 100% of all new recruits, of general labour from Dr Pixley Ka Seme local municipality, as per local agreements latest process to be confirmed with the Service Manager on request
2. In an event that new recruits are not from the defined Dr Pixley Ka Seme municipality, the *Contractor* needs to provide proof that the local municipality could not provide such individual.
3. The *Contractor* submits an updated monthly job statistics on the 1st day of each month, using the reporting template that is provided by the Service Manager.

2.6.2 Transporting of Staff

The *Contractor* use transportation sourced from the Dr Pixley Ka Seme local taxi association. Contact details of the Chairpersons of the different associations will be provided by the Service Manager on request.

2.6.3 Training and Development

4. The *Contractor* to train at least 10 candidates local to Dr Pixley Ka Seme local municipality the sandblasting technique from college and on job. This must be demonstrated every year on progress
5. The *Contractor* to train at least 10 candidates local to Dr Pixley Ka Seme local municipality the Refractory technique from college and on job. This must be demonstrated every year on progress

2.6.4 Supplier Development and Localisation Plan

"Local to site "means all areas that fall within the Dr Pixley Ka Seme Municipal area.

The *Contractor* is required

1. To provide a high level Supplier Development & Localisation implementation plan which stretches for the duration of the contract as part of the returnable of the enquiry.
2. To provide an explanation and action plan for deviation from the proposed plan
3. The *Contractor* is required to procure general labour from Dr Pixley Ka Seme. Only skilled and professionals would be procured from outside of Dr Pixley Ka Seme Municipality Area
4. The *Contractor* is also required to submit its Human Resource Plans indicating the number of new jobs that would be created or retained due to this project
5. The Candidates for Skills Development would be sourced from Dr Pixley Ka Seme first, then

6. The candidates may be developed directly by the supplier, through the suppliers' own supply network or through the SETA accredited training providers
7. Candidates are to be currently unemployed graduates from FET (Further Education and Training) colleges, universities or matriculates. These candidates shall also be representative of the population demographics of Mpumalanga province
8. Mpumalanga, before the rest of RSA
9. The *Contractor* submits proposals to the *Service Manager* for acceptance on how he will employ and train local labour in the following positions:
   Refer to the SDL matrix

2.7 Management of work done by Task Order

1 Task Orders are issued per month one week prior to start of the month for the core crew
2 Task Orders are issued per outage one month prior to the start of an outage
3 The Task Order includes the scope of work for the specific outage.
4 A Task Order is the instruction to commence work.
5 No work shall commence until a Task Order is issued and has been finalised and accepted and signed by both the *Service Manager* and *Contractor*.
6 All work will be issued on a Task Order system. The Work Order, Purchase Requisition and Purchase Order will be created via the SAP PM system.
7 Task Orders are issued for all activities. Assessment of work will be conducted after work complete. Proof for assessments to be supplied to the *Service Manager*

2.7.1 Contract change management

1. The *Service Manager* issues a Task order to the *Contractor* to authorise the execution of work.
2. In the event where it is identified that there is additional work to be done outside the scope of work on the Task Order, the *Contractor* will give the *Service Manger* an early warning with a written quotation.
3. If agreed, the *Service Manager* issues a revised Task Order or additional Task Order.
4. The *Contractor* starts the work on the starting date of the task order. The Task Order is signed by both the *Service Manager* and the *Contractor* before work commences.

2.7.2 Low Service Damages

The low service damage is as per the table in Annexure A.

2.7.3 Documentation control

1 The *Contractor*s safety file will be hand over to the Service Manager after each outage
2 All NEC standard forms should be used eg. Task orders, Early Warnings, Defect certificates and Assessments.
3 The *Contractor* is responsible to plan the supply of the documentation during the various project stages and to provide the documentation in accordance with the *Contractor* Document Submission Schedule (CDSS). A document is thus any written or pictorial information describing, defining, specifying or certifying activities, requirements, procedures or results.
4 The *Contractor* submits all documentation on a formal transmittal form to the Service Manager.
5 All manuals, documents, drawings and engineering documentation shall be presented in British English in both software and hardware.
6 All Communications will be filed and kept on site at all times as it is crucial to have the correct communication structures. These communication documents should at all times adhere to the NEC 3 Term Service Contract communication requirements.
7 Safety files to be submitted and approved before maintenance and outage work commence as per client requirements, two weeks in advance.
8 Planned Outage Scope of work to be issued to *Contractor* from the client five months in advance.
9 Budget quotation for outage work to be submitted one week after SOW submission/SOW clarification.
10 Compensation for Occupational Injuries and Diseases (COID) Certificate and letter of good standing must be valid at all times and submitted to the Service Manager at each anniversary of the contract
11 Two hard copies of the data packs to be supplied to the Service Manager. An Electronic copy of all reports to be provided on CD/ Flash disk

***Contractor* Document Submission Schedule (CDSS)**

Document Name/Description	Date/Time documents to be submitted
A programme in Primavera format as referred to document number (240-85065548)	One week after receipt of Task Order
Baseline risk assessment	One week after receipt of Task Order
Technique sheets	One week after receipt of Task Order
Eskom approval list	One week after receipt of Task Order
Contractor's Safety file	Two weeks before start of work
Inspection report	24 hours after stripping activity
Daily progress report	After Every Shift
Technical report and data pack	Within 3 days of completion of the services

2.7.4 Invoicing and payment

Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Service Manager* with a tax invoice showing the amount due for payment equal to that stated in the *Service Manager*'s payment certificate.

