



Strategy

Grootvlei Power Station

Title: **Tender Technical Evaluation Strategy – Refurbishment of Metal Seated Butterfly Valves for use as CW Isolation valves on main condenser isolation valves (T1 and T2)**

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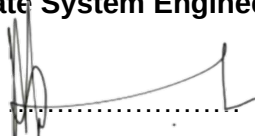
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1. INTRODUCTION

1.1 Scope

This document defines the technical evaluation criteria to be applied for the refurbishment of the T1 and T2 main condenser cooling water isolation valves (triple offset, metal seated butterfly valves, 1350NB) at Grootvlei Power Station.

1.1.1 Purpose

The purpose of this document is to:

- Provide a structured technical evaluation framework for tenders submitted for the refurbishment of condenser isolation valves T1 and T2.
- Ensure compliance with Eskom standards, ISO, EN, API and statutory safety requirements.
- Facilitate objective comparison of tenders by defining mandatory gatekeepers, qualitative scoring, and risk assessments.
- Support engineering due diligence in supplier selection to restore condenser isolation integrity and improve plant reliability.

1.1.2 Applicability

This evaluation strategy applies to:

- Grootvlei Power Station – Condenser System (Units 1–4), specifically T1 and T2 1350NB Metal Seated Butterfly Cooling Water Isolation Valves.
- All tenderers responding to the refurbishment scope defined in GVLEG 0359 Rev 2.
- Engineering, Quality, and Procurement teams responsible for the technical adjudication of tenders at Grootvlei.

1.2 References

- [1] GVLEG 0359 Rev 2 – Technical Specification for Refurbishment of Condenser CW Isolation Valves T1 and T2
- [2] 240-63154109 Rev 3 – Standard for Large Bore Metal Seated Butterfly Valves for Cooling Water Isolation.
- [3] 240-101712128 – Standard for Internal Corrosion Protection of Water Systems, Chemical Tanks.
- [4] 240-105658000 (QM-58) – Supplier Contract Quality Management Specification.
- [5] 240-83539994 Rev 3 – Standard for Non-Destructive Testing (NDT) on Eskom Plant.
- [6] 240-106365693 – Standard for External Corrosion Protection of Plant, Equipment and Associated Piping.
- [7] 240-76992014 – Project/Plant Specific Technical Documents and Records Management.
- [8] 240-65459834 – Project Documentation Deliverable Requirement Specification.
- [9] 240-54179170 – Technical Documentation Classification and Designation Standard.
- [10] 240-66920003 – Documentation Management Review and Handover Procedure for GX Coal Projects.

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- [11] 240-86973501 – Engineering Drawing Standard.
- [12] ISO 9001 – Quality Management Systems.
- [13] EN 1092-1/2 – Flanges and their joints (PN designated – Part 1 Steel flanges).
- [14] EN 10204 – Metallic Products – Inspection Documents.
- [15] API 598 – Valve Inspection and Testing.
- [16] OHSACT 85 of 1993 – Occupational Health and Safety Act (RSA).

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1.3 Abbreviations

Abbreviation	Description
API	American Petroleum Institute
CW	Cooling Water
FAT	Factory Acceptance Test
ITP	Inspection and Test Plan
MTC	Main Turbine Condenser
NB	Nominal Bore
NDT	Non-Destructive Testing
OD	Outside Diameter
OHSACT	Occupational Health and Safety Act (RSA)
PN	Pressure Nominal (flange designation)
QCP	Quality Control Plan (equivalent to QIP / ITP)
QA/QC	Quality Assurance / Quality Control
SOW	Scope of Work
T1 / T2	Condenser Cooling Water Isolation Valves
TET	Tender Evaluation Team
UV	Ultraviolet
ISO	International Organization for Standardization
EN	European Standard (EN Norms)

1.4 Roles and Responsibilities

System Engineer: Custodian of the technical specification, ensures compliance with Eskom standards. Reviews technical returnables and provides expertise during evaluation and site inspections.

Tender Evaluation Team: Conducts desktop and site evaluations of tenders against technical requirements. Each member focuses on system integration, testing, and water chemistry suitability.

