

**CPRI
INDIA**

TEST REPORT



CPRI

TEST REPORT



Central Power Research Institute

(A Govt. of India Society)

P.B.No. 8066, Sadashivanagar Post Office,

Sir C.V. Raman Road,

Bangalore - 560 080 (INDIA)



CPRI

HIGH VOLTAGE DIVISION
CENTRAL POWER RESEARCH INSTITUTE
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NABL Accredited
Laboratory

Sheet 1 of 3

TEST REPORT

Test Report Number	No.43/1/2005-HV/2892/NIE	Dated: 22-12-2005.
Name & Address of the Customer	M/s. NIE Power & Engineering (P) Ltd, B-40, KSSIDC Industrial Estate, Kumbalagudu, Bangalore - 560 074. Ref: NIEPE-CPRI-002.	Dated: 01-12-2005.
Name & Address of the Manufacturer	M/s. NIE Power & Engineering (P) Ltd, B-40, KSSIDC Industrial Estate, Kumbalagudu, Bangalore - 560 074.	
Particulars of Sample tested.		
Condition of sample on Receipt.	New.	
Type	Indoor.	
Designation	12KV, 1250A Three Phase Metal Clad Switchgear with VD4 ABB Breaker with earthed metallic Shutter.	
Serial Number.	001.	
No. of samples tested	One.	
Date(s) of Test(s)	21/12/2005.	
CPRI Sample Code Number.	SC05S2741.	
Particulars of tests conducted	Lightning Impulse Voltage Withstand Test.	
Test in accordance with standard/ Specification.	IEC 62271-200/ 2003.	
Sampling plan	Not Applicable.	
Customer's requirement	Nil.	
Deviations if any	Nil.	
Name of the witnessing persons		
Customer's representatives	Nil.	
Other than customer's representatives	Nil.	
Tests subcontracted with	Nil.	
Address of the laboratory.	Nil.	
Documents constituting this report (in words)		
Number of Sheets	Three.	
Number of oscillogram/s	Twenty.	
Number of graphs	Nil.	
Number of photo/s	Nil.	
Number of Test Circuit Diagrams	Nil.	
Number of Drawings	One (Drawing No's. NIEPE/001/TT/05)	

(K.G.VENKATESH)
Test Engineer

(P.V.VASUDEVAN NAMBUDIRI)
Joint Director

AUTHORISED SIGNATORIES



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Sheet 2 of 3

Test Report No.: 43/1/2005-HV/2892/NIE.

Dated: 22/12/2005.

TEST ARRANGEMENT FOR LIGHTNING IMPULSE VOLTAGE WITHSTAND TEST

Test arrangement	Breaker Position	H.V. Connected to	Earth Connected to
1.	Closed	Aa	Bb,Cc & Frame
2.	Closed	Bb	Aa,Cc & Frame
3.	Closed	Cc	Aa,Bb & Frame
4.	Open & Withdrawn	ABC (Shorted)	abc (Shorted) & Metallic Shutter
5.	Open & Withdrawn	abc (Shorted)	ABC (Shorted) & Metallic Shutter

For Test Arrangement 3 Frame is Isolated

Test arrangement	Test Voltage kV(Peak) *		Oscillogram No's			
	Positive (15 Shots)	Negative (15 Shots)	Positive Polarity		Negative Polarity	
			1 st Shot	15 th Shot	1 st Shot	15 th Shot
1.	75	75	034	037	039	042
2.	75	75	048	059	044	047
3.	75	75	070	082	060	069
4.	75	75	083	088	089	103
5.	75	75	109	114	104	108

The Metal Clad Switchgear with breaker has withstood the above mentioned Lightning Impulse voltage applications on all the three Phases.

* These voltages are final values after applying correction factors for ambient conditions which are given below

Temperature in Degree Celsius		Atmospheric Pressure in mm of Hg.
Dry Bulb	Wet Bulb	
*	22.0	19.0
		684

