



# ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

(Accredited by the National Accreditation Board for Testing and Calibration Laboratories, Govt. of India)  
ERDA Road, Makarpura Industrial Estate, Vadodara-390 010, India.

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## TEST REPORT

SHEET : 1 of 5

<b>NAME &amp; ADDRESS OF CUSTOMER</b>  M/S. RAGHVANI TEXTILES P. LTD. PLOT NO.261,SECTOR IV, EXTENDED AREA, KANDLA SPECIAL ECONOMIC ZONE, GANDHIDHAM-KUTCH.	<b>REPORT NO. :</b> HCCT/03/1120 <b>DATE :</b> 15.09.2012	
	<b>CUSTOMER REF. NO.</b>	<b>DATE</b>
	CIPL/ERDA/TMER/2012	05.07.2011
	<b>DATE OF SAMPLE RECEIPT</b>	<b>DATE OF TESTING</b>
	05.07.2012	12.07.2012
<b>SAMPLE DESCRIPTION</b>  <b>DISTRIBUTION TRANSFORMER</b> MFD. BY : COMFORT INSTA-POWER LTD. RATING : 400 kVA VOLTS : 11000/433 V (at no-load) CURRENT : 21/533 Amps PHASES : 3/3 %IMPEDANCE : 4.0 % VECTOR GROUP : Dyn11 FREQUENCY : 50 Hz WINDING : Copper GTD. NO LOAD LOSS: 800 W (+IS Tol.) GTD. LOAD LOSS AT 75°C: 6000 W (+IS Tol.) GTD. MAX.TEMP. RISE IN OIL/WINDING : 45/55°C	<b>SAMPLE IDENTIFICATION</b> ERDA SAMPLE CODE No.: HCCTWO0103417 SERIAL NO. : IP-159 COOLING : ONAN MONTH & YEAR OF MFG.: 06/2012 CUSTOMER : RAGHVANI TEXTILES P. LTD. ENCL. DRG NO. : 1. Name plate drawing 2. GA-400-11	
<b>TEST DETAILS</b> As per sheet 2 of 5.	<b>TEST SPECIFICATION</b> As per sheet 2 of 5.	
<b>TEST RESULTS :</b> As per sheets 3 of 5 to 5 of 5.		
<b>REMARKS :</b> 1. The transformer <b>conforms</b> to the guaranteed requirement as per above mentioned test specification for above mentioned test nos. 2,3 & 4. 2. Criteria limit has not been specified for test nos. 1 & 5.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b>
<b>Note:</b> 1. This report relates only to the particular sample received in good condition for testing at E.R.D.A. 2. This report cannot be reproduced in part under any circumstances. 3. Publication of this report requires prior permission in writing from Director, E.R.D.A. 4. Only the tests asked for by the customer have been carried out.		

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<b>REPORT NO.:</b> HCCT/03/1120		<b>SHEET :</b> 2 of 5
<b>DATE :</b> 15.09.2013		
<b>TEST DETAILS :</b>		
<b>SR. NO.</b>	<b>TEST DETAILS</b>	<b>TEST SPECIFICATION</b>
1.	Measurement of winding resistance	As per cl.no.10.2 of IS 2026 (Part 1): 2011.
2.	Measurement of voltage ratio and check of phase displacement	As per cl.no.10.3 of IS 2026 (Part 1): 2011.
3.	Measurement of short-circuit impedance and load loss	As per customer's requirement, testing procedure followed of cl.no.10.4 of IS 2026 (Part 1): 2011.
4.	Measurement of no-load loss and current	As per customer's requirement, testing procedure followed of cl.no.10.5 of IS 2026 (Part 1): 2011.
5.	Measurement of insulation resistance	As per cl.no.10.1.3.j of IS 2026 (Part 1): 2011
<b>PREPARED BY</b> 		<b>CHECKED BY</b> 



