

 <b>Eskom</b>	<b>Standard</b>	<b>Technology</b>
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Title: **TECHNICAL EVALUATION  
CRITERIA FOR HIGH VOLTAGE  
DISTRIBUTION DISCONNECTORS  
AND EATHING SWITCHES**

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## **1. Introduction**

This document is aimed at setting the standard technical evaluation criteria to be used when evaluating the tender submissions. This covers the technical evaluation of disconnectors, earthing switches, and equipment training for Eskom Holdings SOC (Ltd). It has Annexures developed to address various aspects required to perform the technical evaluation. It has been drawn from the equipment Standards.

Each voltage level according to the issued Technical A&B schedules shall be treated and evaluated separately through all the technical evaluation stages contained in this document. The successful Tenderer shall be required to prepare for a detailed Design Review with the Eskom technical evaluators

## **2. Supporting clauses**

### **2.1 Scope**

This document covers the technical evaluation criteria for disconnectors, earthing switches, and equipment training within Eskom Holdings SOC (Ltd).

#### **2.1.1 Purpose**

This document addresses the standard documented technical evaluation criteria to be used when performing the technical evaluation of the tender submissions in line with Eskom Holdings SOC (Ltd) requirement. The Technical evaluation report shall be compiled for Eskom purposes based on this document specified evaluation criteria.

#### **2.1.2 Applicability**

This document shall apply throughout Eskom Holdings Limited Divisions.

This standard is applicable to all technical evaluations of the tender submissions for circuit breakers, and switchgear training as per Eskom Holdings SOC (Ltd) requirements.

## **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] ISO 9001 Quality Management Systems.
- [2] 240-56030435, Outdoor Ceramic Station Post Insulators for Systems with Nominal Voltages up to 765kV Standard.
- [3] 240-124520996, Switchgear training requirements from Original Equipment Manufacturers Standard.
- [4] SANS/ IEC 62271-1, Common specifications for high voltage switchgear and control gear standards
- [5] SANS/ IEC 60050(441):1984: International Electrotechnical Vocabulary – Chapter 441: Switchgear, control gear and fuses
- [6] 240-56063815, High Voltage Outdoor Disconnectors and Earthing Switches Standard.
- [7] SANS/ IEC 62271-102, High voltage switchgear and control-gear: Part 102: Alternating current disconnectors and earthing switches

### **2.2.2 Informative**

- [8] 32-1034, Eskom procurement and supply management procedure.

## 2.3 Definitions

### 2.3.1 General

Definition	Description
<b>Disconnecter</b>	[IEV 441-14-05 definition] [2] The mechanical switching device which provides, in the open position, the isolating distance in accordance with the specified requirements. NOTE: A disconnector is capable of opening and closing the circuit when neither negligible current is broken or made, or when no significant change of voltage across the terminals of each of the poles of the disconnector occurs. It is also capable of carrying current under normal circuit conditions or carrying for a specified time current under abnormal conditions such as those of short-circuit.
<b>Earthing switch</b>	[IEV 441-14-11 definition] [2] The mechanical switching device for earthing parts of the circuit, capable of withstanding for a specified time currents under abnormal conditions such as those of short-circuit but not required to carry current under normal conditions of the circuit. NOTE: An earthing switch may have the short-circuit making capacity.
<b>Threshold for Qualification</b>	This is the threshold that has been determined by Eskom Technical evaluation, which the submission must meet to proceed with the technical evaluation after scoring stage.
<b>Technical evaluator</b>	The person(s) appointed by Eskom to perform evaluation of tender submission(s) in line with Eskom requirements.
<b>Submission</b>	The tender in accordance with the requirements of the enquiry

### 2.3.2 Disclosure classification

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

## 2.4 Abbreviations

Abbreviation	Description
<b>CG</b>	Care Group
<b>Dx</b>	Distribution
<b>DS</b>	Disconnector
<b>ES</b>	Earthing switch
<b>Eskom</b>	Eskom Holdings SOC (Ltd)
<b>OEM</b>	Original Equipment Manufacturer
<b>OU</b>	Operating Unit
<b>PI</b>	Post insulator
<b>RFI</b>	Request for Information
<b>RFQ</b>	Request for Quotation
<b>G</b>	Acceleration due to gravity

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## **2.5 Roles and responsibilities**

Technology and Engineering, Air Insulated Switchgear Section compiles this document and maintain this documents up to date with the technical standards.

