

Declaration of Conformity

In Accordance with ANSI/ISEA 125-2014 and ANSI/ASSP Z359.7-2019

Declaration #: DOC-UFT531130

Declaration Date: 09/18/2020

Item #: UFT531130

Description: KStrong® 100 ft. Galvanized Wire Cable Personnel / Material Rated Bi-directional Winch with Brake Feature and Mounting Bracket for Confined Spaces (ANSI)

Brand Name: KStrong

Manufacturer: KStrong

Address: 150 N. Radnor Chester Road, Suite F200, Radnor, PA 19087

**Additional Items Conforming
Under this Declaration (If Applicable):**

KStrong declares that the product(s) listed above is in conformity with the requirements of the following performance standard(s):

ANSI Z359.4-2013

Conformity Assessment Method in accordance with ANSI/ISEA 125-2014



Level 1:

KStrong Lab Outside the Scope of ISO/IEC Standard 17025:2017



Level 2:

KStrong Lab Within the Scope of ISO/IEC Standard 17025:2017



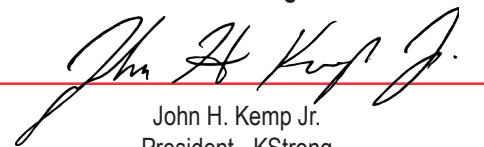
Level 3:

Independent 3rd Party Lab accredited to ISO/IEC Standard 17025:2017

Supporting Documentation: KS-Test-UFT510010.pdf

This Certificate is a guarantee that the above standard(s) was met by the requirements of such standard. Testing was performed under normal operation mode. The results of testing apply only to the particular sample tested and the specific test carried out. This Certificate is only issued for products which have passed the testing requirements of listed standard(s).

Authorized Signature:



John H. Kemp Jr.
President - KStrong

ISO 17025 Accredited Test Laboratory

intertek
Total Quality. Assured.



Intertek Testing Services NA, Inc.
3933 US Rt. 11
Cortland, NY 13045
Tel: 1 607-753-6711
www.intertek.com

Accrediting Agency



A2LA
5202 Presidents Court, Ste 220
Frederick, MD 21703
Tel: 301.644.3248
info@A2LA.org

Test Verification of Conformity

On the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the requirements of the referenced specifications at the time the tests were carried out.

Applicant Name & Address : KStrong Inc
150 N. Radnor Chester Rd
Suite F200
Radnor, PA 19087
USA

Product(s) Tested : Manual Hoist
UFT531130

Model(s) :

Relevant Standard(s)/Specification(s) : ANSI Z359.4-2013 Edition

Verification Issuing Office Name & Address : Intertek Testing Service NA Inc.
3933 US Route 11
Cortland NY 13045

Date of Test(s) : 6/4/20 – 6/8/20

Verification/Report Number(s) : 104359786CRT-001

NOTE : This verification is part of the full test report(s) and should be read in conjunction with it.

This Verification is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to copy or distribute this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this Verification are relevant only to the sample tested. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.



Name: Matthew Stevens

Position: Assoc. Engineer

Date: 8/6/20

A handwritten signature in blue ink, likely of Matthew Stevens, written over a horizontal line.

K Strong Inc.

TEST REPORT

SCOPE OF WORK

ANSI Z359.4 – 2013 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components

REPORT NUMBER

104400142CRT-006

104359786CRT-001 Original Report

ISSUE DATE

8/31/2020

PAGES

14

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TEST REPORT FOR K Strong Inc.

