

सी पी आर आई  
भारत

**CPRI  
INDIA**

परीक्षण रिपोर्ट  
TEST REPORT



**CENTRAL POWER RESEARCH INSTITUTE  
(MEMBER OF STL)**



**CPRI**

**TEST REPORT**

<b>Test Report Number</b>	S2161357	<b>Date :</b>
<b>Name &amp; address of the Customer</b>	M/s Murthy Industries # 5-24-2/4 Auto Nagar, B-Block, Visakapatnam 530 012	<b>25 JAN 2017</b>
<b>Name &amp; address of the Manufacturer</b>	M/s Murthy Industries # 5-24-2/4 Auto Nagar, B-Block, Visakapatnam 530 012	
<b>Particulars of sample tested</b>	415V, 6000 A, LT Switchboard (Non extendable)	
<b>Condition of sample on Receipt</b>	New	
<b>Type</b>	Power Cum Motor Control Centre	
<b>Designation</b>	Main Distribution Board	
<b>Serial number</b>	MURTHY/371	
<b>Number of samples tested</b>	One	
<b>Date(s) of Test(s)</b>	8 <sup>th</sup> November 2016	
<b>CPRI sample code no.</b>	STDSST216S1684	
<b>Particulars of tests conducted</b>	Verification of the short circuit withstand strength	
<b>Test in accordance with</b>	As per clause 8.2.3 of IS: 8623 (Part-1)-1993.	
<b>Sampling plan</b>	Not applicable	
<b>Customer's requirement</b>	Nil	
<b>Deviations if any</b>	Nil	
<b>Name of the Witnessing persons</b>		
<b>Customer's representative</b>	Shri K.R.Murthy	
<b>Other than Customer's representatives</b>	Nil	
<b>Test subcontracted with address of the laboratory</b>	None	
<b>Documents constituting this report (in words)</b>		
<b>Number of sheets</b>	Five	
<b>Number of oscillograms</b>	Two	
<b>Number of graphs</b>	Nil	
<b>Number of photos</b>	One	
<b>Number of Test circuit diagrams</b>	Two	
<b>Number of drawings</b>	Two	

  
(SAUMITRA PATHAK)  
TEST ENGINEER



  
(SUMBUL MUNSHI)  
JOINT DIRECTOR

**CENTRAL POWER RESEARCH INSTITUTE  
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**TEST REPORT**

**CPRI**

Test Report Number S2161357

Date :

25 JAN 2017

**Summary of test**

<b>Test conducted</b>	Verification of the short circuit withstand strength
<b>Rating for which tested</b>	70 kArms for 1.0 second with initial peak of 154 kA 42 kArms for one second with initial peak of 88.2 kA for neutral
<b>Documents constituting this report</b>	
Oscillogram number	S2161357.S02, S04
Photograph numbers	P-1
Test circuit diagram number	OLTS/TCD-STC-01 & OLTS/TCD-STC-02
Drawing number	MURTHY-CPRI-371 Sheet 1 of 2 MURTHY-CPRI-371 Sheet 2 of 2 Rev.01

  
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**TEST REPORT**

Test Report Number S2161357

Date : 25 JAN 2017

**Ratings assigned by manufacturer**

Test sample	415 V, 6000 A, LT Switchboard (Non extendable)
Type	Power Cum Motor Control Centre
Designation	Main Distribution Board
Serial number	MURTHY/371
Rated operational voltage	415 V
Rated current	6000 A
Rated insulation voltage	660 V
Rated frequency	50 Hz
Number of phases	Three phase + Neutral
Degree of protection	IP-42
Rated short- time current	70 kArms for 1.0 second with initial peak of 154 kA 42 kArms for one second with initial peak of 88.2 kA for neutral

  
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**TEST REPORT**

Test Report Number S2161357

Date :

25 JAN 2017

**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
		Ir	Iy	Ib		
Three phase STC test on main circuit busbars of HBB+VBB +HBB (Peak in B-phase) Test circuit diagram: OLTS/TCD-STC-01						
S2161357.S02	161.09	71.10	70.38	70.81	1.0	71.10
Single phase STC test on neutral & nearest phase of main circuit busbars of HBB+VBB+HBB Test circuit diagram: OLTS/TCD-STC-02						
S2161357.S04	88.42	42.39			1.0	42.39

**Observations**

During test : No abnormality.  
After test : No abnormality. Fine wire fuse Intact. All busbars & supports found 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.

