



ECWP UPDATE

Joshua Eaton

UNOLS East Coast Winch Pool

Personnel

2



Brian Guest
The Penny Pincher



Jamie Haley
The Grouch



Josh Eaton
The Space Cadet

Mission: Supporting Science

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Assets

Assets: Winches

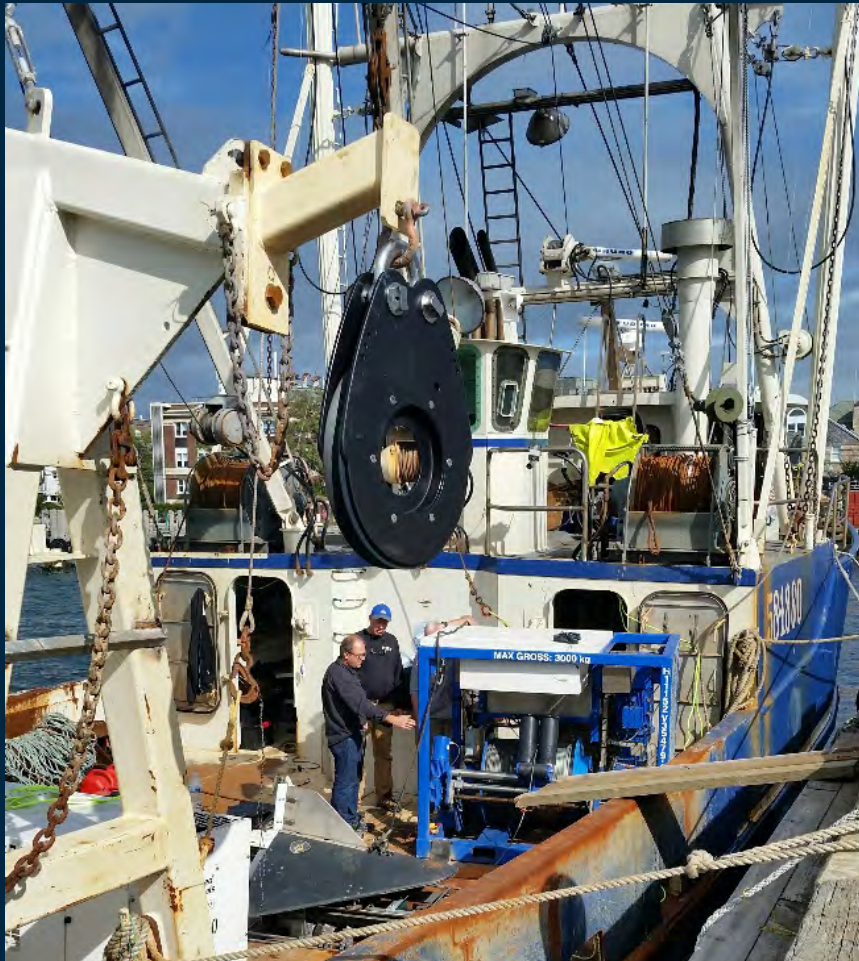
5

- ❑ Two MacArtney MASH2000
- ❑ Two MacArney MASH4000
- ❑ Two Dynacon Model 10030
- ❑ One Dynacon Right Angle
GEOTRACES
- ❑ One Hawboldt Multipurpose Winch
UDel
- ❑ TWO TSE Mooring Spoolers
- ❑ One Sea-Mac 1300
- ❑ One Hawboldt 0.322 Winch