Report No.: 104400142CRT-006

Date Issued: September 18th, 2020

K Strong Inc.
150 N. Radnor Chester Rd
Suite F200
Radnor, PA 19087
USA

TEST STANDARD

ANSI Z359.4 – 2013 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components

AUTHORIZATION

Job Number: 104400142CRT-006
Quote Number: Qu-01088830
Purchase Order Number: None
Purchase Order Date: 12/6/2019

PRODUCT DESCRIPTION

Product type: Manual Hoist / Winch
Brand Name: K Strong Inc.
Model Numbers: UFT531130
Additional Models Covered: None

SAMPLE INFORMATION

Dates Tested: 6/4/2020 – 6/8/2020
Dates Samples Received: 5/28/20

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Date: September 18th, 2020**SECTION 1****TEST PLAN SUMMARY**

The following tests were identified as applicable under the scope of this report. These tests were conducted to determine compliance with the minimum test requirements ANSI Z359.4 – 2013 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components.

SECTION	TEST	TEST DATES	STATUS
3	Design	6/8/20	PASS
4.3.6.1	Static Strength Test, Hoist Line Termination	6/4/20	PASS
4.3.6.2	Static Strength Test, Hoist	6/4/20	PASS
4.3.6.3	Function Test, Force to Raise/Lower (AMBIENT)	6/5/20	PASS
4.3.6.3	Function Test, Force to Raise/Lower (HEAT)	6/8/20	PASS
4.3.6.3	Function Test, Force to Raise/Lower (COLD)	6/8/20	PASS
4.3.6.3	Function Test, Force to Raise/Lower (WET)	6/5/20	PASS
4.3.6.4	Function Test, Slippage (AMBIENT)	6/5/20	PASS
4.3.6.4	Function Test, Slippage (HEAT)	6/8/20	PASS
4.3.6.4	Function Test, Slippage (COLD)	6/8/20	PASS
4.3.6.4	Function Test, Slippage (WET)	6/5/20	PASS
4.3.6.5	Function Test, Primary Brake (AMBIENT)	6/5/20	PASS
4.3.6.5	Function Test, Primary Brake (HEAT)	6/8/20	PASS
4.3.6.5	Function Test, Primary Brake (COLD)	6/8/20	PASS
4.3.6.5	Function Test, Primary Brake (WET)	6/5/20	PASS
4.3.6.9	Function Test, Secondary Brake (AMBIENT)	6/5/20	PASS
4.3.6.9	Function Test, Secondary Brake (HEAT)	6/8/20	PASS
4.3.6.9	Function Test, Secondary Brake (COLD)	6/8/20	PASS
4.3.6.9	Function Test, Secondary Brake (WET)	6/5/20	PASS
8.2.2	Line Constituent of Hoist – Wire Rope	6/4/20	PASS
8.2.1	Corrosion Protection	6/5/20	PASS
5	Marking and Instructions	6/8/20	PASS

SECTION 2**CONCLUSION**

The results illustrated in this report are for use and evaluation by the client, within the scope of the limitation statement. This test report completes our portion of the evaluation of your product based on tests identified.

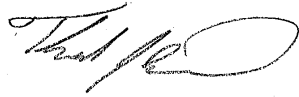
The UFT531130 identified and manufactured by K Strong Inc has met the above testing requirements identified as applicable for minimum performance requirements defined in ANSI Z359.4 – 2013 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components.

Date: September 18th, 2020**Project
Owner:**

Theodore Brown

Title:

Technician

Signature:**Date**

9/18/2020

**Project
Reviewer:**

Matthew Stevens

Title:

Associate Engineer

Signature**Date:**

9/18/2020

SECTION 3**TEST EQUIPMENT INFORMATION****TEST EQUIPMENT:**

Used for Test	Description	Manufacturer	Control No.	Model No.	Serial No.	Cal. Date	Cal. Due
X	Drop Test Structure	Intertek	T1223	NA	NA	NA	NA
X	Tape Measure	Stanley	N1407	25'	NA	9/26/19	9/26/20
X	Force Gauge	Shimpo	T1564	-	-	9/16/19	9/16/20
X	Load Cell	Interface	L099	25K	NA	10/9/19	10/9/20

