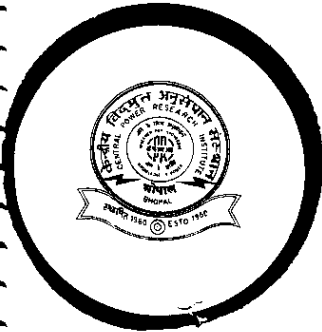




TEST REPORT



CENTRAL POWER RESEARCH INSTITUTE
(A Govt. of India Society)
SWITCHGEAR TESTING & DEVELOPMENT STATION
GOVINDPURA, BHOPAL, - 462 023, INDIA
Phone : +91(0)755 2586682 Fax : +91(0)755 2587774



Central Power Research Institute
 SWITCHGEAR TESTING & DEVELOPMENT STATION
 GOVINDPURA, BHOPAL-462023, INDIA
 Phone: +91(0)755 2586682 Fax: +91(0)755 2587774



NABL Accredited
 Laboratory
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TEST REPORT

Sheet 1 of 5

Test Report Number S2060685

Name & address of the Customer Vikas Controls & Switchgears
 G-1-20, Udyog Vihar,
 Sukher, Udaipur – 313 004

Name & address of the Manufacturer Vikas Controls & Switchgears
 G-1-20, Udyog Vihar,
 Sukher, Udaipur – 313 004

Particulars of sample tested Control Panel
Condition of sample on Receipt New

Type **PCC/MCC**
 Designation Nil
 Serial number Nil
 Number of samples tested One
 Date(s) of Test(s) 9th November, 2006
 CPRI sample code no. STDSST206S1318

Particulars of tests conducted Verification of the short circuit withstand strength
Test in accordance with Standard/specification As per clause 8.2.3 of IS: 8623 (Part I)-1993

Sampling plan Not applicable
 Customer's requirement Nil
 Deviations if any Nil

Name of the Witnessing persons
 Customer's representative Shri. P.K. Geetey/ Shri Dilip Soni
 Other than Customer's representatives Nil
 Test subcontracted with None
 address of the laboratory

Documents constituting this report (in words)
 Number of sheets Five
 Number of oscillograms Two
 Number of graphs Nil
 Number of photos One
 Number of Test circuit diagrams Two
 Number of drawings Two

Date :
15 FEB 2007

(A.K.KHANRA)
 TEST ENGINEER

(M.L.UNHALE)
 JOINT DIRECTOR

 AUTHORISED SIGNATORY



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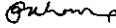
Sheet 2 of 5

Summary of test

Test conducted Verification of the short circuit withstand strength
Rating for which tested 50 kArms for 1.0 second with initial peak of 105 kA

Documents constituting this report

Oscillogram number S2060685.S02, S04
Photograph numbers P-1
Test circuit diagram number OLTS/TCD-STC-01 & OLTS/TCD-STC-02
Drawing number VCS/CPRI/01 Rev.01, VCS/CPRI/02 Rev.01


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Test Report Number S2060685

Sheet 3 of 5

Ratings assigned by manufacturer

Test sample	Control Panel
Type	PCC/MCC
Designation	Nil
Rated operational voltage	415 Vac
Rated current	4000Amp.
Rated insulation voltage	660 V
Rated frequency	50 Hz
Number of phases	Three phase + Neutral
Rated short-time current	50 kArms for 1.0 second with initial peak of 105 kA

Prabhu
TEST ENGINEER



Test Report Number S2060685

Sheet 4 of 5

Verification of the short circuit withstand strength (cl. 8.2.3)

Test conditions:

Condition of the sample : New
 No. of phases : Three & Neutral
 Source frequency : 50Hz.
 Transformer neutral & short circuit point : See test circuit diagram no. OLTS/TCD-STC-01 for three phase test and OLTS/TCD-STC-02 for single phase test
 Safety parameter : The sample was insulated from earth and connected to neutral of the supply via a fuse of 0.1mm diameter copper wire 50mm long in series with a resistor limiting the fault current to 100A

Test results:

Oscillogram Number	Peak kA	RMS in kA			Duration (second)	Equivalent current in kArms for 1 second
		I _r	I _y	I _b		
Three phase test on main busbars of HBB + VBB (Peak in R- phase). Test circuit diagram: OLTS/TCD-STC-01						
S2060685.S02	105.38	50.47	50.74	50.55	1.0	50.74
Single phase test on neutral and nearest phase of main busbar of HBB + VBB. Test circuit diagram: OLTS/TCD-STC-02						
S2060685.S04	63.28	30.52			1.0	30.52

Observations

During test : No abnormality.
 After test : No abnormality. Fine wire fuse intact. All busbars and supports intact.