Assets: Sheaves

6

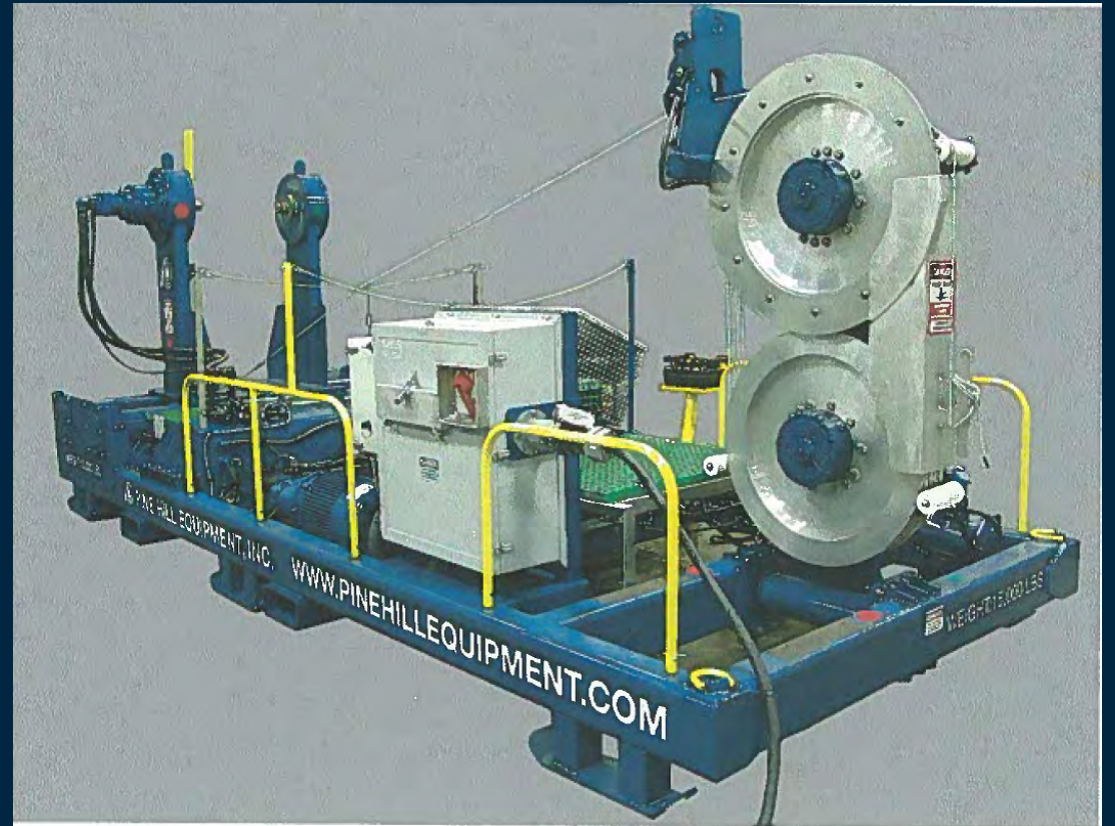


- One ½” Harken Block
- One 36” diameter 0.681 Block
- One 0.322 Trace Metal Sheave
- One Wide Groove Metering Sheave
- One ¼” Trace Metal Sheave
- Access to One 48” diameter 0.681 Sheave

Assets: Tensioners

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- Pinehill Tensioner
- TSE Bull Wheel Tensioner
- Leitheiser Tensioner
- Reel-Power Winder Cart



Assets: Other

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- 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