SECTION 4**SYSTEM VERIFICATION INFORMATION**

SYSTEM VERIFICATION PRIOR TO TESTING			
THE SYSTEM INCLUDES:	Load Cell (L099)	NI Input Card	Labview Program
Attach weight to load cell		Weight (lbs) = 300.2	
Attach weight to load cell		Weight (lbs) = 375.4	
Record Weight		Weight Recorded (lbs) = 300.2	
Record Weight		Weight Recorded (lbs.) = 375.4	
Completed by and Date:		By: TB	Date: 6/4/20

Date: September 18th, 2020**SECTION 5****ANSI Z359.4 – 2013 TEST DATA**

Section (Test)	Requirement	Results	Compliance								
4.3.6.1	Static Strength Test, Hoist Line Termination. The static tensile strength test equipment shall be as specified in 4.1.6. Apply a load of 3,100 pounds (13.8kN) using the static tensile test equipment to the winding drum connection and maintain this load for a period of one minute. Release the load and evaluate the hoist in accordance with 3.2.8.4. the hoist shall sustain a static load equal to four times the maximum capacity of the hoist for a period of at least one minute. Following this static test, the hoist shall successfully complete the tests conducted in accordance with 4.3.6.2 and 4.3.6.3.	<table><tr><th>Sample</th><th>Sustain Load?</th></tr><tr><td>1</td><td>YES</td></tr><tr><td>2</td><td>YES</td></tr><tr><td>3</td><td>YES</td></tr></table> Notes:	Sample	Sustain Load?	1	YES	2	YES	3	YES	PASS
Sample	Sustain Load?										
1	YES										
2	YES										
3	YES										
4.3.6.2	Static Strength Test, Hoist The static tensile strength test equipment shall be as specified in 4.1.6. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. The hoist shall be prepared for the test by fixing the input shaft or mechanism such that the load will be transmitted through the entire hoist drive train from the input to the winding drum. All brakes, including the primary brake shall be disengaged. Apply a load using the static tensile test equipment equal to four times the maximum capacity of the hoist via the hoist line and maintain this load for a period of one minute. Release the load and rotate or activate the hoist input to produce movement of the drum equal to one quarter of the total drive train reduction and repeat the static test. Following the static test, conduct the function, slippage test in 4.3.6.4 and the function test, primary brake in 4.3.6.5. Compare the results to the requirements of 3.2.8.5.	<table><tr><th>Sample</th><th>Sustain Load?</th></tr><tr><td>1</td><td>YES</td></tr><tr><td>2</td><td>YES</td></tr><tr><td>3</td><td>YES</td></tr></table> Notes:	Sample	Sustain Load?	1	YES	2	YES	3	YES	PASS
Sample	Sustain Load?										
1	YES										
2	YES										
3	YES										

