

Title: **PARALLEL GROOVE (PG)
CLAMPS (AI/AI) FOR LOW &
MEDIUM VOLTAGE OVERHEAD
POWER LINES**

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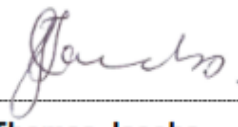
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Content

	Page
1. Introduction	4
2. Supporting clauses	4
2.1 Scope	4
2.1.1 Purpose	4
2.1.2 Applicability	4
2.2 Normative/informative references	4
2.2.1 Normative	4
2.2.2 Informative	5
2.3 Definitions	5
2.3.1 General	5
2.3.2 Disclosure classification	5
2.4 Abbreviations	5
2.5 Roles and responsibilities	5
2.6 Process for monitoring	5
2.7 Related/supporting documents	5
3. Requirements	6
3.1 General requirements	6
3.2 Design	6
3.3 Materials	6
3.4 Electrical jointing compound	7
3.5 Dimensions	7
3.6 Quality assurance	7
3.7 Purchasing schedules A and B	7
4. Tests	8
4.1 General	8
4.2 Type tests	8
4.2.1 General	8
5.2.1.1 Application	8
4.2.2 Visual examination	8
4.2.3 Dimensional and material verification	9
4.2.4 Clamp bolt tightening test	9
4.2.5 Slip test	9
4.2.6 Heat cycle test	9
4.2.7 Corrosion test	9
Acceptance criteria	9
4.3 Sample test	10
4.3.1 General	10
Sample tests are intended to verify the quality of materials and workmanship.	10
4.3.2 Application	10
4.3.3 Sampling and acceptance criteria	10
4.4 Routine tests	10
4.4.1 General	10
4.4.2 Application and acceptance criteria	10
4.5 Test certificates and samples	10

4.5.1	Qualifying type test	10
4.5.2	Production sample test	11
4.5.3	Traceability	11
4.5.4	Samples	11
5.	Marking/packing/selection/documentation	11
5.1	Identification and markings	11
5.2	Packing and protection	11
5.3	Documentation	12
6.	Authorization	12
7.	Revisions	12
8.	Development team	13
9.	Acknowledgements	13
	Annex A – Guide to purchasers on preparing an enquiry	14
	Annex B – Technical Schedules	16
	Annex C – Test Report Schedule	19

Tables

Table 1: Tests for PG Clamps (AI/AI) (As per 1 in SANS 61284)	8
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1. Introduction

This specification has been drafted in line with the objectives of the South African National Standards (SANS). Further, it provides a mechanism for Distribution to optimize its requirements for specific applications.

2. Supporting clauses

2.1 Scope

The specification covers all the Distribution Group's particular requirements for PG Clamp (AI/AI) design, purchase and applications.

2.1.1 Purpose

The purpose of this specification is to provide prospective suppliers and users with a definitive reference for the specific requirements for the manufacture of PG clamps (AI/AI).

2.1.2 Applicability

This document shall apply throughout Eskom Holdings SOC Limited Distribution Division.

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 1700: 2010, ISO metric precision hexagon-head bolts and screws, and hexagon nuts (coarse thread medium fit series)
- [2] SANS 1507:2020, Electric cables with extruded solid dielectric insulation for fixed installations (300 V/500 V to 1900 V/3300 V).
- [3] SANS 50483, Parts 1-6 Test Requirements for Low Voltage Aerial Bundled Cable Accessories
- [4] SANS 9227: 2024, Rev 4, Corrosion tests in artificial atmospheres - Salt spray tests
- [5] 240-84758170: Rev 2, Aerial bundled conductor with uninsulated (bare) neutral.
- [6] 240-75883110: Rev 1, Current carrying compression fittings for reticulation overhead systems.
- [7] 240-93821974: Rev 3, Review and Publication of Scot Documents Related to Transmission and Distribution Businesses
- [8] SANS 61284: 1997, Overhead lines - Requirements and tests for fittings.
- [9] 240-75884478: 2020, Rev 2, Low-voltage reticulation section 1: Low voltage overhead reticulation
- [10] SANS 9000:2015, Quality management systems - Fundamentals and vocabulary
- [11] SANS 9001:2015, Quality Management systems - Requirements
- [12] SANS 9004:2020, Quality management systems - Guidelines for performance improvements
- [13] SANS 2859-1:2004, Sampling procedures for inspections by attributes -Part 1: Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection.
- [14] BS ISO 2859-2:2020, Sampling procedures for inspection by attributes - Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection.
- [15] SANS 3951-5:2008, Sequential sampling plans indexed by acceptance quality limit (AQL) for inspection by variables (known standard deviation)

