



NORTH BIHAR POWER DISTRIBUTION CO. LTD.

[Office of Chief Engineer, Project-I/Urban]

(Regd. Office: Vidyut Bhawan, Bailey Road, Patna)

CIN No: U40109BR2012SGC018920

Letter No: 2030

[File No:-N-XIII/RDSS/VA/Muzaffarpur Circle-3117/2023-

Dated: 20-12-23

E-mail: cerdssnbpdc@gmail.com

From,

Shriram Singh
Chief Engineer, Project-I (Urban)

To,

M/s Ashoka Buildcon Ltd
S.No.-861, Ashoka House,
Ashoka Marg, Vadala, Nashik-422011
E-mail:-ajay.kankariya@ashokabuildcon.com

Sub:- Regarding approval of GTP & Drawing of Heat Shrinkable Termination & Jointing Kits upto 11 KV of make M/s Compaq Internation (P) Ltd., Yamuna Nagar, Haryana for Loss Reduction Component works under "Revamped Reforms-Based and Results-Linked Distribution Sector Scheme."

**Ref:- (i) NOA No.-250 & 251 dated 06.03.2023
(ii) Your letter no.-626 dated 19.12.2023**

Sir,

With reference to the above, please find the copy of approved GTP & Drawing of following item for Loss Reduction Component works under "Revamped Reforms-Based and Results-Linked Distribution Sector Scheme":-

S.N.	Material Description	Vendor Name
1	Heat Shrinkable Indoor & Outdoor Termination and Straight through Jointing Kit upto 11 KV	M/s Compaq Internation (P) Ltd., VPO Shasipur, Khujuri Road, Yamuna Nagar-135001, Haryana

Correction where required in GTP & Drawing submitted by you has been done. However, these drawings shall be subject to correctness as per technical specifications of the tender document and the entire responsibility of correctness of the drawing as per the specifications as well as supply of material according to the technical specifications of the contract agreement shall be that of the contractor.

In case of any conflict or contradiction between GTP/Drawing & Technical Specifications, the decision of Chief Engineer, Project-I (Urban) shall be final and binding on both parties. Contractor shall have to replace the material to the entire satisfaction of the purchaser in case the material is found unsuitable for use in the project, at any stage.

Please carry out the works immediately under the conditions stated above.

Encl:- As above

Yours faithfully

(Shriram Singh)

Chief Engineer, Project-I (Urban)

Memo No.- 2030

Dated- 20-12-23

Copy forwarded **M/s Vindhya Telelinks Limited**, Club 125, 6th floor, Tower A, Plot No- 3, 4 & 5, Sector 125, Noida, UP-201301 / **M/s Polycab India Ltd.**, Polycab House, 771, Pandit Satwalekar Marg, Mumbai / **M/s NCC Ltd.**, NCC House, Survey no. 64, Madhapur, Hyderabad, 500081 for information and necessary action.

Encl:-As above

(Shriram Singh)

Chief Engineer, Project-I (Urban)

Memo No.- 2030

Date- 20-12-23

Copy forwarded to Chief Engineer, Project-II, NBPDC for information and necessary action.

Encl:-As above

(Shriram Singh)

Chief Engineer, Project-I (Urban)

1311



Customer : Ashoka Buildcon LTD.
Project : NBPDC

GTP 11KV XLPE Kits

**SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS
FOR H.S. TYPE END TERMINATIONS & ST. JOINTS
FOR 11KV (E) XLPE UG AND AB CABLE.**

- 1. Manufacturer's Name And Address :- Compaq International Private Limited,
VPO-Shadipur, Khajuri Road,
Yamunanagar-135001, Haryana (India)
- 2. Brand Name And Country Of Origin :- India
- 3. Voltage Rating :- 11KV
- 4. Type Of Kit Offered :- Heat Shrink Type
- 5. Applicable Standard :- IS-13573 (Part 2/2011)
- 6. Size And Weight :- (Approx. For Shipping & Storage Purpose Only
Not For Acceptance Test)

