



Gálvez (SFE), 07 de octubre de 2015

El texto mostrado a continuación representa una traducción fiel del documento en idioma italiano que se anexa, con esto consideramos demostrar fehacientemente el cumplimiento de los transformadores encapsulados en resina epoxi marca Tadeo Czerweny Tesar de la Normativa E2 C2 F1 respecto al comportamiento Ambiental, Climático y frente al Fuego.

TRADUCCIÓN (Original en italiano anexo)

A quien corresponda

OBJETO: Series Ambientales, Climáticas y de Comportamiento frente al Fuego, E2 C2 F1

En esta carta declaramos que **Tadeo Czerweny Tesar** construye transformadores en Resina utilizando el mismo ciclo tecnológico, técnico, de proyección y productivo que **Tesar S.R.L.** y también emplea los mismos materiales.

En consecuencia los transformadores construidos por **Tadeo Czerweny Tesar S.A.** son idénticos a los construidos por **Tesar S.R.L.** en Italia y en nuestros establecimientos del mundo.

Por lo tanto el certificado adjunto E2 C2 F1 es aplicable también a los transformadores producidos por **Tadeo Czerweny Tesar S.A.**

Cordiales saludos

Ingeniero Cesare Farradini

Vicepresidente de TESAR s.r.l. (Italia)

SILVIA P. RAMPONE
Traductora



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Arezzo lì 23/12/2014

A CHI DI COMPETENZA

Vs. rif.

Ns. rif.
citare sulla risposta


OGGETTO: Classi Ambientali, Climatiche e di Comportamento al Fuoco, E2 C2 F1

Con questa lettera noi dichiariamo che Tadeo Czerweny & Tesar SA costruisce trasformatori in resina utilizzando lo stesso ciclo tecnologico, tecnico, di progettazione e produttivo di Tesar S.r.l, così come gli stessi materiali.

Di conseguenza i trasformatori costruiti da Tadeo Czerweny & Tesar SA sono del tutto identici a quelli costruiti da Tesar S.r.l. in Italia e negli altri nostri stabilimenti nel mondo.

Conseguentemente il certificato E2 C2 F1 allegato risulta applicabile ai trasformatori prodotti da Tadeo Czerweny & Tesar SA.

Distinti Saluti.

TESAR s.r.l.
VICEPRESIDENTE
Don. Ing. Cesare Ferradini


Test Certificate of special test to prove suitability to climatic class C2, to environmental class E2 and to fire behaviour test class F1

Apparatus dry-type power transformer

Designation TRS 1000

Rated power 1000 kVA ; Rated voltages 15/0,4 kV ; Rated frequency 50 Hz

Manufacturer TESAR – Chiassa Superiore (Arezzo) - ITALY

Tested for TESAR – Chiassa Superiore (Arezzo) - ITALY

Date(s) of tests from June 20, 2005 to September 27, 2005

Tested by CESI S.p.A. – Milano – ITALY

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in the reference documents, identified in this certificate, has been subjected to the series of proving tests in accordance with

IEC 60076-11 (2004)

This Test Certificate has been issued by CESI in accordance with above mentioned Standards.

The results are shown in the record of Proving Tests and the oscillograms attached in the Test Reports. The values obtained and the general performance are considered to comply with the above Standards and to justify the ratings assigned by the Manufacturer as listed on page No.2 .

The Certificate applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

Only integral reproduction of this Certificate, or reproductions of this page accompanied by any pages on which are stated the endorsed ratings of the apparatus tested, are permitted without written permission from CESI.

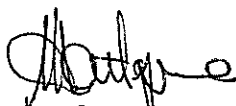
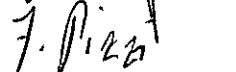
No. of pages 3

Issue date September 30, 2005

Prepared PeC - V. Mantegazza

Verified PeC - F. Pizzi

Approved PeC - M. de Nigris


CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO
Business Unit
Prove e Componenti
Il Responsabile del Servizio

1 - Ratings assigned by the Manufacturer as proved by the tests

rated power	1000 kVA
number of phases	3
rated voltage of the high-voltage winding (primary winding)	15 kV
rated voltage of the low-voltage winding (secondary winding)	400 V
rated current of the high-voltage winding (primary winding)	38,49 A
rated current of the low-voltage winding (secondary winding)	1443 A
rated frequency	50 Hz
connection symbol	Dyn
climatic class	C2
environmental class	E2
fire behaviour class	F1
insulation system temperature	F/F

2 – This Certificate also verifies

Not applicable.

