

 Eskom	Specification	Medupi Power Station
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Title: **Medupi Power Station Supply and Delivery of Aux Boiler C&I spares scope of work**

Document Identifier: **241-20221068**

Alternative Reference Number:

Area of Applicability: **Medupi Power Station**

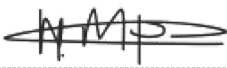
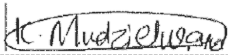
Functional Area: **Material Management**

Revision: **2**

Total Pages: **25**

Next Review Date: **N/A**

Disclosure Classification: **Controlled Disclosure**

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Date: 2026/05/18	Date: 2026/05/18	Date: 2025/05/18	Date: 2026/05/27

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1. Introduction

The reliability and availability of the Aux Boiler C&I spares in general is a concern for us due to the unplanned downtime and regular planned outages at Medupi Power Station. It has contributed too many production risks on the plant and the return to service deadlines of Units after execution works of planned outages.

Initiatives to improve the reliability and availability of the Aux Boiler C&I spares amongst others includes, placing a Aux Boiler C&I spares supply and delivery contract to ensure continuous plant availability, sustainability and improvement.

This document describes the scope of work required for this contract.

2. Supporting Clauses

2.1 Scope

This document covers the requirements for the supply and delivery of the Aux Boiler C&I spares at Medupi Power Station.

2.1.1 Purpose

The purpose of this document is to provide the SOW for the supply and delivery of the Aux Boiler C&I spares contract at Medupi Power Station.

2.1.2 Applicability

This document shall apply throughout Medupi Power Station.

2.1.3 Effective date

The document will be effective from the date of authorisation.

2.2 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

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2.2.1 Normative

- [1]. Eskom SHEQ Policy 32-727
- [2]. Life Saving-Rules – 240-62196227 Medupi Power Station - SHE File Evaluation Checklist – 24097661287
- [3]. ISO 9001 Quality Management Systems.
- [4]. 240 - 97020108 REV. 5 Medupi Maintenance Contracts User Requirement Specification (URS).

2.2.2 Informative

- [1]. Act No 85 Occupational Health and Safety Act & Regulations.
- [2]. 240-46554063: Safety Health Environmental and Quality Policy.

2.3 Definitions

Definition	Description
<i>Contractor</i>	Service provider contracted for the supply and delivery of C&I material with its associated fittings and consumables
<i>Employer</i>	Eskom or Eskom Medupi power station representative appointed in writing.
Task order	The <i>Employer's</i> instruction to be carried out as a task to supply and deliver requested items.

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2.4 Abbreviations

Abbreviation	Explanation
C&I	Control and Instrumentation.
NEC3	New Engineering Contract
OEM	Original Equipment Manufacturer
PD	Order On Request (As and When required)
QC	Quality Control
RF	Refurbishment of items
SHE	Safety Health and Environmental
SHEQ	Safety Health Environmental and Quality
SOW	Scope of Work
V1	Re-Order Point for Non-Repairable Material (Normal)
VB	Manual Re-Order Point Planning (RF)

2.5 Roles and Responsibilities

2.5.1 Employer

The *Employer* shall compile and submit scope of work with technical specifications for the Aux Boiler C&I spares to be supplied and delivered to Medupi Power Station.

The *Employer* shall perform quality checks of all the Aux Boiler C&I spares delivered to Medupi Power Station at the main store.

2.5.2 Contractor

The *Contractor* shall supply and deliver the Aux Boiler C&I spares on an *as and when required basis* to Medupi Power station according to the specifications and technical requirements on this document.

The *Contractor* shall submit all relevant documentation for example manuals, calibration certificates, datasheets etc. as requested by the Employer.

2.6 Process of Monitoring

Not Applicable.

2.7 Related/Supporting Documents

Not Applicable.

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3. Scope of Work

This work specification is developed for the supply and delivery of the Aux Boiler C&I spares at Medupi power station on an **as and when required basis**. This specification is intended to ensure that the appointed *Contractor* supply the correct Aux Boiler C&I spares to Medupi power station.

3.1 Supply of Spares

The scope is as follow:

3.1.1 Description of Item:

Refer to Appendix A: List of Spares with material description

3.1.1.1 Performance Characteristics

The spares shall comply with the specific ratings, software versions etc.

3.1.1.2 Physical Characteristics

The spares shall be robust, reliable and comply with the specified dimensions, materials etc.

3.1.2 Contract Period:

The Contract period is for a duration of 3 Years (36 months). All spares should be available from the supplier for at least 3 years. Replacement spares for obsolete items shall be available from the supplier within 4 weeks of placing such an order and immediately for any spares that are critical.