Remarks : After short circuit test the sample withstood HV test at 2.5 kVrms for one minute as per standard

Conclusion : The test results indicate that the sample tested complies with the requirement of cl. 8.2.3 of the standard.

Pahomg
 TEST ENGINEER



Central Power Research Institute
SWITCHGEAR TESTING & DEVELOPMENT STATION
GOVINDPURA , BHIOPAL,-462023, INDIA
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Test Report Number S2060685

Sheet 5 of 5

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 correction/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) #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 sample drawings by CPRI is limited to dimensional checks only wherever possible.
- g) CPRI issues two kinds of documents:
Test Report:
The test report will contain the record of the values of test parameters as obtained during testing, the physical condition of the apparatus during testing, the physical condition of the apparatus during/after the test(s), copy(ies) of Oscillogram(s), record of supplementary test(s) if any conducted but no certification on the performance of the apparatus tested.
Type Test Certificate:
The test certificate is issued, on request and payment of the prescribed charges only when the apparatus of particular type and rating has satisfactorily passed all the specified tests in compliance with condition stipulated in a published National/International Standards.
- h) All Documents constituting this test report/certificate are stitched together with a continuous silk thread/ribbon, the two ends of which have been brought over the front sheet of this test report/certificate and sealed with a CPRI logo printed paper sticker/embossed.