(K.G.VENKATESH)
Test Engineer



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Sheet 3 of 3

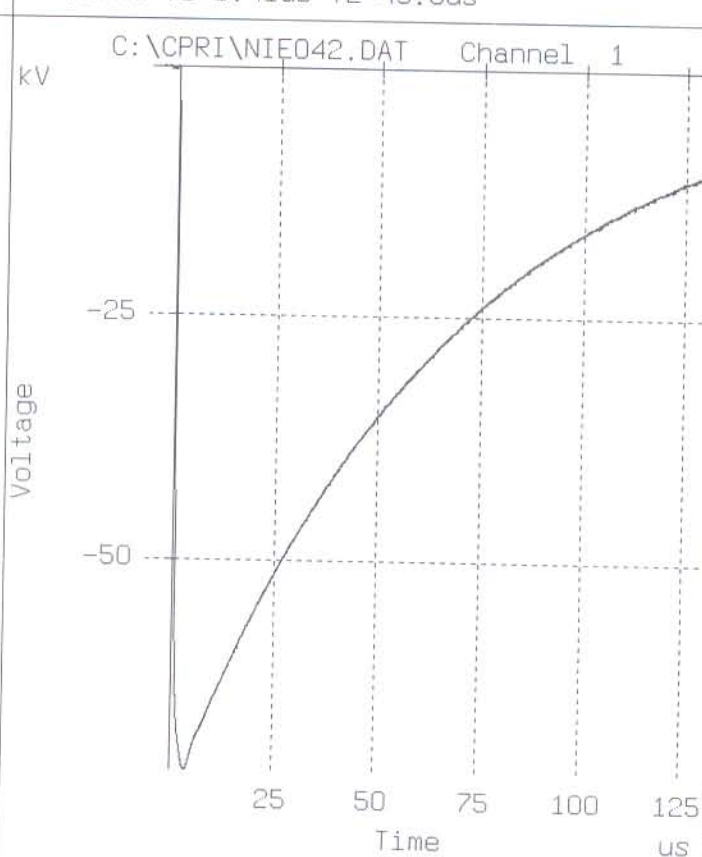
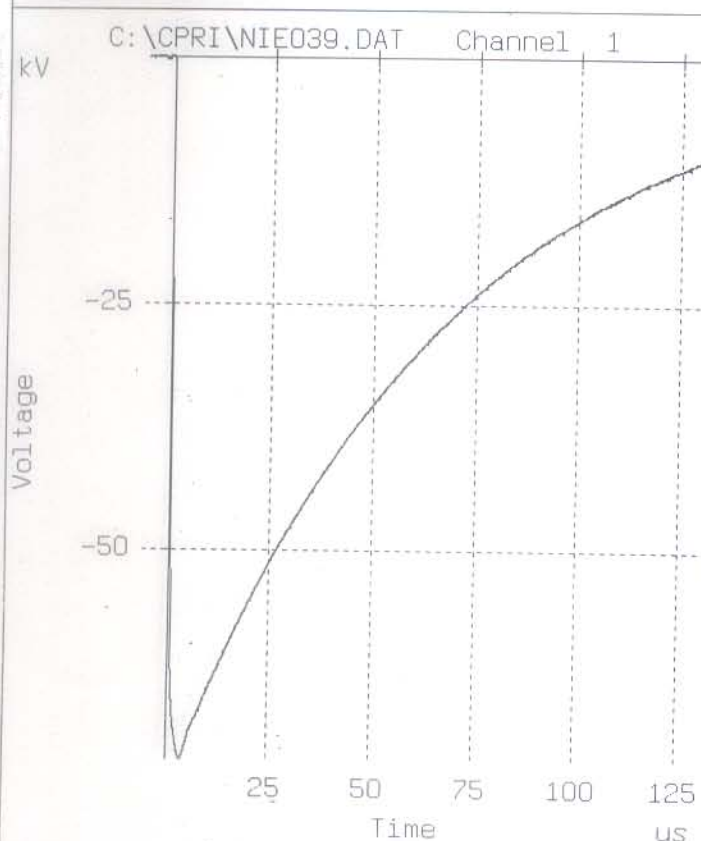
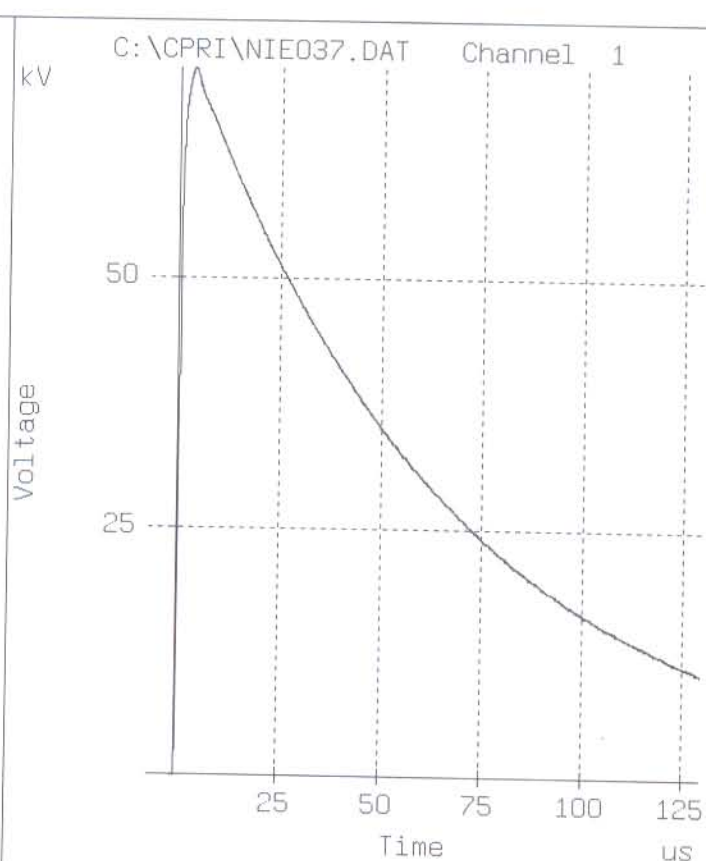
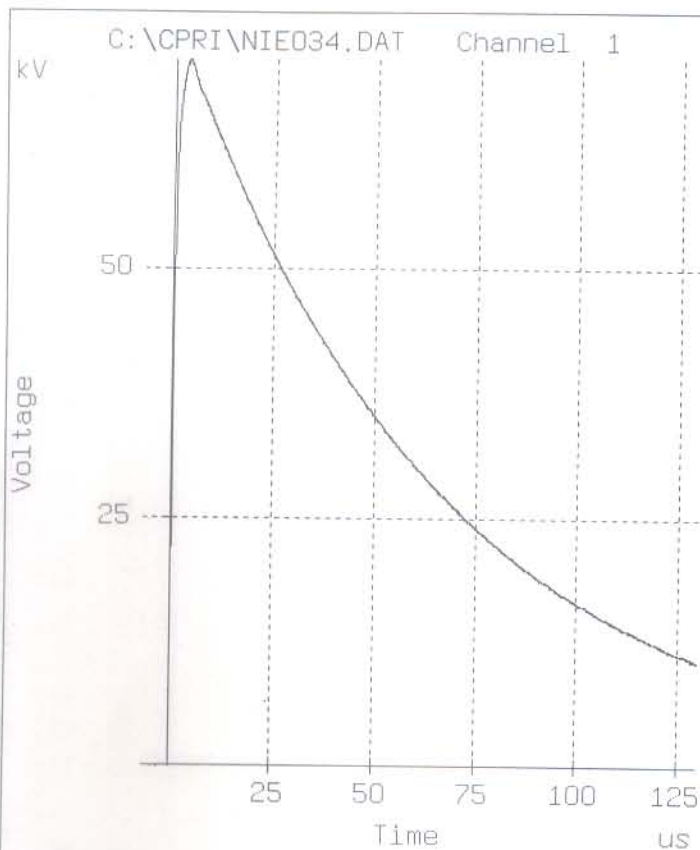
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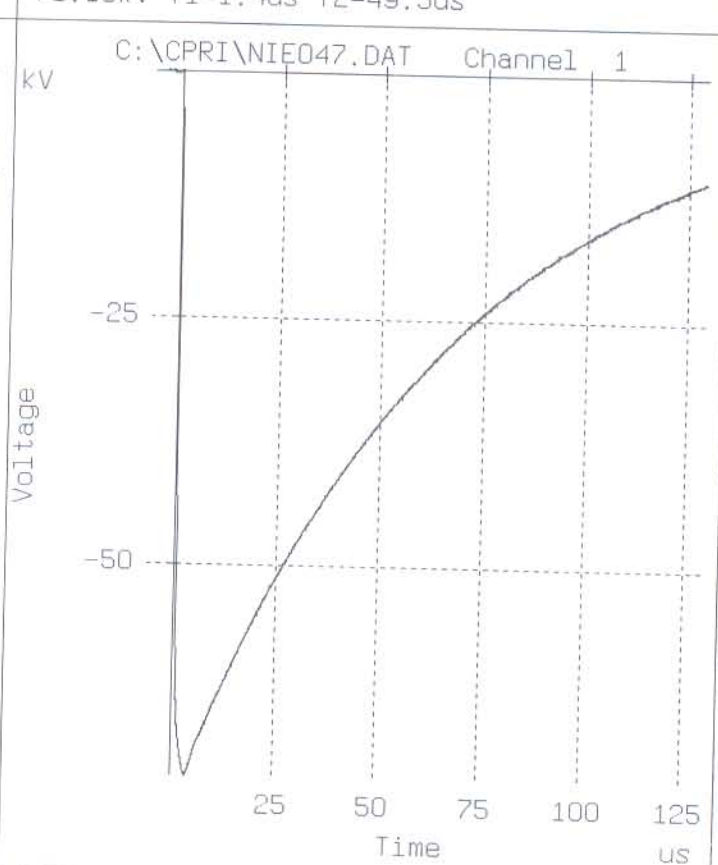
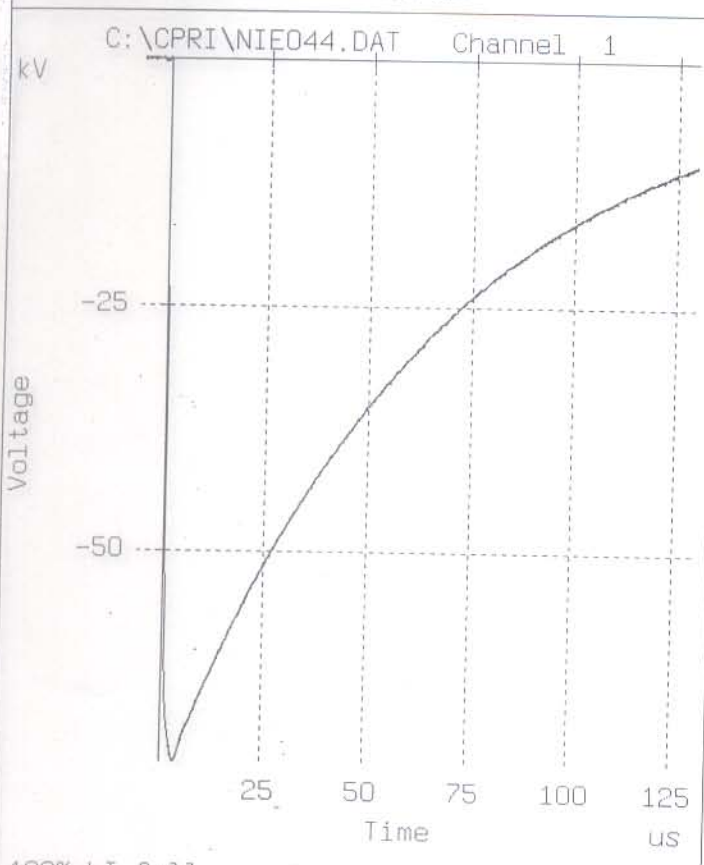
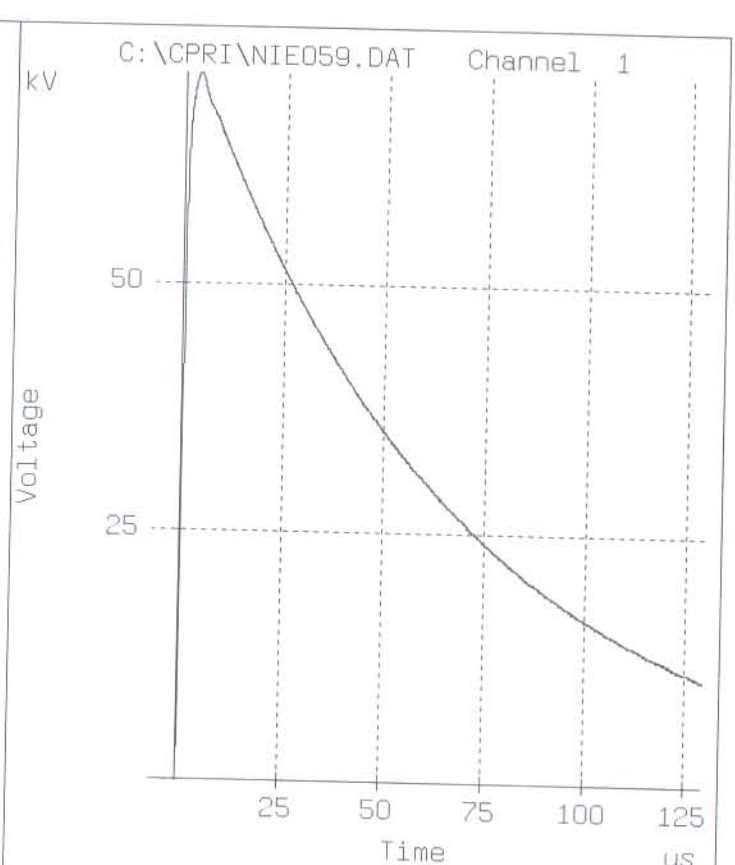
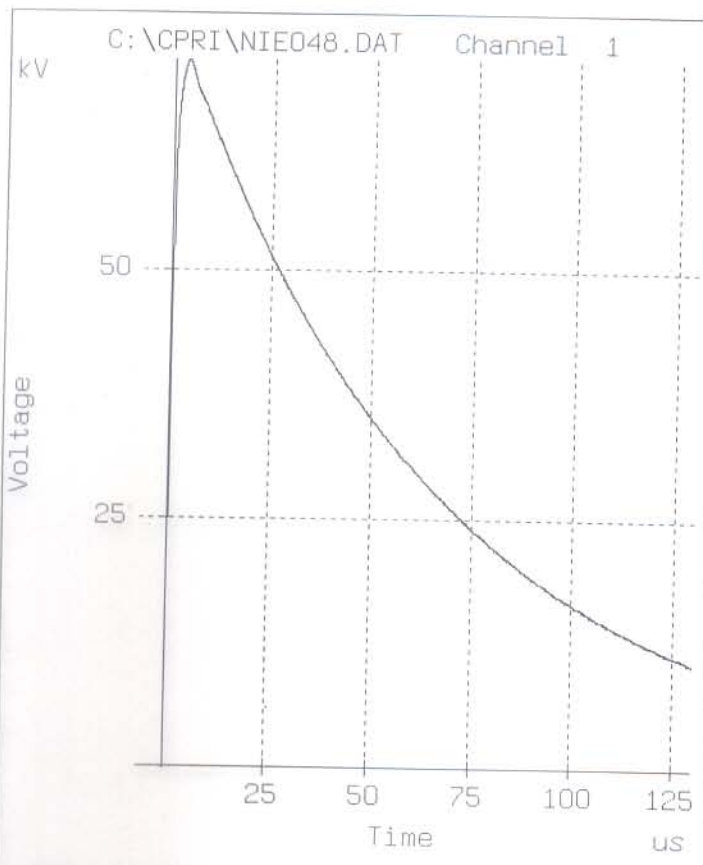
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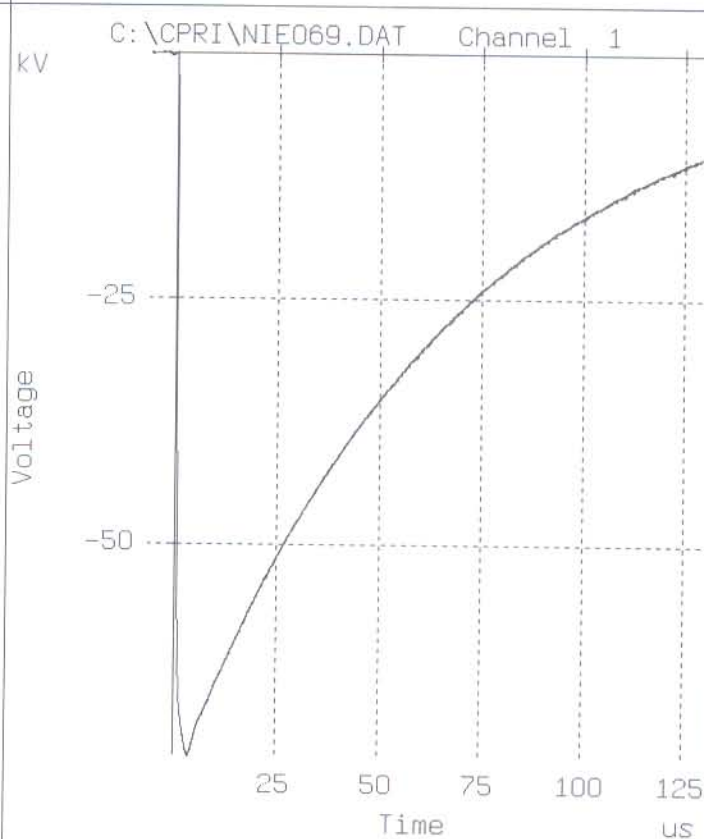
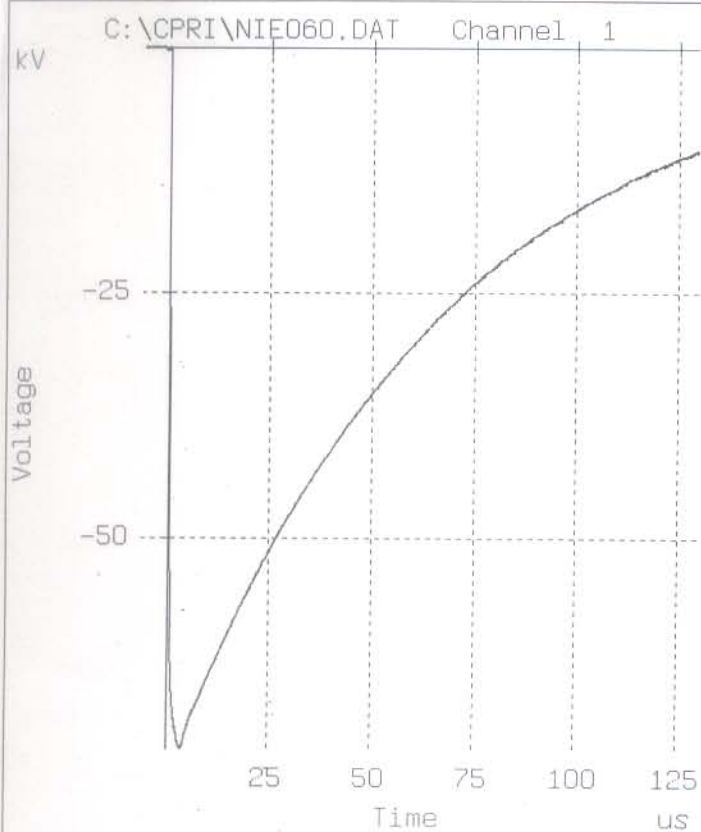
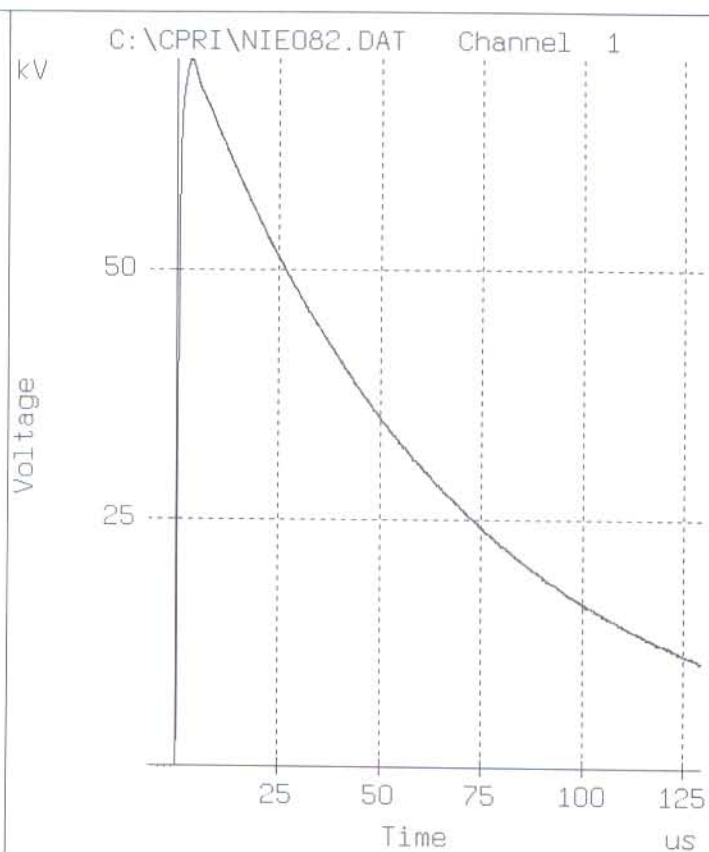
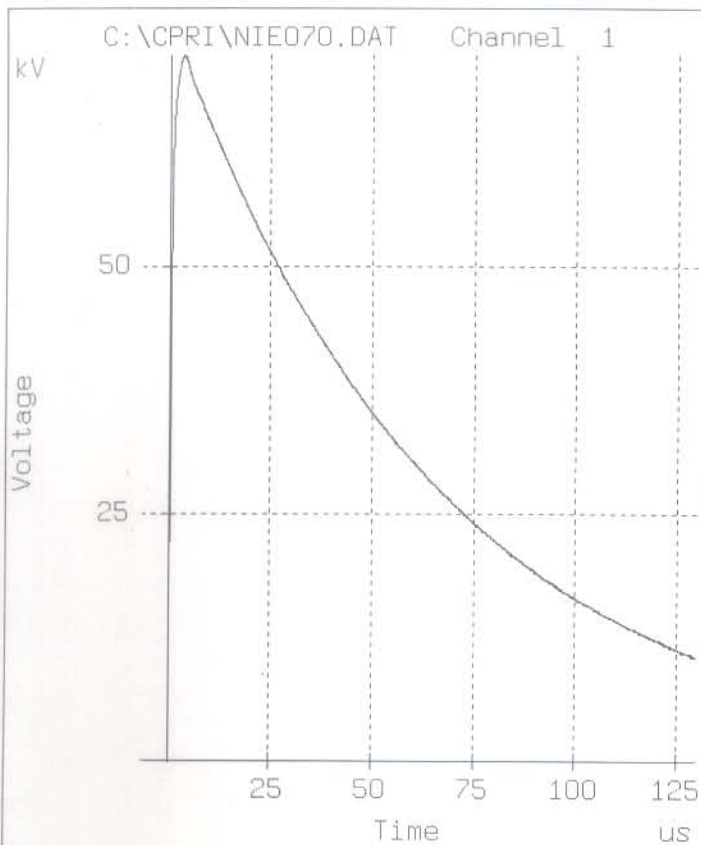
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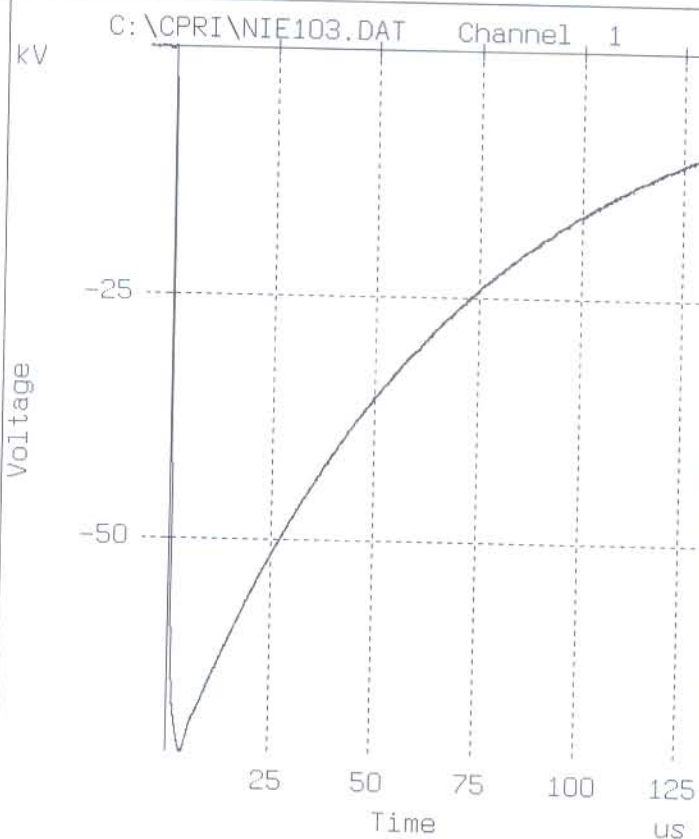
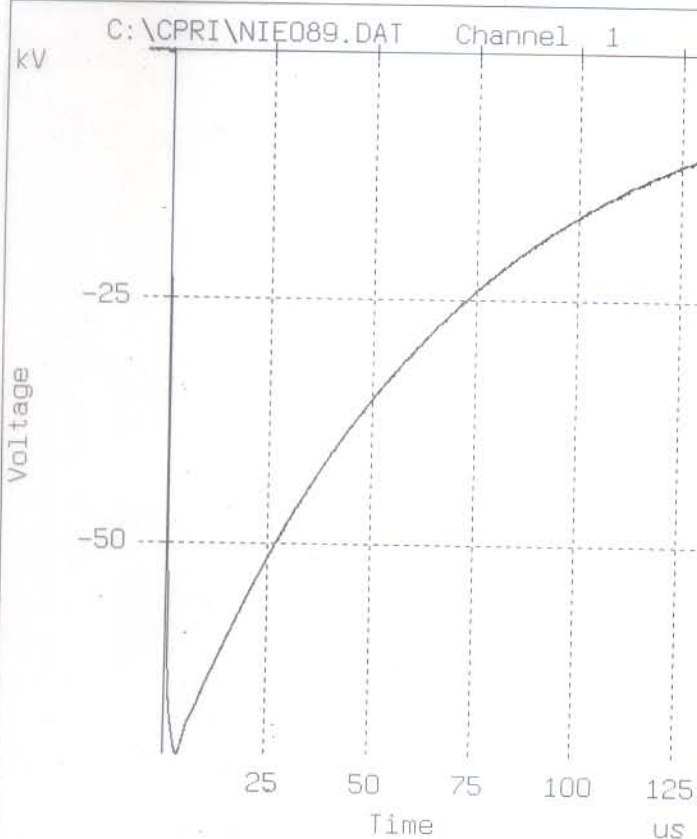
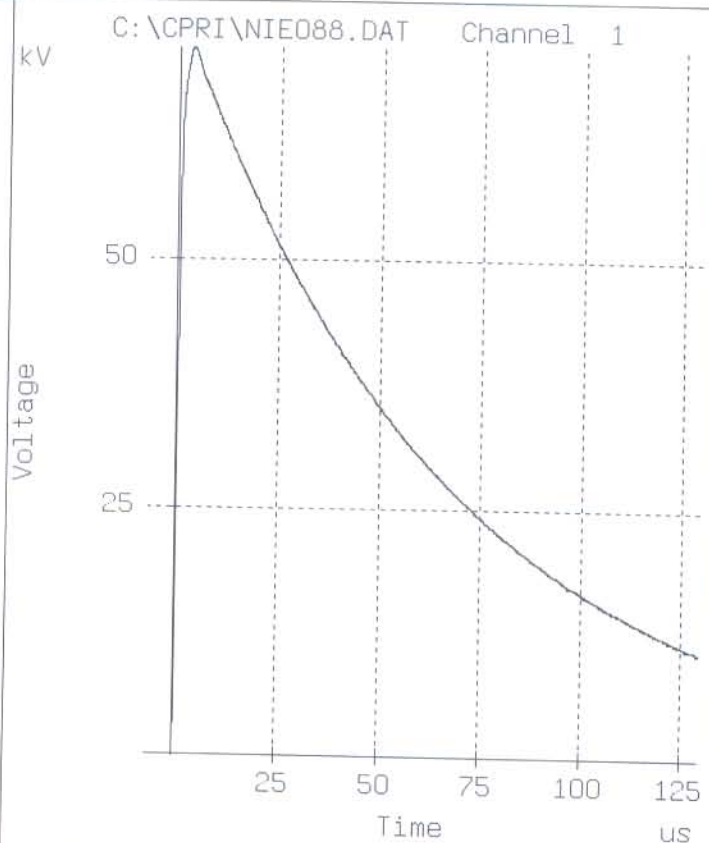
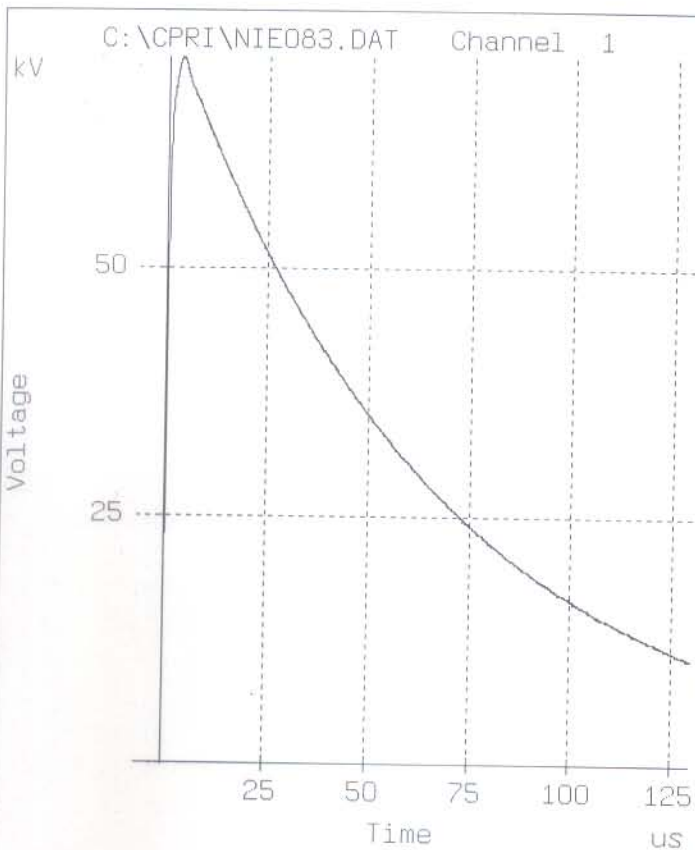
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- b) Publication or reproduction of this report in any form other than by complete set of the whole report and in the language written is not permitted without the written consent of CPRI.
- c) Any Corrections/erasures invalidate this test report/certificate.
- d) Any anomaly/discrepancy in this test report/certificate should be brought to our notice within 45 days from the date of issue
- e) # Mark (if any) indicates that for such tests there is no formal NABL accreditation and the tests are conducted as per the relevant applicable National/International standard or as per the specific customer requirement.
- f) The Verification of the Samples drawings by CPRI is limited to dimensional checks only wherever possible