FOR 3 CORE XLPE (UG) (ARMOURED) CABLE

Outdoor Termination			Indoor Termination			St. Th. Joint		
Kit size (mm ²)	Box size (Inch)	Weight (Approx)	Kit size (mm ²)	Box size (Inch)	Weight (Approx)	Kit size (mm ²)	Box size (Inch)	Weight (Approx)
3x35 - 95	25x5x5	1.2-1.5KG	3x35-95	18x5x5	1.0-2.0KG	3x35-95	42X6X6	3.5-4.5KG
3x120 - 300	25x7.2x6	2.0-2.5KG	3x120-300	18x7.2x6	1.5-2.5KG	3x120-300	42X8X8	4.5-5.5KG
3x400	25x8x8	2.5-3.0KG	3x400	18x8x8	2.0-2.5KG	3x400	49X8X8	5.5-6.5KG

FOR 1 CORE XLPE (UG) (ARMOURED) CABLE

Outdoor Termination			Indoor Termination			St. Th. Joint		
Kit size (mm ²)	Box size (Inch)	Weight (Approx)	Kit size (mm ²)	Box size (Inch)	Weight (Approx)	Kit size (mm ²)	Box size (Inch)	Weight (Approx)
1x35 - 95	25X4X4	1.0-1.5KG	1x35 - 95	21X4X4	0.5-1.0KG	1x35 - 95	33X4X4	2.0-2.5KG
1x120 - 400	25X5X5	1.5-1.9KG	1x120 - 400	21X5X5	1.0-1.9KG	1x120 - 400	41X6X6	2.5-3.0KG
1x500-630	25X5X5	1.5-2.0KG	1x500-630	21X5X5	2.0-2.5KG	1x500-630	41X8X8	3.0-3.5KG
1X800-1000	25X5X5	2.0-2.5KG	1X800-1000	21X5X5	2.0-2.8KG	1X800-1000	41X8X8	3.5-4.0KG

FOR 1 CORE AB CABLE

Outdoor Termination			St. Th. Joint		
Kit size (mm ²)	Box size (Inch)	Weight (Approx)	Kit size (mm ²)	Box size (Inch)	Weight (Approx)
3x1X35 - 95	20X5X5	1.2-1.5KG	3x1X35 - 95	42X6X6	3.5-4.5KG
3x1X120 - 300	20X7.2X6	2.0-2.5KG	3x1X120 - 300	49X8X8	4.5-5.0KG

Subject to the condition that you are not absolved to the responsibility of correctness of materials

Note - Box size & weight indicated above are for estimating Transport + Storage & not for Quality Control Purpose.

- 7. Material of Tubing :- Heat Shrink Tubing Of Modified Polyolefin Based
- 8. Installation Time :- After Cable Preparation,
Approx 45 Minutes For 3c Terminations Approx 2 Hours for 3c St. Th. Jointing
Approx 15 Minutes for 1c Terminations

9. Curing Time :- No Curing Time.



Checked

Handwritten signatures and initials, including AEE(P-1), EEE(P-1), and ESE(P-1)

- 10. Time Required for Energisation :- No Time Delay for Energisation After Completion
- 11. Kit Storage Temperature :- Store Indoor Up to 50 Degree Centigrade
- 12. i) Shelf Life of Kit :- Over 5 Years at Temp. Up to 50°C
ii) Design Life of Kit :- Over 30 Years
- 13. Material Used for Stress Control :- Heat Shrink Semiconducting Modified Polyolefin Tubing + Mastic
- 14. Material Used for Environmental Sealing :- Heat Shrink Material/ Hot Melt Adhesive.
- 15. Dielectric Strength Of Core Insulating :- 10 KV/mm (Min.) As Per IEC-243. Material (Kv/mm.)
- 16. Volume Resistivity :- As per ASTM D - 257
A) Stress Control Tubing :- 1×10^9 Ohms Cms. (min.)
B) Non Tracking Tubing :- 1×10^{12} Ohms Cms. (min.)
- 17. Tensile Strength :- As per ISO- 37
A) Stress Control Tubing :- 10N/Sq.mm (min.)
B) Non Tracking Tubing :- 8N/Sq.mm (min.)
- 18. Ultimate Elongation :- As per ISO-37
A) Stress Control Material :- 200%(min.)
B) Non Tracking Material :- 200%(min.)
- 19. Tracking Resistance :- As per ASTM D - 2303
A) Stress Control Material :- Not Applicable
B) Non Tracking Material :-

