



TITLE: SPECIFICATION FOR MV CABLES	REFERENCE	REV
	CP_TSSPEC_001	10
	DATE:	JULY 2024
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FOREWORD

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INTRODUCTION

The effect of a medium-voltage cable failure is generally severe in terms of customer outage as well as repair cost to City Power. It is therefore important to ensure that MV cables comply with the required specifications and are of acceptable quality. As this is difficult to manage within the present City Power business structures it has been decided that SANS support structures will be relied upon to manage compliance to specification as well as quality. The implication to suppliers is that City Power will only purchase cables that bear the relevant SANS mark.

1. SCOPE

This specification covers City Power’s requirements for medium voltage cables in accordance with SANS 1339.

2. NORMATIVE REFERENCES

The following document contains provisions that, through reference in the text, constitute requirements of this specification. At the time of publication, the editions indicated were valid. All standards and specifications are subject to revision, and parties to agreements based on this specification are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

SANS 1339: Electric cables – Cross-linked polyethylene (XLPE) insulated cables for rated voltages 3,8/6,6 kV to 19/33 kV

SANS 1411-7: Materials of insulated electric cables and flexible cords. Part 7: Polyethylene (PE)

3. DEFINITIONS AND ABBREVIATIONS

The definitions and abbreviations in SANS1339 shall apply to this specification.

4. REQUIREMENTS

4.1 General

The operating voltage of medium-voltage cables shall be;

- a) 6,35/11 kV; 12,7/22 kV or 19/33 kV
- b) The MV network is mostly solidly earthed and therefore only type A cables will be accepted
- c) Unique identifier tapes to be provided in each core

4.2 Conductors

The standard conductor shall be stranded aluminium with the cross-sectional (mm²) areas specified in table 1:

Table 1: Standard sizes medium voltage cables

Aluminium Rated voltage (kV) 11/22/33
70mm ² 3C

95mm ² 3C
120mm ² 3C
185mm ² 3C
300mm ² 1C
300mm ² 3C
500mm ² 1C
1000mm ² 1C
Copper Rated voltage (kV) 11/22/33
630mm ² 1C

4.3 XLPE cables

XLPE cables shall comply with the requirements of SANS 1339 and all requirements detailed in this specification.

4.3.1 Construction

4.3.1.1 Single-core cables shall be type A (aluminium wire armouring), to ensure that the armouring is non-magnetic.

4.3.1.2 Three-core cable shall be type A (steel wire armouring) to provide mechanical protection.

4.3.1.3 All cables shall be longitudinally water blocked. The material used for the longitudinally water blocking should not cause any thermal heating when not removed during jointing or terminating.

4.3.1.4 The manufacturer is responsible to advice of the methodology on whether or not to remove the water blocking material during termination and jointing.

4.3.2 Core identification

The cores of three-core cables shall be identified by the numbers 1, 2, 3, printed as numerals or words either directly on the extruded semi-conducting core screen or on the semi-conducting bedding tapes of each core, or by other acceptable means.

4.3.3 Outer sheath

The outer sheath shall be black PE (Polyethylene) type PS2, weather and ultraviolet (UV) radiation resistant in accordance with SANS 1411-7 and operating at higher temperatures up to 85 °C.

4.4 Symmetrical fault current ratings

Symmetrical fault current ratings are based on an adiabatic temperature rise of 160 °C from an operating temperature of 90 °C to a maximum short-circuit temperature of 250 °C. The symmetrical fault current ratings for aluminium conductor is given in table 2.

Table 2: Symmetrical Fault Current Ratings

Aluminium Conductor Size in mm²	Maximum Symmetrical fault current-carrying Capacity in KA for 1s
70	5.8
95	8.0
120	10.2
185	15.7
300	25.7
400	33.1
500	42.5
630	55
1000	88

4.5 Asymmetrical fault current ratings

Asymmetrical fault current levels shall be within the parameter’s requirements of SANS 1339.

