



CPRI

HIGH VOLTAGE DIVISION
CENTRAL POWER RESEARCH INSTITUTE
P. B. NO.8066, SADHASHIVANAGAR SUB P.O.
Prof. SIR. C.V. RAMAN ROAD, BANGALORE - 560 080, INDIA.
Phone: +91 (0)80 - 23601917 Fax: +91 (0)80 - 23601917

Sheet 1 of 3

TEST REPORT

Test Report Number : No.43/1/2009/HV/7453/NIE **Dated** : 15-12-2009
Name & Address of the Customer : M/s. NIE Power & Engineering(P) Ltd.,
B-40, KSSIDC Industrial Estate,
Kumbalagodu, Bangalore - 74.
Ref. No. Nil **Dated** : 11-12-2009

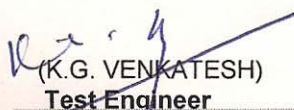
Name & Address of the Manufacturer : M/s. NIE Power & Engineering(P) Ltd.,
B-40, KSSIDC Industrial Estate,
Kumbalagodu, Bangalore - 74.

Particulars of sample tested
Condition of the Sample on Receipt : New.
Type : Non Segregated Bus duct.
Designation : 11kV 1600A Non Segregated Bus duct.
Serial Number : SL-01
Number of samples tested : One.
Date(s) of Test(s) : 11-12-2009
CPRI Sample Code Number : DCCDHRT 09 S0085.

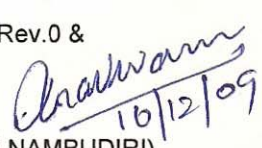
Particulars of tests conducted : 1. Lightning Impulse Voltage Withstand Test.
Test in accordance with standard/ specification : As per IS 8084/1976 RA 2007.
Sampling plan : Not Applicable.
Customer's requirement : Nil.
Deviations if any : Nil.

Name of the witnessing persons
Customer's representatives : Mr. Ravi Kumar & Mr. K.Z. Meeran.
Other than Customer's representatives : None.
Test subcontracted with : None.
Address of the laboratory : None.

Documents constituting this report (in words)
Number of sheets : Three.
Number of oscillogram/s : Twelve.
Number of graphs : Nil.
Number of photo/s : Nil.
Number of Test circuit diagrams : Nil.
Number of drawings : Two {Drawing No. (1) B-01 SH 03 of 03 Rev.0 & (2) I - 01 Rev.0}.


(K.G. VENKATESH)
Test Engineer




(P.V. VASUDEVAN NAMBU DIRI)
Additional Director

AUTHORISED SIGNATORIES



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Test Report No. 43/1/2009-HV/7453/NIE

Dated : 15-12-2009

Test Arrangement For Lightning Impulse Voltage Withstand Test

Sl. No.	Impulse to	Connections to earth
1.	R	Y, B & Frame.
2.	Y	B, R & Frame.
3.	B	R, Y & Frame.

1. Lightning Impulse Voltage Withstand Test

Test Arrangement	Shot No.	Test Voltage kV (Peak) *				Remarks
		Positive Polarity	Osc. No.	Negative Polarity	Osc. No.	
1	1 st	75	100	75	104	Withstood
	5 th	75	101	75	105	Withstood
2	1 st	75	110	75	108	Withstood
	5 th	75	111	75	109	Withstood
3	1 st	75	112	75	114	Withstood
	5 th	75	113	75	115	Withstood

* These voltages are applied under ambient conditions which are as given below :

Temperature in Degree Celsius			Atmospheric Pressure in mm of Hg.
*	Dry Bulb	Wet Bulb	
*	25	17	682


