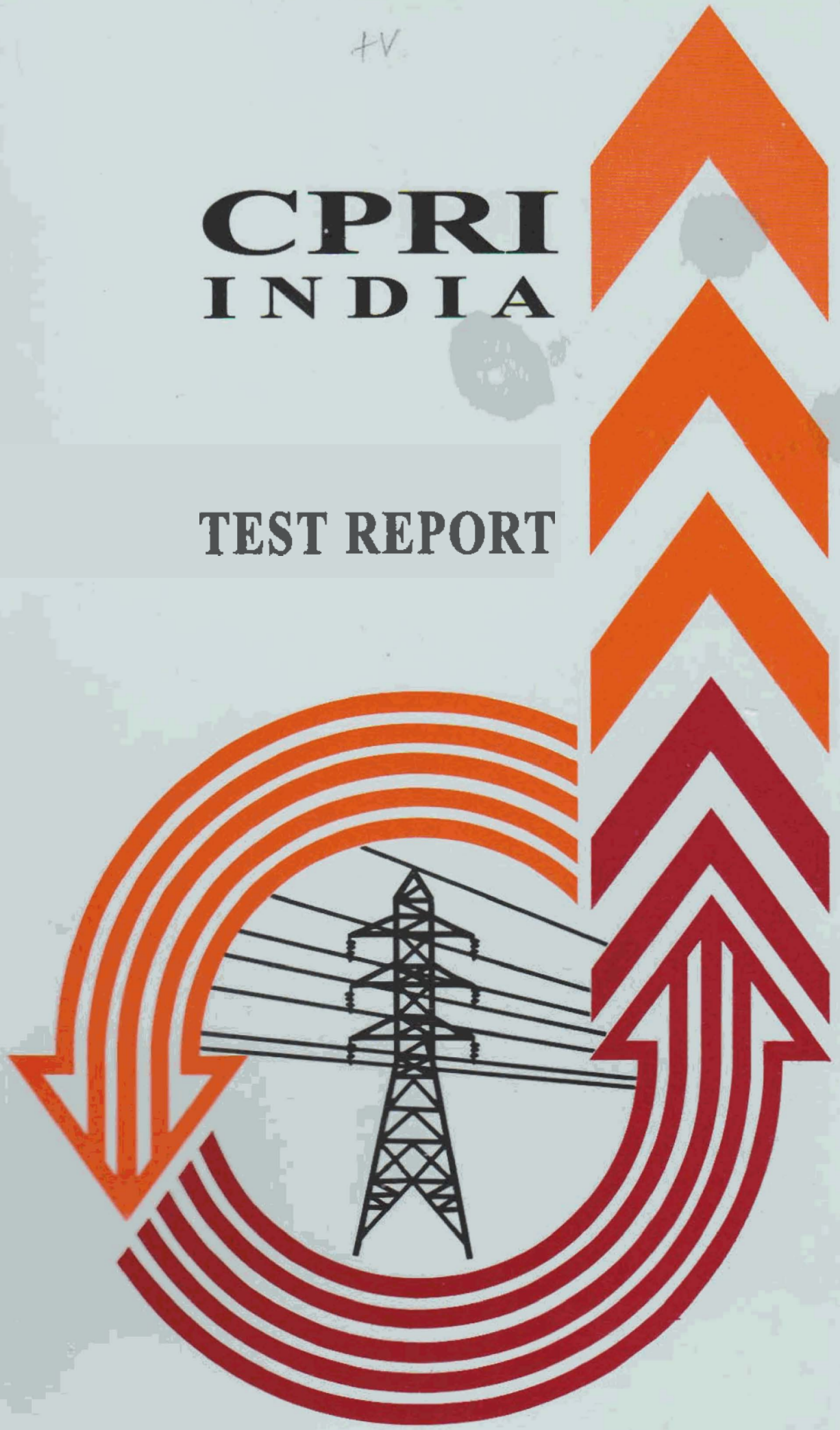


4V

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

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Laboratory

Sheet 1 of 4

TEST REPORT

Test Report Number	SC05514A	dated: 13 th February, 2006
Name & Address of the Customer	M/s. NIE Power & Engineering (P) Ltd., B-40, KSSIDC, Industrial Estate, Kumbalagodu, Bangalore - 560 074.	
Name & Address of the Manufacturer	M/s. NIE Power & Engineering (P) Ltd., B-40, KSSIDC, Industrial Estate, Kumbalagodu, Bangalore - 560 074.	
Particulars of sample tested	AC Metal Enclosed Switchgear & Controlgear- M. V. Switchgear Panel with Vacuum Circuit Breaker	
Condition of the sample on receipt	New	
Type	Cubicle	
Designation	Switchgear cubicle	
Serial number	001	
Number of samples tested	One	
Date (s) of test (s)	2 nd December 2005	
CPRI sample code no(s).	SC05S2741	
Particulars of tests conducted	Short-time withstand current & peak withstand current tests	
Test in accordance with Standard / specification	Sub-clause 6.6 of IEC 62271-200:2003	
Sampling plan	Not applicable	
Customer's requirement	26.3kA rms for 1.0 second & 65.75kA peak on main circuit only	
Deviations if any	Nil	
Name of the witnessing persons		
Customer's representative	Mr. T. M. Sivarama Krishnan, General Manager	
Other than customer's representatives	Nil	
Test subcontracted with address of the laboratory	None	
Documents constituting this report (In words)		
Number of sheets	Four	
Number of oscillograms	One	
Number of graphs	Nil	
Number of photos	Six	
Number of test circuit diagrams	One	
Number of drawings	Three	

(E. R. Vasudevamurthy)
Test Engineer

(B. R. Ravishankar)
Joint Director



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Sheet 2 of 4
Report number: SC05514A

Description of sample tested (rating as assigned by the manufacturer)

Test sample	M. V. Switchgear Panel with Vacuum Circuit Breaker (VCB)
Rated voltage	12 kV
Rated insulation level	28/75 kV
Rated current	1250 A
Rated frequency	50 Hz
Number of poles	Three
Details of VCB	12kV, 1250A, Type VD4 12.12.25 Sl. No. V8293, ABB make
Rated short-time withstand current & peak withstand current	26.3kA rms for 1.0 second & 65.75kA peak

Documents attached to this report

Oscillogram number (s)	SC05514A.S01
Photo number (s)	SC05514A.PB1, SC05514A.PA1, SC05514A.PA2, SC05514A.PA3, SC05514A.PA4 & SC05514A.PA5
Test circuit diagram number (s)	CRTL/SC/STC-03
Drawing number (s)	NIEPE/001/TT/05, NIEL/001/RL/05 SH: 01 & NIEL/001/RL/05 SH: 02


Test Engineer



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Sheet 3 of 4
Report number: SC05514A

Short-time withstand current & peak withstand current tests (sub-clause 6.6)

Test conditions

