



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: 914

[File No:-N-XIII/RDSS/V.A./Chapra Circle-3080/2023-

Dated: 01.8.23

E-mail: cerdssnbpdc@gmail.com

From,

Shriram Singh
Chief Engineer, Project-I (Urban)

To,

M/s NCC Ltd
NCC House, Survey no. 64, Madhapur,
Hyderabad, 500081, Email: elec.tenders@ncccltd.in

Sub:-

Regarding approval of GTP & Drawing of 11 KV 5 KN Polymer Pin Insulators, 11 KV 45 KN B&S Disc Insulator, 11 KV 45 KN T&C Disc Insulator & 11 KV 70 KN B&S Disc Insulator of make M/s Deccan Electricals Pvt. Ltd., Hyderabad for Loss Reduction Component works under "Revamped Reforms-Based and Results-Linked Distribution Sector Scheme."

Ref:-

(i) NOA No.-244 & 245 dated 06.03.2023
(ii) Your letter no.-99 dated 30.06.2023

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	11 KV 5 KN Polymer Pin Insulators	M/Deccan Electricals Pvt. Ltd., 3 rd Floor, Aparupa PCH, 8-2-293/A/A/1, Road No.- 2, Banjarahills, Hyderabad-500034
2	11 KV 45 KN B&S Disc Insulator	
3	11 KV 45 KN T&C Disc Insulator	
4	11 KV 70 KN B&S Disc Insulator	

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.-

914

Dated-

01.8.23

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 Ashoka Buildcon Ltd, S.No.-861, Ashoka House, Ashoka Marg, Vadala, Nashik-422011 / for information and necessary action.

Encl:-As above

(Shriram Singh)

Chief Engineer, Project-I (Urban)

Memo No.-

914

Date-

01.8.23

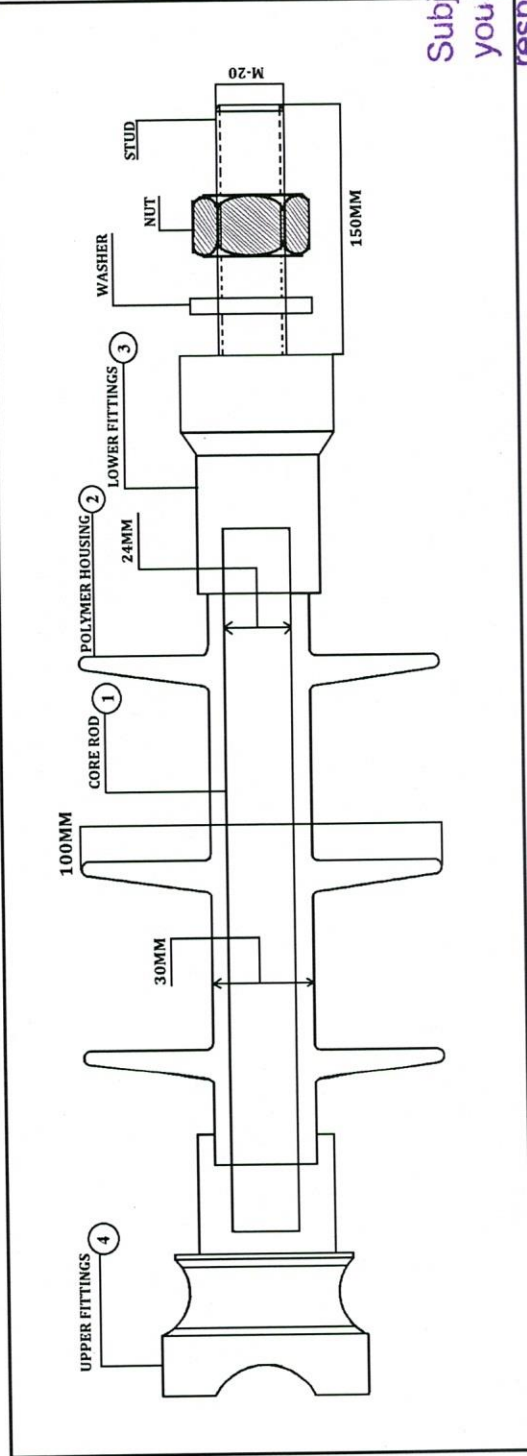
Copy forwarded to Chief Engineer, Project-II, NBPDC for information and necessary action.