The *Contractor* addresses the tax invoice to
Accounts Payable Services
Eskom Holdings SOC Limited
Majuba Power Station
Private Bag 9001
Volksrust
2470

and include on each invoice the following information:

1. Name and address of the *Contractor* and the *Service Manager;*
2. The contract number and title;
3. *Contractor*'s VAT registration number;
4. The *Service Manager*'s VAT registration number 4740101508;
5. Description of service provided for each item invoiced based on the Price List;
6. Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;

3 Health and safety, environment and quality assurance

3.1 Health and Safety Risk Management

1. The *Contractor* complies with the health and safety requirements contained in the General Works Information.
2. Eskom is a national key point and therefore strikes are not permitted. Strikes are to be managed by the *Contractor* at his/her own cost.
3. The *Contractor* to have a dedicated Safety Officer on site at all times when work is performed. The Safety Officer to preferably have a National Diploma, but at least have a SAMTRAC or equivalent qualification.

3.1.1 Statutory Safety

1. Site and or Workshop establishments involved in the execution of welding projects shall meet the mandatory statutory health requirements as contained in the OSH Act and regulations 85 of 1993.

3.1.2 Reporting of Incidents

1. The Employer follows an incident prevention policy; refer to 32-95, Environmental, Occupational Health and Safety Incident Management Procedure, which includes the investigation of all incidents involving personnel and property. This is done with the intention of introducing control measures to

prevent a recurrence of the same incident. The *Contractor* is expected to co-operate fully to achieve this objective. The Employer's Representative must be informed immediately of any incident before the end of the shift.

2. **NOTE:** The reporting of the incident to the Employer's Representative, does not relieve the *Contractor* of his legal obligation to report incidents to the Department of Labour, or to keep records in terms of the Occupational Health and Safety Act, and Compensation for Occupational Injuries and Diseases Act.

3.1.3 Work Stoppages

1. The Employer takes safety serious and therefore lessons learned from other safety lost time incidents are shared with the whole workforce. These stoppages are compulsory and the *Contractor* will not be allowed to claim additional compensation for these stoppages.
2. If the *Contractor* experiences a LTI, he/she might be expected to prepare a presentation and present it at a work stoppage that will be arranged by the Employer. The presentation content/template will be provided by the Employer.

3.1.4 Health and Safety Arrangements

1. The *Contractor* must ensure that all his personnel attend a Health and Safety Induction Course prior to starting with the works. A one- (1) hour course will be provided by the Employer and will be valid for the duration of one- (1) year.
2. The *Contractor* shall comply with the guidelines set out in the Majuba Standard BIA/RM/STD/01 titled "Safety, Health and Environmental specifications to be met by Contractors"
3. Safety Risk Management has the right and authority to visit and inspect the Contractor's workplace or site establishment to ensure that tools, machinery and equipment comply with the minimum safety requirements.
4. The Employer's Representative shall be entitled to instruct the *Contractor* to stop work, without penalty to the Employer, where the Contractor's personnel fail to conform to safety standards or contravene health and safety regulations. The Employer's Representative is entitled to instruct the *Contractor* to discipline his employees and to enforce disciplinary action, and submit a report to the Employer's Representative. The *Contractor* shall implement additional health and safety precautions where necessary.
5. The following Health & Safety requirements should be complied with:
    a. The *Contractor* must supply a Certificate of Competency of his/her employees to work under the following conditions:
        i. Confined Spaces
        ii. Heights
        iii. Heat stresses
        iv. Cold stresses
    b. The *Contractor* to provide the Employer with proof of free issue of adequate Personal Protective Equipment (PPE) to be used by his/her employees (preferably SABS approved). All PPE to comply with the Eskom PPE specification 240-44175132
    c. Noisy equipment and tools - no equipment or tools > 105db (A) may be supplied/utilised by the Contractor.
    d. Sub-contractors - the principal *Contractor* must state if a sub-*Contractor* is going to be used and who the sub-contractor/s are. Proof must be given to Eskom that the sub-contractor/s has/ve the necessary competence and resources to carry out the work safely and to ensure that due care of the environment will be exercised.
    e. Medical examination processes must be complied with.

