

CENTRAL POWER RESEARCH INSTITUTE
{ Member of STL }



CPRI

Sheet 1 of 5

TEST REPORT

Date: 14 SEP 2016

Test Report No. : 2016/STL/1240
Name and Address of the customer : M/s Jodhpur Vidyut Vitran Nigam Limited
Office of the Superintending Engineer (MM&C)
New Power House Premises, Industrial Area, Jodhpur

Name and address of the Manufacturer : M/s Rajasthan Powergen Transformer Pvt. Ltd.
Karola – Bhinmal Road, Village Karola, Sanchore
Dist. Jalore, Rajasthan.

Particulars of Sample(s) Tested : 5MVA 33/11KV Power Transformer
Condition of sample(s) on receipt : New
Type : Outdoor
Designation : Outdoor
Serial Number(s) : RPTPL-01
Number of sample(s) Tested : One
CPRI sample code number(s) : STDSST116S0243
Sealing of the sample if any : Transformer Was Sealed by Polycarbonate Seal Bearing
Seal no. ME715335 to ME715342 on all four corners of top
Cover with tank.

Particulars of test(s) conducted : Test with Lightning Impulse Chopped on tail

Date(s) of Test(s) : 10.08.2016
Test(s) in accordance with Standard/specification : CI. 14 of IS: 2026 (Part-3) 2009, IEC: 60076-3, 2000
Sampling Plan : NIL
Customer's Requirement : Nil
Deviations, if any : NIL

Name of the witnessing persons
Customer's Representatives : Mr. Anil B Shinde
Other than Customer's Representatives : Mr. Prakash Jain (XenScada)
Test subcontracted with name an address of the laboratory : NONE

Documents constituting this report (in words)

No. of Sheet(s) : FIVE
No. of Oscillogram(s) : FORTY TWO
No. of Graph(s) : NIL
No. of Photograph(s) : NIL
No. of Test Circuit Diagram(s) : NIL
No. of Drawing(s) : TWO

(LEENA H. ROY)
TEST ENGINEER



Sarita Dongre
(SARITA DONGRE)
JOINT DIRECTOR

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Sheet 2 of 5

Test Report No: 2016/STL/1240

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SUMMARY OF TEST

- | | | |
|---------------------------------------|---|---|
| 1. Test conducted | : | Test with Lightning Impulse chopped on tail |
| 2. Rating for which tested | : | HV Winding 170kVpeak, LV Winding 75kV peak |
| 3. DOCUMENTS CONSTITUTING THIS REPORT | : | |
| 3.1 Supplementary test report | : | NIL |
| 3.2 Oscillogram No(s) | : | 20161240-01 to 42 |
| 3.3 Drawing of the equipment tested | : | RPTPL- GA-001- 5MVA, RPTPL- RD – 001- 16 |
| 3.4 Test circuit drawing No(s) | : | NIL |
| 3.5 Photograph No(s) | : | NIL |


(LERNA H. ROY)
TEST ENGINEER

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TEST REPORT

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Test Report No: 2016/STL/1240

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DESCRIPTION OF THE SAMPLE TESTED

As assigned by the manufacturer)

Sample : 5MVA,33/11kV Power Transformer
 Rated Power (kVA) : 5000
 Rated Voltage HV (Volts) : 33000
 LV (Volts) : 11000
 Rated Current HV (Amps) : 87.47
 LV (Amps) : 262.43
 No. of Phases : -
 Insulation level LV (kV rms/kV Peak) : 28/75
 Insulation level HV (kV rms/kV Peak) : 70/170
 Type of Cooling : ONAN
 Connection (HV/LV) : Delta/ Star
 Frequency (Hz) : 50
 % Impedance : 7.15
 X/R : -
 Temperature rise of oil/ Winding (deg°C) : 45/50°C
 Type Of Winding : Disc
 Quantity of Oil (litres) : 2550
 Weight of Oil (kgs) : 2142
 Weight of core and winding (kgs) : 7050
 Total weight (Kgs) : 11392
 Vector group : Dyn11
 Year of Manufacture : 2016
 Serial Number : RPTPL-01

Details of taps							
Tap No.	Primary Voltage V	Secondary Voltage V	%Impedance	X- Ratio	Guaranteed No Load Loss	Guaranteed Load Loss at 75 °C	Guaranteed % Impedance at 75 °C
1	34650	11000	6.79	-	-	-	-
3	33000	11000	7.15	-	-	-	-
7	29700	11000	7.86	-	-	-	-


