



ECWP UPDATE 2019



Joshua Eaton

UNOLS East Coast Winch Pool

Personnel

2



Brian Guest
Manager



Jamie Haley
System Maintenance



Josh Eaton
Engineering

Mission: Supporting Science

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DATE



Assets

Assets: Winches

5

Moe & Larry

Curly & Shemp

Donnie & Marie

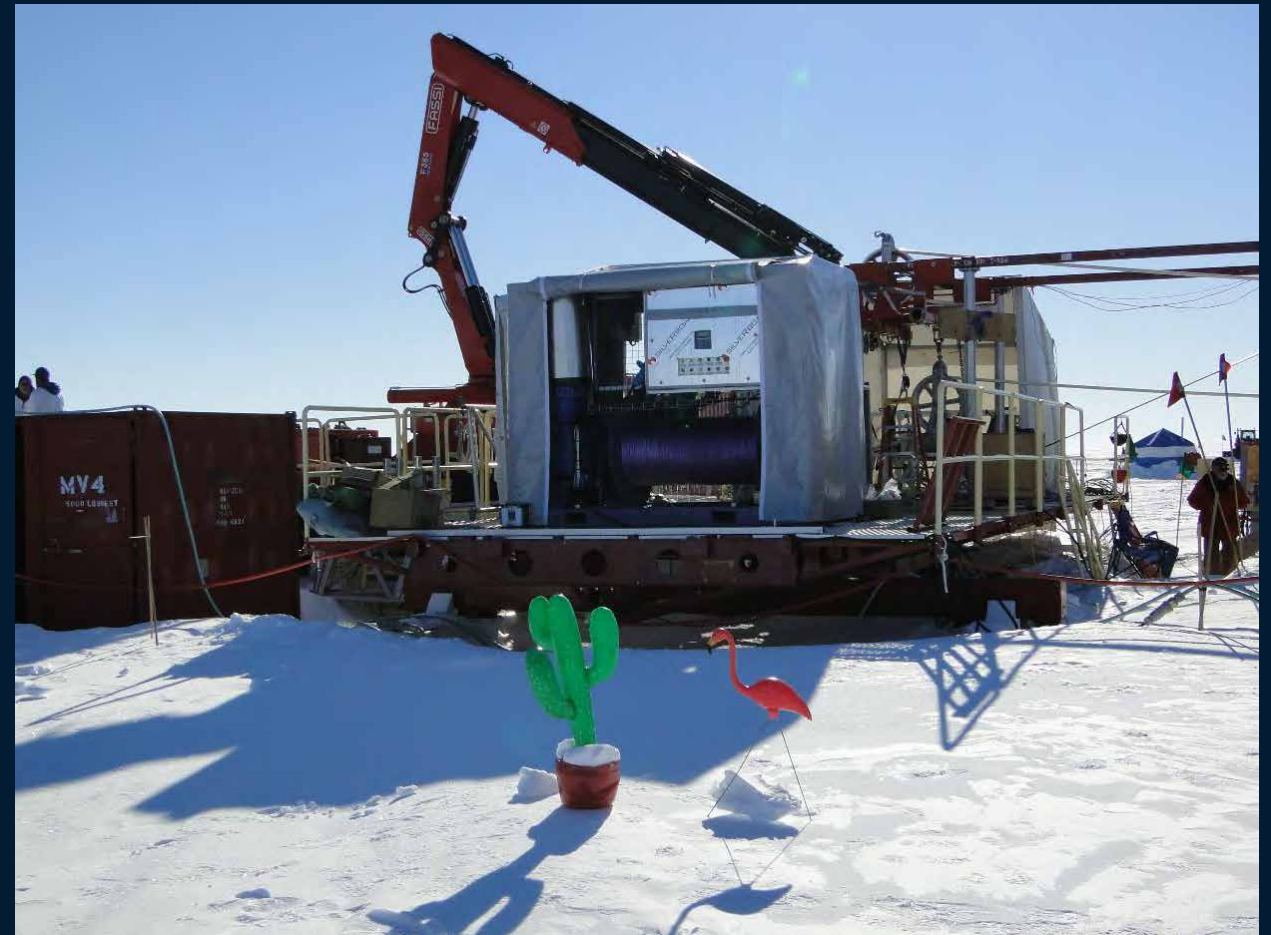
Gloria

Monk

Joe

Cletus & Cooter

Jed



Assets: Sheaves

6



One ½” Harken Sheave

Two 0.322” Harken Sheaves

One 36” diameter 0.681 Sheave

One 0.322 Trace Metal Sheave

One Wide Groove Metering Sheave

One ¼” Trace Metal Sheave

Access to One 48” diameter 0.681 Sheave

Assets: Tensioners

7

Pinehill Tensioner

Barney

Leitheiser Tensioner

Reel-Power Winder Cart



Assets: Other

8

Two Light Duty Turn Tables

One Medium Duty Turn Table

One 25K and one 50K Load Cells

One Quick Check Tensiometer

