TEST REPORT

Report No.: G7972.01-303-44

Rendered to:
CR LAURENCE CO., INC.
Vernon, California

PRODUCT TYPE: Woven Stainless Steel Screen – Type III Infill
SERIES/MODEL: 316 SS Black Powder Coat

	Summary of Results
Title	**Test Specimen #1**
AS 5041 Section 8 – Knife Shear Test	Pass

	Summary of Results
Title	**Test Specimen #2**
AS 5041 Section 8 – Knife Shear Test	Pass

	Summary of Results
Title	**Test Specimen #3**
AS 5041 Section 8 – Knife Shear Test	Pass

Reference must be made to Report No. G7972.01-303-44, dated 02/14/17 for complete test specimen description and detailed test results.

1.0 Report Issued To: CR Laurence Co., Inc.
2100 East 38th Street
Vernon, California 90058

2.0 Test Laboratory: Architectural Testing, Inc., an Intertek company ("Intertek-ATI")
25800 Commercentre Drive
Lake Forest, California 92630
949-460-9600

3.0 Project Summary:

3.1 Product Type: Woven Stainless Steel Screen – Type III Infill

3.2 Series/Model: 316 SS Black Powder Coat

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method. Test specimen description and results are reported herein.

3.4 Test Date: 02/07/17

3.5 Test Record Retention End Date: All test records for this report will be retained until February 07, 2022.

3.6 Test Location: Intertek-ATI test facility in Lake Forest, California.

3.7 Test Sample Source: The test specimens were provided by the client. Representative samples of the test specimens will be retained by Intertek-ATI for a minimum of five years from the test completion date.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Intertek-ATI and are representative of the test specimens reported herein. Test specimen construction was verified by Intertek-ATI per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Charles Presley	Intertek-ATI
Jarod S. Hardman	Intertek-ATI

4.0 Test Method:

AS 5041-2003, *Methods of Test-Security Screen Doors and Window Grilles, Section 8 – Knife Shear Test.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Test Specimen #1:

Overall Area: 0.28 m² (3.06 ft²)	**Width**		**Length**	
	millimeters	**inches**	**millimeters**	**inches**
Overall Size	533	21	533	21
Effective Size of Screen	455	17-15/16	455	17-15/16

Test Specimen #2:

Overall Area: 0.28 m² (3.06 ft²)	**Width**		**Length**	
	millimeters	**inches**	**millimeters**	**inches**
Overall Size	533	21	533	21
Effective Size of Screen	455	17-15/16	455	17-15/16

Test Specimen #3:

Overall Area: 0.28 m² (3.06 ft²)	**Width**		**Length**	
	millimeters	**inches**	**millimeters**	**inches**
Overall Size	533	21	533	21
Effective Size of Screen	455	17-15/16	455	17-15/16

5.0 Test Specimen Description: (Continued)

5.2 Screen Description/Dimensions:

Test Specimen #1

Model#	Sample A
Drawing#	PTC629448-03
Gauge	20
Diameter	0.8 mm / 0.03"
Thickness	1.5 mm / 0.06"
Grade	SAE 316
Surface Finish	Powder Coated
Nominal Aperture	1.5 mm / 0.06"
Mass	0.28 kg/m²

Test Specimen #2-3

Model#	Sample B
Drawing#	PTC629448-02
Gauge	20
Diameter	0.8 mm / 0.03"
Thickness	1.5 mm / 0.06"
Grade	SAE 316
Surface Finish	Powder Coated
Nominal Aperture	1.5 mm / 0.06"
Mass	0.28 kg/m²

6.0 Test Results: Calibration of test equipment was performed by Architectural Testing in accordance with ISO/IEC 17025.

Equipment Utilized:

Asset	Asset #	Date of Calibration	Date of Calibration Due
Force Gauge	005555	03/23/2016	03/23/2017
Stopwatch	65068	03/15/2016	03/15/2018
Steel Tape Measure Gauge	64982	03/04/2016	03/04/2018

6.0 Test Results: (Continued)

Test Specimen #1:

Title of Test	Length of Cut	Length of Complete Penetration	New Blade Used	Results	Note
AS 5041 Section 8 Cut #1	5 mm	0 mm	Yes	Pass	1,2
AS 5041 Section 8 Cut #2	2 mm	0 mm	Yes	Pass	1,2
AS 5041 Section 8 Cut #3	7 mm	0 mm	Yes	Pass	1,2

Test Specimen #2:

Title of Test	Length of Cut	Length of Complete Penetration	New Blade Used	Results	Note
AS 5041 Section 8 Cut #1	2 mm	0 mm	Yes	Pass	1,2
AS 5041 Section 8 Cut #2	5 mm	0 mm	Yes	Pass	1,2
AS 5041 Section 8 Cut #3	5 mm	0 mm	Yes	Pass	1,2

Test Specimen #3:

Title of Test	Length of Cut	Length of Complete Penetration	New Blade Used	Results	Note
AS 5041 Section 8 Cut #1	2 mm	0 mm	Yes	Pass	1,2
AS 5041 Section 8 Cut #2	2 mm	0 mm	Yes	Pass	1,2
AS 5041 Section 8 Cut #3	20 mm	0 mm	Yes	Pass	1,2

***General Note**: All testing was performed in accordance with the referenced standard.*

***Note 1:** Loads were applied at a draw speed of 6.0±1.0 mm per second.*

***Note 2:** Knife snagged in screen material preventing full cut distance, full horizontal test load of 350 N was applied for 20s.*

Intertek-ATI will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Intertek-ATI for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimens tested. This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For ARCHITECTURAL TESTING, INC.:

Digitally Signed by: Charles Presley II

Charles Presley
Technician

Digitally Signed by: Jarod Hardman

Jarod S. Hardman
Laboratory Manager

JSH:ms

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Photographs (2)
Appendix-B: Drawings (2)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
0	02/14/17	-	Original Issue
1	09/25/17	Full report	Remove reference to specimens #4-5 for inclusion in G7972.02-303-44
1	09/25/17	3	Update specimen descriptions to Sample A and Sample B

