

City Campus
GPO Box 2476V
Melbourne 3001
Victoria Australia

Tel +61 3 9925 2600
Fax +61 3 9925 5290
E-mail physics@rmit.edu.au
www.ph.rmit.edu.au

**REPORT ON THE DETERMINATION OF AIRBORNE SOUND TRANSMISSION
LOSS IN ONE-THIRD OCTAVE BANDS AND WEIGHTED SOUND REDUCTION
INDEX (R_w) OF A SERIES OF LORIENT INTEGRITY ARCHITECTURAL
SEALING SYSTEMS FITTED TO A LORIENT STANDARD TIMBER DOOR.**

Testing Procedure: ISO140-3:1995/AS1191-1985

Testing Laboratory: Acoustic Laboratory
RMIT University, Department of Applied Physics
Melbourne, Victoria 3000, Australia

Client: Lorient Australia Pty Ltd.
8 Powells Road
Brookvale, NSW 2100
Australia

Date of Test: 19th-23rd November 2001

Date of Report: 19th December 2001

Report Number: 1211/01-093/PD

Testing Officer:



Peter Dale
Professional Officer
RMIT University
Department of Applied Physics

This report is the property of Lorient
Australia Pty Ltd. Companies using this
report for certification purposes must
have written permission from Lorient.
Copyright 2001.
Tel: (02) 9907 3844

TABLE OF CONTENTS:

Contents	Page Begin
1. Introduction	2
2. Table of Door/Seal Combinations with SRI, R _w and STC Measurements	3
3. Results	5
4. Appendix I: Testing Method and Description	17
5. Appendix II: Testing Conditions and Engineering Drawings	19

**REPORT ON THE DETERMINATION OF AIRBORNE SOUND
TRANSMISSION LOSS IN ONE-THIRD OCTAVE BANDS AND WEIGHTED
SOUND REDUCTION INDEX (R_w) OF A SERIES OF LORIENT INTEGRITY
ARCHITECTURAL SEALING SYSTEMS FITTED TO A LORIENT
STANDARD TIMBER DOOR.**

Testing Procedure: ISO140-3:1995/AS1191-1985

Testing Laboratory: Acoustic Laboratory
RMIT University, Department of Applied Physics
Melbourne, Victoria 3000, Australia

Client: Lorient Australia Pty Ltd.
8 Powells Road
Brookvale, NSW 2100
Australia

Date of Test: 19th-23rd November 2001

Date of Report: 19th December 2001

Report Number: 1211/01-093/PD

Testing Officer: Peter Dale

This report is the property of Lorient
Australia Pty Ltd. Companies using this
report for certification purposes must
have written permission from Lorient.
Copyright 2001.
Tel: (02) 9907 3844

1. INTRODUCTION

The tests described in this report were carried out at the request of LORIENT AUSTRALIA on the week beginning 19th of November 2001 to determine the airborne sound transmission loss and the weighted sound transmission index (R_{w}) of a series of LORIENT INTEGRITY ARCHITECTURAL DOOR SEALING SYSTEMS fitted to a LORIENT STANDARD TIMBER DOOR, as specified in AS 1276.1:1999 Acoustics – Rating of sound insulation in buildings and of building elements, Part I: Airborne Sound Insulation. The tests proceeded over the following 5 working days finishing on 23rd of November 2001. The procedures used to determine the airborne sound transmission loss index were based on and compliant with both ISO 140-3:1995, Measure of Sound Insulation in Buildings and Building Elements, Part 3: Laboratory Measure of Airborne Sound Insulation of Building Elements and AS1191:1985 Acoustics- Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.

The test has been carried out using the pair of sound transmission rooms of the Department of Applied Physics, The Royal Melbourne Institute of Technology Limited. The sample under test is mounted in the vertical aperture between a reverberant source room and a reverberant receiving room.

The sound pressure level difference resulting between these two rooms when a sound source operates in the source room is used in conjunction with the surface area of the sample and the equivalent absorption area of the receiving room to determine the airborne sound transmission loss of the sample.

This report is the property of Lorient
Australia Pty Ltd. Companies using this
report for certification purposes must
have written permission from Lorient.
Copyright 2001.
Tel: (02) 9907 3844

2. TABLE OF DOOR/SEAL COMBINATIONS WITH SRI, R_w AND STC MEASUREMENTS

Test Reference Number	Sample Description	Table of Full Results	Ave SRI (dB)	R _w (C;C _{tr})	STC
Test 50	40mm MDF faced particleboard door leaf installed into steel frame – fully caulked both sides	1	30.6	32(-1;-2)	33
Test 51	40mm MDF faced particleboard door leaf installed into steel frame - uncaulked	2	20.2	21(-1;0)	20
Test 52	40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity LE1212 and IS8011Si seal configuration	3	30.8	32(-1;-2)	32
Test 53	40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7025 and IS8011Si seal configuration	4	31.2	32(-1;-2)	32
Test 54	40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7110 and IS8011Si seal configuration	5	31.4	32(-1;-2)	32
Test 55	40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7080 and IS8011Si seal configuration	6	31.1	32(-1;-2)	32
Test 56	40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8100Si seal configuration – perimeter fully caulked, seal in retracted position	7	30.3	32(-1;-3)	32
Test 57	40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8100Si seal configuration – perimeter caulked, threshold uncaulked, seal in operational position	8	30.3	32(0;-2)	33
Test 58	40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8010Si seal configuration – perimeter caulked, seal in retracted position	9	30.3	32(-1;-3)	33
Test 59	40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8010Si seal configuration – perimeter caulked, threshold uncaulked, seal in operational position	10	30.5	32(0;-3)	33

This report is the property of Lorient Australia Pty Ltd. Companies using this report for certification purposes must have written permission from Lorient.

Test Reference Number	Sample Description	Table of Full Results	Ave SRI (dB)	R _w (C;C _{tr})	STC
Test 60	35mm solid core door leaf installed into steel frame – fully caulked both sides	11	28.5	30(0;-3)	31
Test 61	35mm solid core door leaf installed into steel frame - uncaulked	12	19.3	20(0;0)	20

This report is the property of Lorient Australia Pty Ltd. Companies using this report for certification purposes must have written permission from Lorient.
 Copyright 2001.
 Tel: (02) 9907 3844

3. RESULTS

Table 1: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame – fully caulked both sides

Test Number:	Test 50	
	Sound Transmission Loss Measurements (R-dB)	Octave Band Measurements (R-dB)
Centre Frequency (Hz)	1/3 rd Octave Band (dB)	Octave Band (dB)
100	21.6	
125	24.4	23.8
160	27.5	
200	29.7	
250	26.7	27.3
315	26.2	
400	27.7	27.3
500	26.9	
630	27.2	
800	28.2	
1000	30.5	30.3
1250	33.8	
1600	36.6	
2000	38.3	38.2
2500	40.8	
3150	42.8	
4000	44.4	44.1
5000	45.6	
Average SRI (100-3125Hz; dB)	30.6	
Weighted Sound Reduction Index, R _w (C;C _{tr})	32(-1;-2)	
Sound Transmission Class, STC	33	

