	Scope	Engineering
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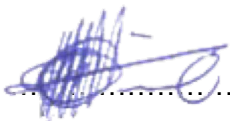
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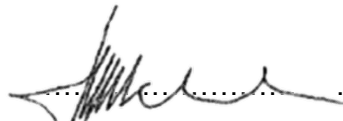
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Functional Responsibility



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11/04/2025

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1. INTRODUCTION

The technical evaluation strategy herein was written for the placement of a five (5) years Boiler Tube contract for Kriel Power Station. The technical specification includes an audit strategy to assess companies for compliance to relevant applicable international code and Eskom's standard requirements of which when met an Eskom Approval is granted. The additional purpose is to briefly outline the minimum scope that will require the Bending Services for the Boiler Tubing Plant in relation to their application, specification, and locations on which some special skills and expertise will be needed.

2. SUPPORTING CLAUSES

2.1 SCOPE

2.1.1 Purpose

The purpose of this tender technical evaluation strategy is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and TET member responsibilities for tender technical evaluation. The technical evaluation strategy serves as basis for the tender technical evaluation process.

WORKS INFORMATION

The works information in this scope includes the following activities:

1. Boiler Tubing manipulation/Bending of Boiler Tubing (Outages Management will be fully responsible for planning, maintaining stock levels and execution as per the table 1 below – for Outages purposes only).
2. Supply the Detailed Bending Drawing (s) - once off per Bend type within the final bending package
3. Bending and manipulation of finned tubing (mostly 38mm OD)
4. Cater for heat treatment (PWHT - where required) during bending process for higher grade material
5. The complete bend component will have to be signed off by the AIA on site (AIA site visit).
6. Prospective supplier must take note that the bending of the Evaporator Screw Wall Corner Slopes is also required and is included in this scope.
7. Shielding of bends will be requested to be done as per the specific scope and outage work requirements

The preparation (Pre-Outage) work for Planned Outages which entails the activities stipulated above is to cater for both small and large boiler sections. This will in turn reduce the Outage/Boiler Tube Failure repair durations, thus fulfilling the intent of the approved Boiler Tube Failure Reduction Strategy.

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On table 1 below, the Boiler Tubing which will require bending and/or manipulation are listed. The wall thickness mentioned in the table is the Installed Wall Thickness.

Please take note that, for the most if not all bends, the service supplier will have to take a sample as there are no manufacturing drawings available. Then the supplier must also give us the detailed bending drawing **once-off** per bend type.

Item	Boiler Component	Subcomponent	Dimensions	Estimated Minimum Quantities per Boiler
1	Superheater 2	Inlet Bends	33.7 mm OD x 4mm WT	2850
2	Superheater 1	Bends	33 OD mm x 3.6 mm WT	1500
3	Superheater 3	Inlet Bends	31.8 mm OD x 4 mm WT	2850
	Reheater 1	Bends (Multiple sizes)	51 OD mm x 4 mm WT	2550
4	Reheater 2	Bends	44.5 mm OD x 3.6 mm WT	1500
5	Economiser	Return Bends	44.5 mm OD x 6.3 mm WT	1500
6	Evaporator Screw Wall Slope	Corner Bends (3D Bends)	38 mm OD x 4.5 mm WT	500
7	Selected Tubes and Bends	Shields	'AS and When Required'	
8	Other	Other	'AS and When Required'	

Table 1: Critical Boiler Tube Bends

2.1.2 Applicability

This document shall apply to Kriel Power station.

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] 240-48929482 Tender Technical Evaluation Procedure
- [2] Occupational Health and Safety Act 85 of 1993 (OHS-Act)
- [3] Pressure Equipment Regulations (PER)
- [4] BS 1113: Design and manufacture of water-tube steam generating plant (including Superheaters, reheaters and steel tube economizers)
- [5] EN 12952 (All parts) Water-tube boilers and auxiliary installations
- [6] EN 13480 (All parts) Piping
- [7] ISO 3834 - 2 Quality requirements for Welding

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2.2.2 Informative

- [8] 240-83540088 Requirements for NDT on Eskom Plant Standard
- [9] 240-83539994 Eskom NDT Personnel Approval (NPA) for Quality Related Special Processes on Eskom Plant Standard
- [10] 240-72273656 Power generation asset critical classification standard
- [11] QM 58 Supplier Contract Quality Requirements Specification

2.3 DEFINITIONS

Definition	Description
Pipework	Pipes and fittings are used for the conveyance of steam, water, gases or other fluids.
Valve	A device for shutting off or controlling the flow of a fluid through a pipe or duct.

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
UCLF	Unplanned Capability Loss Factor
ECN	Engineering Change Notification
EDMS	Engineering Document Management System
ECM	Engineering Change Management

2.5 ROLES AND RESPONSIBILITIES

As per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

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2.8 TET MEMBERS

Table 2: TET Members

TET number	TET Member Name	Designation
TET 1	Feyane Tivane	Engineer, Kriel Turbine Engineering
TET 2	Lloyd Sibande	Engineer, Kriel Turbine Engineering
TET 3	John Mkhonto	Senior Engineer, Boiler Engineering

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TET Member Responsibilities for Part 1

Table 3: TET Member Responsibilities for Part 1

Mandatory Criteria Number	TET 1	TET 2	TET 3
1.1 Method Statement	X	X	X
2. Quality Control Plan	X	X	X
3. Skills	X	X	X
Qualitative Criteria Number	TET 1	TET 2	TET 3
1.1 Method Statement	X	X	X
2.1 Welding Engineer	X	X	X
3.3 Safety Officer	X	X	X

2.9 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

2.9.1 Risks

Table 4: Acceptable Technical Risks

Risk	Description
1.	Inadequate or less than required number of Semi-skilled personnel
2.	

Table 5: Unacceptable Technical Risks

Risk	Description
1.	Unavailable proof of qualifications of personnel and workshop ownership

2.9.2 Exceptions / Conditions

Table 6: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	None

Table 7: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	No proof of Workshop ownership/Rental

3. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
Rofhiwa Nelwamondo	Manager, Kriel PS Engineering
Thapelo Masokoane	Manager, Kriel Boiler Engineering
Loyd Sibande	Engineer, Kriel Boiler Engineering
John Mkhonto	Senior Engineer, Kriel Boiler Engineering
Feyane Tivane	Engineer, Kriel Boiler Engineering

4. REVISIONS

Date	Rev.	Compiler	Remarks
April 2025	1	FJ Tivane	SOW technical evaluation criteria and document registered with documentation Centre

5. DEVELOPMENT TEAM

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

- See section 3 above

6. ACKNOWLEDGEMENTS

- N/A

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