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[16] BS EN 1706: 2020 + A1: 2021, Aluminium and aluminium alloys – Castings - Chemical composition and mechanical properties

[17] DIN EN 24017: 1992, Hexagon head screws: Product grades A and B

2.2.2 Informative

[18] 240-75884478:2020, Low Voltage Reticulation Section 1: Low-Voltage Overhead Reticulation

2.3 Definitions

2.3.1 General

The definitions, where applicable, as used in SANS 50483: Parts 1-6 and SANS 61284 shall apply to this specification.

2.3.2 Disclosure classification

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

2.4 Abbreviations

Abbreviation	Description
Al/Al	Aluminium to Aluminium
AQL	Acceptable quality level
PG	Parallel Groove
SANAS	South Africa National Accreditation System
Al	Aluminium
ABC	Aerial Bundle Conductor
AAAC	All Aluminium Alloy Conductor
ACSR	All Aluminium Conductor Steel Reinforced
LQ	Limiting Quality

2.5 Roles and responsibilities

Not applicable.

2.6 Process for monitoring

Not applicable.

2.7 Related/supporting documents

Superseded document - 34-1645 - parallel groove (PG) clamps (Al/Al) for low & medium voltage overhead power lines

3. Requirements

3.1 General requirements

- a) The PG Clamps (Al/Al) are required for use with conductors that have a diameter from 4 mm to 15 mm. The clamp shall function for all permutations of conductor size e.g. 15 mm main and 4 mm tap, or 4 mm main and 4 mm tap and so on.
- b) A sample, detail of design and all test certificates offered on a tender shall be submitted with a tender for each PG Clamp (Al/Al).
- c) PG Clamps (Al/Al) shall comply with the requirements of the type, sample and routine tests specified in the appropriate subclause.
- d) PG Clamps (Al/Al) shall be suitable for use on bare neutral ABC, AAAC and ACSR or a combination of these conductors.
- e) The PG Clamps (Al/Al) shall be designed to allow them to be fitted without having to dismantle components. All components of the connector shall be held captive when opened for fitting to the conductors.
- f) All components shall be free from sharp edges, burrs and swarf.
- g) All PG Clamps (Al/Al) shall be such that their current carrying capacity is greater than that of the largest conductor to which they are intended to be connected to.
- h) Grooves cut in PG clamps and contact surfaces shall be coated with a corrosion-inhibiting grease.
- i) To ensure good electrical connections, correct conductor installation practice shall be adhered to, i.e. wire brushing of conductor and greasing of contact surfaces.

The clauses in the Eskom Specification apply except the connectors shall be suitable for the main and tap conductor types and sizes stipulated from the relevant Buyers Guide drawings.

3.2 Design

The PG Clamp (Al/Al) shall be designed to:

- a) Avoid damaging the conductor when applied or during service,
- b) Withstand the mechanical loads relevant to installation, maintenance and service,
- c) Withstand the designed service current, including short-circuit current,
- d) Withstand the service temperatures and environmental circumstances (coastal, inland and pollution),
- e) Ensure that individual components are secured against becoming loose in service,
- f) Not generate radio interference voltages,
- g) Be suitably designed for safe and easy handling for live line maintenance,
- h) Avoid brittleness of finished parts by adopting a suitable materials and manufacturing process,
- i) Be used for non-tension joints and shall not reduce the electrical capability of the conductor or earth wire,
- j) Be designed to avoid localized pressures which may cause excessive cold flow of the conductor or earth wire material.

3.3 Materials

- a) The materials used to manufacture the PG Clamp body and bolts shall meet the service life requirements and shall not be susceptible to intergranular or stress corrosion cracking. They shall not cause corrosion of any other parts of the conductor or earth wire.

- b) The two bolts shall be manufactured from grade 316 stainless steel. They shall be M8 x 45 mm long hex heads in accordance with DIN EN 24017. Precautions need to be taken to prevent thread galling. The precautions are to be specified in the schedule. The bolts shall be able to be screwed securely into the aluminium threaded base.
- c) Each bolt shall have a grade 316 stainless steel washer. The outside diameter shall be 17 mm, the inside diameter shall be 8.4 mm, and the washer thickness shall be 2.5 mm.
- d) A PG clamp shall be manufactured to drawing number D-DT 3058.
- e) PG Clamp body to meet requirements of BS EN 1706: 2020 + A1: 2021

3.4 Electrical jointing compound

Jointing compound is required to provide low initial contact resistance and to prevent deterioration of the contact due to oxidation or corrosion, by excluding air and moisture from the contact surface.

