

1175 CHURCH STREET • BOHEMIA, LONG ISLAND, NEW YORK 11716
AREA CODE 631 589-6300



10 September 2012
412943-00-04-C12-0926

Certificate of Conformance for Freight Container Mechanical Seal Testing

Seal Classification: High Security

Customer: S.L.R "OLIMP"
Calea Basarabei 28/2
Chisinau
MD-2002

Attention: Stanislav Pomelnicov

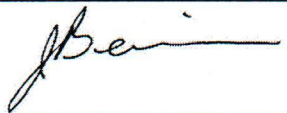

Purchase Order No.: 001/19-07-2012
Sample Type: Cable Seal
Seal Name: Security Seal "TITAN" (as provided by customer)
Model No.: B20 (as provided by customer)
Part No.: 1P (as provided by customer)
Serial Nos.: 0000001 through 0000025
Specification No.: ISO 17712:2010(E) Clause: 5
Test Dates: 31 August and 10 September 2012

Dayton T. Brown, Inc. certifies that 25 samples, 5 for each test, of the Seals referenced above, were subjected to the following tests.

Test Name	Paragraph No.	Classification Rating
Tensile Test	5.2	High Security
Shear Test	5.3	High Security
Bending Test	5.4	High Security
Impact Test at Room Temp	5.5	High Security
Impact Test at Reduced Temp	5.5	High Security

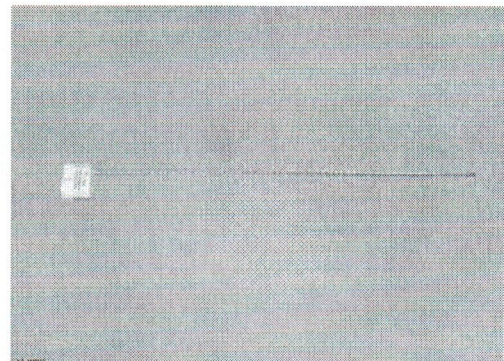
Results: The above listed tests were completed with no discrepancies noted. Refer to Test Report No. 412943-00-04-R12-0927 for complete details.

The test results contained herein pertain only to the specimens listed in this report. This report shall not be reproduced, except in full, without the written approval of Dayton T. Brown, Inc.

Prepared by:		J. Benincasa
Engineer:		S. Benza

James Benincasa

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Brown, Inc., cn=James Benincasa
Date: 2012.09.13 15:55:15 -04'00'





ENGINEERING AND TEST DIVISION
1175 CHURCH STREET, BOHEMIA, LONG ISLAND, NEW YORK 11716 (631) 589-6300

TEST REPORT NO.: 412943-00-04-R12-0927


DAYTON T. BROWN, INC. JOB NO.: 412943-00-000

CUSTOMER: S.L.R "OLIMP"
CALEA BASARABEI 28/2
CHISINAU
MD-2002

SUBJECT: FREIGHT CONTAINER MECHANICAL SEAL CLASSIFICATION TESTING
PER ISO 17712:2010 (E) CLAUSE 5,
CONDUCTED ON 25 CABLE SEALS, MODEL NO. B20,
SERIAL NOS. 0000001 THROUGH 0000025

PURCHASE ORDER NO.: 001/19-07-2012

ATTENTION: STANISLAV POMELNICOV

PREPARED BY	 J. BENINCASA
TEST ENGINEER	 S. BENZA
DATE	11 SEPTEMBER 2012

INFORMATION CONTAINED HEREIN MAY BE SUBJECT TO EXPORT CONTROL LAWS. REFER TO INTERNATIONAL TRAFFIC IN ARMS REGULATION (ITAR) OR THE EXPORT ADMINISTRATION REGULATION (EAR) OF 1979

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

James
Benincasa

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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: The room ambient temperature deviated from the specified tolerance during the tensile, bend and shear tests. The temperature went 1.4°C over tolerance.