5. TESTS

5.1 Routine Test, Sample Test and Type Test

Routine Test, Sample Test and Type Test shall be carried out on the cable in accordance with SANS 1339 and the list of the tests are as per Table 3 below. For routine test, City Power reserves the right to request to approve prototype testing before any ordering can commence

5.2 Site Acceptance Test (SAT)

The following on-site tests after installation shall be carried out as per SANS 1339

- a) AC voltage withstand test of the insulation
- b) Partial discharge (PD) measurements on site

Table 3: List of Tests

1	2	3	4
Component	Test property	Category	Test method

Conductor	Construction	S	SANS 1411-1
Conductor screen	Thickness	S	SANS 6284-2
	Measurement of insulation interface protrusions and voids	S	SANS 6284-1
XLPE insulation	Composition	S	SANS 1411-4
	Thickness	S	SANS 6284-1
	Measurement of voids and contaminants	S	SANS 6284-1
Core screen	Adhesion	S	SANS 6284-2
	Thickness	S	SANS 6284-2
	Measurement of insulation interface protrusions and voids	S	SANS 6284-1
Metal core screen	Assembly	R	Visual examination
	Wire size (where applicable)	S	By measurement
Fillers and binders	Acid gas emission	T	SANS 60754-2
Core(s)	Identification	R, S	Visual examination
	Laying up	R	Visual examination
Lead or lead alloy sheath (where applicable)	Composition	S ^a	SANS 6281-2
	Malleability	S	SANS 6281-2
	Thickness	S	SANS 6281-2
Bedding	Physical properties	S	SANS 1411-2 or SANS 1411-5
	Thickness	S	SANS 60811-201
	Acid gas emission	T	SANS 60754-2
Armour	Properties	S	SANS 1411-6
	Wire diameter	S	SANS 6283
Outer sheath	Physical properties	S	SANS 1411-2, SANS1411-5 or SANS1411-7
	Thickness	S	SANS 60811-201
	Acid gas emission	T	SANS 60754-2
Finished cable	Marking	R	Visual examination
	Conductor resistance	R	SANS 6282-1
	Resistivity of semi-conducting screens	S	SANS 6284-2
	Voltage withstand	R	SANS 6284-3
	Partial discharge test	R	SANS 6291

Table 3 (concluded)

1	2	3	4
Component	Test property	Category	Test method

	DC voltage test on outer sheath	R	SANS 6286
	Fire propagation	T	SANS 60332-3-24
	Smoke emission	T	SANS 61034-2
	Zero halogen emission	T	SANS 60754-2
	Reduced halogen emission	T	SANS 5956
Type approval test	Bending test	T	SANS 6284-3
	Load cycling test	T	SANS 6284-3
	Partial discharge test	T	SANS 6291
	Impulse voltage withstand	T	SANS 6284-3
	Four-hour high-voltage withstand	T	SANS 6284-3
	Water penetration test	T	Annex F of IEC 60502-2:2014
Ageing tests	50 Hz, 2 year test	T	SANS 6284-5
	500 Hz, 3 000 h test	T	SANS 6284-5
In column 3 of this table, a code letter is given that identifies each applicable test as suitable for use as a routine test (R), a sample test (S) or a type test (T).			

6. MARKING, LABELING AND PACKAGING

- 6.1 The cable marking shall comply with the requirements of SANS 1399
- 6.2 The cable shall be marked with a tape unique identification marking system. The purpose is to provide asset management information of the cable manufacturer’s details, specific drum number traceability and length. This shall be provided using a uniquely marked tape. The tape shall withstand production stresses and the cable operating temperature. The tape shall be in the conductor.
- 6.3 The manufacturer shall keep a secure database of all uniquely marked cables supplied to City Power
- 6.4 It shall be possible to prove ownership of the cable using either the asset management or conductor identification numbers at any given time.

7. DOCUMENTATION

Submit type test report as per SANS 1339

Documentation complying with the requirements of SANS 1339 shall be submitted in a catalogue format.

Details of the construction method and data sheet used in order to achieve longitudinal water blocking shall be provided.

8. QUALITY MANAGEMENT

A quality management certificate/systems shall be set up in order to assure the proper quality management of the MV cables during design, development, production, installation and servicing phases. Guidance on the requirements for a quality management plan may be found in the ISO 9001:2015. The details shall be subject to agreement between City Power and the Supplier.