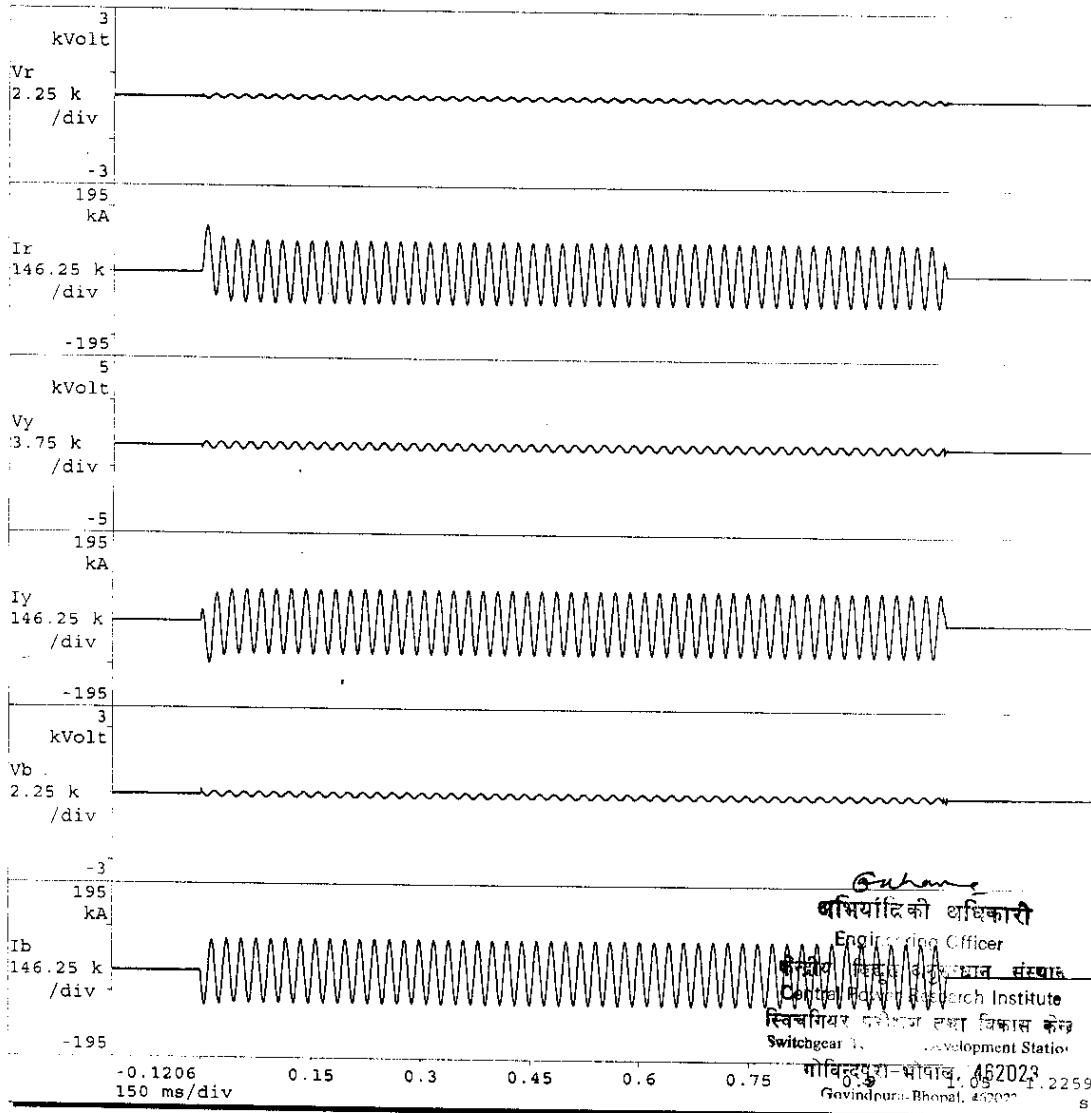

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Central Power Research Institute
 SWITCHGEAR TESTING & DEVELOPMENT STATION