 (LEENA H. ROY)
 TEST ENGINEER

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TEST REPORT

Sheet 4 of 5

Test Report No: 2016/STL/1240

Date: 14 SEP 2016

SCHEDULE OF TESTS

Type of test : Test with Lightning Impulse chopped on tail
Condition of the equipment : New
Atmospheric conditions :

Ambient tem(degC)	Dry bulb tem(degC)	Wet bulb temp (degC)	Atm. Pressure (Hg-mm)
30	30	24	716.5

Description of tests : The Sample was tested with 1.2/50 micro second standard full wave lighting impulse Voltage and chopped on tail wave of negative polarity as per standard Test on LV Winding was conducted with deviated wave shape as per provision of the standard due to station limitation

Test on HV winding: 170kVp

Application No.	Voltage Application	OscillogramNos		
		U-limb	V- limb	w- limb
1st application	Full wave at reduced voltage	20161240-01	20161240-08	20161240-15
2 nd application	Full wave at full voltage	20161240-02	20161240-09	20161240-16
3 rd application	Chopped wave at reduced voltage	20161240-03	20161240-10	20161240-17
4 th application	Chopped wave at 110% voltage	20161240-04	20161240-11	20161240-18
5 th application	Chopped wave at 110% voltage	20161240-05	20161240-12	20161240-19
6 th application	Full wave at full voltage	20161240-06	20161240-13	20161240-20
7 th application	Full wave at full voltage	20161240-07	20161240-14	20161240-21

Test on LV winding 75kVp

Application No.	Voltage Application	OscillogramNos		
		U-limb	V-limb	W-limb
1 st application	Full wave at reduced voltage	20161240-22	20161240-29	20161240-36
2 nd application	Full wave at full voltage	20161240-23	20161240-30	20161240-37
3 rd application	Chopped wave at reduced voltage	20161240-24	20161240-31	20161240-38
4 th application	Chopped wave at 110% voltage	20161240-25	20161240-32	20161240-39
5 th application	Chopped wave at 110% voltage	20161240-26	20161240-33	20161240-40
6 th application	Full wave at full voltage	20161240-27	20161240-34	20161240-41
7 th application	Full wave at full voltage	20161240-28	20161240-35	20161240-42

Observations : No abnormality noticed No significant differences were noticed between voltage and Current transient recorded at reduced voltage and those recorded at full test voltage

CONCLUSION : The test results indicate that the sample tested complies with the requirement of the clause 14 of the standard IS:2026 (Part-3),2009, / IEC: 60076 – 3, 2000.

(Signature)
(LEENA H. ROY)
TEST ENGINEER

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TEST REPORT

Test Report No: 2016/STL/1240

Sheet 5 of 5
Date: 14 SEP 2016

NOTE

- a) The test results relate only to the sample (s) tested.
- b) Publication or reproduction of this 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/test certificate.
- d) NABL has Accredited this laboratory as per ISO 17025-2005 Standard for tests carried out.
- e) Any anomaly/discrepancy in this test report/test certificate should be brought to our notice within 45 days from the date of issue.
- f) The verification of the sample drawing by CPRI is limited to dimensional checks only wherever possible.
- g) CPRI issues two kinds of documents:

Test Report

The test report is issued when the sample is Tested for specific test required by the customer either in accordance with National/international standards or as per customer's requirement but on certification on the performance of the sample tested. The test report will contain the record of the values of test parameters as 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.

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.

