

Title: **TECHNICAL EVALUATION  
CRITERIA FOR MEDIUM  
VOLTAGE CABLE  
ACCESSORIES**

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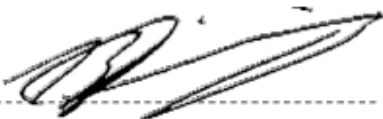
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## **1. Introduction**

This document has been developed to set the standard technical evaluation criteria to be used when performing technical evaluations on the tender submissions. This covers the technical evaluation of MV cable accessories for use in Eskom cable networks. It has clauses developed to address various aspects required to perform the technical evaluation. It has been developed based on Eskom specifications or standards as well as applicable national standards.

This document contains both the evaluation criteria used for the documentation evaluation, factory evaluation and factory sample evaluation.

## **2. Supporting clauses**

### **2.1 Scope**

The document covers the criteria for the evaluation of MV cable accessories for both XLPE and PILC cables within Eskom Holdings SOC (Ltd).

#### **2.1.1 Purpose**

The document aims to standardise on the technical evaluation criteria to be used when evaluating tender submissions for MV cable accessories in line with the Eskom requirements and it is applicable to all the technical evaluations for the related tender submissions.

#### **2.1.2 Applicability**

This document shall apply throughout Eskom Distribution and its controlling interests. This document shall also be applicable to any nominated supplier as part of a possible contract award or pre-qualification.

## **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] SANS 876, Cable terminations and live conductors within air-filled enclosures (insulation co-ordination) for rated a.c. voltages from 7,2 kV and up to and including 36 kV.
- [2] SANS 10198-10, The selection, handling and installation of electric power cables of rating not exceeding 33 kV Part 10: Jointing and termination of paper-insulated cables.
- [3] SANS 10198-11, The selection, handling and installation of electric power cables of rating not exceeding 33 kV Part 11: Jointing and termination of screened polymeric-insulated cables.
- [4] ISO 9001, Quality Management Systems.
- [5] IEC 60055-1, Paper-insulated metal-sheathed cables for rated voltages up to 18/30 kV (with copper or aluminium conductors and excluding gas-pressure and oil-filled cables) Part 1: Tests on cables and their accessories.
- [6] SANS 1332, Accessories for medium-voltage XLPE and impregnated paper-insulated power cables (3,8/6,6 kV to 19/33 kV).
- [7] SANS 60502-4, Power cables with extruded insulation and their accessories for rated voltages from 1 kV ( $U_m = 1,2$  kV) up to 30 kV ( $U_m = 36$  kV) Part 4: Test requirements on accessories for cables with rated voltages from 6 kV ( $U_m = 7,2$  kV) up to 30 kV ( $U_m = 36$  kV).
- [8] SANS 9227 Corrosion tests in artificial atmospheres – Salt spray tests.

- [9] 240-56030619, Accessories for medium-voltage power cables for systems with nominal voltages of 11 kV to 33 kV standard.
- [10] 240- 82789539 (34-211), KIPTS natural ageing and pollution performance test procedure for outdoor insulator products Section 5 - Particular requirements for outdoor MV cable terminations.
- [11] D-DT-8005, MV cable terminations – Impregnated paper insulated cable.
- [12] D-DT-8006, MV cable terminations – XLPE insulated cable.
- [13] D-DT-8007, MV cable joints – impregnated paper insulated cable.
- [14] D-DT-8008, MV cable joints – XLPE insulated cable.
- [15] D-DT-8011, MV straight shrouds.
- [16] D-DT-8015, Cable end caps.
- [17] D-DT-8016, MV unscreened separable connectors.
- [18] D-DT-8017, MV screened separable connectors and tri-furcating kits.
- [19] D-DT-8021, MV transition cable joints (PILC to XLPE).
- [20] D-DT-8077, Cable repair sleeve.

### 2.2.2 Informative

- [21] 32-9: Definition of Eskom documents.
- [22] 32-644: Eskom documentation management standard.
- [23] 474-65: Operating manual of the Steering Committee of Technologies (SCOT).

## 2.3 Definitions

### 2.3.1 General

Definition	Description
<b>Eskom Evaluating Representative(s)</b>	The person(s) appointed by Eskom to perform the evaluation of tender submission(s) in line with Eskom requirements.
<b>Heat shrink</b>	Joints, terminations and any part thereof that is constructed with pre-expanded components that require heat to fit and shrink into position. Excluding cold shrink components.
<b>Indoor terminations</b>	Terminations that are intended for use where they are not exposed to either solar radiation or weathering.