Date: September 18th, 2020

Section (Test)	Requirement	Results	Compliance														
4.3.6.3	Function Test, Force to Raise/Lower. (AMBIENT) The test weight and force measurement gage shall be in accordance with 4.1.2 and 4.1.7 respectively. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to the maximum capacity of the hoist to the end of the hoist line. Using the manual operating means of the hoist, raise the load until it is fully suspended by the hoist line. Using the force measurement gage, measure the force required to raise the load as it would be applied in use by the rescuer. Conduct this measurement three times over one full revolution of the hoist-winding drum. Determine the average of the three measurements and compare this result to the requirements of 3.2.8.5. Using the same procedure as above, determine the force required to lower the load. Compare this result to the requirements of 3.2.8.5.	<table><tr><th>Sample</th><th>Avg Load Required Raise</th></tr><tr><td>1</td><td>16.8 lbf</td></tr></table> Notes: Max Force Applied shall be no greater than 30lbs. <table><tr><th>Sample</th><th>Avg Load Required Lower</th></tr><tr><td>1</td><td>8.5 lbf</td></tr></table>	Sample	Avg Load Required Raise	1	16.8 lbf	Sample	Avg Load Required Lower	1	8.5 lbf	PASS						
Sample	Avg Load Required Raise																
1	16.8 lbf																
Sample	Avg Load Required Lower																
1	8.5 lbf																
4.3.6.3	Function Test, Force to Raise/Lower. (HEAT) The test weight and force measurement gage shall be in accordance with 4.1.2 and 4.1.7 respectively. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to the maximum capacity of the hoist to the end of the hoist line. Using the manual operating means of the hoist, raise the load until it is fully suspended by the hoist line. Using the force measurement gage, measure the force required to raise the load as it would be applied in use by the rescuer. Conduct this measurement three times over one full revolution of the hoist-winding drum. Determine the average of the three measurements and compare this result to the requirements of 3.2.8.5. Using the same procedure as above, determine the force required to lower the load. Compare this result to the requirements of 3.2.8.5.	<table><tr><th>Required Conditions (2hr Min)</th><th>Actual Conditions</th></tr><tr><td>54 C</td><td>54 C</td></tr><tr><td>85% RH</td><td>84.7% RH</td></tr></table> Max Force Applied shall be no greater than 30lbs. <table><tr><th>Sample</th><th>Avg Load Required Raise</th></tr><tr><td>1</td><td>19.93 lbf</td></tr></table> <table><tr><th>Sample</th><th>Avg Load Required Lower</th></tr><tr><td>1</td><td>20.37 lbf</td></tr></table>	Required Conditions (2hr Min)	Actual Conditions	54 C	54 C	85% RH	84.7% RH	Sample	Avg Load Required Raise	1	19.93 lbf	Sample	Avg Load Required Lower	1	20.37 lbf	PASS
Required Conditions (2hr Min)	Actual Conditions																
54 C	54 C																
85% RH	84.7% RH																
Sample	Avg Load Required Raise																
1	19.93 lbf																
Sample	Avg Load Required Lower																
1	20.37 lbf																

Date: September 18th, 2020

Section (Test)	Requirement	Results	Compliance												
4.3.6.3	Function Test, Force to Raise/Lower. (COLD) The test weight and force measurement gage shall be in accordance with 4.1.2 and 4.1.7 respectively. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to the maximum capacity of the hoist to the end of the hoist line. Using the manual operating means of the hoist, raise the load until it is fully suspended by the hoist line. Using the force measurement gage, measure the force required to raise the load as it would be applied in use by the rescuer. Conduct this measurement three times over one full revolution of the hoist-winding drum. Determine the average of the three measurements and compare this result to the requirements of 3.2.8.5. Using the same procedure as above, determine the force required to lower the load. Compare this result to the requirements of 3.2.8.5.	<table><tr><th>Required Conditions (2hr Min)</th><th>Actual Conditions</th></tr><tr><td>-40 C</td><td>-40 C</td></tr></table> Max Force Applied shall be no greater than 30lbs. <table><tr><th>Sample</th><th>Avg Load Required Raise</th></tr><tr><td>1</td><td>17.67 lbf</td></tr></table> <table><tr><th>Sample</th><th>Avg Load Required Lower</th></tr><tr><td>1</td><td>17.97 lbf</td></tr></table>	Required Conditions (2hr Min)	Actual Conditions	-40 C	-40 C	Sample	Avg Load Required Raise	1	17.67 lbf	Sample	Avg Load Required Lower	1	17.97 lbf	PASS
Required Conditions (2hr Min)	Actual Conditions														
-40 C	-40 C														
Sample	Avg Load Required Raise														
1	17.67 lbf														
Sample	Avg Load Required Lower														
1	17.97 lbf														
4.3.6.3	Function Test, Force to Raise/Lower. (WET) The test weight and force measurement gage shall be in accordance with 4.1.2 and 4.1.7 respectively. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to the maximum capacity of the hoist to the end of the hoist line. Using the manual operating means of the hoist, raise the load until it is fully suspended by the hoist line. Using the force measurement gage, measure the force required to raise the load as it would be applied in use by the rescuer. Conduct this measurement three times over one full revolution of the hoist-winding drum. Determine the average of the three measurements and compare this result to the requirements of 3.2.8.5. Using the same procedure as above, determine the force required to lower the load. Compare this result to the requirements of 3.2.8.5.	<table><tr><th colspan="2">Spray Hoist with water for 3 Hours (18 Gal per Hour)</th></tr><tr><td>Time Exposed</td><td>3 Hrs.</td></tr></table> Max Force Applied shall be no greater than 30lbs. <table><tr><th>Sample</th><th>Avg Load Required Raise</th></tr><tr><td>1</td><td>18.4 lbf</td></tr></table> <table><tr><th>Sample</th><th>Avg Load Required Lower</th></tr><tr><td>1</td><td>21.8 lbf</td></tr></table>	Spray Hoist with water for 3 Hours (18 Gal per Hour)		Time Exposed	3 Hrs.	Sample	Avg Load Required Raise	1	18.4 lbf	Sample	Avg Load Required Lower	1	21.8 lbf	PASS
Spray Hoist with water for 3 Hours (18 Gal per Hour)															
Time Exposed	3 Hrs.														
Sample	Avg Load Required Raise														
1	18.4 lbf														
Sample	Avg Load Required Lower														
1	21.8 lbf														