Commercial Department makes use of current version of this document during commercial processes.

Technical evaluator implements the contents of this document applicable to equipment covered by its scope and provide the evaluation report that indicates and refers to the clauses of this document.

## **2.6 Process for monitoring**

Not applicable.

## **2.7 Related/supporting documents**

Not Applicable.

## **3. Document content**

### **3.1 Scope of work**

Unless otherwise stated by the Procurement documentation, the scope of work shall be the design, manufacture, testing, supply, delivery, of the switchgear and provision of the technical training.

### **3.2 Desktop evaluation**

This evaluation exercise is performed by the Eskom technical evaluators. This part of the evaluation starts when the technical submissions are opened for the first time. It begins at evaluation of the Mandatory criteria Stage 1, then proceeds to the Scoring – Stage 2, and refers to relevant Annex for each switchgear item required (refer to Annexure A and Annexure B). The evaluators will also consider the clause-by-clause compliance with the standard 240-560633815(refer to Annex C).

The Eskom technical evaluator will go through the details of the returnable submissions that are required and will ensure that Stage 1 qualification criteria are met. Stage 1 returnables are the following: -

- 1) Completed Technical A & B schedules
- 2) Type test reports
- 3) Drawings
- 4) Operation and Maintenance Instruction Manuals

**Note:** If the above 4 returnables are not available on each technical submission of that item tendered for, that technical submission is disqualified.

Only the tender submission that has complied with the Stage 1 requirement, shall be taken through to Stage 2 of Desktop evaluation. The full scoring that the technical submission can score under Stage 2 is 100%. The technical threshold for qualification is 75%.

The successful tender submission that scores 75% and above, shall be considered for further technical evaluation process. Any technical submission that scored below 75% is disqualified for any further evaluation.

The Eskom technical evaluators shall perform the following to the tender submission that has successfully met the technical threshold for qualification of 75%: -

- a) The list of technical deviations shall be compiled.

**Note:** It must be noted that when the Supplier has listed the technical deviations on an offered item, it does not mean that such are already acceptable to Eskom.

- b) The Supplier(s)/ Tenderer(s) of the item that meet technical threshold for qualification threshold may be subjected to Factory assessment and Product assessment which amongst others, includes raising the technical deviations that form part of the Objective or Discretionary requirements.

### **3.3 Factory and Product Evaluation**

The Eskom registered confidential Desktop evaluation report which indicates the technical submission items that were evaluated and those that met the technical threshold for qualification, will be presented to Group Commercial. The subsequent selection of the suppliers and factories to be visited shall be upon Eskom discretion.

The purpose of the factory visit is to perform the factory assessment, to assess the capability of the factory to deliver the requirements. The factory product assessment at the factory is to ensure if the product meets the technical requirements as specified. During this visit Eskom will also discuss the technical deviations that the technical evaluators found during the Desktop evaluation. The technical evaluators shall populate the applicable Product Assessment Check sheets for all findings, and these shall be raised with the Supplier and Factory Representatives and recorded under the Evaluation Agreement (Annex E). An Eskom confidential report will be produced for these assessments. This will be considered for the technical evaluation.

The technical evaluator is responsible to explain to the Tenderer and factory representatives that the purpose of the visit is not a negotiation, but purely an assessment of the product which has been offered to ensure the compliance with Eskom requirements as specified.

