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1. INTRODUCTION

Camden Power Station operates eight coal-fired boilers, each rated at 200 MW. To comply with legal safety requirements, each boiler is equipped with safety valves to prevent overpressure. Specifically, each boiler has eight Hopkinson Torsion Bar Safety Valves: six mechanically operated valves installed on the boiler drum and two additional valves (one mechanical and one electrically assisted) on the final superheater header.

This document outlines the technical evaluation requirements for the five-year (48-month) service contract for refurbishment and setting of the boiler safety valves, covering maintenance and outage activities.

2. SUPPORTING CLAUSES

2.1 SCOPE

Technical evaluation strategy for the Boiler safety valve refurbishment contract.

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 is applicable to Camden Power Station:

- Boiler Engineering
- Boiler Maintenance
- Outages
- Procurement

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] Occupational Health and Safety Act 85 of 1993 (OHS-Act)

[2] Pressure Equipment Regulations (PER)

[3] ISO 9001: Quality Management Systems.

[4] 240-168966153: Generation Technical Tender Evaluation Procedure Rev 1

[5] 229-T2801: Maintenance of Camden Power Station Boiler Safety Valves 5Y SOW

[6] SANS 347: Standard Specification for the Categorization and Conformity assessment criteria for all Pressure Equipment

[7] ASME B16.5: Pipe Flanges and Flanged fittings

[8] BS EN ISO 4126-1: Safety Devices for Protection against Excessive Pressure – Part 1: Safety Valves

[9] 240-69258336: Pressure Relieving Safety Devices Standard

[10] 004-10758: Boiler Safety Valves Functional Test (Trevi Test)

[11] QM 58: Supplier Contract Quality Requirements Specification

[12] BS EN ISO 3834 Quality requirements for fusion welding of metallic materials

2.2.2 Informative

[1] 240-83539994: Standard for Non-Destructive Testing (NDT) on Eskom Plant

2.3 DEFINITIONS

Table 1 List of Definitions

Term	Definition
Maintenance	Performance monitoring, repair, and replacement of components to ensure the reliable operation of the plant and conformance to statutory requirements. This includes engineering.
Safety Valve	A pressure-relief valve designed to open automatically when the pressure exceeds a predetermined level, preventing equipment failure or hazardous situations.
Overpressure	The condition where pressure within a system exceeds its maximum allowable limit, which may lead to equipment damage or safety hazards.
Boiler Drum	A key component of a steam boiler where water and steam are separated, ensuring proper steam generation and circulation.
Superheater Header	A component in a boiler system that collects and distributes superheated steam to ensure efficient thermal energy transfer.
Refurbishment	The process of restoring equipment by repairing, upgrading, or replacing worn-out components to extend their operational life.
Mandatory	Required by law, regulation, or scope of work; something that must be complied with.
Qualitative	Relating to descriptions or assessments based on characteristics, rather than numerical measurements or quantities.
Gatekeepers	Individuals or entities that control or regulate access to resources, opportunities, or decision-making processes.
Disqualify	To render someone or something ineligible due to failure to meet required criteria, rules, or standards.
Deficient	Lacking necessary qualities, elements, or compliance with a required standard.
Threshold	The minimum level, limit, or value that must be met or exceeded for a specific condition or outcome to occur.
Rigorousness	The quality of being thorough, strict, and precise in process, application, or assessment.
Misrepresenting	Providing false or misleading information, either deliberately or unintentionally, to create a distorted perception.
Cold Adjustment of Set Pressure	The process of setting a safety valve’s opening pressure while the system is not in operation or under normal working conditions.
Blowdown	The controlled release of fluid (steam or water) from a system, typically to remove impurities or maintain pressure levels.
Chattering	The rapid opening and closing of a safety valve, often due to unstable pressure conditions, which can cause wear or damage.
Drift	The deviation of a set pressure over time, leading to an unintended increase or decrease in the relief valve's opening pressure.
SAQA Accredited	Recognized by the South African Qualifications Authority (SAQA) as meeting specific educational or training standards.

Integrated Level 2	Likely refers to a classification within a structured system (e.g., skills accreditation, security clearance, or training level), requiring further context for precise definition.

2.3.1 Classification

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

2.4 ABBREVIATIONS

Table 2 List of Abbreviations

Abbreviation	Description
5Y	Five (5) Years
N/A	Not Applicable
MW	Megawatts
TET	Technical Evaluation Team
SOW	Scope Of Works
ASME	American Society of Mechanical Engineers
SANS	South African National Standards
BS EN ISO	British Standard, European Standard, International Organization for Standardization
QM	Quality Management
NDT	Non-Destructive Testing
M*i*	Mandatory Criteria *i*
RP	Responsible Person
Gx	Generation Engineering
Q*i*	Qualitative Criteria *i*
IO&M Manual	Installation, Operation, and Maintenance Manual
QCP	Quality Control Plan
ITP	Inspection and Test Plan
PQP	Project Quality Plant
Min.	Minimum
mm	Millimetres
Nm	Newton-metres
NQF	National Qualification Framework
SAQA	South African Qualifications Authority
PSR	Plant Safety Regulations
QC	Quality Control
CV	Curriculum Vitae
MPa	Mega Pascals

°C	Degrees Celsius
OEM	Original Equipment Manufacturer
RTS	Return To Service

2.5 ROLES AND RESPONSIBILITIES

[1] As per 240-168966153: Generation Technical Tender Evaluation Procedure Rev 1

2.6 TECHNICAL EVALUATION PLAN

The evaluation as per this standard shall take place in three (3) stages:

2.6.1 Stage 1: Mandatory Evaluation of criteria M1 and M2

Mandatory criteria M1 and M2 (see Table 4: Mandatory Technical Evaluation Criteria) will be evaluated by the TET, companies that do not meet the mandatory requirements will be removed from the tender process. As per [4], in the interest of efficiency, as soon as a company fails on either M1 or M2, there is no further requirement to prove the company as deficient. Immediate removal is recommended.

Mandatory criteria (gatekeepers) are 'must meet' criteria. These criteria shall not be weighted or point scored but shall be assessed on a Yes/No basis as to whether or not the criteria are met. An assessment of 'No' against any criterion shall technically disqualify the tenderer and shall not be further evaluated against Qualitative Criteria. For this tender there are two mandatory requirements to satisfy, M1 and M2, to satisfy in stage 1.

2.6.2 Stage 2: Qualitative Evaluation of tenderers that meet M1 and M2

Tenderers who have successfully passed Stage 1: Mandatory Evaluation of criteria M1 and M2 of the plan, will then be allowed to proceed to the Qualitative Technical Evaluation Criteria. It is strongly recommended that the tenderer makes reference to Appendix A: and Appendix B: Justification for Criteria as these have only been included for their benefit alone. Failure to meet the minimum threshold will result in immediate removal of the tenderer.

Qualitative Evaluation Criteria are weighted evaluation criteria used to identify the highest technically ranked tenderer after all the Mandatory Evaluation Criteria have been met. The Qualitative Evaluation Criteria are weighted to reflect the relevant importance of each criterion.

2.6.3 Stage 3: Mandatory Evaluation of criteria M3

According to the design of this technical evaluation plan, tenderers who successfully pass Stage 1: Mandatory Evaluation of criteria M1 and M2 and Stage 2: Qualitative Evaluation of tenderers that meet M1 and M2 will qualify for the evaluation of M3(see Table 4: Mandatory Technical Evaluation Criteria). This is because deliverables from M1, M2, and Q1–Q7 may be requested during the third stage (ref to the third column in Table 14 Justification for Criteria). Tenderers advancing to Stage 3 will receive adequate notice to prepare for the TET team's assessment of M3. In line with [4] 240-168966153: Generation Technical Tender Evaluation Procedure Rev 1 3.4.2.

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%, in line with [4] 240-168966153: Generation Technical Tender Evaluation Procedure Rev 1. Due to the rigorousness of the following criterion, it would be difficult justifying a higher threshold.