Date: September 18th, 2020

Section (Test)	Requirement	Results	Compliance										
4.3.6.4	Function Test, Slippage. (AMBIENT) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise and lower the load over a distance of at least 10 feet (3m). Observe the hoisting function for any slippage of the load as it is raised or lowered. Conduct this test three times and compare the results with the requirements of 3.2.8.5.	<table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr><tr><td>2</td><td>0 Inches</td></tr><tr><td>3</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Sample	Slippage (In.)	1	0 Inches	2	0 Inches	3	0 Inches	PASS		
Sample	Slippage (In.)												
1	0 Inches												
2	0 Inches												
3	0 Inches												
4.3.6.4	Function Test, Slippage. (HEAT) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise and lower the load over a distance of at least 10 feet (3m). Observe the hoisting function for any slippage of the load as it is raised or lowered. Conduct this test one time and compare the results with the requirements of 3.2.8.5.	<table><tr><th>Required Conditions (2hr Min)</th><th>Actual Conditions</th></tr><tr><td>54 C</td><td>54 C</td></tr><tr><td>85% RH</td><td>84.7% RH</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Required Conditions (2hr Min)	Actual Conditions	54 C	54 C	85% RH	84.7% RH	Sample	Slippage (In.)	1	0 Inches	PASS
Required Conditions (2hr Min)	Actual Conditions												
54 C	54 C												
85% RH	84.7% RH												
Sample	Slippage (In.)												
1	0 Inches												

Date: September 18th, 2020

Section (Test)	Requirement	Results	Compliance								
4.3.6.4	Function Test, Slippage. (COLD) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise and lower the load over a distance of at least 10 feet (3m). Observe the hoisting function for any slippage of the load as it is raised or lowered. Conduct this test one time and compare the results with the requirements of 3.2.8.5.	<table><tr><th>Required Conditions (2hr Min)</th><th>Actual Conditions</th></tr><tr><td>-40 C</td><td>-40 C</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Required Conditions (2hr Min)	Actual Conditions	-40 C	-40 C	Sample	Slippage (In.)	1	0 Inches	PASS
Required Conditions (2hr Min)	Actual Conditions										
-40 C	-40 C										
Sample	Slippage (In.)										
1	0 Inches										
4.3.6.4	Function Test, Slippage. (WET) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise and lower the load over a distance of at least 10 feet (3m). Observe the hoisting function for any slippage of the load as it is raised or lowered. Conduct this test one time and compare the results with the requirements of 3.2.8.5.	<table><tr><th colspan="2">Spray Hoist with water for 3 Hours (18 Gal per Hour)</th></tr><tr><td>Time Exposed</td><td>3hrs</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Spray Hoist with water for 3 Hours (18 Gal per Hour)		Time Exposed	3hrs	Sample	Slippage (In.)	1	0 Inches	PASS
Spray Hoist with water for 3 Hours (18 Gal per Hour)											
Time Exposed	3hrs										
Sample	Slippage (In.)										
1	0 Inches										
			PASS								

