| Eskom | Strategy | Engineering |
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| Title: | **Tender Technical Evaluation Strategy – Inspections, repairs, fabricate, supply, and install of ceramic lined pulverized PF pipes, PF pipes hangers and PF pipes supports** | Unique Identifier: | **555-EBP2026** |
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# 1. INTRODUCTION

Fabrication and supply contract for the PF pipes, PF pipes hangers and PF pipes supports is going out on an open tender. The technical evaluation is in accordance with 32-1033: Eskom Procurement and Supply Chain Management Policy, 32-1034 Eskom Procurement and Supply Chain Management Procedure during the tender process, 240-168966153 Generation Tender Technical Evaluation Procedure, 555-EBP2019 Inspections, repairs, fabricate, supply, and install of ceramic lined PF pipes, PF pipes hangers and PF pipes support scope of work.

The evaluation of the tender is based on the tenderer's ability to meet both mandatory (gatekeepers) and qualitative (weighted) evaluation criteria requirements.

# 2. SUPPORTING CLAUSES

## 2.1 SCOPE

The scope of this document defines the technical criteria to be used to evaluate tender documents supplied by contractors to execute work defined on the scope of work 555-EBP2019 Inspections, repairs, fabricate, supply and install of ceramic lined PF pipes, PF pipes hangers and PF pipes support scope of work. The acceptable and unacceptable technical risks are identified and where exceptions will be allowed it is stated.

### 2.1.1 Purpose

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

### 2.1.2 Applicability

This document is applicable to 555-EBP2019 Inspections, repairs, fabricate, supply, and install of ceramic lined PF pipes, PF pipes hangers and PF pipes support scope of work at 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] 240-168966153: Generation Tender Technical Evaluation Procedure

[2] 32-1033: Eskom Procurement and Supply Chain Management Policy

[3] 32-1034: Eskom Procurement and Supply Management Procedure during the tender process

### 2.2.2 Informative

[4] ISO 9001: Quality Management Systems

[5] 240:105658000: Supplier Quality Management Specification

## 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 |
|---|---|
| TET | Technical Evaluation Team |
| CQP | Contract Quality Plan |
| EN | Europäische Norm ("European Norm"), European Standards |
| ID | Internal Diameter |
| ISO | International Organization for Standardization |
| NDT | Non-Destructive Testing |
| IWE | International Welding Engineer registered with IIW |
| IWT | International Welding Technologist registered with IIW |
| OEM | Original Equipment Manufacturer |
| PQR | Procedure Qualification records |
| QCP | Quality Control Plan |
| SOW | Scope of work |
| WPS | Welding Procedure Specifications |
| WPQR | Welding Procedure Qualification Record |
| WQR | Welder's Qualification Record |

## 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

[1] 240-105658000 Supplier Quality Management Specification

[2] 555-EBP2019 Inspections, repairs, fabricate, supply and install of ceramic lined PF pipes, PF pipeshangers and PF pipes support scope of work.

[3] 240-168966153 Generation Tender Technical Evaluation Procedure

[4] 240-87660096 Non-Destructive Testing Inspection Qualification Standard

[5] 240-83539994 Standard for Non-destructive Testing (NDT) on Eskom Plant

[6] 240-106628253 Standard for Welding Requirements on Eskom Plant

# 3. TENDER TECHNCIAL EVALAUTION 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%.

## 3.2 TET MEMBERS

## 3.3 TENDER RETURNABLES/TECHNICAL SPECIFICATIONS

### 3.3.1 CIDB Registration Certificate

Mandatory: The Company's CIDB registration certificate must be submitted in the "Technical Returnable" section of the tender submission.

The minimum CIDB grade is: 7ME (Grade 7 Mechanical Engineering), Contractor to provide CIDB Registration certificate. This shall be confirmed on www.cidb.org.za

The following documents completed, signed, and submitted:

- CIDB Questionnaire (Annexure G)
- CIDB SBD4
- CIDB SBD9

### 3.3.2 ISO 3834-2 Certification

Complete certificate (all pages) of the valid ISO 3834 Part 2 certificate must be submitted and it must clearly indicate the following: Construction codes: BS EN 12952, BS EN 13480 and PD5500 cover material groups 1, 3, 5, 6 and 8 (according to ISO/TR 15608) for the tenderer declared competent.

### 3.3.3 Quality management system

Valid Certificate of approval in terms of SABS ISO 9001:2008

### 3.3.4 Valid proof of Workshop Ownership/Lease Agreement

All potential service providers must submit valid proof of Ownership of workshop or lease agreement of the workshop. No subcontracting documentation will be deemed acceptable on this requirement thus, **do not** use any subcontracting agreements or documentation for submission in this criterion.

### 3.3.5 Method statement

The tenderer must submit a method statement for the works. The method statement must be a complete method statement with details on inspections, fabrications, installation and alignment of PF pipes, hangers and supports.

