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RAPPORTO DI PROVA

TEST REPORT

Titolo (*Title*):

VIBRATION TEST REPORT ON BXE Elemento Rett. Trasp 5000A-2500A

Richiedente (*Customer*):

– Ente/Società (*Dept./Firm*): POGLIANO BusBar srl
– Sig. (*Mr.*): Antonio Ditondo
– Indirizzo (*Address*): C.so Allamano 43 - 10095 Grugliasco (TO)

Modulo Richiesta Prova n.: VIBP 12_038
Test Requesting Form no.:

Rapporto inviato a: A.Ditondo
Report sent to::

Nome e Firma esecutore
prova: E. Ferrarese
Name and Signature of test engineer:

Nome e Firma resp. Settore: M. Dosio
Signature of the technical manager:

Data ricevimento campioni: 02/02/2012
Date of test sample receipt:

Data esecuzione prove: 02+03/02/2012
Date of test execution:

Località esecuzione prove (se diversa dal piè di pagina): Presenti alle prove: /
Site of test execution (if different from the address in the footer): *Witness to the test:*

I risultati del presente rapporto di prova si riferiscono esclusivamente al campione sottoposto a prova.
The test results contained in this Test report relate to the tested samples only.

E' ammessa la riproduzione integrale del presente Rapporto di prova da parte del Richiedente; la riproduzione parziale dev'essere autorizzata per iscritto dal Laboratorio.
The integral reproduction of the present Test report is allowed; the partial reproduction must be authorized in writing by the Lab.

ADMIN: 15/02/2011
Form: ITA_F_09.01 (Rev.12 June.01,
2011)
Document name: VIBR 12 017
Test report no.: VIBR 12 017
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Page 1 of 52

Project manager:
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1. SETUP DI PROVA TEST SETUP

1.1. IDENTIFICAZIONE CAMPIONE SAMPLE IDENTIFICATION

Prodotto/materiale sottoposto a prova: BXE Elemento Rett. Trasp.5000A
Product/material subjected to test: BXE Elemento Rett. Trasp.2500A

Descrizione: BusBar
Description:

Livello (prodotto di serie, prototipo, ecc.): series
Level (series product, prototype, etc.):

N° matricola: p/n 245381Z1LPA-244781Z1LPA
Part number:

Codice di identificazione: C1202485- C1202486
Identification code:

1.2. DISPOSITIVI AUSILIARI AUXILIARY DEVICES

None.

1.3. CONFIGURAZIONE DI PROVA TEST CONFIGURATION

Not operating.

1.4. SISTEMA DIAGNOSTICO DIAGNOSTIC SYSTEM

Visual check of mechanical integrity after each test vibration.



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2. ELENCO DELLE PROVE

TEST LIST

- 2.1. **RICERCA RISONANZE**
RESONANCE SEARCH
- 2.2. **MANTENIMENTO ALLE FREQUENZE DI RISONANZA**
ENDURANCE TEST

3. METODO DI PROVA

TESTING PROCEDURES

3.1. RICERCA RISONANZE

RESONANCE SEARCH

3.1.1. SPECIFICHE DI PROVA

TESTING SPECIFICATIONS

Normalizzato - Norma di riferimento: IEC 60068-2-6:2007
Standardized - Reference Standard:

Eventuali scostamenti, aggiunte o limitazioni: -
Possible differences, additions or limitations:

Interno - Descrizione: RINA Rules 2003
Internal - Description:

3.1.2. SCOPO DELLA PROVA

TEST OBJECTIVE

The test has been performed in order to measure and monitor the dynamic response of the equipments under test to a sinusoidal swept.

3.1.3. PREPARAZIONE

SET-UP

The equipments under test have been mounted by means of supports directly bolted on the shaker head (vertical axis) and on slip table (in plane axis) (see photos at the end of the document).



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3.1.4. DESCRIZIONE DELLA PROVA TEST DESCRIPTION

The equipments under test have been subjected to a sinusoidal scanning with the following profile.

