

**Department of Building Physics
Laboratory for thermal Performance and
Acoustics**

Ljubljana, 11/02/2014

**SLOVENSKA
AKREDITACIJA**
SIST EN ISO/IEC 17025
LP-005**REPORT****No. P 16/14-520-1****Laboratory measurement of airborne sound
insulation of the single leaf door with fire
resistance MARINE-MANTA B30 CABIN**

Client: MANTA SEŽANA proizvodnja in trgovina, d.o.o., Cesta na Lenivec 45,
SI-6210 SEŽANA.**Order/contract :** Order form No. 1/2014/06.01.2014

Responsible investigator:
Mihael Ramšak, M.Sc. (Mech.Eng.)**Head of Laboratory:**
Friderik Knez, B.Sc.(Phys.)**Director:**
Assoc. Prof. Dr. Andraž Legat, B.Sc.(Phys.)

The results of the test refer only to the tested specimen. This report may only be reproduced as a whole. Complaints will be considered only if received within 15 days from the date of issue of this report. Total number of pages: 7; total number of annexed pages: 4 (1 page of annex A, 2 pages of annex B and 1 page of annex C)

1. TEST DATA

1.1. TEST SPECIMEN

Single leaf door with fire resistance MARINE-MANTA B30 CABIN.

1.2. TEST SPECIMEN DESIGNATION: A-1/14

1.3. METHOD OF DELIVERY OF THE TEST SPECIMEN:

Test specimen was delivered and installed by the client on 13/01/2014

1.4. DESCRIPTION OF THE TEST SPECIMEN

Metal door jamb is filled with the rock wool. Door leaf of total thickness 61 mm is made of 0,8 mm thick steel sheets on both sides, glued with Promat K84 on insulation core made of 3x19 mm thick mineral wool KNAUF MHTB 700 (density approx. 150kg/m³). Between two insulation plates is acoustic insulating material Promasound TL with thickness 2 mm (density approx. 2100kg/m³). Ventilation channel integrated into door leaf. It incorporates a single point mortise lock (TRIOVING 5136).

NOTE: Composition and dimensions of the layers are based on schematics provided by the client.

1.5 TEST METHOD

Measurement of airborne sound insulation according to the standards: SIST EN ISO 10140-1, 10140-2, 10140-4 in 10140-5 : 2010.

1.6 TESTING LOCATION

The test was carried out in Laboratory for sound insulation measurements at the Slovenian National Building and Civil Engineering Institute.

1.7 MEASURING EQUIPMENT

- Acoustic analyser	type 2260 B&K, ID 33401008
- Calibrator	type 4231 B&K ID 12903005
- Omni-directional sound source	type 4296 B&K, ID 52901004
- Amplifier	type 2716 B&K, ID 52901005
- Rotary microphone stand	type 3923 B&K, ID 33401002
- Sound source with amplifier	type 4241 B&K, ID 52901003
- Microphone	type 4189, Serial No. 2395368
- Microphone	type 4189, Serial No. 2395369

1.8 MEASURING CONDITIONS

Temperature : 14^o C
 Relative humidity : 55 %
 Static pressure: 970 hPa

1.9 DATE OF TEST : 13/01/2014

1.10 MEASUREMENT PERFORMED BY: Davor Radič, Civ.Eng.



2. RESULTS OF THE TEST

The weighted sound reduction index of the single leaf door with fire resistance MARINE-MANTA B30 CABIN, calculated according to provisions of the standard SIST EN ISO 717-1 (2013), is:

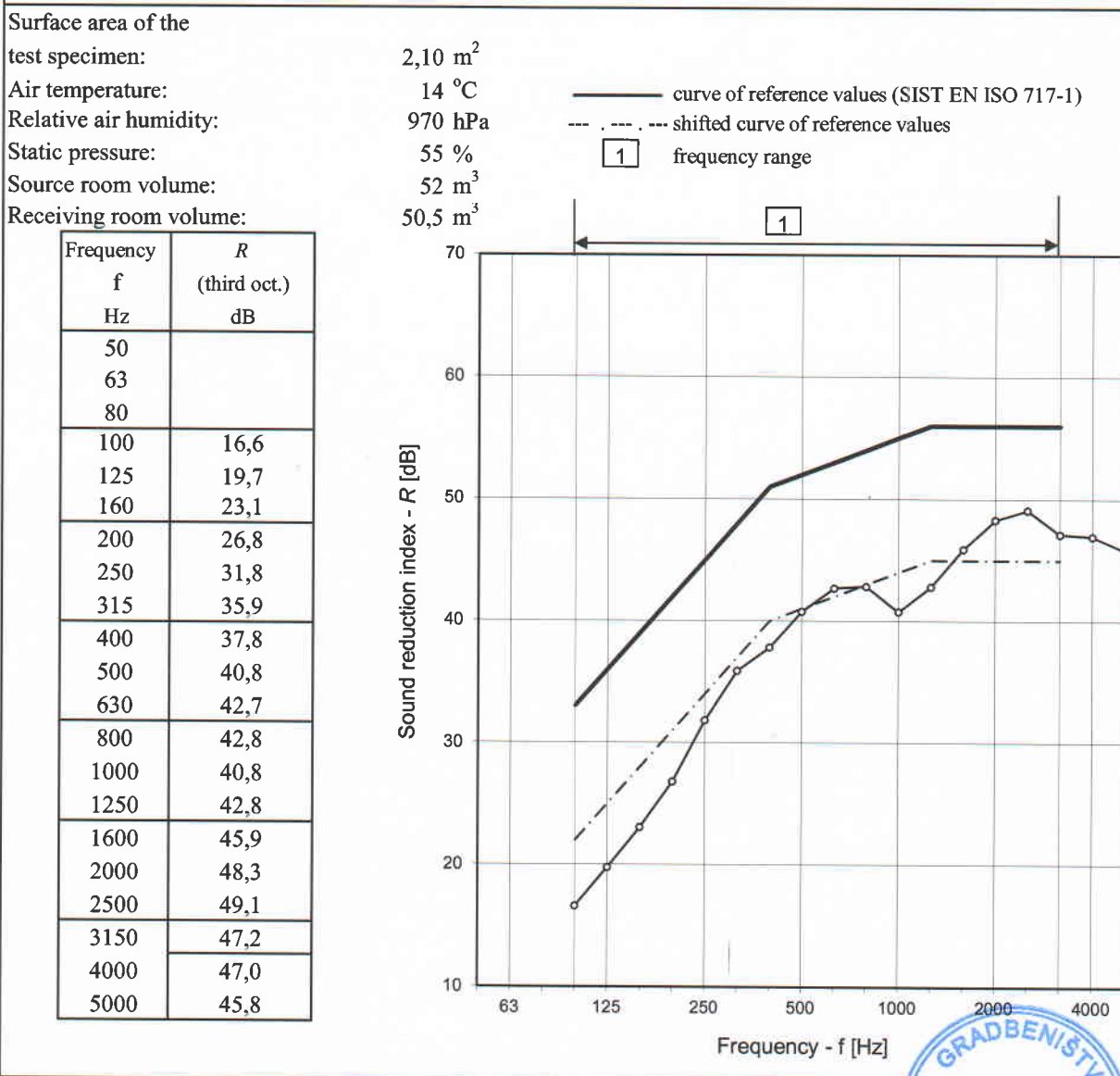
$$R_w (C;C_{tr}) = 41 (-3;-6) \text{ dB}$$

The sound reduction indices R corresponding to each one-third octave band are presented in Annex A/1 to this report.

Davor Radič, Civ.Eng.