The jointing compound shall be:

- a) Non-toxic and non-inflammable,
- b) Stable over a wide temperature range (the melting point shall be not less than 100 °C), and
- c) Neutral, relative to the metals being connected

Grease or paste shall comply with that specified in drawing D-DT-3178 or D-DT-3213

All PG Clamps (AI/AI) shall be individually packed, and contact surfaces covered in grease or paste. The type of compound and its chemical breakdown shall be given in schedule B of an enquiry document.

3.5 Dimensions

The dimensions shall be shown on the product drawings submitted with the tender.

Tolerances applied to dimensions shall ensure that fittings meet their specified mechanical and electrical requirements.

Where no standard or tolerance is referenced, the tolerance shall be $\pm 2\%$ of the dimension but not more than $\pm 0,7$ mm. All tolerances shall be subject to Eskom's approval. Clamps found to be outside of the specified tolerance will be rejected. Where manufacturer's tolerances are stipulated outside the Eskom requirements, reasons for these tolerances must be stipulated and accepted by Eskom before any production occurs.

3.6 Quality assurance

A quality assurance programme considering the requirements of this specification may be used by agreement between the purchaser and supplier to verify the quality of the fittings during the manufacturing process.

Detailed information on the use of quality assurance is given in SANS 9000, SANS 9001 and SANS 9004 standards.

3.7 Purchasing schedules A and B

These can be found in Annex B and a model Schedule A has been completed to depict Distribution's typical requirements. These requirements shall be studied carefully and the Schedule B in an enquiry document shall be completed in full. Any non-compliance with the stated requirements or any special points which must to be stated shall appear on the deviation sheet provided. Failure to complete the deviation sheet may result in a tender being rejected.

The Eskom requirements stated in Schedule A of an enquiry document may change from one enquiry to another without revision of the specification hence these schedules shall be carefully studied and completed for every enquiry.

4. Tests

4.1 General

All tests shall be conducted on new equipment and all samples undergoing testing shall be inspected visually for damage, before the test is carried out. The connectors and joints shall be installed in accordance with the manufacturer's instructions.

All conductors used in the following tests shall be tested mechanically, to ascertain that the breaking force is within the limits specified by the manufacturer before any tests are carried out.

Tests shall be conducted by, and the results certified by, a test authority that is an organization or a person approved by SANAS and Eskom Distribution and as specified in Schedule A. The tests shall be conducted at an ambient temperature of between 10 °C and 30 °C or as otherwise specified, and at a humidity of less than 80 %.

The tests shall be carried out as per Table 1.

Table 1: Tests for PG Clamps (AI/AI) (As per 1 in SANS 61284)

PG CLAMPS (AL/AL)				
Number	Test	Type Test	Sample Test	Routine Test
1.	Visual examination	x	x	x
2.	Dimensional and material verification	x	x	x
3.	Clamp bolt tightening test	x		
4.	Slip test	x		
5.	Heat cycle test	x		
6.	Corrosion test	x		

4.2 Type tests

4.2.1 General

Type tests as per SANS 61284 are intended to establish design characteristics. They are performed once and repeated only when the design or the material of the PG Clamp (AI/AI) is changed. The results of type tests shall be recorded as evidence of compliance with design requirements.

5.2.1.1 Application

PG Clamps (AI/AI) shall be subject to type tests in accordance with Table 1. In addition, other additional tests may be agreed between the purchaser and supplier.

4.2.2 Visual examination

Tests shall include a visual examination to ascertain conformity of the fittings, in all essential respects, with the product drawings. Deviations from the drawings shall be subject to agreement between supplier and purchaser and shall be appropriately documented as an agreement concession.

Sample tests include visual examination in accordance with 4.33 above. The visual examination shall ensure conformity of the manufacturing process, shape coating and surface finish of the clamp with the contract drawings. Particular attention shall be given to markings required and to the finish of surfaces which come into contact with the conductor.

Verification of marking may include marking required by the purchaser in order to verify inspection or testing (e.g. hardness tests, indent marks, inspectors' stamps, etc.).