3.1.5 Vehicle and driver safety

1. All drivers, passengers and pedestrians must obey vehicle safety requirements in terms of the National Road Traffic Act, Act No 93 of 1996, as amended, including other relevant provincial or local requirements.
2. Transportation of passengers: open LDV's:
   With effect from 31 May 2006, no Eskom employee or *Contractor* would be allowed to transport passengers on the back of open light delivery vehicles (LDV's). It is a legal requirement to provide safe transportation of Eskom and *Contractor* employees – therefore the following will be enforced:
   a. Ensure that no employee, including *Contractor* employees or any other person, when on an Eskom site and/or performing work for Eskom, is allowed to be transported in the back of open vehicles.
   b. There will be cases where this may not be reasonable or practicable, namely where vehicles are used during line inspections on sites or on private roads, or similar cases, and in these cases such vehicles must be driven at less than 30km per hour or at a speed suitable to the prevalent conditions. In such cases, the carrying of passengers in the back of such open vehicles could be explicitly allowed, after:
      i. a risk assessment has been carried out, indicating a very low risk;
      ii. mitigating factors have been identified to control any risk identified;
      iii. proper seating and handrails have been provided on the back of the open vehicle:
      iv. These measures have been discussed at the relevant Health and Safety Committee Meeting and approved by the *Employer.*
      v. is defined and contained in a formal written division's or BU's policy, including the appropriate mitigating factors;
      vi. Such a policy has been communicated to all employees and contractors.

      The above risk assessment findings/outcomes must be available at all times for audit purposes.
   c. Tools and equipment must be properly secured.
   d. Only authorised drivers may transport passengers.
   e. Proof must be submitted on request in terms of valid roadworthiness of the vehicle/s.
   f. The above must apply to on site and off site transportation of passengers.
   g. No person may be transported in the back of vehicles closed by means of canopies, unless provided with factory-fitted or manufactured-approved, proper seating and safety belts, i.e. Crew cabs.
   h. The driver must ensure that no employees are transported in the back of open vehicles unless it is allowed in terms of a divisional or BU-specific policy as referred to in paragraph b above. This also applies to *Contractor* and *Contractor* employees when performing work for Eskom.
   i. The driver must ensure that all canopies are being properly fitted and secured and that all loose tools and objects in vehicles are properly secured.
   j. The driver must ensure that their passengers are seated and wear seatbelts at all times.

3.1.6 Vehicle Standard minimum specifications

1. *Contractor* vehicles are to comply with the requirements specified in the Eskom Vehicle Safety Specification 32-345.
2. The standard minimum specifications are applicable to all Eskom-owned vehicles and vehicles used when performing work for Eskom Holdings SOC Limited and its subsidiaries, including contractors (subsidised transport, contractors, consultants, and any person insured directly or indirectly by Eskom, driving a vehicle within or beyond the borders of South Africa). This includes vehicles owned, hired or leased by Eskom or its subsidiaries or any vehicle an employee makes available for Eskom-related business purposes.
3. All vehicles used for Eskom business shall meet the following requirements:
   a. Factory-fitted antilock braking system (ABS) for all vehicles.
   b. Factory-fitted driver and passenger air bags.
   c. Alarm/immobiliser, factory-fitted, and if not available by the manufacturer, it shall be fitted at approved fitment centres.
   d. Factory-fitted power steering.

e. Tyres as per the manufacturer's specifications for the intended purpose.
f. Two emergency warning triangles.
g. Factory-fitted air conditioner.
h. Reverse beeper shall be standard on all heavy commercial vehicles, buses and construction equipment or vehicles being used on construction sites.
i. Refer to the standard for specific requires for Light Delivery Vehicles (LDVs), Heavy Commercial Vehicles, Minibuses, Midi-buses and buses, Trailers and caravans, Construction vehicles and Other requirements.

3.1.7 Hot Work

The *Contractor* to comply with Eskom's Hot Work procedure.