Table 2: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame - uncaulked

Test Number:	Test 51	
	Sound Transmission Loss Measurements (R-dB)	Sound Transmission Loss Measurements (R-dB)
Centre Frequency (Hz)	1/3 rd Octave Band (dB)	Octave Band (dB)
100	16.0	17.2
125	17.3	
160	18.8	
200	20.4	21.0
250	21.7	
315	21.2	
400	21.4	21.5
500	21.4	
630	21.8	
800	21.3	22.0
1000	21.7	
1250	23.3	
1600	23.5	19.4
2000	20.3	
2500	16.8	
3150	17.3	18.0
4000	18.6	
5000	18.3	
Average SRI (100-3125Hz; dB)	20.2	
Weighted Sound Reduction Index, R _w (C;C _{tr})	21(-1;0)	
Sound Transmission Class, STC	20	

Table 3: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity LE1212 and IS8011Si seal configuration.

Test Number:		Test 52	
Centre Frequency (Hz)	Sound Transmission Loss Measurements (R-dB)		Octave Band (dB)
	1/3 rd Octave Band (dB)	Octave Band (dB)	
100	21.4	24.4	
125	26.5		
160	28.6		
200	30.9	31.0	
250	31.4		
315	30.8		
400	31.9	30.5	
500	31.4		
630	28.9		
800	27.3	28.7	
1000	28.4		
1250	31.4		
1600	33.7	34.8	
2000	34.9		
2500	35.9		
3150	38.6	39.9	
4000	40.4		
5000	41.0		
Average SRI (100-3125Hz; dB)		30.8	
Weighted Sound Reduction Index, $R_w(C;C_{tr})$		32(-1;-2)	
Sound Transmission Class, STC		32	

Table 4: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7025 and IS8011Si seal configuration.

Test Number:	Test 53	
	Centre Frequency (Hz)	Sound Transmission Loss Measurements (R-dB)
	100	20.9
	125	27.8
	160	28.5
	200	32.3
	250	32.9
	315	33.0
	400	33.5
	500	33.2
	630	30.6
	800	27.7
	1000	27.1
	1250	29.8
	1600	31.7
	2000	34.1
	2500	36.7
	3150	39.6
	4000	39.7
	5000	41.1
	Average SRI (100-3125Hz; dB)	31.2
	Weighted Sound Reduction Index, $R_w(C;C_{tr})$	32(-1;-2)
	Sound Transmission Class, STC	32

Table 5: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7110 and IS8011Si seal configuration.

Test Number:	Test 54	
	Sound Transmission Loss Measurements (R-dB)	Octave Band
Centre Frequency (Hz)	1/3 rd Octave Band (dB)	(dB)
100	23.9	26.2
125	27.3	
160	29.1	
200	31.4	32.0
250	32.2	
315	32.6	
400	33.9	32.4
500	33.2	
630	30.8	
800	28.0	28.4
1000	27.3	
1250	30.4	
1600	32.3	34.0
2000	34.0	
2500	36.7	
3150	39.8	40.3
4000	40.3	
5000	40.8	
Average SRI (100-3125Hz; dB)	31.4	
Weighted Sound Reduction Index, R _w (C;C _{tr})	32(-1;-2)	
Sound Transmission Class, STC	32	

Table 6: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7080 and IS8011Si seal configuration.

Test Number:	Test 55	
	Centre Frequency (Hz)	Sound Transmission Loss Measurements (R-dB)
		1/3 rd Octave Band (dB)
	100	22.8
	125	27.6
	160	28.5
	200	30.8
	250	32.5
	315	33.4
	400	33.2
	500	32.9
	630	30.3
	800	27.4
	1000	27.3
	1250	29.0
	1600	32.0
	2000	34.5
	2500	36.6
	3150	38.2
	4000	37.8
	5000	39.9
	Average SRI (100-3125Hz; dB)	31.1
	Weighted Sound Reduction Index, R _w (C;C _w)	32(-1;-2)
	Sound Transmission Class, STC	32
		Octave Band (dB)
		25.5
		32.1
		31.9
		27.8
		34.0
		38.5

Table 7: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8100Si seal configuration – perimeter fully caulked, seal in retracted position.

Test Number:	Centre Frequency (Hz)	Test 56	
		Sound Transmission Loss Measurements (R-dB)	Octave Band Measurements (R-dB)
	100	20.8	
	125	25.4	23.6
	160	27.3	
	200	29.7	
	250	26.3	27.1
	315	26.0	
	400	27.1	
	500	26.6	26.6
	630	26.2	
	800	27.5	
	1000	30.3	29.8
	1250	33.7	
	1600	36.6	
	2000	38.4	38.2
	2500	40.3	
	3150	42.4	
	4000	44.0	43.8
	5000	45.4	
	Average SRI (100-3125Hz; dB)	30.3	
	Weighted Sound Reduction Index, $R_w(C;C_{tr})$	32(-1;-3)	
	Sound Transmission Class, STC	32	

Table 8: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8100Si seal configuration – perimeter caulked, threshold uncaulked, seal in operational position.

Test Number:	Test 57	
	Sound Transmission Loss Measurements (R-dB)	Octave Band Measurements (R-dB)
Centre Frequency (Hz)	1/3 rd Octave Band (dB)	Octave Band (dB)
100	18.7	
125	24.8	22.2
160	28.7	
200	29.6	
250	26.7	28.0
315	28.0	
400	28.9	
500	28.1	27.9
630	27.0	
800	28.5	
1000	30.5	30.4
1250	33.6	
1600	36.3	
2000	37.9	37.7
2500	39.4	
3150	38.8	
4000	36.4	37.6
5000	38.0	
Average SRI (100-3125Hz; dB)	30.3	
Weighted Sound Reduction Index, $R_w(C;C_{tr})$	32(0;-2)	
Sound Transmission Class, STC	33	

Table 9: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8010Si seal configuration – perimeter caulked, seal in retracted position.

Test Number:	Test 58	
	Sound Transmission Loss Measurements (R-dB)	Octave Band (dB)
Centre Frequency (Hz)	1/3 rd Octave Band (dB)	
100	18.4	
125	24.7	21.8
160	27.0	
200	30.1	
250	26.3	27.1
315	25.8	
400	27.3	
500	27.3	27.4
630	27.4	
800	28.3	
1000	30.6	30.3
1250	33.7	
1600	36.5	
2000	38.2	38.1
2500	40.6	
3150	42.9	
4000	44.5	44.2
5000	45.7	
Average SRI (100-3125Hz; dB)	30.3	
Weighted Sound Reduction Index, R _w (C;C _{tr})	32(-1;-3)	
Sound Transmission Class, STC	33	

Table 10: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8010Si seal configuration – perimeter caulked, threshold uncaulked, seal in operational position.

