



NORTH BIHAR POWER DISTRIBUTION CO. LTD.

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

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

Letter No: 1204
[N-XIII/RDSS/VA/Samastipur circle-3102/2023]

CIN No: U40109BR2012SGC018920

Contact No: +91-9031007064

Dated: 15/9/23

E-mail: cerdssnbpdc@gmail.com

From,

Shriram Singh,
Chief Engineer, Project-I/Urban

To,

M/s Polycab India Ltd.,
Polycab House , 771 Mogul Lane,
Mahim (W) , Mumbai-400016.
Email: umesh.joshi@polycab.com

Sub:- Approval of GTP & Drawing of M/s Dwarkesh Rubber & Metal Industries , Ahmedabad against NIT No.- 29/PR/NBPDCL/2022 for Development of Distribution Infrastructure at Samastipur Electric Supply Circle under RDSS scheme

- Ref:-**
1. NIT No: 29/PR/NBPDCL/2022
 2. NOA No: 248 & 249 dated 06.03.2023
 3. This office letter no-195 dated 01.09.2023
 4. Your office letter no:PIL/HO/22-23/NBPDCL/Misc/89A dated 12.09.2023

Dear Sir,

With reference to the subject noted above, kindly find enclosed herewith the copy of approved GTP & Drawing of 11 KV 45 KN Composite Polymer Disc Insulator (T&C type) and 11 KV 5 KN Composite Polymer Pin Insulator for Development of Distribution Infrastructure at Samastipur Electric Supply Circle against NIT No.- 29/PR/NBPDCL/2022 under RDSS scheme.

Sl. No.	Name of Item	Vendor Name
1	i) 11 KV 45 KN Composite Polymer Disc Insulator (T&C Type) ii) 11 KV 5 KN Composite Polymer Pin Insulator	M/s Dwarkesh Rubber & Metal Industries , 7 & 26 Mahagujarat Industrial Estate , Behind Hotel Sarvottam , PO-Changodar , Moraiya , Ahmedabad-382213

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

In case of any conflict or contradiction between GTP / Drawings & Technical Specifications, the decision of C.E. (Project-I/Urban) shall be final and binding on both the parties. Contractor shall have to replace the material to the entire satisfaction of the owner in case the material is found unsuitable for use in the project, at any stage. This approval is up to validity of valid type test certificate. In case any problem/issue arises with regard to material/vendor at any stage , NBPDCL reserves the right to withdraw the approval of vendor as well as ask you to replace the materials at your own cost.

Please carry out the works immediately under conditions stated above.

Encl:-As above

Yours faithfully,

(Shriram Singh)

Chief Engineer, Project-I/Urban

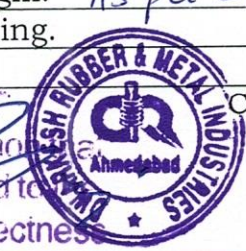
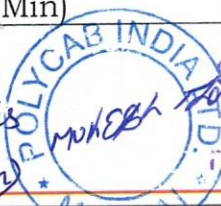

Guaranteed Technical Particulars of 11 KV 45 KN Polymer Disc Insulator

Sl. No.	Details	Requirement for 11 KV 45 KN Disc Insulators T & C type
1	Type of Insulator	Polymeric Composite Disc Insulator
2	Reference Standard	IEC: 61109
3	Material of FRP Rod	Boron free ECR
4	Material of sheds	Silicon Rubber (Min. 30% content by weight.)
5	Type of metal end fitting	Tounge and Clevis Type
6	Material of End Fittings	SGCI/MCI
7	Material of Sealing Compound	RTV Silicon
8	Colour of Sheds	Grey
9	Rated Voltage	11 KV
10	Highest Voltage	12 KV
11	Dry Power Frequency Withstand Voltage	60 KV 70
12	Wet Power Frequency Withstand Voltage	40 KV
13	Dry Power Frequency Flashover Voltage	75 KV
14	Visible Discharge Voltage (PF)	9 KV
15	Wet Power Frequency Flashover Voltage	45 KV
16	Dry Lighting Impulse withstand Voltage	Positive : 75 KV 110 Negative : 80 KV 110
17	Dry Lighting Impulse Flashover Voltage	Positive : 95 KV 120 Negative : 100 KV 120
18	RIV at 1 MHz when energized at 10 KV/ 30 KV (rms) under dry condition	<100 microvolt
19	Creepage distance (Min.)	320 mm
20	Min Failing Load	45 KN
21	Dia of FRP Rod	16 mm
22	Length of FRP Rod (Min)	200 mm
23	Dia of Weather Sheds	96 ± 2 mm
24	Thickness of Housing	3 mm Minimum
25	Dry arc Distance	170 mm (+ve tolerance allowed & no negative tolerance shall be allowed)
26	Weight of Insulator	0.65 Kg ± 100 gm. As per IEC 61109
27	Method of fixing sheds to Housing	Injection Moulding.
28	No of Weather sheds (Min)	Three

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 of materials
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Checked
 EEE(P-1) FEE(P-1) ESE(P-1)

Centre to centre distance
 between Tongue Clevis
 - 300 mm (min)



Regd. Office : 4, Samkeet Bunglow, B/h. Hotel Grand Bhagwati, Off. S.G.Highway, Bodekdev, Ahmedabad - 380054.