  
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**TEST REPORT**

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**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) NABL has Accredited this laboratory as per ISO 17025-2005 standard , vide certificate No.T-0011 for the tests carried out..
- e) The verification of the sample drawings by CPRI is limited to dimensional checks only wherever possible.
- f) Any anomaly/discrepancy in the test report/Certificate should be brought to the notice of CPRI within 45 days from the date of issue.
- 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

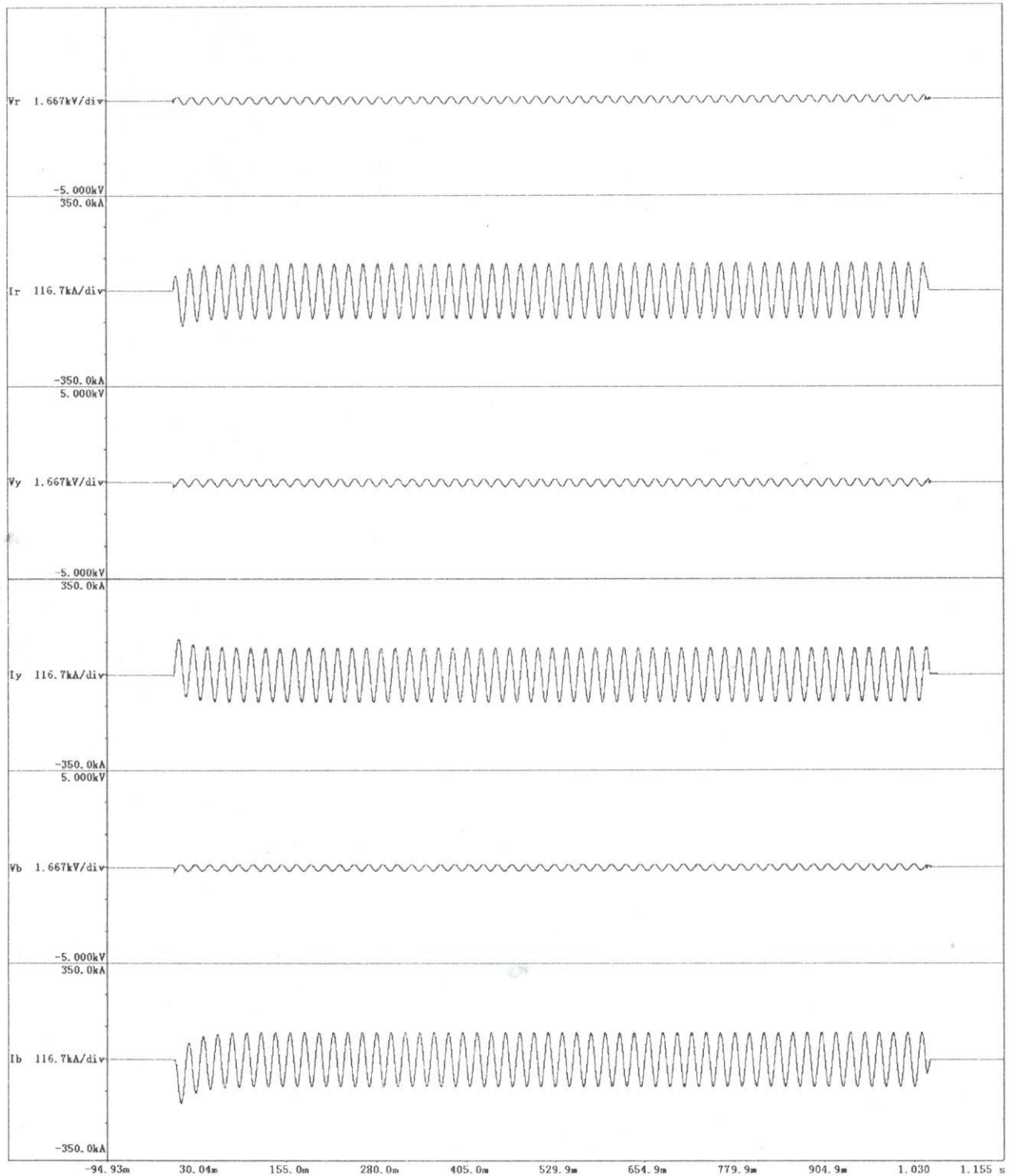
Type test Certificate:

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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S2161357.S02

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Central Power Research Institute  
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Switchgear Testing & Development Station  
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Govindpura, BHOPAL - 462023



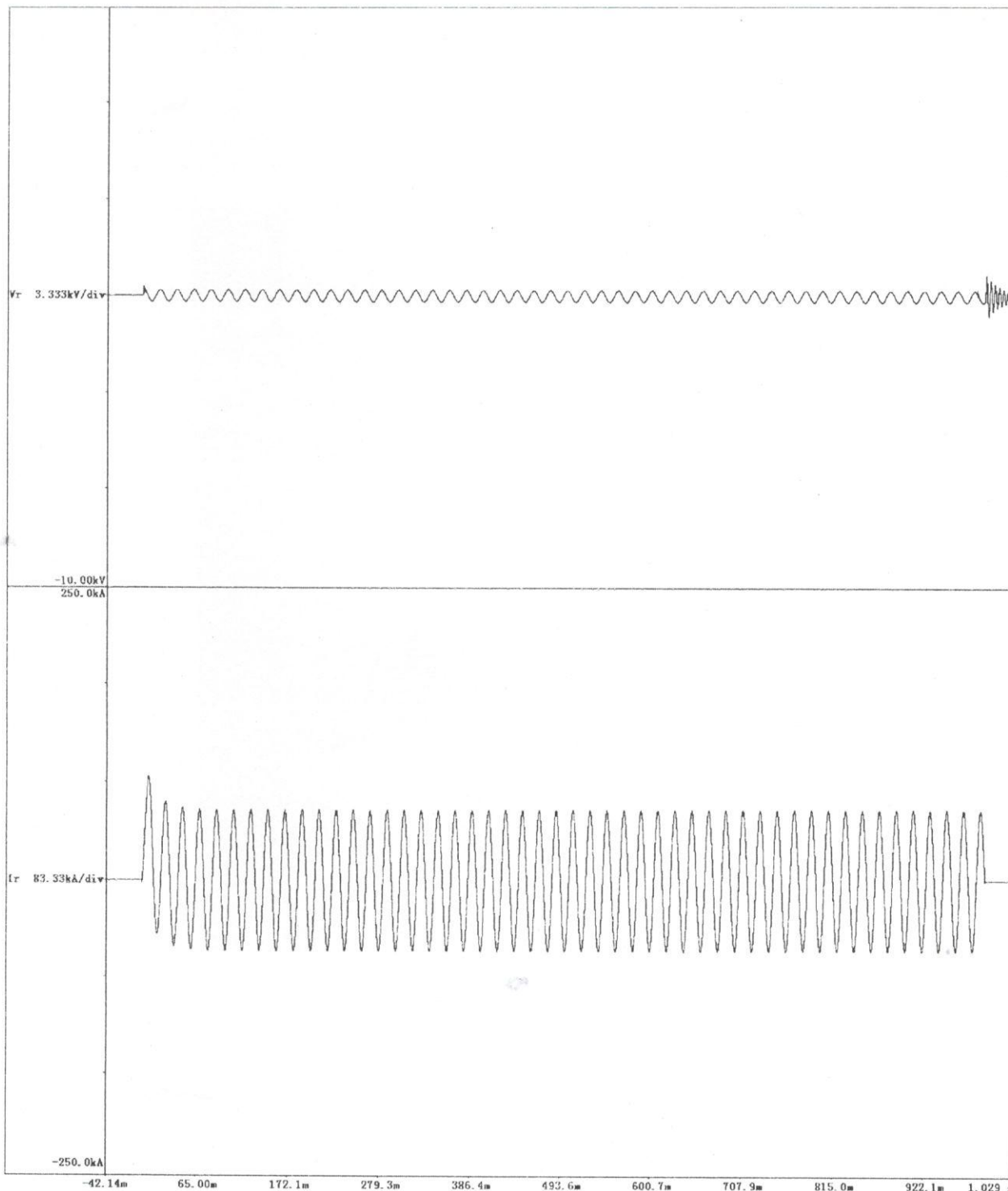
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S2161357.S04