1. The Hot Work Monitor must be in possession of the following qualifications and training:
   a. Basic fire extinguisher training
   b. Hot work monitor training
   c. Broad knowledge of welding, cutting, brazing, grinding, soldering and other hot work activities
   d. Must be able to read and write English
2. Hot work approval
   Before hot work operations begin in a non-designated location, a hot work approval is required. Before the hot work approval is issued, the following conditions are to be verified by the Hot Work Monitor:
   a. Hot work equipment to be used shall be in satisfactory operating condition and in good repair.
   b. Where combustible materials, such as paper clippings, wood shavings, or textile fibres are on the floor, the floor shall be swept clean for a radius of 11m. Combustible floors (except wood on concrete) shall be kept wet, be covered with damp sand, or be protected by non-combustible or fire retardant shields.
   c. Where floors have been wet down, personnel operating arc-welding equipment shall be protected from possible shock.
   d. All combustibles shall be relocated at least 11m horizontally from the work site. If relocation is impractical, combustibles shall be protected with fire retardant covers or otherwise shielded with metal or fire retardant guards or curtains. Edges of covers at the floor shall be tight to prevent sparks from going under them, including where several covers overlap when protecting a large pile.
   e. Openings or cracks in walls, floors, or ducts within 11m of the site shall be tightly covered with fire retardant or non-combustible material to prevent the passage of sparks to adjacent areas.
   f. Conveyor systems that might carry sparks to distant combustibles shall be shielded.
   g. If hot work is done near walls, partitions, ceilings, or roofs of combustible construction, fire retardant shields or guards shall be provided to prevent ignition.
   h. If hot work is to be done on a wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side by relocating combustibles. If it is impractical to relocate combustibles, a fire watch on the opposite side from the work shall be provided.
   i. Hot work shall not be attempted on a partition, wall, ceiling, or roof that has a combustible covering or insulation, or on walls or partitions of combustible sandwich type panel construction.
   j. Hot work that is performed on pipes or other metal that is in contact with combustible walls, partitions, ceilings, or other combustibles shall not be undertaken if the work is close enough to cause ignition by conduction.
   k. Fully charged and operable fire extinguishers that are appropriate for the type of possible fire shall be available immediately at the work area. If existing hose reels are located within the hot work area defined by the permit, they shall be ready for service, but shall not be required to be unrolled or charged. (Loan extinguishers are available from the Fire Department)
   l. If hot work is done in close proximity to a sprinkler head, a wet rag shall be laid over the head and then removed at the conclusion of the welding or cutting operation. During hot work, special precautions shall be taken to avoid accidental operation of automatic fire detection or suppression systems (for example, special extinguishing systems or sprinklers)
   m. Nearby personnel shall be protected against heat, sparks, slag, and so on

n. All welding machines and cutting torch trolleys are to be equipped with at least a 2,5kg dry powder fire extinguisher.
o. If hot work has to be done in high-risk areas where fire systems cannot be impaired, a welding tent should be built around the object to be worked on i.e. Bulk Fuel Oil Plant.

3. Appointment of Hot Work Monitors
   a. Eskom and each *Contractor* Company that is required to perform hot work shall appoint in writing at least one (1) hot work monitor for normal day-to-day maintenance related hot work/ outage related hot work. Additional hot work monitors may be appointed if the workload requires such appointments.
4. Hot Work Approval
   a. The hot work monitor must complete a hot work approval form (Form Part 1). as per 32-681 Plant Safety Regulations

Refer to the procedure for further information.

3.1.8 Confined Spaces

Such As Vessels, Mills, Culverts, Flues, Furnaces, Ducts, Pits, Sewers, Tunnels and Underground Chambers (Refer General Safety Regulation 5 of the OHS Act)

1. At least one door or manhole giving access to each confined space must be provided with a means to lock such door or manhole in the open position. A confined space warning sign must also be attached next to such entrance of a confined space when entry into this area will be required.
2. The door or manhole concerned must be locked in the open position and a confined space warning sign attached before any person is allowed to enter such confined space. The locking, or other preventative measure, must constitute an integral part of the isolation required before the permit to work is issued. Where such a door or manhole cover must be removed by a maintenance person, provisos similar to those stipulated under (section 17.2 c and 7.11.2 b) must apply.
3. Before any door giving access to a confined space is closed, the person closing such door must ensure that there are no persons inside the confined space, and that all tools, equipment and debris have been removed.
4. Where a confined space can be isolated and adequately ventilated, this must be done before the space is environmentally tested and certified clear of all dangerous gases. Thereafter a gas test certificate an environmental certificate must be issued before any person is allowed to enter. In addition:
   a. Adequate ventilation, gas monitoring and thermal stress monitoring (heat stress – WBGT index - cold stress) must be maintained while persons remain in the space.
   b. Only approved lighting and portable electrical tools shall be allowed, (Refer Electrical Machinery Regulation 10 of the Act.
   c. A permit to work must be issued.
5. Where there is a possibility of dangerous substances being present in a confined space which cannot be effectively isolated and adequately ventilated, the following measures must be taken before any person is allowed to enter that space:
   a. All practical steps must be taken to prevent the ingress of dangerous substances.
   b. Every person who enters the confined space must wear approved self-contained breathing apparatus and must have competency for the equipment.
   c. Every person who enters the confined space must wear a safety harness to which a rescue line is attached.
   d. A rescuer must remain on duty outside the confined space and this person must maintain communication with those inside the confined space. The rescuer must control the rescue line(s) attached to the safety harness(es) and must assist in the removal of any person from the confined space in the case of an emergency. An additional set of breathing apparatus must be available for the use of the rescuer.

e. Adequate steps must be taken to ensure that all persons wearing breathing apparatus are withdrawn from the confined space before the end of the specified working duration of the breathing apparatus.
f. A permit to work must be issued.