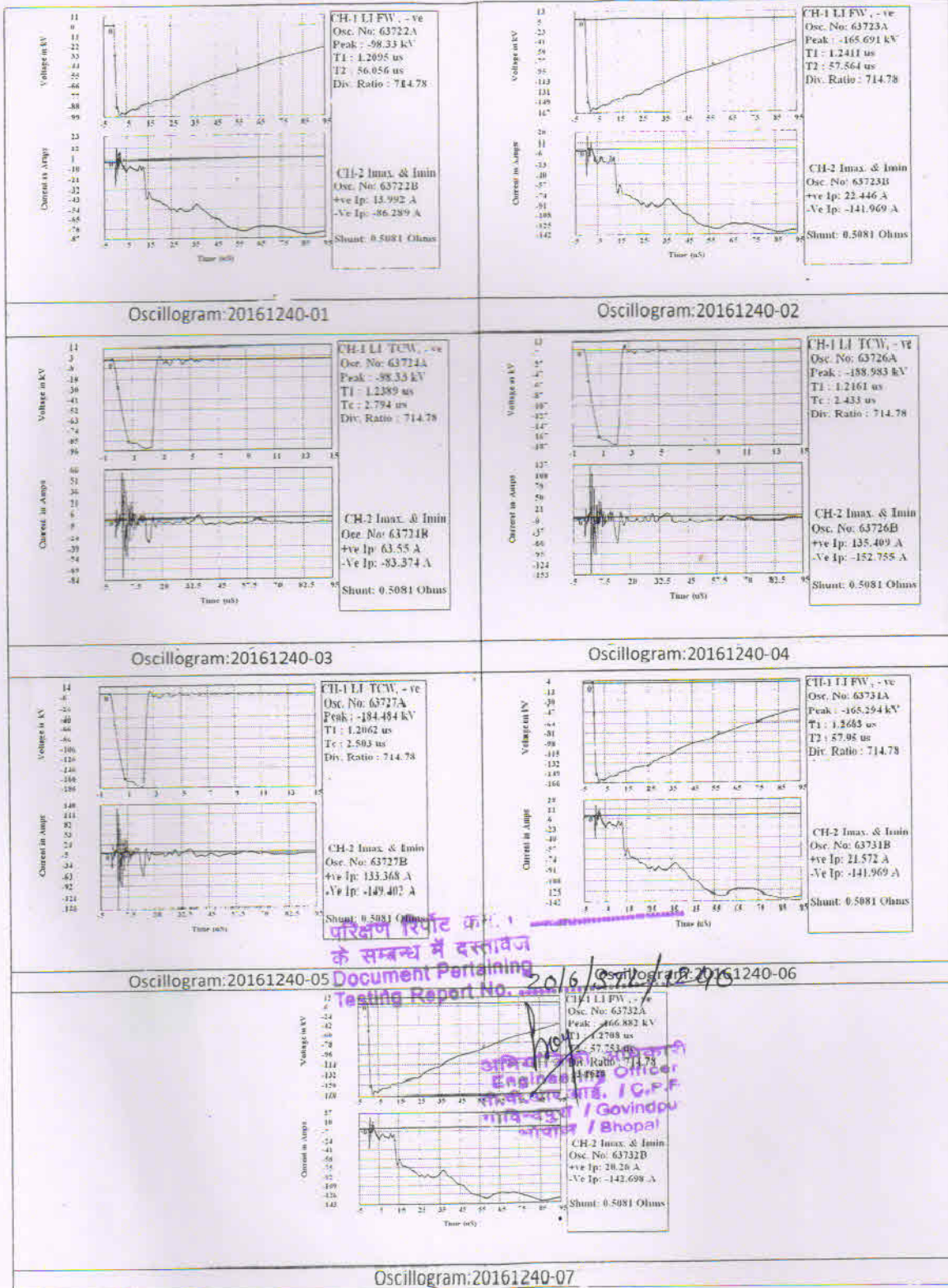
- h) All Documents constituting this test report/certificate are stitched together with a Continuous silk thread /silk ribbon, the two ends of which have been brought over the front sheet of this test report/certificate and sealed with a CPRI printed paper sticker/embossed


