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: Rollc Company
Riyadh, Saudi Arabia

Sound Transmission Loss Test
RAL™-TL11-138

ON: RIFA 77 Overhead Rolling Door

CONDUCTED: 8 June 2011

TEST METHOD

Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the ASTM Designations E90-09 and E413-10, 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 (NVLAP Lab Code: 100227-0). A description of the measuring technique is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the client as RIFA 77 Overhead Rolling Door. The overall dimensions of the specimen as measured were nominally 3.66 m (144 in.) wide by 1.77 m (69.5 in.) high and 210 mm (8.25 in.) thick. The specimen was surface mounted to the opening provided in the laboratory's 2.74 m (9 ft) by 4.27 m (14 ft) wood-lined steel frame. A substantial filler wall was used in the remaining open area. Both the filler wall and test specimen were sealed on the periphery (both sides) with dense mastic.

The manufacturer provided a detailed drawing of the specimen which has been retained on file. A description of the specimen components as provided by a manufacturer's drawing was as follows: Fired Door Motor Operator; Galvanized Steel Hood Painted; Steel Endplate Prime Painted; Lintel Acoustical Smoke Seal; 20/22 gauge Insulated Galvanized Steel Slats Painted; Bottom Bar with Acoustical Smoke Seals.

The rolling door details included the following: Acoustical insulation 38 mm (1.5 in.) wide; 20 gauge galvanized steel exterior panel painted 76 mm (3 in.) long; 22 gauge galvanized steel interior panel painted; (2) 2" x 2" x 1/8" Steel angles prime painted; Acoustical / smoke seal; Sill sealer 5-1/2" wide.

The guide detail included the following: 3/8" dia. expansion bolts at 22" on center; 3" x 5" Steel angle prime painted; 3/8" dia. bolts at 22" on center; 1/8" thick steel angle prime painted; Acoustical / smoke seals; Total depth: 152 mm (6 in.); 6" x 4" x 1/4" Steel angle prime painted; Finished wall (by contractor). 108 mm (4.25 in.) wide. A visual inspection verified the manufacturer's description of the specimen.

The weight of the specimen as measured was 749.8 kg (1,653 lbs.), an average of 116.1 kg/m^2 (23.8 lbs/ft^2). The transmission area used in the calculations was 6.5 m^2 (69.5 ft^2). The source and receiving room temperatures at the time of the test were 26ºC (79±1ºF) and 52±2% relative humidity. The source and receive reverberation room volumes were 178 m^3 (6,298 ft^3) and 177 m^3 (6,255 ft^3), respectively.

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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 E90-09.

FREQ.	T.L.	C.L.	DEF.	FREQ.	T.L.	C.L.	DEF.
100	15	0.64		800	29	0.15	4
125	15	0.52		1000	32	0.12	2
160	15	0.60	3	1250	34	0.12	1
200	20	0.33	1	1600	35	0.11	
250	21	0.41	3	2000	36	0.11	
315	24	0.40	3	2500	39	0.09	
400	26	0.35	4	3150	40	0.06	
500	28	0.17	3	4000	40	0.06	
630	27	0.24	5	5000	42	0.07	

STC=31

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 (SUM OF DEF = 29)
STC = SOUND TRANSMISSION CLASS

Digitally signed by David Moyer
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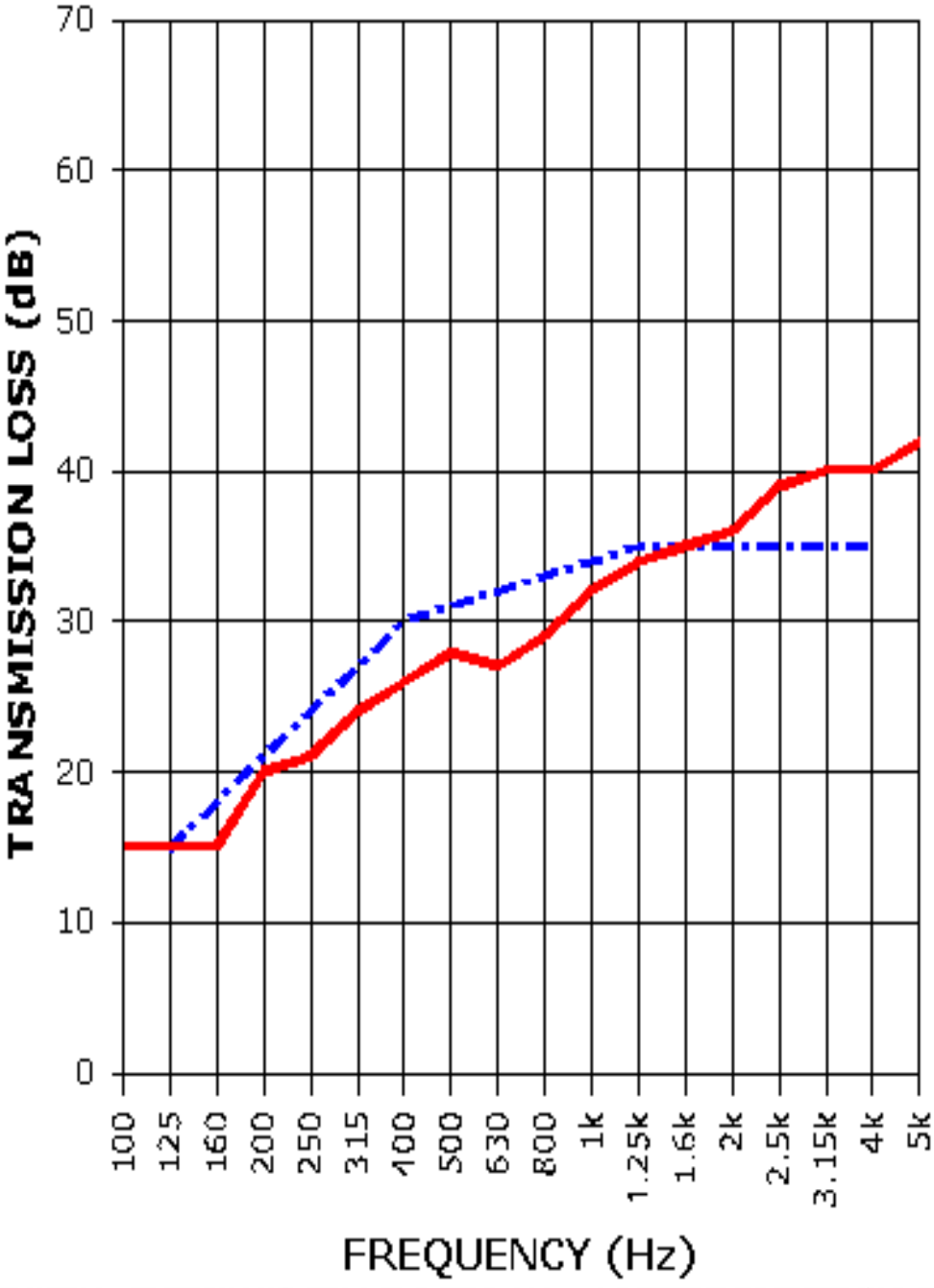
Reason: I am approving this document
Date: 2011.07.25 09:39:02 -05'00'

Tested by _____ Approved by _____

Marc Sciaky
Experimentalist

David L. Moyer
Laboratory Manager

SOUND TRANSMISSION REPORT
RAL – TL11-138



STC = 31

TRANSMISSION LOSS
SOUND TRANSMISSION LOSS CONTOUR