

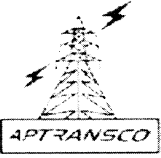
**TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED**  
**STANDARDISED GUARANTEED TECHNICAL PARTICULARS**  
**FOR SOLID CORE INSULATORS (POST TYPE )**

Sl. No	Discription	units	Solid Core Insulators		
		kV	245kV	145kV	36kV
1	Manufacturer				
2	Standard		IS-2544 / IEC-60168		
	The type tests should have been conducted not earlier than 5 years in the Standard third party laboratory. The Manufacturer shall produce the type test reports at the time of acceptance tests.				
3	Type		SOLIDCORE POST TYPE		
4	Insulating material		ALUMINA PORCELAIN		
5	No.of units per stack	Nos.	TWO	ONE	ONE
6	Diameter of the largest shed(mm)	mm	245	210	170
7	Height of insulator stack mm	mm	2300 +/- 3.5	1500 +/- 2.5	508 +/- 1.0
8	Height of each basic unit mm	mm	2300 +/- 3.5	1500 +/- 2.5	508 +/- 1.0
9	Weight kgs (Approx)	kgs	125	64	15
10	Total creepage distance (minimum) mm	mm	6125	3625	900
11	Flashover Voltage				
	Power Frequency Flashover Voltage Dry kV	kV	525	365	100
	Power Frequency Flashover Voltage Wet kV	kV	500	305	85
	Impulse Flashover Voltage kV	kV	1150 +ve and 1160-ve	700	235
12	Power Frequency Withstand test voltage	kV			
	Dry kVp	kV	480	335	85
	Wet kVp	kV	460	275	75
	Impulse kV	kVp	1050	650	200
13	Power frequency puncture withstand voltage kV				
14	Working Voltage kV	kV	245	145	36

**APPROVED FOR TURNKEY PROJECTS**

  
**CHIEF ENGINEER / CONSTRUCTION -1**  
**APTRANSCO/VIDYUTH SOUDHA/AYD.**

**STANDARDISED GUARANTEED TECHNICAL PARTICULARS  
FOR SOLID CORE INSULATORS (POST TYPE )**

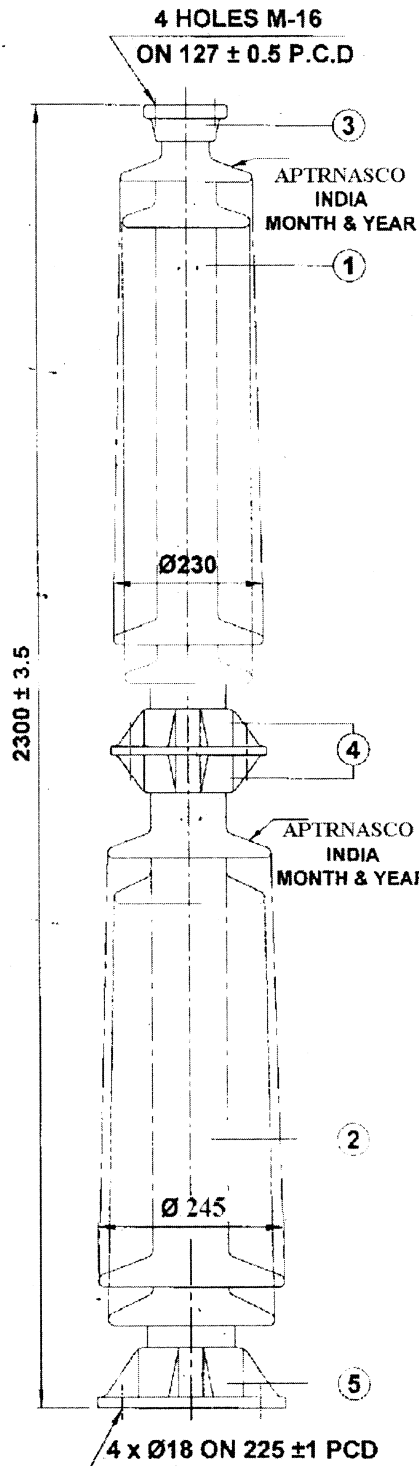
Sl. No	Discription	units	Solid Core Insulators		
15	Mechanical strength				
	a) Cantilever strength	kN	6	6	6
	b) Tensile strength	kN	110	80	50
	c) Torsion Strength	kNm	4.5	4.5	2.5
	d) Compression Strength	kN	220	160	100
16	Pitch Circle Diameter (PCD)				
	Top mm	mm	127 +/- 0.5	127 +/- 0.5	76 +/- 0.5
	Bottom mm	mm	225 +/- 1.0	184 +/- 1.0	76 +/- 0.5
17	Quality of material & standard to which conform		BIS		
	The Manufacturer shall produce the valid BIS certification at the time of acceptance tests.				
18	Packing	Packing shall be done with hard season wood as per the specification.			
19	Markings	"APTRANSCO" letters to be indented or embossed on the metallic portion or on the Porcelain body of the SCI.			
		Standardised Guaranteed Technical Particulars for Solid Core Insulator 245kV, 145kV and 36kV			
		STD/GTP-DWG/Approval No. 202 / Revision No. 0			
		Prepared & Approved during October - 2011			