(LEENA H. ROY)
TEST ENGINEER

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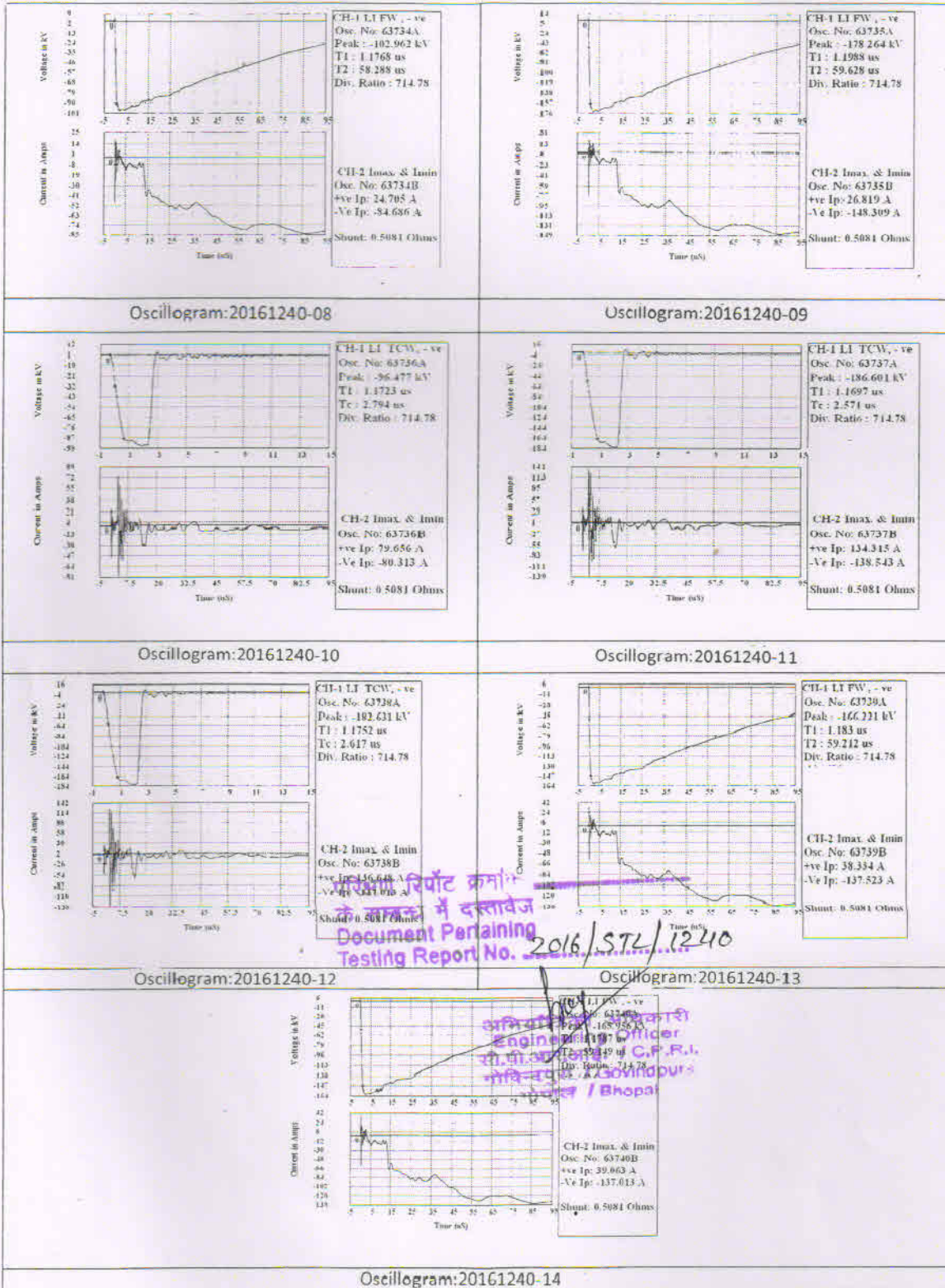
