

## **Test Verification of Conformity**

### Verification Number: 221212002GZA-VOC001

On the basis of the referenced test report(s), sample(s) tested of the below product have been found to comply with the standards harmonized with the directives listed on this verification at the time the tests were carried out. Other standards and Directives may be relevant to the product. This verification is part of the full test report(s) and should be read in conjunction with it <thems.

Once compliance with all product relevant  $e_{mark}$  mark directives are verified, including any relevant e.g. risk assessment and production control, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to products identical to the tested sample(s).

Applicant Name & Address:	Voltamp Transformers Oman SAOC.
	PO BOX no 75, Postal Code 124, Rusayl, Sultanate of Oman.
Product Description:	Three-phase, 2500 kVA, (6000 $\pm$ 2 $\times$ 2.5%) / 400 V (Ur), 50 Hz, ONAN, Dvn11, oil type
P	transformer. The high voltage winding has 5 tans and the principal tan is tan 3
Patings & Principle	Pated nower: 2500 kV/A
Characteristics:	Detect valtered $(2500 \text{ kVA})$
Characteristics.	Rated voltage: $(6 \pm 2 \times 2.5\%)/0.4 \text{ kV}$
Models/Type References:	DC2035
Brand Name:	Oil Filled medium power Transformer
Serial No:	8852580
Relevant Standards/Directives:	EN 50708-1-1:2020; Directive 2009/125/EC
Verification Issuing Office	Intertek Testing Services (Guangzhou) Ltd.
Name & Address:	No. 3-1, Xinhai Xinyi Road, Huangge Town, Nansha District, Guangzhou City, China
Date of Tests:	29/05/2023
Test Report Number(s):	221212002GZA-001: 12 June 2023

Additional information in Appendix.

Jan

Signature

Name: Jason Yan Position: Manager Date: 12 June 2023

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### **APPENDIX: Test Verification of Conformity**

This is an Appendix to Test Verification of Conformity Number: 221212002GZA-VOC001

Manufacturer:

Voltamp Transformers Oman SAOC. Road No 18 & 7, Rusayl industrial Area, P.C.124, PO Box 75, Rusayl, Muscat.

mman

Signature

Name: Jason Yan Position: Manager Date: 12 June 2023

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# VOLTAMP TRANSFORMERS OMAN SAOC

### **TEST REPORT**

SCOPE OF WORK General Test Report

**REPORT NUMBER** 221212002GZA-001

ISSUE DATE 12-June-2023

**REVISION DATE** None

NUMBER OF PAGES

**DOCUMENT CONTROL NUMBER** General Test Report\_TDE D © 2017 INTERTEK





### **TEST REPORT**

Applicant's name	:	Voltamp Transformers Oman SAOC.			
Address	:	PO BOX no 75, Postal Code 124, Rusayl, Sultanate of Oman.			
Contact Name	:	Mr. Anwar Ali E-Mail : anwar@voltampoman.com			
Manufacturer's name	:	: Voltamp Transformers Oman SAOC			
Address	:	Road No 18 & 7, Rusayl industrial Area, P.C.124, PO Box 75, Rusayl, Muscat.			
Contact Name	:	Mr. Anwar Ali E-Mail : anwar@voltampoman.com			
Test item description					
Apparatus	:	Three-phase, 2500 kVA, (6000 $\pm$ 2 $\times$ 2.5%) / 400 V (Ur), 50 Hz, ONAN, Dyn11, oil type transformer. The high voltage winding has 5 taps and the principal tap is tap 3.			
Serial No	:	8852580			
Quantity of sample(s)	:	1	1		
Date of receipt of apparatus	:	2023.05.29			
Testing specification and te	estin	g location			
Test by	:	Voltamp Power SAOC Post Box 690, Postal Code 322, Sohar, Sultanate of Oman			
Test method	:	EN 50708-1-1:2020;			
Test conclusion	:	These results are in compliance with EN 50708-1-1:2020.			
Other information	:	N/A			
Date of test(s)	:	29/05/2023			
Remark	:	<ul> <li>This test report is only for evaluation of the specified standard clauses listed in <u>Test method</u>.</li> <li>Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.</li> </ul>			

Prepared by:

Reviewed by:

Stephen Yu

Project Manager

Hero Luo

**Technical Manager** 



The testing of this report is selected tests. The requirements and tolerances permitted by this report are related to testing of a test sample submitted by the manufacturer for that purpose. Compliance of the test sample does not ensure compliance of the whole production of a manufacturer.