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 17712:2010 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 17712:2010 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 17712:2010 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.

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2.0 REFERENCES

- (a) Customer Purchase Order No.: 001/19-07-2012
- (b) Dayton T. Brown, Inc. Job No.: 412943-00-000
- (c) Test Specifications: ISO 17712:2010 (E) Clause 5

3.0 SEAL CLASSIFICATION

ISO 17712:2010 (E): (H)-High Security for Clause 5

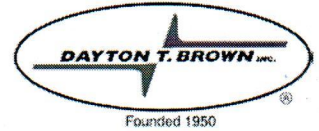


4.0 ADMINISTRATIVE INFORMATION

Customer	S.L.R "OLIMP" Calea Basarabei 28/2 Chisinau MD-2002
Sample Type	Cable Seal
Sample Name	Security Seal "TITAN" (as provided by customer)
Model No.	B20 (as provided by customer)
Part No.	1P (as provided by customer)
Serial Nos.	0000001 through 0000025
Quantity Received	30
Quantity Tested	25
Date Received	30 July 2012
Dates Tested	31 August and 10 September 2012

5.0 TEST PROGRAM OUTLINE

Test	Test Item Description	Results
Tensile	Model No. B20 Cable Seals, Serial Nos. 0000001 through 0000005.	See Page 4.
Shear	Model No. B20 Cable Seals, Serial Nos. 0000006 through 0000010.	See Page 6.
Bending	Model No. B20 Cable Seals, Serial Nos. 0000011 through 0000015.	See Page 8.
Impact	Model No. B20 Cable Seals, Serial Nos. 0000016 through 0000025.	See Page 10.
Test Equipment List and Test Item Photo	Model No. B20 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, with the following exception: The temperature went up to 1.4°C over tolerance.