Winch Pool Shop

One 3 Phase 220 VAC to 480 VAC Transformer

Multiple Slip Rings

Two MRUs



Utilization

Requests

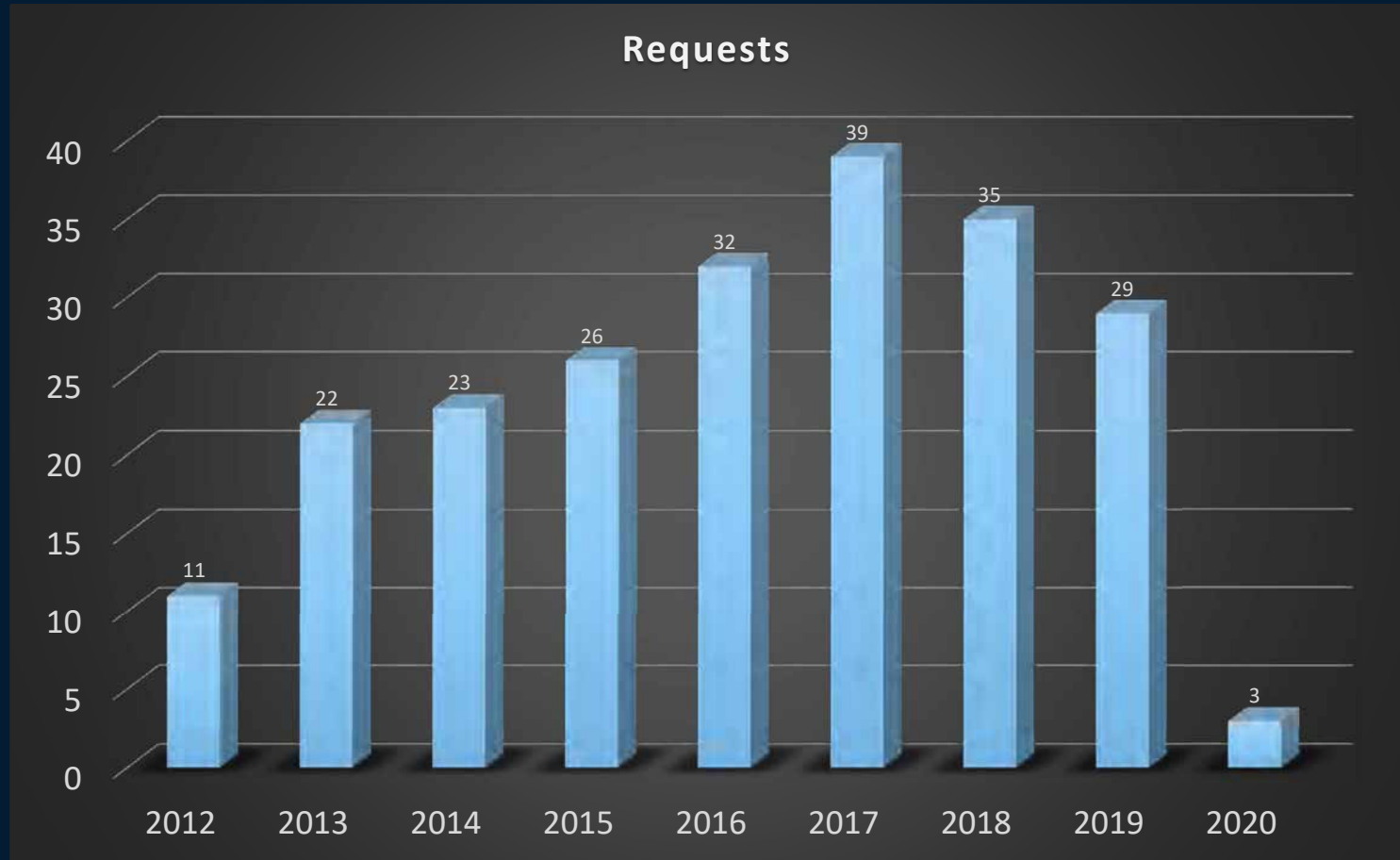
10

Decrease in Requests

Steady Usage Days

35 Requests for 2018

29 Requests for 2019



Request Form

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Woods Hole Oceanographic INSTITUTION AUTHORIZED USERS

UNOLS East Coast Winch Pool

Home Request Form Inventory Schedule Contact Us

Request Form

Requestor*: first last

PI*: first last

Institution Name:

Email Address*:

Telephone Number(s)*:

Agency: NSF or other agency:

Ship: Cruise:

Mobilization date (mm/dd/yyyy): 04/19/2017 Mobilization port:

Demobilization date (mm/dd/yyyy): 04/19/2017 Demobilization port:


Weight of gear (lbs):

Expected tension (lbs):

Wire used: Wire length (m):

Use description:

Comments:



Please type what you see (case sensitive):

Submit

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Issues

Issues

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Shipping Issues

Improper Use of Equipment

Lifting a Bolted Down Winch

Not Contacting Us

Generators

Not a Capstan

14



Fast Shipping





Projects

Upgrades and Repairs

17

~~MASH Winch Cabinet Replacement~~ Completed

~~Corrosion Coating Experiment~~ Completed

~~UMiami Hawboldt Consolidation~~ Completed

~~Change Power Connectors to Meltric DSN~~ Completed

Magnetometer Winch Upgrade 90%

New MASH Remotes

- Creating a standard remote for ECWP winches
- Proof of Concept Complete
- Prototype under construction

MASH Winch Cabinet Replacement

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Completed

Added Vibration
Isolation



Miami Hawboldt Winch

19

Separate
Components



New and Improved!

