TEST REPORT

Secondo i seguenti Standard / *According to following Standards*

Test specification	MIL-STD-285: 1956-06
RADIO-TRANSPARENCY PROPERTIES OF FENCING ELEMENTS MADE OF COMPOSITE MATERIAL MEASURED FROM 100MHz TO 1GHz	**Misurato/*Measured*** (Maximum attenuation: 1dB)
Richiedente / *Applicant's name* .... :	FIBRE NET srl
Indirizzo / *Address* ..... :	Via Zanussi 311, Z.I.U. - 33100 Udine - ITALY
Produttore / *Manufacturer* ..... :	FIBRE NET srl
Indirizzo / *Address* ..... :	Via Zanussi 311, Z.I.U. - 33100 Udine - ITALY
Dispositivo sottoposto ai test/ *Device Under Test* ..... :	M33x33 and M66X66
Data di emissione/ *Date of issue*	05th November 2015
Validità/ *Validity*	Vedi sezione 1.1 / *See section 1.1*
Test report redatto da/ *Author of Test report*	Loris Fruch
Tecnico/i di prova *Engineer/s*	Loris Fruch
Approvato da (+ firma) *Approved by (+ signature)*.....	Silvano Chialina Responsabile del laboratorio/ *Head of the Laboratory* Firmato digitalmente da SILVANO CHIALINA O = non presente C = IT .....
Laboratorio / *Testing Laboratory* .. :	Emilab Srl
Indirizzo / *Address* ..... :	Via F.lli Solari 5/A – 33020 Amaro (UD) - Italy

Index

1. Informazioni Generali / *General Information*

1.0 Laboratorio / Testing Laboratory

Luogo di Prova e partecipanti/ *Testing location and participants:*	
Testing Laboratory:	
Testing location/ address.....:	Emilab Srl Via Jacopo Linussio, 1 – 33020 Amaro (UD) – Italy Tel +39 0433 468625 Email: info@emilab.it
Partecipanti / *Participants*:	Loris Fruch

1.1 Campionamento e Documentazione / *Sampling and Documentation*

I campioni sono stati consegnati dal Cliente. I risultati dei test contenuti in questo documento si riferiscono esclusivamente al modello e numero di serie provato. E' responsabilità del costruttore assicurare che la produzione dei modelli in serie rispetti i requisiti del presente documento. Questo documento non può essere riprodotto in parte senza il consenso scritto del responsabile del laboratorio EMILAB.

EMILAB non si assume nessuna responsabilità per danni derivanti da interpretazioni che esulano dal contesto e dall'applicazione del presente documento.

The samples was delivered by customer. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report. This report shall not be reproduced, except in full, without the written approval of the Issuing testing Emilab laboratory.

EMILAB takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

1.2 Specifiche del test / *Test specifications*

Test performed according to:	
Test plan	/ Date: / Author: /
Test specification	MIL-STD-285: 1956-06 Military standard attenuation measurements for enclosures, electromagnetic shielding, for electronic test purposes

1.3 Svolgimento dei test e condizioni generali / *Test scheduling and general condition*

Svolgimento dei test / *Scheduling* ..... :	
Data ricezione EUT	
Date of receipt of EUT ..... :	07/03/2006
Data esecuzione test	
Date (s) of performance of tests ..... :	07/03/2006
Condizioni ambientali / *Environment Conditions*	Se non diversamente specificato / *If not otherwise specify:* Temperature: 18-28°C Humidity: 20-90% Pressure: 87-108.56 kPa
Intervallo delle tarature/ *Calibration Interval*	Minimum 1 year

1.4 Espressione dei risultati finali / *Test case of final verdicts*

I GIUDIZI NON SONO SOGGETTI AD ACCREDITAMENTO	
/ ***VERDICTS ARE NOT SUBJECT TO ACCREDITATION***	
- test case does not apply to the test object.. :	N/A
- test object does meet the requirement ..... :	Compliant
- test object does not meet the requirement . :	Not Compliant

1.5 Incertezza / *Uncertainty*

L'incertezza estesa riportata è espressa come l'incertezza tipo moltiplicata per il fattore di copertura k = 2, che per una distribuzione normale corrisponde ad una probabilità di copertura di circa il 95 %.