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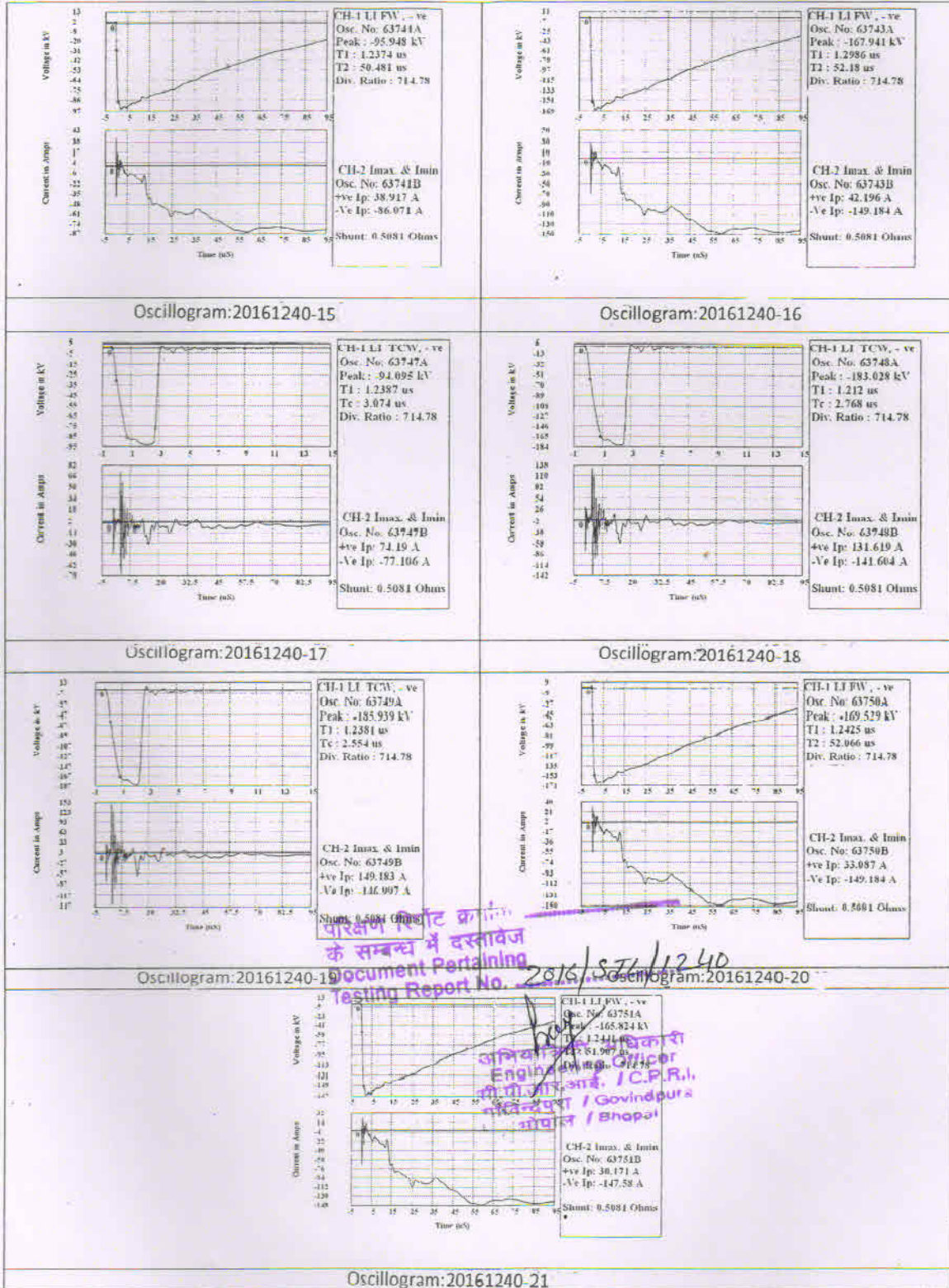


