



Test Report No.: <i>Prüfbericht - Nr.:</i>		50114588 001		Page 1 of 6 <i>Seite 1 von 6</i>	
Client: <i>Auftraggeber:</i>		Tortech Pty Ltd. 4/31 Wentworth St., Greenacre NSW, Australia.			
Test item: <i>Gegenstand der Prüfung:</i>		3 kVA isolation transformer			
Identification: <i>Bezeichnung:</i>		Drawing No. N/A		Serial No.: <i>Serien-Nr.:</i> N/A	
Receipt No.: <i>Wareneingangs-Nr.:</i>		1113009997		Date of receipt: <i>Eingangsdatum:</i> 2017-12-08	
Condition of test item at delivery: <i>Zustand des Prüfgegenstandes bei Anlieferung:</i>		New item <i>Neuer Gegenstand</i>			
Testing location: <i>Prüfart:</i>		TÜV Rheinland Australia Pty. Ltd. 182 Dougharty Road, Heidelberg West, Australia VIC 3081			
Test specification: <i>Prüfgrundlage:</i>		Tested according to customer requirements <i>Geprüft nach Kundenwunsch</i>			
Test Result: <i>Prüfergebnis:</i>		Refer to the results herein. <i>Beziehen Sie sich auf die Ergebnisse hierin.</i>			
Testing Laboratory <i>Prüflaboratorium:</i>		TÜV Rheinland Australia Pty. Ltd. 182 Dougharty Road, Heidelberg West, Australia VIC 3081			
Compiled by / zusammengestellt:			Reviewed by / kontrolliert:		
2017-10-30	Hossein Rabiei		2017-10-31	Antony K. Milovac	
Date <i>Datum</i>	Name <i>Name</i>	Signature <i>Unterschrift</i>	Date <i>Datum</i>	Name <i>Name</i>	Signature <i>Unterschrift</i>
Other Aspects/ Sonstiges:					
Rated Voltage (U_e) / Frequency			250 V / 50 Hz		
Abkürzungen: P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet					
Abbreviations: P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested					
This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products. <i>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</i>					

Revision 5.0

Accredited for compliance
with ISO/IEC 17025
Technical Competence



ACCREDITATION No. 1700

Test Report			
Test item particulars:			
Approximate dimension [W x H x D] (mm): 240 x 150 x 200			
General remarks:			
<ol style="list-style-type: none"> 1. This report shall not be reproduced, except in full. 2. Details in test data / test plan no. 1113009997. 3. Specification applied: Client Requirements. 4. Reporting of results herein is in accordance with NATA recommendations taking into account U of M. <ol style="list-style-type: none"> (a) For minimum limits - Where measurement is on the limit or above the limit it is deemed to comply. Where measurement is below the limit it is deemed not to comply (b) For maximum limits - Where measurement is on the limit or below the limit it is deemed to comply. Where measurement is above the limit it is deemed not to comply. 5. This test report is based on assessment and tests applied to the specific test item(s) as submitted by the client. TÜV Rheinland Australia disclaims any and all responsibility or obligation for any other item. 6. Power supplies used were mains derived a.c. voltage sources of substantially sinusoidal waveform with a nominal frequency of 50 Hz unless otherwise noted. 7. Tests were performed on 15th and 18th December 2017 			
Description of the test item:			
The test item is a 3 kVA isolation transformer with the dimension of 240 x 150 x 200 mm and the following rated values:			
Rated Voltage (U_e) / Frequency		250 V / 50 Hz	
Rated Power		3 kVA	
Drawing provided by the client, not included in the test report:			
	Document No.	Rev.	Description
-	-	-	-
Testing witnessed by:			
N/A			
Options/accessories/ancillary equipment:			
The equipment was tested without any optional accessory installed. Hence, this report does not cover parameters that are influenced by the installation of optional accessory.			

Client Requirements			
Clause	Requirement + Test	Result - Remark	Verdict

No load and two hour load test			
No load setup			
The 250 V, 50 Hz power supply was connected to the input terminals, while the output terminals were not connected and left open circuit. The following parameters were measured during the test:		Refer Table 1.	
<ul style="list-style-type: none"> • Supply voltage • Current • power factor 			
Two hour load test setup			
The 250 V, 50 Hz power supply was connected to the input terminals, while the output terminals were connected to a load. The following parameters were measured at the beginning and after two hours of operation on the primary and secondary side of transformer:			
<ul style="list-style-type: none"> • Voltage • Current • Power • Power factor • Temperature (refer to the photos for TC location) 			
Outside temperature of transformer winding was also measured by K type thermocouple.			
1 st test was performed with rated current, rated voltage and power factor of 1.0 at the secondary side of transformer. (Resistive load)		Refer Table 2.	
2 nd test was performed with rated current, rated voltage and power factor of 0.8 at the primary side of transformer. (Resistive and inductive load)		Refer Table 3.	

