

Title: Tender Technical Evaluation Strategy for Gourikwa & Ankerlig Power Station
Spare Generator Journal Bearings

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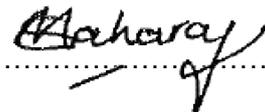
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1. INTRODUCTION

Gourikwa Power Station consists of five OCGTs (Open Cycle Gas Turbines). These units are identical, with the three OCGTs being able to operate in SCO (Synchronous Condenser Operation) mode as these units contains a SSS clutch. The shafts of the units rotate at 3000 rpm and is guided by six journal bearings for three of the units and four journal bearings for the remaining two units.

Ankerlig Power Station consists of nine OCGTs (Open Cycle Gas Turbines). These units are identical, with the four OCGTs being able to operate in SCO (Synchronous Condenser Operation) mode as these units contains a SSS clutch. The shafts of the units rotate at 3000 rpm and is guided by six journal bearings for four of the units and four journal bearings for the remaining five units.

A generator journal bearing is located on both sides of the generator (Turbine End and Exciter End) on each of the fourteen units (five at Gourikwa and nine at Ankerlig). These generator journal bearings are RENK Therm V89 EGXYQ 35-400. No spares are available for these generator journal bearings and therefore will have to be procured and stored as critical spares.

This document discusses the tender technical evaluation strategy for the supply and delivery of spare generator journal bearings.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope of work includes the following:

The *Contractor* supplies and delivers 4 x generator journal bearings, 13 x generator journal bearing shaft labyrinth seals and small components (as per Section 3.2) to the *Employer's* site (Eskom Ankerlig Power Station).

The *Works* are thoroughly discussed in the Technical Specification.

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 document applies to the Gourikwa Power Station Centreline Bearing System. The project applies to the Turbine Engineering Department, Gourikwa Maintenance Department, Ankerlig Maintenance Department Materials Management Department, Procurement Department, Gourikwa Power Station and Ankerlig 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: Tender Technical Evaluation Procedure
- [2] Doc. No. 194/107257 - Technical Specification – GRK & ANK – Spare Generator Journal Bearings

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2.2.2 Informative

[3] Drawing 0.85/5987 - Generator Journal Bearing (RENK Therm V89 EGXYQ 35-400)

[4] Drawing 0.86/9291 – Rotor Complete

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
Do. No.	Document Number
PO	Purchase Order
QCP	Quality Control Plan
Rev.	Revision
TET	Technical Evaluation Team

2.5 ROLES AND RESPONSIBILITIES

N/A as per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

All referenced documents as per Section 2.2.

3. TENDER TECHNICAL EVALUATION STRATEGY

3.1 TECHNICAL EVALUATION THRESHOLD

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

3.2 TET MEMBERS

Table 1: TET Members

TET number	TET Member Name	Designation
TET 1	Jaco van Zyl Pr. Eng.	Senior Engineer – Turbine Engineering
TET 2	Edmond Dumema Pr. Eng.	Senior Engineer – Turbine Engineering
TET 3	Morne du Preez	System Engineer – Turbine Engineering
TET 4	Christo du Preez	System Engineer – Generator Engineering

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3.3 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.	Correct Bearing, Oil Baffles and Labyrinth Seals	The <i>Contractor</i> submits a detailed technical specification, clearly stating the bearing, oil baffles and labyrinth seal specification with the relevant RENK ID Number and product code as per the technical requirement in the Technical Specification to the <i>Employer</i> for acceptance.	The bearing, oil baffles and labyrinth seals must be the exact same bearing as per the original design. A potential sub-contractor will be scored as per the evaluation criteria stipulated for the <i>Contractor</i> , without any exceptions, except if an exception is clearly stated.
2.	Correct Small Components	The <i>Contractor</i> submits a detailed technical specification, clearly stating the bearings' small components as per the technical requirement in the Technical Specification to the <i>Employer</i> for acceptance.	The bearing small components must be the exact same as for the bearing as per the original design. A potential sub-contractor will be scored as per the evaluation criteria stipulated for the <i>Contractor</i> , without any exceptions, except if an exception is clearly stated.