अभियांत्रिकी कार्यालय
के कार्यालय में दस्तावेज
Document Pertaining
Testing Report No. 2016/STL/1240

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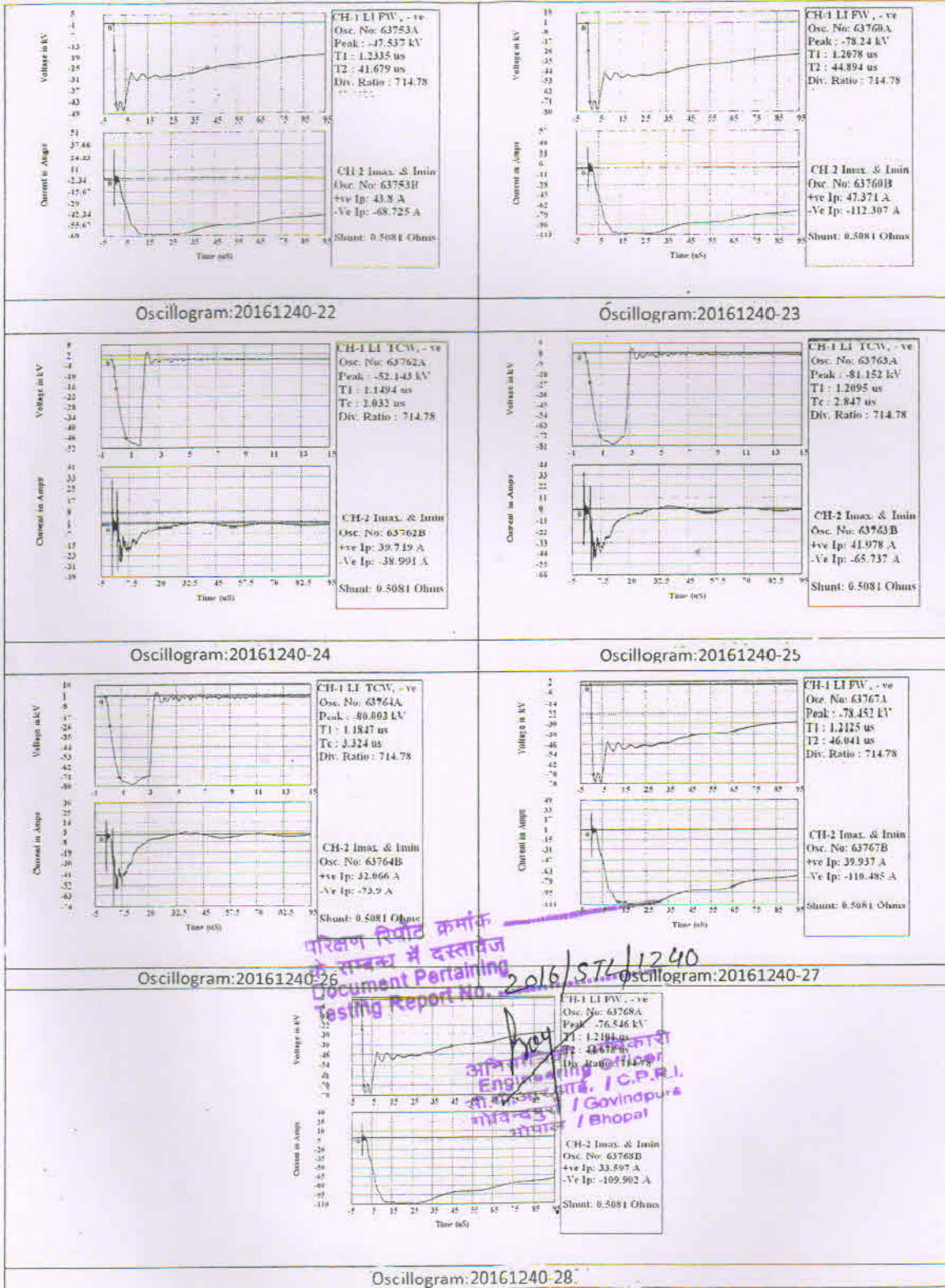
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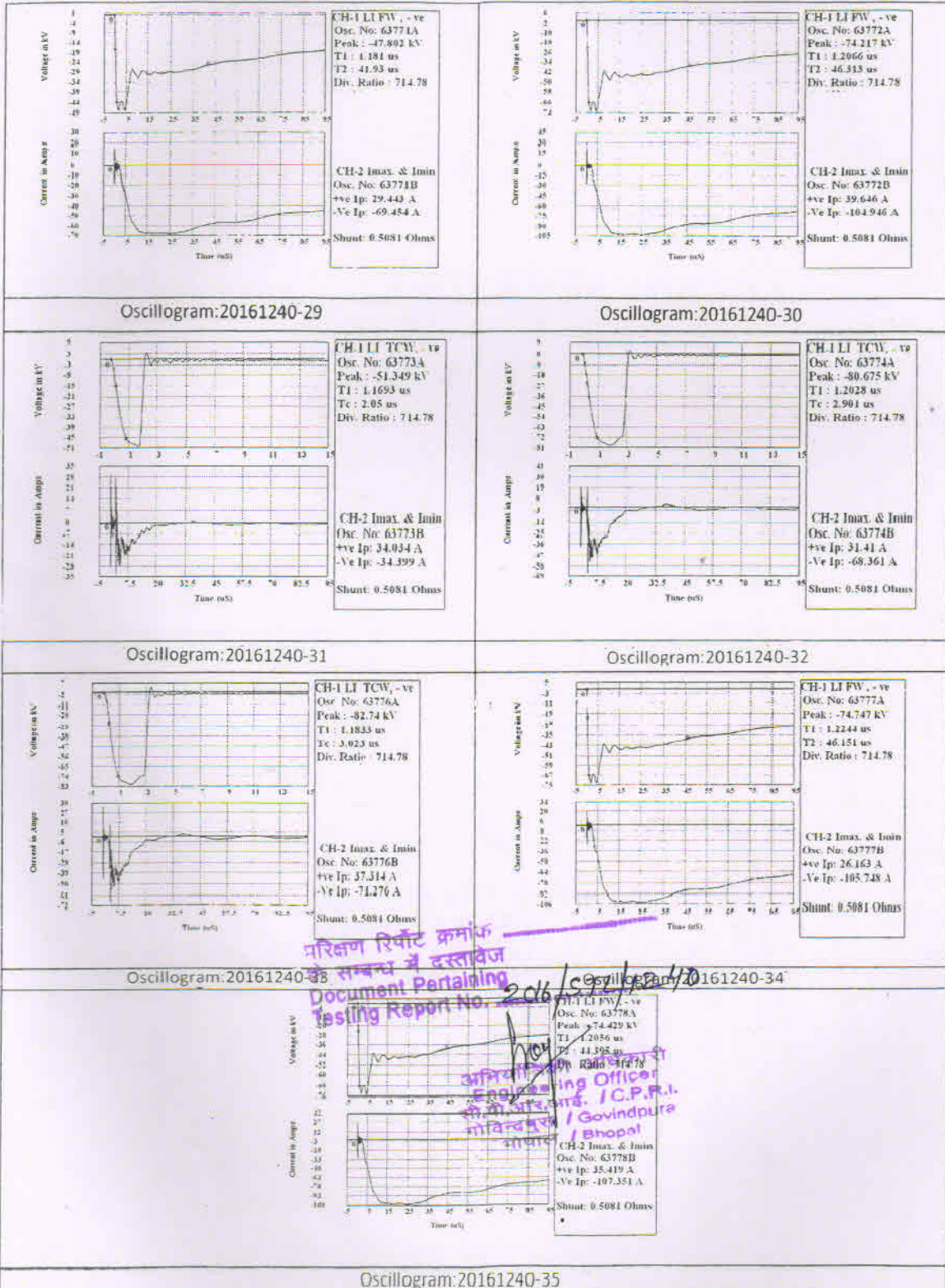
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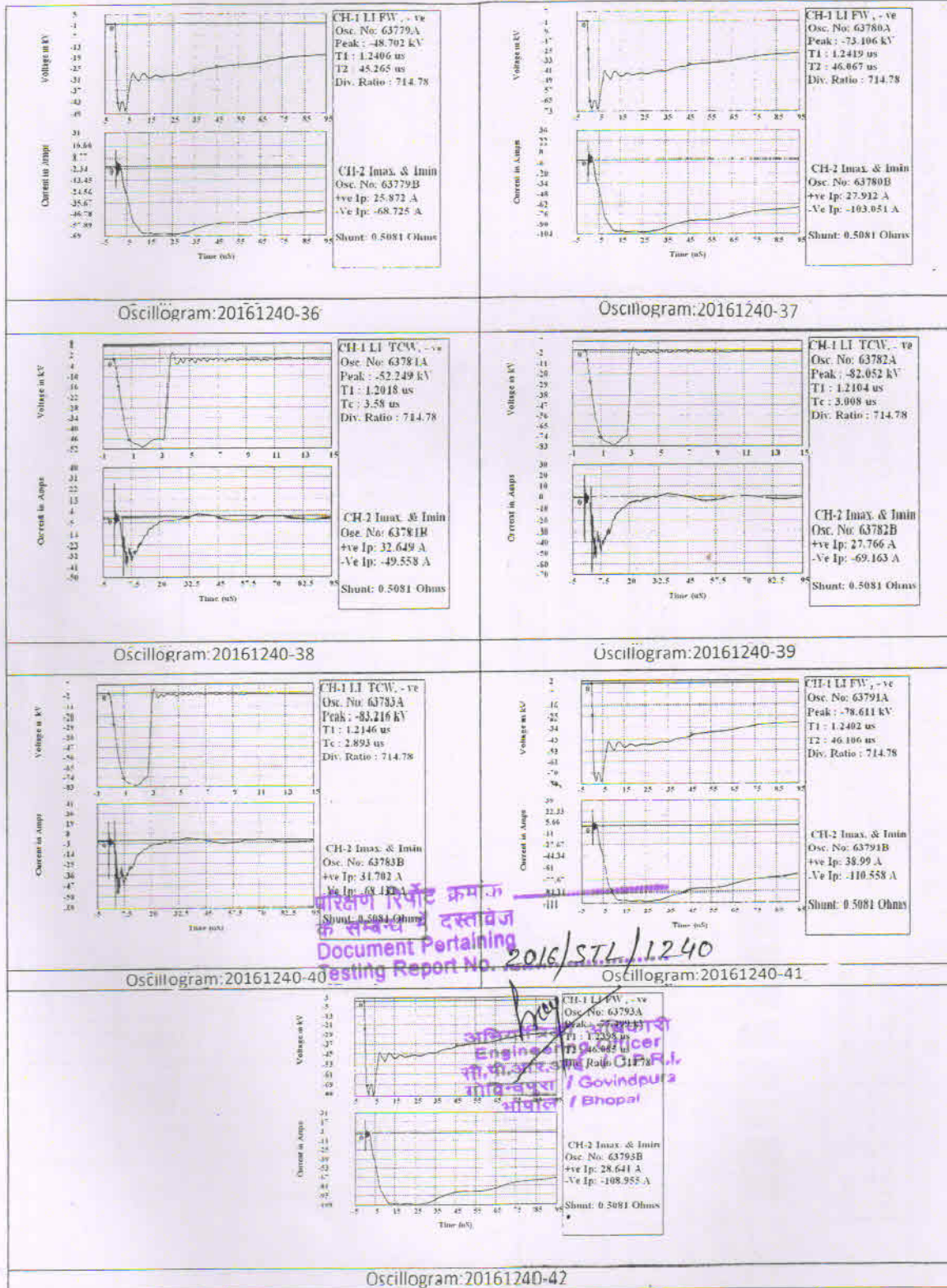
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परिक्षण रिपोर्ट क्रम नं. 2016/STL/1240
के संबंध में दस्तावेज
Document Pertaining
Testing Report No. 2016/STL/1240