From [Hz]	To [Hz]	Displacement [mm]	Acceleration [g]	Sweep rate [Oct/min]
3	13.2	+/- 1.0	-	1
13.2	100	-	0.7	1

Resonance search on the equipment under test have been executed before and after endurance test, in order to monitor the effect of the test on the equipments under test dynamic response.

Signal from measuring accelerometers have been processed in order to obtain response curves (Curve of amplitudes of the fundamental harmonic of the acceleration, calculated at every excitation frequency).

The annexes at the end of the document show graphs of ratio of amplitude accelerations (ratio between measure point and control point at every frequency) on the equipments under test.

3.1.5. POSIZIONI DI CONTROLLO E MISURA CONTROL AND MEASURING POSITIONS

A control accelerometer has been fixed on the shaker table

Details of accelerometers position can be seen on photos at the end of the document.



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3.2. MANTENIMENTO ALLE FREQUENZE DI RISONANZA *ENDURANCE TEST*

3.2.1. SPECIFICHE DI PROVA *TESTING SPECIFICATIONS*

Normalizzato - Norma di riferimento: IEC 60068-2-6:2007
Standardized - Reference Standard:

Eventuali scostamenti, aggiunte o limitazioni: -
Possible differences, additions or limitations:

Interno - Descrizione: RINA Rules 2003
Internal - Description:

3.2.2. SCOPO DELLA PROVA *TEST OBJECTIVE*

The test has been performed in order to ensure that equipments under test withstands to endurance test.

3.2.3. PREPARAZIONE *SET-UP*

The equipments under test have been mounted by means of supports directly bolted on the shaker head (vertical axis) and on slip table (in plane axis) (see photos at the end of the document).



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DESCRIZIONE DELLA PROVA TEST DESCRIPTION

According to the resonance frequencies measured on the test described on paragraph 3.2.2, the E.U.T. has been forced with a sinusoidal vibration at a fixed frequency and amplitude as shown on table below:

Equipment	Axes	Frequency [Hz]	Acceleration [g]	Time [hh:mm:ss]
245300Z3LPA	X	65	0.7	01:30:00
245300Z3LPA	Y	96	0.7	01:30:00
245300Z3LPA	Z	95	0.7	01:30:00
245300Z3LPA	Z	77	0.7	01:30:00
244700Z3LPA	X	98	0.7	01:30:00
244700Z3LPA	Y	30	0.7	01:30:00
244700Z3LPA	Z	98	0.7	01:30:00

Profiles of endurance tests vibrations are shown on graphs at the end of the document.

3.2.4. POSIZIONI DI CONTROLLO E MISURA CONTROL AND MEASURING POSITIONS

A control accelerometer has been fixed on the shaker table

Details of accelerometers position can be seen on photos at the end of the document.



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4. APPARECCHIATURE UTILIZZATE TEST EQUIPMENT

4.1. VIBRATORE ELETTRODINAMICO ELECTRODYNAMIC VIBRATOR

L.D.S. VIBRATION SYSTEM mod. V875 (8000 lbs force) used for X, Y and Z vibration.
LING ELECTRONICS LING mod. 397 – s/n. M706547G;
Servotest Division Electro-hydraulic Servo Vibrator Test System

4.2. SISTEMI DI MISURA MEASURING EQUIPMENT'S

4.2.1. ACCELEROMETRI ACCELEROMETERS

Vibration tests		
Manufacturer	Model	s/n
PCB Piezotronics	352C33	112081
PCB Piezotronics	352C33	111980
PCB Piezotronics	356A14	111109
PCB Piezotronics	356B21	98479
PCB Piezotronics	356A17	110335
PCB Piezotronics	356A14	111109
PCB Piezotronics	352A56	111554
PCB Piezotronics	352A21	127445

4.2.2. SISTEMI DI ACQUISIZIONE ED ANALISI DATA ACQUISITION AND PROCESSING EQUIPMENT

LDS Dactron– mod. LASER USB– s/n. 8563802
LDS Dactron– mod. LASER USB– s/n. 11124660
VIBRATION CONTROL SYSTEM SPECTRAL DYNAMICS – mod. 2552B – s.n. 29327634;
SOFTWARE 255X VIBRATION CONTROL SYSTEM – ver. 3.2.1.

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