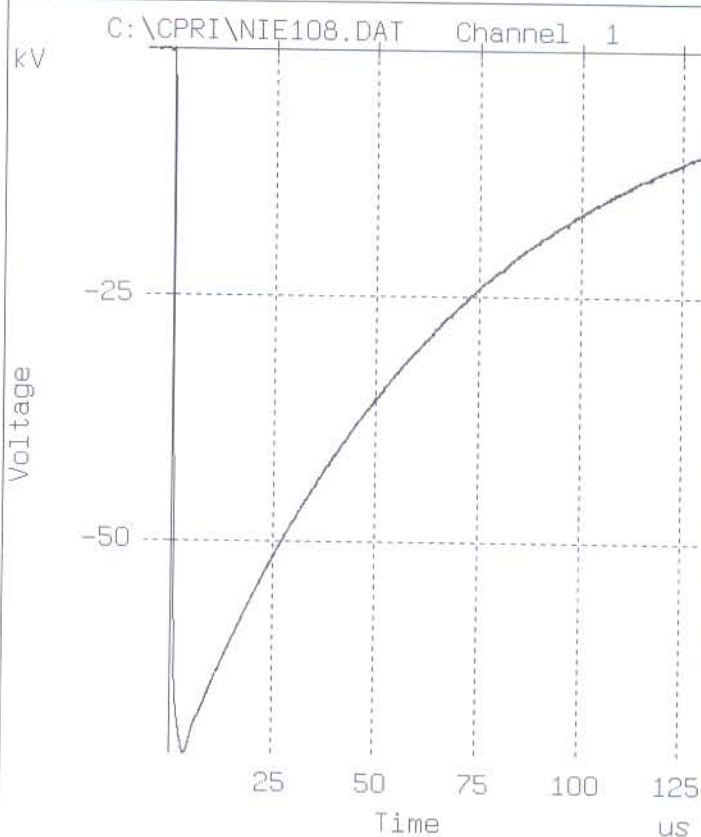
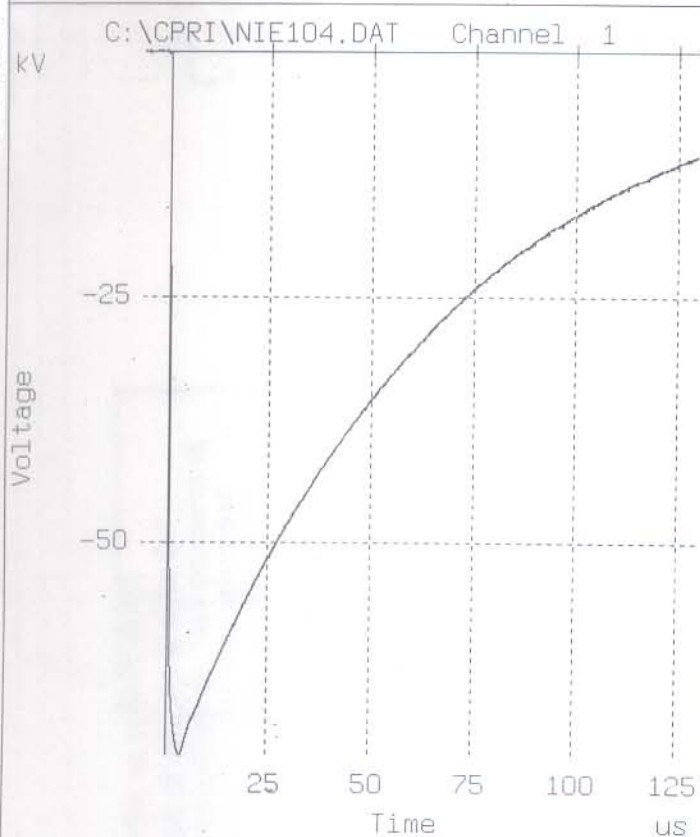
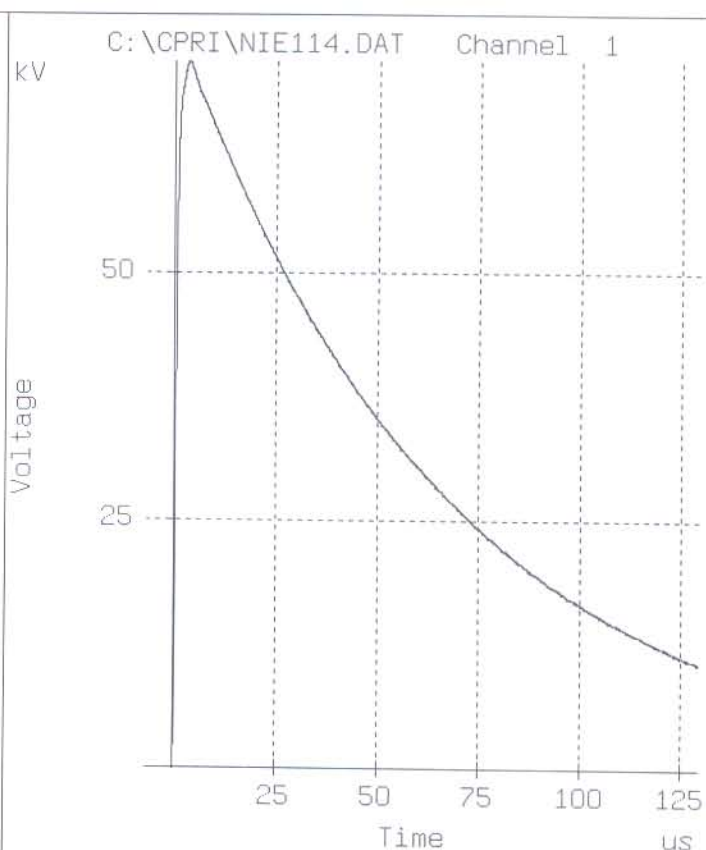
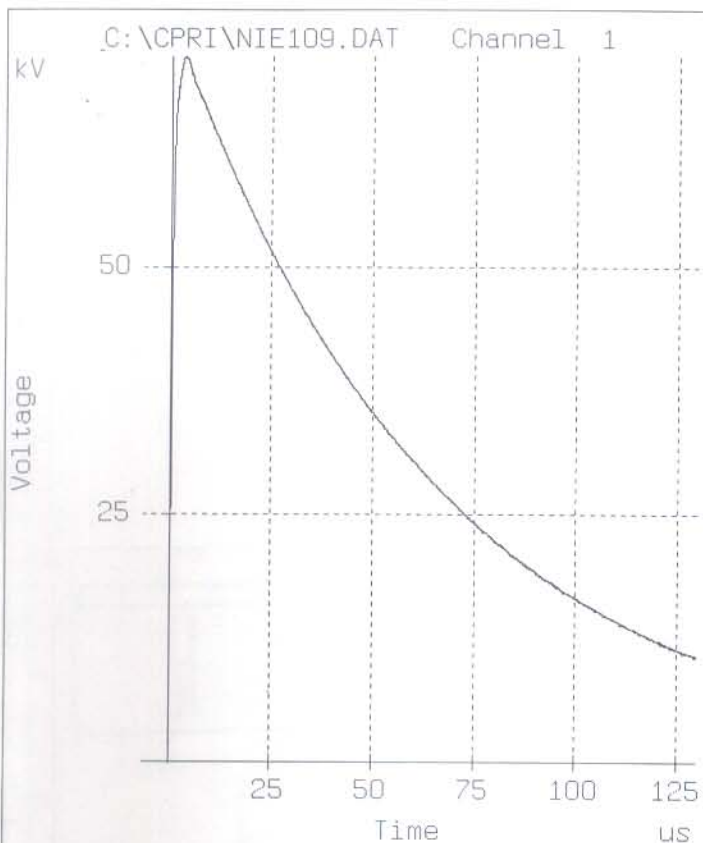
(K.G.VENKATESH)
Test Engineer