20

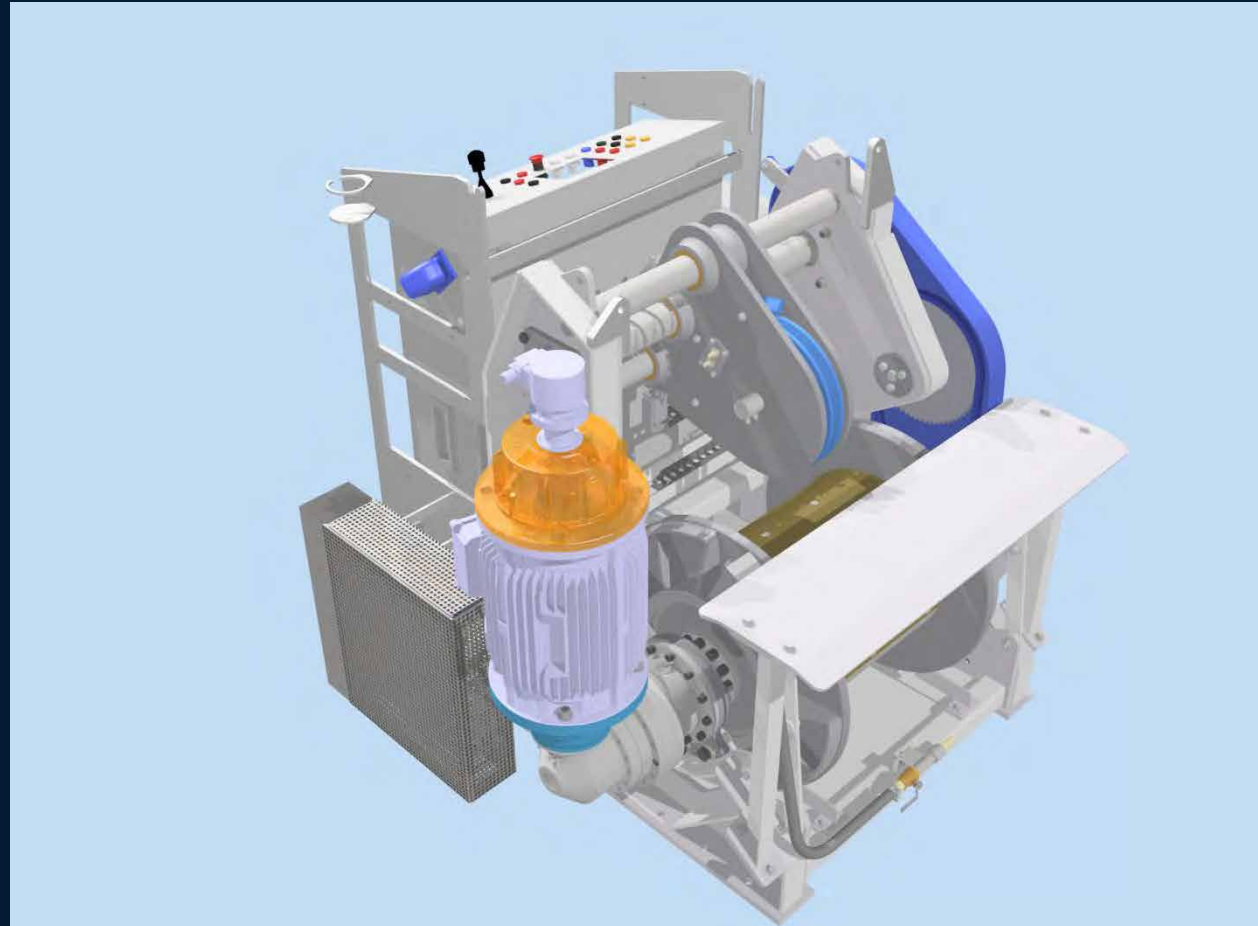
Controls

Operator Platform

Protection Screen

Improved Slip Ring

Cup Holder!