Encl:-As above

(Shriram Singh)

Chief Engineer, Project-I (Urban)

11KV POLYMER COMPOSITE PIN INSULATOR



TECHNICAL CHARACTERISTICS:
 1. INSULATOR CONFIRMS TO IEC 61109 : 2008
 2. TOLERANCE AS PER IEC-61109
 { $\pm(0.04d+1.5)$ mm when $d \leq 300$ mm }
 { $\pm(0.025d+6)$ mm when $d > 300$ mm with a maximum tolerance of ± 50 mm }
DIMENSIONS:
 1. CREEPAGE DISTANCE : 320MM (MIN)
 2. ARGING DISTANCE : 165MM
 3. NO OF WEATHER SHEDS : 3 (SHEDS)
 4. BOTTOM FITTING THREADING LENGTH : 150 ± 7.5 MM
MECHANICAL CHARACTERISTICS:
 1. SPECIFIED MECHANICAL LOAD : 5KN

SL.NO	DESCRIPTION	MATERIAL	QUANTITY
1	CORE	FRP ROD	1
2	HOUSING	SILICON RUBBER
3	BOTTOM END METAL FITTING	SGCI/MCI	1
4	TOP END METAL FITTING	SGCI/MCI	1

DRAWING NO: DEPL/11KV-5KN-320MM-CD/POLYMER/DE-01

ELECTRICAL CHARACTERISTICS:
 1. NOMINAL SYSTEM VOLTAGE : 11KV (RMS)
 2. HIGHEST SYSTEM VOLTAGE : 12KV (RMS)
 3. SYSTEM FREQUENCY VOLTAGE : 50HZ
 4. WET ONE MINUTE POWER FREQUENCY WITHSTAND VOLTAGE : 40.25KV (RMS)
 5. DRY LIGHTNING IMPULSE WITHSTAND VOLTAGE : 98KV (PEAK)
 6. VISIBLE DISCHARGE TEST VOLTAGE : 9KV (RMS) *ilo*
 GALVANISING CONFIRMS TO IS 2629-1985

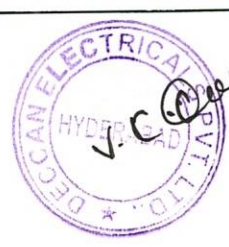
COMPANY : DECCAN ELECTRICALS PVT LTD
 MAF.ADD : SY.NO.10/D, IDA, GADDAPOTHARAM, KAZIPALLY ROAD, HYDERABAD-502319 (T.S)
 E-MAIL : dephhyd@gmail.com

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

CE (Project-1), Urban NBPDC



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GST:-36AACCD7482J1ZB

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GUARANTEED TECHNICAL PARTICULARS OF 11 KV POLYMER COMPOSITE PIN INSULATORS

Sl.No.	Description	Unit	11 KV
	Name of manufacturer & Address	M/s. Deccan Electricals Pvt Ltd Sy No.10/D, Gaddapotharam, Industrial Area, Kazipally Road, Hyderabad-502319 (T.S)	
1	Insulators type & Make	11KV Polymer Composite Pin Insulators	
2.	Standard according to which the insulators manufactured and tested	IEC-61109 <i>IEC-60120/IS:2486-part-II</i>	
3.	Name of material used in Manufacture of the Insulator with class/grade.		
a.	Material of Core (FRP rod) i) E-glass or ECR glass ii) Boron Content.	ECR-Glass, void free Free	
b.	Material of housing & weather-sheds (Silicon content by weight)	Min 30% Seamless sheath of Silicon Rubber of min thickness 3mm.	
c.	Material of end fitting	SGCI	
d.	Sealing compound for end fittings.	RTV Silicone Sealant	
4.	Colour	Grey APPROVED	
5.	Electrical Characteristics	Subject to the conditions	
a.	Nominal system voltage	KV	11 you are not absolved to
b.	Highest system voltage	KV	12 responsibility of correct
c.	Dry power frequency withstand voltage	KV	50 70 of materials
d.	Wet Power frequency withstand voltage	KV	35 40 CE (Project-1), Urban.
e.	Dry Flashover voltage	KV	60 75 NBPDCI
f.	Wet flashover voltage	KV	45
g.	Dry lightning impulse withstand voltage i) positive ii) Negative	KV KV	95 ≥ 110 95 ≥ 110
h.	Dry lightning impulse flashover voltage i) Positive ii) Negative	KV KV	110 ≥ 120 110 ≥ 120
i.	Visible discharge test voltage	KV	9
j.	RIV at 1 MHz when energized at 10KV (rms) under dry condition.		<100 Micro volts
k.	Creepage distance (Minimum)	mm	320