#### **3.3.1 Factory Evaluation**

Eskom technical evaluators will visit the factory to assess the capabilities of the factory, machinery, skills, and technical processes, to ensure the factory can deliver on the requirements. The following will be included: -

- Manufacturing Methods
- Workshop Practices
- Design Practices and Application
- Testing Facility and Practices
- Raw material Procurement, Storage and Sub-contractor practices
- Site and Other Services
- Factory Performance (including the On Time Delivery (OTD) and Factory Failure Rate (FFR))

The factory evaluation criteria are as shown in Annexure F. The OEM must obtain at least 80% to pass the factory evaluation. Where the criterion is met, one point will be awarded and zero points will be awarded for criterion not met, e.g. Yes = 1 and No =0. The factory evaluation results are not a gatekeeper for product evaluation. All findings and recommendations will form part of the evaluation agreement form.

#### **3.3.2 Product Evaluation**

The Tenderer whose submission has been selected shall be subjected to the factory product assessment.

At the factory, the technical evaluators shall verify the type test records kept. Furthermore, the Eskom technical evaluators shall assess the product(s) using Check sheets and Evaluation Agreement document (Annex C to E). The Check sheets are used to compare the compliance of the Eskom standard to the tender submissions. Any deviations to be raised with the Tenderer and factory and all those deviations that were found by Eskom during Desktop evaluation shall be listed on the Evaluation Agreement document (Annex E) and signed off.

The technical evaluators, the tenderer and factory representatives shall sign the completed Evaluation Agreement document which is used to conclude the product evaluation. It shall be emphasised by the technical evaluators that the Evaluation Agreement document is not meant for negotiating deviations, but rather to get consensus on the findings and state of the product and the compliance improvements.

The technical evaluators shall re-assess the score allocated for the desktop evaluation (stage 2) taking into consideration the findings made on the product evaluation at the factory.

The final technical evaluation report will be compiled comprising the desktop evaluation results, factory evaluation results and product evaluation results.

### **3.4 Prior to Awarding of the Contract**

Eskom reserves the right to shortlist the Suppliers/ Tenderers based on the compliance of all other evaluations, after the factory and product assessment. The technical evaluators shall meet with those shortlisted Suppliers/ Tenderers prior to awarding of the contract. The following shall be discussed in detail with those shortlisted Suppliers/ Tenderers: -

- Closing of the technical deviations
- Training
- Final design of the online condition monitoring devices
- Optional digital secondary plant interface (where applicable)

### **3.5 Final Product Acceptance Post Contract Award**

#### **3.5.1 Detailed Design Review (pre-manufacturing)**

The following for the technical submission shall be addressed by the technical evaluators with the successful Supplier/ Tenderer prior to manufacturing and onsite works: -

- Final drawings – equipment, secondary wiring schematics, and where applicable, the optional digital secondary plant interface
- The details of training levels rollout strategy

##### **3.5.1.1 Factory Acceptance Tests and Witnessing of Routine Testing**

Eskom shall witness factory and routine testing. During this visit all the online condition monitoring devices and secondary control and protection devices (including the optional digital secondary plant interface) shall be inspected and witnessed their designed functionality.

##### **3.5.1.2 First Batch Inspection and Closing out of Deviations**

All outstanding deviations and/ or factors that the Supplier/ Tenderer agreed to rectify as per the signed Evaluation Agreement document (Annex E), desktop evaluation findings and final product acceptance stages shall be closed out within the agreed time frames. The technical evaluators shall make the follow-up assessment to ensure closeout post contract award. Also, the first-off installations shall be inspected by both parties.

#### **3.5.2 Factory Failure Rate (FFR)**

The number of units tested and failed divided by the number of total units tested times 100, per calendar year for units rated for

- a) Units rated for 11 up to 66kV. The limit for Eskom to do business with a factory must be less than 7.5%.
- b) Units rated 132 kV or above. The limit for Eskom to do business with a factory must be less than 5%.

The submission must contain FFR for the last 5 years and the figures supplied by the OEM must be auditable.

## 4. Authorisation

This document has been seen and accepted by:

Name & Surname	Designation
Thomas Jacobs	Acting Senior Manager Technology-Engineering
Vuyani Masuku	Chief Engineer: Air Insulated Switchgear

## 5. Revisions

Date	Rev	Compiler	Remarks
June 2025	1	K. Mathumba	New document

## 6. Development team

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

- Vuyani Masuku Chief Engineer: Switchgear -Technology & Engineering
- Khodani Mathumba Engineer: Switchgear -Technology & Engineering

## 7. Acknowledgements

Not Applicable.