LABORATORY MEASUREMENTS OF AIRBORNE SOUND INSULATION ACCORDING TO THE STANDARD SIST EN ISO 10140-2:2010			ANNEX A Page: 1/1
MANUFACTURER:	MANTA SEŽANA d.o.o.	SPECIMEN:	A-1/14
CLIENT:	MANTA SEŽANA d.o.o.	MEASURED IN	LAB 1, LAB 2
TEST SPECIMEN DELIVERED AND ASSEMBLED BY:	MANTA SEŽANA d.o.o.	DATE:	13/01/2014
TEST SPECIMEN DESIGNATION: Single leaf door with fire resistance MARINE-MANTA B30 CABIN			
COMPOSITION OF THE TEST SPECIMEN: Dimensions of the door leaf: <i>length 1937 mm x width 932 mm x thickness 40 mm</i> Core: <i>3x19 mm thick mineral wool KNAUF MHTB 700 (density approx. 150kg/m³), 2 mm thick Promasound TL between layers of of mineral wool, 0,8 mm thick steel sheet on both sides</i> Door jamb: <i>made of 1,5 thick steel metal</i> Door gasket: <i>installed on the door leaf and on the jamb (Sand:172 E3-AFHMA)/Assotech.</i> Door threshold: <i>it is a component of the door jamb</i> Ventilation slots: <i>opened</i>			
Schematics and photos of the test specimen are presented in annexes B and C to this report. Test opening and double massive wall were made in accordance with the provisions of the standard SIST EN ISO 10140-5.			



Standard SIST EN ISO 717-1, (2013) :

$$R_w (C; C_{tr}) = 41 (-3, -6) \text{ dB}$$

Evaluation based on laboratory measurement results.

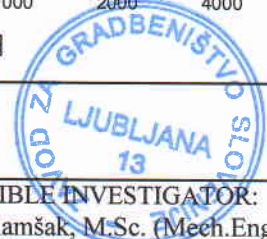
MEASUREMENT PERFORMED BY:

Davor Radič, Civ.Eng.