3 – Reference documents*The following reference documents are integral part of this Certificate*

No.	Description	CESI registration
1	CESI Test Report	MP-A5/028868
2	CESI Test Report	AT-A5/030398
3	CESI Test Report	BC-A5/046609
4	Manufacturer's drawings	A5/046776 no. 1 to 3

4 – Additional references

Not applicable.

Activity code 18546P

5 – Record of proving tests

The table below lists all the tests performed and the references to the relevant Test Reports containing the test values.

No. Standard and clause	Description of tests	Reference documents
IEC 60076-11 clause 27.4	Thermal shock test	MP-A5/028868
IEC 60076-11 clause 27.4	Thermal shock test	AT-A5/030398
IEC 60076-11 clause 26.3.2	Condensation and humidity penetration test	MP-A5/028868
IEC 60076-11 clause 28.3	Fire behaviour test	BC-A5/046609

6 – Identification of the sample

The Manufacturer guarantees that the tested object is manufactured according to the submitted drawings.
CESI checked that these drawings adequately represent in shape and dimensions the essential details and the parts of the tested object.
These drawings identified by CESI and numbered A5/046776 no. 1 to 3 have been returned to the Client.

HV/LV CAST RESIN TRANSFORMERS
MARK TE 151093
ENEL QUALIFICATION ON TRANSFORMER 1600 kVA
NOMINAL POWER
CLASS: E2 – C2 - F1

DETERMINING TESTS, IN ACCORDANCE WITH CEI 14-8/92 , APPENDIX B ENCLOSURES ZA AND VARIATION V1-'93, FOR AMBIENTAL CLIMATIC AND FIRE BEHAVIOUR CLASSES.

E2 : SUBSTANCIAL CONDENSATION AND HIGHLY POLLUTED ENVIRONMENT

C2 : TRANSFORMER SUITABLE FCOR BEING STOCKED AND USED WITH AMBIENT TEMPERATURE - 25°C

F1 : TRANSFORMERS WITH HIGH RISK OF FIRE.
REDUCED INFLAMMABILITY GUARANTEED

AMBIENTAL AND CLIMATIC CLASS: TAB. 1

FIRE BEHAVIOUR: TAB. 2 - TAB. 3

CLIMATIC AND AMBIENTAL TEST FOR CLASS E2 – C2 ON TRANSFORMER 1600 kVA

N°	AMBIENTAL TEST CLASS E2	REFERENCE RULES	LABORATORY TEST	CERTIFICATE N° DATE	NOTES
1	CONDENSATION TEST	CEI 14-8/92 ENCLOSURES ZA CENELEC HD 464 DRY -TYPE TRANSFORMERS	CESI	AT- 96/003863 27/02/96	- TIME OF CONDITIONUING IN AMBIENT SALINE POLLUTED : > 72 h - RELATIVE DAMPNES % : 98 % - WATER CONDUCTIVITY : 1 S/m - TESTS: - N° 3 VOLTAGE APPLICATIONS (INSERTIONS UNDER VACUUM AT 1,1 V _n : 5' EACH) -PARTIAL DISCHARGE MEASUREMENT (PERMANENT LEVEL OF THE APPARENT CHARGE < 10 pC)
2	TEST OF DAMPNESS PENETRATION'	CEI 14-8/92 ENCLOSURES ZA CENELEC HD 464 DRY -TYPE TRANSFORMERS	CESI	AT- 96/003863 27/02/96	- TIME OF CONDITION IN HOT AND DAMP AMBIENT : 144 h - RELATIVE DAMPNES : 90 % - AMBIENT TEMPERATURE : 50 °C - TEST: - APPLIED VOLTAGE - INDUCED VOLTAGE
N°	CLIMATIC TEST CLASS C2	REFERENCE RULES	LABORATORY TEST	CERTIFICATE N° DATE	NOTES
1	HEAT RUN TEST - 25°C	CEI 14-8/92 ENCLOSURES ZA CENELEC HD 464 DRY -TYPE TRANSFORMERS	CESI	LAB- 95/038210 26/01/96	- MANTEINANCE , AFTER REACHING TERMICAL BALANCE, AT - 25 °C FOR 12 h - CURRENT CIRCULATION ON THE WINDINGS EQUAL TO 2 I _n UP TO T max = 120°C (T _{amb} .max 40 °C + ΔT 80°C) TESTS : - APPLIED VOLTAGE - INDUCED VOLTAGE - PARTIAL DISCHARGE MEASUREMENT (PERMANENT LEVEL OF THE APPARENT CHARGE < 10 pC)