### 2.3.2 Disclosure classification

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

## 2.4 Abbreviations

Abbreviation	Description
<b>Al</b>	Aluminium
<b>Cu</b>	Copper
<b>LCC</b>	Leakage Current Collector
<b>MV</b>	Medium Voltage

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Abbreviation	Description
<b>PILC</b>	Paper Insulated Lead Covered
<b>SI</b>	Standards Implementation
<b>SSC</b>	Screened Separable Connectors
<b>WCOU</b>	Western Cape Operating Unit
<b>XLPE</b>	Cross-Linked Polyethylene

## **2.5 Roles and responsibilities**

All Eskom employees and/or appointed bodies involved in the procurement of MV cable accessories shall ensure that the project deliverable meets the requirements of these technical evaluation criteria. Any deviation from these requirements shall constitute non-conformance, unless it was agreed to in advance, by a delegated specialist and is based on sound engineering judgement.

All suppliers of MV cable accessories to Eskom must be conversant with the requirements of this standard, and shall comply with the requirements. No deviations will be accepted and suppliers shall ensure that they obtain clarity where required and obtain all supporting information or documents necessary to comply with this document.

## **2.6 Process for monitoring**

MV cable accessories acceptance shall be based on fully compliant submission of documents, samples and where necessary the factory assessment, and proving manufacturing capability and capacity during factory evaluations.

## **2.7 Related/supporting documents**

Refer to clause/ section 2.2.

## **3. Requirements**

The evaluation methodology will include four main parts:

- Mandatory Evaluation Criteria,
- Qualitative Evaluation Criteria,
- Factory Evaluation Criteria, and
- Factory Sample Evaluation Criteria.

### **3.1 Documentation Evaluation**

The documentation evaluation exercise is performed by Eskom's evaluating representatives. This initial part of the evaluation starts when submissions are opened and assessed for the first time.

During the documentation evaluation, fully compliant units in accordance with this document and the listed applicable document will be required. Failure to submit and comply with the requirements specified in these documents will lead to immediate disqualification. . All tender deliverables required shall be submitted in the format given by Eskom.

The documentation evaluations are meant for establishing if all the key tender deliverables are met. The documentation evaluation will consist of two sections:

- a) Mandatory Technical Evaluation Criteria, and
- b) Qualitative Technical Evaluation Criteria

The tender submission must meet all the Mandatory Technical Evaluation Criteria in order to proceed to the Qualitative Technical Evaluation Criteria.

Qualitative Technical Evaluation Criteria consist of a scoring system. Tenderers are required to score a minimum of 70% in this section to proceed to the Factory Evaluation and Factory Sample Evaluation stage. Any tenderer not achieving the 70% scoring required for Qualitative Technical Evaluation Criteria, will be disqualified.

Only tenderers that have scored 70% in the Qualitative Technical Evaluation Criteria will proceed to Factory Evaluation and Factory Sample Evaluation. However, tenderers shall note that a 100% score for Qualitative Technical Evaluation Criteria is required before a contract is awarded. This will require any pending information to be submitted during factory/sample evaluation for acceptance, before the contract is awarded.

**Note:** It is advisable that any information/ documents submitted in electronic copies shall be submitted in hard copies; in an event that the electronic copies cannot be accessed.

### **3.2 Factory Evaluation**

The factory evaluations will only be performed on the submissions that have met all the Mandatory Technical Evaluation Criteria as stated in this document and have scored the minimum of 70% in the Qualitative Technical Evaluation Criteria. Eskom Commercial shall make arrangements for factory visits and ensure that the technical representatives are invited on time.

At the factory, the Eskom evaluating representative(s) will conduct the evaluation through the use of checklists. The checklists are used to verify factory capability and packaging method compliance with the type tested MV cable accessories offered.

The factory evaluation will be done at the South African factory/site where the packaging of the MV cable accessories will be performed (as indicated by the tenderer during the tender submission).

The following areas shall be assessed during the Factory Evaluation in accordance with 240-56030619 clause 3.3:

- a) Ordering and receiving of goods from OEM;
- b) Procedure for quality checks of received goods;
- c) Handling, packaging and storage of goods; and
- d) Procedure followed for ordering of goods to be delivered to the client.

Any non-conformances on the Factory Evaluation, (a) to (d) above, will have to be addressed before the awarding of the contract, if a tenderer is successful.

