Eskom	Report	Technology

Title: **TECHNICAL EVALUATION CRITERIA FOR POST TYPE INSTRUMENT TRANSFORMERS: CURRENT TRANSFORMERS, INDUCTIVE VOLTAGE TRANSFORMERS, COUPLING CAPACITORS, CAPACITOR VOLTAGE TRANSFORMERS AND CT/VT METERING UNITS**

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Content

1. Introduction

This document is aimed at setting the standard technical evaluation criteria for evaluating Instrument Transformer tender submissions. It covers the technical evaluation criteria for each of the equipment listed under Instrument Transformers, namely, Current Transformers, Inductive Voltage Transformers, Capacitor Voltage Transformers, Coupling Capacitors and CT/VT Metering Units for Eskom Holdings SOC (Ltd).

2. Supporting clauses

2.1 Scope

The document contains functional and objective evaluation criteria for Current Transformers, Inductive Voltage Transformers, Capacitor Voltage Transformers, Coupling Capacitors and CT/VT Metering Units within Eskom Holdings SOC (Ltd).

2.1.1 Purpose

The document addresses the standard documented technical evaluation criteria to be used for evaluating tender submissions in line with Eskom Holdings SOC (Ltd) requirements. This is documented to ensure that the evaluation process is fair, consistent, impartial, transparent and auditable.

2.1.2 Applicability

This document shall apply throughout Eskom Holdings Limited, its Divisions, subsidiaries and entities wherein Eskom has a controlling interest.

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 National document(s)

[1] 32-1034, Eskom procurement and supply management procedure.

[2] 240-48929482 – Tender Engineering Evaluation Procedure

2.2.2 Informative

[3] QM 58: Supplier Contract Quality Requirements Specification.

2.3 Definitions

2.3.1 General

Definition	Description
Enquiry	A competitive or non-competitive request for information, interest, quotations or proposals made to a supplier, a group of suppliers or the market at large.
Submission	The tender in accordance with the requirements of the enquiry.
Technical Evaluation Team (TET) Member	The delegated engineers / technical specialists who are responsible to review and evaluate technical aspects of the tender documentation as per the Tender Technical Evaluation Strategy.

2.3.2 Disclosure classification

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

2.4 Abbreviations

Abbreviation	Description
SANS	South African National Standard
CC	Coupling Capacitor
CT	Current transformer
CT/VT Metering Unit	Current Transformer and Voltage Transformer Metering Unit
CVT	Capacitor Voltage Transformer
Eskom	Eskom Holdings SOC (Ltd)
OEM	Original Equipment Manufacturer
OU	Operating Unit
RFI	Request for Information
RFQ	Request for Quotation
SA	South Africa
TEAP	Technical Evaluated Accepted Product
TET	Technical Evaluation Team

2.5 Roles and responsibilities

All the Instrument Transformer Care Group leaders must ensure that this document is updated, always renewed and current.

2.6 Process for monitoring

Not applicable

2.7 Related/supporting documents

Refer to clause/ section 2.2.

3. Technical evaluation Procedure

The technical evaluation procedure is specific for each item type due to different technical requirements. The evaluation method has two main parts: Functional (Mandatory Requirement, Desktop and Factory) and Objective assessments.

3.1 Functionality Evaluation

3.1.1 Mandatory Requirement

This part of the evaluation starts when submissions are opened for the first time. The evaluation is done using the criteria listed in table 1 below and is done by Technical Evaluation Team members.

Table 1: Mandatory Evaluation

Item	Required documents	Compliance	Comments
1	Completed Technical Schedule (A & B)	Yes / NO	
2	Deviations Schedule	Yes / NO	
3	Outline Drawing of instrument transformer	Yes / NO	
4	Outline Drawing of Insulator used with the instrument transformer	Yes / NO	
5	Test Reports	Yes / NO	
6	Technical Manual addressing Packaging, Transportation, Installation, Storage & Maintenance.	Yes / NO	

TET members will go through the details of the submissions and ensure that all the mandatory requirements are met (i.e. required documents are submitted). Submissions that receive a “NO” answer to any of the mandatory requirements will fail the technical evaluation and will not be evaluated further. Submissions that comply with mandatory requirements will proceed to Desktop evaluation. NB: information submitted including test reports must be in English and units on drawings must be in SI units.

3.1.2 Desktop Evaluation

Desktop evaluation will be based on information submitted under mandatory requirements in paragraph 3.1.1 and will have a total allocation of 100 percentage points. Out of the 100 percentage points, 50 percentage points will be based on documents and the other 50 percent based on test reports as seen in table 2 below. The documents that form part of the evaluation are the technical schedules, manuals, outline drawings and insulator drawings.