### 3.3.6 QCPs

QCPs must be submitted, with clear step-by-step works stipulated in the Quality Control Plan. Preferably three historically fully signed-off plans to be submitted/comprehensive new template with all stakeholders to sign-off. Quality control plan (QCP/ITP).

Referenced document: 240-105658000: Supplier Quality Management Specification: referred sections/paragraphs: 3.4.11, 3.4.12; 3.4.4.be included as minimum.

### 3.3.7 Welding Procedure Specifications (WPS)

Submit Welding Procedure Specifications (WPS) for steel BS 4360 Grade 43A or equivalent, approved material (welding procedure in accordance with BS 2971 and BS EN 13480; casing thickness and flange thickness specified in 240:56239143 section 3.3.1 table 1 (Internal diameter 361mm to 450mm and 451mm to 800mm).
The WPS must be to BS EN standard, BS 2971 and BS13490, not ASME/AWS. The WPS must be approved by an IWE/IWT.
Referenced document: 240-106628253 Standard for welding Requirement on Eskom Plant, paragraph 3.1 and 240-56239143 Ceramic Lined pulverized Fuel Pipework Standard section 3.4.1

### 3.3.8 Welding Procedure Qualification Record (WPQR)/PQR

Submit Welding Procedure Qualification Record (WPQR) for steel to BS 4360 Grade 43A; or equivalent approved material, (welding procedure in accordance with BS 2971 and BS EN 13490); casing thickness and flange thickness specified in 240:56239143 section 3.3.1 table 1 (Internal diameter 361mm to 450mm and 451mm to 800mm). The WPQR must be to BS EN standard (BS 2971 and BSEN13490), not ASME/AWS etc. The WPQR must be approved by an IWE/IWT.
Referenced document: 240-106628253 Standard for welding Requirement on Eskom Plant

### 3.3.9 Welders' and Rigger's Qualifications

Submit 4x off Coded Welders' and 2x off riggers Qualifications and Approved Trade Tests Certificates for the applicable WPS. Referenced document: 240-106628253 Standard for welding Requirement on Eskom Plant.

Submit 2x off riggers Qualifications and Approved Trade Tests Certificates that are recognized by quality approval body.

### 3.3.10 Guarantees and technical particulars of equipment offered

Submit a fully completed schedule A and all relevant requirements as per appendices A and B, of 240-56239143: Ceramic Lined Pulverized Fuel Pipework Standard.

### 3.3.11 Proof of experience

Submit more than 2x off verifiable and signed-off proof of project completion certificates, The tenderer must have experience with installation of Pipework, Pipework Hangers or Pipe Supports and Pipes alignments with hangers at any Eskom Generation Plants or any other similar Industry. Provide verifiable evidence – A contact list (Full names and Contact numbers, names to match the persons on the provided project completion certificates).

### 3.3.12 Valid proof of workshop machinery Ownership/Lease

This is to determine if the service provider can effectively execute the scope in a suitable Engineering Workshop equipped with the right equipment for the works.

Submit proof of ownership/lease of the following workshop, machinery: plate rolling machinery, Lathe or CNC machinery, Suitable Bending equipment, Suitable pipe lifting equipment.

Ownership in terms of purchase invoices of equipment between the service provider and equipment/machine supplier or a fully signed equipment rental agreement between the service provider and machinery owner. In case of rentals the proof of ownership from the machinery owner must accompany the rental agreement.

Workshop visits will be requested through the procurement officer during technical evaluation process. Where service provider(s) will be required to show to the Technical Evaluation Team Members the following capabilities which may include but not limited to:

- Cold and Hot Bending Capabilities
- Fabrication of any available specimen (any pipe specimen available to the service providers) in the CNC/Lathe Machinery
- Plate rolling capabilities and seam welding on rolled piping.
- Provide two samples of QCPs done on historical work
- Provide one data pack on historically done rolled pipe
- Ceramic lining capabilities
- Show in a presentation hanger selection process capabilities and surveys methodology
- Present capabilities to use 3D scanning and Caesar modelling
- Workshop walk down(s)

For the sizes of the pipes/plates to be rolled, bent, and seam-welded, refer to internal diameter range of 361 mm to 800 mm as on Table 1, subsection 3.3.1 page 8 of document 240-56239143

## 3.4 MANADATORY TECHNICAL EVALUATION CRITERIA

**Table 2: Mandatory Technical Evaluation Criteria**

| | Mandatory Technical Criteria Description | Reference to Technical Specification / Tender Returnable | Motivation for use of Criteria |
|---|---|---|---|
| 1. | Contractor should have a CIDB grading of 7ME or higher.<br>Submit all relevant CIDB documents, completed and signed. | 3.3.1 | The financial and works capability of companies with a grade 7 is sufficient to execute a typical order for the PF pipes and hangers during an outage. |
| 2. | Valid ISO 3834-part 2 Certification | 3.3.2 | 240-106628253 Eskom welding Standard stipulated the minimum requirements to be checked at tender phase. |
| 3. | Valid SABS ISO 9001:2008 Certification | 3.3.3 | 240-56239143 Ceramic Lined Pulverized Fuel Pipework Standard stipulates that only suppliers who have obtained approval in terms of SABS ISO 9001:2008. |

All TET members shall independently evaluate and score each mandatory evaluation criteria for each tenderer in accordance with table2.