Table 1 - No load test values

Supply Voltage [V]	250.7
Current I_0 [A]	0.48
Test Frequency [Hz]	50.0
Calculated P_0 [W]	46.0

Table 2 - Two hour load test (PF: 1)

Time	2:42 pm	4:42 pm
Primary V_1 [V]	250.5	250.5
Primary I_1 [A]	12.02	11.97
Primary P_1 [kW]	3.010	3.003
Secondary V_2 [V]	250.7	249.8
Secondary I_2 [A]	11.58	11.53
Secondary PF	1	1
Secondary P_2 [kW]	2.900	2.874
ΔP [W]	110	129
Temp [°C]	26.8	72.0

Table 3 - Two hour load test (PF: 0.8)

Time	9:41 am	11:41 am
Primary V_1 [V]	250.7	251.6
Primary I_1 [A]	12.08	12.04
Primary P_1 [kW]	2.440	2.440
Secondary V_2 [V]	249.2	248.6
Secondary I_2 [A]	11.37	11.33
Secondary PF	0.81	0.81
Secondary P_2 [kW]	2.312	2.296
ΔP [W]	128	144
Temp [°C]	24.8	63.8

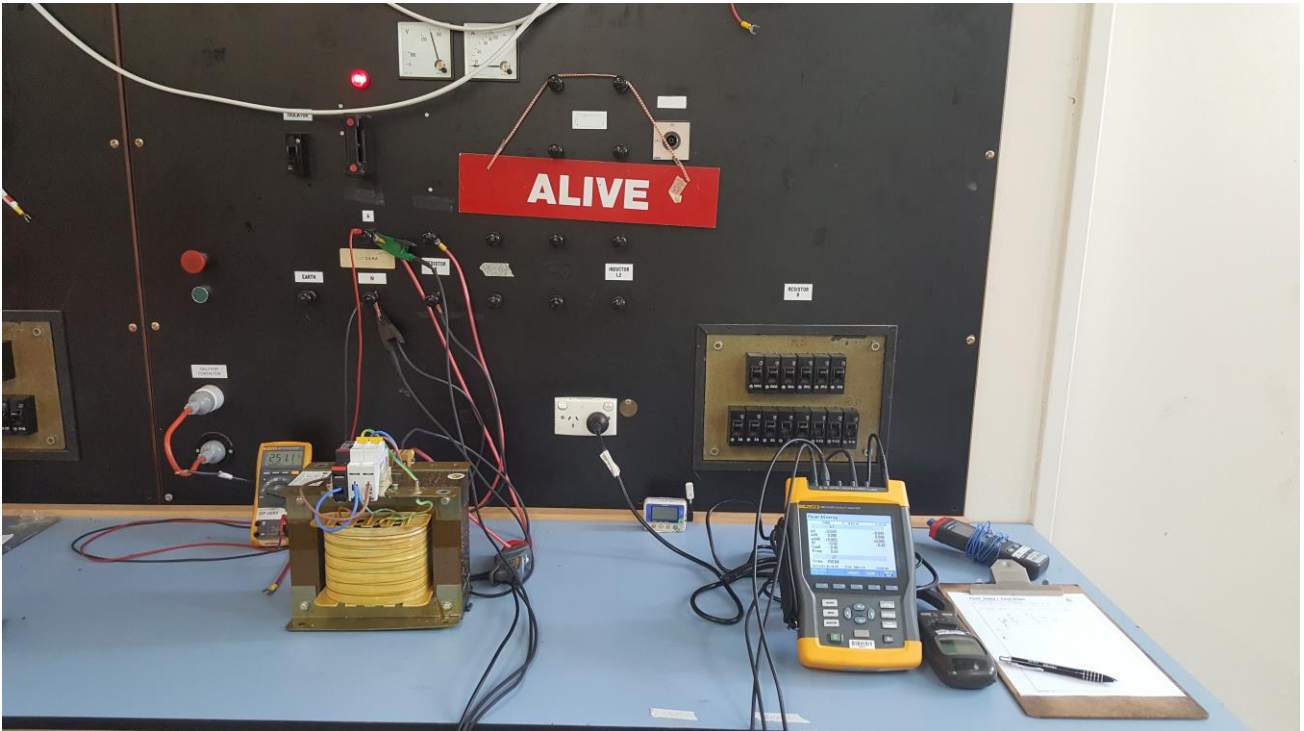


Photo 1 – Test setup for no-load loss test

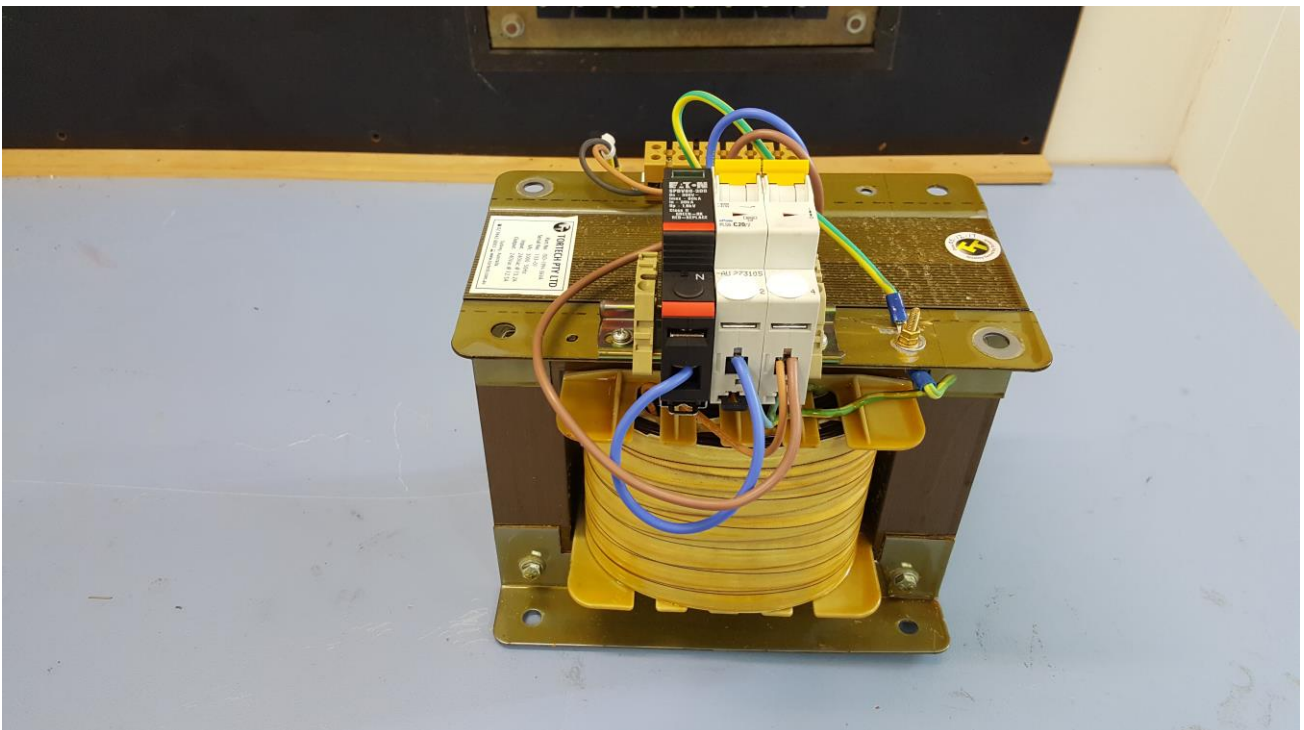


Photo 2 – Test sample after the test (front view)