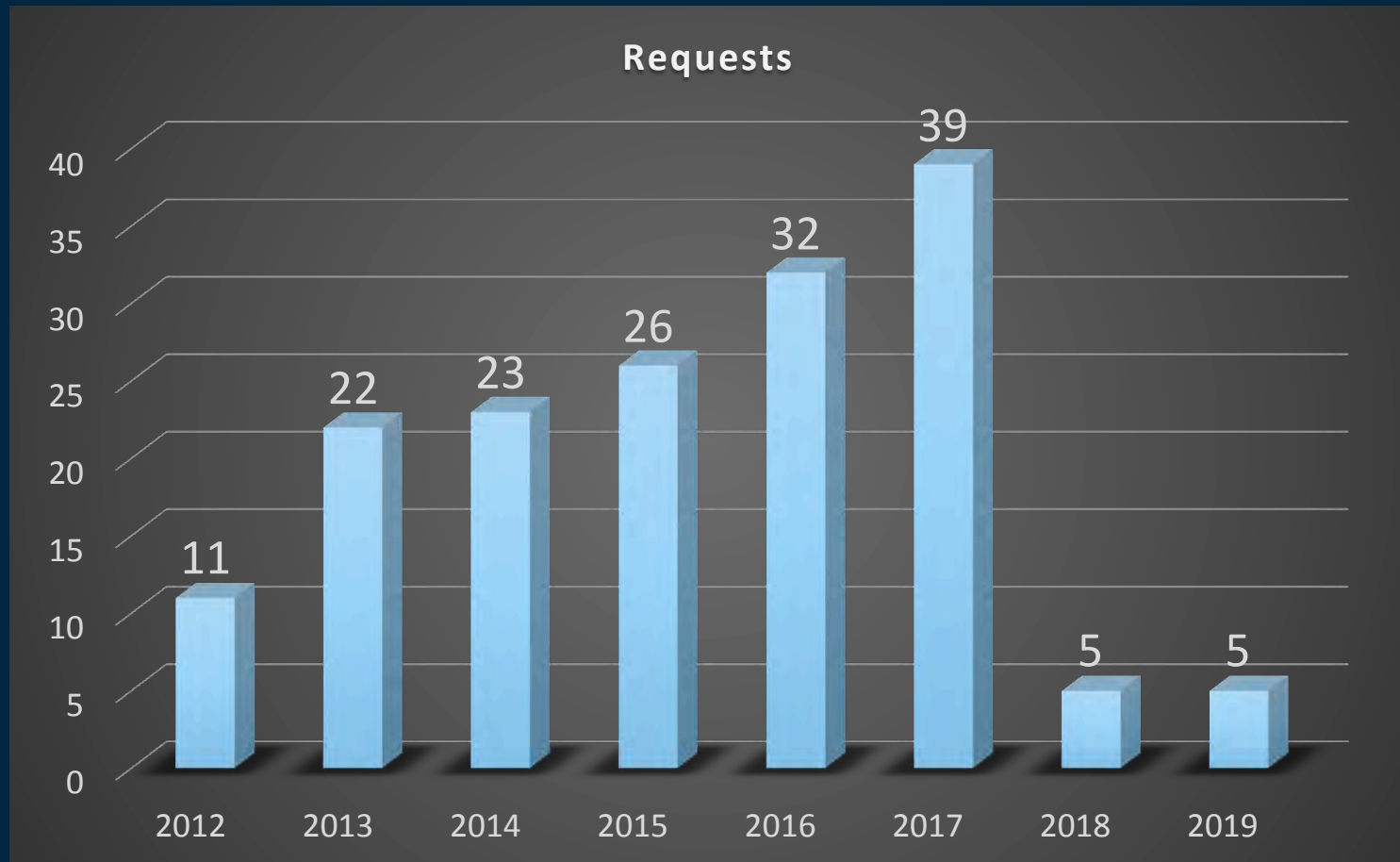
Increase in Requests

Increase in Usage Days

39 Requests for 2017

5 Requests for 2018

5 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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- 
- ❑ VFD Failure
 - ❑ Improper Use of Equipment
 - ❑ Lifting a Bolted Down Winch
 - ❑ Not Contacting Us

Not a Capstan

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Projects

Upgrades and Repairs

16

- ❑ MASH Winch Cabinet Replacement
- ❑ UMiami Hawboldt Consolidation
- ❑ LCI-90i Upgrades
- ❑ Upgraded Dynacon 10030 to Include Line Monitoring
- ❑ Repaired Dynacon 10030 Levelwind
- ❑ Change Power Connectors to Meltric DSN
- ❑ MRU Validation
- ❑ 2013 VGP EALs
- ❑ Corrosion Coating Experiment