 GOVINDPURA, BHOPAL-462023, INDIA
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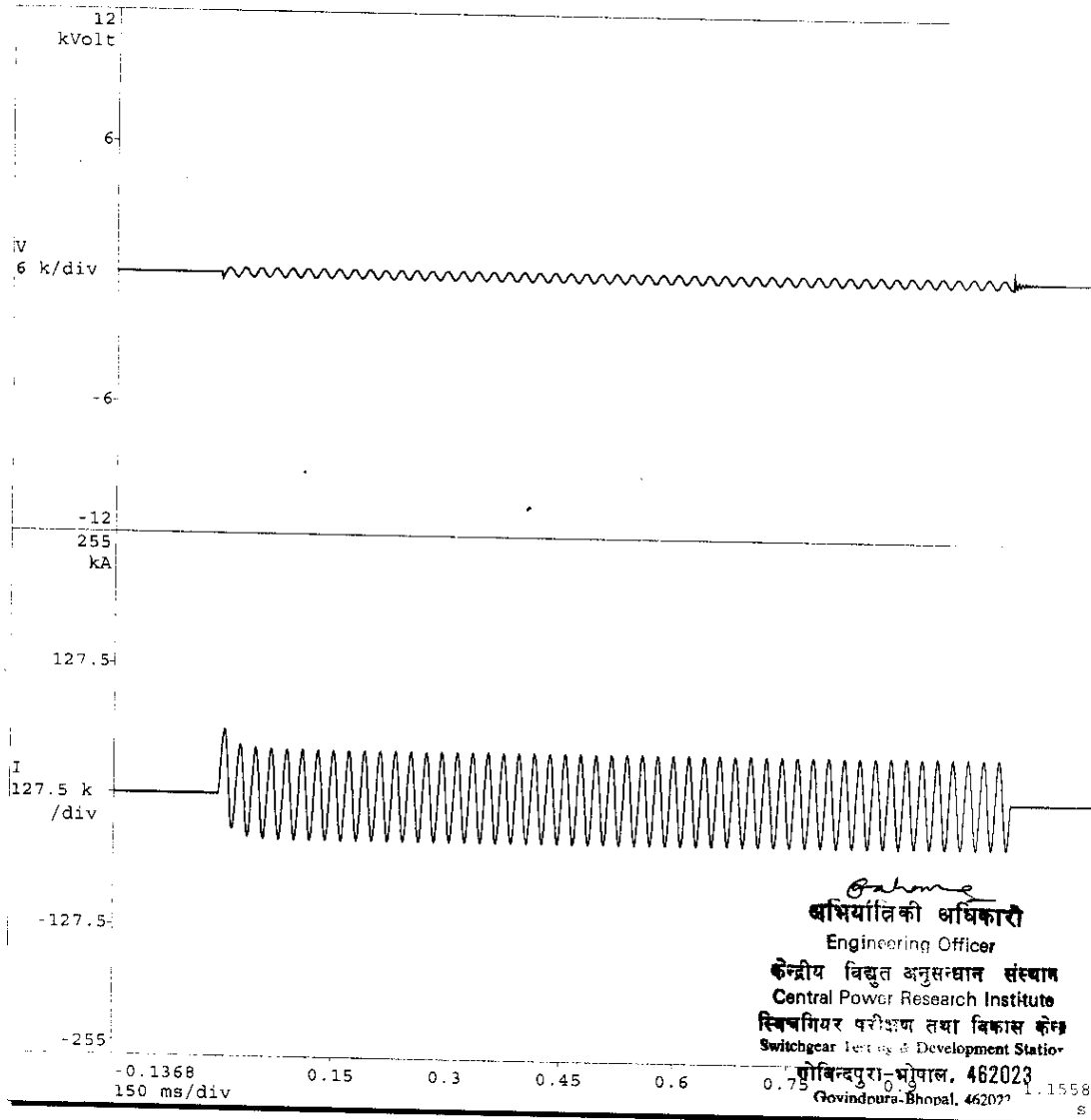
S2060685.S02



