RIVERBANK ACOUSTICAL LABORATORIES

OF IIT RESEARCH INSTITUTE

1512 BATAVIA AVE., BOX 189
GENEVA, ILLINOIS 60134

FOUNDED 1918 BY WALLACE CLEMENT SABINE

REPORT

FOR: Panelfold Doors, Inc.

ON: PANELFOLD SINGLE PANEL ACOUSTICAL FOLDING PARTITION

CONDUCTED: 31 August 1973

Sound Transmission Loss
Test TL 73-245

INTRODUCTION: Unless otherwise designated, the measurements reported below were made with all facilities and procedures in explicit conformity with the American Society for Testing and Materials Designations E 90-70 and E413-70T, as well as other pertinent standards.

DESCRIPTION OF THE SPECIMEN: The Panelfold single panel acoustical partition was 14 feet wide by 9 feet high. The specimen was made of specially laminated wood particle core, hinged with dual wall vinyl extrusions. Panels were arranged in a "serpentine" or single panel accordion configuration with a single overhead supporting track and a single lead post. Continuous sweep seals were installed at the top and bottom of the partition to provide a perimeter seal. The lead post was equipped with a single action draw type positive latch. The operable partition weighed 373 pounds, an average of 3.0 pounds per sq ft. The specimen contained 6 volutes and had a stack depth of 12 inches. The partition was opened and closed 10 times in a normal manner and measurements were made with no further adjustments. The transmission area, S, used in the computation was 126 sq ft. A clearance of 3/4 inch was provided at the top and bottom between the specimen and floor, specimen and ceiling. A description of the construction is in the laboratory file.

RESULTS OF MEASUREMENTS: Sound transmission loss values are tabulated at the eighteen standard frequencies. An explanation of the sound transmission class rating, a graphic presentation of the data, and additional information appear on the following pages.

FREQUENCY, Hertz (cps)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TRANSMISSION LOSS, dB	18	16	18	19	21	23	24	25	27	28	31	33	34	35	34	33	33	36
DEFICIENCIES				1	2	3	5	5	4	4	2	1				1	1	

SOUND TRANSMISSION CLASS 30

Approved R. L. Johnson
Kenneth Johnson

Submitted by D. A. Zedonis
D. A. Zedonis

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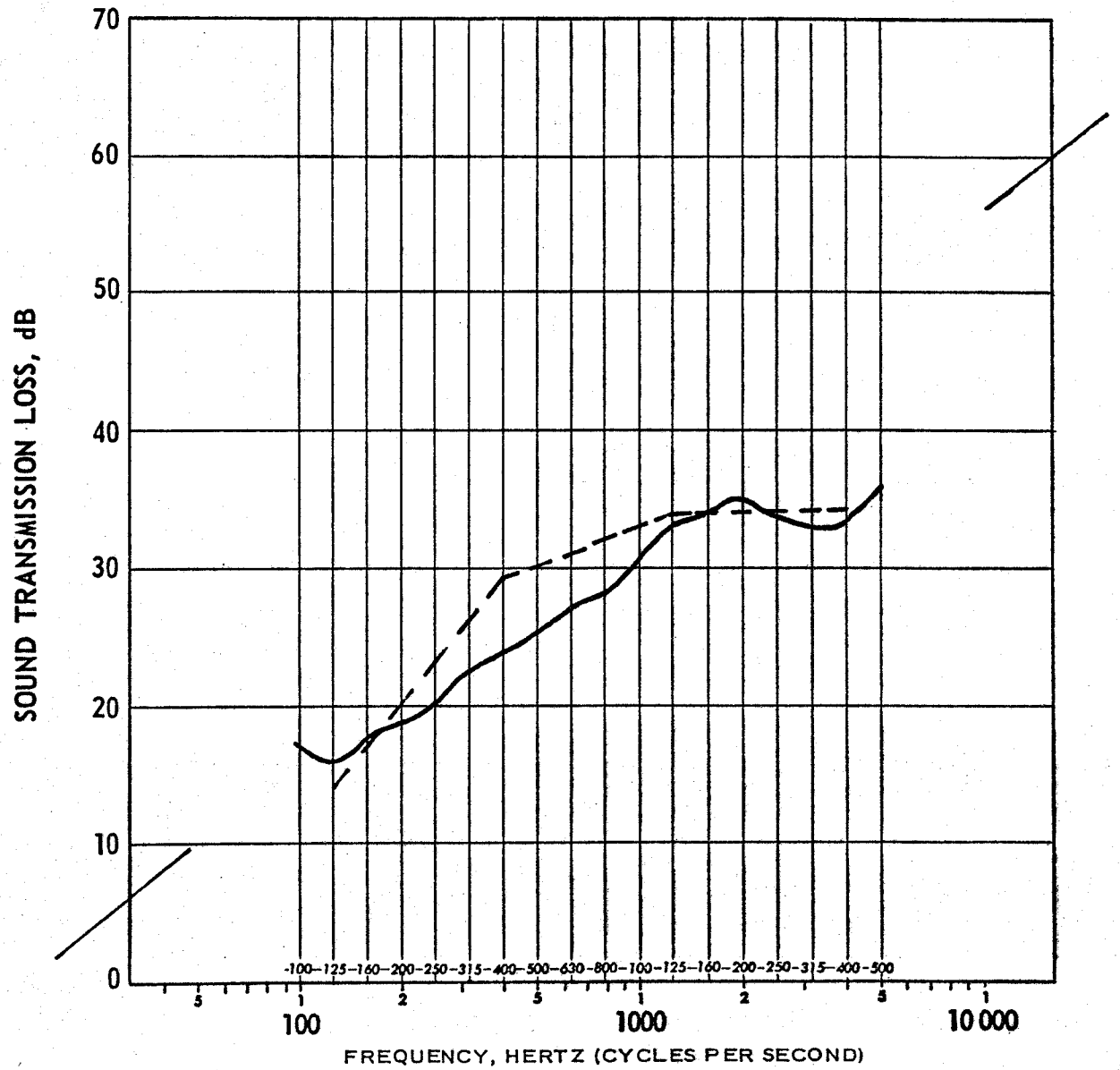

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THE SOUND TRANSMISSION LOSS OF THE TESTED SPECIMEN IS SHOWN BY THE CURVED LINE IN THE ABOVE GRAPH. THE BROKEN LINE IS THE LIMITING SOUND TRANSMISSION CLASS CONTOUR. THE GRAPH WAS PREPARED ON CODEX PAPER NO. 31, 462.

THE THEORETICAL TRANSMISSION LOSS OF THAT LIMP MASS HAVING THE SAME WEIGHT PER SQUARE FOOT AS THE SPECIMEN CAN BE LOCATED BY DRAWING A STRAIGHT LINE BETWEEN THE TWO SLASH MARKS ON THE EDGES OF THE GRID. THIS WAS DERIVED FROM THE EQUATION: TL = 20 LOG W + 20 LOG F - 33, WHERE W IS WEIGHT IN POUNDS PER SQUARE FOOT, AND F IS FREQUENCY IN HERTZ (CYCLES PER SECOND).