Test Number:	Test 59	
	Centre Frequency (Hz)	Sound Transmission Loss Measurements (R-dB)
		1/3 rd Octave Band (dB)
	100	17.5
	125	25.2
	160	29.6
	200	29.7
	250	27.3
	315	28.0
	400	28.6
	500	28.5
	630	26.9
	800	28.3
	1000	29.9
	1250	33.4
	1600	35.9
	2000	38.0
	2500	39.8
	3150	40.9
	4000	41.2
	5000	43.2
		Octave Band (dB)
		21.4
		28.2
		27.9
		30.1
		37.6
		41.6
	Average SRI (100-3125Hz; dB)	30.5
	Weighted Sound Reduction Index, $R_w(C;C_w)$	32(0;-3)
	Sound Transmission Class, STC	33

Table 11: Sound Transmission Loss Measurements (R-dB) based on Laboratory Measurements on a 35mm solid core door leaf installed into steel frame – fully caulked both sides.

Test Number:	Test 60	
	Sound Transmission Loss Measurements (R-dB)	Sound Transmission Loss Measurements (R-dB)
Centre Frequency (Hz)	1/3 rd Octave Band (dB)	Octave Band (dB)
100	19.7	
125	23.5	21.5
160	22.2	
200	26.2	
250	23.0	24.5
315	24.8	
400	24.3	
500	23.7	24.5
630	25.8	
800	27.4	
1000	29.5	29.3
1250	32.3	
1600	35.0	
2000	37.1	36.8
2500	39.5	
3150	41.2	
4000	42.5	42.3
5000	43.7	
Average SRI (100-3125Hz; dB)	28.5	
Weighted Sound Reduction Index, R _w (C;C _{tr})	30(0;-3)	
Sound Transmission Class, STC	31	

4. APPENDIX I: TESTING METHOD AND DESCRIPTION

7.1 TESTING FACILITIES

Testing has been carried out in accordance with International Standard ISO140-3:1995, Measure of Sound Insulation in Buildings and Building Elements, Part 3: Laboratory Measure of Airborne Sound Insulation of Building Elements and AS1191:1985 Acoustics-Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions. The measuring facilities and method have been registered for certification by an independent, external accreditation authority. Testing has been conducted fully in accordance with the terms of accreditation.

The sound transmission suite consists of a reverberant source room volume of 115.82 cubic metres and a reverberant receiving room of volume 114.73 cubic metres. Both rooms have an irregular geometry featuring a pentagonal floor plan with no two walls parallel, and with non-parallel floors and ceilings. The rooms are constructed of 305mm reinforced concrete, supported on laminated-rubber isolators, and acoustically de-coupled from one another by a 50mm closed cell polyurethane gasket.

The irregular room shape has been chosen to assist in the production of diffuse sound fields. Such diffuseness is further enhanced:

- (a) In the receiving room by the inclusion of nine fixed non-rectangular panels, suspended in the room with random orientation. Six panels each have an area of 1.44 square metres and three each have an area of 1.67 square metres. The total one-sided area of these panel diffusers is 13.65 square metres, being 55.7% of that of the largest single boundary surface (the ceiling).
- (b) In the source room by inclusion of nine fixed non-rectangular polyvinyl chloride panels suspended in the room with random orientation. Four panels each have an area 1.86 square metres, the other five each have an area 1.24 square metres. The total one-sided area of these panel diffusers is 13.64 square metres, being 56.5% of that of the largest single boundary surfaces (the ceiling).

The average sound absorption coefficient of the diffusers and the internal surfaces of the rooms is below 0.06 in each test frequency band.

7.2 PROCEDURES

Testing has been conducted in accordance with the methods of ISO140-3:1995, Measure of Sound Insulation in Buildings and Building Elements, Part 3: Laboratory Measure of Airborne Sound Insulation of Building Elements and AS1191:1985 Acoustics- Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.

Random noise is fed to a single loudspeaker placed in a corner of the source room. In each one-third octave band of centre frequency 100 to 5000 hertz, the mean sound pressure level in each room is found by the use of a microphone connected to a Bruel & Kjaer 2133 real time analyzer. Seven independent locations of the microphone are used in each room, with the signals temporally averaged for the sampling time of 64 seconds.

The equivalent absorption area of the receiving room is determined by measurement of the reverberation time in each one-third octave band, a loudspeaker is placed in one corner of the

receiving room. Seven microphone positions are chosen, with eight decays obtained at each position, between 100 and 5000 hertz. The microphone signal is relayed via a microphone amplifier, to a Bruel & Kjaer 2133 Real Time Analyzer. The analyzer is interfaced to a personal computer. A program running on the personal computer allows the determination of the reverberation time from the sound decays in accordance with AS 1045.

The measuring equipment has been calibrated by an independent external laboratory, and can be traced back to the relevant Australian national measurement standards.

7.3 DETAILS OF MEASUREMENTS

The measured airborne sound transmission loss for each door/seal combination, R dB, at each one-third octave bandwidth of centre frequencies between 100 – 5000 Hz is given in tabular form to the nearest decibel. There are no significant errors in transmission loss values due to flanking transmission, filler wall or background noise. The procedures followed were in accordance with both ISO 140-3:1995, Measure of Sound Insulation in Buildings and Building Elements, Part 3: Laboratory Measure of Airborne Sound Insulation of Building Elements and AS1191:1985 Acoustics- Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.

The Weighted Sound Reduction Index of the sample is determined in accordance with ISO 717-1, Rating of Sound Insulation in Buildings and of Building Elements, Part 1: Airborne Sound Insulation (AS/NZS 1276.1: 1999).

At the request of the client, the Average Sound Reduction Index (SRI) and Sound Transmission Class (STC) were determined. The Average Sound Reduction Index (SRI) is determined through averaging the measured sound transmission loss, R dB, in the frequency range 100-3150Hz. The Sound Transmission Class (STC) is determined in accordance with ASTM E413-87 (1994) (Appendix ZA - AS/NZS 1276.1: 1999).