### **3.3 Factory Sample Evaluation**

The factory sample evaluations will be the evaluation of the exact replica product, this means that the exact unit that will be supplied to Eskom shall be evaluated as a factory sample that is offered to Eskom during the tendering. A product range sample quantity allowance will be made by Eskom whereby each tenderer will be required to prepare only one exact replica sample per product range type offered for factory sample evaluations. The factory sample evaluation shall be performed at the respective supplier's facilities in RSA.

**Note:** The factory evaluation and factory sample evaluation shall be performed on the same date and at the same location as indicated by the tenderer.

The following shall be assessed during the factory sample evaluation:

- a) Packaging and marking (including Eskom SAP number) of the sample;
- b) Verification of components with type test reports;
- c) Verification of components with bill of material in each package, and
- d) Verification of installation instruction.

Any non-conformances on the Factory Evaluation ((a) to (d) above) will have to be addressed before contract award if a tenderer is successful.

### 3.4 Technical Evaluation Criteria for MV Cable Joints

#### 3.4.1 Mandatory Technical Evaluation Criteria for MV Cable Joints

This evaluation section will cover all MV cable joints for XLPE and PILC cables for all.

**Table 1: Mandatory Technical Evaluation Criteria for MV Cable Joints**

Criteria	Clause	Acceptance: Yes/ No
Is a detailed covering letter containing a list of items offered submitted?	Buyer's Guide	
Is the manufacturer manufacturing location and component description of each type tested component submitted? Note: Location for the OEM	240-56030619 Cause 3.2.1d)	
Is the location of the final assembly manufacturing location of the offered product submitted? Note: Final assembly shall be done in RSA.	240-56030619 Clause 3.2.1e)	
Is a written guarantee stating that the accessories are suitable for cables that comply with SANS 97 and SANS 1339 provided?	SANS 1332 Clause 5.5	
Is a training proposal for the cable accessories submitted? Note: training proposal to state the type, level of training and duration of training.		
Are all the type test reports for the MV cable accessories submitted in accordance with SANS 1332? Note: Type test reports shall be in English.	SANS 1332, 240-56030619 and Type test schedule	
Has type testing been performed at an ILAC or IAF accredited test facility?	SANS 1332 Clause 6.3.4.4, and 5.2	
Are the completed tests schedule summaries submitted electronically in the provided Excel format?	240-56030619	
Are the completed technical schedules B electronically submitted in the provided Excel format?	Schedule A&B	
Is at least one bill of material per product range submitted?	SANS 1332 Clause 6.3.3	
Is a copy of the installation instruction per product range offered submitted?	240-56030619 Clause 3.2.2	
Do the completed Technical Schedules A & B comply with Eskom requirements?	Schedule A&B	
For any single "NO" on the above the supplier will be disqualified. The type testing should fully comply with the requirements of SANS 1332 (or equivalent) in order to obtain YES under the testing requirements.		

#### 3.4.2 Qualitative Technical Evaluation Criteria for MV cable Joints

Qualitative Technical Evaluation Criteria for MV Cable Joints for the documentation exercise will only be performed on submissions that were successful on the Mandatory Technical Evaluation Criteria (Table 1).



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<b>Type Testing Weight: 70 Total</b>			
<b>Criteria</b>	<b>Clause</b>	<b>Weight</b>	<b>Score</b>
Were type tests performed in the last 10 years?	240-56030619 Clause 3.2.1	5	
Were the type tests performed in the correct sequence on the correct number of samples as specified in SANS 1332?	SANS 1332	10	
Are the submitted type test reports compliant in accordance with SANS 1332? Note: Tenderers will get full weight for full compliance in all the required type test reports in accordance with SANS 1332, and will lose all weight for any none compliance on the submitted type test reports.	SANS 1332	30	
All testing laboratories shall have been accredited by an accreditation body, for example, a national accreditation system (see foreword) or the RvA that has a full valid IAF or ILAC membership. When accessories for compliance with this specification are being assessed, only accredited laboratory test reports shall be considered. Proof that the test laboratory complies with the above requirements shall be provided with the tender.	SANS 1332 clause 6.3.4.4, and 5.2	25	
<ul style="list-style-type: none"> <li>The supplier will be marked negatively for type testing performed more than 10 years ago; 20% for each additional year.</li> </ul>		<b>Total</b>	<b>/70</b>