TAB.1

TEST ON RESIN SAMPLE MARK TESAR TE151093
(CHARACTERISATION OF INSULATOR EPOSSIDIC SYSTEM)

N°	TEST	REFERENCE RULES	EXAMINED SIZE	MISURED VALUE	ACCEPTABLE LIMIT	LABORATORY TEST	CERTIFICATE N° DATE	NOTES
1	MEASUREMENT OF SMOKE OPACITY	CEI 20-37 PART 3 MET.B WEIGHT SAMPLE 100g	DENOPTICAL DENSITY MAX OPTICAL DENSITY MAX. AFTER 40'	0,11 0,08	1,5 MAX	CESI	BC-93/029527 03/11/93	
2	DETERMINATION OF TOXICITY INDEX	CEI 20-37 PART 2	TOXICITY INDEX	1,44	2 MAX	IMQ	01S0454 09/11/93	
3	DETERMINATION OF QUANTITY OF ALOGENHYDRIC ACID	CEI 20-37 PART 1	QUANTITY OF ALOGENHYDRIC ACID	< 1	3 mgHCL/g MAX	IMQ	01S0454 09/11/93	
4	MEASUREMENT OF OXIGEN INDEX	CEI 20-22 APP. A SEZ. 2	OXIGEN INDEX	32,5 %	21% MIN.	IMQ	01S0454 09/11/93	CARATTERISTICHE DELLA COMBUSTIONE V= 0,05mm/S FIAMMA LENTA
5	MEASUREMENT OF TEMPERATURE INDEX	CEI 20-22 APP.A SEZ. 3	TEMPERATURE INDEX	270 °C	250°C MIN.	IMQ	01S0454 09/11/93	
6	DETERMINATION OF SUPERIOR CALORIFIC POWER	ASTM-D 3286	SUPERIOR CALORIFIC POWER	2320 kcal/kg	/	ISTITUTO RICERCHE BREDA	93249/AC/706 12/11/93	

TAB.2

TEST OF SELF-EXTINGUISHING CLASS OF THE TRANSFORMER 1600 kVA
(ON COLOMN COMPLETE WITH WINDINGS)

N°	TEST	REFERENCE RULES	EXAMINATED SIZE	MISURED VALUE	ACCEPTABLE LIMIT	LABORATORY TEST	CERTIFICATE N° DATE	NOTE S
1	GAS IN EXIT OVERTEMPERATURE MEASUREMENT AFTER 5' FROM EXTINGUISH HEATING PANEL (AFTER 45 ' FROM START OF TEST)	CENELEC HD464 S1 10/91 DRY -TYPE TRANSFORMERS ANNEX ZC	GAS IN EXIT OVERTEMPERATURE	100 °C	140 °C MAX	CESI	BC-95/038007 21/11/95	
2	GAS IN EXIT OVERTEMPERATURE MEASUREMENT AFTER 5' FROM EXTINGUISH HEATING PANEL (AFTER 60' FROM START OF TEST)		GAS IN EXIT OVERTEMPERATURE	69 °C	80 °C MAX			
3	MEDIUM LIGHTING MEASUREMENT AFTER FIRST 20' FROM START OF TEST TO END OF TEST	SPEC ENEL 9X07311SECU UE191 01/91 APPENDIX A	MEDIUM LIGHTING	39 %	20 % MIN.			

TAB.3