3.1.1 Core TET Members

The full-time core technical evaluation team that will be reviewing the Camden Boiler Safety Valve Service Contract process will consist of the team members in Table 3 TET Members .

Table 3 TET Members

TET number	TET Member Name	Designation
1 – Core (RP)	Kampamba Chanda	Boiler System Engineer
2 – Core	Velaphi Vilakazi	Senior Boiler Engineer
3 – Core	Mlungisi Makhaya	Senior Boiler Welding Supervisor
4 – Core	Abel Rudman	Senior Turbine Engineer

3.2 MANDATORY TECHNICAL EVALUATION CRITERIA

The mandatory requirement for the tender enquiry is provided in Table 4: Mandatory Technical Evaluation Criteria. The mandatory criteria will be evaluated as a **YES** or **NO**, tenderers who fails mandatory requirements will be disqualified according to the process defined in 2.6 Technical Evaluation Plan above.

Table 4: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
M1	Company Profile	Documented proof provided **(YES/NO?)**	Submit a company profile of the tenderer that intends on executing the physical scope containing: • **Company main business** • **Proof of address of main workshop** where safety valves will be refurbished is occupied by the tenderer. • **Complete Company organogram including** ▪ **Executive level structure** ▪ **Workshop level structure** (indicating years of experience on safety valves) ▪ **Site level structure** (indicating years of experience on safety valves) The tenderer shall be the entity that executes the physical scope, not a subcontractor with the exception of the acceptable risks 3.5 Foreseen Acceptable / Unacceptable Qualifications. The tenderer's facilities will be visited for confirmation of their capacity to execute the required scope in M3.
M2	Company experience – relevant to the tender SOW	Documented proof provided **(YES/NO?)**	Submit a **5-Year** track record of maintenance (as defined in 2.3) safety valves in the form of 1. A table format consisting of a project list containing: i. The **dates** when the work was done ii. **Client** or **company name** work was done for iii. The **scope of work** executed by the tenderer iv. Client contact details: e-mail, contact number and contact person. 2. Evidence of the work done in the form of a **formal, approved contract for all listed work in 1 above**. (If no evidence is submitted, that record will not be considered)

			The track record must cover five (5) separate calendar years (a min of **one (1) project** must be listed **per calendar year** for the calendar **year to be counted**), it is not required for the calendar years to be consecutive. However, **no contracts before 2015 will be considered**. The submitted track record will be verified by the tender evaluation team, during the evaluation of tenders. The listed client contact persons on the track records will be contacted to verify if the work was done, and if the client was satisfied with the work. Clients that state that they were **<u>not</u>** satisfied with the work done by the tenderer or clients that **<u>dispute</u>** that work was done by the tenderer, will be disregarded from the tenderer's track record. If there is **no confirmation of satisfactory execution** of the work by a previous client, then the entry on the track record will be disregarded There are two conditions that must be met by the submitted track record for mandatory requirement M-2 to be satisfied: 1. **<u>60%</u>** of all the tenderer's previous clients listed on the submitted track record that are valid as per the conditions above, must confirm that the tenderer executed the stated work, and to their (clients) satisfaction. 2. The total track record of verified satisfactory work (disregarded clients or projects will not be considered), must covers a 5-year period, no further back than 2015. The calendar years need not be consecutive.
M3	Workshop Visit at the tenderers workshop where the safety valves will be refurbished.	TET team provided will all requested evidence **(YES/NO?)**	In order to verify certain technically critical information required for the contract, the tenderer's workshop will be visited by the TET team. Appropriate notice will be provided. Each member will be provided with a list of potential items that can be requested. This list will be documented in the Evaluation report, along with each member's response. The list of requirements will be drawn from items marked in the Qualitative criteria as potential to be requested on site visit. It is imperative that the tenderer has this evidence available for the TET team, as a single no will be considered as misrepresenting the evidence in Q1-Q5 and will thus return a no for M3, immediately disqualifying the tenderer (as per 2.6).

Further clarity for the benefit of the tenderer of M1-M3 is provided in Appendix A: Detailed Qualitative Technical Evaluation Criteria. All TET members shall independently evaluate and score each Mandatory Evaluation Criteria for each tenderer in accordance with the Table 4: Mandatory Technical Evaluation Criteria above

3.3 QUALITATIVE TECHNICAL EVALUATION CRITERIA

During the tender evaluations the following Table 5: Qualitative Technical Evaluation Criteria shall be used by the TET members to score each criterion.

Any mention of “70- Series” is limited to the 7016, 7020, 7020W, 7028W ONLY. Any other valve that is not these 4 will not be considered as “70- series”. Pipe size will not be considered, just model number. (i.e., Experience on a 3” 7020 is equally as valuable as experience on a 2.5” 7016)

Tenderers are advised to make reference to Appendix A: Detailed Qualitative Technical Evaluation Criteria and Appendix B: Justification for Criteria

Table 5: Qualitative Technical Evaluation Criteria

	Qualitative Technical Criteria Description		**Reference to Technical Specification / Tender Returnable**	**Criteria Weighting (%)**	**Criteria Sub Weighting (%)**
Q1	**Criteria 1: IO&M (Installation, operation, and Maintenance) Information document**		**The Tenderer** is required to submit **their own** Installation, Operating, and Maintenance (IO&M) Information document for **Hopkinsons ‘Hylif’ 70- Series Torsion Bar Safety Valve (including Electrically Assisted)**. This submission **MUST** include the following. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	**35**	
	Q1.1	Operating Overview	Q1.1.1) The tenderer’s operating overview of the Hopkinsons ‘Hylif’ 70- Series Torsion Bar Safety Valve operating principle. The rigorousness of this section will highlight the Tenderer’s understanding of the valve.		**20**
	Q1.2	Procedures	Q1.2.1) Procedure for the safe transportation of Safety Valves		**3**
			Q1.2.2) Procedure for disassembly processes of Hopkinsons ‘Hylif’ 70- Series Torsion Bar Safety Valve		**3**
			Q1.2.3) Procedure for the Assembly processes of Hopkinsons ‘Hylif’ 70- Series Torsion Bar Safety Valve Note: Specify which 70- series valve		**3**
			Q1.2.4) Procedure for the loading of torsion bars including cold adjustment of set pressure of Hopkinsons ‘Hylif’ 70- Series Torsion Bar Safety Valve Note: Specify which 70- series valve		**9**

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
			Q1.2.5) Procedure for the adjustment of the blowdown of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve		**6**
			Q1.2.6) Procedure for access to valve facing and seat in situ maintenance of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve		**3**
			Q1.2.7) Procedure for valve installation of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve		**3**
	Q1.3	QCP/ITP/PQP NB: Some requirements are specifically for 7020 valve installed on Camden Plant as requirements are specific to that valve. **Submissions for any other valve will not be considered where specified "7020"**	Q1.3.1) Sample QCP for the refurbishment of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve including all refurbishment steps to successfully refurbish a safety valve and to execute the calibration lift pressure setting.		**16**
			Q1.3.2) ITP (Check sheets) for the inspection of **Hopkinsons 'Hylif' 7020 Series Torsion Bar Safety Valve Body Seat.** Check sheets shall include critical inspection points/ areas, measuring instrument used, a sketch (drawing), machining tolerances.		**8**
			Q1.3.3) ITP for the inspection of **Hopkinsons 'Hylif' 7020 Series Torsion Bar Safety Valve Plug (Valve Facing).** Check sheets shall include critical inspection points/ areas, measuring instrument used, a sketch (drawing), machining tolerances.		**8**
			Q1.3.4) ITP for the inspection of **Hopkinsons 'Hylif' 7020 Series Torsion Bar Safety Valve Torsion Bars.** Check sheets shall include critical inspection points/ areas, measuring instrument used, a sketch (drawing), machining tolerances.		**8**
	Q1.4	Troubleshooting	1.4.1) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve leaking valve. (min 4 considerations)		**2**
			1.4.2) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve that is slow in reaching full lift. (min 3 considerations)		**2**

