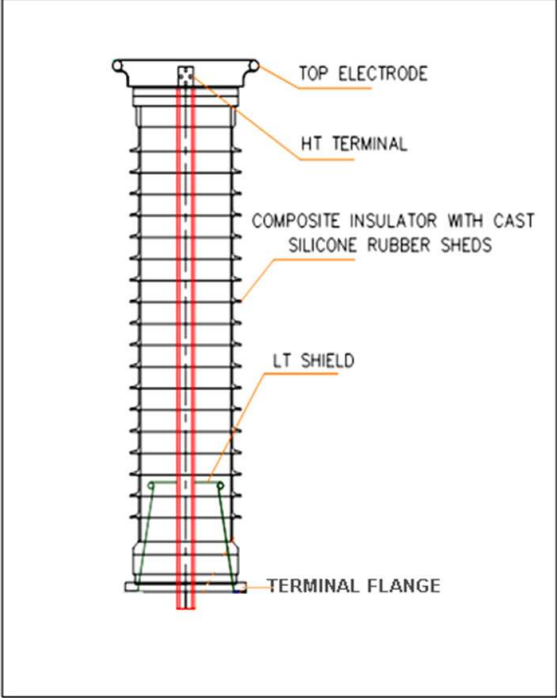


PSGSG	PRODUCT SPECIFICATION	PRODUCT	GSM 765	
15-16 /011		DATE	16.11.15	
REV. 00	SF ₆ GAS INSULATED BUSHING	SHEET	1 of 3	
1.0	Purpose:		CONFIRMATION BY VENDOR	COMMENTS / DEVIATIONS
	Gas-to-Air termination bushing for high voltage testing on 800 kV SF6 gas insulated metal clad substation equipment.		YES/NO	
2.0	Scope of Supply:			
	1.One Number of 800 kV, SF6 gas insulated bushing with composite insulator (porcelain not acceptable).		YES/NO	
	2. The bushing shall be complete with internal and external shields. Alternatively stress graded HT conductor or LT end can be offered.		YES/NO	
3.0	Spare and Services:	3.HT connection shall have provision to connect to gas insulated equipment directly or through insulator.	YES/NO	
		Three sets of spares (if any recommended) like seals and gaskets etc. shall be included in the offer.	YES/NO	
4.0	Mounting Arrangement:			
	Detailed assembly drawing of bushing confirming the different possible mounting arrangements. Please also specify the maximum permissible angle of mounting w.r.t. support structure.		YES/NO	
5.0	Drawing Approval:			
	Drawings as per Master list of manufacturing drawings shall be submitted for approval prior to commencement of supply, in event of order placed by BHEL.Detailed drawing of the critical components like composite insulator, HT Shield, LT Shield, terminal flange shall also be submitted for information of BHEL along with technical bid.		YES/NO	
6.0	Factory Tests:			
	Detailed type test reports i.e., for both electrical and mechanical test shall be furnished with technical offer. . A sample of test report shall be submitted along with the offer. All routine tests have to be carried out on the equipment being offered and test reports to be submitted along with the supply		YES/NO	
7.0	Qualifying Requirements			
	Original Equipment Manufacturer with bushings manufacturing capacities up to 800 kV are eligible to quote. The manufacturer shall have supplied such equipment for past three years. Reference List of customers using this equipment shall be provided with technical offer.		YES/NO	
		Written:	Sulabh Agarwal	16.11.15
		Chkd :	Sulabh Agarwal	16.11.15
		Apprvd:	MM RAO	16.11.15

PSGSG	PRODUCT SPECIFICATION	PRODUCT	GSM 765	
15-16 /011		DATE	15.05.13	
REV. 00	SF6 GAS INSULATED BUSHING	SHEET	2 of 3	
			CONFIRMATION BY VENDOR	COMMENTS / DEVIATIONS
8.0	Technical Specifications			
	1. System Voltage : 800 kV (rms)		YES/NO	
	2. System Frequency : 50 Hz.		YES/NO	
	3. Standard Insulation Level:			
	(a). Dry Lightning Impulse Withstand Voltage : >2100 kV 1.2/50 μ s as per IEC		YES/NO	
	(b). Power frequency withstand voltage dry Voltage : >960 kV /1 min as per IEC		YES/NO	
	(C) Switching Impulse withstand Voltage Dry : > 1425 kV		YES/NO	
	4. Rated Current : > 3150 Amps.		YES/NO	
	5. Rated Short Time Current : 50kA/3sec, 63kA/1sec.		YES/NO	
	6. Rated phase to earth voltage : 800/ $\sqrt{3}$ kV		YES/NO	
	7. Minimum operating pressure : ~0.5Mpa		YES/NO	
	8. Maximum operating pressure :> 0.85 Mpa (abs.)			
9.0	Standard Specifications			
	1. All other specifications as per IEC 60137, version there of IEC 62271-203		YES/NO	
	2. PD level should be in accordance with IEC 60270, version there of 62271-203 for composite gas insulated bushing and shall be specified.		YES/NO	
	3. The resistance of bushing HT conductor should be close to theoretical minimum and shall be specified.		YES/NO	
	4. The test certificates shall be furnished for all type tests.		YES/NO	
	5. Creepage distance of the bushing shall be in the range of 25-31 mm/kV.		YES/NO	
10.0	Gas Connections:			
	For bushings terminated in a conical support insulator, it shall be provided with at least two non-return gas valves (standard DILO) for gas filling and gas pressure monitoring. The detailed drawings of these components shall be provided with the offer.		YES/NO	
11.0	Operating & Maintenance Manuals			
	Supplier shall provide operation and maintenance manual. The user manuals shall have detailed information about frequently maintenance requirements, spare parts and part no.s and addresses for future correspondence etc.		YES/NO	
12.0	Guarantee Certificate			
	Supplier shall provide Guarantee certificate for the equipment to ensure reliability of the equipment for a period of not less than 24 month from the date of dispatch			
		Written:	Sulabh Agarwal	16.11.15
		Chkd :	Sulabh Agarwal	16.11.15
		Apprvd:	MM RAO	15.05.13

PSGSG	PRODUCT SPECIFICATION	PRODUCT	GSM 765
15-16 /011		DATE	16.11.15
REV. 00	SF6 GAS INSULATED BUSHING	SHEET	3 of 3
13	Documents along with technical offer 1. Confirmation of supply as per clause 2 2. Confirmation of meeting technical requirement of this product standard. 3. Format of routine test certificate 4. Type test report copy. 5. Outline drawing of equipment and matching flange 6. Quality assurance plan 7. Shipping/packing drawing and documents 8. PD level of equipment. 9. Resistance of bushing HT conductor. 10. Non-return valve model and drawing.	YES/NO	
14	Documents along with consignments 1. Routine test certificate 2. Dimensional report 3. Guarantee certificate. 4. Operation & Maintenance manual.	YES/NO	
15	Inspection Inspection of items will be carried out at vendor's work prior to dispatch.	YES/NO	
 <p style="text-align: center;">SCHMATIC DIAGRAM OF SF6 GAS BUSHING</p>			
	Written:	Sulabh Agarwal	16.11.15
	Chkd :	Sulabh Agarwal	16.11.15
	Apprvd:	MM RAO	16.11.15