4.2.3 Dimensional and material verification

Tests shall include verification of dimensions, in accordance with clause 4 above, to ensure that clamps are within the dimensional tolerances stated on contract drawings. The purchaser may choose to witness the measurements of selected dimensions or may inspect the supplier's documentation when this is available. Measuring devices / gauges shall be selected with regard to the required precision and accuracy. Documentary evidence of calibration of such devices shall be provided on request.

Routine tests shall include a specified level of dimensional checking when required by the contract quality plan.

Note: Particular attention should be given to those dimensions potentially affecting mechanical and/or electrical performance.

Type and sample tests shall also include verification of materials to ensure that they are in accordance with contract documents. This verification shall normally be carried out by the purchaser inspecting the supplier's documentation relative to material purchasing specifications, certificates of conformity, or other quality documentation. When agreed between the purchaser and supplier, material verification shall include tests appropriate to the material specification.

Routine tests shall include a specified level of material verification (including tests) when required by the contract quality plan.

4.2.4 Clamp bolt tightening test

Perform this test in accordance with clause 11.4.5 in SANS 61284. Test six PG Clamps (Al/Al): two on Hare main conductor and Hare branch conductor, two on Hare main conductor and Squirrel branch conductor, and two on Squirrel main conductor and Squirrel branch conductor.

Remove two PG Clamps (Al/Al) each from the three loops which passed the Corrosion and second Heat Cycle tests in 5.10 and test these six PG Clamps (Al/Al) as described above.

4.2.5 Slip test

Perform this test according to SANS 61284. Test six PG Clamps (Al/Al), two on Hare main conductor and Hare branch conductor, two on Hare main conductor and Squirrel branch conductor, and two on Squirrel main conductor and Squirrel branch conductor.

4.2.6 Heat cycle test

The test shall be performed as indicated in clause 13 of SANS 61284. Test three loops with four PG Clamps (Al/Al) installed on each loop as specified. One loop with Hare main conductor and Hare branch conductor, one loop with Hare main conductor and Squirrel branch conductor, and one loop with Squirrel main conductor and Squirrel branch conductor.

4.2.7 Corrosion test

Test the three loops (12 PG Clamps (Al/Al)) that passed the Heat Cycle in 5.2.7 above, then subject to the Corrosion Tests (Salt Spray) as per SANS 9227 and finally Heat Cycle Test again as per 5.2.7 above.

Test Procedure

Take the three loops that passed the heat cycle test and put them in an airtight salt spray cabinet for 500 hrs in accordance with SANS 9227. After the corrosion test, subject the three loops to the above heat cycle test again.

Acceptance criteria

After Corrosion Testing:

- a) all 12 PG Clamps (Al/Al) shall be free of any traces of detrimental corrosion;
- b) the markings specified shall be legible under normal viewing

After the second heat cycle test:

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- a) there shall be no significant change in the electrical characteristics of the PG Clamps (AI/AI) before the corrosion test.

Remove two PG Clamps (AI/AI) each from the three loops which passed the Corrosion and second Heat Cycle tests and perform the Clamp Bolt Tightening test on these six PG Clamps as described in 5.7.

4.3 Sample test

4.3.1 General

Sample tests are intended to verify the quality of materials and workmanship.

4.3.2 Application

PG Clamps (AI/AI) shall be subjected to sample tests listed in Table 1. The samples to be tested shall be selected at random from the lot offered for acceptance. The purchaser has the right to make the selection.

4.3.3 Sampling and acceptance criteria

Unless otherwise agreed between purchaser and supplier, the sampling plan procedures according to SANS 2859-1 (inspection by attributes), BS ISO 2859-2:2020 (Inspection by attributes) or SANS 3951-5 (inspection by variables) shall be applied.

For each sample test, the type of inspection (by attributes or by variables and detailed procedures inspection level, acceptable quality level, single, double or multiple sampling, etc.) shall be agreed between purchaser and supplier.

Note: Sampling inspection by variables is an acceptance sampling procedure to be used in place of inspection by attributes when it is more appropriate to measure on some continuous scale characteristic(s) under consideration. In the case of failure load test and similar expensive tests, better discrimination between acceptance quality and objective quality is available with acceptance sampling by variables than by attributes for the same sample size.