Test room ambient conditions: 22.4°C and 40.6%RH

TEST DATA

Date: 10 September 2012

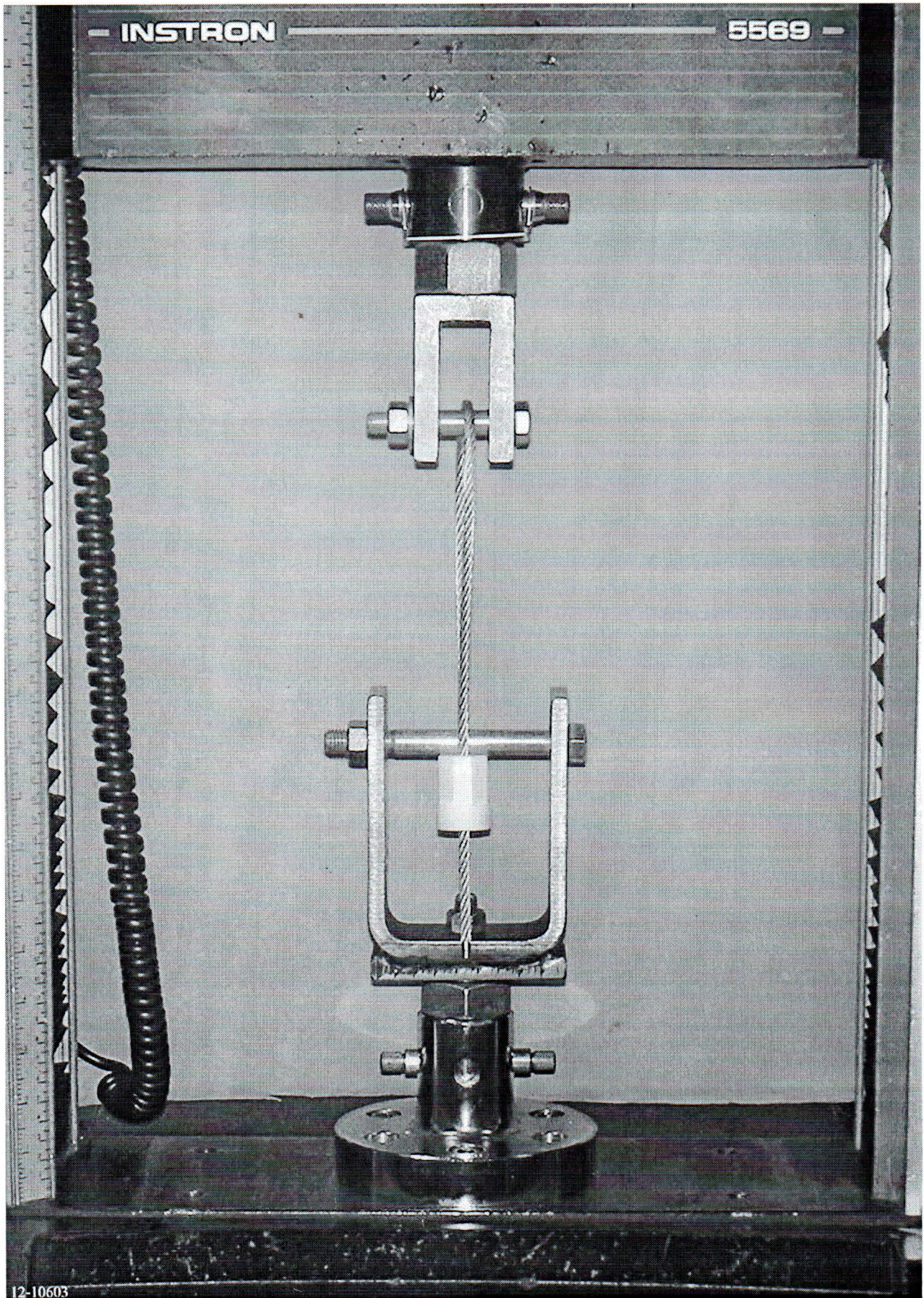
Tensile Test at Room Temperature			
Specimen No.	Load kN	Classification Rating	Remarks
0000001	21.62	H	*
0000002	19.72	H	*
0000003	21.74	H	*
0000004	21.92	H	*
0000005	21.62	H	*

Tech: JB

* A post-test visual inspection of the test items revealed that the cable broke near the lock mechanism due to testing.

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

10 SEPTEMBER 2012

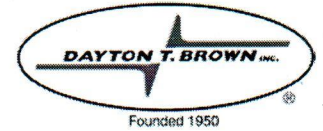
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Shear Test and Results

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, with the following exception: The temperature went up to 1.2°C over tolerance.

Test room ambient conditions: 22.2°C and 38.3%RH

TEST DATA

Date: 10 September 2012

Shear Test at Room Temperature			
Specimen No.	Load (kN)	Classification Rating	Remarks
0000006	8.896	H	*
0000007	8.896	H	*
0000008	8.896	H	*
0000009	8.896	H	*
0000010	8.896	H	*

Tech: JB

* A post-test visual inspection of the test items revealed an indent and a few severed strands of the cable due to testing.

Classification Key

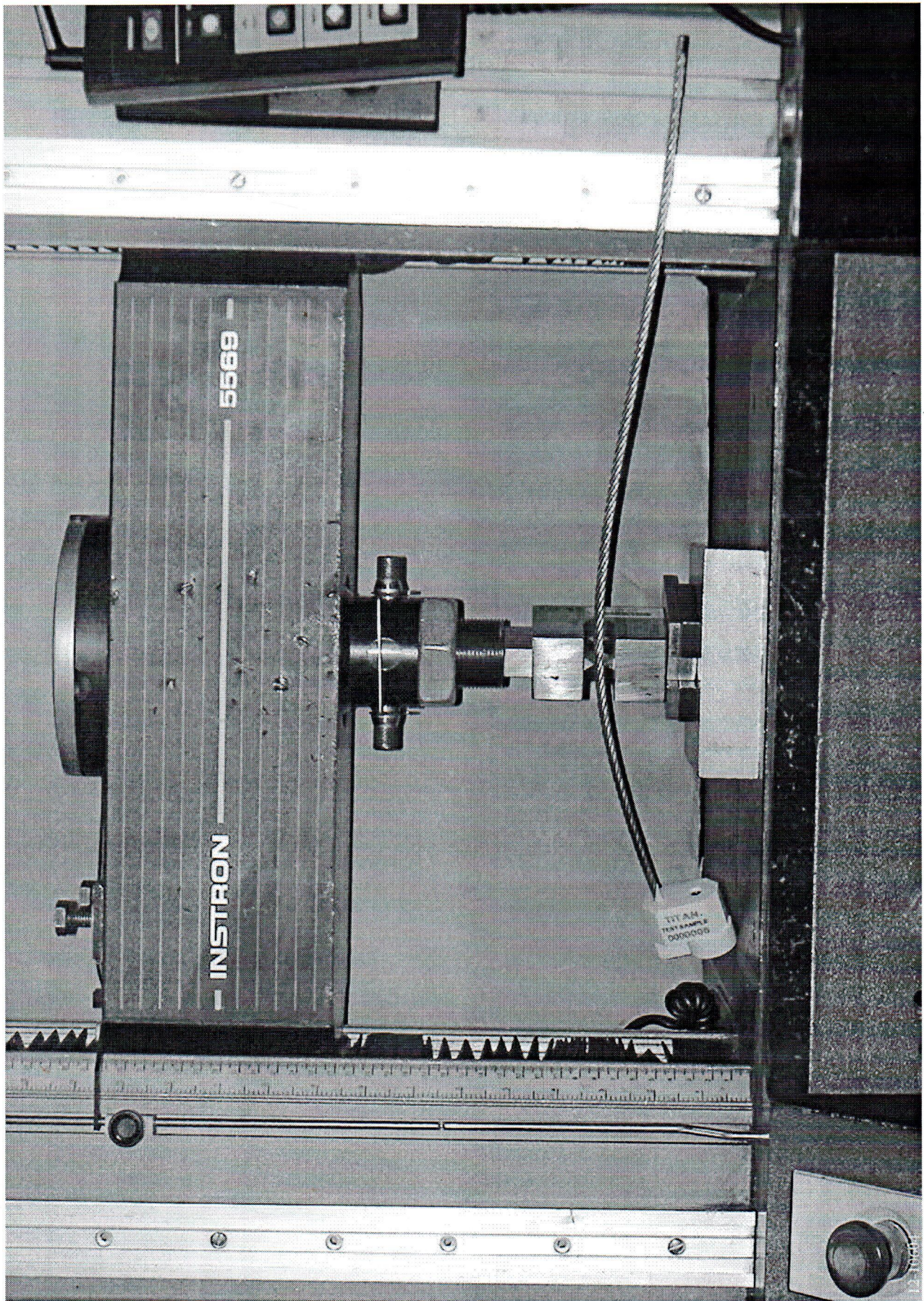
Rating Load to Failure

High Security: (H): 3.336kN

Security (S): 2.224kN

Indicative (I): <2.224kN

SAFETY PRECAUTIONS – Do not exceed a shear force greater than 8900 N (2001 lbf). If the specimen has not failed at that force, halt the test and unload the test equipment. Record a shear force of 8896 N (2000 lbf). 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, with the following exception: The temperature went up to 1.3°C over tolerance.

Test room ambient conditions: 22.3°C and 38.8%RH

TEST DATA

Date: 10 September 2012

Bending Test at Room Temperature			
Specimen No.	Flex Cycles	Classification Rating	Remarks
0000011	>501	H	*
0000012	>501	H	*
0000013	>501	H	*
0000014	>501	H	*
0000015	>501	H	*

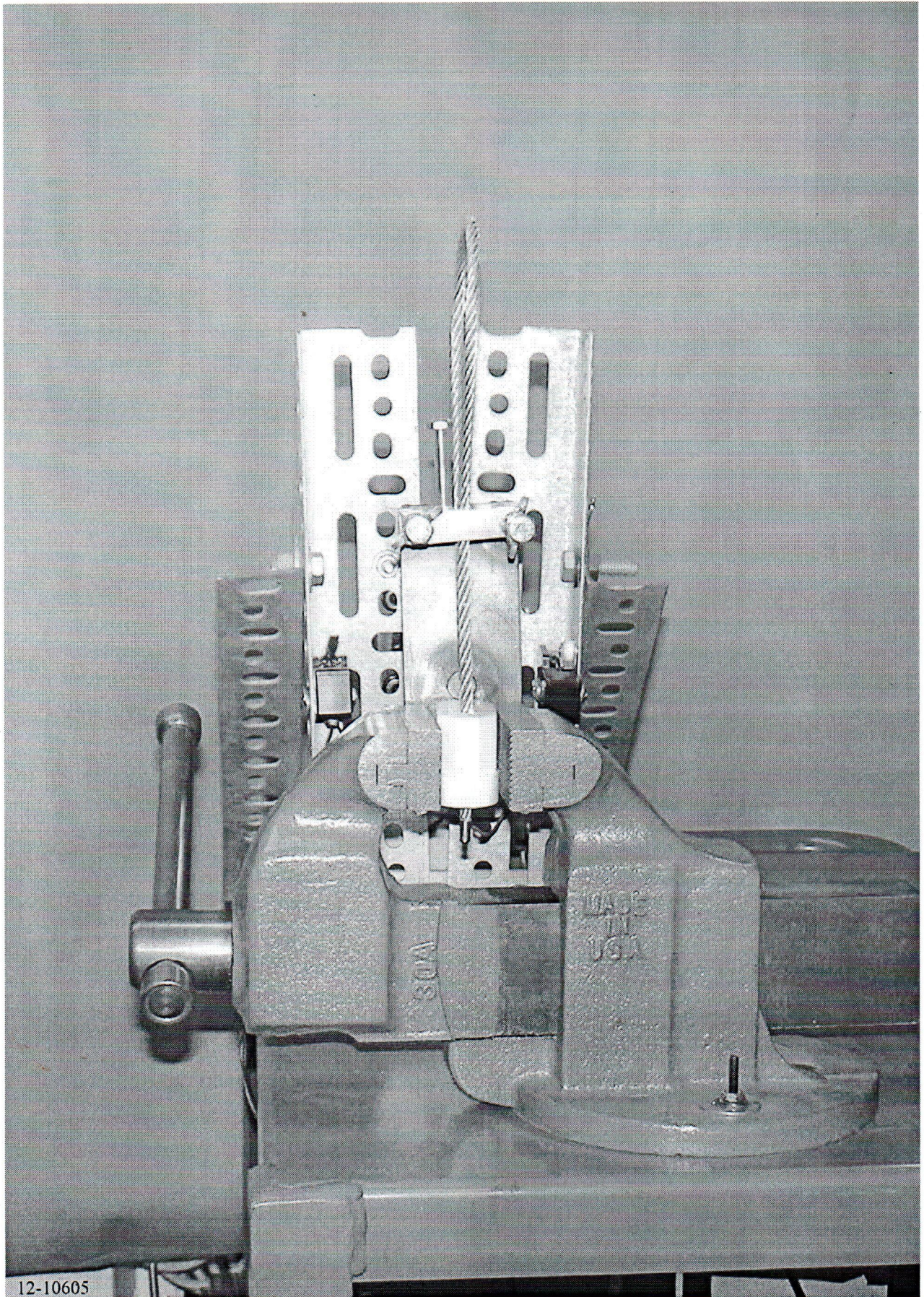
Tech: SD

* A post-test visual inspection of the test items revealed no anomalies due to testing.