3.1.3 Quantity of supply: See Appendix A

The estimated quantities the *Employer* anticipates will be required for the duration of this contract. This value will be used with other estimates to determine the overall contract value. It should be noted that this is just an estimate, and it does not mean that the *Employer* will definitely consume the Aux Boiler C&I spares in the duration of the contract. These quantities are therefore not fixed, and the *Contractor* shall supply the Aux Boiler C&I spares only when instructed by a task order, from the *Employer*.

It is the *Contractor's* responsibility to ensure that the correct spares are delivered. If incorrect spares are delivered, the spares will have to be replaced with the correct spares at the *Contractor's* cost which includes transport and delivery.

3.2 General Requirements

The Spares must be the same in all respects when compared to the original equipment, supplied to Eskom by the OEM under contract. This includes all aspects such as design, materials and material

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specifications, manufacturing, including manufacturing processes and acceptance testing. Where spares offered deviate from the original in any respect, it should be indicated to the *Employer*.

In the case of an obsolete spare, the *Employer* shall be informed and an OEM letter stating such obsolescence, and the predecessor shall be supplied to the Employer for approval prior to any delivery of the latest equipment version. The replacement of the obsolete item shall consider the integration and physical characteristics of the equipment and ensure that it is Form, Fit and Functional.

3.3 Packaging

The following packaging requirements should be adhered to:

- a) The Goods are to be packaged in such a manner that it can be transported and stored for an extended period of time without resulting in damage to the goods.
- b) This includes damage due to moisture ingress, corrosion, vibration from the power station etc.
- c) Where lifting gear is utilised to move the goods, the packaging should allow the lifting operation and ensure that the goods are not damaged in any way during the process.
- d) It will also not be necessary to open packaging for any lifting or transport operation.
- e) Where eye bolts are fitted to move the goods, these eye bolts should be fitted such a way that they can be easily removed and replaced with the Purchaser's eye bolts, ensuring that the packaging stays intact.
- f) The different spare types are to be packaged separately in such a way that each type can be stored separately.
- g) Packaging and labelling of spares should ensure that the spare can be identified without opening the packaging.
- h) Where possible the packaging should ensure that parts can be positively identified through the packaging. Where this is not possible the packaging should allow opening and closing of the packaging and still maintain the packaging integrity afterwards.
- i) Delivery packaging to have the following detail on it as a minimum (removable adhesive sticker if possible):
 - 1. Order number,
 - 2. A short description of component
 - 3. The Eskom stock and / or material number
 - 4. Manufacturing date, where possible
 - 5. Destination power station

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3.4 Quality Assurance

The spares and components shall be supplied to the “goods received” section of the Medupi main store where it will be received by the material management section. The spares shall be delivered with all the required Manuals and datasheets, where required. A delivery note shall be completed upon delivery, stating the date, quantity with the recipient’s details / signature.

Medupi Stores Working Times:

Monday – Thursdays: 07H00 – 16H00

Fridays: 07H00 – 12H00

The quality of manufacturing shall be according to a recognised quality management system such as ISO 9001. Only once the spares have passed the Quality control checks and are booked into the system can a payment be affected.

The Delivery and Transport Costs (including off-loading items) must be included in the quotation.

4. Acceptance

This document has been seen and accepted by:

Name	Designation
Lerato Sehume	C&I Maintenance Manager
Nare Senama	C&I Senior Technical Supervisor
Tumelo Chauke	C&I Senior Technical Supervisor
Tankiso Mpebe	C&I Senior Technical Supervisor
Cornelius Mulaudzi	C&I Senior Technical Supervisor
Thys Britz	C&I Senior Technical Supervisor

5. Revisions

Date	Rev.	Compiler	Remarks
June 2025	1	Thys Britz	First revision
April 2026	2	Nontuthuko Mpangase	Additional Auxiliary Boiler Spares

6. Development Team

The following people were involved in the development of this document:

Name	Designation
Thys Britz	C&I Senior Technical Supervisor
Ernest Morolong	C&I Senior Technician

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Name	Designation
Joel Manamela	C&I System Engineer
Letago Manyelo	C&I System Engineer

7. Acknowledgements

Not Applicable.