The purpose of the sampling process may also be important in the choice between a variables or attributes plan. For example, a purchaser may choose to use an attributes acceptance sampling plan to ensure that parts in a shipment lot are within a required dimensional tolerance; the manufacturer may make measurements under a variable sampling plan of the same dimensions because he/she is concerned with gradual trends or changes which may affect his/her ability to provide shipment lots which meet the AQL.

4.4 Routine tests

4.4.1 General

Routine tests are intended to prove conformance of PG Clamps (AI/AI) to specific requirements and shall be made on every clamp. The tests shall not damage the PG Clamp (AI/AI).

4.4.2 Application and acceptance criteria

Whole lots of PG Clamps (AI/AI) may be subjected to routine tests as listed in Table 1. PG Clamps (AI/AI) which do not conform to the requirements shall be discarded.

4.5 Test certificates and samples

4.5.1 Qualifying type test

One hard copy and one electronic copy of all type-test reports for PG clamps offered shall be supplied to Eskom for approval at tender stage. Certificates supplied for previous tenders shall be re-submitted

4.5.2 Production sample test

Eskom does not require copies of sample test certificates, but the manufacturer shall retain these certificates for a period of at least 2 years.

4.5.3 Traceability

The test certificates for each fitting shall be traceable by reference to the manufacturer's serial/fitting reference number marked on the fitting. A design drawing shall be included in each test certificate and signed/stamped by the testing facility as checked against the sample tested.

4.5.4 Samples

One new sample of each item specified shall be submitted for approval before the general manufacture commences. The type-tested samples shall be submitted with the first offer made on Eskom national tenders.

5. Marking/packing/selection/documentation

5.1 Identification and markings

All PG Clamps (AI/AI) shall be clearly and indelibly marked with the manufacturer's identification mark and clamp reference, which shall be described in the tender documentation. They shall also be marked to indicate the current rating and the maximum and minimum diameter of the conductor for which they are intended and the torque value to be applied for installation. The torque required to tension up the PG clamp shall also be marked on each PG clamp in NM, i.e. 15 Nm (see D-DT 3058).

5.2 Packing and protection

All PG Clamps (AI/AI) shall be individually packed, greased and sealed by the supplier. Packing shall be such as to permit easy identification of the components without their removal. The packing container shall protect the components against corrosive environments and mechanical damage. With every batch of twenty PG Clamps (AI/AI) supplied, an application guide shall be included by the manufacturer, stating the correct application of the PG Clamp (AI/AI). All PG clamps shall be individually packed.

Identical fittings shall be packed together in sealed transparent plastic bags. The thickness of all the plastic material used for plastic bags shall be not less than 100 µm.

On the outside of each container the following information shall be provided:

- a) product description;
- b) product code or part number;
- c) name of manufacturer and contact details;
- d) number of components of each type in the container;
- e) address of the destination;
- f) Eskom's purchase order number;
- g) Eskom's material SAP number(s).

If the product is supplied by a third-party supplier (e.g. importers, agents, etc.) the container shall also bear the following information on the outside of the container:

- a) name of the supplier/agent
- b) contact details of the supplier/agent

5.3 Documentation

- a) When so specified, type tests shall be supplied with the tender, and their certificate numbers shall be stated in schedule B.
- b) A test certificate stating the result of 4.5 above shall be supplied in duplicate with each consignment to every destination.
- c) All drawings shall clearly indicate all critical tolerances.

6. Authorization

This document has been seen and accepted by:

Name and surname	Designation
Thomas Jacobs	Senior Manager T & E (Acting)
Jutas Maudu	Senior Engineer Dx COE

7. Revisions

Date	Rev.	Compiler	Remarks
Aug 2025	2	A. Govender	Update 2.2.1 Normative to latest revisions Changed minimum conductor from Mole to squirrel, etc Updated Corrosion testing Updated Schedule Included additional Abbreviation Corrected grammar and layout of the document
Oct 2015	1	J Calitz J Calitz	Document updated on the latest SCOT template. Updated normative references. Updated abbreviations Updated Annex B Technical Schedule A & B Introduction – Reference to distribution group removed. 4.3 a) Corrosion cracking. 4.4 & 6.2 Greasing/packing requirement changed. 4.5 Tolerance requirements added. 5.8 Slip tests, Squirrel conductor has been replaced by Mole conductor to improve alignment of conductor range to slip testing requirements Document number changed

