

**POWERGRID CORPORATION OF INDIA LIMITED**  
**MANUFACTURING QUALITY PLAN**

		<b>MANUFACTURER'S NAME &amp; ADDRESS</b> BHARAT HEAVY ELECTRICALS LTD ELECTROPORCELAINS DIVISION BANGALORE 560 012		<b>CUSTOMER :</b> POWERGRID	<b>VENDOR CODE</b> 23C538	<b>ITEM:</b> COMPOSITE LONG ROD INSULATORS (For Development Project)	QP No: INB 414 Rev No: 02 Date: 18.12.2013	Valid from : 01-01-2014 Valid up to : 31-12-15					
SL. NO.	COMPONENT / OPERATION DESCRIPTION OF TEST	TYPE OF CHECK	QUANTUM OF CHECK/SAMPLING WITH BASIS	REFERENCE DOCUMENT FOR TESTING	ACCEPTANCE NORMS	FORMAT OF RECORD	APPLICABLE CODES						REMARKS
							1	2	3	4	5	6	
1	2	3	4	5	6	7	8						9

**1.6 GRADING RINGS**

a)	Visual Inspection	Min	5% of Lot size	As per Drawing	As per Drawing	EM TR	A	J	S	W/Y	N	
b)	Dimensional Inspection	Maj	5% of Lot size	As per Drawing	As per Drawing	EM TR	A	J	S	W/Y	N	
c)	Die penetration Test	Maj	5% of Lot size	As per Drawing	As per Drawing	EM TR	A	J	S	W/Y	N	
d)	Chemical Analysis of aluminum alloy	Maj	1 sample per Lot	As per Drawing	As per Drawing	CM TR / Third Party Report	B/D	K/L	P/V	W/Y	N	

**1.7 ROUTINE TESTS**

a)	Dimensions	Maj	100% by gauge	As per approved drawing	As per approved drawing	EM TR	A	J	S	W	N	
b)	Visual examination	Min	100%	Visual / Powergrid spec	IEC 61109, Cl 8.2 & 8.3	EM TR	A	J	S	W	N	
c)	Routine Mechanical test	Maj	100% after crimping	50% SML for 10 sec. As Per IEC 61109 / Powergrid spec	IEC 61109, Cl 8.2 & 8.3	EM TR	A	J	S	W	N	
d)	Checking quality of housing interlocks	Maj	10%			EM TR						

**1.8 ACCEPTANCE TEST**

a)	Verification of dimensions	Maj	IEC 61109/As per Powergrid Specn	IEC 61109/As per Powergrid approved drg.	IEC 61109/As per Powergrid Specn	EM TR	A	J	U	W/Z	Y	
b)	Galvanisation test	Maj	IEC 61109/As per Powergrid Specn	IEC 60383/As per Powergrid Specn (measure by Elco- meter.	IEC 61109/As per Powergrid Specn	EM TR	A	J	U	W/Z	Y	
c)	Verification of end fittings	Maj	IEC 61109/As per Powergrid Specn	IEC 61109/As per Powergrid Specn	IEC 61109/As per Powergrid Specn	EM TR	A	J	U	W/Z	Y	
d)	Recovery of Hydrophobicity	Maj	As per Powergrid Specn Annexure A	As per Powergrid Specn Annexure A	As per Powergrid Specn Annexure A	EM TR	A	J	U	W/Z	Y	