MASH Winch Cabinet Replacement

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Miami Hawboldt Winch

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Meltric DSN Connectors

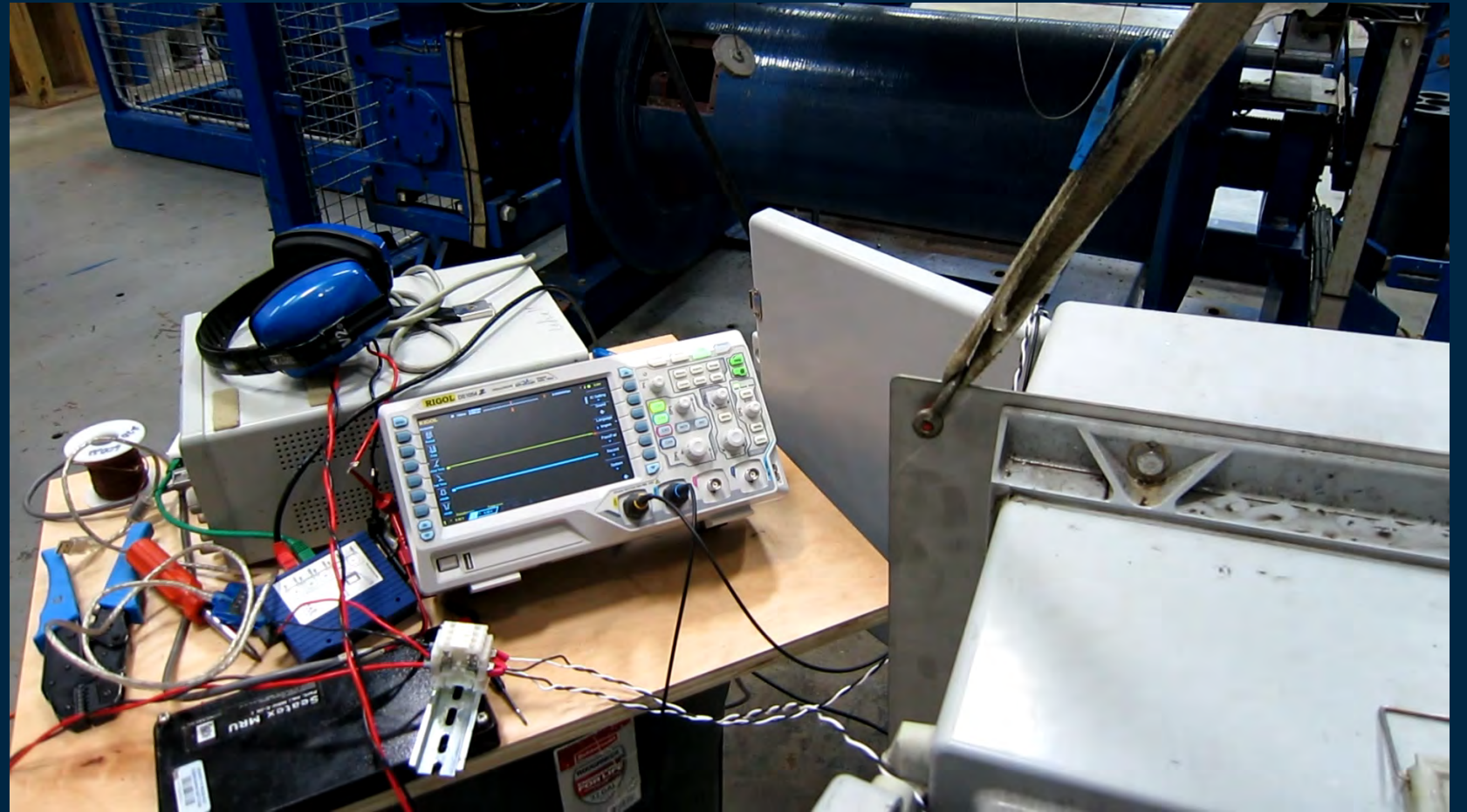
19



- Changing out old connectors
- Driving Factor: Explosion
- Positive Connection Identification

MRU Check and Comparison

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VGP Green Lubricant



Corrosion Coating: Experiment 1



Multipurpose Winch

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Multipurpose Winch – In Real Life

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6 Foot Drum



Motor in the Top Hat





Services

Services

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- Testing Plans
- Winch Service
- Acquisition Assistance
- LCI-90i Oversight
- Overboard Handling Questions
- Technical Assistance

Plans: Testing and Analysis



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MASH2K Test Plan

1. Introduction
The purpose of this test plan is to meet the requirements of UNOLS RVSS, Approve it and to provide the users with safe and functioning equipment. This document serves to quantify and qualify the series of tests needed and to provide a complete and thorough guide.

These tests must be performed twice a continuous operations. If a piece of equipment is out of service 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, hydraulic lines, and controls for problems. Apply power to the equipment. 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 the equipment in the correct direction. Verify that the E-Stop is functional. Verify that the levelwind controls 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 Drive Static Pull Test
Wrap a suitable tension member on it around the tension member in the sheave. Using the winch controls fully exercise the maximum haulback force.

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Hawboldt Test Plan

1. Introduction
The purpose of this test plan is to meet the requirements of UNOLS RVSS, Approve it and to provide the users with safe and functioning equipment. This document serves to quantify and qualify the series of tests needed and to provide a complete and thorough guide.

These tests must be performed twice a continuous operations. If a piece of equipment is out of service 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, hydraulic lines, and controls for problems. Apply power to the equipment. 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 the equipment in the correct direction. Verify that the E-Stop is functional. Verify that the levelwind controls 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 (3000 lbs)
- Suitable Tension Member

2.2.2 Bare Drive Static Pull Test
Wrap a suitable tension member on it around the tension member in the sheave. 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, Approve it and to provide the users with safe and functioning equipment. This document serves to quantify and qualify the series of tests needed and to provide a complete and thorough guide to those tests.

These tests must be performed twice in every five year period with no longer than 3 years between any two tests for continuous operations. If a piece of equipment is out of service 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, hydraulic lines, and controls for problems. Apply power to the equipment. 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 the equipment in the correct direction. Verify that the E-Stop is functional. Verify that the levelwind controls 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 Drive Static Pull Test
Wrap a suitable tension member on the drum with a minimum of 8 wraps. Unwind the tension member in the sheave diameter and the dynamometer in the test haul point. Using the winch controls fully exercise the maximum haulback force.



