

	<b>Strategy</b>	<b>Engineering</b>
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Title:	<b>Tender Technical Evaluation Strategy for Stellite Repairs on Valves at Kriel Power Station</b>	Unique Identifier:	<b>555-ETP2019</b>
		Alternative Reference Number:	<b>N/A</b>
		Area of Applicability:	<b>Engineering</b>
		Documentation Type:	<b>Strategy</b>
		Revision:	<b>2</b>
		Total Pages:	<b>15</b>
		Next Review Date:	<b>N/A</b>
		Disclosure Classification:	<b>CONTROLLED DISCLOSURE</b>

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## **1. INTRODUCTION**

Kriel Power Station makes use of various valves for operation of the Boiler and Turbine plants, for all 6 units. These valves are of different types and operate at different pressures and temperatures. The strategy for the Turbine and Boiler plant valves at Kriel Power Station (normal maintenance and planned outages) includes stripping of various valves and conducting inspections. Following these inspection, various defects are identified which result in these valves requiring repairs. One of the major defects identified during these inspections is the stellite being damaged.

Kriel Power Station currently does not have a contract in place to carry out the required repairs, which is causing problems in terms of time and budget during maintenance periods

The Tender Technical Evaluation Strategy defines the mandatory and qualitative evaluation criteria, which serve as a basis for the technical evaluation process.

## **2. SUPPORTING CLAUSES**

### **2.1 SCOPE**

This strategy defines the Technical Evaluation Team (TET), their responsibilities and the criteria to be used to evaluate tenders for the abovementioned 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.

#### **2.1.2 Applicability**

This strategy document applies to Kriel Boiler and Turbine Engineering.

## **2.2 NORMATIVE/INFORMATIVE REFERENCES**

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

- [1] 240-168966153 Generation Tender Technical Evaluation Procedure
- [2] 555-ETP2018 -Scope of Work to Conduct Stellite Repairs on Valves at Kriel Power Station

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## **2.3 DEFINITIONS**

### **2.3.1 Classification**

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

## **2.4 ABBREVIATIONS**

<b>Abbreviation</b>	<b>Description</b>
ISO	International Organization for Standardization
TET	Technical Evaluation Team
WPS	Welding Procedure Specification
WPQR	Welding Procedure Qualification Record
WQR	Welder Qualification Record

## **2.5 ROLES AND RESPONSIBILITIES**

As per 240-168966153: Generation Tender Technical Evaluation Procedure

## **2.6 PROCESS FOR MONITORING**

Not applicable

## **2.7 RELATED/SUPPORTING DOCUMENTS**

Not applicable

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### **3. TENDER TECHNICAL EVALUATIONSTRATEGY**

#### **3.1 TECHNICAL EVALUATION THRESHOLD**

The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70%.

#### **3.2 TET MEMBERS**

**Table 1: TET Members**

<b>Designation</b>
Senior Technician: Kriel Maintenance
Engineer: Kriel Engineering
Senior Turbine Engineer: Kriel Engineering
Chief Engineer: Welding
Engineer: Kriel Engineering

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### **3.3 MANADATORY TECHNICAL EVALUATION CRITERIA**

**Table 2: Mandatory Technical Evaluation Criteria**

	<b>Mandatory Technical Criteria Description</b>	<b>Reference to Technical Specification/Tender Returnable</b>	<b>Motivation for use of criteria</b>
1.	Proof of valid, up to date ISO 3834-2 certificate	All pages of the valid ISO 3834-2 certificate to be submitted. Material Groups 1, 5, 6, 8 must be listed on the certificate.	High integrity on level 1 Eskom plant and welding governance

### 3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA SCORING MATRIX

The qualitative criteria will be scored according to the scoring matrix set out in the Tender Evaluation Procedure 240-48929482. Table 3 below shows the scoring matrix that will be used