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Gahme
अभियंत्रिकी अधिकारी
 Engineering Officer
 केन्द्रीय विद्युत अनुसन्धान संस्थान
 Central Power Research Institute
 स्विचगियर परीक्षण तथा विकास केंद्र
 Switchgear Testing & Development Station
 गोविन्दपुरा-भोपाल, 462023
 Govindpura, Bhopal, 462023

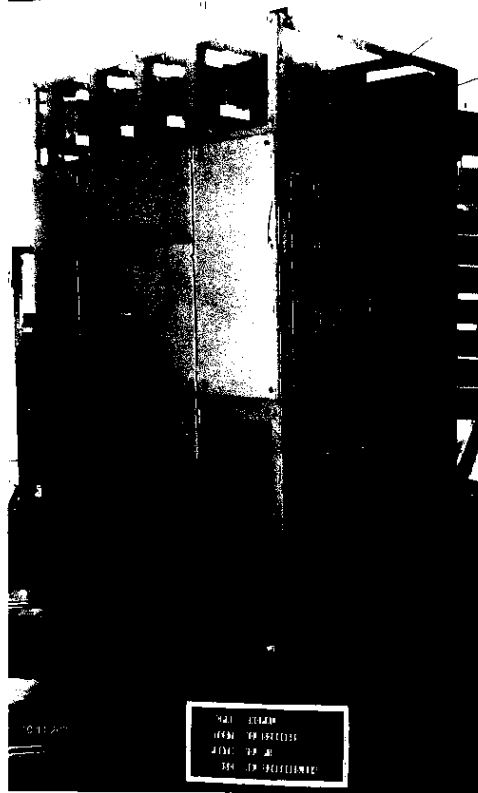
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 SWITCHGEAR TESTING & DEVELOPMENT STATION
 GOVINDPURA, BHOPAL-462023, INDIA
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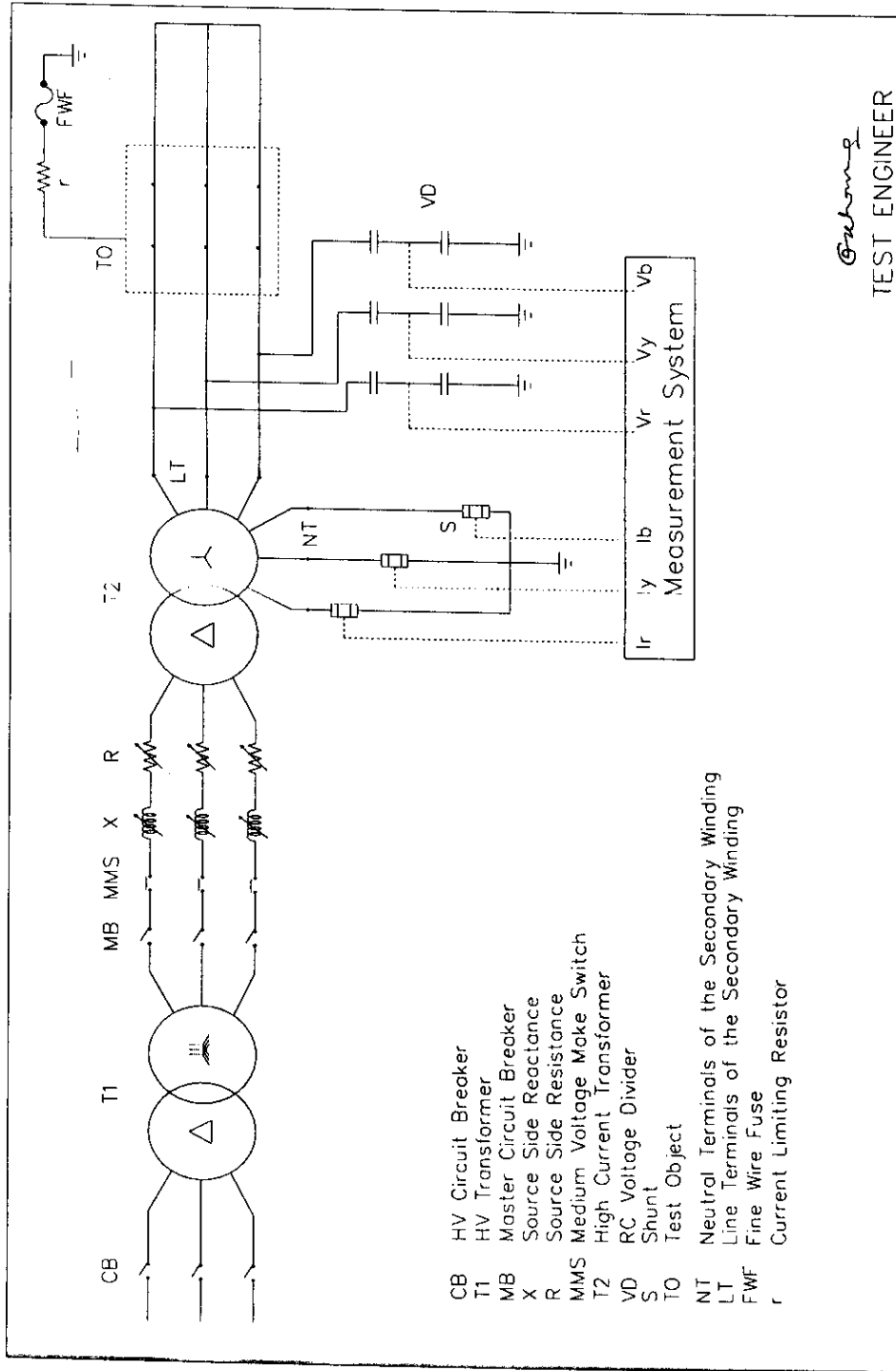
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रिपोर्ट क्रमांक.....
 के संबंध में दस्तावेज
 Document Pertaining
 Report No.....52060685

Bakamp
 अभियंत्रिकी अधिकारी
 Engineering Officer
 सी.पी.आर.आई./C.P.R.I
 गोविन्दपुरा, भोपाल
 Govindpura BHOPAL