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
			1.4.3) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve that has a long blowdown. (min 2 considerations)		**2**
			1.4.4) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve that is vibrating/chattering. (min 3 considerations)		**2**
			1.4.5) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve that has drift in set pressure. (min 2 considerations)		**2**
Q2	**Criteria 2: Welding Requirements**		**The Tenderer** is required to submit **their evidence of returnables listed below**. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	**15**	
	Q2.1	Welding Capability ISO 3834 (with an emphasis on part 2 Comprehensive Quality Requirements)	Q2.1.1) Heat Furnace (min dimensions of 500mm x 500mm x 500mm)		**8**
			Q2.1.2) WPS **and** WPQR for welding ASTM 182 F22 to ASTM 182 F22 (i.e., Bottom body to Body Seat)		**24**
			Q2.1.3) WPS **and** WPQR for welding ASTM 182 F22 to Stellite 6. (i.e., Body seat and Plug hardfacing)		**24**
			Q2.1.4) WPS **and** WPQR for welding ASTM 182 F22 to Stellite 21. (i.e., Body seat and Plug hardfacing)		**24**
Q3	**Criteria 3: Tools, Equipment, and Machinery**		**The Tenderer** is required to submit **their evidence of returnables listed below**. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	**15**	
	Q3.1	Tools Handheld or manually operated instruments used for **disassembling, assembling, adjusting, and inspecting** components	Q3.1.1) Vernier caliper (min range 0-150 mm) and Depth Micrometer (min range 0-25 mm)		**3**
			Q3.1.2) Dial Gauge with Magnetic Stand (min range 0-25mm)		**3**
			Q3.1.3) Torque Wrench (Max Torque 1000 Nm)		**4**

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
		Note: Any of these tool can be requested for inspection along with calibration evidence during site visit M3			
	Q3.2	Equipment Specialized devices or test rigs used to **facilitate repair, testing, and calibration** of the safety valve	Q3.2.1) Portable Valve Lapping Machine compatible to 7020		**9**
			Q3.2.2) Workshop Lapping Table		**9**
			Q3.2.3) Rigging Equipment		**6**
			Q3.2.4) Surface Finish Gauge		**6**
	Q3.3	Machinery Large, powered mechanical systems used for precision manufacturing, resurfacing, or high-force applications in valve repair NB: Some requirements are specifically for 7020 valve installed on Camden Plant as requirements are specific to that valve. **Submissions for any other valve will not be considered where specified "7020"**	Q3.3.1) Hydraulic Press		**6**
			Q3.3.2) Lathe machines		**12**
			Q3.3.3) Milling Machines		**12**
			Q3.3.4) Intelligent Hydraulic Test Bench		**30**
Q4	**Criteria 4: Human Resources**		**The Tenderer** is required to submit **their evidence of returnables listed below**. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	**15**	
	Q4.1	Site Human Resources and structure	Q4.1.1) **Site Manager** To be in possession of: • Minimum National Diploma or N5 (Engineering) **OR** Grade 12 with project management certification (NQF 6) **OR** SAQA accredited equivalent **WITH** proof of exact equivalency from SAQA.		**30**

			Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
		Qualitative Technical Criteria Description			
			• 6 years managing sites for valve repairs including Safety Valve.		
			Q4.1.2) **Supervisors** To be in possession of: • Mechanical Fitter Trade Tested with a min N2 qualification **OR** SAQA accredited equivalent **WITH** proof of exact equivalency from SAQA • 3 years managing a site for valve repairs including Safety Valves. • The Supervisor shall be authorised on the Eskom PSR as a RP.		**25**
			Q4.1.3) Semi-skilled Artisans Min 5 years' experience working with Safety Valves hands on.		**20**
	Q4.2	**Workshop** Human Resources and structure	Q4.2.1) **Workshop Supervisor** To be in possession of: • Minimum National Diploma or N5 (Engineering) **OR** SAQA accredited equivalent **WITH** proof of exact equivalency from SAQA. • 5 years managing workshop for valve repairs including Safety Valve.		**16**
			Q4.2.2) **Machinist** To be in possession of: • Mechanical Fitter Trade Tested with a min N2 qualification **OR** SAQA accredited equivalent **WITH** proof of exact equivalency from SAQA • 3 years' practical machinist experience after acquiring trade test.		**10**
			Q4.2.3) **Quality inspectors** (QC) To be in possession of: • QC Certification (Min SAIW Level 2 Inspector or equivalent) • 3 years QC for Safety Valves repairs.		**10**
			Q4.2.4) Semi-Skilled Artisans/ Operators Min 3 years' experience working with Safety Valves hands on.		**4**

	Qualitative Technical Criteria Description		**Reference to Technical Specification / Tender Returnable**	**Criteria Weighting (%)**	**Criteria Sub Weighting (%)**
Q5	**Criteria 5: Non-Compliance Record**		**The Tenderer** is required to submit **their evidence of returnables listed below**. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	**10**	
	Q5.1	Number of NCR	Q5.1.1) The tenderer shall submit a list in table format of all NCR's received in Eskom Coal Generation fleet in the last 5 years (not further than 2020) (all BU's where the tenderer has done business, namely Arnot, Camden, Duvha, Grootvlei, Hendrina, Kendal, Kriel, Kriel, Lethabo, Majuba, Matimba, Matla, Medupi, Tutuka). [1] Table format for submission to have the following columns: • Count/ index • Date issued • NCR No. • BU issued • Reason for non-compliance [2] The tenderer shall not have more than **2 repeated NCR's** incidents in the last **5 years** across **all Gx BU's** listed above. [3] This list shall be confirmed, and the tenderer shall not be found to have omitted **2 or more** NCR's from the list required in [1]. Failure to meet **any** of the 3 conditions above will result in a 0% score.		**100**
Q6	**Criteria 6: Consumables**		**The Tenderer** is required to submit **their evidence of returnables listed below**. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	**5**	
	Q6.1	Bearing Grease	Q6.1.1) Submit **Product Data Sheet** and **MSDS** of grease to be used during refurbishment of the valves.		**50**
	Q6.2	Torsion Bar Wrapping Tape	Q6.2.1) Submit **Product Data Sheet** and **MSDS** of Torsion Bar Tape to be used during refurbishment of the valves.		**50**

	Qualitative Technical Criteria Description		Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)
Q7	**Criteria 7: Project Management**		**The Tenderer** is required to submit **their evidence of returnables listed below**. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	**5**	
	Q7.1	Project plan/schedule	Q7.1.1) **Integrated level 2** programme for previous projects/contracts (**outages**)		**35**
			Q7.1.2) **Project risk assessment** and **mitigation** for previous projects/ contracts		**35**
			Q7.1.3) **Site organograms** for previous project of similar scope		**30**

Note: All TET members shall independently evaluate and score each Qualitative Evaluation Criteria for each tenderer in accordance with the Table 5: Qualitative Technical Evaluation Criteria above

3.4 TET MEMBER RESPONSIBILITIES

Table 6: TET Member Responsibilities

Mandatory 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
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
6	X	X	X	X
7	X	X	X	X

3.5 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

3.5.1 Risks

Table 7: Acceptable Technical Risks

Risk	Description
1.	**Criteria 2: Welding Requirements** The tenderer may not be in possession of the requirements of this criteria, if so, see Table 6, Item 1
2.	Lack of specialised skills in on site flange face machining, and functional tests

Table 8: Unacceptable Technical Risks

Risk	Description
1.	**Criteria 4** Lack of experience in -70 series Torsion Bar Safety Valves