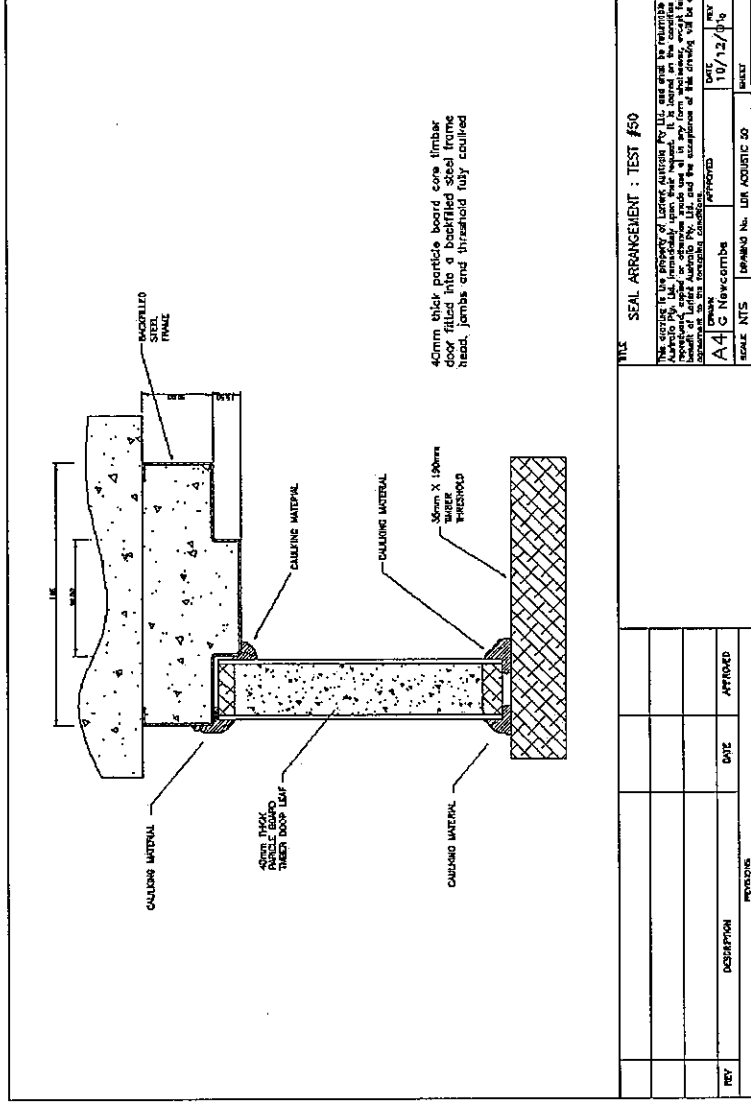
5. APPENDIX II: ENGINEERING DIAGRAMS AND TEST CONDITIONS

TEST 50:

Testing Officer: Peter Dale

Sample Description: 40mm MDF faced particleboard door leaf installed into steel frame – fully caulked both sides.

Description of sample (As provided by the client):



Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 59%.
Send Room: 60%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.04m³.

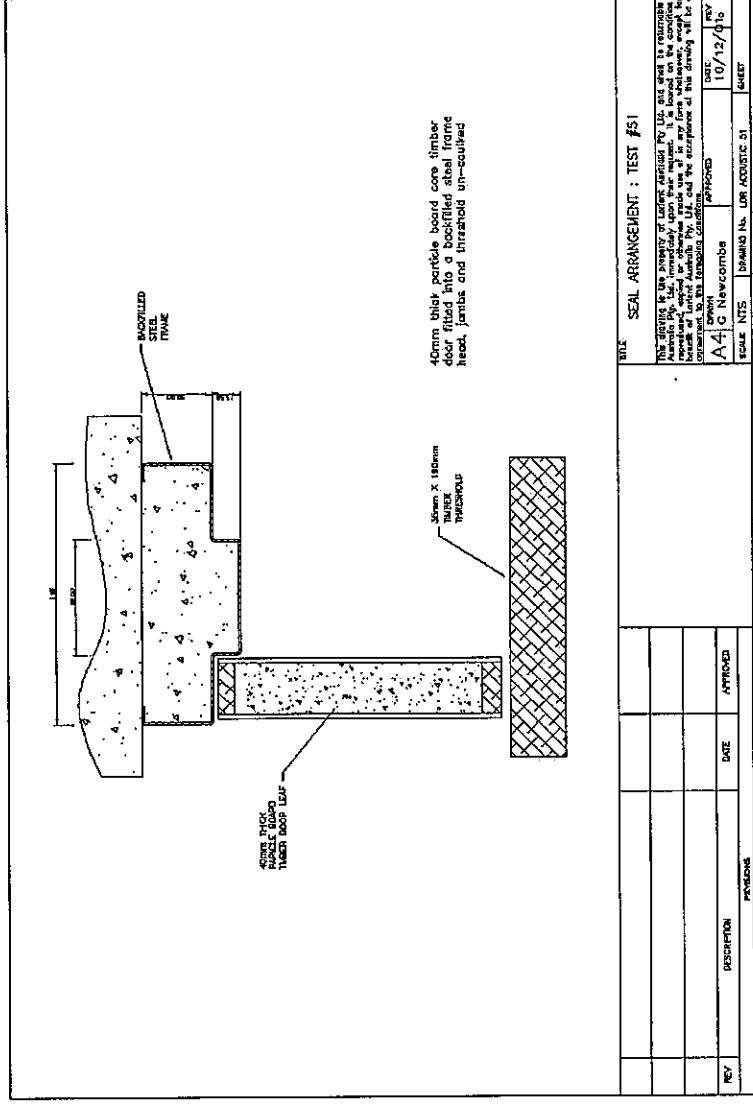
Date of test: 29/11/2001

TEST 51:

Testing Officer: Peter Dale

Sample Description: 40mm MDF faced particleboard door leaf installed into steel frame - uncaulked

Description of sample (As provided by the client).



REV	DESCRIPTION	DATE	APPROVED

SCALE: NTS DRAWING NO. LOR-ACOUSTIC-21 SHEET

TITLE: SEAL ARRANGEMENT - TEST #51

THIS DRAWING IS THE PROPERTY OF LORIENT REPORTS PTY LTD AND WILL BE RETURNED TO THE CLIENT UPON COMPLETION OF THE PROJECT. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF LORIENT REPORTS PTY LTD.

APPROVED: A. C. Newcombs DATE: 10/12/01 REV: 1

Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 59%.
Send Room: 60%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.04m³.

