

NWAA Labs

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SOUND ABSORPTION TEST REPORT #: NWAB190822-01

Client: Akustus Industries, Inc.
518 East Kent Avenue South
Vancouver, BC, Canada, V5X 4V6

Test Date: 22 August, 2019
Report Date: 24 August, 2019
Test Specimen: Cargo 50 Baffles, J Mount

INTRODUCTION

The methods and procedures used in this test conform to the provisions and requirements of ASTM Procedure C 423-09a, *Standard Test Method for Sound Absorption Coefficients by the Reverberation Room Method*. Copies of the test standards are available at www.astm.org. The test chamber is a cuboid, 12.79 m (42.0 ft) long by 10.75 m (35.3 ft) wide by 5.31 m (17.4 ft) high, and volume is 737.4 m³ (26041.0 ft³). There are six fixed surfaces in the reverberation chamber. There are three sources consisting of two dodecahedron loudspeakers mounted in the two upper corners and one sub-woofer located below one of the dodecahedrons. We utilize six Earthworks M-30 Omni directional microphones to gather the data. This test report relates only to the item(s) tested. Any advertisement that utilizes this test report or test data must not imply product certification or endorsement by NWAA Labs and has to include all pages of the report.

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of eighteen hanging panel units that were 120.65 cm (47.5 inch) long by 50.17 cm (19.75 inch) wide by 5.08 cm (2.0 inches) thick. These PET fiber panels were then mounted in a Type J mounting, hanging from cables in six rows of three panels on each cable. The cable were hung in rows that were not parallel to any wall surface. They were spaced is 0.75m (30 inches) and the spacing between panels on the same cable was 0.3m (12.0 inches). The lower edges of the samples were spaced to be 102.87 cm (40.5 inches) from the floor. This created a test sample with the overall area of 756.58 sq cm (117.27 sq. ft.), and an overall weight of 62.26 kg (137.25 lbs.). (See pictures).

Test results are on the following pages.