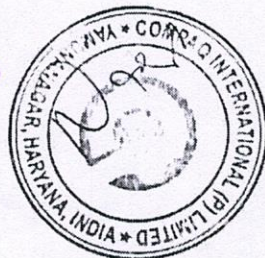
2.5 KV -1 Hr
2.75 KV -1 Hr
(Pass Criteria as per ASTM D-2303)
3.0 KV -1 Hr
3.25 KV -20 Minutes
(Test till failure as per Above)

20. Completeness of Kit contents :- As per approved GA drawing & Kit contents

Krishna
Checked
(Signature)
AEE(P-1) EEE(P-1) ESE(P-1)

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**CE (Project-1), Urban
NBPDC**





21. Guaranteed Performance of installed Kits : (Based on Type Test Report as per IS: 13573 Part-II (2011))

Property	Unit	Indoor Termination	Outdoor Termination	St. Thru. Joint
AC (dry) withstand	kV	28.6	28.6	28.6
AC (wet) withstand	kV	Not Applicable	25.4	Not Applicable
Impulse withstand	kVp	75	75	75
Load Cycles test	°C	95°C-100°C	95°C-100°C	95°C-100°C
(a) Temp. of conductor during heating cycle				
(b) Duration of heating after steady state temp.	Hrs.	2	2	2
(c) Total duration cycle	Hrs.	8	8	8
(d) Duration of Colling	Hrs.	3	3	3
(e) No. of cycles	Hrs.	60	60	30 in air + 30 under water
(f) Continues phase to ground voltage withstand	kV	47.5	47.5	47.5
Partial discharge	PC @ 1.73 Uo	<10	<10	<10
Thermal Short Circuit current withstand 1 sec.(Is)	Deg C for 1 sec	250	250	250
Dynamic Short Circuit withstand	kA	2.55 X Is	2.55 X Is	2.55 X Is
Humidity test	kV	300hrs. at 7.93 kV	Not Applicable	Not Applicable
Salt Fog test	Hrs.	Not Applicable	1000 at 8 kVrms	Not Applicable

22. Acceptance Test:-

Test	GTP Sr.No.	Sampling Plan
Completeness of kit contents	20	One Percent of each type & size
Tensile Strength	17	One Piece of each type & size
Ultimate Elongation	18	One Piece of each type & size
Volume Resistivity	16	One Piece of each type & size
Dielectric Strength	15	One Piece of each type & size

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 AEE(P-1) EEE(P-1) ESE(P-1)