3.5.2 Exceptions / Conditions

Table 9: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	**Criteria 2: Welding Requirements** Due to the specialised nature of the work required in this criteria, the tenderer shall be allowed to subcontract any welding work to a third party, subject to the Eskom Engineer, Eskom Welding QC and AIA's approval and in line with the contract SOW. Therefore, in order to attain the points of criteria 2 in the event that the tenderer does not have these facilities, the tenderer is required to submit at least one (1) historic job for **each** of the individual requirements (Q2.1.2, Q2.1.3, Q2.1.4). This will include: • Job scope of work • Third Party trading name and address • WPS and WPQR for that job • Signed and approved QCP for that job To attain the points for Q2.1.1 the tenderer will be required to submit evidence that any of the third parties they have provided a history of work for in Q2.1.2-Q2.1.4 above are in possession of the required equipment stated in Q2.1.1
2.	The tenderer is allowed to subcontract the following work, however, will be held responsible for the quality of work of their subcontractors: a) On site flange face machining

	b) On site functional testing (Trevi Test) For each of these exceptions, the below will be required: • Third Party trading name and address • Third Party Method statement • Job results (graphs, surface finish, pictures, drawings, calculations, etc)

Table 10: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	**Criteria 4** Experience in any other high pressure (>10MPa), high temperature (>300°C) Safety Valves shall be sufficient for the individual who lacks this experience. In this case, the below should also be submitted: • Valve OEM and Model

4. AUTHORISATION

This document has been seen and accepted by:

Table 11 Authorisations

Name	Designation	Signature
Velaphi Vilakazi	Senior Boiler Engineer	
Mlungisi Makhaya	Senior Boiler Welding Supervisor	
Abel Rudman	Senior Turbine Engineer	

5. REVISIONS

Table 12 Table of Revisions

Date	Rev.	Compiler	Remarks
February 2025	01	K Chanda	First Issue
February 2025	02	K Chanda	• Added recommendations from Specialist into 3.2 and 3.3 • Amended Appendix 1 and 2 to be in line with new requirements from 3.2 and 3.3
September 2025	03	K Chanda	Changed contract duration to 48 months

6. DEVELOPMENT TEAM

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

- K Chanda
- V Vilakazi
- A Rudman
- M Amir

7. APPENDIX A: DETAILED QUALITATIVE TECHNICAL EVALUATION CRITERIA

Table 13 Detailed Qualitative Technical Evaluation Criteria

Qualitative Technical Criteria Description			Reference to Technical Specification / Tender Returnable	Criteria Weighting (%)	Criteria Sub Weighting (%)	Score Scale			
						0-Floor 0=0%	2-Kick in 2=40%	4-Average 4=80%	5-Ceiling 5=100%
Q1	Criteria 1: IO&M (Installation, operation, and Maintenance) Information document		The Tenderer is required to submit their own Installation, Operating, and Maintenance (IO&M) Information document for Hopkinsons 'Hylif' 70-Series Torsion Bar Safety Valve (including Electrically Assisted). This submission MUST include the following. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	35					
Q1	Q1.1	Operating Overview	Q1.1.1) The tenderer's operating overview of the Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve operating principle. The rigorousness of this section will highlight the Tenderer's understanding of the valve.		20	No Submission	• General description with minimal technical depth. • Mentions key components but lacks detailed explanation. • No engineering principles, failure modes, or References to any safety valve standards. No diagrams or supporting illustrations.	• Structured breakdown of valve operation, including torsion bar function and pressure response. • References some safety valve standards and common failure modes. Includes technical sketches and Eskom power station application.	• In-depth explanation with physics, thermodynamics, and load distribution. • Detailed cross-sectional diagrams. • References BS ISO EN 4126-1 standards and common failure modes.
Q1	Q1.2	Procedures	Q1.2.1) Procedure for the safe transportation of Safety Valves		3	No Submission	• Generic transportation guidelines with no reference to gagging, transportation orientation, or shock absorption. • No mention of flange protection, sealing, or vibration control. • Lacks specific handling procedures for safety valves.	• Covers gagging of valves, transportation/storage orientation, and shock absorption. • Includes vibration control. • Addresses flange face protection. • Mentions pre-delivery packaging to prevent contamination.	• Details specialized transport supports to prevent movement and vibration damage. • Specifies materials for wrapping, sealing, and securing the valve. • Includes handling procedures in the workshop, ensuring valve settings remain unchanged. • Includes pictures of transportation equipment/machines (crane, truck, cradle, etc)
Q1	Q1.2	Procedures	Q1.2.2) Procedure for disassembly processes of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve		3	No Submission	• General steps provided but lacks technical depth and safety considerations.• No reference to special tools, OEM specifications.• No details on torsion bar preload, spindle alignment, or critical components.	• Step-by-step disassembly guide including safe release of torsion bar tension.• Specifies required tools• Covers handling of critical components, including spindle, disc, and torsion bars.• Explains marking and documenting parts for reassembly.	• Includes detailed material handling procedures, and contamination control.• References specialized disassembly jigs and safety measures for torsion bar release.• Provides inspection criteria for wear, corrosion, and dimensional tolerances (i.e., Strip and assess or incoming ITP).• Includes diagrams, step-by-step photos, and failure mode considerations.• Addresses workshop cleanliness, tagging, and storage of disassembled parts.

			Q1.2.3) Procedure for the Assembly processes of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve Note: Specify which 70- series valve		3	No Submission	• General reassembly steps provided but lacks technical depth and safety measures. • No mention of torsion bar preload settings, torque values, or alignment procedures. • Missing critical checks (e.g., spindle alignment, disc seating, gasket placement).	• Step-by-step assembly process covering torsion bar installation and tensioning. • Specifies torque values, required tools. • Mentions functional checks before final tightening • Covers risk assessment/ FMEA for incorrect assembly and potential failure points.	• Includes precise torque values, preload settings, and tolerance limits for torsion bar tensioning. • Provides inspection criteria for wear, corrosion, and component condition before assembly. (i.e., Pre-assembly report/ Clean spares report) • Details specialized assembly jigs, contamination control measures, and cleanliness standards. • Includes diagrams, step-by-step photos • Covers final QA/QC checks, proper documentation, and sign-off procedures. (Assembly ITP)
			Q1.2.4) Procedure for the loading of torsion bars including cold adjustment of set pressure of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety ValveNote: Specify which 70- series valve		9	No Submission	• Basic overview of cold adjustment without detailed instructions.• No mention of specific tools, or measurement methods.• Lacks details on safety precautions or specific valve components • No mention of calibration checks or adjustment verification after the procedure.	• Step-by-step instructions for adjusting the set pressure, including torsion bar tension adjustments.• Specifies tools required • Mentions safety precautions • Includes verification methods to confirm correct pressure setting after adjustment • Addresses record-keeping for calibration and adjustment results.	• Detailed explanation of pressure adjustment calculation methods, torsion bar preload settings, and testing procedures.• Provides specific tolerances, and detailed step-by-step instructions for each component involved.• Covers comprehensive safety measures, including valve component protection during adjustments.• Includes detailed checklists, verification methods, and post-adjustment inspections • References validated test equipment and documentation standards for final approval.
			Q1.2.5) Procedure for the adjustment of the blowdown of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve		6	No Submission	• General procedure with high-level steps for blowdown adjustment. • Lacks detail on specific tools or settings required for accurate blowdown adjustment. • Does not mention impact of incorrect blowdown settings or how to monitor and verify correct blowdown. • Minimal reference to safety checks or adjustment limits for blowdown.	• Step-by-step procedure for adjusting blowdown, including torsion bar settings and required torque values. • Specifies tools required • Mentions blowdown range and tolerances and how to adjust based on operating conditions. • Provides safety measures during adjustment and outlines potential risks for incorrect settings. • Includes verification steps to ensure the valve opens and closes correctly within the specified blowdown limits.	• Detailed instructions for adjusting blowdown, including torsion bar preload adjustments, and specific blowdown percentage settings. • Describes the tools and equipment in detail. • Explains the impact of incorrect blowdown on safety valve performance and overall plant operation. • Includes safety protocols during blowdown adjustments. • Provides a step-by-step checklist for adjustment, including final operational checks, performance tests, and documentation requirements (e.g., blowdown verification report).