**APPROVED FOR TURNKEY PROJECTS**

  
**CHIEF ENGINEER / CONSTRUCTION-1**  
**APTRANSCO/VIDYUTH SOUDHA/HYD.**

ALL DIMENSIONS ARE IN MM

**GUARANTEED TECHNICAL PARTICULARS**



**GENERAL :**

1. STANDARDS APPLICABLE : IS 2544 - 1973 /IS:5350-II-1973/  
IEC : 60168 - Ra- 2001
2. TYPE OF INSULATOR : SOLIDCORE POST - A- PUNCTURE PROOF
3. NO. OF UNITS PER STACK TWO
4. MIN. NOM. CREEPAGE DISTANCE MM 6125
5. SHED PROFILES CONFORMS TO IEC 60815-1986
6. COLOUR OF GLAZE BROWN
7. FERROUS PARTS HOT DIP GALVANISED CONFORMS TO  
IS : 2633 - 1986, IEC : 60168 - Ra-2001.
8. NET WEIGHT (APPROX) KGS 125

**MECHANICAL VALUES :**

1. ULTIMATE CANTILEVER STRENGTH KN 6
2. ULTIMATE TORSIONAL STRENGTH KN.M 4.5
3. ULTIMATE TENSILE STRENGTH KN 110
4. ULTIMATE COMPRESSION STRENGTH KN 270

**ELECTRICAL VALUES :**

1. NOMINAL SYSTEM VOLTAGE KV (rms) 220
2. HIGHEST SYSTEM VOLTAGE KV (rms) 245
3. DRY POWER FREQUENCY WITHSTAND VOLTAGE KV (rms) 480
4. WET POWER FREQUENCY WITHSTAND VOLTAGE KV (rms) 460
5. LIGHTNING IMPULSE WITHSTAND VOLTAGE (1.2 / 50µ SEC. WAVE) KV (peak) 1050
6. DRY POWER FREQUENCY FLASHOVER VOLTAGE KV (rms) 525
7. WET POWER FRQUENCY FLASHOVER VOLTAGE KV (rms) 500
8. VISIBLE (CORONA EXTINCTION) VOLTAGE KV (rms) 156
9. IMPULSE FLASHOVER VOLTAGE  
(1.2 / 50 µ SEC)

POSITIVE	KV (peak)	1150
NEGATIVE	KV (peak)	1160

10. RIV TEST DATA  
TEST VOLTAGE TO GROUND KV (rms) 156  
MAX. RIV AT 1 MHz µKV <1000
11. Total Creepage distance mm(min) 6125

**PACKING PARTICULARS :**

1. No. OF INSULATORS PER CRATE. TOP 1 BOT 1
2. GROSS (PACKED) WEIGHT APPROX. Kg 74 94
3. PACKED VOLUME M<sup>3</sup> 0.131 0.152

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*[Signature]*  
25/10/2011  
**CHIEF ENGINEER / CONSTRUCTION-1**  
**APTRNASCO/VIDYUTH SOUDHA/HYD.**

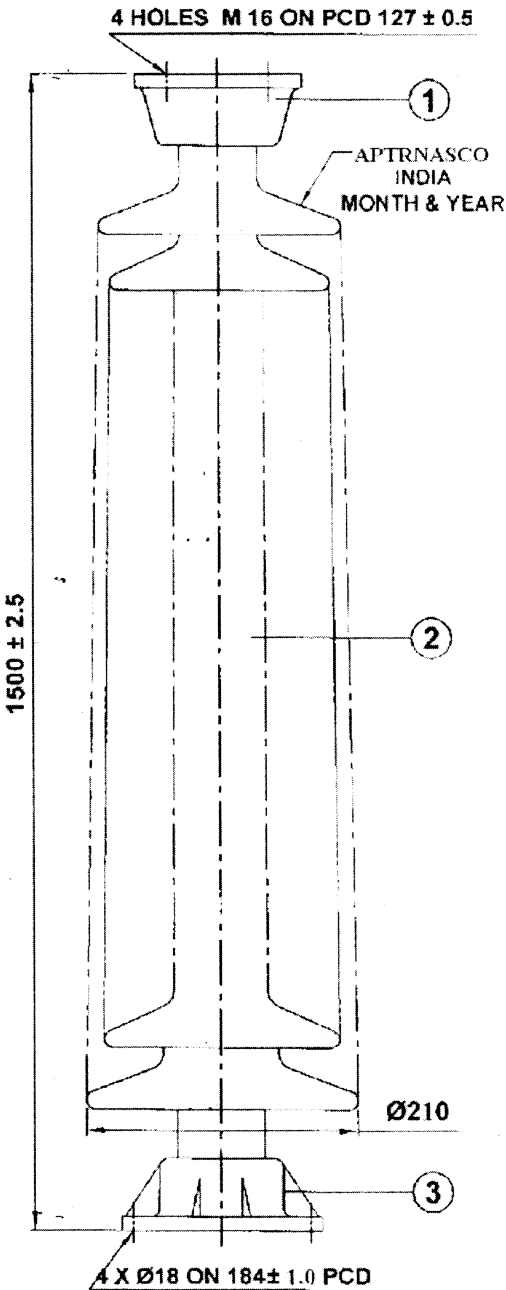
3,4,5	CAP & FLANGE	M.C.I. / S.G.I.	4	HOT - DIP - GALVANIZED
1 & 2	INSULATOR BODY	ALUMINA PORCELAIN KER - 110.2	2	BROWN GLAZED
SL. No.	DESCRIPTION	MATERIAL	No.OFF	FINISH