Appendix A

Photographs

Photo No. 1
Test rig knife with new blades for each specimen

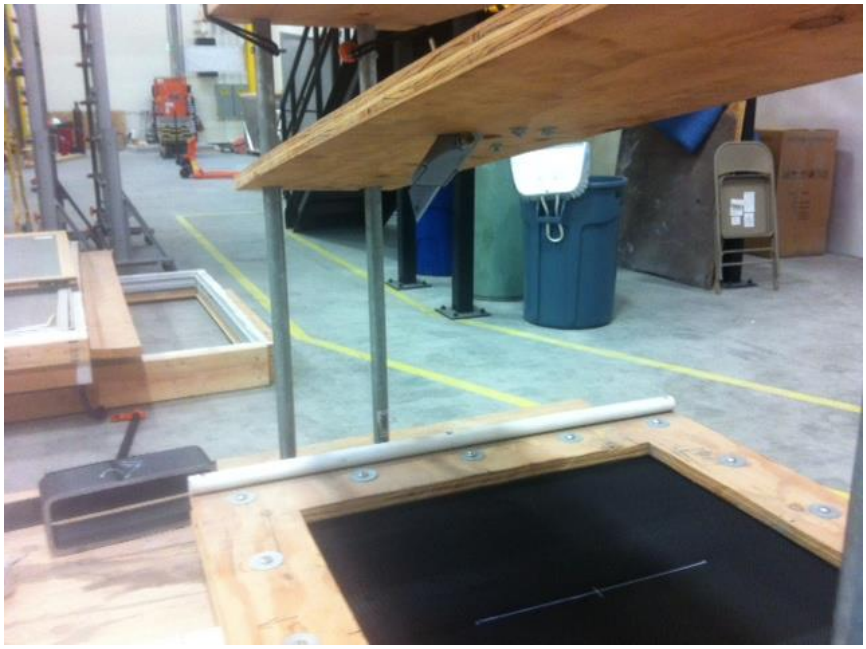


Photo No. 2
Test Specimen #1 after cut number 3

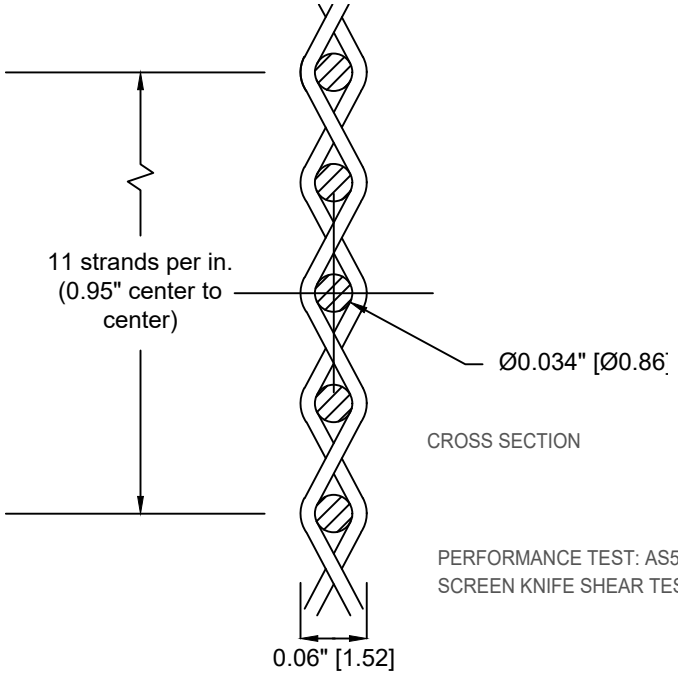
Photo No. 3
Test Specimen #2 after cut number 3

Photo No. 4
Test Specimen #3 after cut number 3

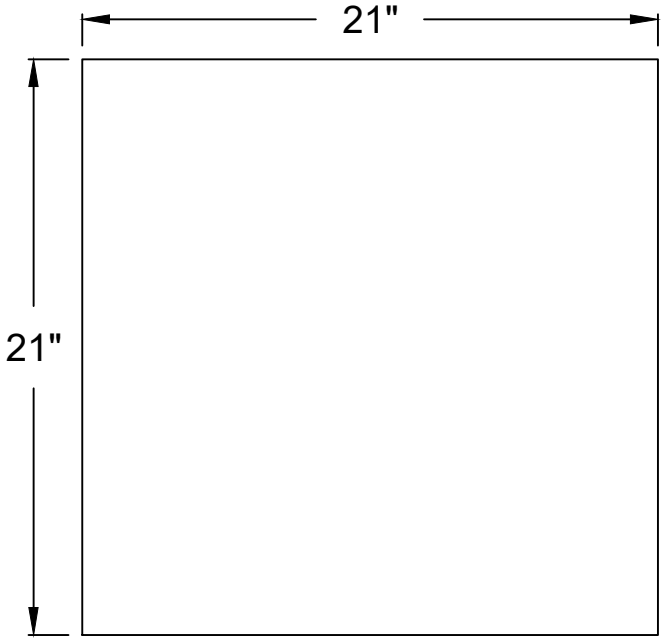
Appendix B

Drawings

PTC629448-02



PERFORMANCE TEST: AS5041 SECTION 8
SCREEN KNIFE SHEAR TEST



BILL OF MATERIALS		
SYMBOL	DESCRIPTION	QTY.
C3	21x21 Woven Mesh 0.86mm 316 Stainless Steel Black Powder Coat	1
C4	21x21 Woven Mesh 0.86mm 316 Stainless Steel Black Powder Coat	1

REV.	DESCRIPTION	DATE	BY
0	Model number change	9-12-17	J.G.