**Table 3: - MV Cable Joints Qualitative Evaluation Criteria - Technical Schedules**

<b>Technical Schedules Weight: 10</b>			
<b>Criteria</b>	<b>Clause</b>	<b>Weight</b>	<b>Score</b>
Correctness of completion i.e. no "TBA, comply, noted, supplied later, acceptable only when Eskom informs"	Technical schedules A & B	5	
No unsupported technical deviations on technical schedules.	Deviation schedules	5	
NB: The technical schedules A & B are provided in a separate Excel sheets as part of the tender technical documents. <ul style="list-style-type: none"> <li>Negative marking is done and a penalty of 25% is applicable for each incorrect completion.</li> <li>Negative marking is done and a penalty of 50% is applicable for each unsupported deviation from meeting Eskom specifications.</li> </ul>		<b>Total</b>	<b>/10</b>

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Unique Identifier: **240-129903077**Revision: **2**Page: **10 of 21****Table 4: MV Cable Joints Qualitative Evaluation Criteria – Installation Instruction**

<b>Installation Instruction Weight: 20</b>			
<b>Criteria</b>	<b>Clause</b>	<b>Weight</b>	<b>Score</b>
Is the installation instruction in colour and originally printed and not photocopied?	SANS 1332 6.3.2 a), f)	2	
Does it clearly indicate the application and assembly of all components?	SANS 1332 6.3.2 a)	2	
Is the bill of materials referenced by quoting the relevant part number at least once when the components are being described?	SANS 1332 6.3.2 b)	2	
Is the installation instruction unique to the rated voltage and the cable type for which the accessory has been designed?	SANS 1332 6.3.2 c)	2	
Is the revision number shown on the Installation Instruction?	SANS 1332 6.3.2 d)	2	
Is the date of issue/approval indicated on the Installation Instruction?	SANS 1332 6.3.2 d)	2	
Has an A4 tear-off page that makes provision for the relevant information (to be completed on-site) been included?	SANS 1332 6.3.2 g)	2	
Has the instruction for removing temporary colour-coded insulating tapes been added?	SANS 1332 6.3.2 h)	2	
Is the method of core crossing along with minimum clearances indicated?	SANS 1332 6.3.2 j)	2	
Are the maximum length and diameter of the ferrules indicated for Joints?	SANS 1332 6.3.2 l)	1	
Is the instruction of how to remove water blocking material (XLPE cable) for jointing or termination purposes included in the installation instruction? Note: Tenderers will be awarded full points for PILC cables.	240-56030619 Clause 3.2.2	1	
		<b>Total</b>	<b>/20</b>

Tenderer will be required to achieve a minimum combined score of 70% from Table 2 to Table 4.

### 3.5 Technical Evaluation Criteria for MV Cable Terminations

This evaluation section will cover all MV cable termination for indoor and outdoor application. This will include the following types of cable terminations: single core, three core, and trifurcating terminations.

#### 3.5.1 Technical Evaluation Criteria MV Cable Terminations: Mandatory Technical Evaluation Requirements

**Table 5: Mandatory Technical Evaluation Criteria for MV Cable Terminations**

<b>Criteria</b>	<b>Clause</b>	<b>Acceptance: Yes/ No</b>
Is a detailed covering letter containing a list of items offered submitted?	Buyer's Guide	
Is the manufacturer manufacturing location and component description of each type tested component submitted?	240-56030619 Clause 3.2.1d)	
Is the location of final assembly manufacturing location of the offered product submitted? <b>Note:</b> Final assembly shall be done in RSA.	240-56030619 Clause 3.2.1e)	

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Criteria	Clause	Acceptance: Yes/ No
Is a written guarantee stating that the accessories are suitable for cables that comply with SANS 97 and SANS 1339 provided?	SANS 1332 Clause 5.5	
Is a training proposal for the cable accessories submitted? Note: training proposal to state the type, level of training and duration of training.		
Are all the type test reports for the MV cable accessories submitted in accordance with SANS 1332? <b>Note:</b> Type test reports shall be in English.	SANS 1332, 240-56030619 and Type Test Schedule	
Has type testing been performed at an ILAC or IAF accredited test facility?	SANS 1332 Clause 6.3.4.4, and 5.2	
Are the completed tests schedule summaries submitted electronically in the provided Excel format?	240-56030619	
Are the completed technical schedules B electronically submitted in the provided Excel format?	Schedule A&B	
Is at least one bill of material per product range offered submitted?	SANS 1332 Clause 6.1.1	
Is a copy of the installation instruction per product range submitted?	240-56030619 Clause 3.3.2	
Do the completed Technical Schedules A&B comply with Eskom requirements?	Schedule A&B	
Has the outdoor termination been subjected to a natural ageing test? Type test report to be submitted. Any of the following options shall be accepted: Koeberg Insulator Pollution Test Site (KIPTS), or 5 000-hour salt fog test, or 1 000-hour salt fog test to be pre-qualified as minimum, where after a 5 000-hour salt fog test shall be mandatory to be performed prior to the awarding of an Eskom contract. <b>Note:</b> This requirement is only applicable for outdoor terminations; thus, it will be waived for indoor terminations.	240-56030619 Clause 3.2.1 b)	
For any one "NO" on the above the supplier will be disqualified. The type testing should fully comply with the requirements of SANS 1332 (or equivalent) in order to obtain YES under the testing requirements.		