CUSTOMER REF.	APTRNASCO	SCALE	NTS
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**Standardised Drawing for Solid Core Insulator 220 / 245kV**

**STD/GTP-DWG/Approval No. 203 - 1 / Revision No. 0**

**Prepared & Approved during October - 2011**



**GUARANTEED TECHNICAL PARTICULARS**

**GENERAL :**

- 1. STANDARDS APPLICABLE : IS 2544 - 1973 / IEC : 168 - 2001
- 2. TYPE OF INSULATOR : SOLIDCORE POST TYPE
- 3. NO. OF UNITS PER STACK ONE
- 4. MIN. NOM. CREEPAGE DISTANCE MM 3625
- 5. SHED PROFILES CONFORMS TO IEC 815-1986
- 6. FERROUS PARTS HOT DIP GALVANISED AS PER IS : 2633 - 1986
- 7. DRY ARCING DISTANCE MM 1360
- 8. APPROX WEIGHT Kg 64

**MECHANICAL VALUES :**

- 1. ULTIMATE CANTILEVER STRENGTH KN 6
- 2. ULTIMATE TORSIONAL STRENGTH KN.M 4.5
- 3. ULTIMATE TENSILE STRENGTH KN 80
- 4. ULTIMATE COMPRESSION STRENGTH KN 160

**ELECTRICAL VALUES :**

- 1. NOMINAL SYSTEM VOLTAGE KV (rms) 132
- 2. HIGHEST SYSTEM VOLTAGE KV (rms) 145
- 3. DRY POWER FREQUENCY WITHSTAND VOLTAGE KV (rms) 335
- 4. WET POWER FREQUENCY WITHSTAND VOLTAGE KV (rms) 275
- 5. LIGHTNING IMPULSE WITHSTAND VOLTAGE  
(1.2 / 50 µ SEC. WAVE) KV (peak) 650
- 6. DRY POWER FREQUENCY FLASHOVER VOLTAGE KV (rms) 365
- 7. WET POWER FREQUENCY FLASHOVER VOLTAGE KV (rms) 305
- 8. IMPULSE FLASHOVER VOLTAGE  
(1.2 / 50 µ SEC) +VE / -VE WAVE KV (Peak) 700
- 9. VISIBLE (CORONA EXTINCTION) VOLTAGE KV (rms) >105
- 10. RIV TEST DATA
- TEST VOLTAGE TO GROUND KV (rms) 105
- MAX. RIV AT 1 MHz µKV <1000
- 11. Total Creepage distance mm(min) 3625

**PACKING PARTICULARS :**

- 1. No. OF INSULATORS PER CRATE. 1
- 2. GROSS (PACKED) WEIGHT (APPROX). Kg 86
- 3. PACKED VOLUME M<sup>3</sup> 0.03887

**APPROVED FOR TURNKEY PROJECTS**

  
**CHIEF ENGINEER / CONSTRUCTION :**  
**APTRANSCO/VIDYUTH SOUTH DIVISION**

3	FLANGE	M.C.I. / S.G.I.	1	HOT - DIP - GALVANIZED
2	INSULATOR BODY	ALUMINA PROCELAIN KER - 110 - 2	1	BROWN GLAZED
1	CAP	M.C.I. / S.G.I.	1	HOT - DIP - GALVANIZED
SL. No.	DESCRIPTION	MATERIAL	No.OFF	FINISH
CUSTOMER REF <b>APTRANSCO</b>			SCALE NTS	



**Standardised Drawing for Solid Core Insulator 132 /145kV**  
**STD/GTP-DWG/Approval No. 203 - 2 / Revision No. 0**

Prepared & Approved during October - 2011