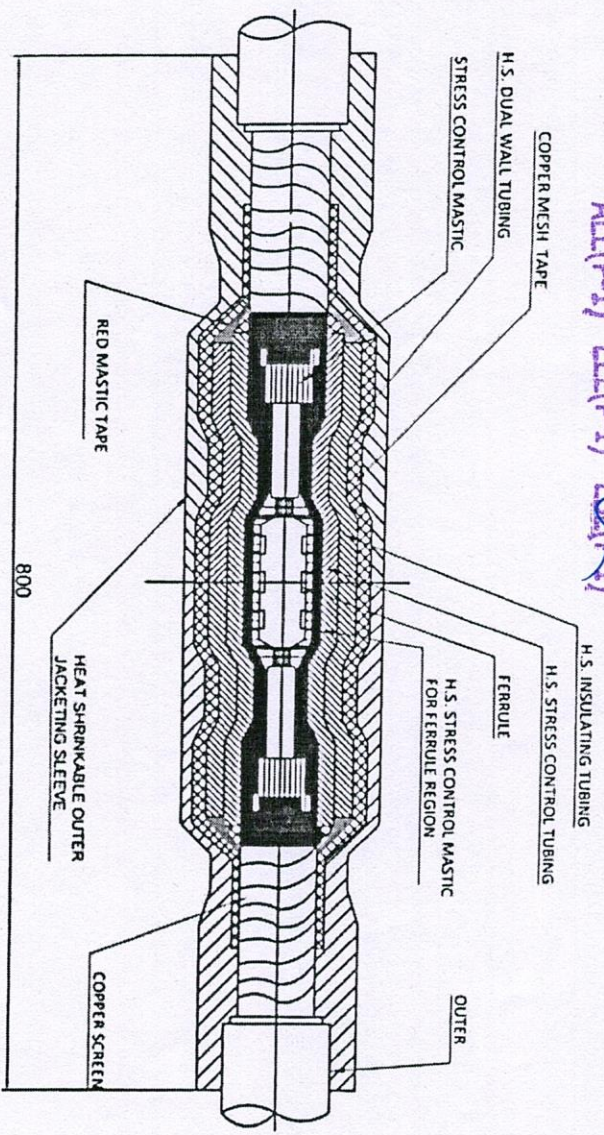
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HEAT SHRINKABLE STRAIGHT JOINTS FOR 11KV XLPE AB CABLE

Checked
 AEEP-1) EEEP-1) ISPP-1)



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 NBPDCL



S.No.	Cable Size (mm ²)	Qty.
1	3 X 1 X 3.5-95	1No.
2	3X1X120-300	1No.

S.No.	Item Description	Qty.
1.	Heat shrinkable outer jacketing sleeve-- 800mm	1No.
2.	Heat shrinkable stress control tubing-- 370mm	1No.
3.	Heat shrinkable insulating tubing-- 360mm	1No.
4.	Heat shrinkable dual wall tubing -- 350mm	1No.
5.	Stress control mastic for ferrule region.	25strips
6.	Stress relief tape for insulation screen end.	25strips
7.	Red mastic tape	45strips
8.	Tinned copper mesh tape.	1Roll
9.	Copper binding wire.	1Roll
10.	Inline connector (Ferrule)	1No.
11.	Nylon String	1No.
12.	Alloxite emery tape (80, 150 & 220 Grit)	15Strip Each
13.	Silicon grease	1No.
14.	Cleaning tissue	3Pcs.
15.	Mopping cloth	1Pc.
16.	Detailed installation instruction manual	1NO.

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 ISO 9001:2000
 ISO 14001:2004
 ISO 18001:2008
 COMPANY

COMPAG INTERNATIONAL (P) LIMITED
 YAMUNA NAGAR-HARYANA(INDIA)