Meltric DSN Connectors

21



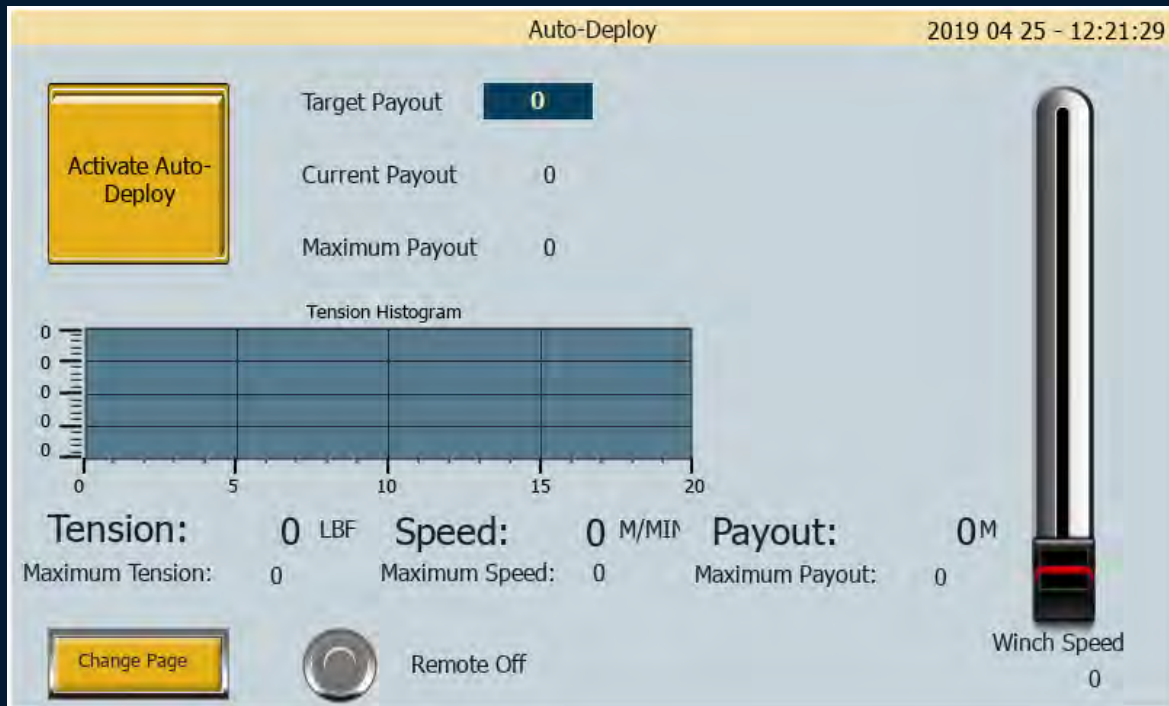
Changing out old connectors

Driving Factor: Explosion

Positive Connection Identification

ECWP Remote

22



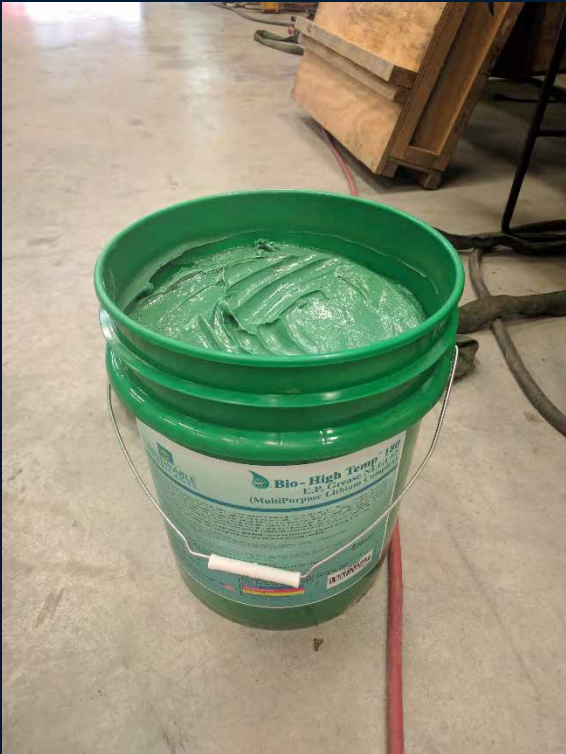
Universal Remote for Our Winches

Add Features to Old Winches

Smaller Tether

Smaller Connector

Green Lube



Corrosion Coating: Experiment



Multipurpose Winch

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Multipurpose Winch – In Real Life

25

6 Foot Drum



Motor in the Top Hat





Services

Services

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Testing Plans

Training

Winch Service

Acquisition Assistance

LCI-90i Oversight

Overboard Handling Questions

Technical Assistance

Plans: Testing and Analysis



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UNOLS East Coast Winch Pool

36199-104 Woods Hole Rd., Woods Hole, MA 02543
508/548-2600 ext. 3000 | www.whoi.edu

MASH2K Test Plan

1. Introduction

The purpose of this test plan is to meet the requirements of UNOLS RVSS Appendix II and to provide the users with safe and functioning equipment. This document serves as a guide to the series of tests needed and to provide a complete and thorough guide.

These tests must be performed continuously during operations. If a piece of equipment is out of compliance it must be tested prior to use.

2. Tests

2.1 Functional Tests

2.1.1 Verify safe power up:
Visually inspect the wiring, connections, and hydraulic lines, and controls for problems. Turn on the equipment and look for any faults.

2.1.2 Verify Operation of Controls:
Check for spring return on joysticks as well as momentary switches.
Check that joysticks move in the correct direction.
Verify that the E-Stop is functional.
Verify that the interwind-overhaul function properly.
Verify that all additional controls functional.