Classification Key

Rating Flexible Seals
 Cycles to Failure

High Security (H): 501
Security (S): 251
Indicative (I): <251



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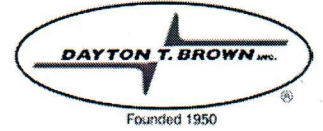
TYPICAL PHOTO OF THE BENDING TEST SET UP

10 SEPTEMBER 2012
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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.

TEST DATA

Date: 31 August 2012

Impact Test at 18°C					
Specimen No.	Number of Successful Impacts Per Load (J)			Classification Rating	Remarks
	13.56	27.12	40.68		
0000016	5	5	5	H	*
0000017	5	5	5	H	*
0000018	5	5	5	H	*
0000019	5	5	5	H	*
0000020	5	5	5	H	*

Tech: AP

* A post-test visual inspection of the test items revealed that portions of the seals broke or deformed due to testing. The cable and lock of the seals remained intact.

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: 31 August 2012

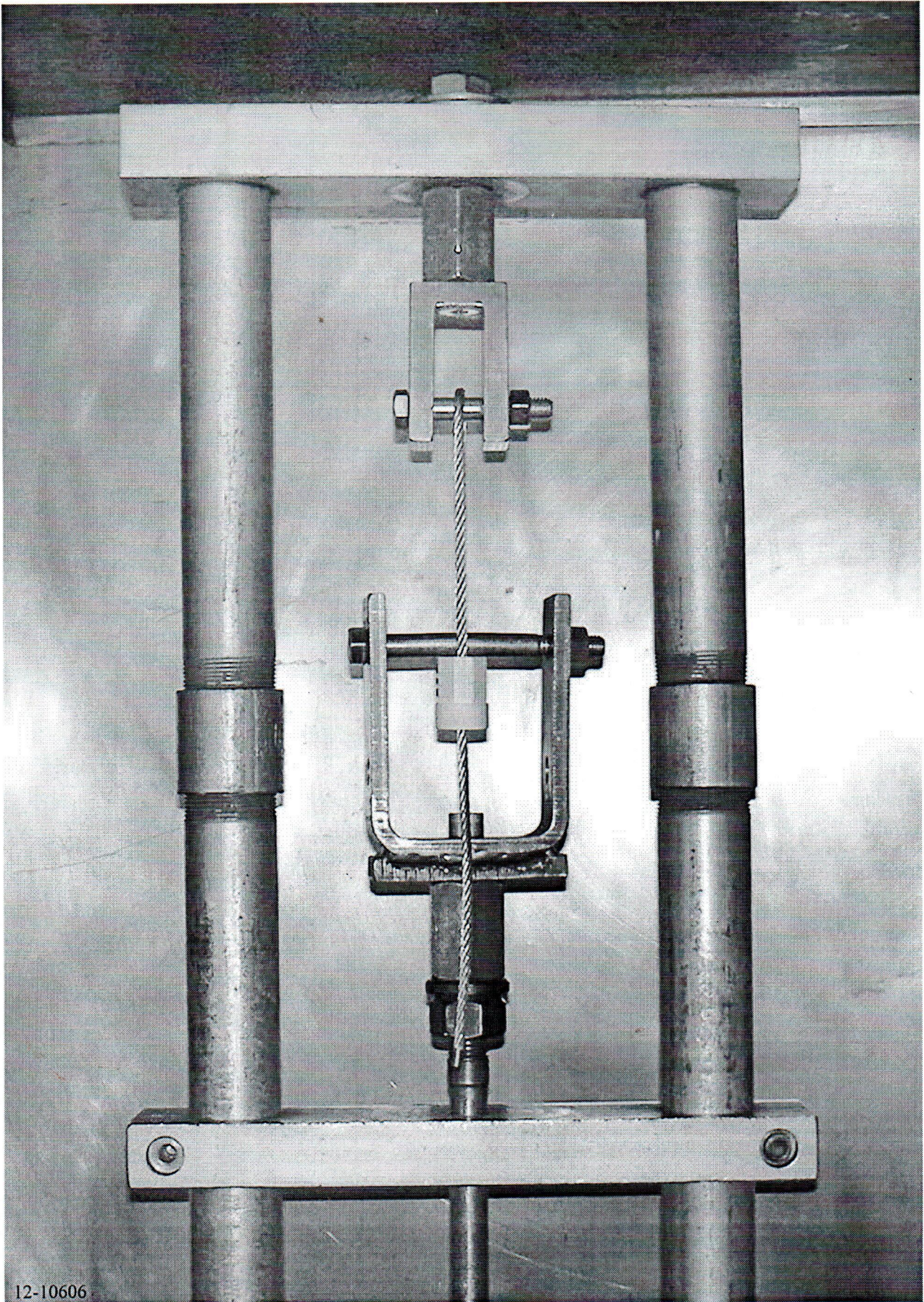
Impact Test at -27°C					
Specimen No.	Number of Successful Impacts Per Load (J)			Classification Rating	Remarks
	13.56	27.12	40.68		
0000021	5	5	5	H	*
0000022	5	5	5	H	*
0000023	5	5	5	H	*
0000024	5	5	5	H	*
0000025	5	5	5	H	*