3.4 QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 3: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
1.	Draft Measurement Check Sheets. The draft measurement check sheets must include the final inner diameters of the bearings.	The <i>Contractor</i> provides draft measurement check sheets to the <i>Employer</i> for acceptance as part of the tender returnable documents.	20%	N/A
2.	Proof of similar work executed and capabilities.		20%	N/A
2.1	Proof of similar services provided. The <i>Contractor</i> supplies a list of services provided, specifically supplying RENK bearings, as evidence. The services provided must cover at least 70% of the specified RENK generator journal bearing size (Therefore, an inside diameter of more than Ø280mm. Acceptable and unacceptable risks for this qualitative technical criterion can be found in Section 3.6.1.	The <i>Contractor</i> supplies a list of RENK bearings supplied to the <i>Employer</i> (or other companies), as part of the tender returnable documents, to the <i>Employer</i> for acceptance.		70%

	Qualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
2.2	<p>Capabilities.</p> <p>The <i>Contractor</i> supplies a company profile stipulating their capabilities as a company, including photos of the <i>Contractor's</i> workshop to indicate the company's capabilities which is in line with the scope of work.</p> <p>The <i>Employer</i> reserves the right to visit the <i>Contractor's</i> premises (including the premises of possible subcontractors) for evaluation purposes.</p> <p>Acceptable and unacceptable exceptions for this qualitative technical criterion can be found in Section 3.6.2.</p>	<p>The <i>Contractor</i> submits a company profile, including photos of their workshop to indicate their capabilities as a company, as part of the tender returnable documents to the <i>Employer</i> for acceptance.</p> <p>A potential sub-contractor will be scored as per the evaluation criteria stipulated for the <i>Contractor</i>, without any exceptions, except if an exception is clearly stated.</p>		30%
3.	<p>Proof of technical services company.</p> <p>The <i>Contractor</i> provides proof that the Engineering manufacturing and machining are provided by the company internally and not sourced out by a labour broker.</p> <p>Acceptable and unacceptable risks for this qualitative technical criterion can be found in Section 3.6.1.</p> <p>The <i>Employer</i> reserves the right to visit the <i>Contractor's</i> premises (including the premises of possible subcontractors) for evaluating purposes.</p>	<p>The <i>Contractor</i> provides the proof to the <i>Employer</i> for acceptance, as part of the tender returnable documents. Motivation: A labour broker must not be used for this specialized service that is required. The <i>Contractor</i> must provide the technical services themselves.</p> <p>A potential sub-contractor will be scored as per the evaluation criteria stipulated for the <i>Contractor</i>, without any exceptions, except if an exception is clearly stated.</p>	20%	
4.	<p>Quality control plan (QCP)</p> <p>The <i>Contractor</i> submits a high-level QCP as part of the tender returnable documents to the <i>Employer</i> for acceptance. The QCP must include the high-level method statement as per the Technical Specification.</p> <p>The <i>Employer</i> reserves the right to revise the QCP after purchase order placement.</p> <p>Acceptable and unacceptable risks for this qualitative technical criterion can be found in Section 3.6.1.</p>	<p>The <i>Contractor</i> submits a high-level QCP as part of the tender returnable docs to the <i>Employer</i> for acceptance.</p> <p>The QCP must include the high-level scope as per the Technical Specification.</p> <p>A potential sub-contractor will be scored as per the evaluation criteria stipulated for the <i>Contractor</i>, without any exceptions, except if an exception is clearly stated.</p>	20%	N/A

	Qualitative Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
5.	<p>Lead Time</p> <p>The lead time starts at PO placement and finishes when the <i>Works</i> are delivered by the <i>Contractor</i> and accepted by the <i>Employer</i>.</p> <p>The lead time specification for the completion of the <i>Works</i> is 6 calendar months or earlier.</p>	The lead time specification for the completion of the <i>Works</i> is 6 calendar months or earlier.	20%	
TOTAL			100	N/A

3.5 TET MEMBER RESPONSIBILITIES

Table 4: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4
1	X	X	X	X
2	X	X	X	X
Qualitative Criteria Number	TET 1	TET 2	TET 3	TET 4
1	X	X	X	X
2	X	X	X	X
3	X	X	X	X
4	X	X	X	X
5	X	X	X	X