### 3.5.2 Qualitative Evaluation Criteria of MV Cable Termination

Qualitative Evaluation Criteria of MV Cable terminations for the documentation exercise will only be performed on submissions that were successful on the Mandatory Evaluation Criteria (Table 5).

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<b>Type Testing Weight: 70 Total</b>			
<b>Criteria</b>	<b>Clause</b>	<b>Weight</b>	<b>Score</b>
Were type tests performed in the last 10 years?	240-56030619 Clause 3.2.1	5	
Were the type tests performed in the correct sequence on the correct number of samples as specified in SANS 1332?	SANS 1332	10	
Are the submitted type test reports compliant in accordance with SANS 1332? In addition, is the aging test compliant in accordance with 240-56030619? Note: Tenderers will get full weight for full compliance in all the required type test reports in accordance with SANS 1332, and will lose all weight for any none compliance on the submitted type test reports.	SANS 1332 & 240-56030619 Clause 3.2.1 b)	30	
All testing laboratories shall have been accredited by an accreditation body, for example, a national accreditation system (see foreword) or an RvA that has a full valid IAF or ILAC membership. When accessories for compliance with this specification are being assessed, only accredited laboratory test reports shall be considered. Proof that the test laboratory complies with the above requirements shall be provided during the tendering.	SANS 1332 Clause 6.3.4.4, and 5.2	25	
The supplier will be marked negatively for type testing performed more than 10 years ago; 20% for each additional year.		<b>Total</b>	<b>/70</b>

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**Table 7: Qualitative Evaluation Criteria of MV Cable Termination- Technical Schedules**

Technical schedules Weight: 10			
Criteria	Clause	Weight	Score
Correctness of completion i.e. no "TBA, comply, noted, supplied later, acceptable only when Eskom informs"	Technical Schedules A & B	5	
No unsupported technical deviations on technical schedules.	Deviation Schedules	5	
NB: The technical schedules A & B are provided in a separate Excel sheets as part of the Tender Technical Documents. <ul style="list-style-type: none"><li>Negative marking is done and a penalty of 25 % is applicable for each incorrect completion.</li><li>Negative marking is done and a penalty of 50 % is applicable for each unsupported deviation from meeting Eskom specification.</li></ul>		<b>Total</b>	<b>/10</b>

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**Table 8: Qualitative Evaluation Criteria of MV Cable Termination- Installation Instruction**

Installation Instruction Weight: 20			
Criteria	Clause	Weight	Score
Is the installation instruction in colour and originally printed and not photocopied?	SANS 1332 6.3.2 a), f)	2	
Does it clearly indicate the application and assembly of all components?	SANS 1332 6.3.2 a)	2	
Are the bill of materials referenced by quoting the relevant part number at least once when the components are being described?	SANS 1332 6.3.2 b)	2	
Is the installation instruction unique to the rated voltage and the cable type for which the accessory has been designed?	SANS 1332 6.3.2 c)	1	
Is the revision number shown on the installation instruction?	SANS 1332 6.3.2 d)	1	
Is the date of issue/approval indicated on the installation instruction?	SANS 1332 6.3.2 d)	1	
Is the installation instruction unique for the indoor and outdoor application of terminations?	SANS 1332 6.3.2 e)	1	
Has an A4 tear-off page that makes provision for the relevant information (to be completed on-site) been included?	SANS 1332 6.3.2 g)	1	
Has the instruction for removing temporary colour-coded insulating tapes been added?	SANS 1332 6.3.2 h)	1	
Is the position of the waterproofing of the earthing indicated?	SANS 1332 6.3.2 i)	1	
Is the method of core crossing along with minimum clearances indicated?	SANS 1332 6.3.2 j)	1	
Is the method of sealing the interface between the termination tail outer tube and lug barrel indicated for terminations?	SANS 1332 6.3.2 k)	1	
Does the lug comply with the range taking requirements in accordance with SANS 1332?	SANS 1332 Table 1	2	
Is the minimum thickness of insulation required at any point of the shroud indicated?	SANS 1332 6.3.2 m)	1	
Is the instruction of how to remove water blocking material (XLPE cable) for jointing or termination purposes included in the installation instruction? <b>Note:</b> Tenderers will score full points for PILC cables.	240-56030619 Clause 3.2.2	2	
		<b>Total</b>	<b>/20</b>

Tenderer will be required to achieve a minimum combined score of 70% from Table 6 to tTble 8.