अभिषेक
Engineer
सी. पी. आर. सी.
गोविंदपुरा / Govindpura
भोपाल / Bhopal

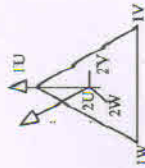
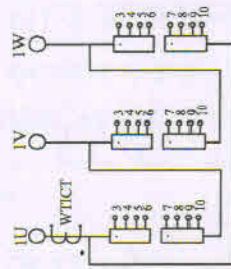
RAJASTHAN POWEREGEN TRANSFORMER PVT.LTD

BHINMAL-KAROL ROAD SANCHORE 343041
RAJASTHAN INDIA

TRANSFORMER NO	REPTPL-01	FREQUENCY	50
KVA	5000	TAP POSITION	MAX/NOR/MIN
VOLTS AT HV	33000	% IMPEDENCE AT 75°C GUARANTEED	7.15
NO LOAD LV	11000	LOAD LOSSES IN KW AT 75°C GUARANTEED	6.79
AMPERES HV	1747	NO LOAD LOSSES IN KW GUARANTEED	23 KW
AT FULL LOAD LV	263.43	VECTOR GROUP	4 KW
PHASES HV	3-DELTA	TYPE OF COOLING	DYN-11
& CONNECTION LV	3-STAR	CORE & WDG.	GNAN
SPECIFICATION	IS:2026	OIL	7D59
YEAR OF MANUFACTURE	2016	TOTAL WEIGHT	2142
		OIL	11392
			2550
			45
			50

GTD. MAX. TEMP RISE IN OIL/WDG. OVER AMBIENT OF 90deg. °C
 IMPULSE LEVEL HV/LV 170/75KV
 SHORT CKT CURRENT AMPS FOR 0.5 SEC DYNAMIC & 2.0 SEC THERMAL
 CUSTOMER SPEC./REF. JVVNL TN- 2168
 GUARANTEED PERIOD 36 MONTHS FOR THE DATE OF DISPATCH
 DATE OF DISPATCH

POSN.	CONNECT	HV VOLTS	AMPS	LV VOLTS	AMPS
1.	6-7	34650	83.314	11000	311000
2.	7-5	33825	85.345	11000	311000
3.	5-8	33000	87.479	11000	311000
4.	8-4	32175	89.722	11000	311000
5.	4-9	31350	92.064	11000	311000
6.	9-3	30525	94.572	11000	311000
7.	3-10	29700	97.199	11000	311000



क. वि. अ. स. द्वारा इस रेखा चित्र को सत्यापन जती तक भी संभव है सिर्फ विनियम जोध तक सीमित है
 The Verification of the Drawing by CPRI is Limited to Dimensional Check only Wherever Possible.
 दस्तावेज परमाणु रिपोर्ट के
 Pertaining to Test Report No. 2016/37/1240

अभियंता की अधिकारी
 Engineering Officer
 री. द. कार्. शा. / C.P.R.I.
 भोपाल / Bhopal

DRAWN BY	MP	RAJASTHAN POWERGEN TRANSFORMER PVT LTD
CHECKED	SANJAY SHANKAR	BHINMAL-KAROLA ROAD
DESIGNED	SHANKAR	SANCHORE -304143 RAJASTHAN
CUSTOMER	JVVNL	5. MVA 33/11 KV
DATE	14-08-2016	RATING DIAGRAM PLATE
SCALE	NTS	RPTPL-RD-001-16