3.6 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.6.1 Risks

Table 5: Acceptable Technical Risks

Risk	Description
1.	Refer to qualitative technical criteria number 2.1 – Proof of similar services provided. The <i>Contractor</i> supplies a list of services provided, specifically supplying RENK journal bearings, as evidence. The services provided should cover at least 50% of the specified RENK journal bearing size. It will be an acceptable risk if the proof of previous RENK journal bearings supplied has sizes of between 50% and 70% of the RENK journal bearing size requirement.
2.	Refer to qualitative technical criteria number 2.2 – Capabilities The <i>Contractor</i> provides a company profile of their capabilities to supply RENK journal bearings required, as evidence for the <i>Employer's</i> acceptance, but the company profile is not accompanied with the necessary photo evidence. This will be an acceptable technical risk.
3.	Refer to qualitative technical criteria number 3 – Proof of technical services company. The <i>Contractor</i> can be a technical services company (with a company profile as evidence for the <i>Employer's</i> acceptance), but sub-contracts the entire scope of work to a technically acceptable company as per the evaluation. A potential sub-contractor will be scored as per the evaluation criteria stipulated for the <i>Contractor</i> , without any exceptions, except if an exception is clearly stated.
4.	Refer to qualitative technical criteria number 4 – Quality control plan. The risk if the <i>Contractor</i> submit a very basic QCP (Quality Control Plan) including the high-level scope of work will be acceptable.
5.	Refer to qualitative technical criteria number 5 – Lead Time. It will be an acceptable technical risk if the contractor supplies a quote with a lead time of 6 to 9 months.

Table 6: Unacceptable Technical Risks

Risk	Description
1.	Refer to qualitative technical criteria number 2.1 – Proof of similar services provided. The <i>Contractor</i> supplies a list of services provided, specifically supplying RENK journal bearings, as evidence. The services provided should cover at least 30% of the specified RENK journal bearing. This covers bearings of sizes between 30% and 50% of the original design size. It will be an unacceptable risk if the proof of previous RENK journal bearings supplied has sizes of less than 30% of the specified RENK journal bearing size requirement.
2.	Refer to qualitative technical criteria number 3 – Proof of technical services company. The <i>Contractor</i> is not a technical services company, but sub-contracts the entire scope of work to a technically acceptable company as per the evaluation. A potential sub-contractor will be scored as per the evaluation criteria stipulated for the <i>Contractor</i> , without any exceptions.

Risk	Description
3.	Refer to qualitative technical criteria number 4 – Quality control plan The risk if the <i>Contractor</i> submit a QCP (Quality Control Plan) with a completely different scope of work will be an unacceptable risk.
4.	Refer to qualitative technical criteria number 5 – Lead Time. It will be an unacceptable technical risk if the <i>Contractor</i> supply a quote with a lead time of between 9 and 12 months. Any lead time above 12 months will be rejected and will score 0 for this criterion.

3.6.2 Exceptions / Conditions

Table 7: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	Refer to qualitative technical criteria number 2.1 – Proof of similar services provided. The <i>Contractor</i> supplies a list of machining and manufacturing work executed, specifically to the RENK journal bearings, as evidence, without photo evidence of the specific project/s. This exception will be acceptable.
2.	Refer to qualitative technical criteria number 2.2 – Capabilities. It will be an acceptable exception if the <i>Contractor</i> supplies a company profile as evidence of their capabilities, which is in line with the scope of work, without sending photos of their workshop.

Table 8: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	Refer to qualitative technical criteria number 2.2 – Capabilities. It will be an unacceptable exception if the <i>Contractor</i> supply photos of their workshop and/or a company profile as evidence of their capabilities, which is not in line with the required scope of work.

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
Jaco van Zyl	Senior Engineer – Turbine Engineering	
Edmond Dumema	Senior Engineer – Turbine Engineering	<i>B.C. Dumema</i>
Morne du Preez	System Engineer – Turbine Engineering	
Christo du Preez	System Engineer – Generators Engineering	

5. REVISIONS

Date	Rev.	Compiler	Remarks
September 2023	2	JH van Zyl	Document reviewed to remove requirement of Drawing from the Contractor.
January 2023	1	JH van Zyl	Document registered as official document.

6. DEVELOPMENT TEAM

Jaco van Zyl – Senior Engineer – Turbine Engineering

7. ACKNOWLEDGEMENTS

N/A

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