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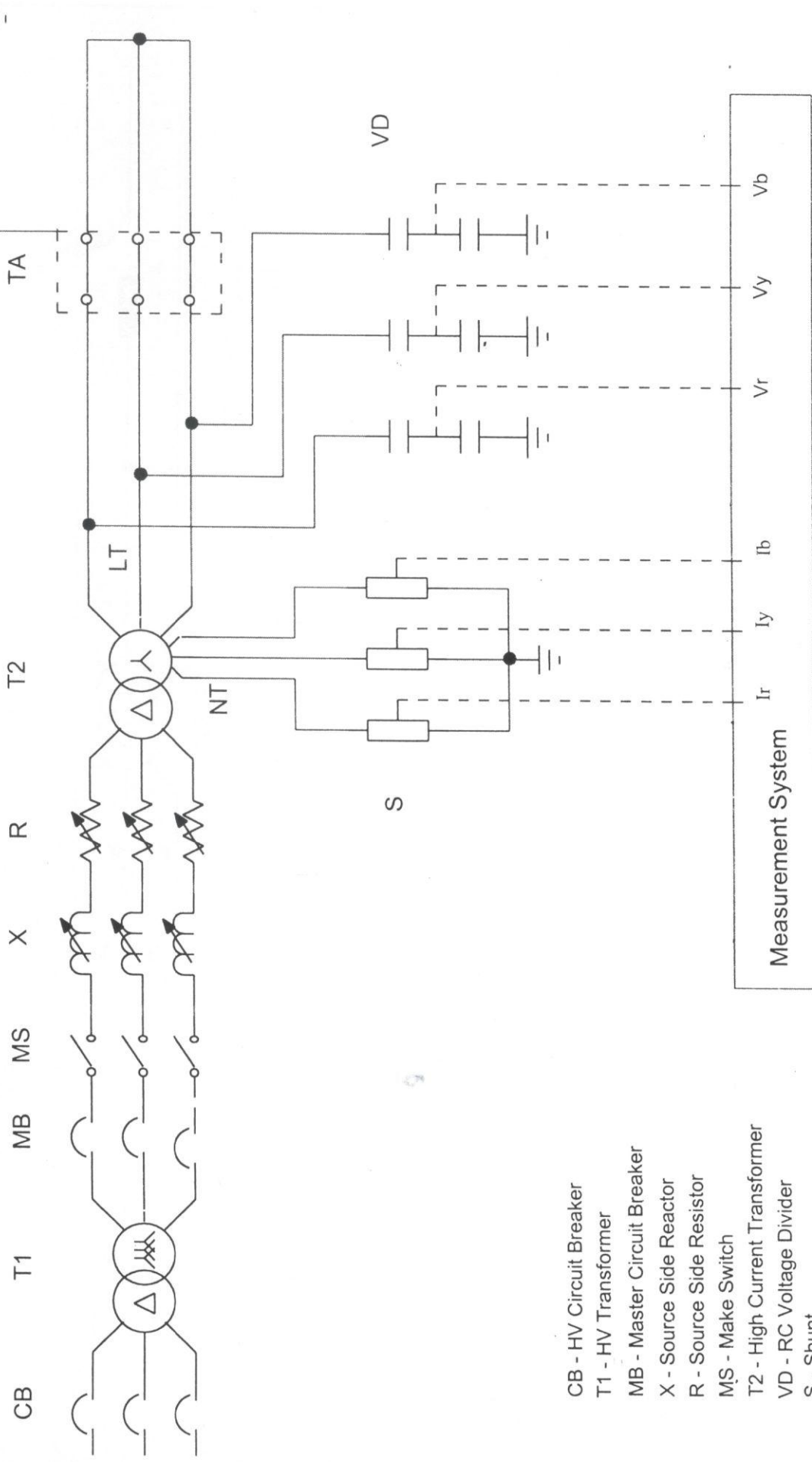
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TEST ENGINEER