Possible test case verdicts: - test case does not apply to the test object......: N/A - test object does meet the requirement .........: P (Pass) - test object does not meet the requirement .........: F (Fail) General remark: This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Throughout this report a 🛛 comma 🗌 point is used as the decimal separator.



Report No.: 221212002GZA-001

#### Form for data requested

Type of transformer	Three phase power transformer
Frequency	50 Hz
Phase number	3
Rated power	2500 kVA
Cooling system	ONAN
Rated voltage HV winding	6 kV
Rated voltage LV winding	0.4 kV
Tapping range	±2 x 2.5%
Total range of tapping	$\pm$ 5%
Connection symbol	Dyn11
Type of tap changer	De-energized tap changer
Voltage regulation winding	HV
Po, the measured no load loss at rated voltage and	1518.0 W
rated frequency, on the rated tap	
Pc0, the measured electrical power required by the	0 W
cooling system for no load operation (if any) derived	
from the type test measurements of the power	
taken by the fan and liquid pump motors	
Pk, the measured loss at rated current and rated	18326.0 W
frequency on the rated tap corrected to reference	
temperature	
Ref. temperature for the load loss	<b>75</b> ℃
Core Material	Silicon steel
Core mass	2042 kg
Conductor material	Copper
Conductor mass	1692 kg
Manufacturer	Voltamp Transformers Oman SAOC Road No 18 & 7 Rusayl industrial
	Area,P.C.124,PO Box 75,Rusayl,Muscat.
Year of manufacturing	2023.05
Reasons for exception from minimum PEI	N/A



Total Quality. Assured.

#### Test and verification results:

Clause	Ecodesign requirements	Result - Remark	Verdict
1	Minimum energy performance or efficiency requirements for medium power transformers	-	-
	Medium power transformers shall comply with the maximum allowed load and no-load losses or the Peak Efficiency Index (PEI) values set out in Tables I.1 to I.5, excluding medium power pole-mounted transformers, which shall comply with the maximum allowed load and no-load losses values set out in Table I.6	-	-
1.1	Requirements for three-phase medium power transformers with rated power ≤ 3150 kVA	-	-
	Tier 1 (1 July 2015): Maximum load and no-load losses (in W) for three-phase <b>liquid-immersed</b> medium power transformers with one winding with Um≤24kV and the other one with Um≤1.1kV	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Max Po= W Tier 2 (1 July 2021): Maximum load and no-load losses (in W) for three-phase <b>liquid-immersed</b> medium power transformers with one winding with Um≤24kV and the other one with Um≤1.1kV Max Pk= 18500 W Max Po= 1575 W	P <sub>k</sub> = 18326 W P₀= 1518 W	Pass
	Tier 1 (1 July 2015): Maximum load and no-load losses (in W) for three $-$ phase <b>dry-type</b> medium power transformers with one winding with Um $\leq$ 24kV and the other one with Um $\leq$ 1.1kV Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Tier 2 (1 July 2021): Maximum load and no-load losses (in W) for three – phase <b>dry-type</b> medium power transformers with one winding with Um ≤24kV and the other one with Um≤1.1kV Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Correction of load and no-load losses in case of other combinations of winding voltages or dual voltage in one or both windings (rated power ≤3150kVA)	-	-
	Tier 1 (1 July 2015): The maximum allowable losses in Table I.1 and Table I.2 were no correction for one winding with Um≤24kV and the other with Um >3.6 kV Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Tier 2(1 July 2021): The maximum allowable losses in Table I.1 and Table I.2 were no correction for one winding with Um≤24kV and the other with 3Um >3.6 kV Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A

