



Strategy

Engineering

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1. INTRODUCTION

Service Water is tapped off from the main Raw Water supply line to the Water Treatment Plant and is conveyed via the Service Water pumps through two pipelines to the plant i.e., the East and West Service Water supply lines.

The Service Water pumps (three electrical and three diesel) share a common suction manifold that splits into three legs each supplying one set of pumps (i.e., one electrical and one diesel). Each pump discharge connects to the common discharge manifold and splits into the East and West Service Water supply lines.

The East and West Service Water supply lines feed into two parallel lines that supply Service Water to units one to eight i.e., the header supplying the Air Heaters and Ash Plant and the header supplying the Boiler and Turbine tundishes.

The Service Water System supplies cooling water to the following systems/plants:

- Ash water sealing system
- Auxiliary cooling system
- Back up to fire system

The Service water pipework is severely corroded and needs to be replaced.

2. SUPPORTING CLAUSES

2.1 SCOPE

This document covers the different aspects that will be evaluated and scored by the Technical Evaluation Team (TET) to complete the technical evaluation of the Camden Replacement of Service Water Pipeline enquiry. The team members are listed and appointed in this document along with their responsibilities. The document also describes the acceptable and unacceptable risks and qualifications and/or conditions.

Once the Technical Evaluation Strategy is authorised no changes will be made to the evaluation criteria without appropriate authorisation.

2.1.1 Purpose

The purpose of this tender technical evaluation strategy is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and Technical Evaluation Team (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 document is applicable to the Camden Replacement of Service Water Pipeline scope.

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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] 240-168966153: Generation Tender Technical Evaluation Procedure
- [2] 32-1034: Eskom Procurement Policy
- [3] Contract Strategy

2.3 DEFINITIONS

2.3.1 Classification

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

2.4 ABBREVIATIONS

Abbreviation	Description
CV	Curriculum Vitae
ECSA	Engineering Council of South Africa
TET	Technical Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

As per 240-168966153: Generation Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

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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%.

Table 1: Qualitative Evaluation Criteria Scoring Table

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

Note 1: The scoring table does not allow for scoring of 1 and 3.
Note 2: Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.

3.2 TET MEMBERS

Table 2: TET Members

TET number	TET Member Name	Designation
TET 1		Snr Advisor Chemistry – RT&D
TET 2		Auxiliary Plant System Engineer – Camden
TET 3		Auxiliary Plant System Engineer – Camden
TET 4		Snr Supervisor Tech Welding – Camden
TET 5		Snr Inspector Tech Welding – Camden

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3.3 MANDATORY TECHNICAL EVALUATION CRITERIA

Table 3: Mandatory Technical Evaluation Criteria

	KPI - CRITERIA EVALUATION INDICATOR	MINIMUM CRITERIA EVALUATION REQUIREMENTS	SOURCE
1	Corrosion Protection: Experience of Contractor	Provide verifiable references and sources of evidence that the product supplier and applicator have successfully applied a coating (internal and external) corrosion protection system equal to (as a minimum) the surface area as defined in the enquiry and Scope of Work (SOW) documents within the last 5 years. NB. Where scope will be subcontracted, the tender submission must clearly indicate all the subcontractor's details and a copy of the subcontracting agreement.	The listing shall include formal signed off QCPs, release certificates or a list of successfully completed projects. The listing must include the following: <ul style="list-style-type: none"> • Description of the work performed. • Name of company where project was executed • Contact person and contact number • Contract period • Contract value • Contract number • Total surface area of work previously completed
2	Adherence to 240-123801640-Standard for Low Pressure Pipelines	Provide a letter stating the Contractor's intent to comply to 240-123801640-Standard for Low Pressure Pipelines	Signed Letter
3	ECSA Registration	ECSA certificate for key person responsible for all technical aspects. (The use of more than one key person is acceptable provided the split in responsibilities are clearly indicated.)	Certified copy of ECSA registered professional engineer or technologist in Mechanical Engineering
4	CIDB level 7 ME	Certified copy of CIDB registration certificate to be submitted	Certified copy of CIDB registration certificate to be submitted
5	ISO 3834-2 Certified (ISO 3834-3:2021 Quality Requirements for fusion welding of metallic materials – Part 2: Comprehensive Quality Requirements)	Certified copy of ISO 3834-2 certification to be submitted. NB. Where scope will be subcontracted, the tender submission must clearly indicate all the subcontractor's details and a copy of the subcontracting agreement	Certified copy of certification