## 3.5 QUALITATIVE TECHNICAL EVALUATION CRITERIA

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

| Score | % | Definition |
|---|---|---|
| 5 | 100 | **COMPLIANT**<br>• Meet technical requirement(s) AND.<br>• No foreseen technical risk(s) in meeting technical requirements. |
| 4 | 80 | **COMPLIANT WITH ASSOCIATED QUALIFICATIONS**<br>Meet technical requirement(s) with.<br>• Acceptable technical risk(s) AND/OR.<br>• Acceptable exceptions AND/OR.<br>• Acceptable conditions. |
| 2 | 40 | **NON-COMPLIANT**<br>• Does not meet technical requirement(s) AND/OR.<br>• Unacceptable technical risk(s) AND/OR.<br>• Unacceptable exceptions AND/OR.<br>• Unacceptable conditions. |
| 0 | 0 | **TOTALLY DEFICIENT OR NON-RESPONSIVE** |
| Note 1: The scoring table does not allow for scoring of 1 and 3.<br>Note 2: Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy. | | |

All TET members as defined in the Tender Technical Evaluation Strategy shall independently evaluate and score each Qualitative Evaluation Criteria for each tenderer.

Each TET members shall provide a scoring form detailing all allocated scores for each evaluated criteria for each tender

## Table 4: Qualitative Technical Evaluation Criteria

| | Qualitative Technical Criteria Description | | Reference to Technical Specification Tender Returnable | Criteria Weighting (%) | Criteria Sub Weighting (%) |
|---|---|---|---|---|---|
| **1.** | **Quality Control Plan** | | 240-105658000 Supplier Quality Management Specification | 20 | |
| | 1.1 | Method Statement must be specific to the scope of work, Inspection, fabrication, and installation steps methodology.<br>• (0/5) - non-responsive; No submission<br>• (2/5) - Unacceptable risk: Inadequate method statement (Incomplete) in reference to the scope of work<br>• (5/5) – Ceiling; Complete method statement with details on inspections, fabrications, installation of PF pipes, hangers and supports | 3.3.5 | | 10 |
| | 1.2 | Clear step-by-step works stipulated in the Quality Control Plan, preferably three historically fully signed-off plans to be submitted/Comprehensive new templates with all stakeholders to sign-off. Quality control plan (QCP/ITP)<br>• (0/5) - Non-responsive; No submission<br>• (2/5) - Unacceptable risk; Inadequate and/or Incomplete QCP's/ITP as per 240-105658000, paragraph 3.4.11, 3.4.12 and 3.4.4<br>• (5/5) - Ceiling; Complete QCP's/ITP specific to the execution of work and compliant to as per 240-105658000, paragraph 3.4.11, 3.4.12 and 3.4.4 | 3.3.6 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| **2.** | **Welding and Testing** | | 240-106628253 Standard for welding Requirement on EskomPlant | 20 | |
| | 2.1 | Welding Procedure Specifications (WPS) for steel to BS 4360 Grade 43A; or equivalent approved material, (welding procedure in accordance with BS 2971 and BS EN13480<br>• (0/5) – Non-responsive; No submission(s)<br>• (2/5) – Unacceptable risk; WPS not approved by registered IWE or IWT<br>• (5/5) – Ceiling Fully signed off WPS | 3.3.7 | | 5 |
| | 2.2 | Welding Procedure Qualification Record (WPQR)/PQR approved by a manufacturer's registered IWE or IWT<br>• (0/5) – Non-responsive; No submission(s)<br>• (2/5) – Unacceptable risk; WPR/PQR not approved by registered IWE or IWT (2/5)<br>• (5/5) – Ceiling; WPR/PQR approved by registeredIWE or IWT WPS and WPQR (5/5) | 3.3.8 | | 5 |
| | 2.3 | Submit 4xoff Coded Welders' Qualifications and 2x off riggers with approved Trade Tests Certificates<br>• (0/5) – Non-responsive; No submission<br>• (2/5) – Unacceptable risk; Only 1xoff each Submission<br>• (4/5) – Acceptable risk; Only 2xoff each or more but less than the full requirement, incomplete submissions<br>• (5/5) – Ceiling; Fully and Complete Submission | 3.3.9 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| **3.** | **Technical guarantees of workshop equipment, material offered and proof of relevant experience** | | 240-56239143 Ceramic Lined Pulverized Fuel Pipework Standard | 60 | |
| | **3.1** | A fully completed schedule A (stipulated on appendix A) – Guarantees and Technical particulars of material offered (Refer on Appendix B)<br>• (0/5) – Non-responsive; No submission<br>• (2/5) – Unacceptable risk; incomplete schedule A or/and incomplete applicable appendix B.<br>• (5/5) – Ceiling; Fully and Complete Submissions | 3.3.10 | | 10 |
| | **3.2** | Submit more than 2x off verifiable and signed-off proof of project completion certificates, The tenderer must have experience with installation of Pipework, Pipework Hangers, Pipe Supports and Pipes alignments with hangers at any Eskom Generation Plants or any other similar Industry. Provide verifiable evidence – A contact list (Full names and Contact numbers, names to match the persons on the provided project completion certificates).<br>• (0/5) – Non-responsive; No submissions; No proof of verifiable completed relevant projects to the scope of work or proof cannot be verified.<br>• (2/5) – Unacceptable risk;.0-2 completed projects with verifiable proof of completion, projects relevant to the scope of work.<br>• (4/5) – Acceptable risk; 3-5 completed projects with verifiable proof of completion, projects relevant to the scope of work,<br>• (5/5) – Ceiling; Fully and Complete Submission (6 to >10years of completed projects with verifiable proof of completion, projects relevant to the scope of work, | 3.3.11 | | 15 |