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Clause	Ecodesign requirements	Result	- Remark	Verdict
1.1	Requirements for three-phase medium power transformers		_	_
	with rated power ≤ 3150 kVA		-	
	Tier 1 (1 July 2015):	P <sub>k</sub> =	W	N/A
	The maximum allowable losses in Table I.1 and Table I.2 can be increased by 15 % for no load loss and by 10 % for load loss for load losses for one winding with Um=36kV and the other with Um $\leq$ 3.6kV Max Pk= W	P <sub>o</sub> =	W	
	Max Po= W			
	Tier 2 (1 July 2021): The maximum allowable losses in Table I.1 and Table I.2 can be increased by 15 % for no load loss and by 10 % for load loss for load losses for one winding with Um=36kV and the other with Um $\leq$ 3.6kV Max Pk= W Max Po= W	P <sub>k</sub> = P <sub>o</sub> =	W W	N/A
	Tier 1 (1 July 2015):	P <sub>k</sub> =	W	N/A
	The maximum allowable losses in Table I.1 and Table I.2 can be increased by 15 % for no load loss and by 10 % for load loss for load losses for one winding with Um=36kV and the other with Um> 3.6kV Max Pk= W	P <sub>o</sub> =	W	
	Tier 2 (1 July 2021):	P.=	١٨/	N/A
	The maximum allowable losses in Table I.1 and Table I.2 can be increased by 15 % for no load loss and by 10 % for load loss for load losses for one winding with Um=36kV and the other with Um> 3.6kV Max Pk= W Max Po= W	P <sub>o</sub> =	Ŵ	
	Tier 1 (1 July 2015):	P <sub>k</sub> =	W	N/A
	The maximum allowable losses in Table I.2 can be increased by 20 % for no load loss and by 15 % for load loss for load losses for one winding with Um=36kV and the other with Um> 3.6kV Max Pk= W Max Po= W	P <sub>o</sub> =	W	
	Tier 2 (1 July 2021):	P <sub>k</sub> =	W	N/A
	The maximum allowable losses in Table I.2 can be increased by 20 % for no load loss and by 15 % for load loss for load losses for one winding with Um=36kV and the other with Um> 3.6kV Max Pk= W Max Po= W	P <sub>o</sub> =	W	
	Correction factors to be applied to the load and no load losses indicated in Tables I.1, I.2 and I.6 for medium power transformers with dual voltage in one or both windings differing more than 10 % and rated power ≤ 3 150 kVA.		-	-

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Clause	Ecodesign requirements	Result - Remark	Verdict
1.1	Requirements for three-phase medium power transformers with rated power ≤ 3150 kVA	-	-
	Tier 1 (1 July 2015): Dual voltage on one winding with reduced power output on the lower low-voltage winding AND maximum available power on the lower voltage of the low- voltage winding limited to 0,85 of the rated power assigned to the low- voltage winding at its higher voltage. Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Tier 2 (1 July 2021):Dual voltage on one winding with reduced power output on the lower low-voltage winding AND maximum available power on the lower voltage of the low- voltage winding limited to 0,85 of the rated power assigned to the low- voltage winding at its higher voltage.Max Pk=WMax Po=W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Tier 1 (1 July 2015): Dual voltage on one winding with reduced power output on the lower high-voltage winding AND maximum available power on the lower voltage of the high- voltage winding limited to 0,85 of the rated power assigned to the high- voltage winding at its higher voltage. Max Pk= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Tier 2 (1 July 2021): Dual voltage on one winding with reduced power output on the lower high-voltage winding AND maximum available power on the lower voltage of the high- voltage winding limited to 0,85 of the rated power assigned to the high- voltage winding at its higher voltage. Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Tier 1 (1 July 2015):         The maximum allowable losses can be increased by 15 %         for no load losses and by 10 % for load losses for Dual         voltage on one winding AND full rated power available on         both windings, i.e., the full nominal power is available         regardless of the combination of voltages.         Max Pk=       W         Max Po=       W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Tier 2(1 July 2021):The maximum allowable losses can be increased by 15 %for no load losses and by 10 % for load losses for Dualvoltage on one winding AND full rated power available onboth windings, i.e., the full nominal power is availableregardless of the combination of voltages.Max Pk=WMax Po=	P <sub>k</sub> = W P <sub>o</sub> = W	N/A

