RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

TEST REPORT

FOR: Panelfold, Inc.

Sound Transmission Loss Test
RAL™-TL02-176

ON: Panelfold Steel Faced Operable Wall

CONDUCTED: 12 August 2002

RESULT: STC 47

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-99 and E413-87, as well as other pertinent standards. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. A description of the measuring technique is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as a Panelfold steel faced operable wall. The specimen was fully operable and was comprised of interlocking panels arranged in a flat configuration and supported by an overhead track. The nominally 83 mm (3.25 in.) thick panels were constructed of 0.61 mm (.0239 in.) thick (24 gauge) steel faces with metal frames and interior sound retarding material. The abutting edges between panels consisted of interlocking vertical stiles incorporating vertical sound seals. A continuous vinyl seal installed on each side of each panel closed the clearance between the top of the panels and the soffit. A mechanical seal in each panel closed the clearance between the bottom of the panels and the floor. An expanding panel provided final closure. The manufacturer installed the specimen directly into the laboratory's 4.27 m (14 ft) wide by 2.74 m (9 ft) high wood-lined frame. Each panel was 83 mm (3.25 in.) thick by 1.27 m (50 in.) wide by 2.59 m (102 in.) high including seals. Each panel weighed an average of 110 kg (242 lb), or 33.4 kg/m^2 (6.8 lb/ft^2), including trolley. The expanding panel was nominally 330 mm (13 in.) wide by 2.59 m (102 in.) high and weighed 82.3 kg (181.5 lbs). The overall nominal dimensions of the test specimen installed and tested as measured were 4.27 m (168 in.) wide by 2.57 m (101 in.) high and 83 mm (3.25 in.) thick. The weight of the entire specimen as measured was 462 kg (1,019 lbs.), an average of 42 kg/m^2 (8.6 lbs/ft^2). The transmission area used in the calculations was 11 m^2 (118 ft^2). The source and receiving room temperatures at the time of the test were 26±1ºC (79±1ºF) and 57% relative humidity. The source and receive reverberation room volumes were 179m^3 (6,298 ft^3) and 177 m^3 (6,255 ft^3), respectively. Laboratory personnel performed a full inspection on the test specimen. A detailed description is on file and has been intentionally withheld from this report in order that the manufacturer may control full proprietary rights regarding its product. The operable wall was opened and closed at least five times, and the test was conducted with no further adjustments.

TEST RESULTS

Sound transmission loss values are tabulated at the eighteen standard frequencies. A graphic presentation of the data and additional information appear on the following pages. The precision of the TL test data is within the limits set by the ASTM Standard E90-99.

FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	17	0.50		800	45	0.38	4
125	28	0.37	3	1000	48	0.38	2
160	32	0.33	2	1250	51	0.28	
200	35	0.42	2	1600	51	0.25	
250	37	0.34	3	2000	51	0.25	
315	41	0.41	2	2500	50	0.22	1
400	42	0.45	4	3150	50	0.22	1
500	44	0.38	3	4000	53	0.23	
630	43	0.40	5	5000	57	0.22	

STC=47

ABBREVIATION INDEX

FREQ. = FREQUENCY, HERTZ, (cps)
T.L. = TRANSMISSION LOSS, dB
C.L. = UNCERTAINTY IN dB, FOR A 95% CONFIDENCE LIMIT
DEF. = DEFICIENCIES, dB<STC CONTOUR
STC = SOUND TRANSMISSION CLASS

Tested by_____ Approved by_____

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