**Annex A – DS/ES technical evaluation criteria for desktop**

<b>BASIC COMPLIANCE: TENDER DELIVERABLES AND MANDATORY TECHNICAL REQUIREMENTS FOR DS &amp; ES – STAGE 1</b>			
<b>Item</b>	<b>Description of technical requirement</b>	<b>Yes / No</b>	<b>Eskom assessment</b>
a)	<b>The completed Technical A&amp;B schedules</b> (Of the Disconnectors & Earthing Switches.)		
b)	<b>List of type test reports</b> (The copies of the type- test reports)		
c)	<b>Drawings and constructional features</b> The general arrangement outlines drawing (for each offered disconnector type or earthing switch type)		
	Wiring diagrams (Electrical secondary wiring schematics (NOTE: This shall include the wiring schematics of the offered controlled switching device, condition monitoring device and Optional digital interface)		
	Rating / Name plates		
d)	<b>Operation and Maintenance Instruction Manuals</b>		
	<b>NB: FAILURE TO SUBMIT THE TENDER RETURNABLES IN STAGE 1 ABOVE SHALL RENDER THE TENDERER NON-RESPONSIVE AND WILL BE DISQUALIFIED FOR FURTHER EVALUATION</b>		

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SCORING AGAINST CRITERIA FOR EVALUATION – STAGE 2 (Total = 100 %, threshold for qualification = 75 %)				
Item	Description of technical requirement	Met	Weight	Score
a)	<b>Rated values and characteristics (correct value)</b> NB: If one requirement is not met 26% is automatically deducted		26%	
	a) Rated voltage ( $U_r$ ). b) Rated normal current ( $I_r$ ) and Temperature rise. c) Rated Power frequency withstand Level (PFWL) – ( $U_d$ ). d) Rated Lightning Impulse withstand voltage (peak) (LIWL) - ( $U_p$ ) e) Rated Switching Impulse withstand voltage (peak) (SIWL) - ( $U_s$ ) (applicable to $U_r \geq 245$ kV). f) Rated Short-Time Withstand Current ( $I_k$ ) g) Rated Peak Withstand Current ( $I_p$ ) h) Rated Short-circuit making current i) Specified creepage distance			
b)	<b>Type test reports</b> NB: If one requirement is not met 26% is automatically deducted		26%	
	a) Power frequency withstand voltage tests (SANS 62271-102 clause 6.2). b) Lightning impulse dry withstand voltage tests (SANS 62271-102 clause 6.2). c) Switching impulse voltage tests (SANS 62271-102 clause 6.2) (applicable to $U_r \geq 300$ kV). d) Measurement of the resistance of circuits (SANS 62271-102 clause 6.4). e) Temperature rise tests (SANS 62271-102 clause 6.5). f) Short time withstand current, and Peak withstand current test (SAN S 62271-102 clause 6.6). g) Peak withstand current test (SANS 62271-102 clause 6.6) (Earthing switch). h) Operating and mechanical			
	NB: The score will be the ratio of the successfully met over the total number of items listed here-under, then multiplied by the weight.		6%	