8. Appendix

8.1 Appendix A: List of Spares with material description

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SAP Material Number	OEM Part number	Material Short Description	Material Full Description	Lab Code	Material Type	Unit of Measure	Max	Required Quantity
574401	MD741- 1	MODULE:ETHERNET SWITCH;12-30 V DC	MODULE: TYPE: ETHERNET SWITCH; POWER SOURCE: 12-30 V DC; APPLICATION: AUX BOILER; DIMENSIONS: 114X45X99 MM; MANUF P/N: MD741-1; SINUAT; RJ45 PLUG; SPEED: 10/100MBS	C&I	V1	EA	2	4
642510	FLS 09 UV5	SCANNER:FLAME;220 V;4-20 MA;FLS 09 UV5	SCANNER: TYPE: FLAME; POTENTIAL: 220 V; CURRENT: 4-20 MA; SUPPL P/N: 7-7955-1064273; MODEL NO: FLS 09 UV5	C&I	V1	EA	3	6
646141	FLUS O6 UV	UNIT:FLAME MONITOR UNIT;AUX BOILER	UNIT: TYPE: FLAME MONITOR UNIT; APPLICATION: AUX BOILER; SUPPL P/N: FLUS O6 UV; REFERENCE NO: 7-8385- 602164; MATERIAL OF THE FRONT PANEL ALUMINIUM; 2 LED DISPLAYS; AMBIENT TEMPERATURE -10 TO 60 DEG; TYPE OF MOUNTING PLATE FASTENING; HOUSING MATERIAL POLYCARBONATE; DEGREE OF PROTECTION IP20; DIMENSIONS: WD 100 X HT 75 X DP 110 MM	C&I	PD	EA	10	20

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646291	FLS 09-UV-5	SCANNER:FLAME;42 VDC;15 MA;0.63 W	SCANNER: TYPE: FLAME; POTENTIAL: 42 VDC; CURRENT: 15 MA; POWER: 0.63 W; SUPPL P/N: FLS 09-UV-5; REFERENCE NO: 7-7955-602167; AMBIENT TEMPERATURE -10 TO 60 DEG C; HOUSING MATERIAL BRASS, NICKEL PLATED; DEGREE OF PROTECTION IP 65; WITH 3 M CONNECTING LINE	C&I	PD	EA	10	20
0647643	ZS-335-11Z-1637	SWITCH LMT:IP67	SWITCH, LIMIT: ENCLOSURE: IP67; DIMENSIONS: WD 40.5 X LG 103.5 X HT 38 MM; SUPPL P/N: ZS-335-11Z-1637	-	-	EA	20	20

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-	ABB- MCB-01G / 1SFA611610R1110	LIMIT SWITCH	CONTACT MCB-01G / 1SFA611610R1110, ELEMENT HOLDER MCBH5- 00 /1 SFA611601R1100 ROTARY UNLOCKING MPMT3-10R / 1SFA611510R1001, "EMERGENCY STOP" LABEL NAS-USE90 / GJD9432256R1592	-	-	-	-	3
0653346	VZO25S	INDICATOR SGHT FLW	INDICATOR, SIGHT FLOW: SUPPL P/N: VZO25S	-	-	-	-	3

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-	PE 02.40.00	THERMOMETER	THERMOMETER, TYPE: PE 02.40.00	-	-	-	-	4
0645812	DG 50 B	SWITCH, PRESSURE	PRESSURE SWITCH, TYPE: DG 50 B	-	-	-	-	8

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0642694	DL150A-31	SWITCH, PRESSURE	SWITCH, PRESSURE: TYPE: AIR; RANGE: 0-150 MBAR; ACTION: DPST; ENCLOSURE RATING: IP54; MANUF P/N: DL150A-31; CONNECTION: BOTTOM 1/2 IN-NPT; POTENTIAL: 250 VOLT ALTERNATING CURRENT; CURRENT: 5 AMPERE; POWER: 250 VOLT ALTERNATING CURRENT; CONTACT ARRANGEMENT: 1NO 1NC	-	-	-	-	8
-	ELTC/1-4/05	THERMOSTAT	ELECTRONIC TEMPERATURE CONTROLLER TYPE ELTC/1-4/05. SUPPLY VOLTAGE: 230V, +/- 10%, 50HZ, SWITCHING CAPACITY 16A; MEASURING INPUT: PT100 DIN 2- WIRE; ADJUSTMENT RANGES: +150...+400°	-	-	-	-	3

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0654714	ELTh/3 / 1	THERMOSTAT	CAPILLARY THERMOSTAT, TYPE: ELTH/3 / 1 POLE	-	-	-	-	10
0653350	72F1H- SE1AARAAA4AA	METER, FLOW	FLOW MEASURING, TYPE: PROLINE PROWIRL 72 F1H / 72F1H-SE1AARAAA4AA	-	-	-	-	2