**Table 3: Qualitative Technical Evaluation Criteria Scoring Matrix**

Score	%	Definition
5	100	<b>COMPLIANT</b> <ul style="list-style-type: none"> <li>Meet technical requirement(s) AND;</li> <li>No foreseen technical risk(s) in meeting technical requirements.</li> </ul>
4	80	<b>COMPLIANT WITH ASSOCIATED QUALIFICATIONS</b> <ul style="list-style-type: none"> <li>Meet technical requirement(s) with;</li> <li>Acceptable technical risk(s) AND/OR;</li> <li>Acceptable exceptions AND/OR;</li> <li>Acceptable conditions.</li> </ul>
2	40	<b>NON-COMPLIANT</b> <ul style="list-style-type: none"> <li>Does not meet technical requirement(s) AND/OR;</li> <li>Unacceptable technical risk(s) AND/OR;</li> <li>Unacceptable exceptions AND/OR;</li> <li>Unacceptable conditions.</li> </ul>
0	0	<b>TOTALLY DEFICIENT OR NON-RESPONSIVE</b>
<b>Note 1:</b> The scoring table does not allow for scoring of 1 and 3.		



### 3.5 QUALITATIVE TECHNICAL EVALUATION CRITERIA SCORING MATRIX

**Table 4: Qualitative Technical Evaluation Criteria**

			Qualitative Technical Criteria Description						
	TECHNICAL INFORMATION		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)	Evaluation Scoring Breakdown			
						0	2	4	5
1.	Welding Requirements			65%					
	1.1	The Contractor must submit to the Employer for acceptance, a WPS and WPQR for group 1 materials as per BS EN 15608 standard. The butt weld joint welding procedure, with a qualified thickness range of 3-14mm, must be in accordance with BS EN 15614-1	WPS and WPQR(butt weld joints) as per requirements in 555-ETP2018, section 7.2.1		10	No Submission /requirements not met			WPS and WPQR submitted and meets requirements
	1.2	The Contractor must submit to the Employer for acceptance, a WPS and WPQR for group 1 materials as per BS EN 15608 standard. The WPS and WPQR must illustrate hard facing using the relevant electrode/consumable, in accordance with BS EN 15614-7, must be submitted.	WPS and WPQR (hard facing) as per requirements in 555-ETP2018, section 7.2.1		10	No Submission /requirements not met			WPS and WPQR submitted and meets requirements

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	<b>1.3</b>	The Contractor must submit to the Employer for acceptance, a WPS and WPQR for group 5 materials as per BS EN 15608 standard. The butt weld joint welding procedure, with a qualified thickness range of 3-14mm, must be in accordance with BS EN 15614-1	WPS and WPQR as per requirements in 555-ETP2018, section 7.2.1		5	No Submission /requirements not met			Submitted and meets requirements
	<b>1.4</b>	The Contractor must submit to the Employer for acceptance, a WPS and WPQR for group 5 materials as per BS EN 15608 standard. The WPS and WPQR must illustrate hard facing using the relevant electrode/consumable, in accordance with BS EN 15614-7, must be submitted.	WPS and WPQR as per requirements in 555-ETP2018, section 7.2.1		5	No Submission /requirements not met			Submitted and meets requirements
	<b>1.5</b>	The Contractor must submit to the Employer for acceptance, a WPS and WPQR for group 6 materials as per BS EN 15608 standard. The welding procedure with PWHT (butt weld joint design), with a qualified thickness range of 3-14mm must be submitted, in accordance with BS EN 15614-1.	WPS and WPQR as per requirements in 555-ETP2018, section 7.2.1		5	No Submission /requirements not met			Submitted and meets requirements
	<b>1.6</b>	The Contractor must submit to the Employer for acceptance, a WPS and WPQR for group 6 materials as per BS EN 15608 standard. The WPS and WPQR with PWHT must illustrate hard facing using the relevant electrode/consumable, in accordance with BS EN 15614-7, must be submitted.	WPS and WPQR as per requirements in 555-ETP2018, section 7.2.1		10	No Submission /requirements not met			Submitted and meets requirements