Checked



Redg. Add:- 301, "APURUPA PCH", 8-2-293/A/A/1, Road No.2 Banjara Hills, Hyderabad, Telangana-India- 500034

Fact. Add:- Sy. No.10/D Gaddapotharam Industrial Area, Kazipally Rd, Hyderabad, Telangana India-502319

deplhyd@gmail.com deccanelectrical.in +91-40-23550810 +91-40-23550872



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Sl.No.	Description	Unit	11 KV
6.	Mechanical characteristics		
a.	Minimum failing load	KN	5
7.	Dimensions of Insulator		
a.	Weight	Kg	0.80
b.	Dia of FRP rod	mm	24
c.	Length of FRP rod	mm	≥175 200
d.	Dia weather-shed	mm	100
f.	Thickness of housing	mm	3
h.	Dry arc distance	mm	165 170
i.	Bottom fitting threading length	mm	150
8.	Method of fixing of sheds to housing		Single injection Moulding
9.	No.of weather sheds	No's	3
10	Type of sheds		
a.	Aerodynamic		Aerodynamic
b.	With under-ribs		NA
11.	Packing details		
a.	Type of packing		HDPE Bags
b.	No. of insulator in each pack	No	40
c.	Gross weight of package	Kg	32
12	Any other particulars which the bidder may like to give.		Nil

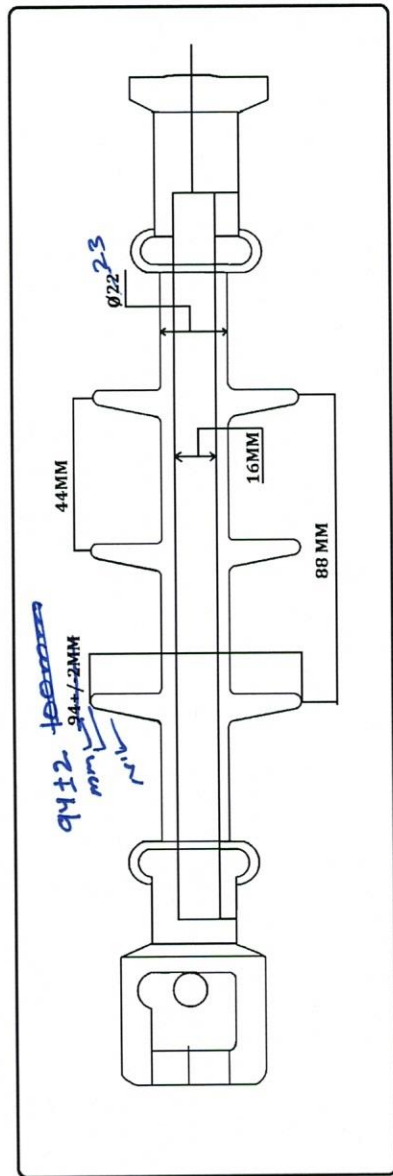
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Each Insulator shall be legibly and indelibly marked with -
i) Name/Trademark of vendor.
ii) Month/year of manufacturing.
iii) Min failing Load/Mech. strength in KN.
iv) RDSS - LR (NBPDCCL)

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11KV 45 KN(B&S) COMPOSITE POLYMER DISC INSULATOR



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CE (Project-1), Urban
 NBPDC

DRAWING NO : DEPL/11KV/70KN/320-CD/2022-23

ELECTRICAL CHARACTERISTICS :-

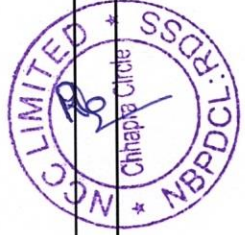
- HIGHEST SYSTEM VOLTAGE : 12KV (RMS)
- DRY POWER FREQUENCY WITHSTAND VOLTAGE : 50KV (RMS)
- WET POWER FREQUENCY WITHSTAND VOLTAGE : 35KV (RMS)
- DRY LIGHTNING IMPULSE WITHSTAND VOLTAGE : 75KV (PEAK)
- VISIBLE DISCHARGE TEST VOLTAGE : 9KV (RMS)