			Q1.2.6) Procedure for access to valve facing and seat in situ maintenance of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve		3	No Submission	• General description of access to the valve facing and seat without much detail.• Lacks specifics on the tools and equipment needed for the procedure.• No step-by-step instructions• Does not mention necessary precautions or risks during maintenance.	• Step-by-step instructions for accessing the valve facing and seat with clear identification of tools and equipment required for the job • Describes the process of valve isolation, removal of covers, and securing the valve while ensuring it stays protected.• Mentions basic safety procedures in situ during maintenance.• Includes basic troubleshooting steps for identifying wear or issues on the valve and seat.	• Includes precise steps for removing and installing the valve cover, isolation methods, and safe handling of the valve components during maintenance.• Specifies detailed instructions on tools, including specialized instruments for lapping seat • Comprehensive safety protocols, ensuring no pressure is applied during maintenance.• Provides detailed guidance on checking seat sealing integrity and post-maintenance testing, to ensure correct operation.• References the documentation required after the procedure.
			Q1.2.7) Procedure for valve installation of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve		3	No Submission	• General instructions for installing the valve with minimal detail. • Vague reference to securing the valve and checking for alignment. • Basic mention of torque values but no detailed steps or tools listed. • Lacks safety considerations or quality checks after installation.	• Step-by-step instructions for valve installation, including alignment of the valve with the flange sealing. • Detailed mention of tools and equipment needed for installation • Clear instructions on valve orientation, tightening sequences, and ensuring valve seat integrity. • Safety precautions mentioned during installation. • Mentions post-installation checks for alignment, tightness, and seal integrity.	• Comprehensive pre-installation checks. • Detailed installation steps, including correct valve orientation, seating of the valve to prevent misalignment, and torquing of bolts in the correct sequence with specified torque values. • Post-installation checks, including valve seat tests, leakage tests, and functional test. • Includes comprehensive safety protocols ensuring no damage to the valve components during installation. • Documentation requirements after installation.
	Q1.3	QCP/ITP/PQPNB: Some requirements are specifically for 7020 valve installed on Camden Plant as requirements are specific to that valve. Submissions for any other valve will not be considered where specified "7020"	Q1.3.1) Sample QCP for the refurbishment of Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve including all refurbishment steps to successfully refurbish a safety valve and to execute the calibration lift pressure setting.		16	No Submission	• Generic outline of refurbishment steps.• No mention of pressure setting or testing.• Missing traceability of parts and documentation.	• Clear steps for disassembly, inspection, refurbishment, and reassembly.• Defined pressure testing step• Inspection points for critical components on separate ITP• Clear documentation, including test results and part replacements.	• Full, detailed process covering all stages of refurbishment, including parts reconditioning and replacement.• Defined pressure testing steps• Complete traceability of parts, testing, and documentation, including pressure setting certificate.• Final certification by Eskom engineer and AIA confirming valve performance.
			Q1.3.2) ITP (Check sheets) for the inspection of Hopkinsons 'Hylif' 7020 Series Torsion Bar Safety Valve Body Seat. Check sheets shall include critical inspection points/ areas, measuring instrument used, a sketch (drawing), machining tolerances.		8	No Submission	• General description of inspection without specific details. • Minimal or no reference to critical inspection points. • Limited or generic instruments listed, without specification. • Tolerances are either not mentioned or unclear. • No drawing reference or incomplete drawings.	• Clear identification of critical inspection points on the valve body seat. • Instruments specified with accuracy levels. • Clear references to relevant drawings and diagrams. • Tolerances mentioned for each critical measurement.	• Comprehensive list of critical inspection points. • Instruments specified with precision and calibration details, including accuracy. • Drawing references provided for each critical inspection point, clearly marked on the diagrams. • Tolerances specified for every critical dimension, with acceptance criteria. • QC Signature

			Q1.3.3) ITP for the inspection of Hopkinsons 'Hylif' 7020 Series Torsion Bar Safety Valve Plug (Valve Facing). Check sheets shall include critical inspection points/ areas, measuring instrument used, a sketch (drawing), machining tolerances.		8	No Submission	• General description of the valve facing inspection without detailed critical points. • Instruments listed, but lacking accuracy or type of measurements. • No specific drawing references or vague references. • Tolerances are mentioned generally or not at all. • No mention of stellite reweld	• Clear identification of critical inspection points on the valve facing. • Instruments specified but lack accuracy details. • Clear references to relevant drawings and diagrams. • Tolerances mentioned for each critical measurement. • Mention of stellite reweld	• Comprehensive list of critical inspection points. • Instruments specified with precision and calibration details, including accuracy. • Drawing references provided for each critical inspection point, clearly marked on the diagrams. • Tolerances specified for every critical dimension, with acceptance criteria. • QC Signature. • Mention of stellite reweld with reference to approved stellite WPS
			Q1.3.4) ITP for the inspection of Hopkinsons 'Hylif' 7020 Series Torsion Bar Safety Valve Torsion Bars. Check sheets shall include critical inspection points/ areas, measuring instrument used, a sketch (drawing), machining tolerances.		8	No Submission	• General description of the Torsion Bars inspection without detailed critical points.• Instruments listed, but lacking accuracy or type of measurements.• No specific drawing references or vague references.• Tolerances are mentioned generally or not at all.• No consideration of ultrasonic testing for internal cracks.	• Clear identification of critical inspection points, visual checks for damage and measurement points for dimensions, removal of tape.• Instruments specified but lack accuracy details.• Clear references to relevant drawings and diagrams.• Tolerances mentioned for each critical measurement.• Mention of ultrasonic testing for internal cracks, but without reference to detailed procedure.	• Fully detailed identification of critical inspection points (e.g., visual, bends, dimensional, ultrasonic inspection for internal cracks, concentricity).• Instruments specified with precision and calibration details, including accuracy.• Drawing references provided for each critical inspection point, clearly marked on the diagrams.• Speciation of replacement wrapping tape• QC Signature• Detailed procedure for ultrasonic testing and expected results.
	Q1.4	Troubleshooting	1.4.1) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve leaking valve. (min 4 considerations)		2	No Submission	• Generic troubleshooting steps without a structured approach. • Common failure modes listed but not linked to specific symptoms. • No reference to inspection tools or diagnostic techniques. • Lacks decision-making flow (e.g., what to check first, second, etc.). • No reference to manufacturer guidelines or industry standards.	• Logical step-by-step process identifying possible causes • Failure modes mapped to symptoms with probable causes and corrective actions. • Basic inspection tools specified • References to manufacturer specifications for acceptable tolerances and corrective limits. • Includes decision tree or fault-finding flowchart for structured troubleshooting.	• Systematic, well-structured troubleshooting process covering all major and minor failure modes. • Clearly defines failure symptoms with root cause analysis. • Detailed inspection procedures, including instrument calibration requirements. • Includes safety precautions and procedural steps to minimize damage or downtime. • Cross-referenced with manufacturer guidelines, industry best practices, and historical failure data.
			1.4.2) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve that is slow in reaching full lift. (min 3 considerations)		2	No Submission			
			1.4.3) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve that has a long blowdown. (min 2 considerations)		2	No Submission			
			1.4.4) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve that is vibrating/chattering. (min 3 considerations)		2	No Submission			
			1.4.5) Troubleshooting considerations for a Hopkinsons 'Hylif' 70- Series Torsion Bar Safety Valve that has drift in set pressure. (min 2 considerations)		2	No Submission			
Q2	Criteria 2: Welding Requirements		The Tenderer is required to submit their evidence of returnables listed below. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	15		No Submission			

	Q2.1	Welding Capability ISO 3834 (with an emphasis on part 2 Comprehensive Quality Requirements)	Q2.2.1) Heat Furnace (min dimensions 500mm x 500mm x 500mm)		8	No Submission	• Furnace dimensions provided but lack verification or supporting documentation. • No clear evidence of compliance with temperature range requirements (2.2.2-2.2.4). • Missing maintenance and calibration procedures.	• Verified furnace dimensions meeting 500mm x 500mm x 500mm requirement. • Temperature range compliance partially demonstrated with test reports or manufacturer specifications. • Evidence of calibration procedures, but lacking traceability to an accredited body. • Limited information on operational safety features, such as overheating protection.	• Furnace meets minimum dimensions (500mm x 500mm x 500mm) with certified verification. • Temperature range adheres to 2.2.2-2.2.4, validated with independent testing reports. • Calibration traceable to an accredited laboratory, with documented history. • Detailed safety features, including programmable controls, fail-safes, and alarm systems.
			Q2.2.2) WPS and WPQR for welding ASTM 182 F22 to ASTM 182 F22 (i.e., Bottom body to Body Seat)		24	No Submission	• WPS is provided but lacks essential details (e.g., heat input, preheat, and post-weld heat treatment (PWHT)). • WPQR is not supported by certified test results.• No evidence of compliance with relevant codes • Material certificates for ASTM A182 F22 are missing or incomplete. • Absence of destructive or non-destructive test (NDT) reports confirming weld integrity.• If required, no mention of buffer layer details (e.g., material type, thickness, welding sequence)	• WPS includes essential variables (joint design, welding process, filler metal, shielding gas, etc.). • WPQR is available with partial test results, but some key parameters (e.g., impact toughness, hardness) are not fully documented. If required, no documentation of dilution control.• Partial NDT and mechanical test results but missing full certification. • Material certificates provided but lack full traceability to heat batches. • If required, Buffer layer is mentioned, but its thickness and deposition method are not fully justified.	• WPS fully compliant with applicable codes, with detailed process parameters. • WPQR includes verified and certified test reports, covering tensile, bend, impact, and hardness testing. If required, details dilution control. • Complete NDT results (RT, UT, PT, or MT) confirming weld soundness. • Preheat and PWHT procedures strictly adhered to, with traceable temperature logs. • Material certificates fully traceable to heat numbers, batch records, and supplier verification. • If required, detailed buffer layer application, specifying material type, thickness, welding sequence, and interpass temperature control.
			Q2.2.3) WPS and WPQR for welding ASTM 182 F22 to Stellite 6. (i.e., Body seat and Plug hardfacing)		24	No Submission			
			Q2.2.4) WPS and WPQR for welding ASTM 182 F22 to Stellite 21. (i.e., Body seat and Plug hardfacing)		24	No Submission			
Q3	Criteria 3: Tools, Equipment, and Machinery		The Tenderer is required to submit their evidence of returnables listed below. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	15					
	Q3.1	Tools Handheld or manually operated instruments used for disassembling, assembling, adjusting, and inspecting components Note: Any of these tool can be requested for inspection along with calibration evidence during site visit M3	Q3.1.1) Vernier caliper (min range 0-150 mm) and Depth Micrometer (min range 0-25 mm)		3	No Submission	• Photographic evidence of either Vernier caliper or depth Micrometer. • No valid calibration certificate.	• Photographic evidence of both Vernier caliper and depth Micrometer. • Calibration certificates/ stickers with valid traceability.	• Fully documented and Photographic evidence of both, including tool specifications and serial numbers • Detailed calibration records with expiry dates and verification against manufacturer-specified tolerances.
			Q3.1.2) Dial Gauge with Magnetic Stand (min range 0-25mm)		3	No Submission	• Photographic evidence of a dial gauge with no magnetic stand.• No valid calibration certificate.	• Clear photographic evidence of dial gauge and magnetic stand.• No valid calibration certificate.	• Fully documented and Photographic evidence, including tool specifications and serial numbers.• Valid calibration certificates with expiration dates and verification against required tolerances.

			Q3.1.3) Torque Wrench (Max Torque 1000 Nm)		4	No Submission	• Photographic evidence of a torque wrench but not 1000 Nm. • No valid calibration certificate.	• Clear photographic evidence of torque wrench that is 1000 Nm rated. • No valid calibration certificate.	• Fully documented and Photographic evidence, including tool specifications and serial numbers. • Valid calibration certificates with expiration dates and verification against required tolerances.
	Q3.2	Equipment Specialized devices or test rigs used to facilitate repair, testing, and calibration of the safety valve	Q3.2.1) Portable Valve Lapping Machine compatible to 7020		9	No Submission	• Photographic evidence of a valve lapping kit, but unclear if it includes all necessary components. • No documentation on grit sizes, lapping tools, or intended application. • No verification of kit suitability for Hopkinsons 'Hylif' 70-Series Torsion Bar Safety Valve.	• Clear photographic evidence of a complete portable lapping kit, including lapping compounds (various grit sizes), tools, and accessories. • Documented specifications of lapping compound grit sizes, application methods. • Evidence of previous use in valve refurbishment, with recorded lapping procedures and surface finish confirmation method.	• Photographic evidence of a complete portable lapping kit with Full documentation, including manufacturer specifications, material safety data sheets (MSDS) for lapping compounds, and detailed kit inventory. • Clear records of past use in refurbishing Hopkinsons 'Hylif' 70-Series valves, with before-and-after inspection results. • Step-by-step procedure for correct lapping techniques, including recommended pressure, duration, and inspection methods to ensure an optimal valve seal.
			Q3.2.2) Workshop Lapping Table		9	No Submission	Photographic evidence of a lapping table, but no proof of its capability to achieve a mirror finish.No documentation on table flatness, material composition, or surface roughness achievable.Missing details on abrasives, lapping compounds, and their applicable grit sizes.No verification of previous use in precision lapping applications.Lack of process control—no mention of pressure application, rotation speed, or lapping duration.	Clear photographic evidence of a fully equipped lapping table with adjustable settings.Documented specifications of the table's surface flatness, abrasives used, and achievable Ra/Rz roughness.Evidence of previous successful use, with records showing typical results on metallic surfaces.Defined process parameters, including lapping pressure, compound application, and table speed.Some quality assurance steps provided, but without before-and-after surface finish verification.	Full technical documentation, including manufacturer specifications, calibration records, and maintenance logs.Certified proof of mirror finish capability, with surface roughness values (Ra ≤ 0.05 µm) verified through profilometer readings.Detailed process control guidelines, including optimal lapping speeds, pressure settings, and recommended abrasives.Photographic evidence of past successful applications, including before-and-after images with measurement reports.Standard operating procedures (SOPs) for precision lapping, ensuring repeatable and high-quality finishes.
			Q3.2.3) Rigging Equipment		6	No Submission	**Partial** list of rigging equipment provided.	**Comprehensive** list of rigging equipment.	**Detailed** list of rigging equipment with **specifications**.