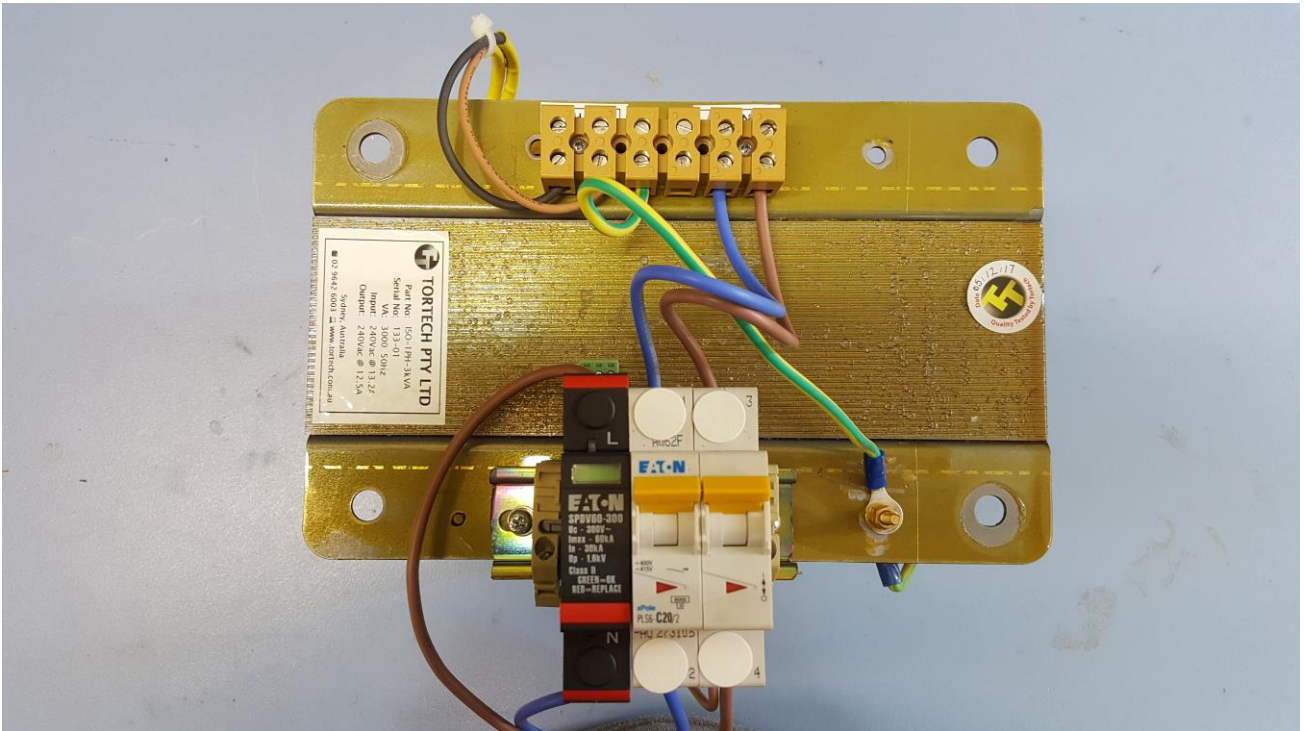


Photo 3 – Test sample after the test (top view)

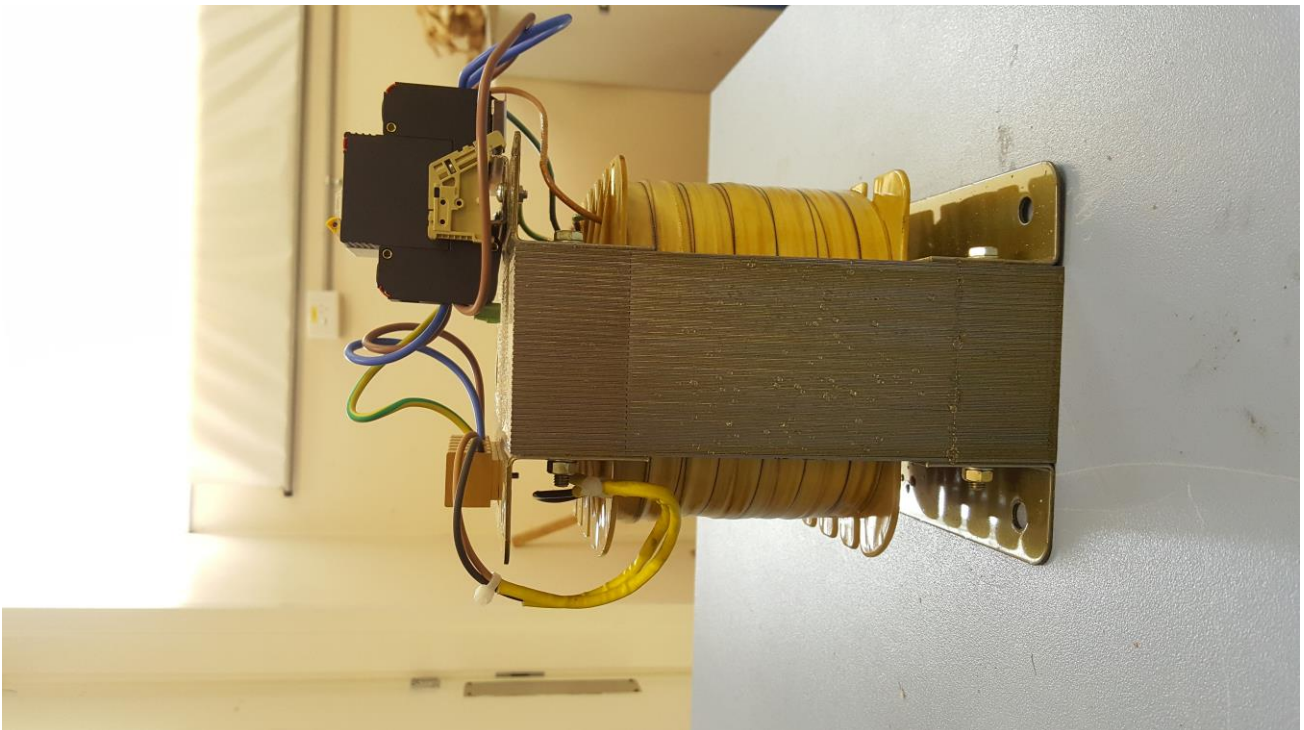


Photo 4 – Test sample after the test (side view)

End of the Test report