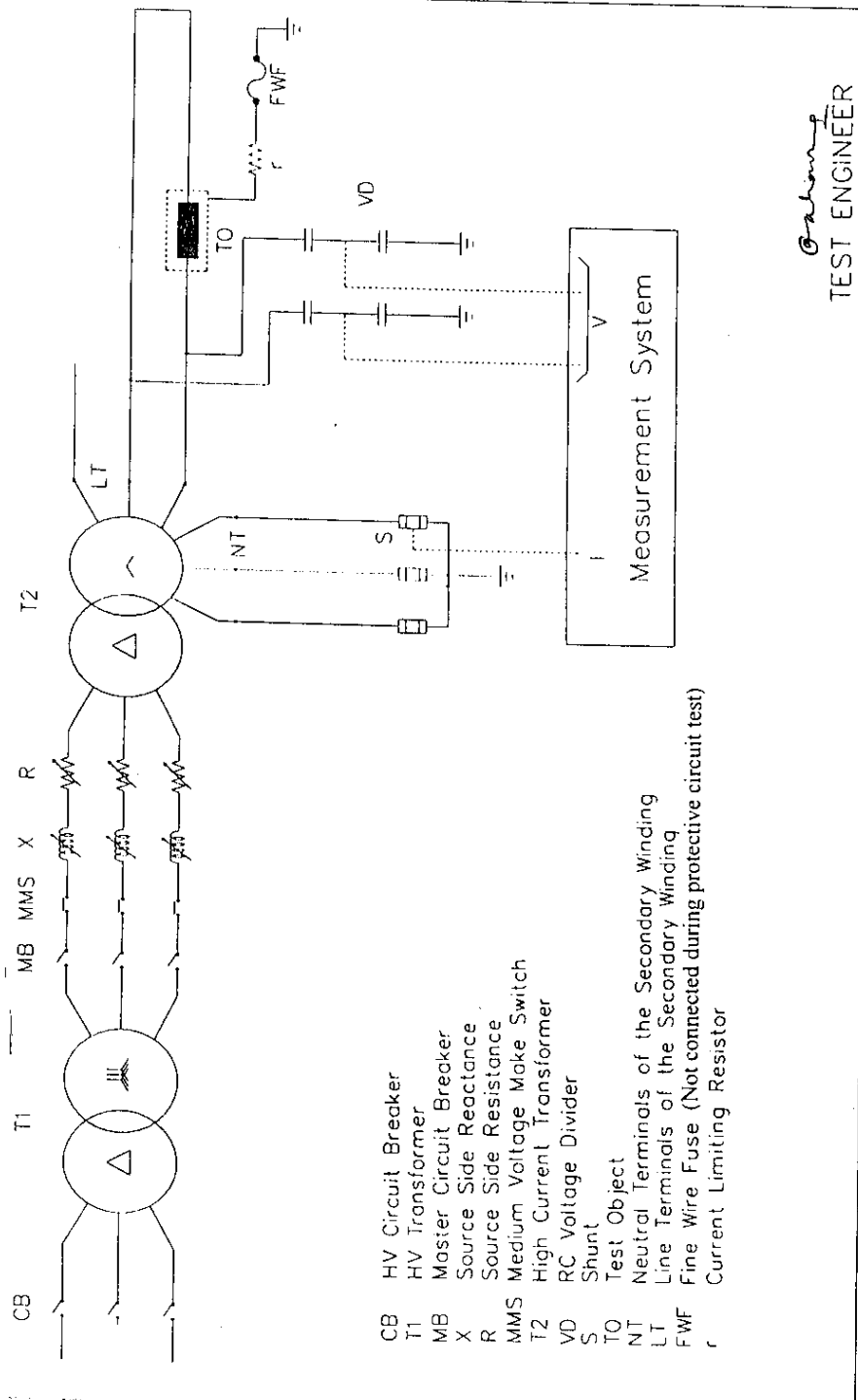
CPRI, Bhopal



B. B. B.
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OLTS/TCO-01

CPRI, Bhopal



- CB HV Circuit Breaker
- T1 HV Transformer
- MB Master Circuit Breaker
- X Source Side Reactance
- R Source Side Resistance
- MMS Medium Voltage Make Switch
- T2 High Current Transformer
- VD RC Voltage Divider
- S Shunt
- TO Test Object
- NT Neutral Terminals of the Secondary Winding
- LT Line Terminals of the Secondary Winding
- FWF Fine Wire Fuse (Not connected during protective circuit test)
- r Current Limiting Resistor

Gahmy
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OLTS/TCD-STC-02