Certificate No. : T-0071

ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION
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TEST REPORT

NAME & ADDRESS OF CUSTOMER	**REPORT NO. :** HCCT/03/1120 **DATE :** 15.09.2012	
M/S. RAGHVANI TEXTILES P. LTD. PLOT NO.261,SECTOR IV, EXTENDED AREA, KANDLA SPECIAL ECONOMIC ZONE, GANDHIDHAM-KUTCH.	**CUSTOMER REF. NO.**	**DATE**
	CIPL/ERDA/TMER/2012	05.07.2011
	DATE OF SAMPLE RECEIPT	**DATE OF TESTING**
	05.07.2012	12.07.2012

SAMPLE DESCRIPTION	**SAMPLE IDENTIFICATION**
DISTRIBUTION TRANSFORMER 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	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
TEST DETAILS As per sheet 2 of 5.	**TEST SPECIFICATION** As per sheet 2 of 5.

TEST RESULTS : As per sheets 3 of 5 to 5 of 5.

REMARKS : 1. The transformer **conforms** 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.

PREPARED BY **CHECKED BY** **APPROVED BY**

Note: 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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REPORT NO.: HCCT/03/1120 **SHEET** : 2 of 5
DATE : 15.09.2013

TEST DETAILS :

SR. NO.	TEST DETAILS	TEST SPECIFICATION
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

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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
	Note: All the tests were carried out on Tap No.3			
1.	**Measurement of winding resistance:** (As per cl.no.10.2 of IS 2026 (Part 1): 2011.) At top oil temp.: 32.9°C			---
	HV Winding			
	1U – 1V :	--	4.5686 Ω	
	1V – 1W :	--	4.5592 Ω	
	1U – 1W :	--	4.5548 Ω	
	Average :	--	4.5609 Ω	
	LV Winding			
	2U – 2V :	--	5.5835mΩ	
	2V – 2W :	--	5.5665mΩ	
	2U – 2W :	--	5.6385mΩ	
	Average :	--	5.5962mΩ	
2.	**Measurement of voltage ratio and check of phase displacement :** (As per cl.no.10.3 of IS 2026 (Part 1): 2011)			**Conforms**
	Voltage ratio measured between			
	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	
	Vector Group :	Dyn11	Dyn11	

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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.	**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. Tested with **21.0025** Amps (on HV side) Frequency : **49.666** Hz Top oil temp.: **33.2**°C			**Conforms**
	Test current (Amps)		21.0025	
	Impedance voltage (Volts)		433.87	
	Measured load loss (Watts)		5595.912	
	Load loss (Watts) (Computed to 100% load)			
	At 33.2 °C		5605.24	
	At 75 °C	Max.6900 (As specified by customer)	6425.67	
	Impedance voltage (%) (Computed to 100% load)			
	At 33.2 °C		3.95	
	At 75 °C	4.0 ± 10% (As specified by customer)	4.04	
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) Tested with average **429.16** Volts. (on LV side) Frequency : **49.563** Hz			**Conforms**
	RMS Voltage (Volts)		432.83	
	No load current(Amps)		7.0819	
	Measured No load loss (Watts)		800.12	
	Corrected No load loss (Watts)	Max. 920 (As specified by customer)	793.31	

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

Sr. No.	Particulars of Tests	Requirement	Obtained Value	Remarks
5.	**Measurement of insulation resistance:** (As per cl.no.10.1.3.j of IS 2026 (Part 1): 2011) Top oil temp.: 33.7°C			----
	IR value measured between			
	HV winding --- Earth at 2500 V DC	----	1.34 GΩ	
	LV winding --- Earth at 500 V DC	----	3.69 GΩ	
	HV winding --- LV winding at 2500 V DC	----	1.05 GΩ	

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