2.2 Static Tests

2.2.1 Equipment Required:

- MASH2K
- Sheave
- Power Cable
- Dynamometer
- Overhead Crane
- 125% SWT Weight (400 lbs)
- Suitable Tension Member

2.2.2 Bare Drum Static Pull Test:
Wrap a suitable tension member around the tension member in the shaft. Using the winch controls fully exercise the winch.

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Hawboldt Test Plan

1. Introduction

The purpose of this test plan is to meet the requirements of UNOLS RVSS Appendix II and to provide the users with safe and functioning equipment. This document serves as a guide to the series of tests needed and to provide a complete and thorough guide.

These tests must be performed continuously during operations. If a piece of equipment is out of compliance it must be tested prior to use.

2. Tests

2.1 Functional Tests

2.1.1 Verify safe power up:
Visually inspect the wiring, connections, and hydraulic lines, and controls for problems. Turn on the equipment and look for any faults.

2.1.2 Verify Operation of Controls:
Check for spring return on joysticks as well as momentary switches.
Check that joysticks move in the correct direction.
Verify that the E-Stop is functional.
Verify that the interwind-overhaul function properly.
Verify that all additional controls functional.

2.2 Static Tests

2.2.1 Equipment Required:

- Hawboldt
- Sheave
- Power Cable
- Dynamometer
- Overhead Crane
- 125% SWT Weight (2000 lbs)
- Suitable Tension Member

2.2.2 Bare Drum Static Pull Test:
Wrap a suitable tension member on the drum with a minimum of 8 wraps. Connect the tension member to the sheave diameter and the dynamometer to the test point. Using the winch controls fully exercise the maximum haulback force.

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Canilevered Dynacon Winch Test Plan

1. Introduction

The purpose of this test plan is to meet the requirements of UNOLS RVSS Appendix II and to provide the users with safe and functioning equipment. This document serves as a guide to the series of tests needed and to provide a complete and thorough guide to those tests.

These tests must be performed twice a year: once every five years period with no longer than 3 years between any two tests for continuous operations. If a piece of equipment is out of compliance it must be tested prior to use.

2. Tests

2.1 Functional Tests

2.1.1 Verify safe power up:
Visually inspect the wiring, connectors, hydraulic lines, and controls for problems. Turn on the equipment and look for any faults.

2.1.2 Verify Operation of Controls:
Check for spring return on joysticks and momentary switches.
Check that joysticks move in the correct direction.
Verify that the E-Stop is functional.
Verify that the interwind-overhaul function properly.
Verify that all additional controls functional.

2.2 Static Tests

2.2.1 Equipment Required:

- Canilevered Dynacon
- Sheave
- Power Cable
- Dynamometer
- Overhead Crane
- 125% SWT Weight (4375 lbs)
- Suitable Tension Member

2.2.2 Bare Drum Static Pull Test:
Wrap a suitable tension member on the drum with a minimum of 8 wraps. Connect the tension member to the sheave diameter and the dynamometer to the test point. Using the winch controls fully exercise the maximum haulback force.