### 3.6 Technical Evaluation Criteria for MV Screen and Un-screen Separable Connectors

This evaluation section will cover all MV screen and un-screen separable connectors (SSC and USC).

### 3.6.1 Mandatory Technical Evaluation Criteria MV Screen and Un-screen Separable Connectors

**Table 9: Mandatory Technical Evaluation Criteria MV Screen and Un-screen Separable Connectors**

Criteria	Clause	Acceptance: Yes/ No
Is a detailed covering letter containing a list of items offered submitted?	Buyer's Guide	
Is the manufacturer manufacturing location and component description of each type tested component submitted?	240-56030619 Clause 3.2.1d)	
Is the location of the final assembly manufacturing location of the offered product submitted? Note: Final assembly shall be done in RSA.	240-56030619 Clause 3.2.1(e)	
Is a written guarantee stating that the accessories are suitable for cables that comply with SANS 97 and SANS 1339 provided?	SANS 1332 Clause 5.5	
Are all the type test reports for the MV cable accessories submitted in accordance with SANS 1332? Note: Type test reports shall be in English.	SANS 1332, 240-56030619 and Type Test Schedule	
Has type testing been performed at an ILAC or IAF accredited test facility?	SANS 1332 Clause 6.3.4.2 and 5.2	
Are the completed tests schedule summaries submitted electronically in the provided Excel format?	Type Test Schedule	
Are the completed technical schedules B electronically submitted in the provided Excel format?	Schedule A & B	
Is at least one bill of material per product range offered submitted?	SANS 1332 Clause 6.1.1	
Is a copy of the installation instruction per product range offered submitted?	240-56030619 Clause 3.2.2	
Do the completed technical schedules A & B comply with Eskom requirements?	Schedule A&B	
For any single "NO" on the above the supplier will be disqualified. The type testing should fully comply with the requirements of SANS 1332 (or equivalent) in order to obtain YES under the testing requirements.		

### 3.6.2 Qualitative evaluation criteria of MV Screen and Un-screen Separable Connectors

Qualitative Evaluation Criteria of MV Screen and Un-screen Separable Connectors technical evaluation for the documentation exercise will only be performed on submissions which were successful in the Mandatory Evaluation Criteria of MV Screen and Un-screen Separable Connectors (Table 9)

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<b>Type Testing Weight: 70 Total</b>			
<b>Criteria</b>	<b>Clause</b>	<b>Weight</b>	<b>Score</b>
Were type tests performed in the last 10 years?	240-56030619 Clause 3.2.1	5	
Were the type tests performed in the correct sequence and are all the sequences on the correct number of samples as specified in SANS 1332 followed during testing?	SANS 1332	10	
Are the submitted type test reports compliant in accordance with SANS 1332? Note: Tenderers will get full weight for full compliance in all the required type test reports in accordance with SANS 1332, and will lose all weight for any none compliance on the submitted type test reports	SANS 1332 &	30	
All testing laboratories shall have been accredited by an accreditation body, for example, a national accreditation system (see foreword) or an RvA that has a full valid IAF or ILAC membership. When accessories for compliance with this specification are being assessed, only accredited laboratory test reports shall be considered. Proof that the test laboratory complies with the above requirements shall be provided with the tender.	SANS 1332 clause 6.3.4.4, and 5.2	25	
<ul style="list-style-type: none"> <li>The supplier will be marked negatively for type testing performed more than 10 years ago; 20 % for each additional year.</li> </ul>		<b>Total</b>	<b>/70</b>

**Table 11: Qualitative Evaluation Criteria of MV SSC and USC– Technical Schedules A & B**

<b>Technical Schedules Weight: 10</b>			
<b>Criteria</b>	<b>Clause</b>	<b>Weight</b>	<b>Score</b>
Correctness of completion i.e. no "TBA, comply, noted, supplied later , acceptable only when Eskom informs"	Technical Schedules A & B	5	
No unsupported technical deviations on technical schedules.	Deviation Schedules	5	
NB: The Technical Schedules A & B are provided in a separate Excel sheets as part of the Tender Technical Documents. <ul style="list-style-type: none"> <li>Negative marking is done and a penalty of 25 % is applicable for each incorrect completion.</li> <li>Negative marking is done and a penalty of 50% is applicable for each unsupported deviation from meeting Eskom specifications.</li> </ul>		<b>Total</b>	<b>/10</b>