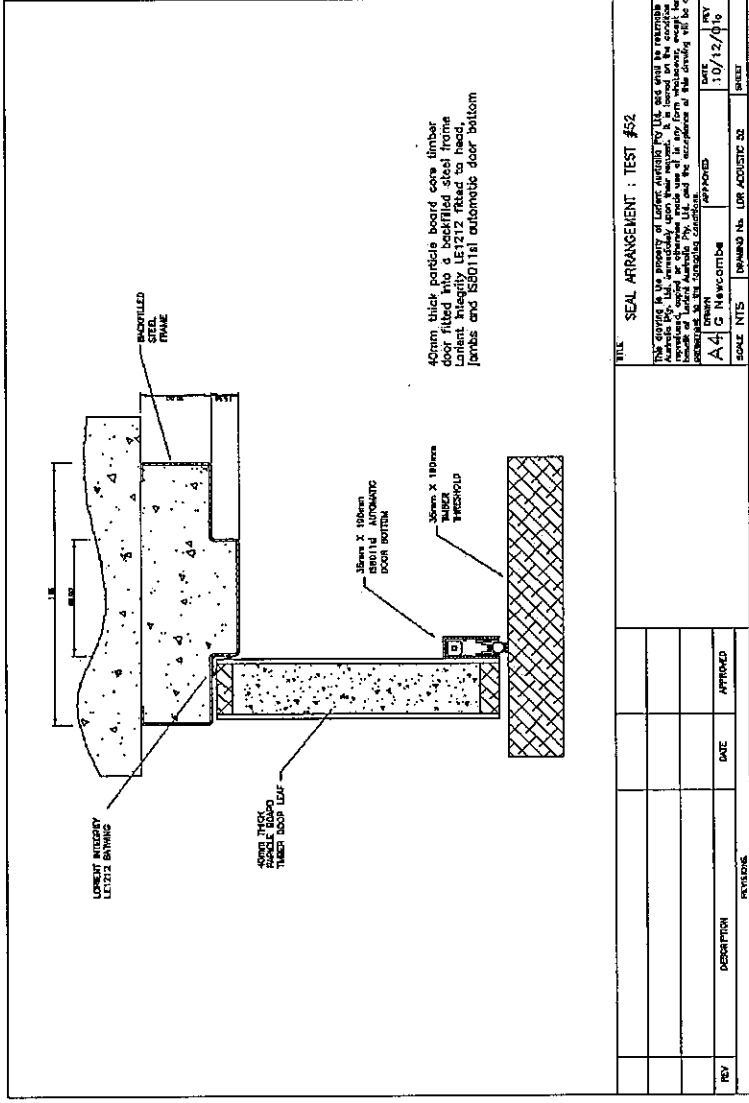
Date of test: 29/11/2001

TEST 52:

Testing Officer: Peter Dale

Sample Description: 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity LE1212 and IS8011SI seal configuration.

Description of sample (As provided by the client).



Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 59%.
Send Room: 60%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.04m³.

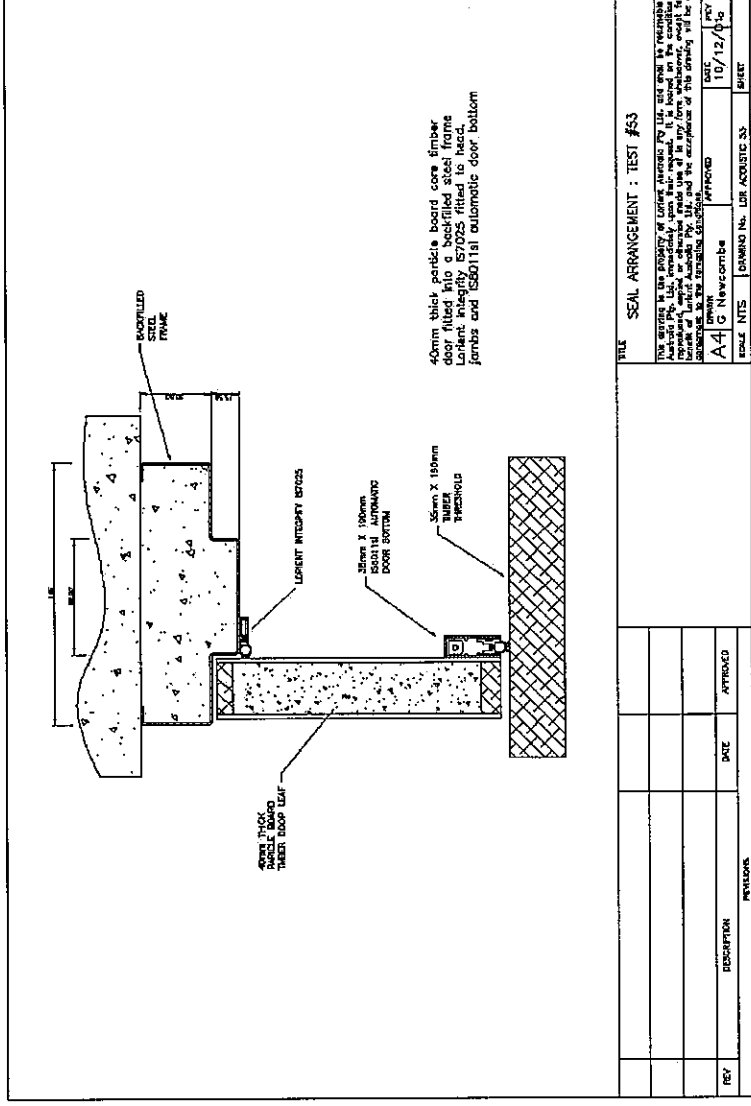
Date of test: 29/11/2001

TEST 53:

Testing Officer: Peter Dale

Sample Description: 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7025 and IS8011Si seal configuration.

Description of sample (As provided by the client).



Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 59%.
Send Room: 60%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.04m³.

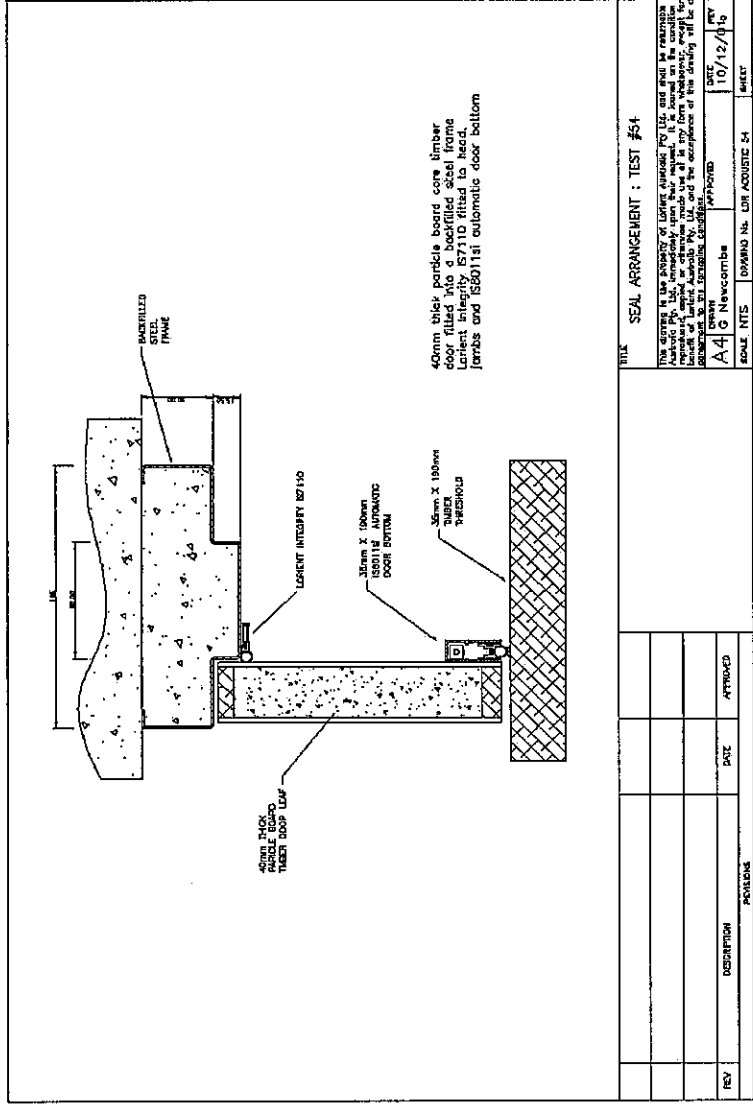
Date of test: 29/11/2001

TEST 54:

Testing Officer: Peter Dale

Sample Description: 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7110 and IS8011Si seal configuration.