The reported expanded uncertainty of measurements is stated as the standard uncertainty of measurement, multiplied by the coverage factor k=2, which for a normal distribution corresponding to a coverage probability of approximately 95%.

1.6 Termini, Definizioni e Acronimi/ *Terms, definitions and abbreviations*

With reference to IEC 60050-161

ALSE	absorber-lined shielded enclosure
AM	amplitude modulation
AN	artificial network
AV	Average Detector
BAN	broadband artificial network
BCI	Bulk Current Injection
CBCI	Common Mode BCI
CDN	Coupling Decoupling Network
DBCI	Differential Mode BCI
DUT	Device Under Test
EMC	electromagnetic compatibility
EMI	electromagnetic interference
EUT	Equipment Under test
FSP	Functional Performance Status
HCP	Horizontal Coupling Plate
LISN	Line Impedance Simulation Network
OM	Operating Modes
PM	pulse modulation
PK	Peak Detector
RE	Radiate Emission
RI	Radiate Immunity
QP	Quasi-peak Detector
VSWR	voltage standing wave ratio
TEM cell	transverse electromagnetic cell

2.0 Apparecchiatura sottoposta a test/ *Device Under Test*

Descrizione / D***escription*****.....:**	M33x33P: Fencing-protection element made of F.R.P. (Fiberglass Reinforced Polyester) composite material, consisting of: - monolithic F.R.P. (Fiberglass Reinforced Polyester) mesh, square mesh size 33x33 mm, average thickness 3 mm, 75% free port, made of pretensioned chemically resistant glassfiber impregnated with thermosetting polyester resin, manufactured with multiple twisted warp and flat weft threaded between the warp fibers - F.R.P. (Fiberglass Reinforced Polyester) poles for mesh support, square section dim. 50x50x5 mm, made of pretensioned chemically resistant glassfiber impregnated with thermosetting polyester resin - plastic accessories and stainless steel alloy rivets for the installation of fencing-protection elements M66x66P**:** Fencing-protection element made of F.R.P. (Fiberglass Reinforced Polyester) composite material, consisting of: - monolithic F.R.P. (Fiberglass Reinforced Polyester) mesh, square mesh size 66x66 mm, average thickness 3 mm, 86% free port, made of pretensioned chemically resistant glassfiber impregnated with thermosetting polyester resin, manufactured with multiple twisted warp and flat weft threaded between the warp fibers - F.R.P. (Fiberglass Reinforced Polyester) poles for mesh support, square section dim. 50x50x5 mm, made of pretensioned chemically resistant glassfiber impregnated with thermosetting polyester resin - plastic accessories and stainless steel alloy rivets for the installation of fencing-protection elements
Marchio commercial / *Trade Mark* .....:	/
Produttore / *Manufacturer*.....:	FIBRE NET S.r.l.
Modello / *Model/Type reference* .....:	Fiberglass Reinforced Polyester mesh, square mesh size 33x33 mm (EUT N° 2406/A); Fiberglass Reinforced Polyester mesh, square mesh size 66x66 mm (EUT N° 2406/B);
Numero EUT / *EUT Number*.....:	2406/A, 2406/B
Numero di campioni testati / *Number of samples tested* .....:	1+1