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 4: Qualitative Technical Evaluation Criteria

	KPI - CRITERIA EVALUATION INDICATOR	MINIMUM CRITERIA EVALUATION REQUIREMENTS	SOURCE	CRITERIA WEIGHTING %	CRITERIA SUB WEIGHTING %	SCORE SCALE			
						Floor	Kick in	Average	Ceiling
	Criteria 1: Corrosion Protection			30		0=0%	2=40%	4=80%	5=100%
1.1	Product Data Sheets for all products comprising the system i.e. primer, top coats	Company must provide datasheets for all products as per the scope. • primer and top coats - Generic type, physical, chemical, service temperatures and chemical resistance limits.	Datasheets		20	None provided	Data sheets provided only for primer and (40%) information as per Criteria for coating system was provided.	All data sheets provided and (80%) information as per Criteria for coating system was provided.	All data sheets provided and All information as per Criteria were provided.
1.2	Method statements for work	Company must provide a detailed methodology and equipment list (number and capacity) required for effective; (a) surface preparation and coating application including internal 6m long length pipes (lance boom equipment), (b) ventilation management (c) dust and debris removal. (d) surface preparation production rates per area (e) removal of spent abrasive grit, dust/debris (f) specified/required environmental conditions. • The precise sequence and breakdown of work areas/activities in order to clearly demonstrate experience and knowledge to avoid unnecessary delays i.e. rework time. The sequence to consider surface preparation production rates per area with) due consideration of time for removal of spent abrasive grit, dust/debris all in conjunction	Method statements		30	No method statement submission	≥3 steps missing or not sufficient	1 - 2 steps missing or not sufficient	All application steps (a – f) provided.

	KPI - CRITERIA EVALUATION INDICATOR	MINIMUM CRITERIA EVALUATION REQUIREMENTS	SOURCE	CRITERIA WEIGHTING %	CRITERIA SUB WEIGHTING %	SCORE SCALE			
						Floor	Kick in	Average	Ceiling
						0=0%	2=40%	4=80%	5=100%
1.3	Quality Control Plan	<ul style="list-style-type: none"> • Shall detail all inspections and tests as detailed in method statement with the listing of the relevant local (SANS) or international standards as well as the required acceptance criteria. • Inspections during lining application shall at least cover; <ul style="list-style-type: none"> (a) surface preparation and coating application including internal 6m long length pipes (lance boom equipment), (b) environmental parameters, (c) paint properties/batch certificate i.e. thickness, (d) continuity and visual tests. 	Detailed QCP		25	None provided	High-level QCP missing: ≥ 3 Steps or tests i.e. (a – d) or ≥ 3 Missing standards or ≥ 3 Acceptance criteria.	QCP missing: 1 - 2 Steps or tests i.e. (a – d) or 1-2 Missing standards or 1-2 Acceptance criteria.	Detailed QCP indicating all steps, tests, standards, inspections criteria and interventions i.e. (a – d).
1.4	List of deviations from the Eskom specification	Company must provide a letter either stating no deviations or must state the deviations.	List of deviations		15	Detrimental, technically unacceptable Deviations or Exclusions	Not an option	No definitive statement that there are any Deviations or Exclusions OR Acceptable Deviations or Exclusions.	A definitive statement that there are no Deviations or Exclusions.
1.5	Detailed Programme	Detailed program indicating the time that will take for entire projects. The programme to show all activities from site establishment to site de-establishment.	Project Programme		10	None provided	Not an option	Some activities missing or not sufficient	All activities steps provided