(K.G. VENKATESH)
Test Engineer



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Sheet 3 of 3

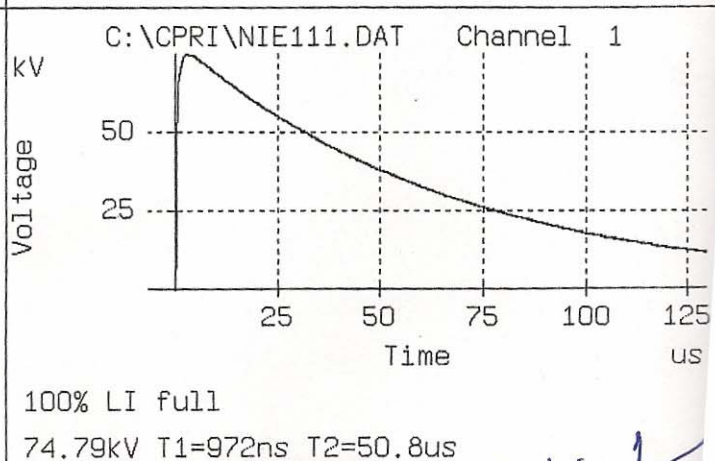
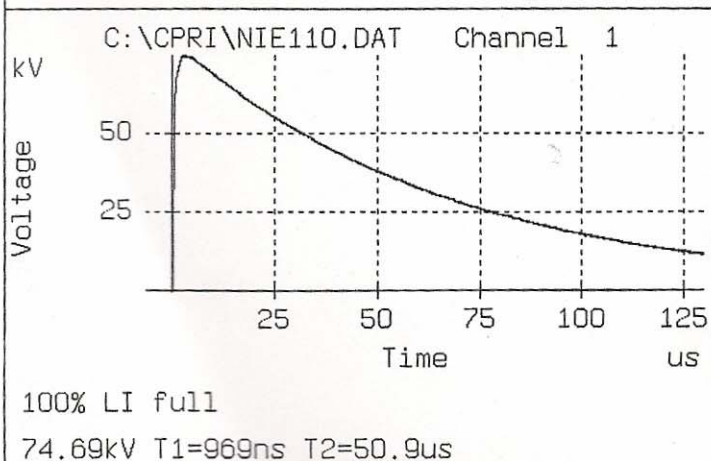
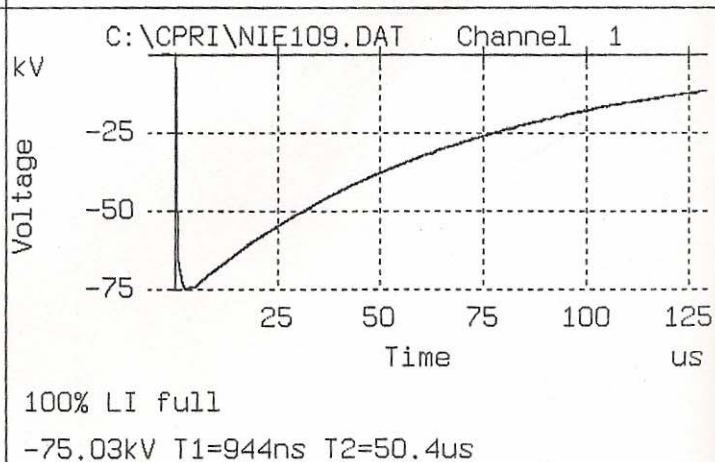
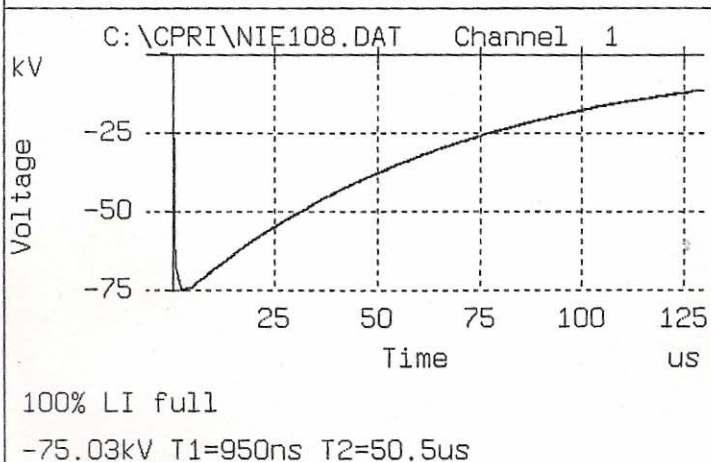
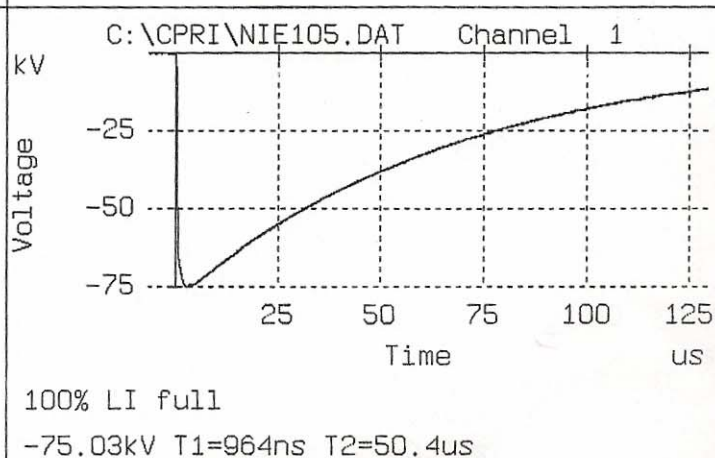
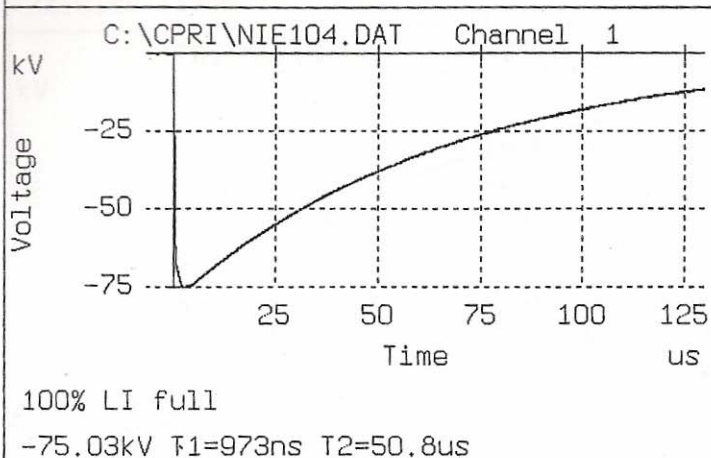
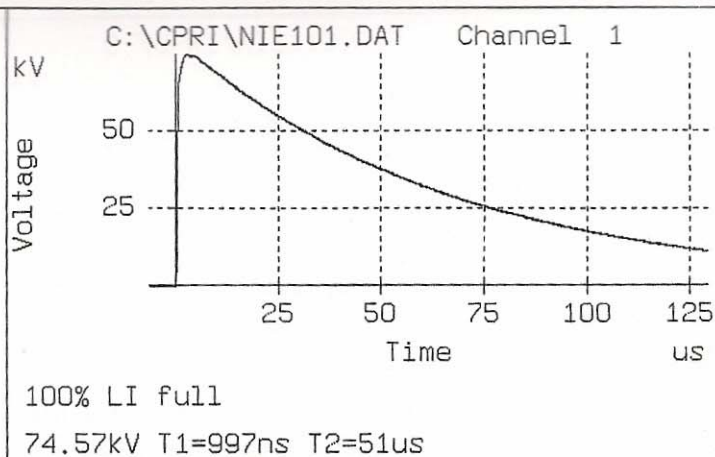
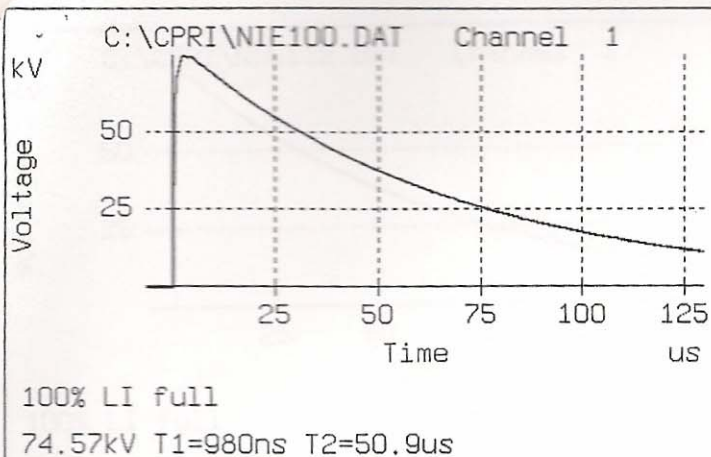
Test Report No. 43/1/2009-HV/7453/NIE