Factory Add. : 7 & 26 Mahagujarat Ind. Estate, Behind Hotel Sarvottam, Opp AIA Engineering Ltd, Morriya (Changodar) - 382213
 Taluka-Sanand, Dist. Ahmedabad, (M)+91-9924136870, 7698816199 (E) office.dwarkesh@gmail.com

GE (Project-1), Urban
 NBPDC



29	Type of Sheds	Aerodynamic
30	Type of Packing	HDPE Bags / Corrugated Box
31	No of Insulator in each pack	Packed in a such manner that gross weight of the crates along with the Insulators shall not exceed 100 Kgs.
32	Marking on Insulators	All Insulators should be legibly and indeliably marked with following: a) Name of trademark of the Manufacturer b) 11 KV (Voltage & Type) c) Month and Year of Manufacturing d) Min. failing load/guaranteed mechanical strength in kilo Newton followed by the word "KN" to facilitate easy identification e) RDSS-NBPDCL RDSS-LR (NBPDCL)

Tolerance as per JEC 6109, TS of RDSS

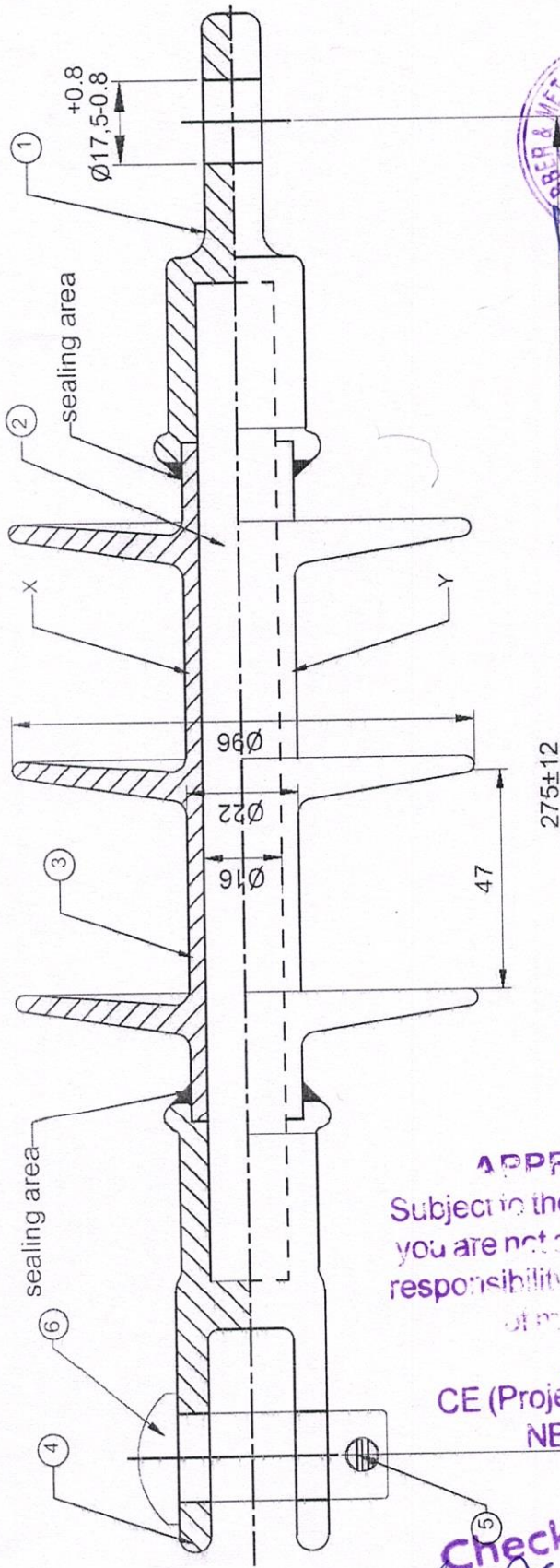
For Dwarkesh Rubber & Metal Industries,



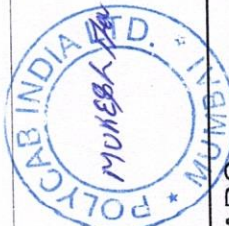
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 AEE(P-1) EEE(P-1) ESE(P-1)

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Marking to be embossed at "X" and "Y"
Logo MONTH & YEAR