	KPI - CRITERIA EVALUATION INDICATOR	MINIMUM CRITERIA EVALUATION REQUIREMENTS	SOURCE	CRITERIA WEIGHTING %	CRITERIA SUB WEIGHTING %	SCORE SCALE			
						Floor	Kick in	Average	Ceiling
Criteria 2: Welding Requirements				35		Floor	Kick in	Average	Ceiling
						0=0%	2=40%	4=80%	5=100%
2.1	Welding Inspector	Welding Inspector level 2 (SAIW) NB. One qualified welding inspector required as a minimum.	Submit a detailed CV with certified copies of the Qualifications AND 3 years relevant experience with traceable references		20	Totally Deficient or Non-responsive	Certified copy of qualification(s), CV indicating one (1) year of related experience	Certified copy of qualification(s), CV indicating two (2) years of related experience	Meet requirements - certified copy of qualification(s), CV indicating three (3) or more years of related experience
2.2	Procedures	Welding Procedure Specification (WPS) AND Welding Procedure Qualification Record (WPQR)	Submit WPS AND WPQR in accordance with ISO 15614-1:2017 - Specification and Qualification of welding procedures for metallic materials – Welding procedure test – part 1		20	Totally Deficient or Non-responsive scores	Either one of the tender returnables not provided	Not an option	Both tender returnables provided
2.3	Welders	2.3.1 Welders qualifications in accordance with ISO 9606-1:2012: Qualification testing of welders – Fusion Welding NB. Four qualified welders required as a minimum.	Submit the number of welders required for execution of the scope of work with certified copies of the Qualifications (Certified Welder or Trade Test Certificate)		10	Totally Deficient or Non-responsive	Certified copy of qualification(s) for two (2) welders submitted	Certified copy of qualification(s) for three (3) welders submitted	Meet requirements - certified copy of qualification(s) for four (4) welders submitted
		2.3.2 Experience of Welders	Submit a detailed CV indicating 3 years relevant experience with traceable references		10	Totally Deficient or Non-responsive	CV's indicating one (1) year of related experience	CV's indicating two (2) years of related experience	Meet requirements – CV's indicating three (3) or more years of related experience

	KPI - CRITERIA EVALUATION INDICATOR	MINIMUM CRITERIA EVALUATION REQUIREMENTS	SOURCE	CRITERIA WEIGHTING %	CRITERIA SUB WEIGHTING %	SCORE SCALE			
						Floor	Kick in	Average	Ceiling
						0=0%	2=40%	4=80%	5=100%
2.4	Boiler Makers	2.4.1 Boiler Makers qualifications NB. Four qualified boiler makers required as a minimum	Submit the number of boiler makers required for execution of the scope of work with certified copies of the Qualifications (Trade Test Certificate)		5	Totally Deficient or Non-responsive	Certified copy of qualification(s) for two (2) boiler makers submitted	Certified copy of qualification(s) for three (3) boiler makers submitted	Meet requirements - certified copy of qualification(s) for four (4) boiler makers submitted
		2.4.2 Experience of Boiler Makers	Submit a detailed CV indicating 3 years relevant experience with traceable references		5	Totally Deficient or Non-responsive	CV's indicating one (1) year of related experience	CV's indicating two (2) years of related experience	Meet requirements – CV's indicating three (3) or more years of related experience
2.5	QCP	Completed (QCP or ITP) for a welding activity	Provide a QCP for a typical welding activity i.e. welding a pipeline		20	Totally Deficient or Non-responsive	Submitted but not signed or not relevant	Submitted but missing one critical signature	Fully compliant
2.6	Fire watcher	Fire watcher	Submit a detailed CV with certified copies of the Qualifications (Fire Watcher training certificate) with traceable references		10	Totally Deficient or Non-responsive	CV provided with certified copy of qualification(s)	Not an option	Meet requirements - CV provided with certified copy of qualification(s) and traceable references