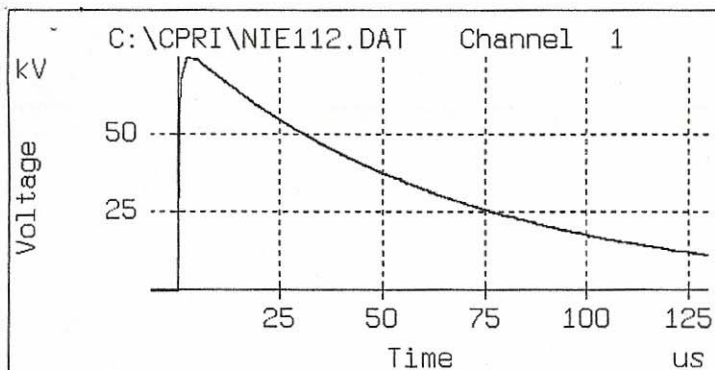
Dated : 15-12-2009

NOTE

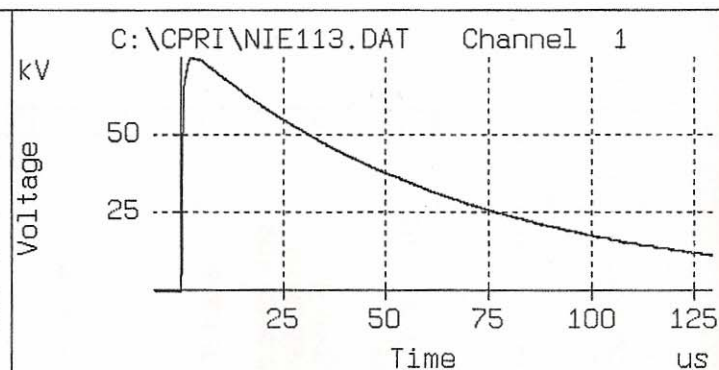
- a) The test results relate only to the item(s) tested.
- b) Publication or reproduction of this test report/certificate in any form other than by complete set of the whole report and in the language written is not permitted without the written consent of CPRI.
- c) Any corrections/erasure invalidates this test report/certificate.
- d) Any anomaly/discrepancy in this test report/certificate should be brought to our notice within 45 days from the date of issue.
- e) The verification of the sample drawings by CPRI is limited to dimensional checks only wherever possible.