9. ENVIRONMENTAL MANAGEMENT

An environmental management certificate/systems shall be set up in order to ensure proper management and compliance of the MV cables during installation operation, maintenance, and decommissioning phases. Guidance on the requirements of a health and safety plan may be found in OHSAS 14001:2015 standards. This is to ensure that the asset conforms to standard operating procedures and City Power SHERQ Policy. The details shall be subject to agreement between City Power and the Supplier.

10. HEALTH AND SAFETY

A health and safety certificate/systems shall be set up in order to ensure proper management of MV cables and compliance of the queuing system during installation, operation, maintenance, and decommissioning phases. Guidance on the requirements of a health and safety plan may be found in OHSAS 45001:2018 standards. This is to ensure that the asset conforms to standard operating procedures and City Power SHERQ Policy. The details shall be subject to agreement between City Power and the Supplier.

ANNEXURE A - BIBLIOGRAPHY

NRS 013: Medium-Voltage Cables

ANNEXURE B - REVISION INFORMATION

DATE	REV. NO.	NOTES
September 2002	0	First issue
August 2003	1	Add in complete Annex C – Technical Schedules
August 2005	2	Addition of 300 mm ² 3 core Type A XLPE cable Addition of 185 mm ² 1 core Type B XLPE cable General editing Updating of Annex D
July 2011	3	<p>4.4.1.1 Single-core XLPE cables shall be type A (aluminium wire armouring).</p> <p>4.4.1.3 Longitudinal water blocking is required on all XLPE cables.</p> <p>5 TESTS Due to the importance of longitudinal water blocking, the water penetration type test (SANS 1339) for cables complying with clause 4.4.1.3 shall be carried out.</p> <p>7 DOCUMENTATION Details of the construction method used in order to achieve longitudinal water blocking required in clause 4.4.1.3. shall be provided.</p> <p>Addition of Environmental Management – section 9</p> <p>Annexure D - New SAP 2742 - CABLE 6,35 / 11KV, 630 MM SQ COPPER CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, LEAD ALLOY E COVERED AND HAVING A BLACK PVC OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.</p> <p>Annexure D - Removed SAP 5090</p> <p>Annexure D – Added item 2 SAP 5012 and 5 SAP 5013</p>
2014	4	Added aluminium conductor sizes Edited the unique identifier tapes Removed the paper cables from the specification Changed title

June 2017	5	<p>2. Normative Reference,</p> <p>Added SANS 1411-7: Materials of insulated electric cables and flexible cords. Part 7: Polyethylene (PE)</p> <p>4.3.3 Outer Sheath</p> <p>Added, weather and ultraviolet (UV) radiation resistant in accordance with SANS 1411-7 and operating at higher temperatures up to 85 °C.</p> <p>4.4 Symmetrical fault current ratings</p> <p>Symmetrical fault current ratings Symmetrical fault current ratings are based on an adiabatic temperature rise of 160 °C from an operating temperature of 90 °C to a maximum short-circuit temperature of 250 °C. The symmetrical fault current ratings for copper and aluminium conductors are given in table 2. Maximum Symmetrical fault current ratings for 1s. Table 2: Symmetrical Fault Current Ratings.</p> <p>TECHNICAL SCHEDULES A & B. Items No 1 to 18, Sub-clause 4.3 & 4.4, updated to Maximum symmetrical fault level for 1s, and updated Schedule A kA rating.</p> <p>Material Group: Cable MV</p> <p>Added SAP Short description: CAB 22 XLPE 300 3C AL SWA, added SAP Long Description: Cable 12.7 / 22kv, 300 mm² Aluminium Conductor, Three Core, XLPE Insulated, Screened, PVC Bedded, Steel Wire Armoured and having a black Polyethylene Outer Sheath. Added SAP No: 3326</p>
August 2018	6	<p>Updated work group</p> <p>Incorporated CP_TSSPEC_154 to CP_TSSPEC_001</p> <p>Added list of test that shall be conducted</p> <p>Added clause 10: Health and Safety</p> <p>Technical Schedule: Annexure D updated</p>
September 2018	7	<p>Copper discontinued as a conductor</p> <p>Removed SAP No. 3321, 5012, 413, 1089, 5013, and 3325 from Annexure C and D</p>
March 2021	8	<p>Annexure D - New SAP 2742 - CABLE 6,35 / 11KV, 630 MM SQ copper conductor, single core, XLPE Insulated, Screened, Lead alloy covered and having a black pvc outer sheath. item specification NO. CP_TSSPEC_001.</p> <p>Clause 4.5, Asymmetrical fault current ratings</p>
October 2023	9	<p>Annexure D- New SAP XXXX CAB 11 XLPE 70 3C AL SWA Added new study committee</p>