6. Where it is not possible to reduce the WBGT index to be below 30 for manual work, access shall only be allowed, if relevant training has been done and a local procedure is in place that explains in detail the access control and health and safety precautions as described in the environmental regulations. (Refer Environmental Regulations for Workplaces 2(4) of the Act).
7. If the original scope of work changes, a new permit to work must be issued, or if hazardous substances are used, the risk assessment, pre-work checklist, the environmental certificate, gas test certificate shall be re-evaluated and re-issued as required.

3.1.9 Working on Heights

General

1. Wherever reasonably practicable, preference is given to the performance of work at ground level as opposed to in an elevated position.
2. Where work in an elevated position is necessary, preference is given to fall prevention measures such as, but not limited to, effective barricading and the use of work platforms.
3. Persons may only work from a fall risk position if a site-specific fall protection plan is in place and correctly implemented and consists of the following:

a. All appointments for the fall protection plan developer and implementer are in place.
b. One risk assessment, which is specific and incorporates the working at height risk assessment, as well as the site-specific risk assessment, has been completed for the work to be conducted.
c. Safe working procedure/task analysis and work instructions, approved by a competent person, are in place.
d. A fall rescue plan, along with necessary equipment and trained rescuers, is in place.
e. Appropriate training, as determined by the risk assessment, has been provided.
f. Appropriate height safety equipment and personal protective equipment have been issued to the individual.
g. There are equipment inspection procedures and up-to-date inspection records.
h. Individuals are medically fit to work at height, and records of this are kept.
i. A site-specific risk assessment is performed.

4. While work is in progress, adequate warning signs and/or barricades shall be used in all areas where there is a risk of persons being injured by materials or equipment falling from the work area. Barricades should be continuous and easily visible.
5. A drop zone shall be established with appropriate warning signs and barrier tape or barricading, warning personnel below of workers above and potential falling objects.

3.1.10 Risk Assessment

1. A risk assessment allows for careful examination of what could cause harm to people because of a work activity, and it allows one to take the necessary precautions to prevent the harm from occurring.
2. The following hierarchy of controls has to be observed.
   a. When considering work at height, a risk assessment must be conducted, form part of the health and safety plan to be applied on site and must include;
      i. the identification of the risks and hazards to which persons may be exposed to;
      ii. an analysis and evaluation of the risks and hazards identified based on a documented method;
      iii. a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;

iv. a monitoring plan; and

v. a review plan

b. Working at height risk assessments shall take into account factors such as:
   i. the necessity for the work to be done in an elevated position as opposed to on the ground;
   ii. barricading and other fall prevention measures;
   iii. requirements of the safe work procedure;
   iv. restrictions in fall distances and clearances;
   v. mobility required for the task, for example, degree of vertical or horizontal movement;
   vi. height being worked at;
   vii. possible injuries;
   viii. duration of exposure;
   ix. frequency of performing these activities;
   x. type of work and ergonomic considerations;
   xi. work site/area congestion;
   xii. potential/likelihood/causes of a fall occurring;
   xiii. endurance of workers;
   xiv. risk control measures;
   xv. electrical hazards and safe clearances from overhead power lines;
   xvi. structure (ease of access, secure footing, and compatibility with fall prevention and/or fall arrest equipment);
   xvii. terrain;
   xviii. restrictions with reference to working alone (a rescue must always be executable);
   xix. falling objects; and
   xx. suitable anchor points.

c. Develop approved written safe work procedures/task analysis and work instructions for all elevated work and make them available to all persons carrying out the work. Standard procedures may be suitable for most work; however, unusual conditions or architectural features may require additional site-specific procedures. The person supervising the work must ensure that safe work procedures/task analysis and work instructions are followed at all times.

d. In the design phase, consider fall risks with regard to minimising risk, ease of access, anchor points, and avoidance as far as reasonably practicable.

e. The risk assessment will determine the selection of suitable work at height equipment and systems for the work to be performed safely.

f. Be aware of hazards resulting from adverse weather conditions, and where necessary, modify the work method accordingly.

g. Determine the content and intervals of planned job observations during the risk assessment.

h. The risk assessment must include the rescue plan.

i. Persons working alone should have a practical way of performing a rescue in the event of an incident.

j. Risk assessments must be performed and documented by competent persons. The mitigation process from the risk assessments must influence the content of the fall protection plan.

k. In the case of live work, work has to be conducted according to standards and procedures while maintaining minimum safe working clearance.

l. Take into account the risks associated with objects falling from heights. Tools and equipment must be safely secured and attached to the body or structure