# CPRI Bhopal

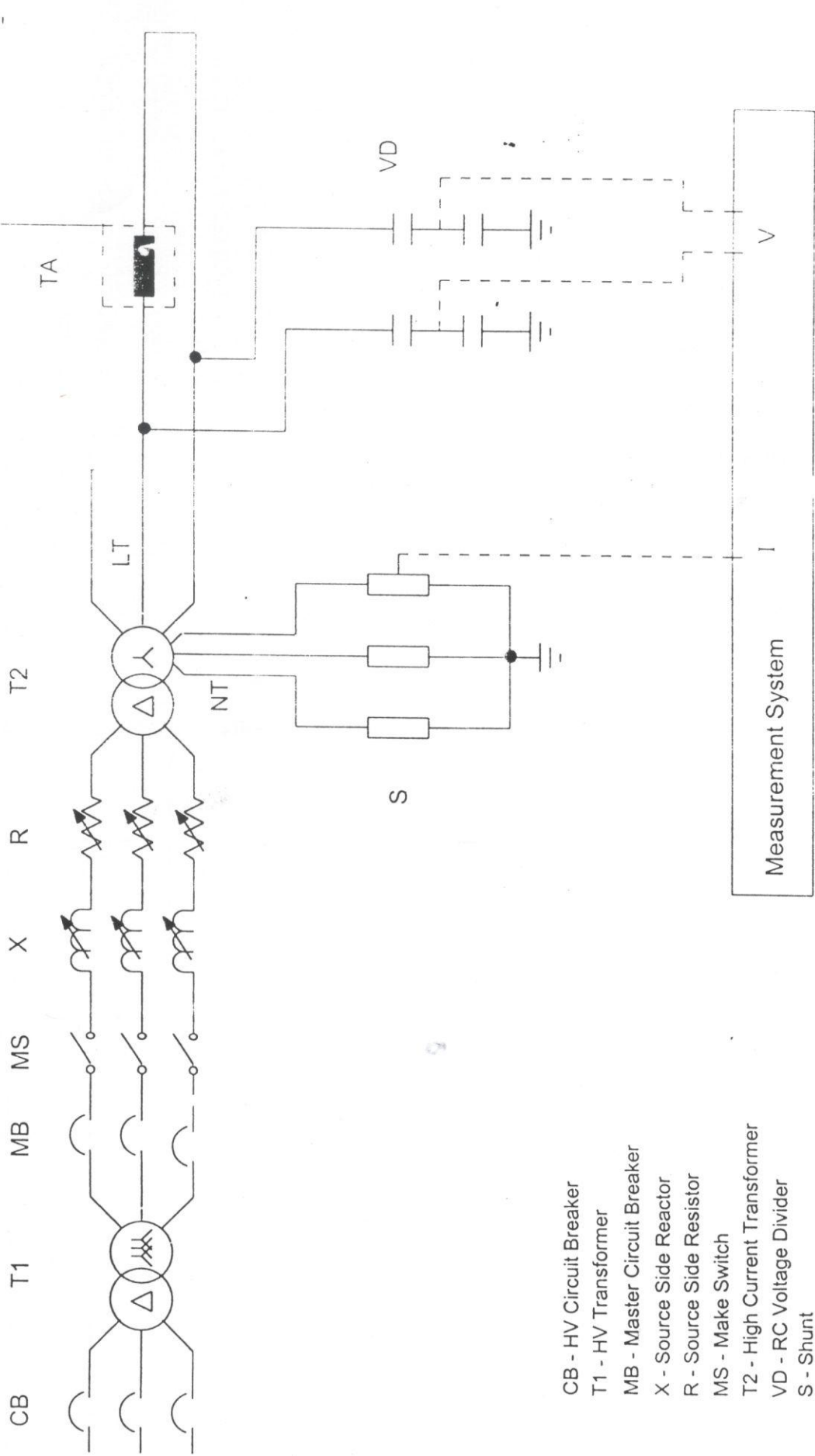


- CB - HV Circuit Breaker
- T1 - HV Transformer
- MB - Master Circuit Breaker
- X - Source Side Reactor
- R - Source Side Resistor
- MS - Make Switch
- T2 - High Current Transformer
- VD - RC Voltage Divider
- S - Shunt
- TA - Test Apparatus
- r - Current Limiting Resistor
- FWF - Fine Wire Fuse
- LT - Line terminals of the secondary windings of T2
- NT - Neutral terminals of the secondary windings of T2