SPECIFICATION FOR MV CABLES

REFERENCE

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CP_TSSPEC_001

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July 2024

10 Replace SAP 911 with SAP 3235

Reinstated SAP 3327 CAB 22 XLPE 1000 1C AL SWA

TECHNICAL SCHEDULES A AND B

ITEM 1: CAB 11 XLPE 120 3C AL SWA (SAP 3231)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 2: CAB 11 XLPE 185 3C AL SWA (SAP 3232)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	11	
4	4.2	Number of cores (1 or 3 core/s)	3	
5	4.2	Conductor size mm ²	185	
6	4.3	Cable type XLPE	XLPE	
7	4.4	Maximum symmetrical fault level for 1s (SANS1339) kA	15.7	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 2: CAB 11 XLPE 185 3C AL SWA (SAP 3232)

DEVIATION SCHEDULE

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NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 3: CAB 11 XLPE 300 1C AL UARM (SAP 3235)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 4: CAB 11 XLPE 300 3C AL SWA (SAP 3234)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	11	
4	4.2	Number of cores (1 or 3 core/s)	3	
5	4.2	Conductor size mm ²	300	
6	4.3	Cable type XLPE	XLPE	
7	4.4	Maximum symmetrical fault level for 1s (SANS 1339) kA	25.7	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

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 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 4: CAB 11 XLPE 300 3C AL SWA (SAP 3234)

DEVIATION SCHEDULE

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Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 5: CAB 11 XLPE 500 1C AL AWA (SAP 3324)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description		Schedule A	Schedule B
1		Manufacturer's name		Required	
2		Country of Origin		Required	
3	4.1	System operating voltage	kV	11	
4	4.2	Number of cores	(1 or 3 core/s)	1	
5	4.2	Conductor size	mm ²	500	
6	4.3	Cable type	XLPE	XLPE	
7	4.4	Maximum symmetrical fault level for 1s (SANS 1339)	kA	42.5	
8	4.5	Earth fault level (1s)	kA	Required	
9	6	Marking requirements		Required	
10	7	Technical Catalogue to be provided with tender documentation		Required	
11	7	Certified copy of type test to be provided with tender documentation	XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letters

Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 5: CAB 11 XLPE 500 1C AL AWA (SAP 3324)

DEVIATION SCHEDULE

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Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 6: CAB 11 XLPE 630 1C CU AWA (SAP 2742)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A & B

ITEM 7: CAB 11 XLPE 1000 1C AL AWA (SAP 3236)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	11	
4	4.2	Number of cores (1 or 3 core/s)	1	
5	4.2	Conductor size mm ²	1000	
6	4.3	Cable type XLPE	XLPE	
7	4.4	Maximum symmetrical fault level for 1s (SANS 1339) kA	88	
8	4.5	Earth fault level(1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 7: CAB 11 XLPE 1000 1C AL AWA (SAP 3236)