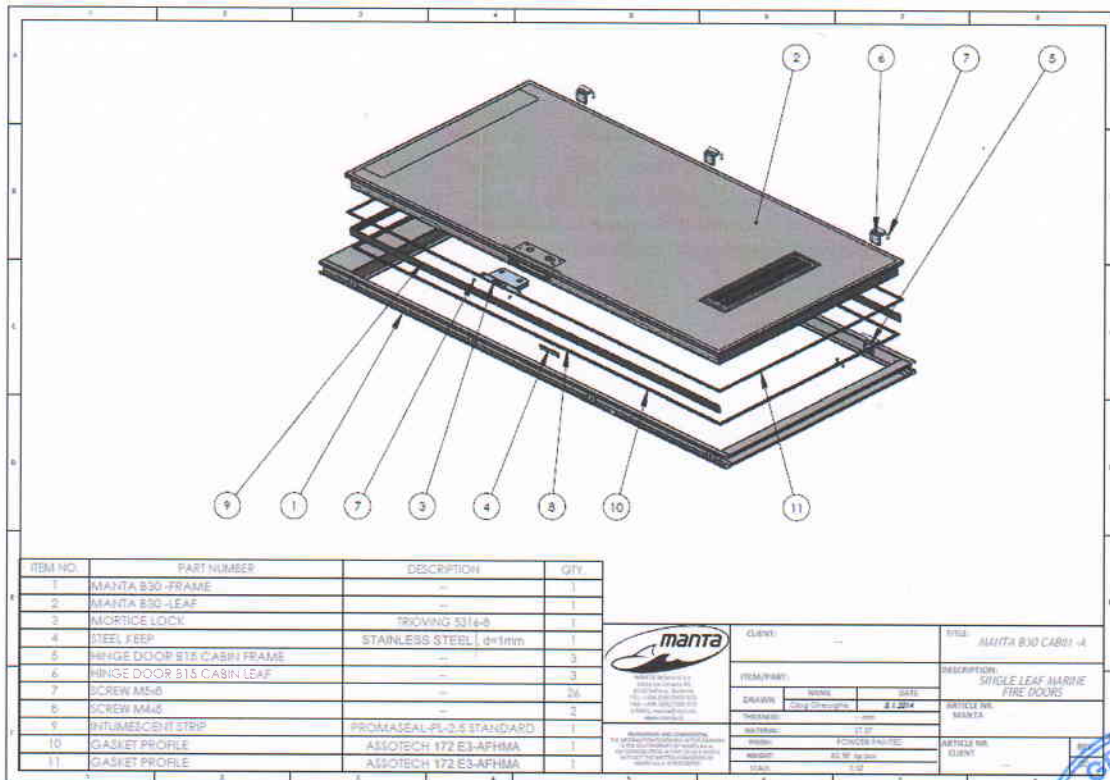
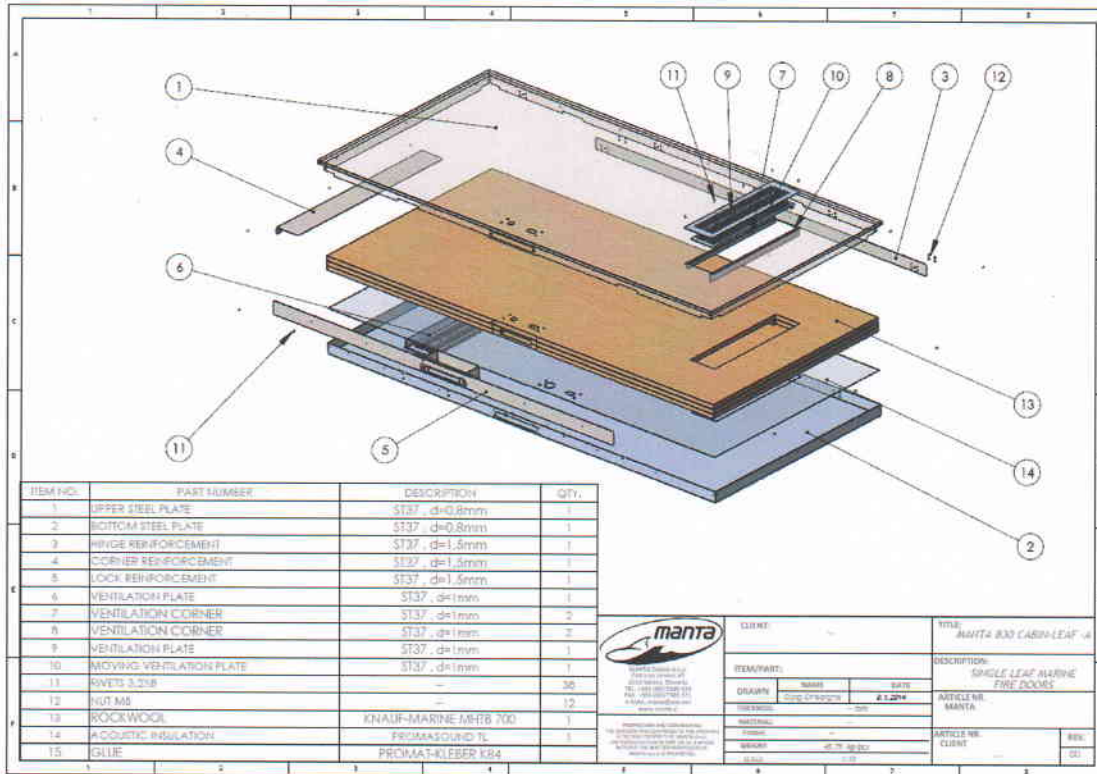
RESPONSIBLE INVESTIGATOR:

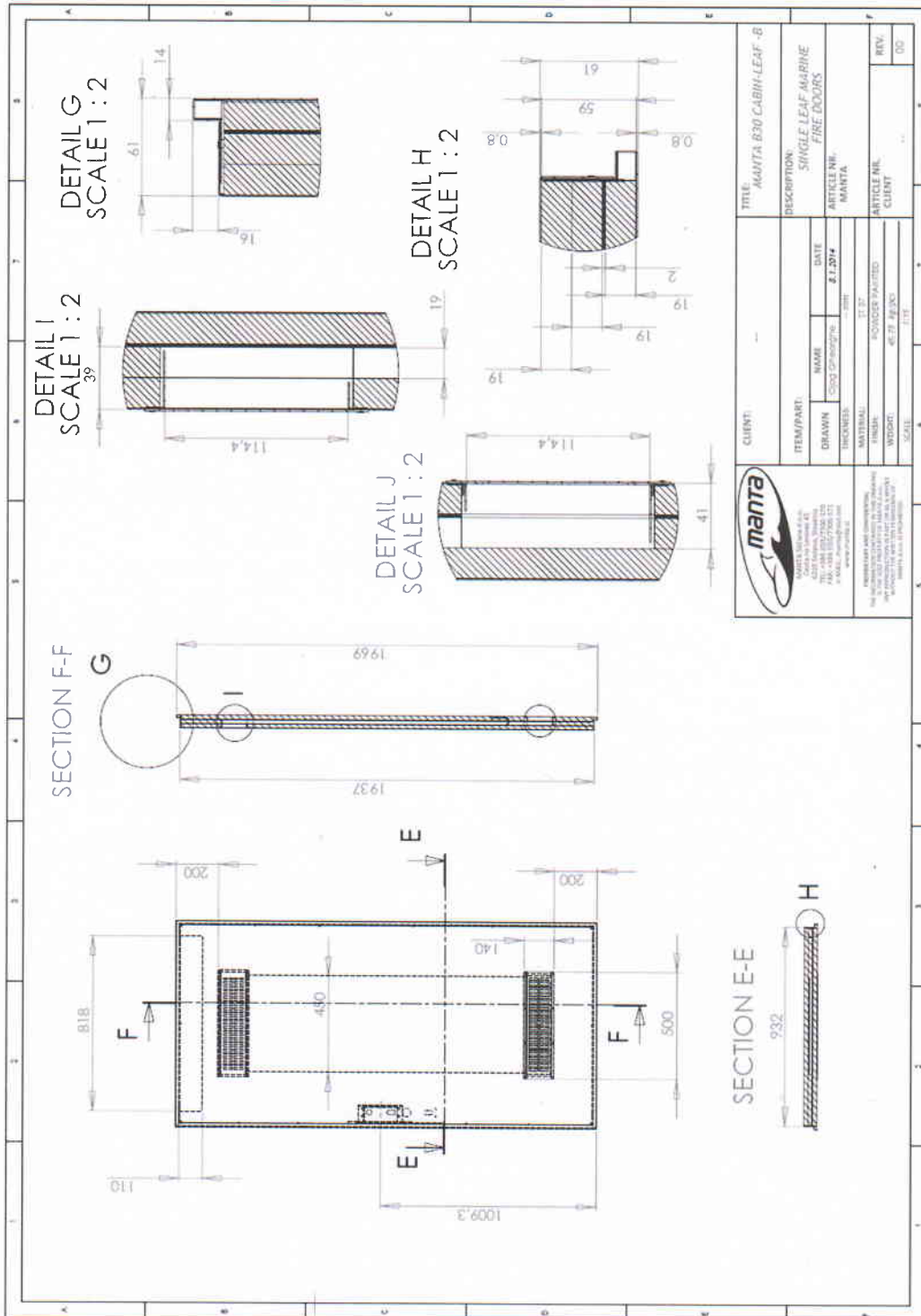
Mihael Ramšak, M.Sc. (Mech.Eng.)

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LAYOUT OF THE TEST SPECIMEN





Note:

Layout based on a schematics provided by the client. The conformity of the tested panel to the manufacturer's plan has not been verified in detail.

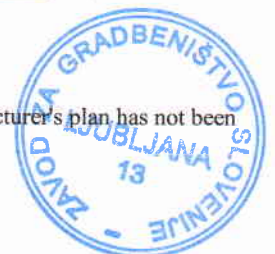


Photo of the specimen-source room (Lab.1)



Photo No. 27655d-05

Detailed view at the lockset



Photo No. 27655d-02

Photo of the specimen-receiving room (Lab.2)



Photo No. 27655d-06

Detailed view at the threshold



Photo No. 27655d-03

