

	<b>Strategy</b>	<b>Duvha Power Station Generation</b>
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## **1. INTRODUCTION**

This tender technical evaluation strategy explains exactly how the tenders will be evaluated for the installation of new condenser tubes for Duvha's re-tubing project.

## **2. SUPPORTING CLAUSES**

### **2.1 Scope**

This document concerns the installation of condenser tubes, including the supply of stakes and the tools required for re-tubing. It does not include the procurement or transport of the new condenser tubes.

#### **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 2.1.2 Applicability**

This document applies to condenser re-tubing at Duvha 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 rev1 : Tender Technical Evaluation Procedure

[2] ENS0077 Unit 1 Condenser Tube Installation SoW

#### **2.2.2 Classification**

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

### **2.3 Abbreviations**

<b>Abbreviation</b>	<b>Description</b>
ITP	Inspection and Test Plan
MPDS	Material Product Data Sheet
MSDS	Material Safety Data Sheet

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Abbreviation	Description
QCP	Quality Control Plan
RT&D	Research, Testing and Development
TET	Technical Evaluation Team

## **2.4 Roles and Responsibilities**

[3] As per 240-48929482 rev1: Tender Technical Evaluation Procedure.

## **3. TENDER TECHNICAL EVALUATION STRATEGY**

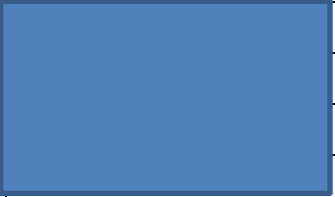
### **3.1 Technical Evaluation Threshold**

The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70%. Should no Contractor meet the minimum threshold of 70% Eskom reserves the right to negotiate and/or consider Contractors that obtained between 65% and 69%

### **3.2 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		System Engineer
TET 2		Senior Engineer
TET 3		Senior Consultant
TET 4		Corporate Consultant

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### **3.3 Mandatory Technical Evaluation Criteria**

**Table 2: Mandatory Technical Evaluation Criteria**

	<b>Mandatory Technical Criteria Description</b>	<b>Motivation for use of criteria</b>
1	Verifiable experience of the Contractor or joint venture partner regarding fully re-tubed main steam condenser for a turbine size greater than 100 MW in the last 5 years.	To ensure high quality of workmanship
2	Verifiable references are to be provided for condenser stakes supplied. At least 5 previous condenser retube projects within the previous 5 years, where due to the design, condenser stakes are a requirement. The stake design shall adhere to the requirements as detailed in [2]. The reference list shall contain contact details of the plant owners and the date when the retube (which involved stakes) was done as well as the condenser tube material used for the respective retube projects.	To minimise the risk of premature failure of components

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### 3.4 Qualitative Technical Evaluation Criteria

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

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> Meet technical requirement(s) with; <ul style="list-style-type: none"> <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>

**Table 4: Qualitative Technical Evaluation Criteria**

Scope Section	Criteria	Weight %	Sub Weight %
1	Retubing	70	
1	All welding activities on distillate pipework as per section 7.11 [2] will only be performed by an ISO 3834 Part 2, contractor or sub-contractor. A valid copy of the ISO 3834 certificate must be supplied with tender.		20
2	Adherence to the above Works Information. If the contractor adhere fully to the scope of work a letter stating this shall be supplied. Any technical deviations shall be clearly indicated.		35
3	An example of Contractor's procedures (mock-up and pullout test, tube removal, installation and expansion procedure)		10
4	An example of the Contractor's QCP for a typical condenser installation.		10
5	The tool list (Table 8 in the works information) shall be		25

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	included in the tender with column 2 and 4 completed. These tools need to be on site for the total duration of the specific condenser under refurbishment, these tools will not be removed from site to assist any other condenser refurbishments project, which runs concurrent with the unit that is contracted.		
	<b>Supply of stakes</b>	<b>17.5</b>	
6	Overall dimensional drawing of a proposed stakes including material selection.		100
	<b>Coating</b>	<b>12.5</b>	
7	The coating of condenser waterboxes shall only be performed by contractors who can produce verifiable references of similar corrosion protection on CW systems, chemical tanks and associated piping & ducts, done during the last 5 years.		60
8	Supply of the latest revisions of the specified Material Product Data Sheets and Material Safety Data Sheets.		20
9	Detailed QCP for similar work done as per coating specification RTD/MAT/19/199		20
		<b>TOTAL=100</b>	

### 3.5 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>
1	X	X	X	X
2	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>
1	X	X	X	X
2	X	X	X	X
3	X	X	X	X
4	X	X	X	X

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5	X	X	X	X
7	X	X	X	X
8	X	X	X	X
9	X	X	X	X

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### **3.6 Foreseen Acceptable / Unacceptable Qualifications**

#### **3.6.1 Risks**

**Table 6: Acceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1	Different tube de-loading techniques than scope, with references to proof effectiveness

**Table 7: Unacceptable Technical Risks**

<b>Risk</b>	<b>Description</b>
1	Never performed Condenser retubing
2	Do not have all required tools
3	Inexperience with staking
4	No QC personnel on site during detubing, retubing or expansion activities
5	Damage to tubesheet by means of grinding or cutting

#### **3.6.2 Exceptions / Conditions**

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

<b>Risk</b>	<b>Description</b>
1	Inadequate cleaning of tubesheet holes, that might lead to delays
2	Cleanliness of condenser not acceptable before loading of tubes – might cause a delay.

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

<b>Risk</b>	<b>Description</b>
1	Non-compliance to coating requirements
2	No water spray system
3	Cutting tubes with grinder instead of internal cutter
4	Inadequate rigging capabilities
5	No Mock up blocks for mock up testing
6	Unskilled / inexperienced labour in charge of detubing or retubing activities

## **Tender Technical Evaluation Strategy – Installation of Unit1 Condenser Tubes at Duvha Power Station**

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### **4. AUTHORISATION**

This document has been seen and accepted by:

<b>Name</b>	<b>Designation</b>

### **5. REVISIONS**

<b>Date</b>	<b>Rev.</b>	<b>Compiler</b>	<b>Remarks</b>
May 2020	0.1		First Draft issued for comments
June 2020	1		First Issue

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