Date: September 18th, 2020

Section (Test)	Requirement	Results	Compliance										
4.3.6.5	Function Test, Primary Break. (AMBIENT) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise the load until it is completely suspended and at least 2 feet (0.6m) above the ground. Measure and record the level of the weight relative to the ground (or other fixed reference point). Without raising or lowering the weight from this position, release the operating control of the hoist. Measure and record the new position of the weight and determine the distance the weight traveled following release of control. Conduct this measurement process three times over one full revolution of the hoist-winding drum. Determine the average of the three measurements and compare this result to the requirements of 3.2.8.5.	<table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr><tr><td>2</td><td>0 Inches</td></tr><tr><td>3</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Sample	Slippage (In.)	1	0 Inches	2	0 Inches	3	0 Inches			
Sample	Slippage (In.)												
1	0 Inches												
2	0 Inches												
3	0 Inches												
4.3.6.5	Function Test, Primary Break. (HEAT) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise the load until it is completely suspended and at least 2 feet (0.6m) above the ground. Measure and record the level of the weight relative to the ground (or other fixed reference point). Without raising or lowering the weight from this position, release the operating control of the hoist. Measure and record the new position of the weight and determine the distance the weight traveled following release of control. Conduct this measurement process one time over one full revolution of the hoist-winding drum. compare this result to the requirements of 3.2.8.5.	<table><tr><th>Required Conditions (2hr Min)</th><th>Actual Conditions</th></tr><tr><td>54 C</td><td>54 C</td></tr><tr><td>85% RH</td><td>84.7% RH</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Required Conditions (2hr Min)	Actual Conditions	54 C	54 C	85% RH	84.7% RH	Sample	Slippage (In.)	1	0 Inches	PASS
Required Conditions (2hr Min)	Actual Conditions												
54 C	54 C												
85% RH	84.7% RH												
Sample	Slippage (In.)												
1	0 Inches												

Date: September 18th, 2020

Section (Test)	Requirement	Results	Compliance										
4.3.6.5	Function Test, Primary Break. (COLD) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise the load until it is completely suspended and at least 2 feet (0.6m) above the ground. Measure and record the level of the weight relative to the ground (or other fixed reference point). Without raising or lowering the weight from this position, release the operating control of the hoist. Measure and record the new position of the weight and determine the distance the weight traveled following release of control. Conduct this measurement process one time over one full revolution of the hoist-winding drum. compare this result to the requirements of 3.2.8.5.	<table><tr><th>Required Conditions (2hr Min)</th><th>Actual Conditions</th></tr><tr><td>-40 C</td><td>-40 C</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Required Conditions (2hr Min)	Actual Conditions	-40 C	-40 C	Sample	Slippage (In.)	1	0 Inches	PASS		
Required Conditions (2hr Min)	Actual Conditions												
-40 C	-40 C												
Sample	Slippage (In.)												
1	0 Inches												
4.3.6.5	Function Test, Primary Break. (WET) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise the load until it is completely suspended and at least 2 feet (0.6m) above the ground. Measure and record the level of the weight relative to the ground (or other fixed reference point). Without raising or lowering the weight from this position, release the operating control of the hoist. Measure and record the new position of the weight and determine the distance the weight traveled following release of control. Conduct this measurement process one time over one full revolution of the hoist-winding drum. compare this result to the requirements of 3.2.8.5.	<table><tr><th colspan="2">Spray Hoist with water for 3 Hours (18 Gal per Hour)</th></tr><tr><th>Time Exposed</th><th>Time Exposed</th></tr><tr><td>10:30am</td><td>1:30pm</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Spray Hoist with water for 3 Hours (18 Gal per Hour)		Time Exposed	Time Exposed	10:30am	1:30pm	Sample	Slippage (In.)	1	0 Inches	PASS
Spray Hoist with water for 3 Hours (18 Gal per Hour)													
Time Exposed	Time Exposed												
10:30am	1:30pm												
Sample	Slippage (In.)												
1	0 Inches												