(K.G. VENKATESH)
Test Engineer

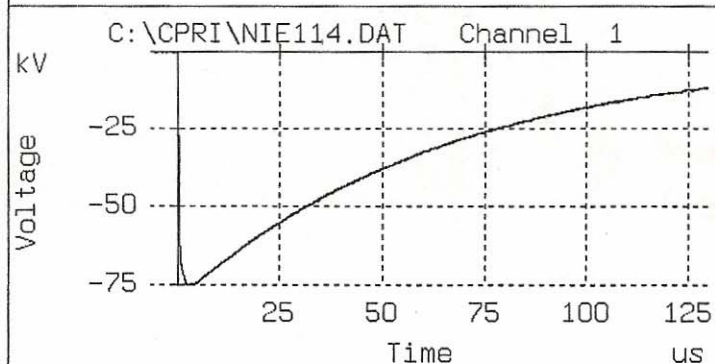




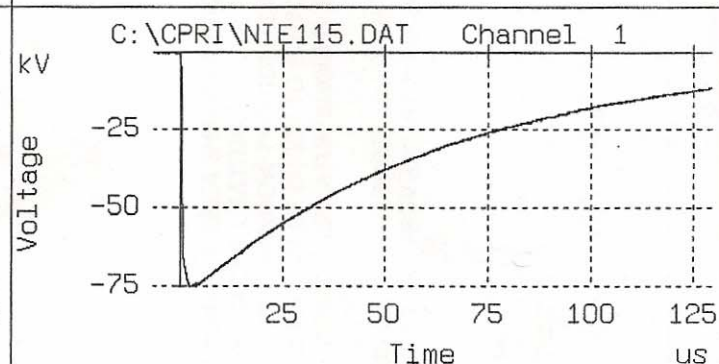
100% LI full
74.81kV T1=955ns T2=50.8us



100% LI full
74.68kV T1=965ns T2=50.9us



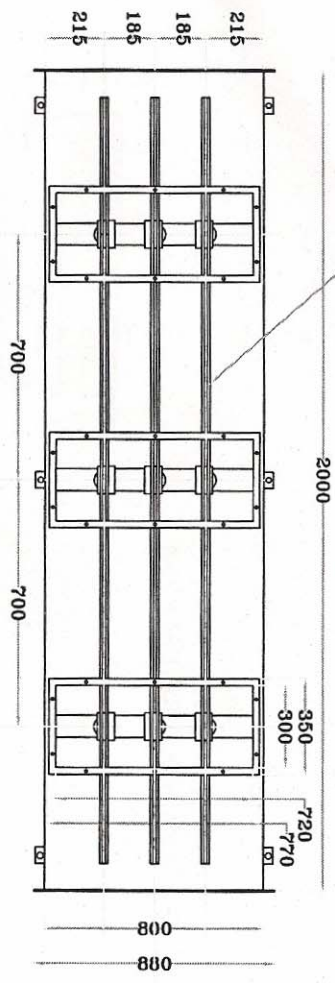
100% LI full
-75.03kV T1=926ns T2=50.5us



100% LI full
-75.03kV T1=933ns T2=50.4us

100 X 10 X 2 AL BUS BAR
1800mm LENGTH

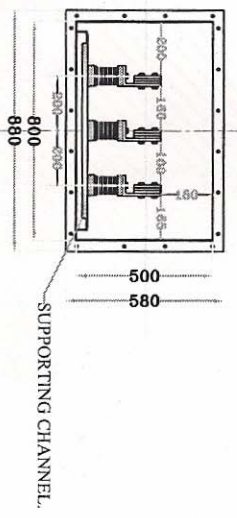
TOP VIEW



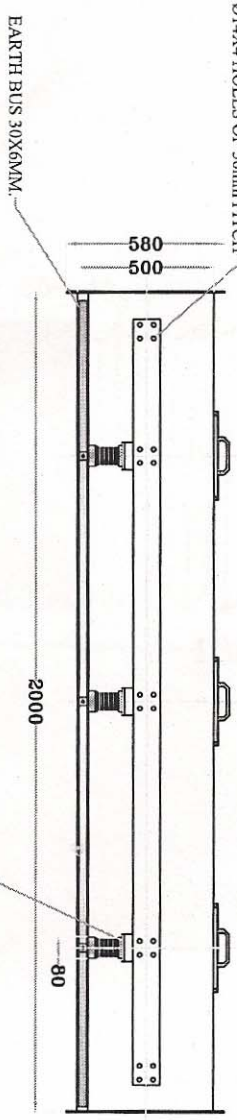
QTY : 03 NOS

"इस चित्र का उपयोग केवल
आपकी जानकारी के लिए है।"
"ATTENTION OF THIS DRAWING IS
LIMITED TO THE CHECKING OF
IMPORTANT DIMENSIONS ONLY"

FRONT VIEW



Ø14X4 HOLES OF 50mm PITCH



SUPPORTING INSULATORS Ø75 X 130mm.

SUPPORTING CHANNEL.