3.1.11 Fall Protection Plan

1. A task-/job-specific fall protection plan shall be developed and approved by a competent person for any activity where there is a risk of a fall.
2. A competent fall protection plan developer must be appointed according to 10(1)(a) of the Construction Regulations.
3. The fall protection plan shall include a task-/job-specific risk assessment and requirements relating to the following:
   a. Training programme for employees working from a fall risk position
   b. Appointments and authorisations
   c. The procedure addressing the inspection, testing, and maintenance of all fall protection equipment
   d. A risk assessment that is site-specific with regard to fall risks for work to be performed
   e. The processes for evaluation of the employees' medical fitness necessary to work in a fall risk position and the records of this (medical surveillance programme)
   f. Equipment use and specification
   g. Fall prevention, fall arrest, and fall rescue
   h. Method statements or safe work procedures/task analysis/work instructions.
4. The fall protection plan and its requirements shall be integrated into the health and safety plan.
5. Adherence to the fall protection plan is mandatory. An induction on the fall protection plan must be carried out for all relevant employees.
6. The fall protection plan must be suitably amended in accordance with the risk assessment, equipment technology, standards, and legislation.
7. The fall protection plan must be monitored and reviewed as required by the work performed and changes in hazards.

FAS Training

1. All users of height safety equipment for working at height must be trained, assessed and declared competent for the specific height safety equipment and associated structures.
2. Only service providers accredited by Eskom to present the basic Fall Arrest System and Rescue Course as per the working at heights procedure will be accepted and recognised as competent to provide competency for working at heights training. A list of the Eskom Accredited Service providers can be obtained from the Service Manager.
3. Validity of FAS and rescue training
   a. There shall be no expiry date on official training, but at least one job observation on each user per annum, for example by a peer.
   b. There shall be no expiry date on the certificate, but only the date of training.
   c. Evaluation to be conducted every three years by an accredited trainer.
4. The need for refresher training is determined by the employer, taking into account factors such as period of inactivity and changing circumstances as determined by risk assessments and job observations.
5. Refresher training/workshops for rescue need to be run on a regular basis, at least six- monthly.
6. At least two persons per team have to be able to perform rescues if work at height is involved.
7. All personnel trained to perform rescues will be trained to first aid Level 2.

8. Documented training records for all work at height training must be maintained.

3.2 Environmental constraints and management

The *Contractor* is required to ensure that all works are carried out as per the Majuba Power Station Environmental Requirements for Contractors and Suppliers Work Instruction (ENV/GEN/SPEC/01).
The *Contractor* shall make clear provision for the following as part of the tender submission prior awarding of the contract:

1. The Aspects/Impacts register and Environmental management plan that is based on applicable legislation, which relates to their activities on site.
2. An appointed, trained and competent person in writing, who will have the responsibilities of implementing all environmental requirements on a specific contract
3. All method statements, at a minimum addressing the activities that have significant environmental aspects
4. Proof of competence (certificates) of persons performing activities that could have significant impact on the environment.
5. Environmental Management System certificate (if certified) if not, an environmental management manual and/or procedures
6. List of all Hazardous Substances to be used and their SDS's
7. Environmental file to be kept on site by contractor

The *Contractor* shall ensure that their persons are aware of the significant environmental aspects, related actual or potential environmental impacts associated with their work. The *Contractor* shall be available for Environmental audits during work hours.
The following environmental requirements are complied with at all times:

1. Zero liquid effluent discharge.
2. No chemicals will be dumped into the station drains or on the premises.
3. No oil or waste will be dumped in an unauthorised area or unlicensed waste site.
4. Asbestos will be handled and stored according to Act 15 of 1973 (hazardous substances Act).
5. No materials or waste will be buried/burnt on site. Hazardous agents shall be handled and stored according to the hazardous substances Act no 15 of 1973.
6. Environmental incidents shall be reported, captured and investigated as outlined in the latest version of the Environmental Incident Management Procedure (240-133087117).
7. The *Contractor* shall comply with any directive and/or instruction related to legislation and/or Eskom Procedures that is issued from the Environmental Department.
8. Ensure that waste (sandblasting grit) is disposed in an appropriate licenced waste facility.
9. Safe disposal certificates to be forwarded to Eskom Environmental Department for all waste disposed.

3.3 Quality assurance requirements

The *Contractor* Complies with the quality requirements contained in the General Works Information.
The *Contractor* adheres to the following Quality requirements:

1. The *Contractor* makes use of the approved technique sheets with all testing
2. The *Contractor* Submits a file with approved technique sheets to the *Service Manager* 1 week after receipt of a task order
3. The *Contractor* ensures that all personnel are Eskom approved
4. All reports are signed by relevant personnel
5. Reports are delivered within 3 working days
6. Re-shooting of X-rays should not exceed 3% of all X-Rays

7. Quality of Wall Thickness (Average measurement of the 10% spot check of measurements done) should be equal to or lower than 3mm
8. The *Contractor* to report Wall Thickness loss within 12 hrs of measurement
9. The *Contractor* to report any defects noted within 1 day
10. The *Contractor* Complies with all relevant NDT Safety measurements

3.4 Foreign Material Exclusion

The following controls and practices comply:

1. All system openings or access is covered except when the work is being carried out under a specific procedure.
2. The specific opening is being monitored.
3. Work, inspection, testing, sampling or surveying is in progress that requires the removal of the FME device.