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Clause	Ecodesign requirements	Result - Remark	Verdict
1.1	Requirements for three-phase medium power transformers with rated power ≤ 3150 kVA	-	-
	Tier 1 (1 July 2015): The maximum allowable losses can be increased by 25 % for no load losses and by 20 % for load losses for Dual voltage on both windings AND rated power available on all combinations of windings, i. e., both voltages on one winding are fully rated in combination with one of the voltages on the other winding. Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Tier 2(1 July 2021): The maximum allowable losses can be increased by 25 % for no load losses and by 20 % for load losses for Dual voltage on both windings AND rated power available on all combinations of windings, i. e., both voltages on one winding are fully rated in combination with one of the voltages on the other winding. Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
1.2	Requirements for medium power transformers with rated power > 3150 kVA	-	-
	Tier 1 (1 July 2015): Minimum Peak Efficiency Index (PEI) values for <b>liquid-</b> <b>immersed</b> medium power transformers Min PEI = %	PEI= %	N/A
	Tier 2 (1 July 2021): Minimum Peak Efficiency Index (PEI) values for <b>liquid-</b> <b>immersed</b> medium power transformers Min PEI = %	PEI= %	N/A
	Tier 1 (1 July 2015): Minimum Peak Efficiency Index (PEI) values for <b>dry type</b> medium power transformers Min PEI = %	PEI= %	N/A
	Tier 2 (1 July 2021): Minimum Peak Efficiency Index (PEI) values for <b>dry type</b> medium power transformers Min PEI = %	PEI= %	N/A
1.3	Requirements for medium power transformers with rated power ≤ 3 150 kVA equipped with tapping connections suitable for operation while being energised or on-load for voltage adaptation purposes. Voltage Regulation Distribution Transformers are included in this category.	-	-
	Tier 1 (1 July 2015):Maximum allowable levels of losses set out in Table I.1 andI.2 shall be increased by 20 % for no load losses and 5 % forload losses in Tire 1 and by 10 for no load loss in Tier 2.Max Pk=WMax Po=	P <sub>k</sub> = W P <sub>o</sub> = W	N/A



Total Quality. Assured.

Clause	Ecodesign requirements	Result - Remark	Verdict
1.3	Requirements for three-phase medium power transformers with rated power ≤ 3150 kVA	-	-
	Tier 2 (1 July 2021): Maximum allowable levels of losses set out in Table I.1 and I.2 shall be increased by 20 % for no load losses and 5 % for load losses in Tire 1 and by 10 for no load loss in Tier 2. Max Pk= W Max Po= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
1.4	Requirements for medium power pole-mounted transformers	-	-
	Tier 1 (1 July 2015): Maximum load and no-load loss (in W) for medium power liquid immersed pole-mounted transformers. Max Pk= W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
	Max Po=       W         Tier 2 (1 July 2021):       Maximum load and no-load loss (in W) for medium power         liquid immersed pole-mounted transformers.         Max Pk=       W         Max Po=       W	P <sub>k</sub> = W P <sub>o</sub> = W	N/A
2	Minimum energy efficiency requirements for large power transformers	-	-
	The minimum efficiency requirement for large power transformers are set out in Tables I.7, I.8 and I.9.	-	-
	Minimum Peak Efficiency Index requirements for liquid immersed large power transformers	-	-
	Tier 1 (1 July 2015): Minimum Peak Efficiency Index (PEI) values for <b>liquid-</b> <b>immersed</b> large power transformers Min PEI = %	PEI= %	N/A
	Tier 1 (1 July 2021): Minimum Peak Efficiency Index (PEI) values for <b>liquid-</b> <b>immersed</b> large power transformers Min PEI = %	PEI= %	N/A
	Tier 1 (1 July 2015): Minimum Peak Efficiency Index (PEI) values for <b>dry-type</b> large power transformers with Um≤36 kV Min PEI = %	PEI= %	N/A
	Tier 1 (1 July 2021): Minimum Peak Efficiency Index (PEI) values for <b>dry-type</b> large power transformers with Um≤36 kV Min PEI = %	PEI= %	N/A
	Tier 1 (1 July 2015):Minimum Peak Efficiency Index (PEI) values for dry-typelarge power transformers with Um>36 kVMin PEI =%	PEI= %	N/A
	Tier 1 (1 July 2021):         Minimum Peak Efficiency Index (PEI) values for dry-type         large power transformers with Um>36 kV         Min PEI =       %	PEI= %	N/A



#### Nameplate Drawing:

