DAYTON T. BROWN INC.
Founded 1950

ENGINEERING AND TEST DIVISION
CHURCH STREET, BOHEMIA, LONG ISLAND, NEW YORK 11716 (631) 589-6300

TEST REPORT NO.: 411067-08-04-R10-2083

DAYTON T. BROWN, INC. JOB NO.: 411067-08-000

CUSTOMER: MEGA FORTRIS GROUP
P.O. BOX 934
DAYTON, NJ 08810

SUBJECT: FREIGHT CONTAINER MECHANICAL SEAL CLASSIFICATION TESTING CONDUCTED ON 25 CABLE SEALS, MODEL NO. MCL350, SERIAL NOS. 000001 THROUGH 000025

PURCHASE ORDER NO.: FTR7270

ATTENTION: MR. ADRIAN NG

PREPARED BY	J. BENINCASA
TEST ENGINEER	G. HYLAND
QUALITY DEPARTMENT	
DATE	5 AUGUST 2010

THE DATA CONTAINED IN THIS REPORT WAS OBTAINED BY TESTING IN COMPLIANCE WITH THE APPLICABLE TEST SPECIFICATION AS NOTED

James Benincasa

Digitally signed by James Benincasa
DN: c=US, st=New York, l=Bohemia, o=Dayton T. Brown, Inc., cn=James Benincasa, email=JBenincasa@dtbtest.com
Date: 2010.08.05 10:55:09 -04'00'

A2LA ACCREDITED

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1.0 ABSTRACT

This test report details the results of freight container mechanical seal classification testing conducted on Cable Seals, under reference (a) to the requirements of reference (c).

Results of the tests are detailed in the following text.

Exceptions/deviations during tests are as follows: None

Test data pertinent to this program will remain on file at Dayton T. Brown, Inc. for 90 days.

The testing and results contained in this report are in accordance with the testing requirements called out in ISO/PAS 17712 and are only applicable to the specific units identified in the test report and do not address any individual manufacturer's compliance or non-compliance with all the requirements of ISO/PAS 17712 which are the sole responsibility of each manufacturer and not part of the testing performed and recorded in this test report.

Dayton T. Brown, Inc. is not involved in any production quality inspections. All tests are based on the samples that are selected by the manufacturer and provided to Dayton T. Brown, Inc. without any Dayton T. Brown, Inc. involvement in said selection.

Dayton T. Brown, Inc. performs testing to ISO/PAS 17712 under laboratory conditions. These tests do not measure and are not intended to measure all possible applications or installations of the seal assembly or components. In that event, the report will describe the particular application tested in detail. Dayton T. Brown, Inc. is not responsible for actual performance of any seal assembly as installed in any application.

This report shall not be reproduced, except in full, without the written approval of Dayton T. Brown, Inc.

2.0 REFERENCES

(a) Customer Purchase Order No.: FTR7270

(b) Dayton T. Brown, Inc. Job No.: 411067-08-000

(c) Test Specifications: ISO/PAS 17712:2006(E)

3.0 SEAL CLASSIFICATION

ISO/PAS 17712:2006(E): (H)-High Security

4.0 ADMINISTRATIVE INFORMATION

Customer	Mega Fortris Group P.O. Box 934 Dayton, NJ 08810
Sample Type	Cable Seal
Sample Name	Cable Lock 350 (as provided by customer)
Model No.	MCL350 (as provided by customer)
Serial Nos.	000001 through 000025
Quantity Received	30
Quantity Tested	25
Date Received	13 July 2010
Dates Tested	14 through 16 July 2010

5.0 TEST PROGRAM OUTLINE

Test	Test Item Description	Results
Tensile	MCL350 Cable Seals, Serial Nos. 000001 through 000005.	See Page 4.
Shear	MCL350 Cable Seals, Serial Nos. 000006 through 000010.	See Page 6.
Bending	MCL350 Cable Seals, Serial Nos. 000011 through 000015.	See Page 8.
Impact	MCL350 Cable Seals, Serial Nos. 000016 through 000025.	See Page 10.
Test Equipment List and Test Item Photo	MCL350 Cable Seal	See Page 13.

6.0 TEST RESULTS

Tensile Test and Results

TEST REQUIREMENT

The tensile test shall be conducted in accordance with reference (c).

TEST RESULTS

A pretest visual inspection of the test items revealed no anomalies.
All testing was performed in accordance with the referenced specification.
Test room ambient conditions: 24.1ºC and 49.4%RH
* A post-test visual inspection of the test items revealed that the cable broke at the lock mechanism due to testing.
** A post-test visual inspection of the test items revealed that the cable broke through the edge of the lock mechanism due to testing.

TEST DATA Date: 16 July 2010

Tensile Test at Room Temperature

Specimen No.	Load kN	Classification Rating	Remarks
000001	11.91	H	*
000002	10.77	H	**
000003	12.52	H	*
000004	12.83	H	*
000005	13.66	H	*

Tech: SD

Classification Key

Rating	Load to Failure
High Security (H):	10.0 kN
Security (S):	2.27 kN
Indicative (I):	<2.27 kN

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TYPICAL PHOTO OF THE TENSILE TEST SET UP

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Shear Test and Results

TEST REQUIREMENT

The shear test shall be conducted in accordance with reference (c).

TEST RESULTS

A pretest visual inspection of the test items revealed no anomalies.
All testing was performed in accordance with the referenced specification.
Test room ambient conditions: 24.1ºC and 47.1%RH
* A post-test visual inspection of the test items revealed that the cutting blades severed the cable of the seals.

TEST DATA Date: 16 July 2010

Shear Test at Room Temperature

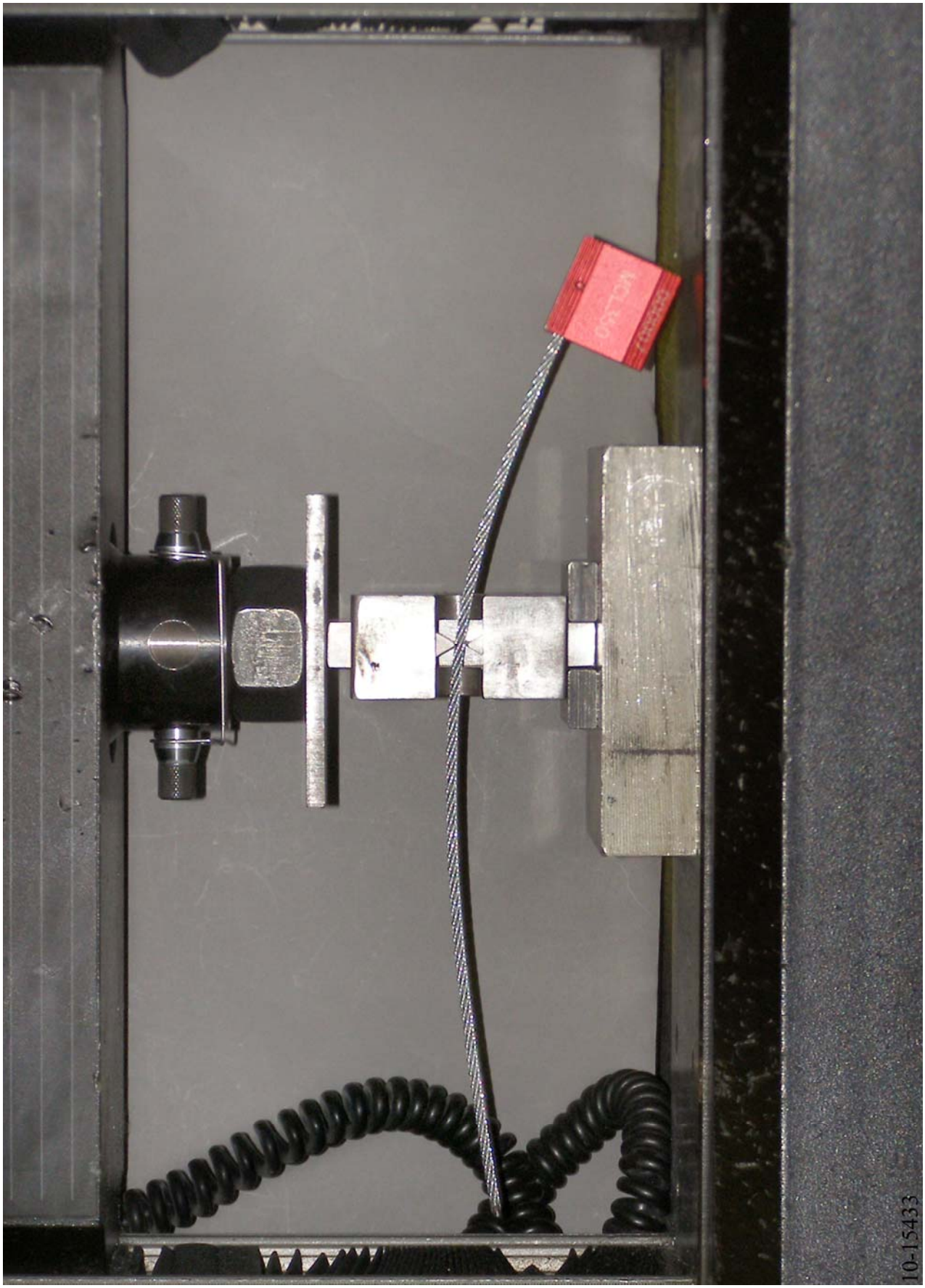
Specimen No.	Load (kg-f)	Classification Rating	Remarks
000006	777.2	H	*
000007	747.0	H	*
000008	793.8	H	*
000009	792.1	H	*
000010	811.5	H	*

Tech: SD

Classification Key

Rating	Load to Failure
High Security: (H):	341 kg-f
Security (S):	227 kg-f
Indicative (I):	<227 kg-f

As per ASTM 1157:2004, page 4, Figure 7 per shear test warning. Do not exceed a shear force greater than 907.2Kg-f (2000lbs). If a specimen does not sever during the application of 907.6Kg-f (2001lbs), halt the test and unload the test equipment. Record shear force of 907.2Kg-f (2000lbs). Do not test specimen to failure. Sudden and violent rupture of the test specimen can endanger personnel, equipment and property.



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TYPICAL PHOTO OF THE SHEAR TEST SET UP

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Bending Test and Results

TEST REQUIREMENT

The bending test shall be conducted in accordance with reference (c).

TEST RESULTS

A pretest visual inspection of the test items revealed no anomalies.
All testing was performed in accordance with the referenced specification.
Test room ambient conditions: 24.2ºC and 48.2%RH
* A post-test visual inspection of the test items revealed no anomalies due to testing.

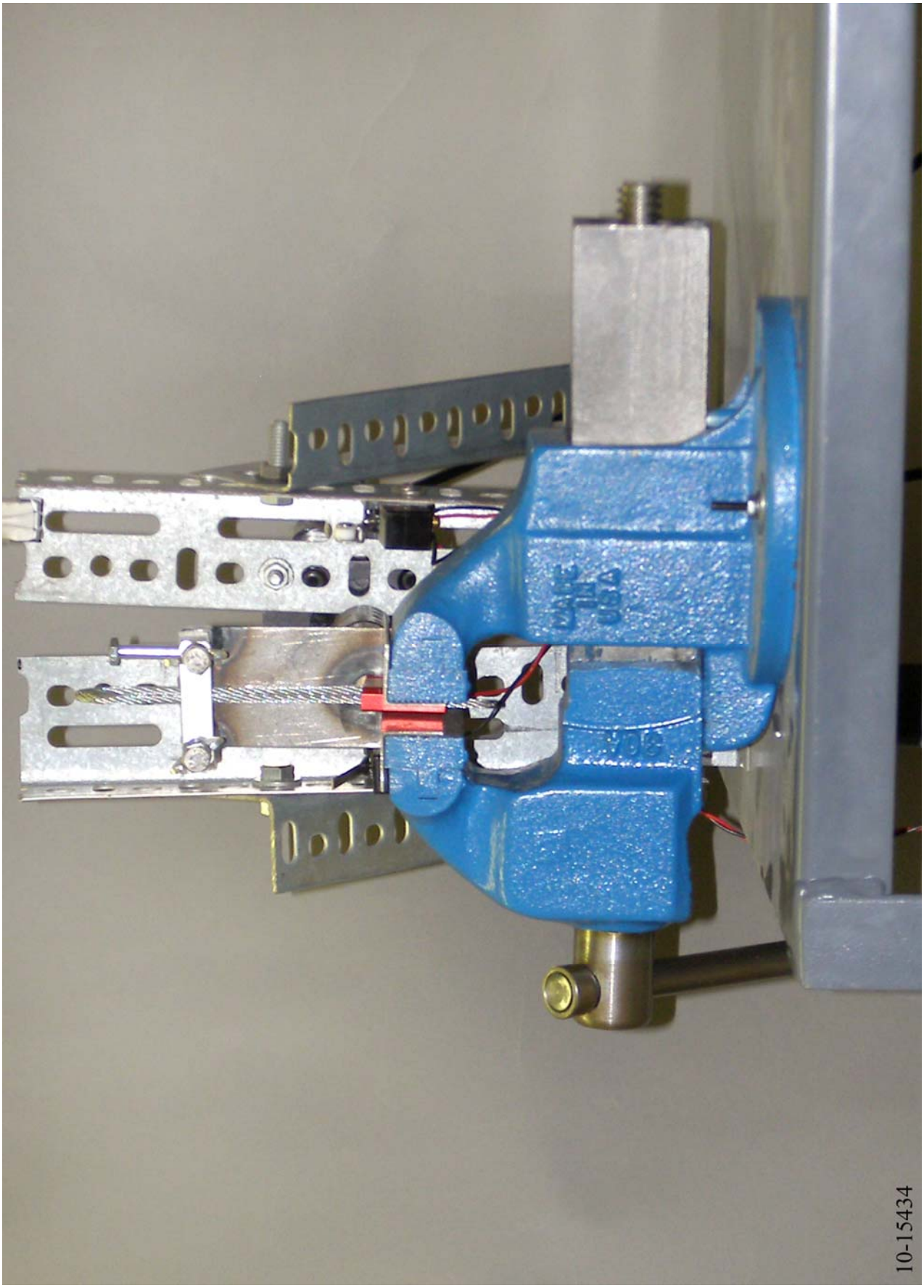
TEST DATA Date: 16 July 2010

Bending Test at Room Temperature			
Specimen No.	Flex Cycles	Classification Rating	Remarks
000011	>501	H	*
000012	>501	H	*
000013	>501	H	*
000014	>501	H	*
000015	>501	H	*

Tech: SD

Classification Key

Rating	Flexible Seals Cycles to Failure
High Security (H):	501
Security (S):	251
Indicative (I):	<251



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TYPICAL PHOTO OF THE BENDING TEST SET UP

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Impact Test and Results

TEST REQUIREMENT

The impact test shall be conducted in accordance with reference (c).

TEST RESULTS

A pretest visual inspection of the test items revealed no anomalies.
All testing was performed in accordance with the referenced specification.
* A post-test visual inspection of the test items revealed that portions of the seals deformed due to testing. The cable and lock of the seals remained intact.

TEST DATA Date: 14 July 2010

Impact Test at 18ºC

Specimen No.	Number of Successful Impacts Per Load (J) 13.56	27.12	40.68	Classification Rating	Remarks
000016	5	5	5	H	*
000017	5	5	5	H	*
000018	5	5	5	H	*
000019	5	5	5	H	*
000020	5	5	5	H	*

Tech: SD

Classification Key

Rating	Load to Failure (5 impacts at each load)
High Security (H):	40.68 J
Security (S):	27.12 J
Indicative (I):	<27.12 J

Impact Test and Results

TEST DATA – (Continued) Date: 15 July 2010

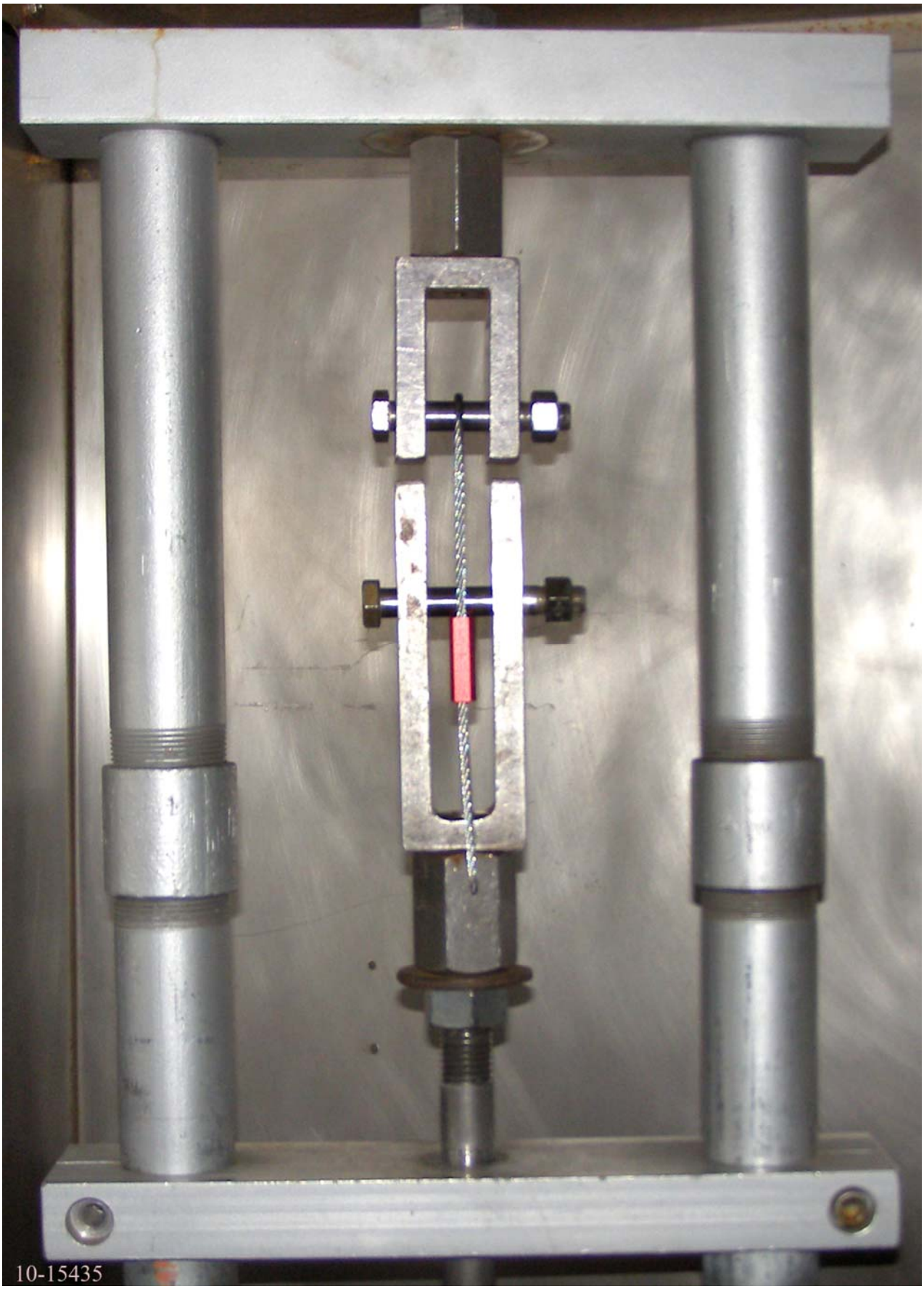
Impact Test at -27ºC

Specimen No.	Number of Successful Impacts Per Load (J) 13.56	27.12	40.68	Classification Rating	Remarks
000021	5	5	5	H	*
000022	5	5	5	H	*
000023	5	5	5	H	*
000024	5	5	5	H	*
000025	5	5	5	H	*

Tech: SD

Classification Key

Rating	Load to Failure (5 impacts at each load)
High Security (H):	40.68 J
Security (S):	27.12 J
Indicative (I):	<27.12 J



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TYPICAL PHOTO OF THE IMPACT TEST SET UP

14 JULY 2010

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Test equipment utilized for the program reported herein was within its assigned interval of calibration. Details are on file at Dayton T. Brown, Inc. and will be made available upon request.

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TEST: **FREIGHT CONTAINER MECHANICAL SEAL CLASSIFICATION TESTING**

Item	Manufacturer	Model	DTB No.	Accuracy	Last Cal Date	Cal Due Date
THERMOTRON, 275	THERMOTRON	FX-82-CHV-25-25	04E-006	N/A	06/10/1997	N.C.R.
CONDITIONING ROOM	DAYTON T. BROWN	N/A	04S-001	N/A	-	N.C.R.
