

	<p align="center">Scope of Work</p>	<p align="center">Generation</p>
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Date: 12/09/2022

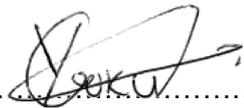
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Date: 13/09/2022

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1. INTRODUCTION

Kusile Power Station consists of six boiler generating units, each generating unit has a dedicated Condensate Polishing Plant (CPP), which removes unwanted materials such as crud and debris in the system. The CPP's treat the condensate collected in the Air-Cooled Condensate Tank (ACCCT). Each Unit CPP comprises of 4 pre-polishing cartridges for normal operations. Each cartridge houses 8 pre-polishers which equates to a total of 32 pre-polishing filters per unit. These filters require frequent replacement to support commissioning and unit start-up conditions due to the overall dirtiness of the boiler and turbine steam/water cycle.

2. SUPPORTING CLAUSES

2.1 SCOPE

2.1.1 Purpose

This document provides the specification of the CPP pre-polishing filters required for commissioning and start-up of Unit 5 and 6.

2.1.2 Applicability

This document shall apply to Kusile Power Station only.

2.2 NORMATIVE/INFORMATIVE REFERENCES

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

2.2.1 Normative

[1] ISO 9001 Quality Management Systems.

2.2.2 Informative

None

2.3 DEFINITIONS

2.3.1 Disclosure Classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

2.4 ABBREVIATIONS

Abbreviation	Description
CPP	Condensate Polishing Plant
ACCCT	Air-Cooled Condensate Tank

2.5 ROLES AND RESPONSIBILITIES

Compiler: The document compiler is responsible for ensuring that this document is up-to-date and that this document is not a duplication of an existing documentation, regarding the document's objectives and content.

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Authoriser: The document authoriser is a duly delegated person with the responsibility to review the document for alignment to business strategy, policy, objectives and requirements. He/she shall authorise the release and application of the document.

2.6 PROCESS FOR MONITORING

Not applicable.

2.7 RELATED/SUPPORTING DOCUMENTS

- [1] 366-316742 Scope of Work for the Supply of CPP Pre-Polishing Filters, Rev1.
- [2] 2522M-D10-00-00-02 FILTER TYPE: GB 8 R6/HORIZ
- [3] 1074309361 Procurement Strategy: Supply and Delivery of 3671 Condensate Polishing Plant Commissioning Pre-Filters for Kusile Power Station

3. SCOPE OF WORK

Supply the required quantity of pre-polishing filters (Table 2) according to the below specification:

Table 1: CPP Pre-Polishing Filter Specification

Type	Disposable non-back washable cartridge filters
Filtration rating	5micron /10micron / 20micron Absolute
Dimensions	6x60 inches
Filter Media Material	Pleated Polypropylene
Hardware Material	Polypropylene
Max Allowable differential pressure	200 kPa
Filtering area per pre-filtration vessel	68m ²
Design Temperature	110°C

Table 2: Required Amount of CPP Pre-Polishing Filters

Pre-Polishing Filters	Number required
20Microns	552
10Microns	128
5Microns	412

Appendix A shows the technical specification of the 5Microns filter. The 20microns and 10microns filters must have exact technical specification as the 5microns filters the only difference must be the filter pores sizes.

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4. TECHNICAL EVALUATION STRATAGY

Only filters that fully comply with this specification will be considered. Any other proposals will be immediately disqualified and will not be evaluated.

5. AUTHORISATION

This document has been seen and accepted by:

Name & Surname	Designation
Yuvir Gokul	BOP-Manager
Chris Odendaal	P17 LDE

6. REVISIONS

Date	Rev.	Compiler	Remarks
May 2020	1	V Mphaga	Initial SOW
May 2022	2	MD Delekoa	Revised SOW
September 2022	3	MD Delekoa	Updated number of filters required

7. DEVELOPMENT TEAM

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

- David Delekoa
- Chris Odendaal

8. ACKNOWLEDGEMENTS

None

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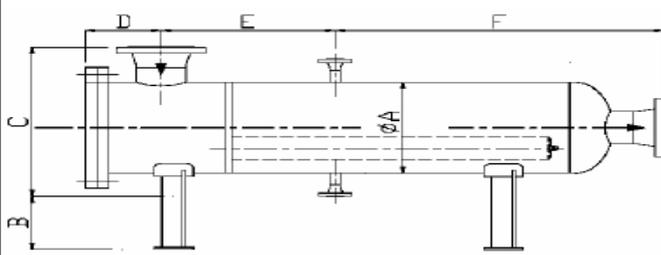
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9. APPENDICES

9.1 APPENDIX A: 5MICRON FILTER TECHNICAL SPECIFICATION/DATASHEET

No. 24
VESSELS

1 OLDB11/12/13/14 AT001
2 OLDB11/12/13/14 AT001
3 OLDB11/12/13/14 AT001
4 OLDB11/12/13/14 AT001
5 OLDB11/12/13/14 AT001
6 OLDB11/12/13/14 AT001



PRELIMINARY DIMENSIONS						
A	B	C	D	E	F	
660	570	1080	400	750	1400	mm

EsKOM Dwg No. : 0.90/22267
PDNA Dwg No. : TKB-AU-TB-00045-001

G.B. Filtri s.r.l.
Sede legale: Via S. Maria 13 - 21047 SARONNO
Sede operativa: Via Lino La Malfa, 18/20
Tel. 0331/466232 - Fax 464562
20027 P.S. CALDINA (MI)
Cod. Fisc. 02026220123

ASS'Y DWG. GB 2401 - Detail Assembly dwg.

12/03/12 G.B. FILTRI - Filled according to GE comments
01/08/11 & 24/02/12 and G.B. Filtri internal revision
27/07/11 G.B. FILTRI - Filled

* ACCORDING TO PIPING SPECIFICATION
TO BE FILL BY MFR
(refer to Supplier spec. Nr. A6080/1 Rev. 1 dated 21/03/11)

Construction code		ASME VIII Div.1 last edition	ITEM	CPP Preliminary Filters
Norme costruttive		FILTER TYPE: GB 8 R6/HORIZ		
Quantity	Quantità	24 (TWENTYFOUR)		
DESIGN DATA	Flow-Rate Portata	m3/h	Operating esercizio	Design progetto
	Pressure Pressione	kPa	435 ÷ 580	652
	ΔP at Clean / Dirty Filter	kPa	800	1000
	Temperature Temperatura	°C	≤ 35 / 150	
	Wind load Carico del vento	kg	50 ÷ 85 MAX	110
	Seismic load Carico sismico	kg	See 2522M-	--
	Fluid density Densità fluido	kg/dm3	307	307
	Corr. All. Sovr. Di corrosione	mm	1	
	Remarks:		3	
	Hidrostatic Test Pressure	kPa		1500
FABRICATION DATA	Body Material	Material Materiale		
	Top Cover Flanges Material	ASTM A 516 GR 70		
	Internals Material: Welded/Removable	ASTM A 105		
	External Bolts&Nuts Material	R		
	Top Cover Gasket Material	ASTM A 193 B7 / A 194 2H (ZINC PLATED TYPE AND METRIC SIZE)		
	Internal Lining	VITON		
	Top Cover Closure Type	/		
CONNECTIONS	External Finishing	FLANGE W/HINGE		
	Internal Finishing	DCS 1000 Primer only vessel / DCS 1000 legs		
	IN/OUT	TECTYL 506 EH		
	VENT	12" S.O. ANSI 150#		
	DPI	* 1" S.O. ANSI 150#		
	BOTTOM DRAIN	* 1/2" SW ANSI 3000#		
	TUBE SHEET DRAIN	* 2" S.O. ANSI 150# + 1" S.O. ANSI 150# (see dwg. GB 2401)		
FILTER ELEMENT DATA	PSV	/		
	TYPE	DISPOSABLE CARTRIDGE		
	MODEL	MPP2/5/60		
	QUANTITY	8		
	FILTRATION RATING			
	DIMENSIONS	6"x60"		
	FILTER MEDIA MATERIAL	PLEATED POLYPROPYLENE		
HARDWARE MATERIAL	POLYPROPYLENE			
MAX ALLOWABLE ΔP kPa	200 ~			
FILTERING AREA	68 m²			



GE Infrastructure
Water & Process Technologies

Client:	ESKOM KUSILE POWER STATION	DOC. No.	2522M-D10-00-00-02	
Plant:	CONDENSATE POLISHING PLANT	Date 23/06/11	Rev. 2	
CPP SERVICE PRE-POLISHING FILTERS		Draw GB	Check GB	Auth. GM