TITLE: HEAT SHRINKABLE STRAIGHT THROUGH JOINTS FOR 11KV / 3 CORE XLPE AB CABLE

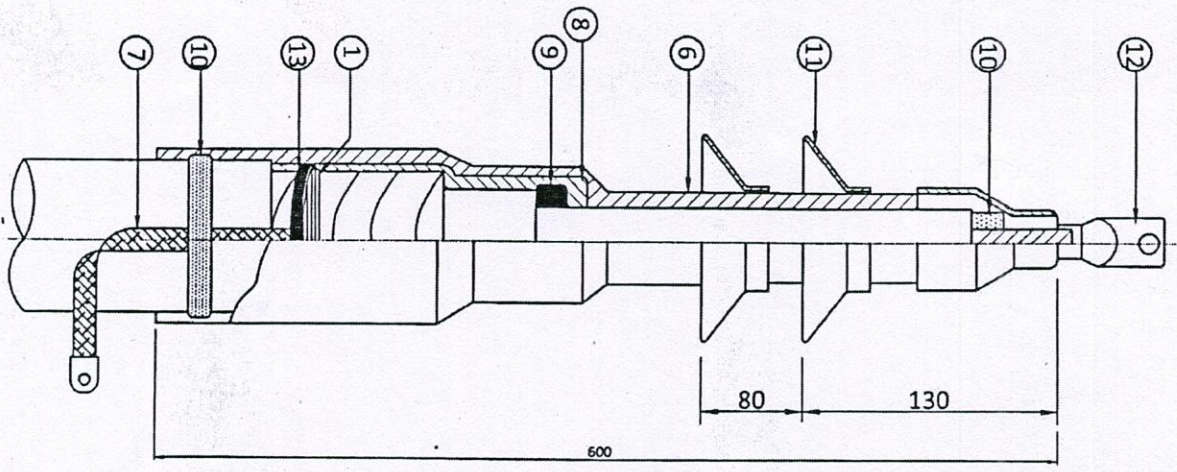
DATE: 22.07.14

SCALE: MS

DRAWING SIZE: A4

DRAWING NO.: COMPAG/14/17

GENERAL TOLERANCE: ±10%



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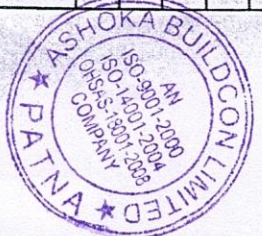
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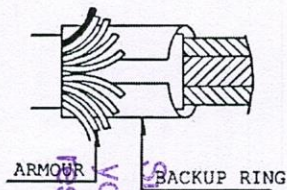
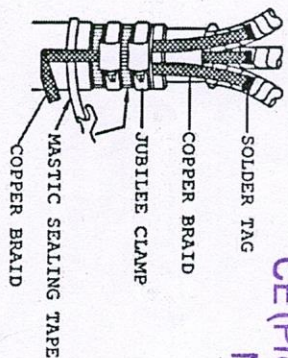
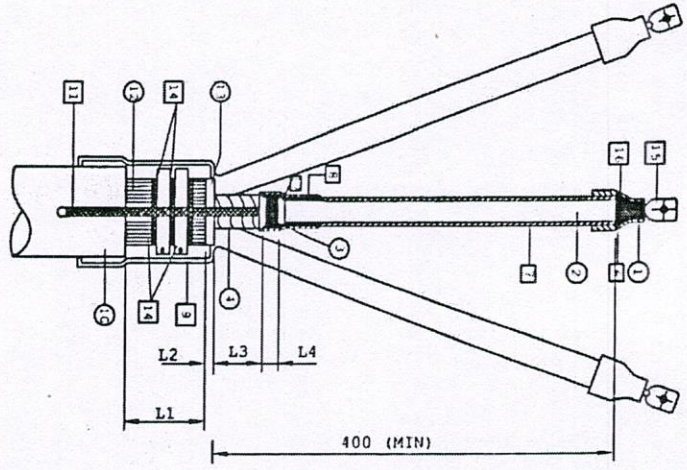
DRAWN BY	SAHIL KUMAR
CHECKED BY	NASIM
APPROVED BY	RAKESH KUMAR

S. No.	DESCRIPTIONS	QTY.
1	Cable Size (mm ²) 3X1X35-95	1
2	3X1X120-300	1
01.	COPPER BINDING WIRE	1 No.
02.	NYLON STRING	1 No.
03.	AL. OXIDE CLOTH	1 STRIP.
04.	CLEANING LIQUID	1 No.
05.	SILICON GREASE	1 No. -
06.	ANTI TRACKING TUBING -600mm	1 No.
07.	CU. BRAID FOR EARTHING	1 No.
08.	STRESS CONTROL TUBING-120mm	1 No.
09.	STRESS GARDING MASTIC	1 No.
10.	RED MASTIC	1 No.
11.	H. S. RAIN SHED	2 Nos.
12.	AL. GRIMPING LUG	1 No.
13.	BUTYLE MASTIC	1 STRIP
14.	INSTRUCTIONS MANUAL	1 No.