FME devices shall:

1. Prevent the introduction of foreign material into the component or system during the cover's installation and removal.
2. The cover must be clearly marked as an FME device, clean, sturdy and free from debris.
3. Be secured so that they will not be sucked in or blown away by a pressure drop or surge of the system. The use of paper, plastic bags, rags or any other unauthorised materials are not permitted to be used as FME devices.
4. Not be capable of damaging any critical surface and not show evidence of chemical decomposition during service or result in corrosive action.
5. Internal FME devices, which seal off an opening from inside the system, must be used wherever practical to isolate the component or system opening.
6. Where practical a removed component such as a valve bonnet, flange, and junction box cover should be used as an FME device.
7. Internal closure devices shall be attached internally whenever possible to avoid their inadvertent loss into the system during work activities. Special consideration should be given during installation and removal of such devices.
8. Inspect internal devices for damage prior to installation.
9. FME devices should be clearly marked to prevent inadvertent removal or damage. Bright colours are recommended.
10. All FME devices are to be recorded in a register.

4 Procurement

4.1 Subcontracting

4.1.1 Preferred Subcontractors

All Subcontractors need to be approved by the Service Manager before the Subcontractor gets to site.

4.1.2 Subcontract documentation, and assessment of subcontract tenders

The *Contractor* prepares subcontract documentation with detailed SOW. The use of the NEC system is recommended on how subcontract tenders are to be issued, received, assessed and awarded. The sub contract needs to be coming from Pixley ka Seme municipality as part of community development strategy from the local forums.

4.2 Plant and Materials

4.2.1 *Contractor*'s procurement of Plant and Materials

All tools and equipment used to provide the service are supplied by the *Contractor*.

4.2.2 Plant & Materials provided "free issue" by the *Service Manager*

Scaffolding, lagging removal and replacement of lagging will be provided by the *Service Manager*.

5 Working on the Affected Plant

5.1 *Service Manager*'s site entry and security control, permits, and site regulations

The Entry to site is only approved once the following is adhered to:
1 The *Contractor*s Safety file is to be approved by the *Service Manager*'s Safety department.
2 All personnel must undergo screening for Criminal records and outstanding warrants
3 Site-specific induction is to be done by all personnel.
4 Refer to the General Works information

5.1.1 Permits

1. The *Contractor* will ensure that he/she is informed of all the requirements of Eskom's Plant Safety Regulations and ORHVS and that he/she at all times comply to the requirements of these Regulations.
2. The *Contractor* ensures that at least 2 of his supervisors are trained and authorised as Authorised Supervisors within 3 months of the start of the contract.
3. Training is provided by Eskom Majuba and is done according to a schedule, thus arrangements need to be made with the Service Manager well in advance.
4. The *Contractor* to re-authorise in time his Authorised Supervisors to always have at least two Authorised Supervisors on site.

5.2 People restrictions, hours of work, conduct and records

5.2.1 Time Clocking

1 The *Contractor* uses a biometric time clocking system
2 No clocking will result in non-payment. If a person clocked in but not out or did not clock in, but clocked out, the person will not receive payment for that specific day.
3 Proof of clocking to be submitted to the Employer from files directly generated from the clocking system (no manual intervention)
4 In case of clocking system breakdown, the contractor has to report the breakdown immediately to the Service Manager and the system has to be replaced within 24 hours. Manual clocking counter signed by the Eskom Service manager or his/her delegate can be used for the duration while the system is out of service. No signature from the Eskom Service manager or delegate will result in non-payment
5 During GO's, MGO's and IR's costing with supporting timesheets is provided every two weeks together with a forecast for future invoicing.

5.2.2 Hours of work

1. Normal working hours is Eskom working hours:
   a. Monday to Thursday **07:30 - 16:45**
   b. Fridays 07:30 - 12:30
2. Outage or maintenance opportunities working hours are :
   a. Monday to Sunday **07:00 - 19:00 or as required by the SOW** (might require 24 hour shifts)
3. Overtime rules are adhered to as determined by the Department of Manpower.

4. All Timesheets are to be kept for records purposes i.e. man-hours worked safely etc.
5. Other hours will be determined as per critical path activities during outages and maintenance opportunities.
6. Overtime to be approved by the *Service Manager* or the Maintenance *Supervisor*
7. Daily time sheet must be kept up to date of normal and overtime worked at all times.