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Unique Identifier: **240-129903077**Revision: **2**Page: **17 of 21****Table 12: Qualitative Evaluation Criteria of MV SSC and USC– Installation Instruction**

<b>Installation Instruction Weight: 20</b>			
<b>Criteria</b>	<b>Clause</b>	<b>Weight</b>	<b>Score</b>
Is the installation instruction in colour and originally printed and not photocopied?	SANS 1332 6.3.2 a), f)	2	
Does it clearly indicate the application and assembly of all components?	SANS 1332 6.3.2 a)	2	
Are the bill of materials referenced by quoting the relevant part number at least once when the components are being described?	SANS 1332 6.3.2 b)	2	
Is the installation instruction unique to the rated voltage and the cable type for which the accessory has been designed?	SANS 1332 6.3.2 c)	1	
Is the revision number shown on Installation instruction?	SANS 1332 6.3.2 d)	1	
Is the date of issue/approval indicated on the installation instruction?	SANS 1332 6.3.2 d)	1	
Is the installation instruction unique for the indoor and outdoor application of terminations?	SANS 1332 6.3.2 e)	1	
Has an A4 tear-off page that makes provision for the relevant information (to be completed on-site) been included?	SANS 1332 6.3.2 g)	1	
Has the instruction for removing temporary colour-coded insulating tapes been added?	SANS 1332 6.3.2 h)	1	
Is the position of the waterproofing of the earthing indicated?	SANS 1332 6.3.2 i)	1	
Is the method of core crossing along with minimum clearances indicated?	SANS 1332 6.3.2 j)	1	
Is the method of sealing the interface between the termination tail outer tube and lug barrel indicated for terminations?	SANS 1332 6.3.2 k)	1	
Does the lug comply with the range taking requirements in accordance with SANS 1332?	SANS 1332 Table 1	2	
Is the minimum thickness of insulation required at any point of the shroud indicated?	SANS 1332 6.3.2 m)	1	
Is the instruction of how to remove water blocking material (XLPE cable) for jointing or termination purposes included in the installation instruction? Note: Tenderers will score full points for PILC cables.	240-56030619 Clause 3.2.2	2	
		<b>Total</b>	<b>/20</b>

The tenderer will be required to achieve a minimum combined score of 70% from Table 10 to Table 12.

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### 3.7 Technical Evaluation Criteria for MV Plug-in Type Connectors and Surge Arrestors

This evaluation section will cover all MV Plug-in Type Connectors and Surge Arrestors.

#### 3.7.1 Mandatory Technical Evaluation Criteria MV Plug-in Type Connectors and Surge Arrestors

**Table 13: Mandatory Technical Evaluation Criteria MV Plug-in Type Connectors and Surge Arrestors**

Criteria	Clause	Acceptance: Yes/ No
Is a detailed covering letter containing a list of items offered submitted?	Buyer's Guide	
Is the manufacturer manufacturing location and component description of each type tested component submitted?	240-56030619 Clause 3.2.1d)	
Is the location of the final assembly manufacturing location of the offered product submitted? Note: Final assembly shall be done in RSA.	240-56030619 Clause 3.2.1(e)	
Is a written guarantee stating that the accessories are suitable for cables that comply with SANS 97 and SANS 1339 provided?	SANS 1332 Clause 5.5	
Are all the type test reports for the MV cable accessories submitted in accordance with SANS 1332? Note: Type test reports shall be in English.	SANS 1332, 240-56030619 and Type Test Schedule	
Has type testing been performed at an ILAC or IAF accredited test facility?	SANS 1332 Clause 6.3.4.2 and 5.2	
Are the completed tests schedule summaries submitted electronically in the provided Excel format?	Type Test Schedule	
Are the completed technical schedules B electronically submitted in the provided Excel format?	Schedule A & B	
Is at least one bill of material per product range offered submitted?	SANS 1332 Clause 6.1.1	
Is a copy of the installation instruction per product range offered submitted?	240-56030619 Clause 3.2.2	
Do the completed technical schedules A & B comply with Eskom requirements?	Schedule A&B	
Do the dimensions of the type 5 inside-cone plug-in surge arrester comply with EN 50180 and EN 50181?	SANS 1332 Clause 4.1.13	
Has the method used for disconnecting the surge arresters for the purpose of cable testing been submitted?	SANS 1332 Clause 4.1.11.6	
For any single "NO" on the above the supplier will be disqualified. The type testing should fully comply with the requirements of SANS 1332 (or equivalent) in order to obtain YES under the testing requirements.		

