



**पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड**  
(भारत सरकार का उद्यम)  
**POWER GRID CORPORATION OF INDIA LIMITED**  
(A Government of India Enterprise)



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Corporate Office : "Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001, Haryana  
Tel. : 2571700 - 719, Fax : 2571760, 2571761 Gram : 'NATGRID'

संदर्भ संख्या/Ref. Number

CIN: L40101DL1989GO11038121

संदर्भ / Ref: C-ENG/Tr. Core/IZOLYATOR/BSG/145-1250/TT/AUG/01

दिनांक / Date: 10.08.2017

सेवा में /To **M/s Massa LLC (Izolyator High Voltage Electrical Equipment)**  
Lenina Street 77, Pavlovskaya  
Sloboda village, Istra District,  
Moscow region, Russia, 143581

**Kind Attn: Mr. Andrey Shornikov, International Business Development Manager**  
**Dr. Ashok Singh, Chief Representative Massa, India**

विषय / Sub: **Type Test approval of Standard 145kV/1250A RIP Bushing – Izolyator, Russia Make**


Dear Sir,

Please refer to your letter ref Izo/PGCIL/2017/03/Type/test-145kV-1250/REV01 dated 04/08/2017 regarding the submission of type test report on above subject bushing. The type tests were carried out at M/s Izolyator, Russia and Federal State Unitary Enterprise "V.I. Lenin Russian National Electrotechnical Institute" (FGUP VEI), Russia in line with IEC 60137-2008 and witnessed by POWERGRID.

Sr. No	Test Description as per IEC 60137-2008 On 145kV/1250A RIP Bushing Drawing/GTP No. 686352.604 / REV 01 Type:TCSIV-90-145/1250 Bushing Sr. No. n-76997	TEST REPORT	Remarks
01	Dry & wet power frequency voltage withstand test.	371 & 11020-027-2017	Found generally in order
02	Dry lightning impulse voltage withstand test (Bushing Sr. No. n-76997, n-77090 & n-77089)	1, 4 & 371	
03	Temperature Rise Test	371	
04	Verification of Thermal Short Time current withstand	371	
05	Cantilever Load withstand Test	371	
06	Electromagnetic Compatibility Test	371	
07	Verification of Dimension	371	
08	Routine Tests	371	

The subject Bushing was tested for an altitude correction of 1600 meter from MSL. With this the requirement of type test on aforesaid bushing is completed.

Thanking you.

Yours truly,  
  
(Gunjan Agrawal)  
Ch. Manager (Engg-S/s)