5.3 Health and safety facilities on the Affected Property

Refer to the Land Management Work Instruction (ENV/GEN/WI/16)

5.3.1 Environmental controls, fauna & flora

Refer to the General Works Information

5.3.2 Records of *Contractor*'s Equipment

1. The *Contractor* to declare all equipment and tools via a pre-set up list at the main entrance, where removal permit will be issued by Security personnel.
2. *Contractor* need to have a list of inventory of their equipment on site.
3. Proof of site entrance needs to be provided before equipment can be removed from site.
4. The *Contractor* keeps these records. If the records are lost, the Employer does not have the responsibility to issue a gate release permit and the *Contractor* might have to leave the equipment behind on site.

5.3.3 Equipment provided by the *Service Manager*

1 Overhead cranes
2 The *Service Manager* is entitled to withdraw use of the said Equipment, should proper care not be ensured.

5.4 Site services and facilities

5.4.1 Provided by the *Employer*

1 Toilets at the four corners of the power station
2 Power points where available - own cables to be routed
3 Water points, where available
4 Compressed air (Service air), where available
5 Hazardous waste disposal
6 Grass area where site establishment can be done safely.

5.4.2 Provided by the *Contractor*

1. *Contractor* to provide a dark room for film development
2. *Contractor* to provide locking storage facility for unused hazardous chemicals
3. *Contractor* to provide big hazardous dust bins to dispose hazardous chemicals temporarily.
4. Containers, for dressing rooms, office and dining
   - 4.1 Containers to be in an acceptable condition - well maintained, no major dents, no rust on exterior walls.
   - 4.2 Floors of containers to be in a good condition, no rust on floors will be excepted as this poses a safety risk.
   - 4.3 The only acceptable exterior colours allowed are blue, white or grey or any of the corporate Eskom colours (chart can be obtained from the Service Manager)
5. Tools, equipment and consumables
6. Portable 380V electrical distribution boards, and supply cables to and from the boards for all his power supply requirements to execute the services.

- *Contractor*s' Electrical Distribution Boards complies with OHSA as referred to in the Electrical Installation Regulations and the Electrical Machinery Regulations. Each board brought on site has a certificate of compliance issued by an accredited person.
- The *Contractor*s' Electrical Distribution Boards must be installed at a time negotiated with the Electrical Maintenance Manager, or prior to the possession date. Distribution boards will be connected to a 380V three-phase AC power supply by the *Service Manager*, only after the *Contractor* has submitted the valid certificate of compliance.
- All *Contractor*s' Electrical Distribution Boards are earthed to the steel structure of the plant.

7. Accommodation
8. Transport
9. Office furniture, equipment and stationary
10. Meals. The *Contractor* or any of his employees or Subcontractors may buy take away meals from the fast food outlet on site, if available.
11. Telecommunications
12. Everything else necessary for providing the Service

6 List of drawings

6.1 Drawings issued by the *Service Manager*

All relevant drawings are available on request from the Majuba Documentation Centre.

Annexure A: Table of low service damages (X17)

Low Service Damage Description	Value of Low Service Damages	Limit of Low Service Damage
1. Service delaying the Outage Critical Path agreed schedule or Delaying other *Contractor*(s) from starting/completing their work or delaying the RTS of the unit	0.25 % per total value of the Task orders for the outage per day	Limited to 5% of the total value of the Task Order(s) for the outage
2. Service delays not finishing as per agreed upon project plan submitted and approved by the *Service Manager*	0.25% per total value of the Task Order(s) for the outage per day	Limited to 5% of the total value of the Task Order(s) for the outage
3. Submission of documents as per agreed upon Contract Document Submittal Schedule in this service agreement	0.25% per total value of the Task Order(s) for the outage per day	Limited to 5% of the total value of the Task Order(s) for the outage
4. Inadequate execution (not fully complying with the given instruction)	0.25% per total value of the Task Order(s) for the outage per day	Limited to 5% of the total value of the Task Order(s) for the outage
5. Daily Progress Report not updated	0.25% per total value of the Task Order(s) for the outage per day	Limited to 5% of the total value of the Task Order(s) for the outage
6. Non-response of NCR within 3 days	0.25% per total value of the Task Order(s) for the o outage per day	Limited to 5% of the total value of the Task Order(s) for the outage
7. Contractor sustains a First Aid or Medical Incident	0.5% per total value of the Task Order(s) for the Outage	0.5% per total value of the Task Order(s) for the Outage
8. Contractor sustains a Lost Time Incident	1% per total value of the Task Order(s) for the Outage	1% per total value of the Task Order(s) for the Outage
9. Contractor not reporting safety incidents within the same shift to the Eskom Coordinator and Contract Service Manager	0.5% per total value of the Task Order(s) for the Outage	0.5% per total value of the Task Order(s) for the Outage
10. Failure to keep the Safety File up to date and audited on a monthly basis to cater for maintenance opportunities	R10 000 once-off and then a further R10 000 per day until the file is audited and approved	R50 000