RECORDER, CHART TRULINE	HONEYWELL	DR4500	12-12	TYPE T ± 0.7°F	09/21/2009	09/19/2010
LOGGER, RH AND TEMPERATURE	HART SCIENTIFIC	1620A	12-39	59 TO 95°F ± 0.75°F; 10 TO 70% RH ± 2% RH	11/23/2009	11/21/2010
CONTROLLER, ENVIRONMENTAL SYSTEM	JC SYSTEMS	620	25-55	RTD ± 1.08°F, RH ± 1% RH	03/23/2010	09/19/2010
TESTER, UNIVERSAL TENSILE	INSTRON	5569	29-2	± 1% OF READING	10/19/2009	10/17/2010
WEIGHT, DEAD BLOW	DAYTON T. BROWN	JB-1	38-55	0.01 KGRAMS	05/03/2010	04/29/2012
IMPACT TESTER, FREIGHT CONTAINER MECHANICAL SEAL	DAYTON T. BROWN	ISO/PAS 17712	61-10	N/A	-	N.C.R.
GAUGE, DIGITAL FORCE 50 LBS. FULL SCALE	CHATILLON	DFS-050	61-8	VENDOR	07/06/2010	07/03/2011
CALIPER, DIGIMATIC 4"	MITUTOYO	CD-4" CS	68-273	± .0005"	06/02/2010	05/29/2011
PROTRACTOR, DIGITAL	PRO PRODUCTS	PRO 3600	68-279	± 0.2° OF RANGE	04/13/2010	04/10/2011
FIXTURE, SHACKLE CUTTING AND 2 BLADES	DAYTON T. BROWN	ISO TC 104	68-390	MFR	06/18/2010	06/12/2011

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MODEL NO. MCL350 CABLE SEAL

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FILE NO. 10-15436

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