	<p><b>The Supplier/ Tenderer shall provide the following or the written commitments to perform these tests subject to contract award: -</b></p> <p>a) Radio interference (RIV) test (SANS 62271-102 clause 6.3) (applicable to <math>U_r \geq 123</math> kV).</p> <p>b) Verification of the degree of protection (SANS 62271-102 clause 6.7).</p> <p>c) Mechanical endurance test (as specified by Eskom on the Technical Schedule section A)</p>			
c)	<p><b>Drawings and constructional features (GA outline drawing)</b></p> <p>NB: The score will be the ratio of the successfully met over the total number of items listed here-under, then multiplied by the weight.</p>		10%	
	<p>Drawing number</p> <p>Detailed description provided in "Title".</p> <p>Overall dimensions</p> <p>Main HV terminal details</p>			
d)	<p><b>Wiring diagrams</b></p> <p>NB: The score will be the ratio of the successfully met over the total number of items listed here-under, then multiplied by the weight.</p>		10%	
	<p>Drawing number</p> <p>Detailed description provided in "Title"</p> <p>Details of secondary terminals</p>			
e)	<p><b>Rating / Name plates</b></p> <p>NB: The score will be the ratio of the successfully met over the total number of items listed here-under, then multiplied by the weight.</p>		6%	
	<p>Name of manufacturer</p> <p>Type designation and serial number</p> <p>Technical rating details</p>			
f)	<p><b>Manuals and requested information (operation &amp; maintenance)</b></p> <p>NB: The score will be the ratio of the successfully met over the total number of items listed here-under, then multiplied by the weight.</p>		10%	
	<p>Manuals submitted in both hardcopy &amp; Electronic copy and in written in English. Following topics covered: -</p> <ul style="list-style-type: none"> <li>• Transport, storage, installation, operation instruction and maintenance</li> <li>• Dismantling, repair, settings, inspections &amp; lubrication</li> <li>• List of special tools and</li> <li>• List of recommended spares parts</li> </ul>			

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g)	<b>Training Standard compliance</b> <b>NB:</b> The score will be the ratio of the successfully met over the total number of items listed here-under, then multiplied by the weight.		<b>6%</b>	
	<b>NOTE:</b> Refer to, Standard: 240-124520996– Switchgear training requirements from Original Equipment Manufacturers, taking into account the Eskom specified Levels of training: - <ul style="list-style-type: none"> <li>• Written commitment by supplier to provide training</li> <li>• Written commitment by supplier to provide maintenance DVD provided</li> <li>• Written commitment by supplier to provide LOCAL aftersales technical specialist support during equipment life expectancy.</li> </ul>			
	<b>Total</b>		<b>100%</b>	

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**Annex B – Switchgear Training Standard compliance clause by clause  
schedule**

SWITCHGEAR TRAINING TECHNICAL EVALUATION CRITERIA (Standard: 240-124520996 Switchgear training requirements from Original Equipment Manufacturers)		
* If the Supplier does not comply', then it shall be covered in the Deviation Schedule		
Clause	Question/ Item	Response (Yes or No)
3.1 (a)	Does the Supplier provide OEM accredited instructors to do first-hand training?	
3.1 (d)	Does the Supplier provide training levels 1 – 4, all in English?	
3.1 (f)	Does the Supplier training consist of 30% theoretical training and theoretical examination? Certification	
3.1 (f)	Does the Supplier training consist of 70% practical training and practical examination?	
3.2.2 (c)	Level 4: Does the cost of training include theoretical and practical training, and all documentation, DVDs, and certificates?	
3.2.3.1 (a)	Level 4: Does the OEM agree to offer two yearly re-assessment of accreditation/certified Switchgear Maintenance Specialists?	
3.2.3.1 (b)	Level 4: Will the Supplier provide training as and when required?	
3.2.4 (c)	Has the Supplier provided the Level 4 training duration on submission?	
3.2.4 (d)	Will the Supplier agree with Eskom on location where Level 4 training will be offered? Will the Level 4 training be offered locally?	
3.3.2 (b)	Level 3: Does the cost of training include theoretical and practical training, and all documentation, DVDs, and certificates?	
3.3.2 (Note)	Level 3: Does the training include two yearly re-assessments?	
3.3.3.2 (b)	Has the Supplier provided the Level 3 training duration on submission?	
3.3.3.2 (c)	Will the Supplier agree with Eskom on location where Level 3 training will be offered? Will the Level 3 training be offered locally?	
3.4.2 (b)	Level 2: Does the cost of training include theoretical and practical training, and all documentation, DVDs, and certificates?	
3.4.3 (b)	Is the duration of Level 2 training one-day?	
3.4.3 (c)	Will the Level 2 training be offered at central Eskom location?	
3.5.2 (b)	Level 1: Does the cost of training include theoretical and practical training, and all documentation, DVDs, and certificates?	
3.5.3 (b)	Is the duration of Level 1 training one-day?	
3.5.3 (c)	Will the Level 1 training be offered at central Eskom location?	