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- NOTES:**
- CHARACTERISTICS/APPLICATION STANDARD/TOLERANCE :- IEC :-61109-2008
 - Thickness of galvanizing coating 86 Microns, (galvanization conforms to:- IS:2629-1985, or IEC:-383)

SR NO.	DESCRIPTION	MATERIAL	QTY.	REMARKS
6	RIVET	FORGED STEEL	1	H.D.G
5	SECURITY CLIP	SPLIT PIN - STAINLESS STEEL	1	-
4	CLEVIS	SGCI / MCI	1	H.D.G
3	HOUSING	SILICONE RUBBER	-	HTV
2	CORE ROD	FIBRE GLASS	1	ECR-GR/BORON FREE
1	TONGUE	SGCI / MCI	1	H.D.G

SCALE	UNIT	PROJECTION
NTS.	mm.	
ALL DIMENSIONS ARE IN mm.		
DRAWN BY	P.G.P	15.12.2017
CHECKED BY	A.K.P	15.12.2017
APPROVED BY		

Drg. No.	879002	Rev. No.	0
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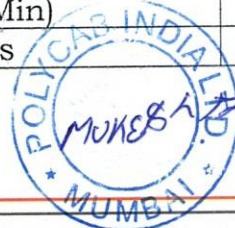
TECHNICAL PARTICULARS	
Compliance to IEC 61109 Ed.2.0 & IEC 62217	
DIMENSIONS	
Sectional Length	mm 275 ± 12
Creepage distance minimum	mm 320
Dry arcing distance	mm 170
MECHANICAL CHARACTERISTICS	
Specified mechanical load	kN 45
Routine mechanical load	kN 22.5
ELECTRICAL CHARACTERISTICS	
Nominal System Voltage	KV 11
Highest System Voltage	KV 12
Wet power frequency withstand voltage	KV(ms) 40
Dry lightning impulse withstand voltage	KVP 75 110
Visible Discharge Test Voltage	KV(rms) 9


**Guaranteed Technical Particulars of 11 KV Composite (Polymer)
 Insulators**

5 KN

Sl. No.	Details	Requirement for 11 KV PIN Insulators
1	Name of the Manufacturer	M/s. Dwarkesh Rubber and Metal Industries.
2	Type of Insulator	Polymeric Composite Pin Insulator
3	Reference Standard	IEC: 61109
4	Material of FRP Rod	FRP(Boron Free ECR)
5	Material of sheds	Silicon Rubber (Min. 30% content by weight.)
6	Housing	One piece housing using Injection Molding Principle
7	Housing Material of Top End Fittings	SGCI/MCI/FORGED STEEL
8	Material of Sealing Compound	RTV Silicon
9	Colour of Sheds	Grey
10	Rated Voltage	11 KV ✓
11	Highest Voltage	12 KV ✓
12	Dry Power Frequency Withstand Voltage	60 KV 70
13	Wet Power Frequency Withstand Voltage	35 KV 40
14	Dry Power Frequency Flashover Voltage	75 KV =
15	Wet Power Frequency Flashover Voltage	45 KV ✓
16	Dry Lighting Impulse Withstand Voltage	Positive : 80 KV 110 Negative : 80 KV 110
17	Dry Lighting Impulse Flashover Voltage	Positive : 95 KV 120 Negative : 100 KV 120
18	Radio Interface Voltage (RIV) at 1 MHz when energized at 10 KV (rms) under dry condition	<100 microvolt
	Visible Discharge Voltage (PF)	9 KV =
19	Creepage distance (Min.)	320 mm =
20	Min Failing Load	5 KN =
	Weight of Insulator	0.900 Kg ± 200 gm. AS per IEC: 61109
21	Dia of FRP Rod	24 mm -
22	Length of FRP Rod (Min)	165 mm -
23	Dia of Weather Sheds	105 mm ± 2 mm

Checked

-2
AEE(P-1) EEE(P-1) ESE(P-1)

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 Taluka-Sanand, Dist. Ahmedabad, (M)+91-9924136870, 7698816199 (E) office.dmi@gmail.com.