Source Short-circuit generator
Phase Three
Frequency 50 Hz
Neutral Isolated

Test sample

Phase Three; one end of the horizontal bus-bars connected to source.
Condition before test In clean & new condition, VCB operable on no-load.
Mounting Vertical

Test details

Test circuit number CRTL/SC/STC-03
Short-circuit applied On the outgoing terminals horizontal bus-bars through the VCB
Short-circuit point Grounded

Test results

Oscillogram Number	Current (kA)		Duration - seconds	Ambient Temperature - °C	Observations
	Peak	RMS			
SC05514A.S01	67.28	R - 26.02 Y - 27.93 B - 26.18 Average: 26.71	1.06	26.6	During test: No abnormality. After test: VCB operable on no-load at the first attempt.

Measurement of resistance of the main circuit

Condition of the sample	Test current (A) d.c.	Ambient Temperature °C	Resistance - μΩ		
			R-phase	Y-Phase	B-Phase
Before short-time withstand current & peak withstand current tests	100	26.7	104.8	92.5	98.1
As after short-time withstand current & peak withstand current tests	100	26.6	98	103	105

Power frequency high voltage withstand test

Power frequency high voltage was applied	Remarks
a) With VCB in close condition, between each phase and all other poles connected to earth	Withstood 28 kV rms for 1.0 minute
b) with VCB in open condition, between all incoming terminals connected together and all outgoing terminals connected together	Withstood 28kV rms for 1.0 minute

Physical Inspection

Condition of bus-bars No visible damage or deformation
Condition of insulators No visible damage
Condition of VCB No visible damage

Remarks: The sample tested complies with sub-clause 6.6 of IEC 62271-200:2003

Test Engineer



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Sheet 4 of 4
Report number: SC05514A

NOTE

- a) This is not a certificate of rating. A certificate of rating is not issued as only limited tests as requested by the customer were carried out.
- b) The test results relate only to the item(s) tested.
- c) 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 approval of CPRI.
- d) Corrections / erasings invalidate the test report.
- e) Any anomaly / discrepancy in the test report should be brought to our notice within 45 days from the date of issue.
- f) # 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.

Additional Information:

CPRI issues following types of reports/certificates:

Test Report:

The test report contains the record of the values of test parameters as obtained during testing, the physical condition of the sample during / after the test(s) and copy of oscillogram(s). Test report is issued when partial tests are performed as against the complete test requirement for proving specific ratings.