COMPANY : M/S. DECCAN ELECTRICALS PVT LTD	
DRAWN BY	ADD : UNIT NO.301, APURUPA PCH, 8-2-293/A/A/1, ROAD NO.2, BANJARAHILLS, HYDERABAD-500034
V.KIRAN KUMAR	(T.S)
2022-23	PH.No:040-23550810/72 E-MAIL : dephhyd@gmail.com

CHARACTERISTICS	VALUES
BALL FITTING (16B)	SGI /FORGED
SOCKET FITTING (16mm)	SGI /FORGED
RATED VOLTAGE	11KV
NO OF SHEDS	3
SPACE BETWEEN TWO SHEDS	44MM
CREEPAGE DISTANCE	320MM
DRY ARCING DISTANCE	167 MM
MECHANICAL FAILING LOAD	45KN
APPLICABLE STANDARD	IEC-61109

TOLERANCE AS PER IEC-61109
 { ±(0.04Xd+1.5)mm when d≤300mm}
 { ±(0.025Xd+6)mm when d>300mm with a maximum tolerance of ±50mm }

NOTE : ALL DIMENSIONS ARE IN "MM"



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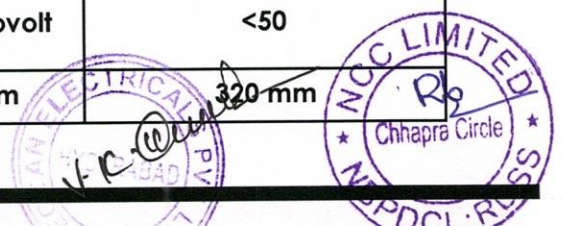
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GUARANTEED TECHNICAL PARTICULARS OF 11KV POLYMER DISC INSULATORS (B & S) 45KN

Sl. No.	Characteristics of insulators	Unit	11KV 45 KN (B&S)
1	Type of Insulator		Composite Disc Type (Long Rod) Insulators
2	Standard according to which the insulators manufactured and tested		As per IEC 61109
3	Name of material used in manufacture of the insulator with class/grade)		Silicon rubber, fibre glass rod (FRP Rod) ECR grade, end fittings
	a) Material of core (FRP rod)		ECR Glass
	i) E-glass or ECR – glass ii) Boron content		Boron Free Epoxy
	b) Material of housing & weather sheds (silicon content by weight) c) Material of end fittings d) Sealing compound for end fittings		b) 30% by weight c) HDG SGI Casting d) RTV Silicon alloy Sealant
4	Colour		Grey
5	Electrical characteristics		
	a) Nominal system voltage	KV (rms)	11 KV
	b) Highest system voltage	KV (rms)	12 KV
	c) Dry Power Frequency withstand voltage	KV (rms)	70.45 KV
	d) Wet Power Frequency withstand voltage	KV (rms)	40.35KV
	e) Dry flash over voltage	KV (rms)	75.50KV
	f) Wet flash over voltage	KV (rms)	45.40KV
	g) Dry lightning impulse withstand voltage	KV (Peak)	110.75KV
	i) Positive	KV (Peak)	110.75 KV
	ii) Negative		
	h) Dry lightning impulse flash over withstand voltage	KV (Peak)	120.110KV
	i) Positive	KV (Peak)	120.110KV
	ii) Negative		
	i) RIV at 1 MHz when energized at 10KV/30KV (rms) under dry condition	Microvolt	<50
	j) Minimum creepage distance (mm)	mm	320 mm

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Fact. Add:- Sy. No.10/D Gaddapotharam Industrial Area, Kazipally Rd, Hyderabad, Telangana India-502319