Description of sample (As provided by the client).



REV	DESCRIPTION	DATE	APPROVED
A4	G Newcombe	APPROVED	
DATE	10/12/01	REV	
SCALE	NTS	DRAWING NO.	LOR ACOUSTIC 24
SHEET			

FILE SEAL ARRANGEMENT : TEST #54

THIS DRAWING IS THE PROPERTY OF LORIENT AUTOMATIC DOOR LTD. AND SHALL BE RETURNED TO THE COMPANY IMMEDIATELY UPON COMPLETION OF THE PROJECT. NO PARTS OF THIS DRAWING OR INFORMATION CONTAINED HEREIN IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF LORIENT AUTOMATIC DOOR LTD. AND THE ACCEPTANCE OF THIS DRAWING WILL BE CONSIDERED AS AN ACCEPTANCE OF THE TERMS AND CONDITIONS OF THE DRAWING.

Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 62%.
Send Room: 60%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.04m³.

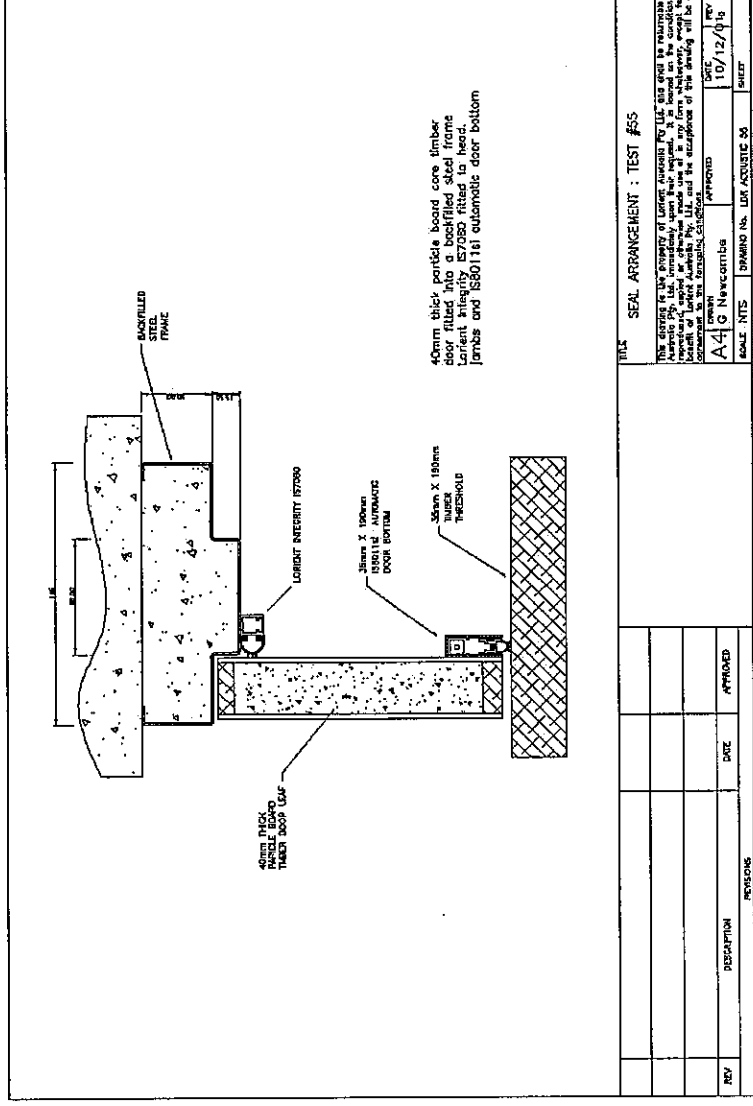
Date of test: 30/11/2001

TEST 55:

Testing Officer: Peter Dale

Sample Description: 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS7080 and IS8011Si seal configuration.

Description of sample (As provided by the client).



Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 62%.
Send Room: 60%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.04m³.

Date of test: 30/11/2001

TEST 56:

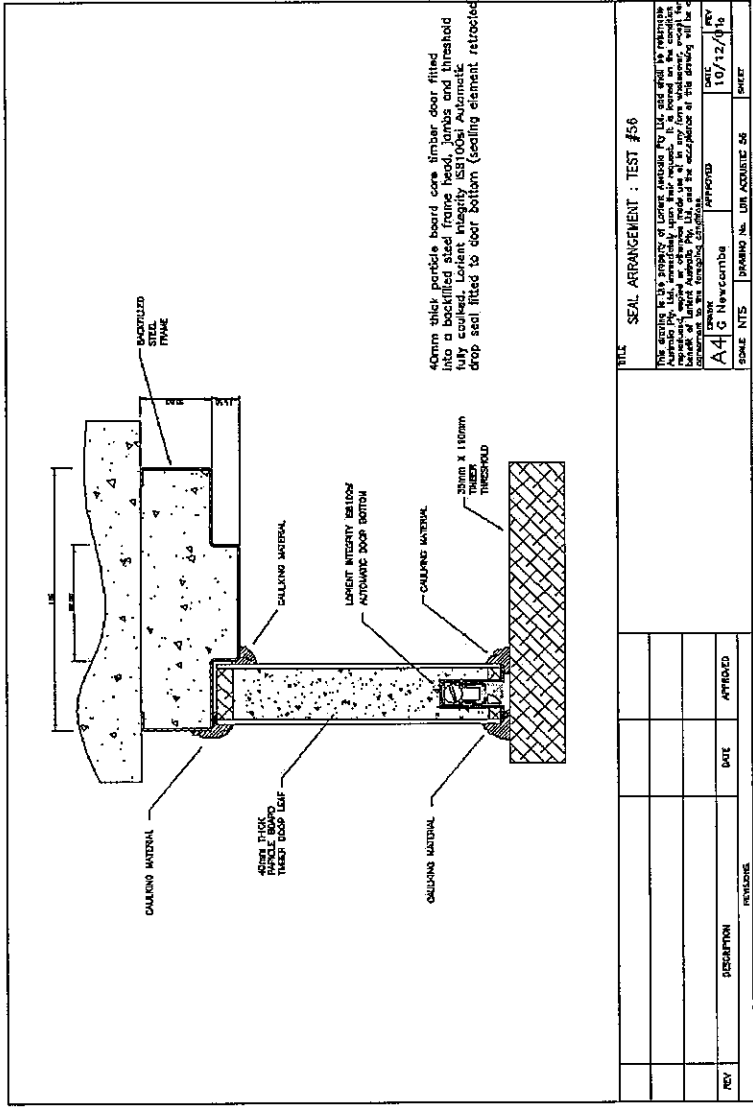
Testing Officer:

Peter Dale

Sample Description:

40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8100Si seal configuration – perimeter fully caulked, seal in retracted position.