			Q3.2.4) Surface Finish Gauge/ Chart		6	No Submission	• General statement claiming availability of a surface finish chart/gauge but no supporting documentation.	• Photographic evidence of the surface finish chart/gauge, including make, model, and serial number. • Documented procedure for surface finish measurement, detailing critical areas inspected on the valve. • Past inspection records demonstrating the use of the chart/gauge in assessing valve seating surfaces.	• Photographic evidence of the surface finish chart/gauge with Complete equipment documentation. • Valid calibration certificate • Detailed inspection procedure, specifying inspection points, acceptance criteria, and tolerances per ASME or ISO standards for safety valves. • Inspection reports with clear traceability to specific Hopkinsons 'Hylif' 70-Series valves, including before-and-after finish readings. • Evidence of chart/gauge operator competency
	Q3.3	MachineryLarge, powered mechanical systems used for precision manufacturing, resurfacing, or high-force applications in valve repairNB: Some requirements are specifically for 7020 valve installed on Camden Plant as requirements are specific to that valve. Submissions for any other valve will not be considered where specified "7020"	Q3.3.1) Hydraulic Press		6	No Submission	• Photographic evidence of a hydraulic press availability without technical details.• No operator training records or competency certification (signed training register).	• Photographic evidence of a hydraulic press, including make, model, tonnage, and operational specifications.• Operator training records showing personnel competency.	• Photographic evidence of a hydraulic press including Complete technical specifications, including load capacity, operational pressure range, and safety features.• Valid calibration and load certification.• Work procedure for press usage, safety precautions.• Operator training records showing personnel competency
			Q3.3.2) Lathe machines		12	No Submission	• Photographic evidence of a lathe machine availability without specifications. • Unclear suitability for machining Hopkinsons 'Hylif' 7020 valve components. • No evidence of operator competency or training.	• Photographic evidence of a lathe machine, including make, model, and machining capacity. • Calibration records demonstrating compliance with industry standards. • Documented machining capabilities, including tolerance levels and materials handled. • Vague suitability for machining Hopkinsons 'Hylif' 7020 valve components with dimensions • Operator training records showing personnel competency.	• Photographic evidence of a lathe machine with Complete technical specifications, including swing over bed, between centers capacity, spindle speeds, and tooling compatibility. • Detailed suitability for machining Hopkinsons 'Hylif' 7020 valve components with dimensions • Calibration records demonstrating compliance with industry standards. • Operator competency certificates ensuring compliance with industry standards and OHS regulations.
			Q3.3.3) Milling Machines		12	No Submission	• Photographic evidence of a Milling Machines availability without specifications.• Unclear suitability for machining Hopkinsons 'Hylif' 7020 valve components.• No evidence of operator competency or training..	• Photographic evidence of a Milling Machines, including make, model, and machining capacity.• Calibration records demonstrating compliance with industry standards.• Documented machining capabilities, including tolerance levels and materials handled.• Vague suitability for machining Hopkinsons 'Hylif' 7020 valve components with dimensions• Operator training records showing personnel competency.	• Photographic evidence of a milling machines with Complete technical specifications, including spindle speeds, feed rates, travel distances, and tooling compatibility.• Detailed suitability for machining Hopkinsons 'Hylif' 7020 valve components with dimensions• Calibration records demonstrating compliance with industry standards.• Operator competency certificates ensuring compliance with industry standards and OHS regulations.

			Q3.3.4) Hydraulic Test Bench		30	No Submission	• Photographic evidence of a hydraulic test bench without details of specifications or capabilities. • No clear explanation of its suitability for testing Hopkinsons 'Hylif' 7020 Torsion Bar Safety Valve. • Lack of calibration records or compliance certificates. • No evidence of operator competency or training.	• Photographic evidence of a hydraulic test bench, including specifications • Documentation confirming calibration, including the date of last calibration and certification from an accredited body with traceability. • Description of its suitability for testing the Hopkinsons 'Hylif' 7020 Torsion Bar Safety Valve and its components. • Operator training records showing personnel competency and experience.	• Photographic evidence of a hydraulic test bench, including full technical specifications, including pressure range, flow rates, accuracy, and any other relevant parameters. • Valid calibration certificates from an accredited body. • Evidence of its suitability for testing the Hopkinsons 'Hylif' 7020 Torsion Bar Safety Valve and its components. • Operator qualifications and competency records related to operating the hydraulic test bench.
Q4	Criteria 4: Human Resources		The Tenderer is required to submit their evidence of returnables listed below. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	15					
Q4	Q4.1	Site Human Resources and structureNote exceeding requirements will be advantageous in scoring	Q4.1.1) Site Manager To be in possession of:• Minimum National Diploma or N5 (Engineering) OR Grade 12 with project management certification (NQF 6) OR SAQA accredited equivalent WITH proof of exact equivalency from SAQA.• 6 years managing sites for valve repairs including Safety Valve.		30	No Submission	Site manager does not possess relevant qualification but has some NQF 6 and meets experience quota.	Site manager meets requirements exactly (i.e., No more than 3 complete years' experience)	Site Manager exceeds any of the requirements having meet all other requirement.
Q4	Q4.1	Site Human Resources and structureNote exceeding requirements will be advantageous in scoring	Q4.1.2) Supervisors To be in possession of: • Mechanical Fitter Trade Tested with a min N2 qualification OR SAQA accredited equivalent WITH proof of exact equivalency from SAQA • 3 years managing a site for valve repairs including Safety Valves. • The Supervisor shall be authorised on the Eskom PSR as a RP.		25	No Submission	Supervisors meets qualification, authorisation, and duration of experience requirements, just not on specified safety valve.	Supervisors meets all requirements (relevant qualification, authorisations, with no more than 3 complete years of experience).	Supervisors exceeds any of the requirements having meet all other requirement.
Q4	Q4.1	Site Human Resources and structureNote exceeding requirements will be advantageous in scoring	Q4.1.3) Semi-skilled Artisans Min 5 years' experience working with Safety Valves hands on.		20	No Submission	CV Submitted with less than 5 experience	CV Submitted with 5 experience	CV Submitted with more than 5 experience
Q4	Q4.2	Workshop Human Resources and structure	Q4.2.1) Workshop Supervisor To be in possession of: • Minimum National Diploma or N5 (Engineering) OR SAQA accredited equivalent WITH proof of exact equivalency from SAQA. • 5 years managing workshop for valve repairs including Safety Valve.		16	No Submission	Supervisor does not possess relevant qualification but has some N5 and meets experience quota.	Supervisor meets requirements exactly (i.e., No more than 5 complete years' experience)	Supervisor exceeds any of the requirements having meet all other requirement.
Q4	Q4.2	Workshop Human Resources and structure	Q4.2.2) Machinist To be in possession of: • Mechanical Fitter Trade Tested with a min N2 qualification OR SAQA accredited equivalent WITH proof of exact equivalency from SAQA • 3 years' practical machinist experience after acquiring trade test.		10	No Submission	Machinist does not possess relevant qualification but has some N2 and meets experience quota.	Machinist meets requirements exactly (i.e., No more than 3 complete years' experience)	Machinist exceeds any of the requirements having meet all other requirement.
Q4	Q4.2	Workshop Human Resources and structure	Q4.2.3) Quality inspectors (QC) To be in possession of: • QC Certification (Min SAIW Level 2 Inspector or equivalent) • 3 years QC for Safety Valves repairs.		10	No Submission	Quality inspectors possess min L2 inspector certification but does not meet the experience criteria.	Quality inspectors meet all requirements (specified certification, with no more than 3 complete years of required experience).	Quality inspectors exceed any of the requirements having meet all other requirement
Q4	Q4.2	Workshop Human Resources and structure	Q4.2.4) Semi-Skilled Artisans/ OperatorsMin 3 years' experience working with Safety Valves hands on.		4	No Submission	CV Submitted with less than 3 experience	CV Submitted with 3 experience	CV Submitted with more than 3 experience

Q5	Criteria 5: Non-Compliance Record		The Tenderer is required to submit their evidence of returnables listed below. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	10					
	Q5.1	Number of NCR	Q5.1.1) The tenderer shall submit a list in table format of all NCR's received in Eskom Coal Generation fleet in the last 5 years (not further than 2020) (all BU's where the tenderer has done business, namely Arnot, Camden, Duvha, Grootvlei, Hendrina, Kendal, Kriel, Kriel, Lethabo, Majuba, Matimba, Matla, Medupi, Tutuka). [1] Table format for submission to have the following columns: • Count/ index • Date issued • NCR No. • BU issued • Reason for non-compliance [2] The tenderer shall not have more than 2 repeated NCR's incidents in the last 5 years across all Gx BU's listed above. [3] This list shall be confirmed, and the tenderer shall not be found to have omitted 2 or more NCR's from the list required in [1]. Failure to meet any of the 3 conditions above will result in a 0% score.		100	No Submission	Less than 2 Repeated non-compliance	No repeated Repeated non-compliance	No non-compliance
Q6	Criteria 6: Repair Consumables		The Tenderer is required to submit their evidence of returnables listed below. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	5					
	Q6.1	Bearing Grease	Q6.1.1) Submit Product Data Sheet and MSDS of grease to be used during refurbishment of the valves. Note this is a 0/5 Sub Criteria		50	No Submission/ Does not comply with OEM Specification	N/A	N/A	Complies with OEM Specification
	Q6.2	Torsion Bar Tape	Q6.2.1) Submit Product Data Sheet and MSDS of Torsion Bar Tape to be used during refurbishment of the valves. Note this is a 0/5 Sub Criteria		50	No Submission/ Does not comply with OEM Specification	N/A	N/A	Complies with OEM Specification
Q7	Criteria 7: Project Management		The Tenderer is required to submit their evidence of returnables listed below. Non submission will result in 0%. Failure to meet kick in criteria will also result in 0%:	5					
	Q7.1	Project plan/schedule	Q7.1.1) Integrated level 2 programme for previous projects/contracts (outages)			No Submission	Basic project plan provided, lacking detail or milestones.	Detailed project plan outlining activities and timelines.	Comprehensive project plan with clear milestones and deliverables.
			Q7.1.2) Project risk assessment and mitigation for previous projects/ contracts			No Submission	Basic risk assessment provided, lacking depth or mitigation strategies.	Comprehensive risk assessment with mitigation strategies.	Detailed risk assessment covering all potential risks and effective mitigation strategies.
			Q7.1.3) Site organograms for previous project of similar scope			No Submission	Basic organograms provided, lacking detail or clarity.	Organograms detailing site personnel structure and level.	Detailed organograms with clear reporting lines and roles and safety valve experience for each employee.