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	<b>1.7</b>	The Contractor must submit to the Employer for acceptance, a WPS and WPQR for group 8 materials as per BS EN 15608 standard. The butt weld joint welding procedure, with a qualified thickness range of 3-14mm, must be in accordance with BS EN 15614-1	WPS and WPQR as per requirements in 555-ETP2018, section 7.2.1		10	No Submission /requirements not met			Submitted and meets requirements
	<b>1.8</b>	The Contractor must submit to the Employer for acceptance, a WPS and WPQR for group 8 materials as per BS EN 15608 standard. The WPS and WPQR must illustrate hard facing using the relevant electrode/consumable, in accordance with BS EN 15614-7, must be submitted.	WPS and WPQR as per requirements in 555-ETP2018, section 7.2.1		10	No Submission /requirements not met			Submitted and meets requirements
<b>2</b>	<b>Quality Control, Technical Exclusions and Qualifications</b>			<b>35%</b>					
	<b>2.1</b>	Contractor to provide at least one example of a signed QCP for similar work done previously	Fully signed off QCP for work previously done, as per requirements in 555-ETP2018, section 7.2.2		5	No Submission /requirements not met			Submitted and meets requirements
	<b>2.2</b>	The Contractor must demonstrate previous experience in successfully conducting off-site and in-situ stellite repair of valves.  A list of at least 8 relevant verifiable references (3 off-site repairs and 5 for in-situ repairs) within the last 10 years must be provided.	Proof of experience must be confirmed by submission of the following information:  • Client • Description of work performed • Project date  Name, designation, and contact number of reference person		20	Less than 5 relevant verifiable references provided	5-6 relevant verifiable references provided	6-7 relevant verifiable references provided	8 or more relevant verifiable references provided

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	<b>2.3</b>	The Contractor must submit welder qualification record (WQR), as per BS EN 9606-1, that indicates competency in executing Group 6 materials.	Submission of welder qualification indicating competency in executing Group 6 materials, as per requirements in 555-ETP2018, section 7.2.2		10	No Submission /requirements not met			WQR submitted and requirements met
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### 3.6 TET MEMBER RESPONSIBILITIES

**Table 5: TET Member Responsibilities**

<b>Mandatory Criteria Number</b>	<b>TET 1</b>	<b>TET 2</b>	<b>TET 3</b>	<b>TET 4</b>	<b>TET 5</b>
<b>1</b>	X	X	X	X	X
<b>2</b>	X	X	X	X	X
<b>Qualitative Criteria Number</b>	<b>TET 1</b>	<b>TET 2</b>	<b>TET 3</b>	<b>TET 4</b>	<b>TET 5</b>
<b>1.1</b>	X	X	X	X	X
<b>1.2</b>	X	X	X	X	X
<b>1.3</b>	X	X	X	X	X
<b>1.4</b>	X	X	X	X	X
<b>1.5</b>	X	X	X	X	X
<b>1.6</b>	X	X	X	X	X
<b>1.7</b>	X	X	X	X	X
<b>1.8</b>	X	X	X	X	X
<b>2.1</b>	X	X	X	X	X
<b>2.2</b>	X	X	X	X	X
<b>2.3</b>	X	X	X	X	X

### **3.7 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS**

#### **3.7.1 Risks**

**Table 6: Acceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1.	None

**Table 7: Unacceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1.	Inability to do in-situ valves stelliteing
2.	Insufficient stelliteing experience

#### **3.7.2 Exceptions / Conditions**

**Table 8: Acceptable Technical Exceptions / Conditions**

<b>Risk</b>	<b>Description</b>
1.	N/A

**Table 9: Unacceptable Technical Exceptions / Conditions**

<b>Risk</b>	<b>Description</b>
1.	All requirements must be adhered to. Non-submission or exclusion of any of the 8 WPS & WPQR will result in a Zero score.
2.	Non-submission of welder qualification record indication competency for Group 6 materials

#### **4. AUTHORISATION**

This document has been seen and accepted by:

<b>Designation</b>
Senior Technician: Kriel Power Station, Maintenance
Senior Engineer: Kriel Power Station, Turbine Engineering
Chief Engineer: Gx Asset Management - Welding
Engineer: Kriel Power Station, Turbine Engineering
Engineer: Kriel Power Station, Boiler Engineering
Group Engineering Manager: Kriel Power Station
Kriel Valve Specialist: Gx Asset Management
Senior Advisor: Outages
Engineering Manager: Kriel Power Station, Turbine Engineering
Engineer: Kriel Power Station, Boiler Engineering

#### **5. REVISIONS**

<b>Date</b>	<b>Rev.</b>	<b>Remarks</b>
October 2021	0	First Draft
March 2024	1	Document signed off
April 2025	2	Update to Mandatory and qualitative requirements

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