Date: September 18th, 2020

Section (Test)	Requirement	Results	Compliance								
4.3.6.9	Function Test, Secondary Break. (AMBIENT) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line and the primary brake shall be disabled. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise the load until it is completely suspended and at least 4 feet (1.2m) above the ground. Measure and record the level of the weight relative to the ground (or other fixed reference point). Without raising or lowering the weight from this position, release the operating control of the hoist to allow the secondary brake to activate. Measure and record the new position of the weight and determine the distance the weight traveled following release of control. Compare this result to the requirements of 3.2.8.5.	<table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr><tr><td>2</td><td>0 Inches</td></tr><tr><td>3</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Sample	Slippage (In.)	1	0 Inches	2	0 Inches	3	0 Inches	PASS
Sample	Slippage (In.)										
1	0 Inches										
2	0 Inches										
3	0 Inches										

Section (Test)	Requirement	Results	Compliance										
4.3.6.9	Function Test, Secondary Break. (HEAT) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line and the primary brake shall be disabled. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise the load until it is completely suspended and at least 4 feet (1.2m) above the ground. Measure and record the level of the weight relative to the ground (or other fixed reference point). Without raising or lowering the weight from this position, release the operating control of the hoist to allow the secondary brake to activate. Measure and record the new position of the weight and determine the distance the weight traveled following release of control.	<table><tr><th>Required Conditions (2hr Min)</th><th>Actual Conditions</th></tr><tr><td>54 C</td><td>54 C</td></tr><tr><td>85% RH</td><td>84.7% RH</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Required Conditions (2hr Min)	Actual Conditions	54 C	54 C	85% RH	84.7% RH	Sample	Slippage (In.)	1	0 Inches	PASS
Required Conditions (2hr Min)	Actual Conditions												
54 C	54 C												
85% RH	84.7% RH												
Sample	Slippage (In.)												
1	0 Inches												

Date: September 18th, 2020

	Compare this result to the requirements of 3.2.8.5.										
4.3.6.9	Function Test, Secondary Break. (COLD) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line and the primary brake shall be disabled. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise the load until it is completely suspended and at least 4 feet (1.2m) above the ground. Measure and record the level of the weight relative to the ground (or other fixed reference point). Without raising or lowering the weight from this position, release the operating control of the hoist to allow the secondary brake to activate. Measure and record the new position of the weight and determine the distance the weight traveled following release of control. Compare this result to the requirements of 3.2.8.5.	<table><tr><th>Required Conditions (2hr Min)</th><th>Actual Conditions</th></tr><tr><td>-40 C</td><td>-40 C</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Required Conditions (2hr Min)	Actual Conditions	-40 C	-40 C	Sample	Slippage (In.)	1	0 Inches	PASS
Required Conditions (2hr Min)	Actual Conditions										
-40 C	-40 C										
Sample	Slippage (In.)										
1	0 Inches										