Tech: AP

* A post-test visual inspection of the test items revealed that portions of the seals broke or deformed due to testing. The cable and lock of the seals remained intact.

Classification Key

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



12-10606

JOB NO. 412943-00-000
412943-00-04-R12-0927

TYPICAL PHOTO OF THE IMPACT TEST SET UP

31 AUGUST 2012

FILE NO. 12-10606



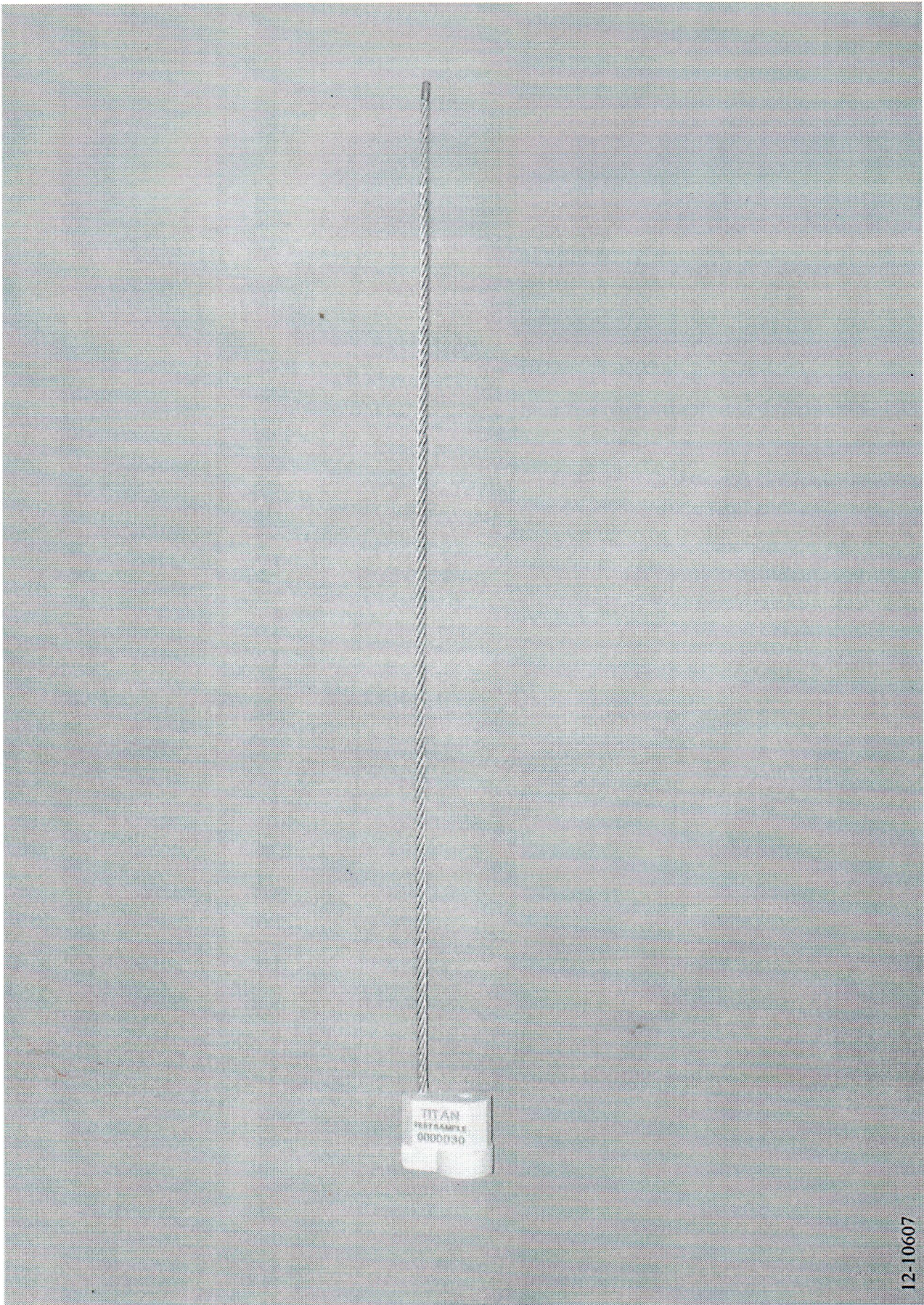
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Test equipment utilized for the program reported herein was within its assigned interval of calibration. Details are on file at Dayton T. Brown, Inc. and will be made available upon request.