DEVIATION SCHEDULE

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Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 8: CAB 22 XLPE 300 1C AL AWA (SAP 4142)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	22	
4	4.2	Number of cores (1 or 3 core/s)	1	
5	4.2	Conductor size mm ²	300	
6	4.3	Cable type XLPE	XLPE	
7	4.4	Maximum symmetrical fault level for 1s (SANS 1339) kA	25.7	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 8: CAB 22 XLPE 300 1C AL AWA (SAP 4142)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 9: CAB 22 XLPE 300 3C AL SWA (3326)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 10: CAB 22 XLPE 500 1C AL AWA (SAP 3328)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	22	
4	4.2	Number of cores (1 or 3 core/s)	1	
5	4.2	Conductor size mm ²	500	
6	4.3	Cable type XLPE	XLPE	
7	4.4	Maximum symmetrical fault level for 1s (SANS 1339) kA	42.5	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓ ✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 10: CAB 22 XLPE 500 1C AL AWA (SAP 3328)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 11: CAB 22 XLPE 630 1C AL AWA (SAP 3329)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 12: CAB 22 XLPE 1000 1C AL SWA (SAP 3327)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 13 CAB 33 XLPE 300 3C AL SWA (SAP 3452)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	33	
4	4.2	Number of cores (1 or 3 core/s)	3	
5	4.2	Conductor size mm ²	300	
6	4.3	Cable type XLPE	XLPE	
7	4.4	Symmetrical fault level (SANS1339) kA	25.7	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 13: CAB 33 XLPE 300 3C AL SWA (SAP 3452)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 14: CAB 33 XLPE 300 1C AL AWA (SAP 4293)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	33	
4	4.2	Number of cores (1 or 3 core/s)	1	
5	4.2	Conductor size mm ²	300	
6	4.3	Cable type XLPE	XLPE	
7	4.4	Symmetrical fault level (1S)SANS 1339 kA	25.7	
8	4.5	Earth fault level(1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 14: CAB 33 XLPE 300 1C AL AWA (SAP 4293)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 15: CAB 33 XLPE 185 3C AL SWA (SAP 4294)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	33	
4	4.2	Number of cores (1 or 3 core/s)	3	
5	4.2	Conductor size mm ²	185	
6	4.3	Cable type XLPE	XLPE	
7	4.4	Symmetrical fault level (SANS 1339) kA	15.7	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 15: CAB 33 XLPE 185 3C AL SWA (SAP 4294)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 16: CAB 33 XLPE 185 1C AL AWA (SAP 4295)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	33	
4	4.2	Number of cores (1 or 3 core/s)	1	
5	4.2	Conductor size mm ²	185	
6	4.3	Cable type Paper / XLPE	XLPE	
7	4.4	Symmetrical fault level (SANS 1339) kA	15.7	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 16: CAB 33 XLPE 185 1C AL AWA (SAP 4295)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 17: CAB 33 XLPE 500 1C AL AWA (SAP 3453)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	33	
4	4.2	Number of cores (1 or 3 core/s)	1	
5	4.2	Conductor size mm ²	500	
6	4.3	Cable type Paper / XLPE	XLPE	
7	4.4	Symmetrical fault level (SANS 1339) kA	15.7	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 17: CAB 33 XLPE 500 1C AL AWA (SAP 3453)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 18: CAB 33 XLPE 630 1C AL AWA (SAP 3462)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description	Schedule A	Schedule B
1		Manufacturer's name	Required	
2		Country of Origin	Required	
3	4.1	System operating voltage kV	33	
4	4.2	Number of cores (1 or 3 core/s)	1	
5	4.2	Conductor size mm ²	630	
6	4.3	Cable type Paper / XLPE	XLPE	
7	4.4	Symmetrical fault level (SANS 1339) kA	55	
8	4.5	Earth fault level (1s) as per SANS 1339 kA	Required	
9	6	Marking requirements	Required	
10	7	Technical Catalogue to be provided with tender documentation	Required	
11	7	Certified copy of type test to be provided with tender documentation XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
 Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 18: CAB 33 XLPE 630 1C AL AWA (SAP 3462)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 19: CAB 33 XLPE 1000 1C AL AWA (SAP 3464)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 20: CAB 11 XLPE 95 3C AL SWA (SAP 4296)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

ANNEXURE C - TECHNICAL SCHEDULES A AND

TECHNICAL SCHEDULES A AND B

ITEM 21 : CAB 11 XLPE 70 3C AL SWA (SAP 4921)

Schedule A: Purchaser's specific requirements

Schedule B: Guarantees and technical particulars of equipment offered

Item	Sub-clause of CP_TSSPEC_001	Description		Schedule A	Schedule B
1		Manufacturer's name		Required	
2		Country of Origin		Required	
3	4.1	System operating voltage	kV	11	
4	4.2	Number of cores	(1 or 3 core/s)	3	
5	4.2	Conductor size	mm ²	70	
6	4.3	Cable type	XLPE	XLPE	
7	4.4	Maximum symmetrical fault level for 1s (SANS 1339)	kA	5.8	
8	4.5	Earth fault level as per SANS 1339	kA (1s)	Required	
9	6	Marking requirements		Required	
10	7	Technical Catalogue to be provided with tender documentation		Required	
11	7	Certified copy of type test to be provided with tender documentation	XLPE SANS 1339	Required	

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters Signature

Full name of company: _____

TECHNICAL SCHEDULES A AND B

ITEM 21 : CAB 11 XLPE 70 3C AL SWA (SAP 4921)

DEVIATION SCHEDULE

Any deviations offered to 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 City Power.