| | | | | | |
|---|---|---|---|---|---|
| | **3.3** | Submit valid proof of ownership/lease and accreditation(s) of a fully equipped engineering workshop with the following machinery:<br>• Workshop<br>• Plate rolling machinery.<br>• Lathe or CNC machinery<br>• Bending equipment<br>• Suitable pipe lifting equipment<br>Only JV documentation will be acceptable, no subcontractor's documentation is allowed.<br>• (0/5) – Non-responsive; No submissions; No verifiable proof of ownership of the mentioned machinery or no proof of workshop ownership/lease.<br>• (2/5) – Unacceptable risk; verifiable proof of ownership of any combination of any two (2) of the mentioned machinery and workshop.<br>• (4/5) – Acceptable risk; verifiable proof of ownership of any combination of any three (3) of the mentioned machinery and workshop.<br>(5/5) – Ceiling; verifiable proof of ownership of all 4 specified machinery and workshop. | 3.3.12 | | 35 |
| | | | | **TOTAL 100** | **100** |

## 3.6 TET MEMBER RESPONSIBILITIES

**Table 3: TET Member Responsibilities**

| Mandatory Criteria Number | TET 1 | TET 2 | TET 3 |
|---|---|---|---|
| 1 | X | X | X |
| 2 | X | X | X |
| 3 | X | X | X |
| **Qualitative Criteria Number** | **TET 1** | **TET 2** | **TET 3** |
| 1.1 | X | X | X |
| 1.2 | X | X | X |
| 2.1 | X | X | X |
| 2.2 | X | X | X |
| 2.3 | X | X | X |
| 3.1 | X | X | X |
| 3.2 | X | X | X |
| 3.3 | X | X | X |

## 3.7 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

### 3.7.1 Risks

**Table 4: Acceptable Technical Risks**

| Risk | Description |
|---|---|
| 1. | Only 2xoff each or more but less than the full requirement, incomplete submissions |

**Table 5: Unacceptable Technical Risks**

| Risk | Description |
|---|---|
| 1. | A WPQR/PQR not approved by a registered IWE or IWT |
| 2. | WPS not approved by registered IWE or IWT |
| 3. | Inadequate method statement (Incomplete) with reference to the scope of work |
| 4. | Inadequate and/or Incomplete QCP's/ITP as per 240-105658000, paragraph 3.4.11, 3.4.12 and 3.4.4 |
| 5. | Submission of 1 of the 4 Coded Welders' Qualifications and Approved Tests Certificates |
| 6. | Irrelevant and no proof of experience in relation to the scope of work |
| 7. | <3 completed projects relevant to the scope of work |
| **1.** | No relevant machinery owned or leased by the service provider |
| **2.** | No workshop owned or leased by the service provider |
| **3.** | No proof of experience on similar work at Eskom Power Station or any other heavy industry |

### 3.7.2 Exceptions / Conditions

**Table 6: Acceptable Technical Exceptions / Conditions**

| Risk | Description |
|---|---|
| 1. | |

**Table 7: Unacceptable Technical Exceptions / Conditions**

| Risk | Description |
|---|---|
| 1. | |

## 4. AUTHORISATION

This document has been seen and accepted by:

## 5. REVISIONS

## 6. DEVELOPMENT TEAM

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

## 7. ACKNOWLEDGEMENTS