Description of sample (As provided by the client).



Dimensions of Sample:

2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample:

2.2351m².

Sample - Test Conditions

Temperature:

Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity:

Receive Room: 62%.
Send Room: 55%.

Room Volume:

Receive room: 120.13m³.
Send Room: 115.04m³.

Date of test:

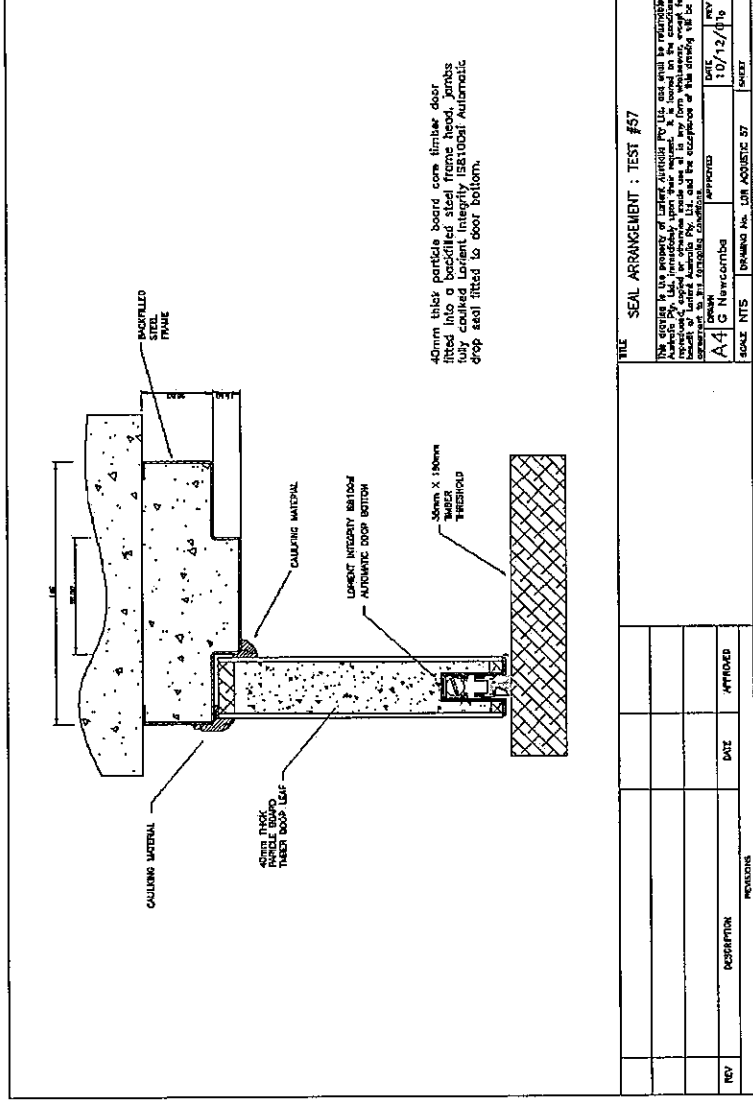
30/11/2001

TEST 57:

Testing Officer: Peter Dale

Sample Description: 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8100Si seal configuration - perimeter caulked, threshold uncaulked, seal in operational position.

Description of sample (As provided by the client).



Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 62%.
Send Room: 55%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.04m³.

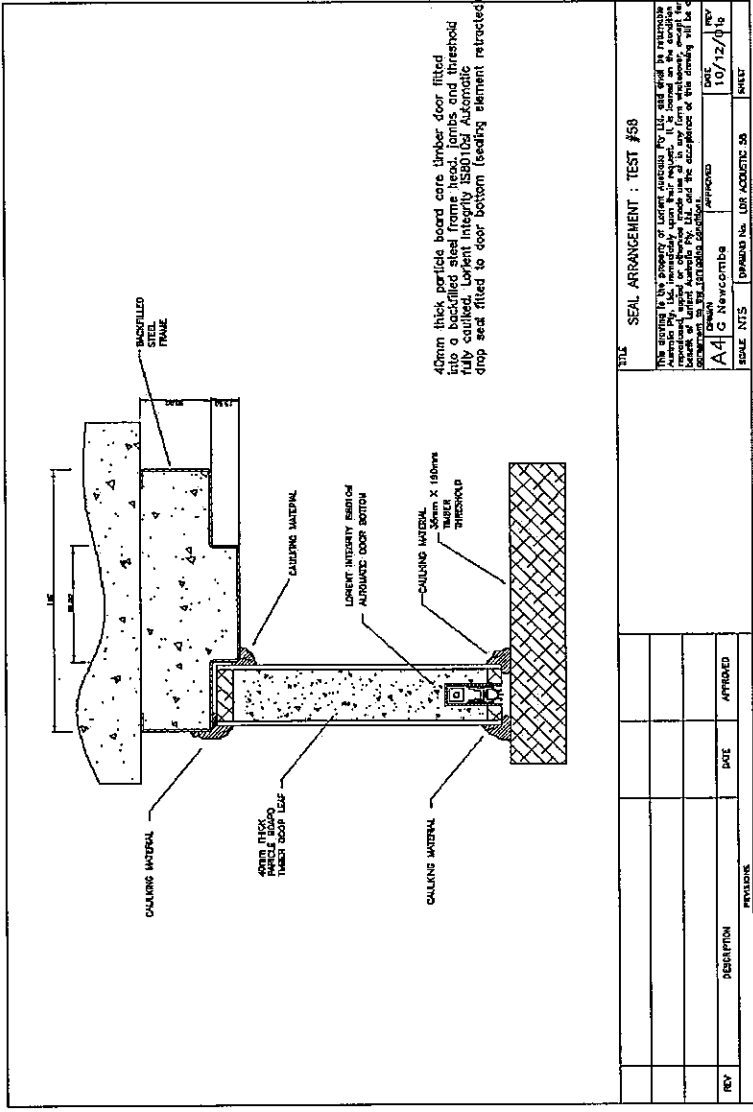
Date of test: 30/11/2001

TEST 58:

Testing Officer: Peter Dale

Sample Description: 40mm MDF faced particleboard door leaf installed into steel frame with Lorient Integrity IS8010Si seal configuration – perimeter caulked, seal in retracted position.