Section (Test)	Requirement	Results	Compliance										
4.3.6.9	Function Test, Secondary Break. (WET) The test weight shall be in accordance with 4.1.2. Install the hoist to the test structure in accordance with the manufacturer’s instructions. For this test, the hoist drum shall be filled to capacity (maximum useable length) with hoist line and the primary brake shall be disabled. Connect a rigid weight equal to 125% of the maximum capacity of the hoist to the end of the hoist line. Using the manual or powered operating means of the hoist, raise the load until it is completely suspended and at least 4 feet (1.2m) above the ground. Measure and record the level of the weight relative to the ground (or other fixed reference point). Without raising or lowering the weight from this position, release the operating control of the hoist to allow the secondary brake to activate. Measure and record the new position of the weight and determine the distance the weight traveled following release of control.	<table><tr><th colspan="2">Spray Hoist with water for 3 Hours (18 Gal per Hour)</th></tr><tr><th>Time Exposed In</th><th>Time Exposed Out</th></tr><tr><td>7:00am</td><td>10:05am</td></tr></table> <table><tr><th>Sample</th><th>Slippage (In.)</th></tr><tr><td>1</td><td>0 Inches</td></tr></table> Notes: Sample Line must not slip more than 4” when released.	Spray Hoist with water for 3 Hours (18 Gal per Hour)		Time Exposed In	Time Exposed Out	7:00am	10:05am	Sample	Slippage (In.)	1	0 Inches	PASS
Spray Hoist with water for 3 Hours (18 Gal per Hour)													
Time Exposed In	Time Exposed Out												
7:00am	10:05am												
Sample	Slippage (In.)												
1	0 Inches												

Date: September 18th, 2020

	Compare this result to the requirements of 3.2.8.5.														
8.2.2	Line Constituent of Hoist – Wire Rope. Wire rope used as a line constituent of a hoist shall be constructed of stainless steel or galvanized steel strand having a minimum nominal diameter of 0.1875 inches (4.8mm) and a minimum breaking strength of 3,400 pounds (15.1kN) when tested in accordance with reference 8.2.2	Minimum breaking strength of 3,400 lbs when tested to Section ASTM E8-04, <i>Standard Test Methods for Tension Testing of Metallic Materials</i> <table><tr><th>Sample</th><th>Minimum Breaking Strength</th></tr><tr><td>1</td><td>>3400 Lbs</td></tr><tr><td>2</td><td>>3400 Lbs</td></tr><tr><td>3</td><td>>3400 Lbs</td></tr><tr><td>4</td><td>>3400 Lbs</td></tr><tr><td>5</td><td>>3400 Lbs</td></tr></table> Diameter of Wire Rope:	Sample	Minimum Breaking Strength	1	>3400 Lbs	2	>3400 Lbs	3	>3400 Lbs	4	>3400 Lbs	5	>3400 Lbs	PASS
Sample	Minimum Breaking Strength														
1	>3400 Lbs														
2	>3400 Lbs														
3	>3400 Lbs														
4	>3400 Lbs														
5	>3400 Lbs														

Section (Test)	Requirement	Results	Compliance								
8.2.1	Corrosion Resistance. ASTM B117-03, <i>Standard Practice for Operating Salt Spray (Fog) Apparatus</i> Protection shall, at a minimum, allow these devices to operate and show no signs of corrosion, which, if left unchecked, could result in corrosion-related failure of the device, after being salt spray (fog) tested for 96 hours in accordance with the method described in reference 8.2.1.	<table><tr><td></td><td>Sample: 1-3</td></tr><tr><td>Operate as intended:</td><td>YES</td></tr><tr><td>Signs of corrosion (visual only):</td><td>NO</td></tr><tr><td>Corrosion Related Failure:</td><td>NO</td></tr></table>		Sample: 1-3	Operate as intended:	YES	Signs of corrosion (visual only):	NO	Corrosion Related Failure:	NO	PASS
	Sample: 1-3										
Operate as intended:	YES										
Signs of corrosion (visual only):	NO										
Corrosion Related Failure:	NO										
5	Markings and Instructions		PASS								

SECTION 6**REVISION HISTORY**

REPORT NUMBER	DATE OF REVISION	DESCRIPTION OF CHANGE:	PROJECT OWNER	REVIEWED BY
104400142CRT-006	9/18/2020	Report Extension	Theodore Brown	Matthew Stevens