3.0 Radio-Transparency Evaluation - Condizioni di prova / *Test Conditions*

Technician / Tecnico: Loris Fruch			
Table No.	TEST: RADIO-TRANSPARENCY PROPERTIES OF FENCING ELEMENTS MADE OF COMPOSITE MATERIAL		\
Method	MIL-STD-285: 1956-06		\
Parameters required prior to the test	Laboratory Ambient Temperature	18 to 28 °C	
	Relative Humidity	20 to 90 %	
Parameters recorded during the test	Laboratory Ambient Temperature	25 °C	
	Relative Humidity	64 %	
Fully configured sample scanned over the following frequency range	100MHz to 1GHz		
Supplementary information: - Test site: Semi-anechoic chamber; - Antenna distance: 1m; - The measurements were made with the detector set to PEAK within a IF bandwidth of 120KHz; - The attenuation was obtained by the difference between the measurement with and without the EUT placing it between the receiving antenna and the dipole transmitter;			

3.1 Apparecchiature utilizzate / *Test Equipment Used* – Radio-Transparency Evaluation

Apparecchiature usate/Equipment Used	***Modello/Model***	***Costruttore/Manufacturer***	***Numero di serie/Serial Number***
EMI Receiver	8542E	Hewlett/Packard	3807A00256
Antenna Bilog	CBL6111C	Chase	2415
Semi-Anechoic Chamber	-	ETS LINDGREN	5207

3.2 Fotografie del setup / *Photo of the test setup* – Radio-Transparency Evaluation

Measure executed without the EUT (rererence)

Measure executed on EUT N° 2406/A

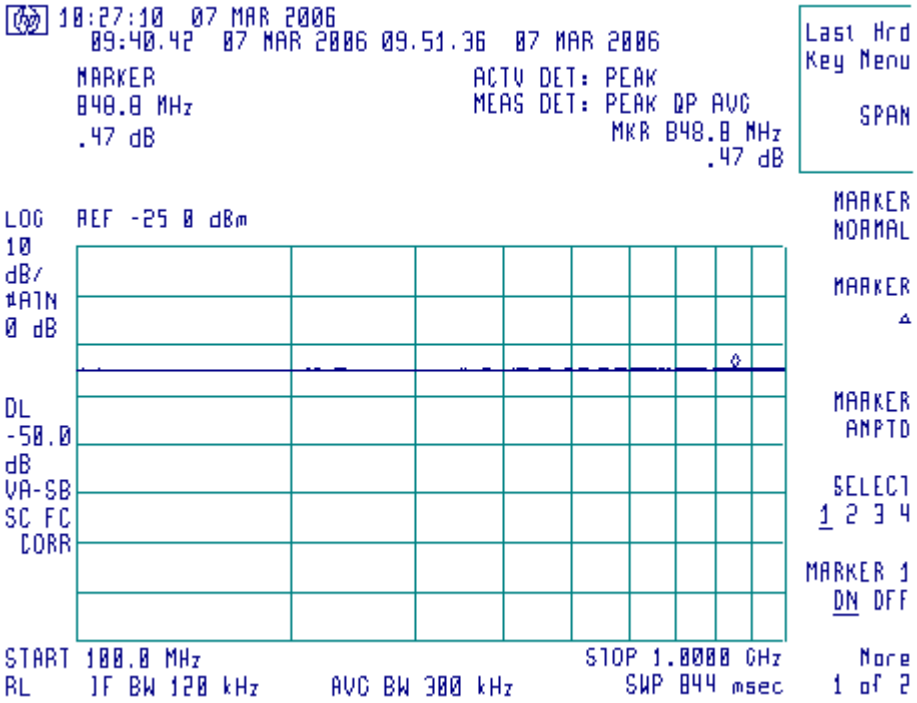
Measure executed on EUT N° 2406/B

3.3 Risultati / *Results*– Radio-Transparency Evaluation

Maximum attenuation observed is less than 1dB. See the details in the charts of the following paragraphs. The charts represents the difference between the reference and the signal measured with the Net.

3.3.1 Grafici dei risultati / *Graphical representation data* – Radiated emission

EUT N° 2406/A (Fiberglass Reinforced Polyester mesh, square mesh size 33x33 mm)



EUT N° 2406/B (Fiberglass Reinforced Polyester mesh, square mesh size 66x66 mm)