Table 2: Point Allocation for Desktop Evaluation

Activity	Weight
Completed Technical Schedule (A & B)	35
Outline drawing	5
Insulator Drawing	5
Manual	5
Test Reports	50

3.1.2.1 Completed Technical Schedule (A & B)

The technical schedules will be score based on completeness of information completed by suppliers. Non-compliance or deviation to primary or secondary terminals or both required by Eskom will have a 35 points penalty. The rest of the items in the technical schedule will have a 1-point penalty (Technical schedules are provide in an excel format in the technical package)

3.1.2.2 Outline and Insulator drawing

Criteria	Weight	Score
Detailed description provided in “Title	1.0	
Revision number	1.0	
Drawing number	1.0	
Dimensions	1.0	
Approved and date	1.0	
Total	**/5**	

3.1.2.3 Manual

The manual submitted must address packaging, transportation, installation, storage and maintenance. A point will be deducted for each item not addressed e.g. if storage is not addressed, a point will be deducted.

Criteria	Weight	Score
Packaging	1.0	
Transportation	1.0	
Installation	1.0	
Storage	1.0	
Maintenance	1.0	
Total	**/5**	

3.1.2.4 Test Reports

The tests required are different for different instrument transformer types and sometimes are different across voltages levels. These will be clearly specified in the technical schedule(s). Depending on the number of tests required, the submitted test reports will be divided by the total number of tests required in the technical schedule and multiplied by 50 to give a total of 50 percent. As an example, if an instrument transformer requires 7 tests and a supplier submits 5 test reports, their score will be calculated as follows:

$$Tests\ Score = \frac{5}{7} * 50 = 35.7\ points$$

Criteria	Weight	Score
Lightning impulse test	1.0	
Power frequency wet withstand test	1.0	
Short-circuit withstand capability test for VTs	1.0	
Short time current test for CTs	1.0	
Chopped Impulse	1.0	
Temperature rise tests	1.0	
Accuracy tests	1.0	
Total	**/7**	

The minimum threshold required to pass the desktop top evaluation is 70%. The outstanding items can then be used as conditions of contract award if the supplier is successful.

3.1.3 Factory and Practical Assessment

This assessment is performed based on assessing the supplier's capability to manufacturer the required product and to enter a contract with Eskom. The factory assessment is by no means a confirmation or guarantee that any contract will be entered into by Eskom and the supplier or that post contract performance has been achieved. Any actions undertaken by the supplier because of the factory assessment report is for the supplier's account. Any liability for the said actions undertaken by the supplier is not transferrable to Eskom in any way.

The assessment team has no authority or responsibility in the decision taken by Eskom with respect to contracting for a product or service. Any statements, intentions and/or actions expressed by the assessment team during the assessment and post the assessment has no effect and does not constitute any liability to Eskom with regards to contract placement or post contract performance guarantees.

3.1.3.1 Scope

Eskom representative(s) will arrange a visit to the factory that has qualified for a factory evaluation (i.e. supplier(s) that passed the desktop evaluation). Tenderers shall have samples locally (in SA) available for inspection by the TET. The factory and practical assessment include two activities i.e. the Quality and Work practices assessment using the checklist (see Annexure B) and a sample assessment. The sample assessment is necessary to determine the supplier's capability to do routine tests (that is to confirm product operational performance and quality).

The checklist is used to verify capability of the factory to supply the required product and compliance to the equipment specification and documents submitted for the tender. The same checklists will be used across all suppliers to ensure fairness of assessment. For practical assessment, the factory will be required to carry out a full set of routine tests on an instrument transformer. The instrument transformer type to be tested during the assessment and its voltage will be communicated in advance.

The sample tested must pass all routine tests. At the end of this exercise, Eskom assessment representative(s) will list all the deviations on the evaluation document. The representative will conduct formal discussions of the deviations in line with Eskom's requirements. Herein, the Tenderer and/or their OEM shall indicate whether they agree or disagree to meet Eskom requirements upon contract award.

At the end, Eskom, the Tenderer and OEM representatives will sign the assessment document which continues to be used for concluding the Technical Evaluation report. Where the Tenderer and OEM agreed to meet Eskom requirements, all of these are documented for contract award purpose and verification afterwards.

3.1.3.2 Confidentiality

All information reviewed, observed, recorded during and reported because of this assessment will be treated as, and remains highly confidential. The procurement team and the supplier's team will be the only parties included in the distribution list.