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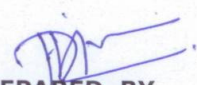
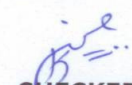
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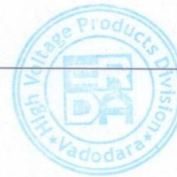
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REPORT NO.: HCCT/03/1120		SHEET : 3 of 5		
DATE : 15.09.2012				
Sr. No.	Particulars of Tests	Requirement	Obtained Value	Remarks
1.	<p>Note: All the tests were carried out on Tap No.3</p> <p><b>Measurement of winding resistance:</b> (As per cl.no.10.2 of IS 2026 (Part 1): 2011.) At top oil temp.: 32.9°C</p> <p style="text-align: center;"><b>HV Winding</b></p> <p>1U - 1V : -- 4.5686 Ω 1V - 1W : -- 4.5592 Ω 1U - 1W : -- 4.5548 Ω <b>Average</b> : -- 4.5609 Ω</p> <p style="text-align: center;"><b>LV Winding</b></p> <p>2U - 2V : -- 5.5835mΩ 2V - 2W : -- 5.5665mΩ 2U - 2W : -- 5.6385mΩ <b>Average</b> : -- 5.5962mΩ</p>			---
2.	<p><b>Measurement of voltage ratio and check of phase displacement :</b> (As per cl.no.10.3 of IS 2026 (Part 1): 2011)</p> <p style="text-align: center;"><b>Voltage ratio measured between</b></p> <p>1U-1V and 2u-2n: 44.00 ± 0.5% 43.962 1V-1W and 2v-2n: 44.00 ± 0.5% 43.923 1W-1U and 2w-2n: 44.00 ± 0.5% 43.924</p> <p style="text-align: center;"><b>Vector Group :</b> Dyn11 Dyn11</p>			<b>Conforms</b>
<p> PREPARED BY</p>		<p> CHECKED BY</p>		



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Certificate No. : T-0071

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**REPORT NO.:** HCCT/03/1120 **SHEET : 4 of 5**  
**DATE** : 15.09.2012

Sr. No.	Particulars of Tests	Requirement	Obtained Value	Remarks
3.	<b>Measurement of short-circuit impedance and load loss:</b> (As per customer's requirement, testing procedure followed of cl.no.10.4 of IS 2026 (Part 1): 2011. Tested with <b>21.0025</b> Amps (on HV side) Frequency : <b>49.666</b> Hz Top oil temp.: <b>33.2</b> °C  <b>Test current</b> (Amps) <b>Impedance voltage</b> (Volts) <b>Measured load loss</b> (Watts) <b>Load loss</b> (Watts) (Computed to 100% load) At 33.2 °C At 75 °C  <b>Impedance voltage</b> (%) (Computed to 100% load) At 33.2 °C At 75 °C	Max.6900 (As specified by customer)	21.0025 433.87 5595.912  5605.24 6425.67  3.95 4.04	<b>Conforms</b>
4.	<b>Measurement of no-load loss and current :</b> (As per customer's requirement, testing procedure followed of cl.no.10.5 of IS 2026 (Part 1): 2011) Tested with average <b>429.16</b> Volts. (on LV side ) Frequency : <b>49.563</b> Hz  <b>RMS Voltage</b> (Volts) <b>No load current</b> ( Amps) <b>Measured No load loss</b> (Watts) <b>Corrected No load loss</b> (Watts)	Max. 920 (As specified by customer)	432.83 7.0819 800.12 793.31	<b>Conforms</b>

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<b>REPORT NO.:</b> HCCT/03/1120		<b>SHEET:</b> 5 of 5		
<b>DATE</b> : 15.09.2012				
Sr. No.	Particulars of Tests	Requirement	Obtained Value	Remarks
5.	<b>Measurement of insulation resistance:</b> (As per cl.no.10.1.3.j of IS 2026 (Part 1): 2011) Top oil temp.: 33.7°C <b>IR value measured between</b> HV winding --- Earth at 2500 V DC LV winding --- Earth at 500 V DC HV winding --- LV winding at 2500 V DC	---	1.34 GΩ 3.69 GΩ 1.05 GΩ	----
<b>PREPARED BY</b>		<b>CHECKED BY</b>		

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