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0653350	72F80- SE1AARAAA4AA	METER, FLOW	FLOW MEASURING, TYPE: PROLINE PROWIRL 72 F80 / 72F80-SE1AARAAA4AA	-	-	-	-	5
-	DPTC-SH	TEMPERATURE SWITCH	EPHY MESS MOTOR PROTECTION THERMISTOR, TYPE DPTC- SH	-	-	-	-	10

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-	WDB0101201	SWITCH	SWITCH BOX, TYPE: WDB0101201	-	-	-	-	3
-	NRG 16-11	SWITCH, LEVEL	GESTRA- SENSOR TYPE NRG 16-11, G3/4", L=1000MM, TRANSMITTER TYPE NRS 1-7 B	-	-	-	-	8

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0645792	NRG 16-12	SENSOR	GESTRA- SENSOR TYPE NRG 16-12, G3/4", L=1000MM, TRANSMITTER TYPE NRS 1-8 B	-	-	-	-	8
0645844	LRGT 16-1 - KS90	TRANSDUCER	CONDUCTIVITY TRANSDUCER / REGULATOR, TYPE: LRGT 16-1 - KS90 / PN40 - G1" / L=615MM	-	-	-	-	5

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0645845	NRGT 26-1	TRANSMITTER, LEVEL	LEVEL TRANSMITTER, TYPE: NRGT 26-1 / 230V - 50HZ / G3/4" / EN10204-3.1 / L=794MM / WATER	-	-	-	-	5
-	V4 F3C M4 EXH	SWITCH, LEVEL	IER EBERHARD HENKEL- MAGNETIC FLAP INDICATOR MAGTOP V4 F3C M4 EXH / ME=2000MM WITH LIMIT SWITCH MAGTOP SNAP 201	-	-	-	-	4

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-	FSG 1CA	LEVEL TRANSMITTER	FILL LEVEL PROBE, TYPE: NIVOMAT FSG 1CA / ME=2000MM	-	-	-	-	2
-	LG 40-x2	GAUGE, LEVEL	REFLEX LEVEL GAUGE TYPE: LG 40-X2, KOM.-NO. 2009-202167; SIZE 10 / A=500MM / E=350MM / H=75MM / J=75MM / G=130MM, STOP VALVETYPE A130; DRAIN VALVE TYPE AV 500	-	-	-	-	5

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-	AMV - 2x -2x	MONITOR	DOUBLE TWO POINT TEMPERATURE MONITOR, TYPE: AMV 2-2	-	-	-	-	8
-	ATHf-70	THERMOSTAT	SURFACE-MOUNTING THERMOSTAT, TYPE: ATHF-70	-	-	-	-	5

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0699975	AZ 15 ZVK	SWITCH, LIMIT	SAFETY SWITCH, TYPE: AZ 15 ZVK	-	-	-	-	8
0654716	200 L	SWITCH, LEVEL	MAGNETIC FLOAT SWITCH, TYPE: 200 L / SERIAL 160002303 / 37603455	-	-	-	-	5

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0674258	4-EVSA 10NH4	SWITCH, LIMIT	SWITCH, TYPE: 4-EVSA 10NH4.P.02.32.64	-	-	-	-	3
-	111.12.63	GAUGE, PRESSURE	PRESSURE GAUGE, TYPE: 111.12 / NS=63 / 0 - 6 BAR / G1/4" B	-	-	-	-	8

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-	213.53.100	GAUGE, PRESSURE	PRESSURE GAUGE, TYPE: 213.53 / NS=100 / 0 - 6 BAR / R 1/2" / LM	-	-	-	-	3
0616846	233.50.160	GAUGE, PRESSURE	GAUGE, PRESSURE: DIAL SIZE: 160 MM; CONNECTION SIZE: G1/2 IN; CASE MATERIAL: STAINLESS STEEL; CONNECTION MATERIAL: STAINLESS STEEL; CONNECTION LOCATION: BACK LOWER; MOUNT: SCREW; FILLED: GLYCERINE 99.7 PCT; SPECIFICATION: 233.50; RANGE: 0-2.5 MEGAPASCALS; TUBE MATERIAL: STAINLESS STEEL; CONNECTION TYPE: THD	-	-	-	-	10

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-	612.20.100	GAUGE, PRESSURE	PRESSURE GAUGE, TYPE: 612.20 / NS=100 / 0 – 600 KPA / R 1/2" / LM	-	-	-	-	3
0654711	S73.160		THERMOMETER, TYPE: S73.160 / NS=160 / 0 - 400 °C / CONN. NO. 3 / UNION NUT M24X1,5 / L1=355MM	-	-	-	-	8

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