Test Report No.43/1/2005-HV/2892 /NIE Dated:22-12-2005.

TEST ENGINEER

इस चित्र का सांख्यिक महत्वपूर्ण
आमर्षों की जाँच तक हि सीमित है।
"ATTESTATION OF THIS DRAWING IS
LIMITED TO THE CHECKING DEPT
IMPORTANT DIMENSIONS ONLY (TYPICAL)

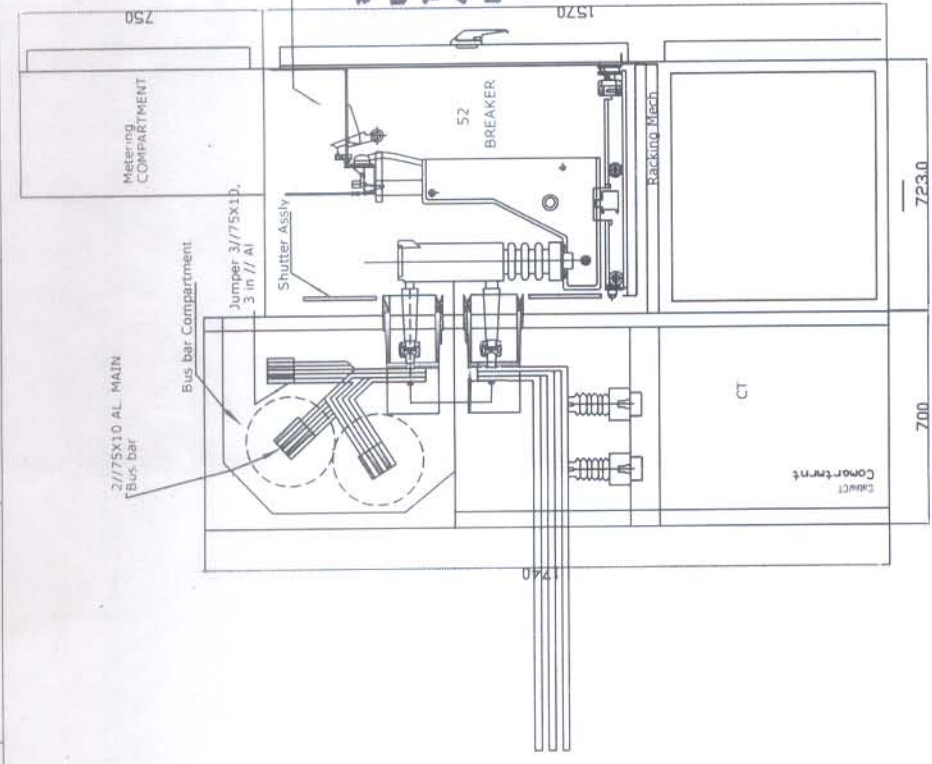
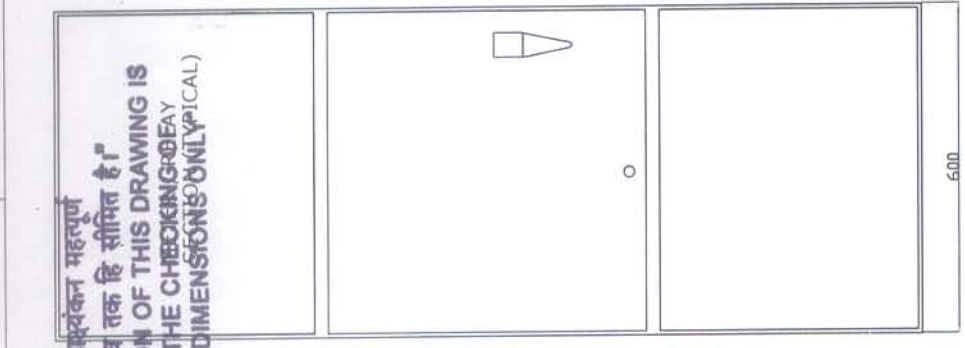
DRAWING NO. NIEL/001/RL/05

ALL DIMENSIONS ARE IN MM

NIE POWER & ENGINEERING (P) LTD.
THIS DRAWING AND DESIGN IS THE PROPERTY OF
AND MUST NOT BE COPIED OR LENT WITHOUT
THEIR PERMISSION IN WRITING

FRONT VIEW

Epoxy Insulator Height : 130 mm
Phase to phase clearance = 150 mm
(Center to center)



FRONT

SIDE ELEVATION

यह चित्र परीक्षण दस्तावेज सं. 43/1/...
एवम् से संबंधित है।
THIS DRAWING PERTAINS TO TEST REPORT
43/1/5005-HV/288/NIE
Dated 28-12-2005

इंजीनियरी अधिकारी
ENGINEERING OFFICER
सी आर डी एल / सी पी आर आई
CRTL / CPRI
बंगलूर - 80
BANGALORE-80

NIE POWER & ENGINEERING (P) LTD. BANGALORE - 560 002 INDIA		CUSTOMER	11KV MV SWITCHGEAR WITH VCB (VD-4) & DUMMY			
 SYSTEM HOUSE		P.O. NO./DATE				
		PROJECT				
		CONSULTANT				
		CONTRACTOR				
		TITLE : CROSS SECTIONAL GA SYSTEM 12KV/3φ 50hz 26.34MVA/Sec, Earth			DRAWING NO.	
					NIEPE/001/TT/05	
SCALE : NTS		3		2		1
		4				
				REV. A		

0	02/10/2005	SAM	KSR	SR
DATE	DRAWN BY	CHECKED BY	APPROVED BY	

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