Winch Assistance

Atlantic Explorer

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Winch Controls

DESH5

DESH4

COM7

System Mapping

Support

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Atlantis

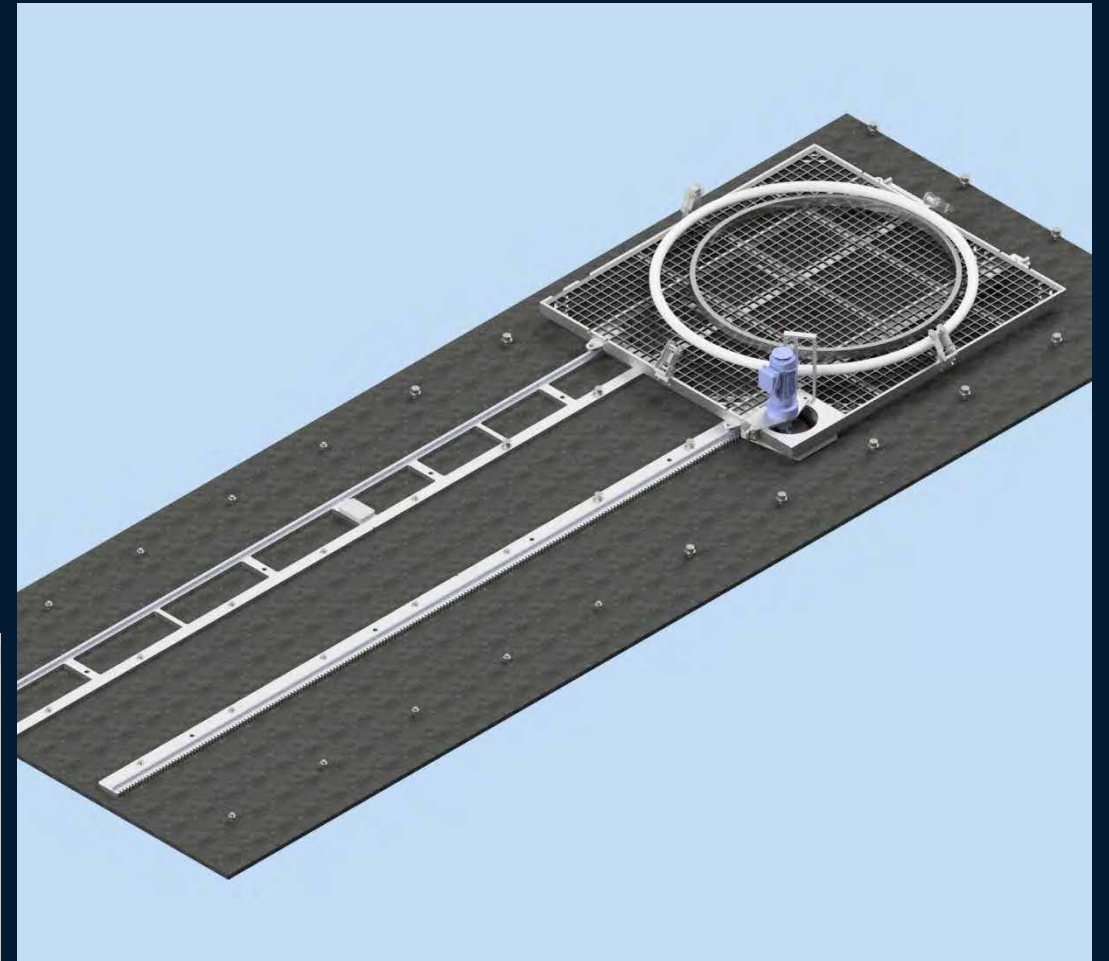
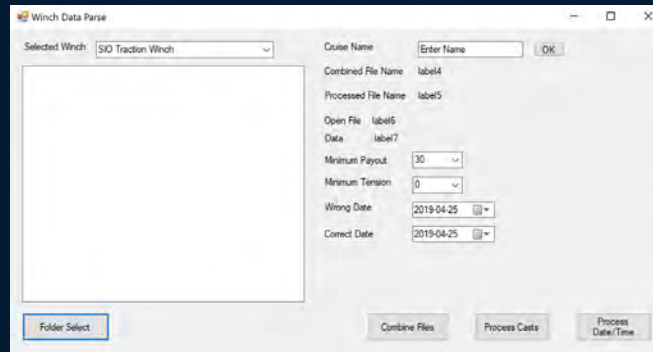
- Provided Tensiometer
- Measuring Methodology
- Spooling Help

Armstrong

- CTD Rosette Track
- Active Heave Compensation
- Spooling Help

OSU Coring Group

- Wire Log Analysis





Winch Acquisition

Acquisition Assistance

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University of Hawaii LARS Replacement

Skidaway Trace Metal Winch





Future Projects

Upcoming Projects

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Next Generation Levelwind

Testing 9/16 3x19 on 0.68 Sheaves

Heave Sensor

Winch Test Platform

M2M Gateways

Improve Website

Document Repository

MRU Pool