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Grootvlei Engineering Management: Approves and endorses the evaluation outcomes. Ensures the process follows Eskom governance and site engineering policies.

Contractor: Provides mandatory returnables and executes refurbishment in SA workshops. Ensures safe transport, packaging, refurbishment, and compliance with all standards

Quality: QA/QC ensures ISO 9001 and Eskom QM-58 compliance.

2. TENDER TECHNICAL EVALUATION STRATEGY

2.1 Technical Evaluation Threshold

- For an equitable technical evaluation of the tenders the Contractor must provide all documentation as per the requirements below. All tender returnables given below must be provided.
- A weighted score-card approach is used to evaluate the technical compliance of the tenders against the specifications or ability to perform the work. Tenderers need to have a minimum weighted score of 70% overall or more to technically qualify for further evaluation.
- Failure to provide all the required technical tender returnables as detailed in this section, will render the tender to be non-responsive, and thus tender will be rejected
- In event that the company trade name changed since 2015 a brief history of company name change history to be included to indicate that same facility manufactured since 2015 (or earlier)

2.2 TET Members

Technical evaluation will be done by the member listed on table below:

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Mlungisi Khumalo	Condensate System Engineer
TET 2	Samukelo Ngubane	Feedwater System Engineer
TET 3	Ntsakisi Ndhambi	Snr Technician Maintenance
TET 4	Mnelisi Dladla	Centreline System Engineer
TET 5*	Vusi Dlamini (Alternative)	Turbine Engineering Manager

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3. TECHNICAL TENDER EVALUATION CRITERIA

The Technical Evaluation Criteria for the refurbishment of T1 and T2 condenser isolation valves are divided into:

- *Mandatory Technical Evaluation Criteria (Gatekeepers)*: These are non-negotiable requirements. Failure to comply results in automatic disqualification and the tender being declared non-responsive.
- *Qualitative Technical Evaluation Criteria – Phase 1 (Desktop Evaluation)*: Assessment of technical returnables such as method statements, coating procedures, QCP/ITP, and compliance with Eskom standards.
- *Qualitative Technical Evaluation Criteria – Phase 2 (Site Visit)*: On-site verification of the contractor's workshop, facilities, safety compliance, QA/QC systems, and technical capabilities.

3.1 Mandatory Technical Evaluation Criteria

The mandatory technical evaluation criteria serve as gatekeepers and represent the minimum “must meet” requirements for tender compliance. These criteria will be assessed using a YES/NO questionnaire format, with no scoring or weighting applied as shown in table 2.

A “NO” response to any gatekeeper will result in immediate disqualification of the tender submission, and the bidder will not progress to detailed technical evaluation.

These criteria are defined to capture the most critical and non-negotiable parameters required for the successful execution of the refurbishment of condenser isolation valves.

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Table 2: Reference 1 Mandatory Criteria Questionnaire

No.	Mandatory Technical Criteria (Gatekeepers) ¹	Tenderer Response (YES / NO)	Comments / Evidence Reference
1.	Proven Experience Contractor must provide ≥2 verifiable references of refurbishment of triple offset, metal seated butterfly valves ≥1200mm in diameter, performed in South Africa since 2015		
2.	Workshop Location All refurbishments must be conducted in South Africa, as per scope of work.		

Failure to provide the details above will render the tender to be non-responsive, and thus tender will be rejected

¹ **NB:** What Should **NOT** Be Acceptable as Valid References:

- Outdated projects – refurbishment done before 2015 (valves).
 - Unverifiable references – no valid client details, unverifiable contacts, or only purchase orders submitted.
 - Geographical non-compliance – refurbishment performed outside South Africa.
-