**Annex C: Disconnectors and Earthing switches compliance clause by clause  
schedule**

Standard: 240-56063815 – High Voltage Outdoor Disconnectors and Earthing Switch standard.		
If the supplier does not comply to the clauses, then it shall be covered on the deviation schedule		
Clause Number	Comply? (Yes or No)	Comments:
3 a		
3 b		
3 c		
3 d		
3 e		
3 f		
3 g		
4.1		
4.2		
4.3		
4.4		
4.5		
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5.16.7 a		
5.16.7 b		
5.16.7 c		
5.16.8		
5.16.9		
5.16.10		
5.16.11		
6.1		
6.2 a, b		
6.3		
6.4		
6.5		
7.1		
7.2		
7.3		
7.4 a, b		
7.5		
7.6		
7.7.1		
7.7.3		
7.7.6		
8		
10		
11.1 a, b		
11.2		

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11.3 a, b		
12		
12.1		
12.2		
12.3		
12.4		
12.5		
12.6		
13.1		
13.2.1		
13.2.2		
13.2.3		
13.4		
13.5.1		
13.5.2		
13.5.3		
13.5.4		
13.5.5		
13.5.6		
13.5.7		
13.5.8		
13.5.9		
14		

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**Annex D: Product assessment CHECKSHEET for Disconnector/ Earthing  
Switch**

		<b>DISCONNECTOR/ EARTHING SWITCHES CHECKSHEET (DESIGN REVIEW)</b>	
<b>NOTE:</b> This Checksheet be completed using the Disconnectors and Earthing switches Standard: 240-56063815 and the "Disconnectors and Earthing Switches Compliance Clause by Clause Schedule". The deviations found shall be used for Annex D completion.			
<b>Manufacturer:</b>			
Name			
Country			
<b>Tenderer and Factory Representatives</b>			
Tenderer rep			
Factory rep			
<b>Disconnector</b>			
Type:		Voltage:	
Amp rating:		kA rating:	
<b>Operating Mechanism</b>			
Manufacturer:		Motor Voltage:	
Type:		Motor current:	
Hand or Motor Drive	Motor		
<b>Inspected By Eskom Evaluation Representative</b>			
Name:		Signature:	
Designation:		Date:	

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Sheet Number (X of Y): ____ of ____					
Item	Items Inspected and findings made	Details on Eskom Standard			Eskom comments
No#		Clause	Page	Comply?	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Inspected By Eskom Evaluation Representative			
Name:		Signature:	
Designation:		Date:	

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Disconnecter & Earthing switch Operating Mechanism			
Manufacturer:		Number of mechanisms	
Type:		Facilities for manual operation:	


Item No#	Items Inspected and findings made	Details on Eskom Standard			Eskom comments
		Clause	Page	Comply?	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Inspected By Eskom Evaluation Representative			
Name:		Signature:	
Designation:		Date:	

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**Annex E – Product Assessment Agreement**

		<b>EVALUATIONS AGREEMENT</b>							
<b>No</b>	<b>DEVIATION</b>	<b>RESPONSE</b>	<b>TENDERER</b>		<b>FACTORY</b>		<b>Eskom</b>		<b>Target date</b>
<b>Sec</b>	<b>Comments</b>	<b>Comments</b>	<b>Agree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Disagree</b>	
<b>Eskom Evaluating Representative I</b>									
<b>Name:</b>		<b>Signature:</b>							
<b>Designation:</b>		<b>Date:</b>							
<b>Tenderer Representative I</b>									
<b>Name:</b>		<b>Signature:</b>							
<b>Designation:</b>		<b>Date:</b>							
<b>Factory Representative I</b>									
<b>Name:</b>		<b>Signature:</b>							
<b>Designation:</b>		<b>Date:</b>							