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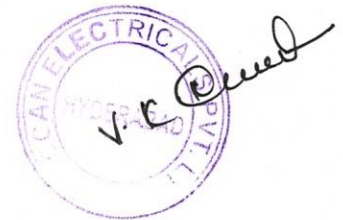
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6.	Mechanical characteristics a) Minimum failing load	mm	45 KN
7.	Dimensions of insulators		
	i) weight	Kgs.	0.65 kg (Approx)
	ii) Dia FRP Rod	mm	16
	iii) Length of FRP Rod	mm	200(min)
	iv) Dia of weather sheds	mm	94+/-2
	v) Thickness of housing	mm	3
	vi) Dry arc distance	mm	167 170
	vii) Dimensional drawings of insulator (including weight with tolerances in weight) enclosed	Yes / No	Yes
8.	Method of fixing of sheds to housing (specify) : Single mould and injection moulding.		Single mould and injection moulding
9.	No. of weather sheds		3
10.	Type of sheds		Aero dynamic
	i) Aero dynamic ii) With under ribs		
11.	Packing details		HDPE Bags 50 No's 32.5 Kg's
	i) Type of packing		
	ii) No. of insulators in each pack iii) Gross weight of package		
12.	Any other particulars which the bidder may like to give		Nil

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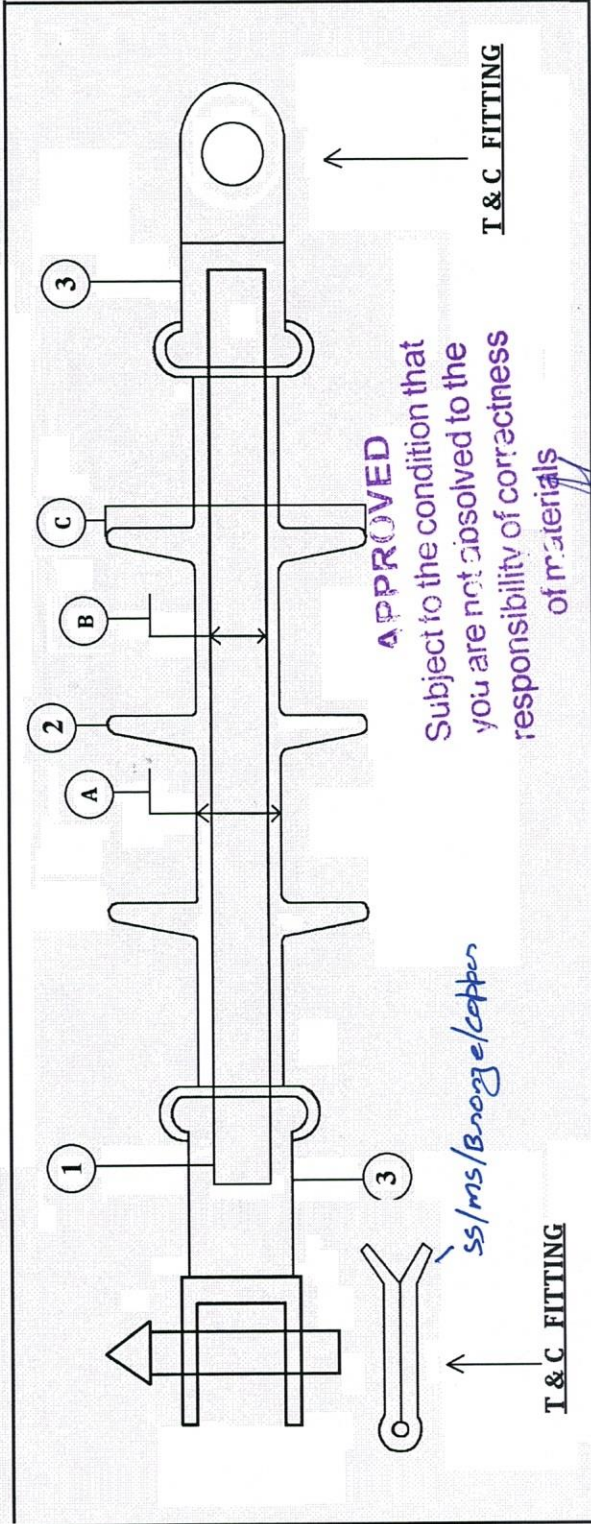


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11KV POLYMER DISC INSULATORS (C & T) 45KN