COMPAG INTERNATIONAL (P) LIMITED
 YAMUNA NAGAR - HARYANA (INDIA)

MAKE	COMPAG
SCALE: MTS	DRAWING SIZE: A4
DATE: 11-07-14	DRAWING NO.: COM/11.15/AB/00
TITLE: Heat Shrinkable Outdoor Termination for 11KV 1 Core AB XPE Cables	





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 CHECKED BY : NASIM
 APPROVED BY : JAKESH KUMAR

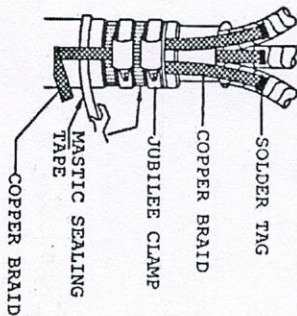
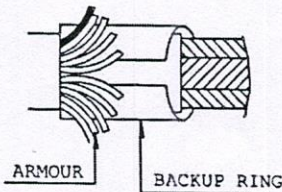
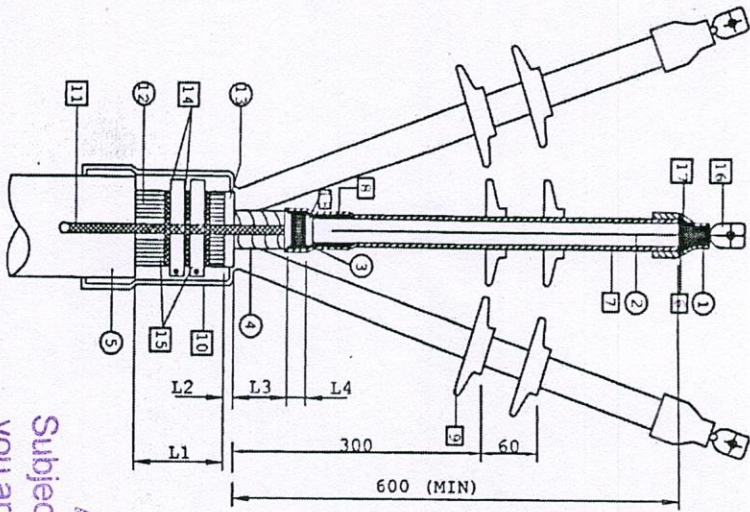
400	65	10	150	50
120-300	50	10	150	50
35-95	40	10	150	50
CABLE SIZE	L1	L2	L3	L4
□	CABLE COMPONENTS			
△	KIT COMPONENT (MANOR PART)			
L1	LENGTH OF SEMI CONDUCTING SCREEN OF COPE			
L2	LENGTH OF METALLIC SHIELD OF COPE			
L3	LENGTH OF INNER SHEATH			
L4	LENGTH OF ARMOR			
LEGENDS				
△	MORPHING CO-PTH			
△	ALCATEL EMERY TAPE			
△	NYLON STRING			
△	SILICON GREASE			
△	STRESS CONTROL MASTIC			
△	LAG SEALING TAPE			
△	TERMINAL LUG			
△	MASTIC SEALING TAPE			
△	JUBILEE CLAMP			
△	INNEROR SHEATH			
△	ARMOR			
△	TINNED COPPER EXHIB BRAID (MAIN PART)			
△	ANTI-TRACKING CABLE BREAKOT			
△	STRESS CONTROL TUBING			
△	ANTI-TRACKING WEATHER RESISTANT TUBING			
△	TERMINAL SHEATH			
△	OUTER SHEATH			
△	METAL SHIELD			
△	SEMI CONDUCTING SCREEN			
△	INSULATION			
△	CONDUCTION			
△	GTY			
DESCRIPTION				