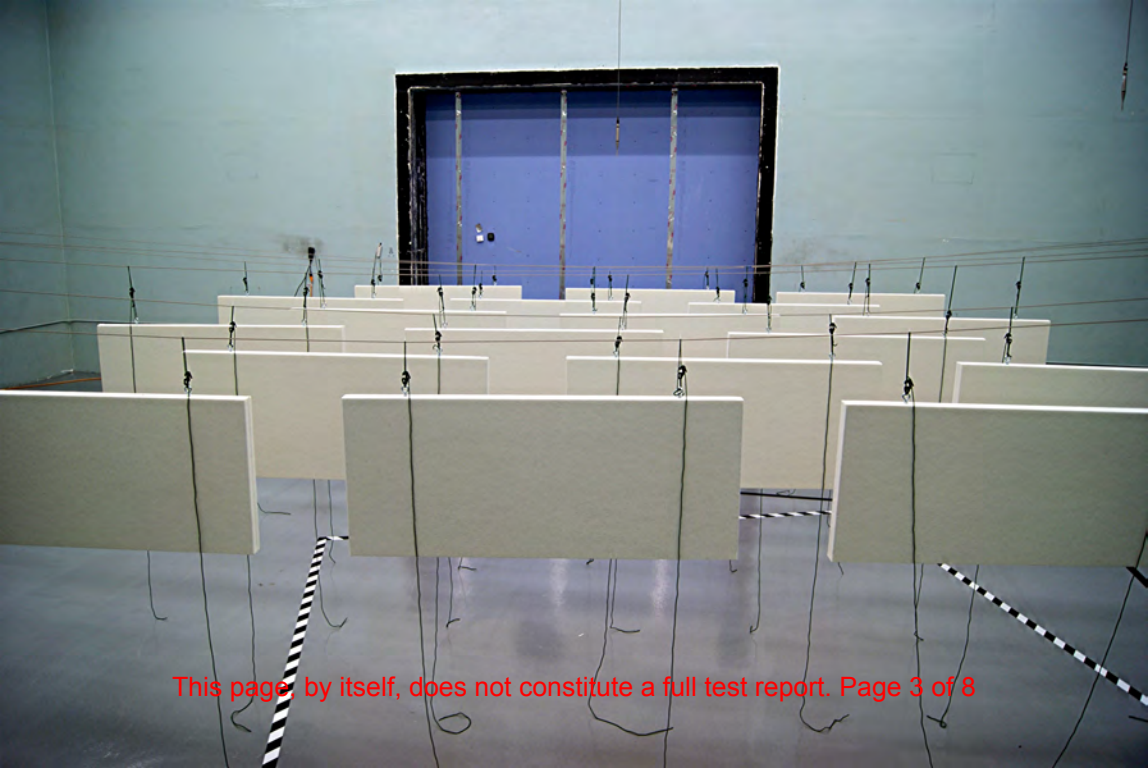
Submitted by,
NWAA Labs Inc



Ron Sauro
NWAA Labs Inc



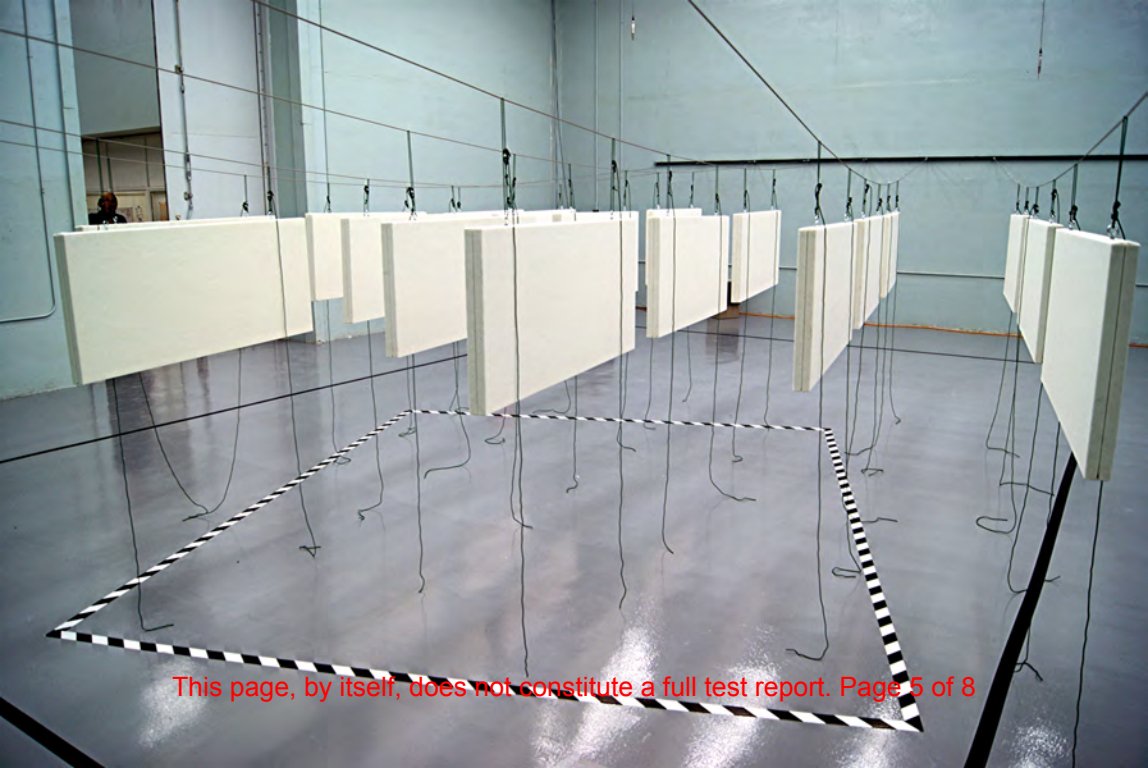
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Test #	NWAB190822-01
Test Date:	22-Aug-19
Mounting per ASTM E795-00:	J Mount
Area Tested: M ²	10.89
Temperature: °C	23
Barometer: pa	101500
Humidity: %	63

NRC	1.10
SAA	1.08

Cargo 50 Baffles, Type J mount (Surface)

Frequency (Hz)	Absorption Coefficient	Absorption (m ²)	Absorption (sabins)
40Hz	0.08	0.82	8.80
50Hz	0.08	0.87	9.40
63Hz	0.24	2.65	28.60
80Hz	0.17	1.80	19.40
100Hz	0.30	3.25	35.00
125Hz	0.25	2.74	29.50
160Hz	0.33	3.55	38.20
200Hz	0.40	4.37	47.10
250Hz	0.49	5.29	57.00
315Hz	0.46	5.05	54.40
400Hz	0.55	5.98	64.40
500Hz	0.69	7.47	80.40
630Hz	0.94	10.24	110.30
800Hz	1.13	12.30	132.40
1000Hz	1.42	15.46	166.40
1250Hz	1.67	18.15	195.40
1600Hz	1.73	18.89	203.40
2000Hz	1.75	19.11	205.70
2500Hz	1.73	18.89	203.40
3150Hz	1.74	18.97	204.20
4000Hz	1.68	18.32	197.20
5000Hz	1.62	17.63	189.80
6300Hz	1.59	17.32	186.40
8000Hz	1.52	16.57	178.40
10000Hz	1.53	16.71	179.90

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Number of Units	18
Temperature: °C	23
Barometer: pa	101500
Humidity: %	63

NRC	
SAA	

Cargo 50 Baffles Type J Mount objects				
Frequency (Hz)		Absorption per object (m ²)	Absorption per object (sabins)	
50Hz		0.05	0.49	
63Hz		0.05	0.52	
80Hz		0.15	1.59	
100Hz		0.10	1.08	
125Hz		0.18	1.95	
160Hz		0.15	1.64	
200Hz		0.20	2.12	
250Hz		0.24	2.61	
315Hz		0.29	3.16	
400Hz		0.28	3.02	
500Hz		0.33	3.58	
630Hz		0.41	4.46	
800Hz		0.57	6.13	
1000Hz		0.68	7.36	
1250Hz		0.86	9.24	
1600Hz		1.01	10.86	
2000Hz		1.05	11.30	
2500Hz		1.06	11.43	
3150Hz		1.05	11.30	
4000Hz		1.05	11.35	
5000Hz		1.02	10.95	
6300Hz		0.98	10.54	
8000Hz		0.96	10.36	
10000Hz		0.92	9.91	

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Cargo 50 Baffles, Type J mount (Surface)