TEST ENGINEER

OLTS/TCD-STC-01

**CPRI Bhopal**

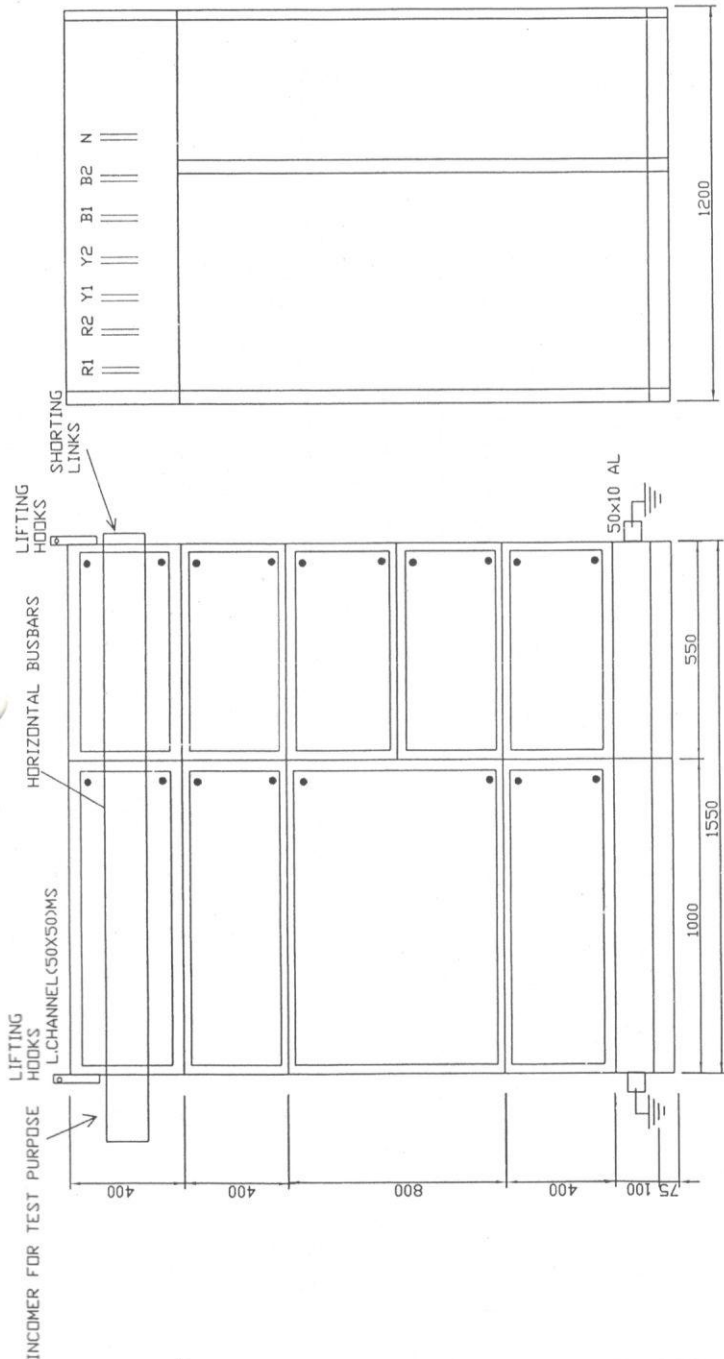


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- LT - Line terminals of the secondary windings of T2
- NT - Neutral terminals of the secondary windings of T2

  
 TEST ENGINEER  
 OLTS/TCD-STC-02



The contents of this Drawing are the sole property of M/S. MURTHY INDUSTRIES and they should neither be copied nor given to a third person without the prior permission of Company.

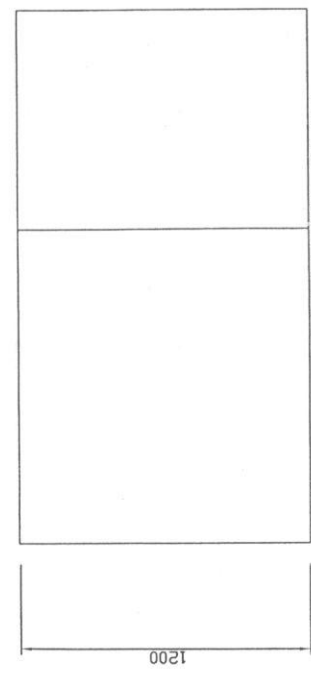


HORIZONTAL BUSBARS : 4:10X200  
PER PH  
2:10X200 FOR N  
MATERIAL : ALUMINIUM ALLOY  
RATING : -6000A

NOTES:  
1) ALL DIMENSIONS ARE IN MM.  
2) DIMENSIONS ARE NOT TO SCALE.  
3) GEN. TOLERANCE +2%.

कै. वि. उ. द्वारा रेखाचित्र का सत्यापन  
जहाँ तक भी संभव हो सिर्फ विभीय  
जाय तक ही सीमित है।  
THE VERIFICATION OF THIS DRAWING  
BY CPRI IS LIMITED TO DIMENSIONAL  
CHECKS ONLY WHEREVER POSSIBLE.

TYPE : POWER CUM MOTOR  
CONTROL CENTRE



FOUNDATION PLAN

रिपोर्ट क्रमांक .....  
के संदर्भ में दस्तावेज  
Document Pertaining  
Report No. .... 52.161.357

अभिधीनकारी  
Engineering Officer  
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गोविंदपुरी, भोपाल  
Govindapura, Bhopal

REV. NO.	DATE	DESCRIPTION	CHKD.	APPD.	CLIENT:	DRAWN:	K.R.MURTHY	02.11.16
					MURTHY INDUSTRIES # 5-24-2/A, AUTO NAGAR, B-BLOCK, VISAKHAPATNAM-530012	CHD	K.R.MURTHY	02.11.16
					TITLE:	APPD.	K.R.MURTHY	02.11.16
					GA DRG OF 6000A	SHEET NO 1 OF 2		
					LT SWITCHBOARD FOR CPRI TEST	DRG. NO.		
						MURTHY-CPRI-371		