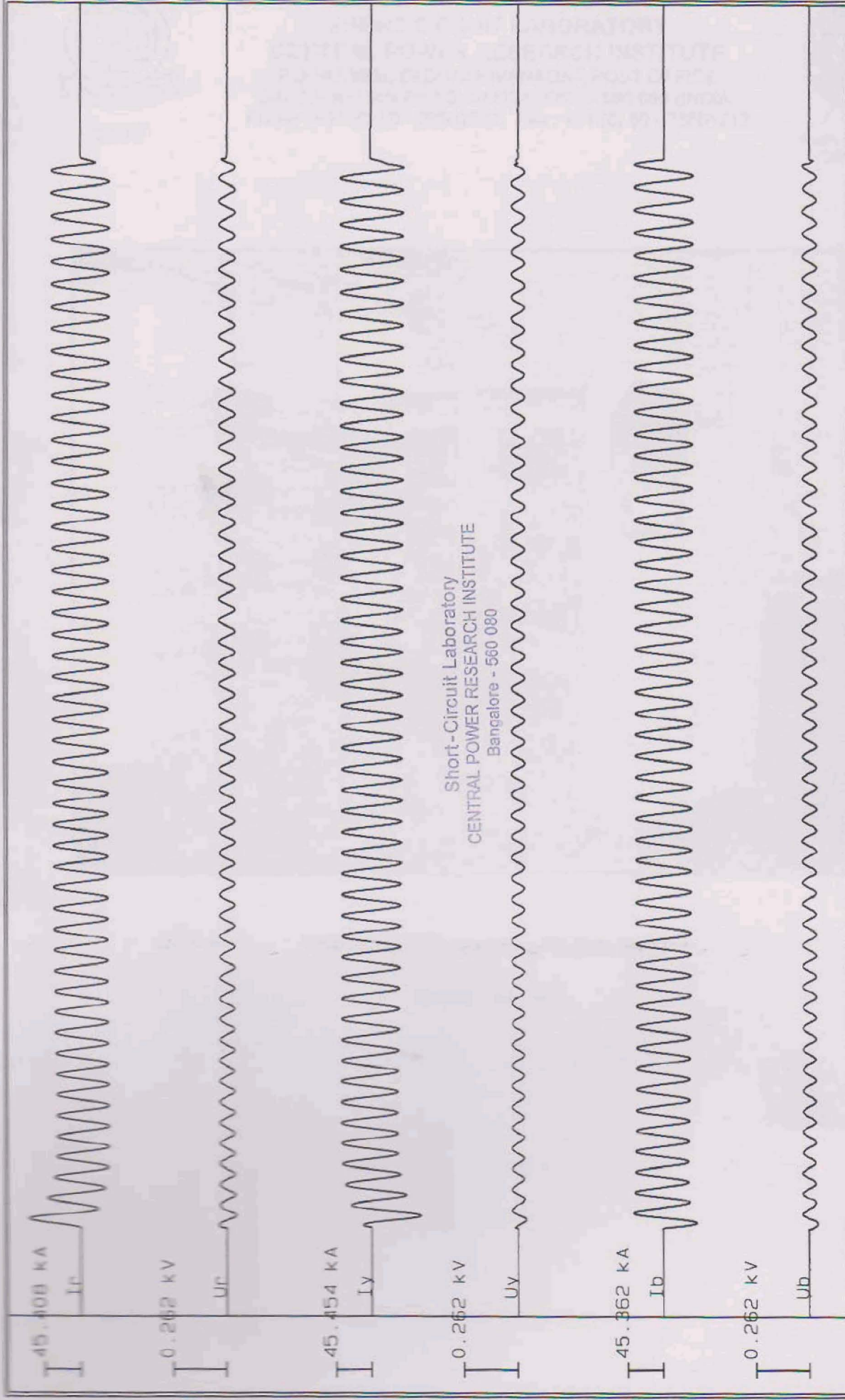
Sealed Certificate:

The sealed certificate is issued, on request and payment of the prescribed charges thereof only when the sample of particular type and rating has satisfactorily passed all the specified tests in compliance with the condition stipulated in a published National / International standard.

CPRI issues the following type test certificates based generally on STL Guidelines:

- I. Type test certificate of Short Circuit Performance.
- II. Type test certificate of Switching Performance.
- III. Type test certificate of Temperature Rise Performance.
- IV. Type test certificate of Dielectric Performance.
- V. Type test certificate of complete type test.


Test Engineer



Short-Circuit Laboratory
 CENTRAL POWER RESEARCH INSTITUTE
 Bangalore - 560 080

SC05514A.S01 Dt: 02/12/05

B. Babu

TEST ENGINEER

261.32 msec