	KPI - CRITERIA EVALUATION INDICATOR	MINIMUM CRITERIA EVALUATION REQUIREMENTS	SOURCE	CRITERIA WEIGHTING %	CRITERIA SUB WEIGHTING %	SCORE SCALE			
				35		Floor	Kick in	Average	Ceiling
	Criteria 3: Mechanical Requirements					0=0%	2=40%	4=80%	5=100%
3.1	Method Statement	Detailed Method Statement indicating the following: <ul style="list-style-type: none"> • Design • Supply of material • Fabrication • Installation methodology • Execution programme 	Detailed Method Statement document		35	Totally Deficient or Non-responsive	4 steps missing.	2 steps missing.	All 5 steps provided
3.2	Relevant Experience	Company's completed orders with delivery note in similar scope (Design, supply, fabrication, delivery and installation of pipework, valves, etc.).	Proof of signed completion orders with delivery note certificates, with traceable references. The completion certificate to include the following: <ul style="list-style-type: none"> • Description of the work performed. • Name of company where project was executed • Contract period • Contract value 		30	Totally Deficient or Non-responsive	≤ 2 completed orders	≥ 3 completed orders	≥ 5 completed orders

	KPI - CRITERIA EVALUATION INDICATOR	MINIMUM CRITERIA EVALUATION REQUIREMENTS	SOURCE	CRITERIA WEIGHTING %	CRITERIA SUB WEIGHTING %	SCORE SCALE			
						Floor	Kick in	Average	Ceiling
						0=0%	2=40%	4=80%	5=100%
3.3	Riggers	3.3.1 Riggers required to execute the scope of work	Submit the number of riggers required for execution of the scope of work with certified copies of the Qualifications (Rigging certificate)		5	Totally Deficient or Non-responsive scores a 0	Not an option	Eight (8) to Nine (9) Riggers provided with certified copy of rigger qualification(s)	Meets Requirements – Ten (10) or more Riggers provided with certified copy of rigger qualification(s)
		3.3.2 Experience of riggers	Submit detailed CV 's indicating the number of years related experience with traceable references		5	Deficient or Non-responsive scores a 0	CV indicating one (1) or more years of related experience..	CV indicating two (2) or more years of related experience..	CV indicating one (3) or more years of related experience..
3.4	Key Resource CV	Key resource CV	CV for key person (ECSA registered engineer) responsible for all technical aspects. (The use of more than one key person is acceptable provided the split in responsibilities are clearly indicated.)		25	Totally Deficient or Non-responsive	CV indicating one (1) year of related experience	CV indicating three (3) years of related experience	CV indicating five (5) or more years of related experience

3.5 TET MEMBER RESPONSIBILITIES

Table 5: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4	TET 5
1	X	X			
2		X	X		
3		X	X		
4		X	X		
5				X	X
Qualitative Criteria Number	TET 1	TET 2	TET 3	TET 4	
1.1 to 1.5	X	X			
2.1 to 2.6				X	X
3.1 to 3.4		X	X		

X – Mandatory

3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.6.1 Risks

Table 6: Acceptable Technical Risks

Risk	Description
1.	Failure to provide spares lists

Table 7: Unacceptable Technical Risks

Risk	Description
1.	No information on adherence to Eskom Standards provided.

3.6.2 Exceptions / Conditions

Table 8: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	Professional Technologist is utilised and not Professional Engineer as deemed by ECSA

Table 9: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	Failure to meet plant performance requirements in terms of reliability and availability
2.	

4. REVISIONS

Date	Rev.	Compiler	Remarks
July 2023	1		Original Issue
February 2024	2		Evaluation Criteria Revised

5. DEVELOPMENT TEAM

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6. ACKNOWLEDGEMENTS

N/A

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