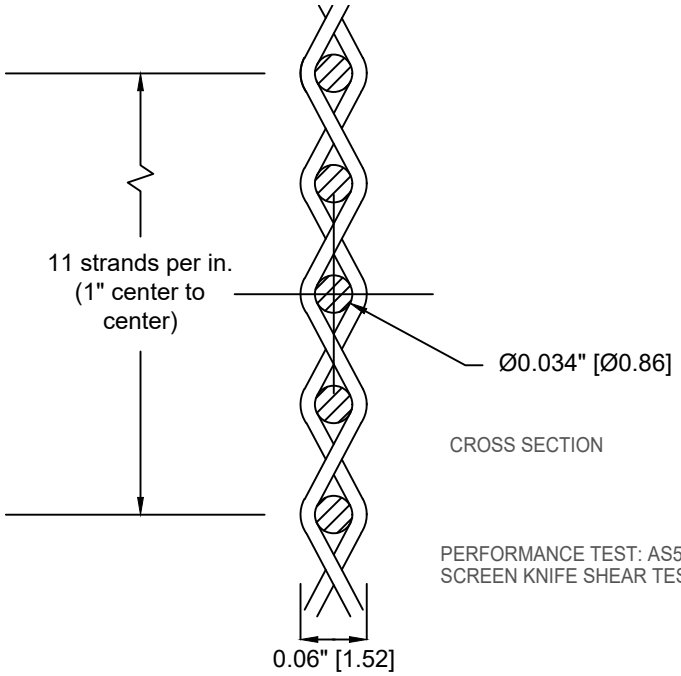
C.R. LAURENCE CO., INC.
PRODUCT TESTING & CERTIFICATION
2100 E. 38TH STREET
LOS ANGELES, CA 90058

DRAWN BY: J.G.
DATE: 2-8-2017
SCALE: N.T.S.

TITLE: SECURITY SCREEN MESH DETAIL (SAMPLE B)

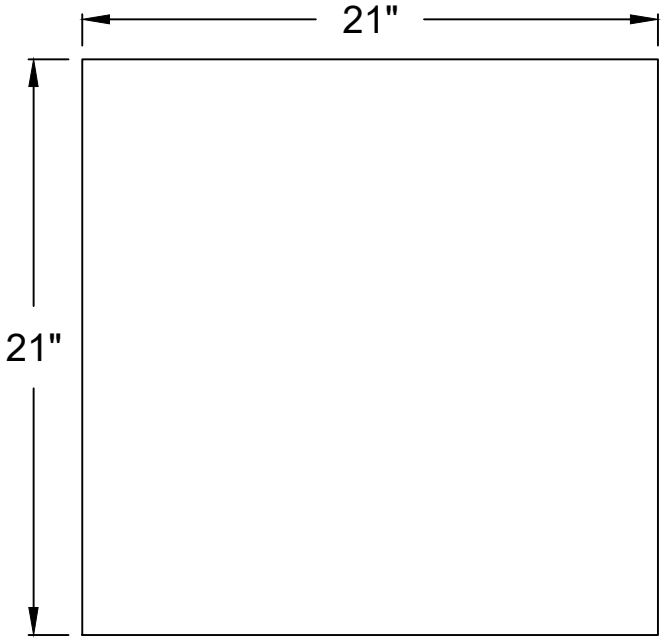
DRAWING NO. PTC629448-02

PTC629448-03



CROSS SECTION

PERFORMANCE TEST: AS5041 SECTION 8
SCREEN KNIFE SHEAR TEST



BILL OF MATERIALS		
SYMBOL	DESCRIPTION	QTY.
F3	21x21 Woven Mesh 0.86mm 316 Stainless Steel Black Powder Coat	1

REV.	DESCRIPTION	DATE	BY
0	Model number change	9-12-17	J.G.

C.R. LAURENCE CO., INC.
PRODUCT TESTING & CERTIFICATION
2100 E. 38TH STREET
LOS ANGELES, CA 90058

DRAWN BY: J.G.
DATE: 2-8-2017
SCALE: N.T.S.

TITLE: SECURITY SCREEN MESH DETAIL (SAMPLE A)

DRAWING NO. PTC629448-03

Sheet No. 3 of Sheets 3