Description of sample (As provided by the client).



Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 62%.
Send Room: 55%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.12m³.

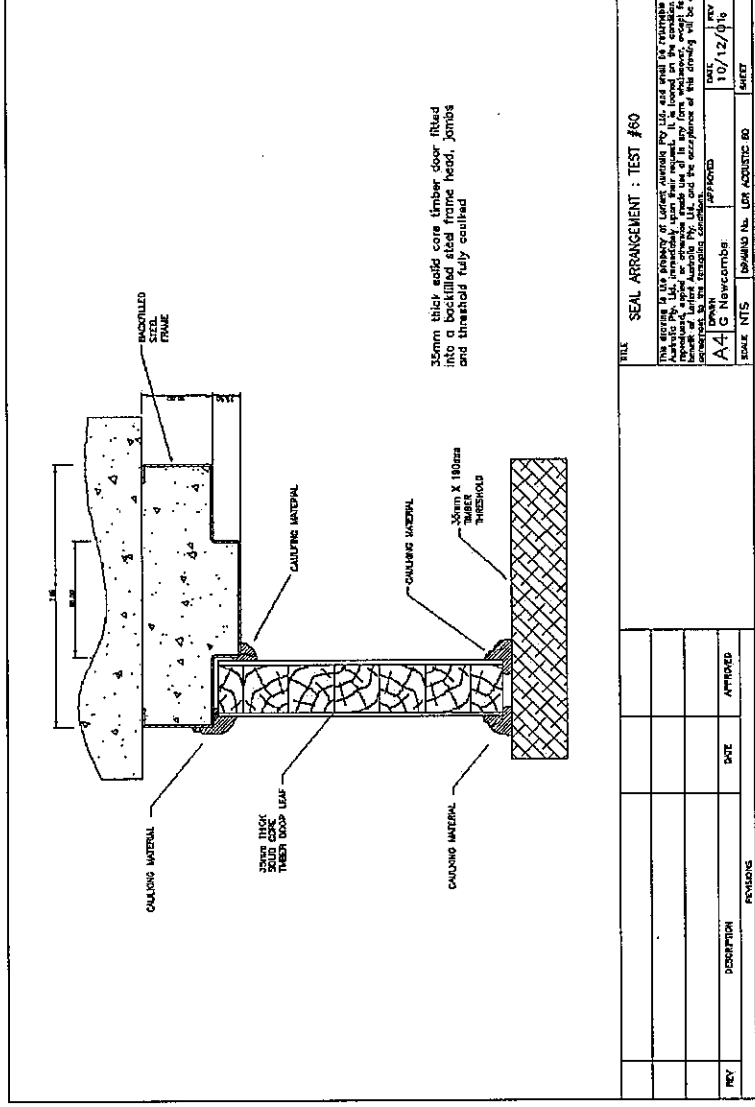
Date of test: 30/11/2001

TEST 60:

Testing Officer: Peter Dale

Sample Description: 35mm solid core door leaf installed into steel frame – fully caulked both sides.

Description of sample (As provided by the client).



Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C, Send Room: 21.0°C.

Humidity: Receive Room: 62%, Send Room: 55%.

Room Volume: Receive room: 120.13m³, Send Room: 115.04m³.

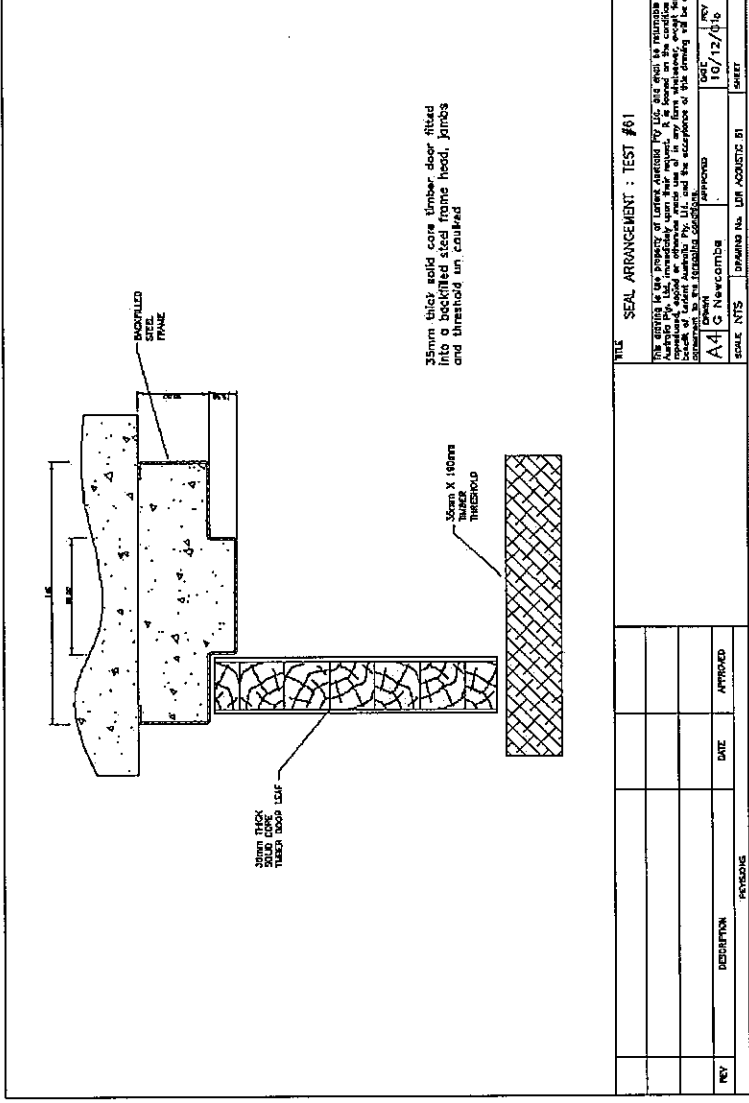
Date of test: 30/11/2001

TEST 61:

Testing Officer: Peter Dale

Sample Description: 35mm solid core door leaf installed into steel frame – uncaulked.

Description of sample (As provided by the client).



Dimensions of Sample: 2170 mm high x 1540 mm wide. Door including mounting frame

Size of sample: 2.2351m².

Sample - Test Conditions

Temperature: Receive Room: 21.0°C.
Send Room: 21.0°C.

Humidity: Receive Room: 62%.
Send Room: 55%.

Room Volume: Receive room: 120.13m³.
Send Room: 115.14m³.

Date of test: 30/11/2001