3.1.4 Assessment Methodology

The assessment will follow a documented supplier capability and capacity assessment criteria as shown in annexure B. These criteria are intended to assess the technical capabilities of the supplier and the product offered for tender to ensure it meets the tender requirements. During the assessment the following areas are evaluated in detail:

- Confirm information submitted in technical schedules
- Manufacturing Methods
- Work Practices
- Design Practices and Application
- Testing Facility and Practices
- Raw material Procurement, Storage and Sub-contractor practices
- Site and Other Services

The minimum threshold required to pass the factory and practical assessment is 70% compliance to the evaluation criteria (Annexure B) and a successful practical assessment i.e. the factory must have the capability to do all routine tests, and the tested sample / specimen must pass the routine tests.

Note: Full compliant (YES) = score of 1 and Non-compliant (NO) = score of 0.

3.2 Objective Assessment

All items in the functional criterion which are not fulfilled by successful suppliers (i.e. suppliers who passed the functional evaluation) will form part of objective assessment and be used as condition of contract award. Eskom will negotiate with successful suppliers to indicate when compliance of 100% must be met, or outstating issues addressed prior to contract award.

Note: Eskom reserves the right to place the technically compliant products on the product database upon it meeting the threshold set for technical / functional evaluation". "Eskom reserves the right not to perform a technical/functional evaluation on a product that has been added to the product database as this product has previously been found to be technically compliant."

The functional scoring threshold will be used as an entry requirement to the TEAP database. The entry of a product to the database is determined by compliance with Eskom's technical requirements. This compliance is determined by a technical evaluation (above) that gets conducted during the tender process. Accepted products will be listed irrespective of the tenderer winning the tender or not.

4. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Thomas Jacobs	Senior Manager (Acting) Engineering & Technology
Henri Groenewald	Chief Engineer

5. Revisions

Date	Rev	Compiler	Remarks
December 2025	1	Jutas Maudu	• Document reviewed • Gatekeeper changed to Mandatory Requirement • TEAP Clause added. • Tenderers shall have samples locally (in SA) available for inspection by the TET added. • Desktop score tables added.
July 2018	0	Mogale Sekgobela	Changes to desktop and factory assessment and a new document number. This doc was a report now it is a standard

6. Development team

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

- Jutas Maudu
- Sibongile Maphosa
- Japhta Makgotlho
- Henri Groenewald
- Thabiso Kgosiemang

7. Acknowledgements

The author acknowledges the input from the members of the Instrument Transformer Care Group.

ANNEX A - Functionality Evaluation Criteria - Mandatory Evaluation

Specifications Referred to	NRS 029, NRS 030, 240-56062864, and 240-56062765, 240-56030645 (TSP 41-589) and 240-56065032.	
Voltage Class Referred to	Refer to Technical Schedules A & B	
Level 1 – Functionality: Mandatory Requirements		
Activity	**Compliance**	**Qualification Criteria**
a) Is a completed Technical Schedule (A & B) submitted?	Yes/No	Level 1
b) If there are deviations, are technical deviations submitted?	Yes/No	Level 1
c) Is the outline drawing submitted? NB: Units must be in SI units system	Yes/No	Level 1
d) Is the insulator drawing submitted? NB: Units must be in SI units system	Yes/No	Level 1
e) Are tests reports submitted?	Yes/No	Level 1
f) Is the equipment manual addressing Packaging, Transportation, Installation, Storage and Maintenance submitted?	Yes/No	Level 1
g) Is all information supplied in English?	Yes/No	Level 1
Level 2 – Scoring/Rating (only submissions that pass Level 1 (mandatory requirements))		
2.1 Level 2 task/measure – technical schedules, documents and tests – 100 points		
Activity	**Weight**	**Qualification Criteria**
a) Completed Technical Schedule (A & B)	35	Level 2
b) Outline drawing	5	Level 2
c) Insulator drawing	5	Level 2
d) Equipment Manual	5	Level 2
e) Test Report	50	Level 2