8. APPENDIX B: JUSTIFICATION FOR CRITERIA

The Hylif Torsion Bar safety valve was designed in the late 1960's to address the limitations of traditional spring-loaded valves at the time, such as hysteresis, inconsistent lift, and metal fatigue. It introduced a torsion bar mechanism that replaced coil springs, ensuring precise pressure relief, reduced mechanical wear, and a stable reseating action.

This innovative design offers greater accuracy, longer service life, and lower maintenance costs, making it ideal for high-pressure applications. However, its higher initial cost and exceptionally specialized maintenance requirements were trade-off's that were taken when constructing Camden.

The current safety valve's on the station have been in operation for undetermined number of years, however, we can be sure that they have been in operation for at least 20 years, as they were kept as part of the stations RTS.

With all these factors considered, only the most skilled technicians with prior training and experience in this specific valve design should be allowed to service these valves. It is for this reason that the requirements of this tender are substantially more stringent, and product focused, then usual. Below is a line-by-line justification for the rationale behind the criterion selection for this tender.

Table 14 Justification for Criteria

No	Justification	M3 Check
M1	Selected to maintain and ensure control of the expertise involved in servicing this valve	Yes
M2	Selected to as evidence to demonstrate the tenderers experience in working with Safety Valves	Yes
M3	Selected to ensure that the evidence provided in the data pack can be confirmed before awarding the contract	Yes
Q1.1.1	Selected to grade the tenderer's understanding of the valve. As stated above, prior knowledge of this valve is imperative to proper service	No
Q1.2.1	Selected to understand the tenderer's care in handling and transporting Eskom Assets	No
Q1.2.2	Selected to grade the tenderer's understanding of all necessary steps to be taken when stripping the valve	No
Q1.2.3	Selected to grade the tenderer's understanding of all necessary steps to be taken when assembling the valve. The need to specify which valve is due to the ceiling grade requiring valve specific information.	No
Q1.2.4	Selected to grade the tenderer's technical understanding of cold setting the valve. The need to specify which valve is due to the ceiling grade requiring valve specific information.	No
Q1.2.5	Selected to grade the tenderer's understanding of the impact of blowdown on the operation of the valve and efficiency of the plant. As well as understanding valve blowdown calculations.	No
Q1.2.6	Selected for the tenderer to illustrate their competence in in-situ valve maintenance thus reducing downtime	No
Q1.2.7	Selected to understand the tenderer's care in handling, transporting, and installing Eskom Assets	No
Q1.3.1	Selected for the tenderer to illustrate their level of expertise and detail in the entire valve refurbishment process	No
Q1.3.2	Selected to grade the tenderer's understanding of the component and which dimensional, and visual checks to be conducted to ensure continued proper functioning.	No
Q1.3.3	Selected to grade the tenderer's understanding of the component and which dimensional, and visual checks to be conducted to ensure continued proper functioning.	No
Q1.3.4	Selected to grade the tenderer's understanding of the component and which dimensional, and visual checks to be conducted to ensure continued proper functioning.	No

Q1.4.1	Selected to Grade the tenderer's understanding of the failure mechanism, and logical steps to be followed to ensure return to safe operation of the valve	No
Q1.4.2	Selected to Grade the tenderer's understanding of the failure mechanism, and logical steps to be followed to ensure return to safe operation of the valve	No
Q1.4.3	Selected to Grade the tenderer's understanding of the failure mechanism, and logical steps to be followed to ensure return to safe operation of the valve	No
Q1.4.4	Selected to Grade the tenderer's understanding of the failure mechanism, and logical steps to be followed to ensure return to safe operation of the valve	No
Q1.4.5	Selected to Grade the tenderer's understanding of the failure mechanism, and logical steps to be followed to ensure return to safe operation of the valve	No
Q2.1.1	Ensure the tenderer has the capability to heat treat components of the valve that require it	Yes*
Q2.1.2	Ensure the tenderer has the capability to weld	Yes*
Q2.1.3	Ensure the tenderer has the capability to weld	Yes*
Q2.1.4	Ensure the tenderer has the capability to weld	Yes*
Q3.1.1	Selected to emphasise the need to accurate, and calibrated measuring equipment	Yes
Q3.1.2	Selected to emphasise the need to accurate, and calibrated measuring equipment	Yes
Q3.1.3	Selected to emphasise the need for accurately torquing valve bolts as per OEM	Yes
Q3.2.1	Selected to ensure tenderer is able to perform lapping in situ	Yes
Q3.2.2	Selected to ensure tenderer is able to perform lapping at workshop	Yes
Q3.2.3	Selected to tenderer has the facilities to timeously rig up/down the safety valves considering their weight	Yes
Q3.2.4	Selected to ensure that the tenderer adheres to the required surface finishes of critical valve components	Yes
Q3.3.1	Selected to illustrate the tenderer's workshop's ability to gradually, and evenly, apply pressure to components	Yes
Q3.3.2	Selected to illustrate the tenderer's workshop's ability to radially remove material	Yes
Q3.3.3	Selected to illustrate the tenderer's workshop's ability to axially remove material	Yes
Q3.3.4	Selected to illustrate the tenderer's workshop's ability to test the valve according to Eskom Specification and produce record of test	Yes
Q4.1.1	The need for a site manager who has an appreciation for mechanical principals and has worked on sites where the valve is part of the installed base.	No
Q4.1.2	The need for a supervisors with an appreciation for mechanical principals and has worked on sites where the valve is part of the installed base. Supervisor should be able to take permits when required.	No
Q4.1.3	The need for experienced individuals on site capable of doing routine maintenance.	No
Q4.2.1	The need for a workshop supervisor who has an appreciation for mechanical principals and has worked on sites where the valve is part of the installed base.	Yes
Q4.2.2	The need for a skilled labor that is compentent in operating the specialised machines used in maintenance of the valves.	Yes
Q4.2.3	The need for a QC with an appreciation of fundamental quality management skills with experience in safety valves, hence possessing a working understanding of the valve and it's component and why certain inspections are necessary.	Yes
Q4.2.4	The need for experienced individuals in the workshop who are capable of performing non skilled maintenance tasks.	Yes
Q5.1.1	Illustrate continued improvement inline with ISO 9001	No
Q6.1.1	Ensures the tenderer has knowledge of non negotiable consumables to be used in the maintenance of the valves	Yes

Q6.2.1	Ensures the tenderer has knowledge of non negotiable consumables to be used in the maintenance of the valves	Yes
Q7.1.1	Illustrate the ability to plan at a deep level	No
Q7.1.2	Illustrate the ability to anticipate risk in a project and provide mitigations	No
Q7.1.3	Illustrate order or organisation on site.	No

* If Welding is outsourced as per 3.5 Foreseen Acceptable / Unacceptable Qualifications This will not be subject to M3 check