SCALE: NTS
 DATE: 01-06-2017
 DRAWING NO.: COM/11-15/ROU/1/D

COMPAG INTERNATIONAL (P) LIMITED
 YAMUNA NAGAR - HARYANA (INDIA)

11140: HEAVY SERVICEABLE 2000027 TEMPERATURE SENSITIVE FOR 11KV 3 CORE TYPE CABLE





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 AEE(P-1) EEE(P-1) ESE(P-1)



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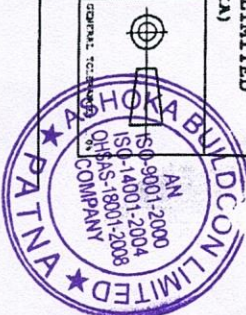
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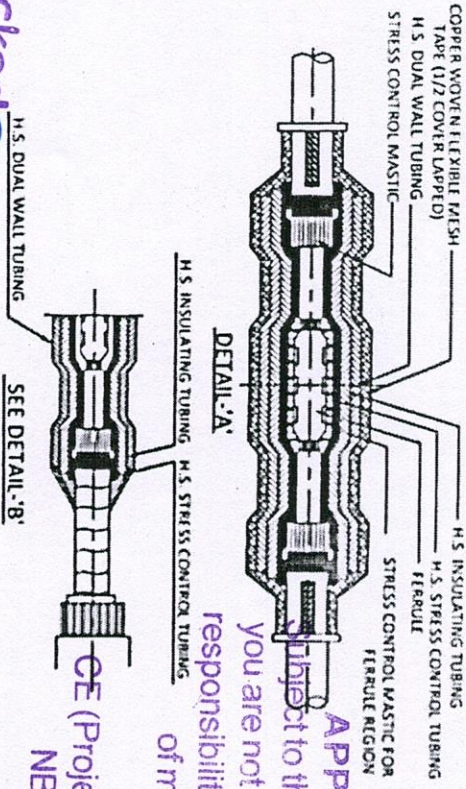
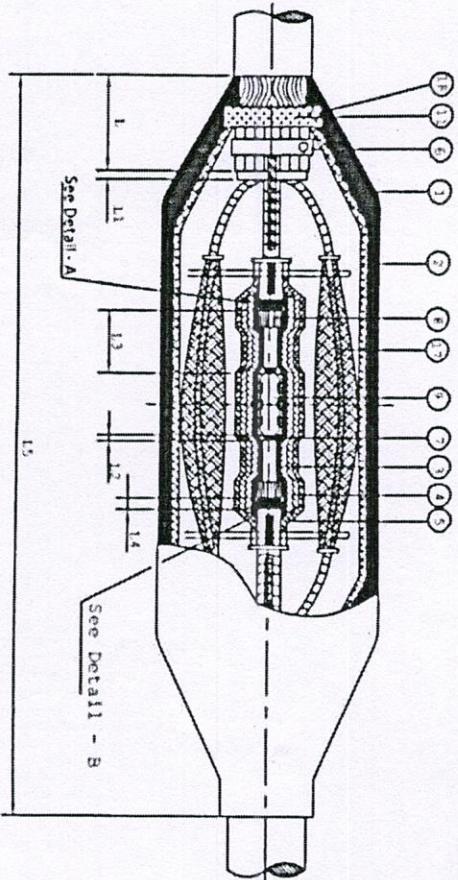
DRAWN BY	SAHIL KUMAR
CHECKED BY	NASIM
APPROVED BY	RANESH KUMAR

Title: HEAVY SHRINKABLE OUTDOOR TERMINATION SITUABLE FOR 1LV 3 CORE XLPE CABLE	
SCALE: NTS	DRAWING SIZE: A1
DATE: 27-07-2017	REV: 00
DRAWING NO.: COM/11-15/R01/00	