CE (Project-1), Urban

SL.NO	DESCRIPTION	MATERIAL
1	FRP ROD	FIBRE REINFORCED PLASTIC
2	POLYMER HOUSING	SILICON RUBBER
3	END FITTING	SGCI/MCI

DRAWING NO : DEPL/11KV/45KN/320-CD/2022-23

COMPANY : M/S. DECCAN ELECTRICALS PVT LTD	
DRAWN BY	ADD: UNIT NO.301, APURUPA PCH, 8-2-293/A/A/1, ROAD NO.2, BANARAHILLS, HYDERABAD-500034 (T.S)
V.KIRAN KUMAR	PH.NO : 040-23550810/72 E-MAIL : dephhyd@gmail.com
2022-23	

DIMENSION CHART			
	A	B	C
DIMENSION	22-23	16	94-94mm 100
TOLERANCE	+/-0.5	+/-0	+/-2

NOTE:
 1. ALL DIMENSIONS ARE IN "MM" OTHERWISE SPECIFIED
 2. TOLERANCE AS PER IS: 61109
 3. CREEPAGE DISTANCE : 320MM (MIN)
 4. MECHANICAL LEAVING LOAD : 45 KN

NOTE: ALL DIMENSIONS ARE IN "MM"



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GUARANTEED TECHNICAL PARTICULARS OF 11KV POLYMER DISC INSULATORS (C & T) 45KN

Sl. No.	Characteristics of insulators	Unit	11KV 45 KN (C&T)
1	Type of Insulator		Composite Disc Type (Long Rod) Insulators
2	Standard according to which the insulators manufactured and tested		As per IEC 61109 IEC - 60120/IS - 2486 part-II.
3	Name of material used in manufacture of the insulator with class/grade		Silicon rubber, fibre glass rod (FRP Rod) ECR grade, end fittings
	a) Material of core (FRP rod)		ECR Glass
	i) E-glass or ECR – glass		Boron Free Epoxy
	ii) Boron content		b) 30% by weight
3	b) Material of housing & weather sheds (silicon content by weight)		c) HDG SGI Casting
	c) Material of end fittings		d) RTV Silicon alloy Sealant
	d) Sealing compound for end fittings		
4	Colour		Grey
5	Electrical characteristics		
3	a) Nominal system voltage	KV (rms)	11 KV
	b) Highest system voltage	KV (rms)	12 KV
	c) Dry Power Frequency withstand voltage	KV (rms)	70.45 KV
	d) Wet Power Frequency withstand voltage	KV (rms)	40.35 KV
	e) Dry flash over voltage	KV (rms)	75.50 KV
	f) Wet flash over voltage	KV (rms)	45.40 KV
	g) Dry lightning impulse withstand voltage	KV (Peak)	110.75 KV
	i) Positive	KV (Peak)	110.75 KV
	ii) Negative		
	h) Dry lightning impulse flash over withstand voltage	KV (Peak)	120.110KV
i) Positive	KV (Peak)	120.110KV	
ii) Negative			

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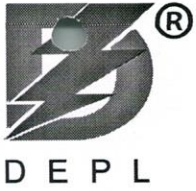
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	i) RIV at 1 MHz when energized at 10KV/30KV (rms) under dry condition	Microvolt	<50 100
	j) Minimum creepage distance (mm)	mm	320 mm
6.	Mechanical characteristics a) Minimum failing load	mm	45 KN
7.	Dimensions of insulators		
	i) weight	Kgs.	0.6 kg (Approx)
	ii) Dia FRP Rod	mm	16
	iii) Length of FRP Rod	mm	200(min)
	iv) Dia of weather sheds	mm	94+/-2
	v) Thickness of housing	mm	3
	vi) Dry arc distance	mm	167 170
	vii) Dimensional drawings of insulator (including weight with tolerances in weight) enclosed	Yes / No	Yes
8.	Method of fixing of sheds to housing (specify) : Single mould and injection moulding.		Single mould and injection moulding
9.	No. of weather sheds		3
10.	Type of sheds	Subject to the condition that you are not absolved to the responsibility of correctness of materials	Aero dynamic
	i) Aero dynamic ii) With under ribs		
11.	Packing details	CE (Project-1), Urban NBPDC	HDPE Bags 50 No's 30 Kg's
	i) Type of packing		
	ii) No. of insulators in each pack iii) Gross weight of package		
12.	Any other particulars which the bidder may like to give		Nil

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