Item No.	Sub-clause of CP_TSSPEC_001	Proposed deviation

NOTE: TICKS [✓✗], ASTERISK [*], WORD [NOTED], OR TBA [TO BE ADVISED] SHALL NOT BE ACCEPTED.

Tender Number: _____

Tenderer's Authorised Signatory: _____
Name in block letters
Signature

Full name of company: _____

ANNEXURE D – STOCK ITEMS

Item	SAP No.	SAP Short Description	SAP Long Description
1	3231	CAB 11 XLPE 120 3C AL SWA	CABLE 6,35 / 11KV, 120 MM SQ ALUMINIUM CONDUCTOR, THREE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
2	3232	CAB 11 XLPE 185 3C AL SWA	CABLE 6,35 / 11KV, 185 MM SQ ALUMINIUM CONDUCTOR, THREE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
3	3235	CAB 11 XLPE 300 1C AL UARM	CABLE 6,35 / 11KV, 300 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, UNARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.
4	3234	CAB 11 XLPE 300 3C AL SWA	CABLE 6,35 / 11KV, 300 MM SQ ALUMINIUM CONDUCTOR, THREE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
5	3324	CAB 11 XLPE 500 1C AL AWA	CABLE 6,35 / 11KV, 500 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
6	2742	CAB 11 XLPE 630 1C CU AWA	CABLE 6,35 / 11KV, 630 MM SQ COPPER CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
7	3236	CAB 11 XLPE 1000 1C AL AWA	CABLE 6,35 / 11KV, 1000 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
8	4142	CAB 22 XLPE 300 1C AL AWA	CABLE 12.7 / 22KV, 300 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
9	3326	CAB 22 XLPE 300 3C AL SWA	CABLE 12.7 / 22KV, 300 MM SQ ALUMINIUM CONDUCTOR, THREE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
10	3328	CAB 22 XLPE 500 1C AL AWA	CABLE 12.7 / 22KV, 500 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
11	3329	CAB 22 XLPE 630 1C AL AWA	CABLE 12.7 / 22KV, 630 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND HAVING A BLACK

			POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
12	3327	CAB 22 XLPE 1000 1C AL SWA	CABLE 12.7 / 22KV, 1000 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
13	3452	CAB 33 XLPE 300 3C AL SWA	CABLE 19 / 33KV, 300 MM SQ ALUMINIUM CONDUCTOR, THREE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.
14	4293	CAB 33 XLPE 300 1C AL AWA	CABLE 19 / 33KV, 300 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.
15	4294	CAB 33 XLPE 185 3C AL SWA	CABLE 19 / 33KV, 185 MM SQ ALUMINIUM CONDUCTOR, THREE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.
16	4295	CAB 33 XLPE 185 1C AL AWA	CABLE 19 / 33KV, 185 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.
17	3453	CAB 33 XLPE 500 1C AL AWA	CABLE 19 / 33KV, 500 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.
18	3462	CAB 33 XLPE 630 1C AL AWA	CABLE 19 / 33KV, 630 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.
19	3464	CAB 33 XLPE 1000 1C AL AWA	CABLE 19 / 33KV, 1000 MM SQ ALUMINIUM CONDUCTOR, SINGLE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, ALUMINIUM WIRE ARMoured AND BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001.
20	4296	CAB 11 XLPE 95 3C AL SWA	CABLE 6,35 / 11KV, 95 MM SQ ALUMINIUM CONDUCTOR, THREE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001
21	4921	CAB 11 XLPE 70 3C AL SWA	CABLE 6,35 / 11KV, 70 MM SQ ALUMINIUM CONDUCTOR, THREE CORE, XLPE INSULATED, SCREENED, PVC BEDDED, STEEL WIRE ARMoured AND HAVING A BLACK POLYETHYLENE OUTER SHEATH. ITEM SPECIFICATION NO. CP_TSSPEC_001