#### 3.7.2 Qualitative evaluation criteria of MV Plug-in Type Connectors and Surge Arrestors

Qualitative Evaluation Criteria of MV Plug-in Type Connectors and Surge Arrestors technical evaluation for the documentation exercise will only be performed on submissions which were successful in the Mandatory Evaluation Criteria of MV Plug-in Type Connectors and Surge Arrestors (Table 13)

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**Table 14: Qualitative Evaluation Criteria of MV Plug-in Type Connectors and Surge Arrestors - Type test reports**

Type Testing Weight: 70 Total			
Criteria	Clause	Weight	Score
Were type tests performed in the last 10 years?	240-56030619 Clause 3.2.1	5	
Are the submitted type test reports compliant in accordance with SANS 60099 or equivalent standard? Note: Tenderers will get full weight for full compliance in all the required type test reports in accordance with SANS 60099, and will lose all weight for any none compliance on the submitted type test reports	SANS 1332 &	35	
All testing laboratories shall have been accredited by an accreditation body, for example, a national accreditation system (see foreword) or an RvA that has a full valid IAF or ILAC membership. When accessories for compliance with this specification are being assessed, only accredited laboratory test reports shall be considered. Proof that the test laboratory complies with the above requirements shall be provided with the tender.	SANS 1332 clause 6.3.4.4, and 5.2	30	
<ul style="list-style-type: none"> <li>The supplier will be marked negatively for type testing performed more than 10 years ago; 20 % for each additional year.</li> </ul>		<b>Total</b>	<b>/70</b>

**Table 15: Qualitative Evaluation Criteria of MV Plug-in Type Connectors and Surge Arrestors– Technical Schedules A & B**

Technical Schedules Weight: 10			
Criteria	Clause	Weight	Score
Correctness of completion i.e. no “TBA, comply, noted, supplied later , acceptable only when Eskom informs”	Technical Schedules A & B	5	
No unsupported technical deviations on technical schedules.	Deviation Schedules	5	
NB: The Technical Schedules A & B are provided in a separate Excel sheets as part of the Tender Technical Documents. <ul style="list-style-type: none"> <li>Negative marking is done and a penalty of 25 % is applicable for each incorrect completion.</li> <li>Negative marking is done and a penalty of 50% is applicable for each unsupported deviation from meeting Eskom specifications.</li> </ul>		<b>Total</b>	<b>/10</b>

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**Table 16: Qualitative Evaluation Criteria of MV Plug-in Type Connectors and Surge Arrestors –  
Installation Instruction**

Installation Instruction Weight: 20			
Criteria	Clause	Weight	Score
Is the installation instruction in colour and originally printed and not photocopied?	SANS 1332 6.3.2 a), f)	5	
Does it clearly indicate the application and assembly of all components?	SANS 1332 6.3.2 a)	5	
Are the bill of materials referenced by quoting the relevant part number at least once when the components are being described?	SANS 1332 6.3.2 b)	5	
Is the revision number shown on Installation instruction?	SANS 1332 6.3.2 d)	2.5	
Is the date of issue/approval indicated on the installation instruction?	SANS 1332 6.3.2 d)	2.5	
		<b>Total</b>	<b>/20</b>

The tenderer will be required to achieve a minimum combined score of 70% from Table 10 to Table 16.

### 3.8 Conclusion

This report is effective in specifying the technical evaluation criteria for MV cable accessories to be used in Eskom. The MV cable accessories suppliers are to complete Technical Schedule B drawings and test schedules aligned with 240-56030619 and SANS 1332 as part of the tender deliverables.

## 4. Authorisation

This document has been seen and accepted by:

Name and surname	Designation
Deidre February	Manager: SI WCOU
Jacques Paulse	MV LV Cable Systems Care Group Chairperson
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## 5. Revisions

Date	Rev	Compiler	Remarks
May 2020	2	B Olivier	Revised document. Threshold changed from 80% to 70%.
Dec 2017	1	Q. Khumalo	New document.

## 6. Development team

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

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## **7. Acknowledgements**

Not applicable.