SIDE VIEW

NOTE :

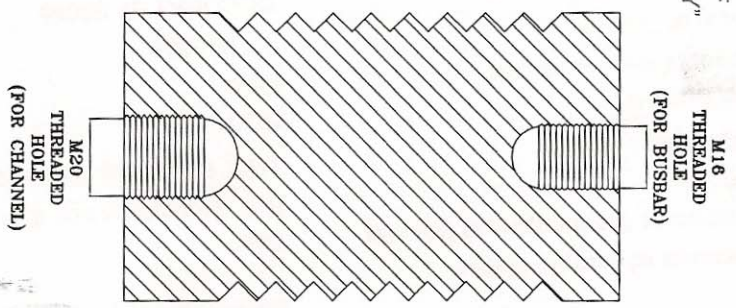
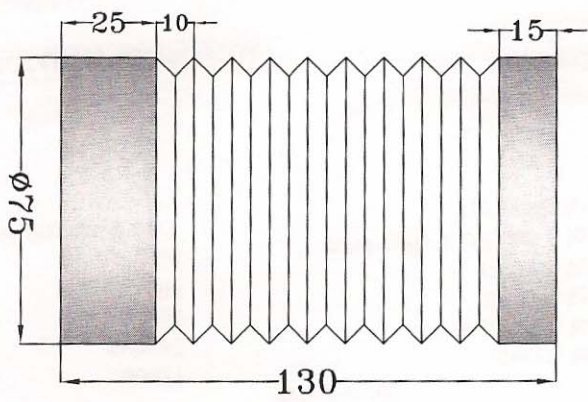
- 1) THE DUCT MADE OF CRCA SHEET HAVING 2.5mm THICK & STANDARD COLOUR COATING.
- 2) THE INSPECTION WINDOW PROVIDED IN THE BUS DUCT FOR EASY TERMINATION OF BUSES TO SUPPORTING INSULATORS.
- 3) THE SUPPORTING INSULATOR SHOULD BE EPOXY TYPE OF SIZE Ø75 x 130mm.
- 4) EARTH BUS CU 30X6 RUNNED ALONG WITH BUSDUCT.
- 6) THE BUSBARS ARE PROVIDED WITH HEAT SHRINKED SLEEVES.

यह चित्र परीक्षण दस्तावेज सं. 43/1/.....
एचवी गी..... से संबंधित है।
THIS DRAWING PERTAINS TO TEST REPORT
43/1/.....
Dated: 15/12/09.

इंजीनियर श्री अशोक
ENGINEERING OFFICER
सी पी और आई / CPRI
बंगलूरु / BANGALORE - 560 080

NIE POWER & ENGINEERING(P) LTD				CUSTOMER			
ABB				P.D. NO./DATE			
SYSTEM HOUSE				PROJECT			
ALL DIMENSIONS ARE IN MM				CROSS SECTIONAL VIEWS OF			
SCALE : 1:1				BUS DUCT.			
4				2			
8				1			
ISSUED FOR TESTING				DRAWING NO.			
DESCRIPTION				REV.			
DATE				0			
DRAWN				B-01 SH 03 OF 03			
CHECKED							
APPROVED							
KZN							
ZS							
SB							

“इस चित्र का उपयोग केवल
आधार के रूप में है।”
“ATTESTATION OF THIS DRAWING IS
LIMITED TO THE CHECKING OF
IMPORTANT DIMENSIONS ONLY”



यह चित्र परीक्षण दस्तावेज सं. 43/1/.....
एनपी नं. में संशोधित है।
THIS DRAWING RELATES TO TEST REPORT
43/1/..2009..NIV/..7453/NIE
Dated 15/12/09

इंजीनियर अशोक
ENGINEERING OFFICER
सी पी और आई/CPRI
बैंगलूर/ BANGALORE-560 080
MATERIAL : EPOXY

ISSUED FOR TESTING PURPOSE		NIE POWER & ENGINEERING PVT. LTD		CUSTOMER	
DESCRIPTION		DATE	DRAWN	CHECKED	APPROVED
			KZM	ZS	SB

ABB
SYSTEM HOUSE
ALL DIMENSIONS ARE IN MM
SCALE : 1:1

P.D. NO./DATE
PROJECT

11KV INSULATOR

DRAWING NO.

REV.