4.2. Qualitative Technical Evaluation Criteria – Phase 1 Desktop Review

Table 3: Phase 1 – Qualitative Technical Evaluation Criteria

No.	Qualitative Technical Criteria Description ²	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)
1.	Compliance with Eskom Standard 240-63154109 Rev 3 – Demonstrated understanding and adherence to specified sections, including omissions and additions (e.g., gearbox, packaging, pressure testing).	[1], [2]	10
2.	Refurbishment Methodology & Quality Assurance – Detailed method statement including: • Dismantling/reassemble steps • General arrangement and detail drawings • Seal fitment procedure • NDT as per 240-83539994 • Pressure testing and seat leakage test procedure • Packaging to be used for transportation and storage	[1], [2], [15]	30
3.	Material Suitability & Corrosion Protection – Evidence that valve materials and coatings are suitable for Grootvlei CW chemistry (Annexure 1) and comply with 240-101712128 and 240-106365693.	Annexure of [1], [3], [6]	30
4.	Documentation & Compliance Declaration – Clear statement of deviations/exclusions to spec; provision of preliminary coating procedure with data sheets.	[1], [2] and [6]	10
5.	Gearbox and Actuator Integration – Confirmation of compatibility with free-issued AUMA actuator and gearbox, including setting of end stops and torque switches.	[1] and [2]	20
			Total: 100

² What Should **NOT** Be Acceptable as Valid References:

- Incorrect methods – cleaning by chemical/abrasive methods or valve refurbishment not compliant with Eskom Std. 240-63154109 Rev 3.

4.3. Qualitative Technical Evaluation Criteria – Phase 2 Site Visit

Table 4: Phase 2 – Qualitative Technical Evaluation Criteria

No.	Qualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)
1.	Workshop Capability Assessment – Verification of South African workshop facilities and equipment for handling ≥1200mm NB valves.	Sec. 3.1, Site visit clause	15
2.	Health & Safety Compliance – Adherence to OHS Act 85 of 1993 and site-specific safety requirements.	[16]	15
3.	Quality Control Plan (QCP) Implementation – Review of QCP/ITP including hold points, FAT, and employer inspections.	[4]	20
4.	Technical Competence & Past Experience – Validation of references from Table 2 and technical capability for triple-offset valve refurbishment.	Sec. 4.2, Table 2	40
5.	Final Assembly & Testing Setup – Readiness for hydrostatic and seat leakage tests per 240-63154109 and/or API 598.	[2], [15]	10
			Total: 100

4.1. Tet Member Responsibilities

Table 5: TET Member Responsibility

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5*
1	X	X	X	X	X
2	X	X	X	X	X
Qualitative Criteria Number – Phase 1	TET 1	TET 2	TET 3	TET 4	TET 5*
1	X	X	X	X	X
2	X	X	X	X	X
3	X	X	X	X	X
4	X	X	X	X	X
5	X	X	X	X	X
Qualitative Criteria Number – Phase 2	TET 1	TET 2	TET 3	TET 4	TET 5*
1	X	X	X	X	X
2	X	X	X	X	X
3	X	X	X	X	X
4	X	X	X	X	X
5	X	X	X	X	X

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4.2. Foreseen Acceptable / Unacceptable Qualifications

Table 6: Acceptable Technical Risks

Risk	Description
1	Use of alternative coating materials that are superior to specified standards.
2	Minor deviations in method statement provided they do not compromise valve integrity or performance.
3	Alternative materials offered - but suitable / superior to specification requirements

Table 7: Unacceptable Technical Risks

Risk	Description
1	Non-South African refurbishment facility.
2	Inability to verify two valid references for valves ≥1200mm since 2015.
3	Gearbox design not compatible with AUMA actuator or lacking external adjustable end stops.
4	Non-compliance with pressure testing requirements per 240-63154109 and/or API 598.
5	Gearbox of Scotch yoke design or travelling nut design

Table 8: Acceptable Technical Exceptions/ Conditions

Risk	Description
1	Proposal of enhanced material grades with supporting technical justification

Table 9: Unacceptable Technical Exceptions/ Conditions

Risk	Description
1	Any deviations from flange marking or pressure side identification requirements
2	Use of non-compliant NDT methods or omission of required inspections

5. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Date	Signature
Vusi Dlamini	Turbine Engineering Manager	30/09/2025	
Thabo Montja	Engineering Manager		

6. REVISIONS

Date	Rev	Compiler	Designation	Remarks
September 2025	1	Mlungisi Khumalo	Condensate System Engineer	Original document

ADAPTED BY:

❖ Mlungisi Khumalo; Condensate Systems Engineer at Grootvlei Power Station

_____ 29/09/2025

7. ACKNOWLEDGEMENTS:

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