C.E. (Project), Urban

VPPDC



24	Thickness of Housing	3 mm Minimum
25	Dry arc Distance	165 mm (+ve tolerance shall be allowed & no negative tolerance shall be allowed)
27	No of Weather sheds (Min)	Three
28	Type of Sheds	Aerodynamic
30	Thread Length of Bottom end Fitting	110 mm (Min).
31	Type of Packing	HDPE Bags / Corrugated Box
32	No of Insulator in each pack	Packed in a such manner that gross weight of the crates along with the Insulators shall not exceed 100 Kgs.
33	Marking on Insulators	All Insulators should be legibly and indelibly marked with following: a) Name of trademark of the Manufacturer b) 11 KV , Polymer Composite c) Month and Year of Manufacturing d) Min. failing load/guaranteed mechanical strength in kilo Newton followed by the word "KN" to facilitate easy identification. e) RDSS-NBPDCL RDSS-LR(NBPDCL)

Tolerance as per IEC 61109, TS of RDSS

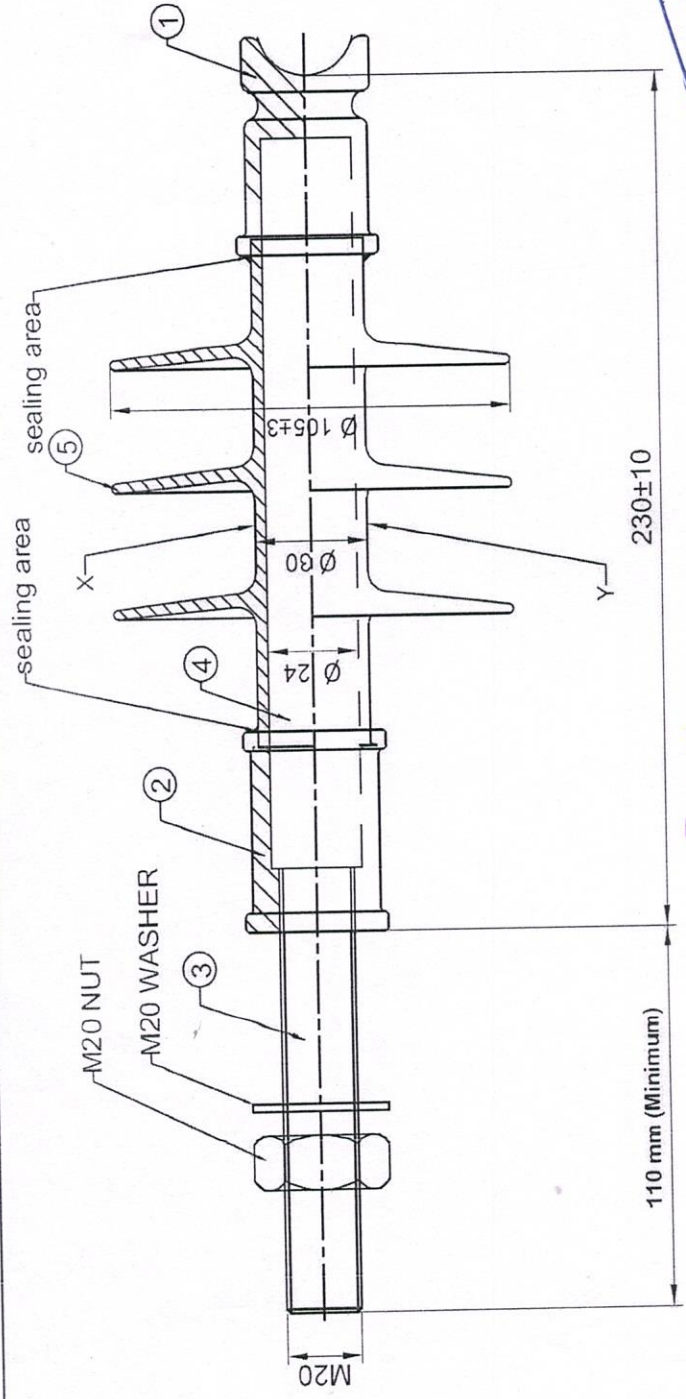
For Dwarkesh Rubber & Metal Industries,



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

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 Logo MONTH & YEAR

NOTES:
 CHARACTERISTICS/APPLICATION STANDARD/TOLERANCE :- IEC :61109-2008
 Thickness of galvanizing coating 86 Microns, (galvanization conforms to:- IS:2629-1985, or IEC:-383)

SILICONE RUBBER	HTV
FIBRE GLASS	ECR-GR/BORON FREE
M.S	H.D.G
CASTING / MCI	H.D.G
CASTING / MCI	H.D.G
MATERIAL	QTY.

SCALE	UNIT	REMARKS
NTS.	mm.	PROJECTION
ALL DIMENSIONS ARE IN mm		
DRAWN BY	R.R.P	24.10.2020
CHECKED BY	A.K.P	24.10.2020
APPROVED BY		

Dwg. No. 879034
 Rev. No. 0

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

TECHNICAL PARTICULARS	mm	230 ±10
Sectional Length	mm	320
Creepage distance minimum	mm	165
Dry arcing distance	KN	5
Mechanical load (bending)	KV	11
Nominal System Voltage	KV	12
Highest System Voltage	KV(rms)	95-100
Wet power frequency withstand voltage	KVP	80-110
Dry lightning impulse withstand voltage	KV(rms)	9
Visible Discharge Test Voltage		