Winch Acquisition

Acquisition Assistance

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- UDel/ECWP: New Multi-Purpose Winch
- UConn/NERC: Fast Deployment Winch
- General Winch Specifications



UDel Winch

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Winch Test Platform



Bronze Casting



UDEL Multipurpose Winch FAT

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UCONN NERC Winch

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- ROV Winch
- Rapid Deployment
- Light Weight
- Designed for ROV Tether and 0.322

PPE In Denmark

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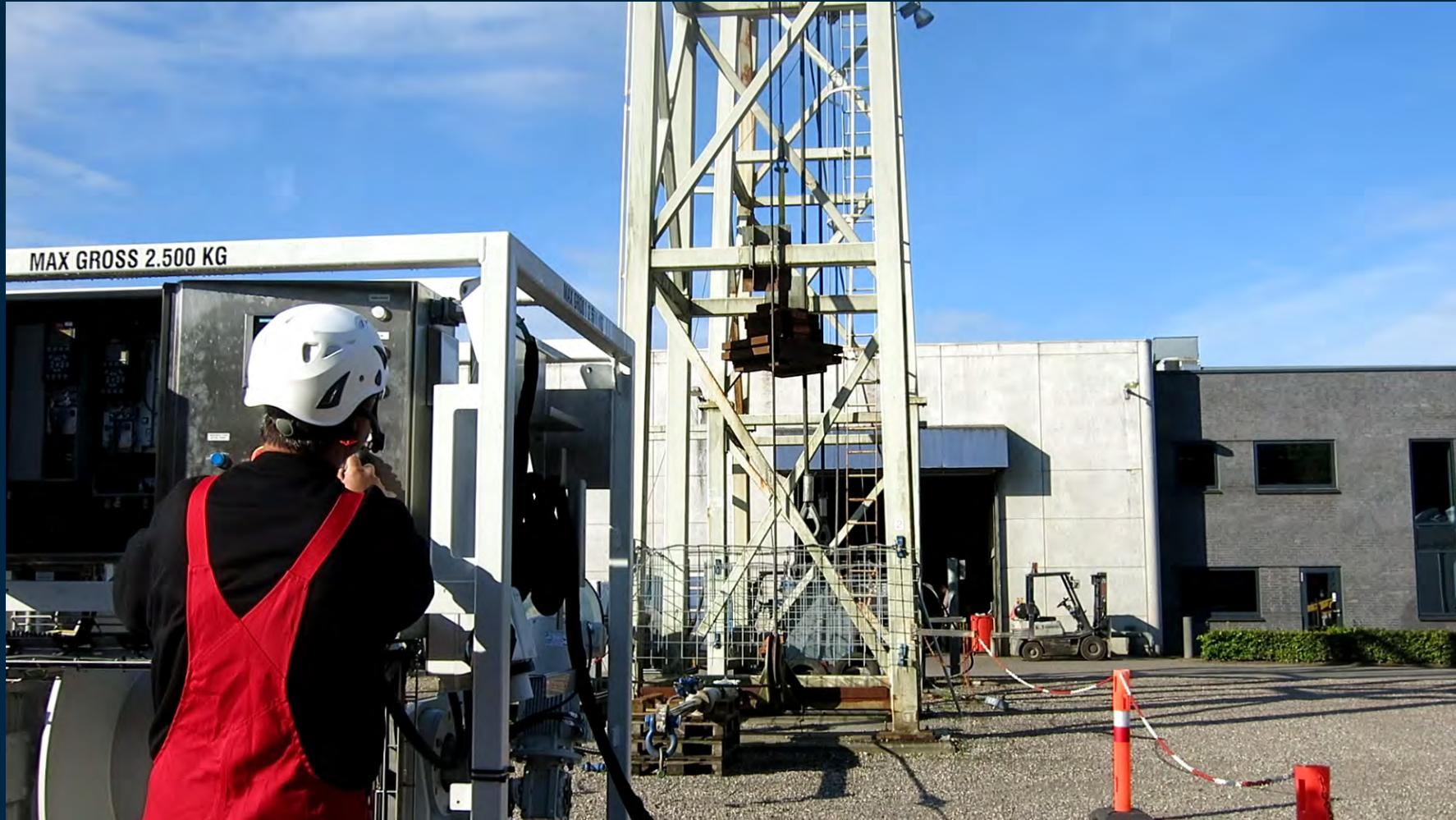


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Uconn FAT

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Future Projects

Upcoming Projects

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- ❑ Next Generation Levelwind
- ❑ Heave Sensor
- ❑ Winch Test Platform
- ❑ M2M Gateways
- ❑ Improve Website
- ❑ Document Repository