ITEM NO.	DESCRIPTION	QTY
1	CONDUCTOR	1
2	INSULATION	1
3	METAL SHIELD	1
4	OUTER SHEATH	1
5	TECHNICAL SLEEVE	1
6	ANTI-FRANKING WEATHER RESISTANT TUBING	1
7	STRESS CONTROL TUBING	1
8	SAID SHEET	1
9	ANTI-FRANKING WEATHER RESISTANT TUBING	1
10	MASTIC SEALING TAPE	1
11	JUBILEE CLAMP	1
12	INNER SHEATH	1
13	ARMOUR	1
14	TINNED COPPER EARTH BRAID (9MM EXACT)	1
15	ANTI-FRANKING CABLE BENDKOT	1
16	SAID SHEET	1
17	STRESS CONTROL TUBING	1
18	ANTI-FRANKING WEATHER RESISTANT TUBING	1
19	TECHNICAL SLEEVE	1
20	OUTER SHEATH	1
21	METAL SHIELD	1
22	CONDUCTOR	1

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EXAMINER: SAHIL KUMAR
 CHECKED BY: NAJIM
 APPROVED BY: SAJESH KUMAR

ITEM NO.	QTY	DESCRIPTION	UNIT	100	200	300	400	500	1475
1		HEAT SHRINKABLE GUTTA JACKETING SLEEVE							
2		G.I. WIRE 2.5mm							
3		HEAT SHRINKABLE STRESS CONTROL TUBING							
4		HEAT SHRINKABLE INSULATING TUBING							
5		HEAT SHRINKABLE DUAL WALL TUBING							
6		APRIMER TAPING MATERIAL (BACKUP RING-2 NOS., * TINNED COPPER Braid-DUBILER CLAMP-2 NOS.)							
7		STRESS CONTROL MASTIC FOR FERRULE REGION							
8		STRESS CONTROL MASTIC							
9		INSULATING CONNECTOR CO. (FERRULE)							
10		STRESS CONTROL MASTIC							
11		MOISTE SEALING TAPE							
12		WIRE SPRING							
13		ALUMINUM BRACKET TAPE							
14		WIRE RESISTIVE TAPE							
15		PREPARED LEAD							
16		CLEANING FLUID							
17		HEAT SHRINKABLE STRESS CONTROL TUBING							
18		HEAT SHRINKABLE DUAL WALL TUBING							
19		HEAT SHRINKABLE INSULATING TUBING							
20		HEAT SHRINKABLE GUTTA JACKETING SLEEVE							

ITEM NO.	QTY	DESCRIPTION	UNIT	100	200	300	400	500	1475
1		HEAT SHRINKABLE GUTTA JACKETING SLEEVE							
2		G.I. WIRE 2.5mm							
3		HEAT SHRINKABLE STRESS CONTROL TUBING							
4		HEAT SHRINKABLE INSULATING TUBING							
5		HEAT SHRINKABLE DUAL WALL TUBING							
6		APRIMER TAPING MATERIAL (BACKUP RING-2 NOS., * TINNED COPPER Braid-DUBILER CLAMP-2 NOS.)							
7		STRESS CONTROL MASTIC FOR FERRULE REGION							
8		STRESS CONTROL MASTIC							
9		INSULATING CONNECTOR CO. (FERRULE)							
10		STRESS CONTROL MASTIC							
11		MOISTE SEALING TAPE							
12		WIRE SPRING							
13		ALUMINUM BRACKET TAPE							
14		WIRE RESISTIVE TAPE							
15		PREPARED LEAD							
16		CLEANING FLUID							
17		HEAT SHRINKABLE STRESS CONTROL TUBING							
18		HEAT SHRINKABLE DUAL WALL TUBING							
19		HEAT SHRINKABLE INSULATING TUBING							
20		HEAT SHRINKABLE GUTTA JACKETING SLEEVE							

COMPAQ INTERNATIONAL (P) LIMITED
 YAMONA NAGAR, HARIDWAR (INDIA)
 CONNECTING POWER

SCALE: HTS
 DATE: 02-06-2017
 DRAWING SIZE: A4
 REV: 00

ISSUE NO.: COM/11-13/001/07