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## Annex F – Factory Evaluation Criteria (Technical Quality)

Section 1	
GENERAL INFORMATION	
Name of Supplier:	
Name of Manufacturer:	
Registered name and full street address of the factory at which the audit and inspection is done:	
Factory representatives:	
Name:	Position:
Name:	Position:
Name:	Position:
Name:	Position:
RECEIVING/GOODS INWARDS INSPECTION AND STORAGE	

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Are materials, components and sub-assemblies verified by the factory as complying with the applicable requirements?	Yes	No
Comments:		
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:		
Are non-conforming products/components/materials clearly identified and segregated to prevent their use?	Yes	No
Comments:		
Are records of raw material received, kept/stored? In what format and for how long?	Yes	No
Comments:		
Is there a system in place to manage reception and allocation of raw materials?	Yes	No

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Comments:		
PRODUCTION LINE INSPECTION AND ROUTINE TESTS		
Comments:		
ASSEMBLY: Do personnel have readily available up to date procedures, assembly instructions, photographs, drawings or reference samples?	Yes	No
Comments:		
PRODUCTION LINE TEST: Do personnel have readily available up to date procedures, work instructions and drawings related to the required testing to be carried out on the intermediate stage and the final product, related to conformance of the finished product?	Yes	No
Comments:		
Are the test results monitored for trends or recurrences and reported to production/quality management?	Yes	No

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Comments:		
Are repaired and reworked products re-inspected in accordance with documented procedures?	Yes	No
Comments:		
Does the "Production line inspection" and the "Routine Tests" performed by the factory sufficiently cover all the applicable requirements?	Yes	No
Comments:		
Are personnel involved in the assembly and quality control, adequately briefed on their duties and competent to perform them?	Yes	No
Comments:		
CALIBRATION OF TEST EQUIPMENT AND TESTING FACILITY		
Is all equipment used for testing calibrated?	Yes	No

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Comments:		
Is the equipment provided with a label, or similar method, indicating the date of the last calibration and the due date for the next calibration?	Yes	No
Comments:		
Are records from equipment calibrations appropriate and kept by the factory?	Yes	No
Comments:		
Do the records indicate that the calibration is traceable to National/International metrology standards?	Yes	No
Comments:		
Does the factory have the capability to carry out all the routine tests?	Yes	No
Comments:		

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Do test reports identify the test specimen and are they properly singed and stored?	Yes	No
Comments:		
FACTORY CAPABILITY AND QUALITY MANAGEMENT SYSTEM		
Does the factory have a documented Quality Management System?	Yes	No
Comments:		
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:		
Are the records from internal audits and the corrective actions, where applicable, available and are they sufficiently detailed to demonstrate that the Quality Management System is effective?	Yes	No
Comments:		
COMPLAINTS/NON-CONFORMANCES		

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Does the factory have a documented system for handling complaints?	Yes	No
Comments:		
Do the factory review complaints from customers or other stakeholders and take appropriate action?	Yes	No
Comments:		
Are records of the complaints and of the corrective actions taken kept?	Yes	No
Comments:		
CHANGE CONTROL		
Is there a documented procedure that covers control of products and production process changes?	Yes	No
Comments:		

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Does the procedure cover the review and approval of product or production process changes by the responsible personnel/management?	Yes	No
Comments:		
Are there provisions to ensure that changes to the product construction are accepted by competent/authorise personnel?	Yes	No
Comments:		
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
Comments:		
DESIGN PRACTICES		
Are designs done in-house?	Yes	No
Comments:		
Does the company have design tools and guidelines?	Yes	No

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Comments:		
Is there a design process workflow system?	Yes	No
Comments:		
Is there a documented process for verification and validation of designs?	Yes	No
Comments:		
Are new designs approved and verified by competent personnel?	Yes	No
Comments:		
Following final design approval, is there a process in place to link the new design to the manufacturing process?	Yes	No
Comments:		
FINDINGS		

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CONCLUSION
RECOMMENDATION(S)

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