ANNEX B – Factory Evaluation Criteria

1 GENERAL INFORMATION			
a) Name of Supplier:			
b) Name of Manufacturer:			
c) Registered name and full street address of the factory at which the audit and inspection is done:			
d) Factory Representatives			
Name:	Position:		
Name:	Position:		
Name:	Position:		
Name:	Position:		
2 RECEIVING / GOODS INWARDS INSPECTION AND STORAGE			
a) Are materials, components and sub-assemblies verified by the factory as complying with the applicable requirements		Yes	No
Comments: Inspect the receiving data sheets, supplier's quality plan, physical inspections, etc.			
b) If the factory relies on certificates of conformity of test results from suppliers, do these clearly identify the products, specifications, quantity of items, dated and signed?		Yes	No
Comments:			
c) Are records from incoming inspection(s) appropriate and kept by the factory?		Yes	No
Comments:			
d) Are non-conforming products/components/materials clearly identified and segregated to prevent their use?		Yes	No
Comments:			
e) Are records of raw material received kept / saved? In what format and for how long?		Yes	No
Comments:			

f) Is there a system in place to manage reception and allocation of raw materials?	Yes	No
Comments:		
3 PRODUCTION LINE INSPECTION AND ROUTINE TESTS		
a) ASSEMMBLY: Do personnel have readily available up-to-date procedures, assembly instructions, photographs, drawings or reference samples?	Yes	No
Comments:		
b) PRODUCTION LINE TEST: Do personnel have readily available up-to-date procedures, work instructions, and drawings related to required testing to be carried out on the intermediate stage and the final product related to conformance of the finished product.	Yes	No
Comments:		
c) Are the test results monitored for trends or recurrences and reported to production / quality management?	Yes	No
Comments:		
d) Are repaired and reworked products re-inspected in accordance with documented procedures?	Yes	No
Comments:		
e) Do the Production Line Inspection and Routine Tests performed by the factory sufficiently cover all the applicable requirements?	Yes	No
Comments:		
f) Are personnel involved in the assembly and quality control adequately briefed on their duties and competent to perform them?	Yes	No
4 CALIBRATION OF TEST EQUIPMENT AND TESTING FACITILITY		
a) Is all equipment used for testing calibrated?	Yes	No
Comments:		
b) Is the equipment provided with a label or similar method indicating the date of the last calibration and the next due date?	Yes	No
Comments:		
c) Are records from equipment calibrations appropriate and kept by the factory.	Yes	No
Comments:		

d) Do the records indicate that the calibration is traceable to National/International Metrology Standards?	Yes	No
Comments:		
e) Does the factory have the capability to carry out all routine tests?	Yes	No
Comments:		
f) Do test reports identify the test specimen, are properly signed and stored?	Yes	No
Comments:		
5 FACTORY CAPABILITY AND QUALITY MANAGEMENT SYSTEM		
a) Does the factory have a documented Quality Management System?	Yes	No
Comments:		
b) Does the factory regularly perform internal audits of its quality management system, and periodically check that all documented procedures, including those required for certification, are followed?	Yes	No
Comments:		
c) Are records from internal audits and corrective actions available and are they sufficiently detailed to demonstrate that the Quality Management System is effective?	Yes	No
Comments:		
d) Are personnel carrying out the internal audits and checks mentioned in 10.2, appropriately trained and, in addition, independent of the process being audited?	Yes	No
Comments:		
6 COMPLAINTS / NON-CONFORMANCE		
a) Does the factory have a documented system for handling complaints?	Yes	No
Comments:		
b) Does the factory review complaints from customers or others, and take appropriate action?	Yes	No
Comments:		
c) Are records kept of the complaints and of corrective actions taken?	Yes	No
Comments:		
7 Change Control		

a) Is there a documented procedure covering control of products and production process changes?	Yes	No
b) Does the procedure cover the review and approval of product or production process changes by responsible personnel / management?	Yes	No
c) Are there provisions to ensure that changes to the product construction are accepted by competent / authorised personnel?	Yes	No
d) Is there an up-to-date parts list or similar evidence available specifying the components/parts to be used during production of the products?	Yes	No
8 Design Practices		
a) Are designs done in-house?	Yes	No
Comments:		
b) Does the company have design tools and guidelines?	Yes	No
Comments:		
c) Is there a design process workflow system?	Yes	No
Comments.		
d) Is there a documented process for verification and validation of designs?	Yes	No
Comments:		
e) Are new designs approved and verified by competent personnel?	Yes	No
Comments:		
f) Following final design approval, is there a process in place to link the new design to the manufacturing process?	Yes	No
9 FINDINGS		
10 CONCLUSION		

11 RECOMMENDATION(S)

A copy of this report is provided to the undersigned contact person in the factory, who confirms to be aware of the contents by signing below:

Date:	Date:
Auditor's Name:	Factory Representative:
Signature:	Signature:

ACKNOWLEDGEMENT BY THE AUDITED FACTORY

We acknowledge and agree with the content of this Factory Inspection Audit Report.	
We acknowledge the content of this Factory Inspection Audit Report and we disagree with the content as reported in the following clauses/sub-clauses and/or findings.	
Comments:	
Date:	
Contact Person's Name and Position:	
Signature:	