Date	Rev.	Compiler	Remarks
Oct 2011	1	S Mashaba	Document number changed to DSP 34-1645 Reformatted to a new template. Updated normative references. Errors fixed. 4.1.1 Conductor range (diameter) changed from 15mm to 17,5mm 4.6 ISO 9000-1 replaced by SANS 9000, ISO 9002 and ISO 9003 have been replaced by SANS 9001 and ISO 9004-1 replaced by SANS 9004 6.1 Required torque changed from 60 NM to 15NM according to D-DT 3058 Annex C New technical schedule A & B plus deviation schedule
Nov 2007	0	B Hill	There were no changes Document number changed to 34-1645
Sept 2005	1		New revision to document. DSP0033
Nov 2000	0		Original issue. SCSSCAAL4 replaced by DISSCAAL4

8. Development team

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

- Jacques Calitz Eskom Research, Testing and Development
- Leon Christiaans SI, Cape Coastal
- Adriaan Govender DX COE

9. Acknowledgements

Not applicable.

Annex A – Guide to purchasers on preparing an enquiry (informative)

1) General

Annex A provides the purchaser with a convenient aid to purchasing. Use of this form is intended to obviate the need for preparing a detailed technical specification.

The purchaser needs only specify compliance with this specification, provide the tenderers with details of his particular requirements, and set out the information he requires the tenderer to provide, as indicated below.

2) Schedules

Annex B provides the purchaser with a model schedule A and a schedule B for use in the preparation of his enquiry.

2.1 Schedule A

Schedule A lists the requirements to be specified by the purchaser in enquiries and orders. These requirements include references to the relevant sub-clauses in the normative references and this specification, to assist in compiling the schedules.

Where the text of any referenced standard stipulates that the purchaser shall indicate his requirements, these requirements should also be specified in schedule A.

2.2 Schedule B

The purchaser should require the tenderer to fill in this schedule. By doing this, the tenderer will state compliance with this specification and will provide the information the purchaser has requested.

3) Commercial conditions

A purchaser will furthermore need to indicate the commercial conditions applicable and draw up a price schedule. Requirements for delivery, storage, packing and marking should be attended to in this part of the enquiry.

4) Quality assurance

This specification does not cover the purchaser's requirements in respect of quality assurance, quality control, inspections etc., since each purchaser needs to consider the criticality of the application of each component, his own policy towards these matters, etc. Purchasers are referred to SANS 9000, SANS 9001 and SANS 9004 for guidance.

5) Testing

Attention should be paid to the subject of testing, and the related costs. Tests should be carried out by a competent party and tenderers should be requested to provide assurances on this point. Price schedules should be so drawn up and covering letters so worded that the costs of all services such as tests, delivery and spares are declared and allowed for in the tender. Before type tests and routine tests are carried out on samples, the number of samples used and the frequency of sampling should be agreed upon with the supplier.

6) Revision of standards used as normative references

This specification, as has been indicated, is based on a set of defined standards which may have been revised or amended. Most purchasers would, in principle, wish to employ the latest standards. The recommended approach to this question is to secure an undertaking from a supplier to review the latest versions and amendments and to incorporate these where possible and agreeable to both parties. A blanket commitment to work to the “latest” versions of standards creates legal difficulties of interpretation and risks for both parties and should be carefully assessed. This invariably cannot be done in the time available.

Annex B – Technical Schedules

Technical Schedules A and B for

PG CLAMPS (AI/AI) D3058

Schedule A: Purchasers specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

1	2	3	4
Item	Description	Schedule A	Schedule B
1	Product Information		
1.1	☐ Purchasing details		
1.1.1	SAP No		XXXXXXXXXX
1.1.2	Manufacturer	XXXXXXXXXX	
1.1.3	Country of origin	XXXXXXXXXX	
1.1.4	Manufacturer's Product Code	XXXXXXXXXX	
1.1.5	Drawing number & Revision number	XXXXXXXXXX	
1.1.6	Physical identification mark on product	XXXXXXXXXX	
1.1.7	Compliance to critical dimensions on Buyer's Guide	3058	
1.1.8	Item sample required	YES	
1.2	☐ Mechanical and electrical properties		
1.2.1	Material Grade/Material used:	XXXXXXXXXX	
1.2.2	PG Bolts	XXXXXXXXXX	
1.2.3	PG Body	XXXXXXXXXX	
1.2.4	Tensile strength MPa	XXXXXXXXXX	
1.2.5	Washer dimensions (Diameter and thickness)	XXXXXXXXXX	
1.2.6	Conductor range	XXXXXXXXXX	
1.2.7	Elongation mm	XXXXXXXXXX	
1.2.8	Anti galling measures taken?	XXXXXXXXXX	
1.2.9	Thread size	M8 bolt	XXXXXXXXXX
1.2.10	Filler content	XXXXXXXXXX	
1.2.11	Dielectric strength	XXXXXXXXXX	
1.2.12	Fabrication method		
	a) Extrusion	XXXXXXXXXX	
	b) Forging	XXXXXXXXXX	
1.2.13	Electrical jointing compound used/type as per D-DT-3178/3213	XXXXXXXXXX	

