

Specification of "420kV Composite Hollow Insulator"		Specification No: PSHVE/22-23/1	
		Date: 01.11.2022	
S. No.	Description	BHEL Specification	Vendor Compliance/ Deviation
1.0	Application	420kV composite hollow insulator would be used for mounting of optical sensors in high voltage substation	
2.0	Scope of Supply	Two (2) number of 420 kV, composite hollow insulator (porcelain not acceptable).	
Electrical Requirement			
3.0	System voltage	420 kV	
4.0	System frequency	50 Hz	
5.0	Standard Insulation Level a) Lightning Impulse withstand voltage b) Switching Impulse withstand voltage c) Power Frequency withstand voltage (1 min)	a) 1425 kV b) 1050 kV c) 650 kV	
Insulator Data (Refer Figure 1)			
6.0	Creepage distance, L	10500 mm minimum	
7.0	Insulator Length, H	Approx. 4200 mm	
8.0	Arcing distance, SW	Vendor to specify	
9.0	Insulator inner tube diameter	ID (ø I) : 80 mm ± 2 mm	
10.0	Tube material	FRP	
11.0	Shed material	Silicone rubber	
12.0	Outer flange diameter (both top & bottom)	220 mm ± 2 mm (with 12 bolting holes at 194 mm PCD)	
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13.0	Mechanical Load	2.0 kN (min)	
14.0	Service temperature	- 40 to + 80 °C	
15.0	Insulator Weight	Vendor to specify	
16.0	Insulating Medium	None	

Others

17.0	Drawings	Drawing of the proposed composite hollow insulator should be submitted along with the technical bid.	
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Warranty

18.0	Warranty	The item supplied shall be under warranty for a period of 12 months from the date of receipt of material for defects, if any for material/workmanship. Any defective part noticed by BHEL will be replaced at no costs for BHEL.	
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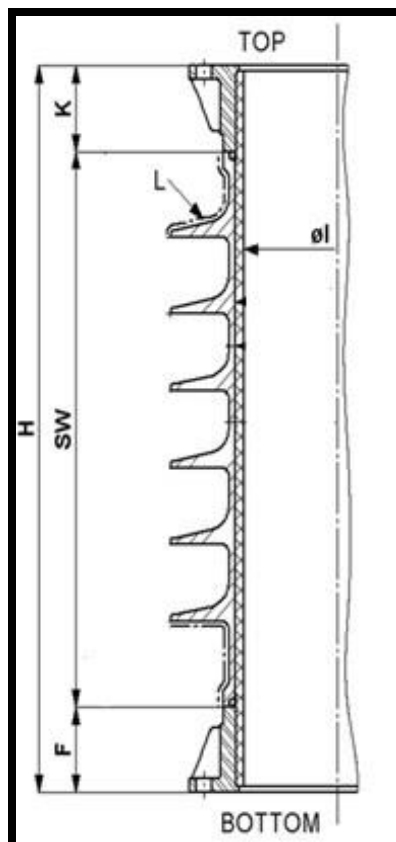


Figure 1: Typical Insulator Geometry for 420kV Composite Hollow Insulator

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*Vendors are advised to write specifications in detail and not to write like 'Complied/ Yes / No ' etc. in specifications.