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	-	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 $\pm 0.7^{\circ}\text{F}$	09/26/2011	09/23/2012
LOGGER, RH AND TEMPERATURE	HART SCIENTIFIC	1620A	12-39	59 TO 95 $^{\circ}\text{F}$ $\pm 0.75^{\circ}\text{F}$; 10 TO 70% RH $\pm 2\%$ RH	11/17/2011	11/11/2012
CONTROLLER, ENVIRONMENTAL SYSTEM	JC SYSTEMS	620	25-55	RTD $\pm 1.08^{\circ}\text{F}$, RH $\pm 1\%$ RH	03/27/2012	03/24/2013
TESTER, UNIVERSAL TENSILE	INSTRON	5569	29-2	$\pm 1\%$ OF READING	08/26/2011	09/26/2012
WEIGHT, DEAD BLOW	DAYTON T. BROWN	JB-1	38-55	± 0.01 KGRAMS	04/30/2012	04/27/2014
IMPACT TESTER, FREIGHT CONTAINER MECHANICAL SEAL	DAYTON T. BROWN	ISO 17712:2010	61-10	N/A	-	N.C.R.
CALIPER, DIGIMATIC 4"	MITUTOYO	CD-4" CS	68-273	$\pm .0005$ "	06/04/2012	06/02/2013
PROTRACTOR, DIGITAL	PRO PRODUCTS	PRO 3600	68-279	$\pm 0.2^{\circ}$ OF RANGE	04/02/2012	03/31/2013
FIXTURE, SHACKLE CUTTING AND BLADES	DAYTON T. BROWN	ISO 17712:2010	68-318	MFR	04/23/2012	04/21/2013
TAPE MEASURE, 16' X 3/4"	LUFKIN	HV1035CME	68-349	MFR	10/12/2011	N.P.C.R.



12-10607

JOB NO. 412943-00-000

MODEL NO. B20 CABLE SEAL

10 SEPTEMBER 2012

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