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1.3	☐ PG Clamps (AI/AI) are required for the following conductor types		
1.3.1	Cross-sectional area of the smallest conductor mm ²		XXXXXXXXXX
1.3.2	Breaking force of the smallest conductor kN		XXXXXXXXXX
1.3.3	Current rating @ 75 degrees Celsius of the smallest conductor A		XXXXXXXXXX
1.3.4	Cross-sectional area of the largest conductor mm ²		XXXXXXXXXX
1.3.5	Breaking force of the largest conductor kN		XXXXXXXXXX
1.3.6	Current rating @ 75 degrees Celsius of the largest conductor A		XXXXXXXXXX
2	Test Authority		
2.1	☐ Preferred person/organisation	SABS/NEFTA	XXXXXXXXXX
3	Electrical Jointing Compound	D-DT-3178/3213	
3.1	☐ General		
3.1.1	Trade name	XXXXXXXXXX	
3.1.2	Type of compound	XXXXXXXXXX	
3.1.3	Recommended quantity per fitting	XXXXXXXXXX	
3.1.4	Are grooves pre-treated and individually packed?	YES	
3.1.5	Source of supply	XXXXXXXXXX	
3.1.6	Temperature rating:		
	a) Continuous	XXXXXXXXXX	
	b) Maximum under short-circuit conditions	XXXXXXXXXX	
	c) Oil separation (4 hours @150C) Less than 0.1%	XXXXXXXXXX	
4	Documentation (to be submitted with tender) Note: All documentation to be provided in electronic format.		
4.1	☐ General		
4.1.1	Outline drawings of item Sets	1	
4.1.2	Material grade certification	YES	
4.2	☐ Test reports	Required	Report Number
4.2.1	Visual examination	YES	
4.2.2	Verification of general dimensions	YES	
4.2.3	Verification of material type	YES	
	Mechanical Tests	YES	
4.2.4	- Mechanical bolt tightening test (SANS 61284)	YES	
4.2.5	- Slip test (SANS 61284)	YES	
4.2.6	- Heat cycle test (SANS 61284)	YES	
4.2.7	- Corrosion test (SANS 9227)	YES	

NOTE: DEVIATION SCHEDULE CONTINUE ON NEXT PAGE. IF NO DEVIATIONS ARE MENTIONED ON THE DEVIATION SCHEDULE IT WILL BE ACCEPTED THAT THE SUPPLIER AND MANUFACTURER FULLY COMPLIES WITH THE REQUIREMENTS OF THE ESKOM SPEC

Deviation schedule

Any deviations from this specification shall be listed below with reasons for deviation. In addition, evidence shall be provided that the proposed deviation will at least be more cost-effective than that specified by Eskom.

Item	Clause	Proposed deviation

SIGNATURES

Supplier:

_____	_____	_____
Name (Print)	Sign	Date

Manufacturer:

_____	_____	_____
Name (Print)	Sign	Date

Eskom:

_____	_____	_____
Name (Print)	Sign	Date

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Annex C – Test Report Schedule

1	2		3	4
Item	Description	Test	Specification	Report Number
4.2.1	Visual examination	Type	SANS 61284	
4.2.2	Verification of general dimensions	Type	SANS 61284, 240-75883128, D-DT-3058	
4.2.3	Verification of material type	Type	SANS 61284, 240-75883128, DIN NE 24017, ANSI C119.4, D-DT-3058	
4.2.4	- Mechanical bolt tightening test	Type	SANS 61284	
4.2.5	- Slip test	Type	SANS 61284	
4.2.6	- Heat cycle test	Type	SANS 61284	
4.2.7	- Corrosion test	Type	SANS 9227 240-75883128	

SIGNATURES

Supplier:

Name (Print)	Sign	Date

Manufacturer:

Name (Print)	Sign	Date

Eskom:

Name (Print)	Sign	Date

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