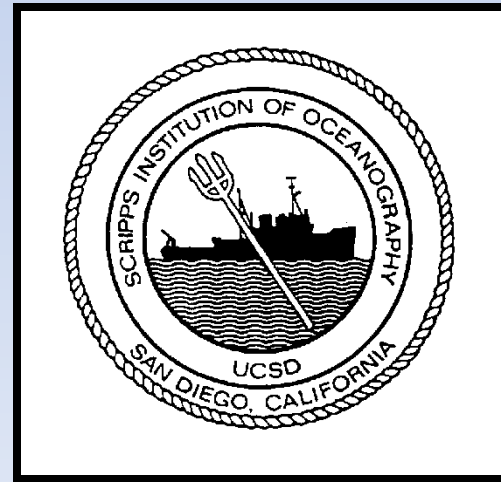


RVTEC 2018

NSF West Coast Winch Pool
operated by
Scripps Institution of Oceanography



Winch Pool Mission

- To provide an inventory of oceanographic winches (etc.) for shared use.
- To keep the inventory in good repair, in compliance with applicable standards (CFR, RVSS).
- To modify the composition of the inventory to reflect the needs of end-users.
- To provide technical support: maintenance, repairs, design, engineering, fabrication, Q&A.

How the Winch Pool Works

- Science parties communicate their needs to us.
- We match their needs to available machinery.
- Those conducting NSF-funded research generally incur no costs (freight included) to use machinery.
- Others *generally* pay a “day rate” and the cost of freight.

Personnel

- Management and Quality Control
 - Pool Manager: Capt. Eric Buck (part time, 20 %)
 - Winch/Wire Engineer: A. Davis, PE (full time)
- Mechanical
 - WP Technician: Lorenzo McCoy (as required)
 - Attends vessels for mob/de-mob of Dynacon deep sea traction winch
 - Occasional travel supporting other winches
 - Spooling services

Funding → → →

- Logistics—shipping, etc.
 - Estimated annually, included in our annual NSF proposal
- Engineering Services—design, analysis, etc.
 - NSF-funded projects included in our annual NSF proposal
 - Others pay an hourly rate
- Major Repairs, Capital Equipment Purchases –big ticket items
 - Requested in separate NSF proposals
- Routine Maintenance
 - Covered by the day rate for each winch (non-NSF funds)

Funding



- Spooling Services
 - Projects can be time consuming, expensive. Without sufficient notice can't generally absorb their cost:
 - 1 cable off @ our facility → a 2-day project, \$3k
 - 4 cables off & on @ OSU (Newport, OR) → 5 days, \$20k
 - 1 cable off & on @ UH → 2 days, \$24k
 - Projects for NSF-funded vessels *can be* included in our annual proposal (i.e. operators can incur no charge for spooling if we're given sufficient advance notice).



Inventory

- 3 light-duty winches
- 4 mooring spoolers
- 1 spooling winch
- 1 mooring capstan
- 1 heavy-duty traction winch
- 1 tensioning/spooling machine
- 3 line tensioners
- 3 sets fiber optic slip rings

Light-Duty Winches



SeaMac, Poseidon

Up to 2,600 lbs pull.

Holds 3,000 m of .322" cable.

Light-Duty Winches



Hawboldt SPR-2036/S

Up to 3,500 lbs pull.
Holds 3,000 m of .322 cable.



Mooring Spoolers



TSE SD-70 / SDP-70 Mooring Spoolers (not winches)

Up to 7,500 lbs pull.
Holds 2,500 m of 1" cable.

Mooring Spoolers



Dynacon 843 Winch

Up to 7,500 lbs pull.
Holds 5,300 m of 1" cable.

(Remote operating station, HPU not shown)

Mooring Spoolers



Dynacon Mooring Spooler

Mooring Capstan

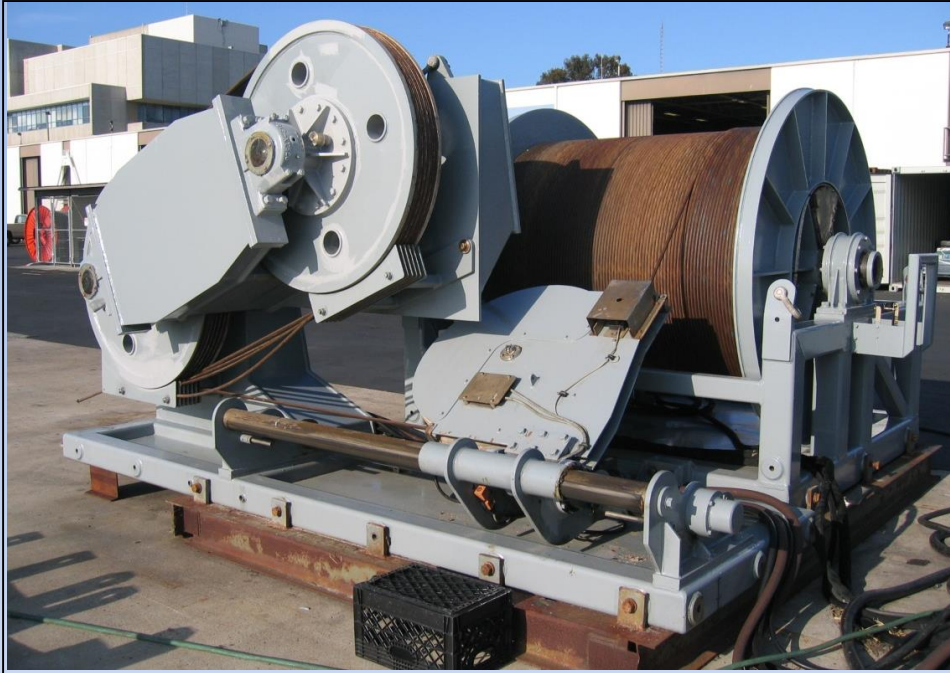


Lebus Mooring Capstan

Also for spooling moorings.

Up to 7,000 lbs pull. Unlimited cable-holding capacity.
(Remote operating station, wireless remote not shown)

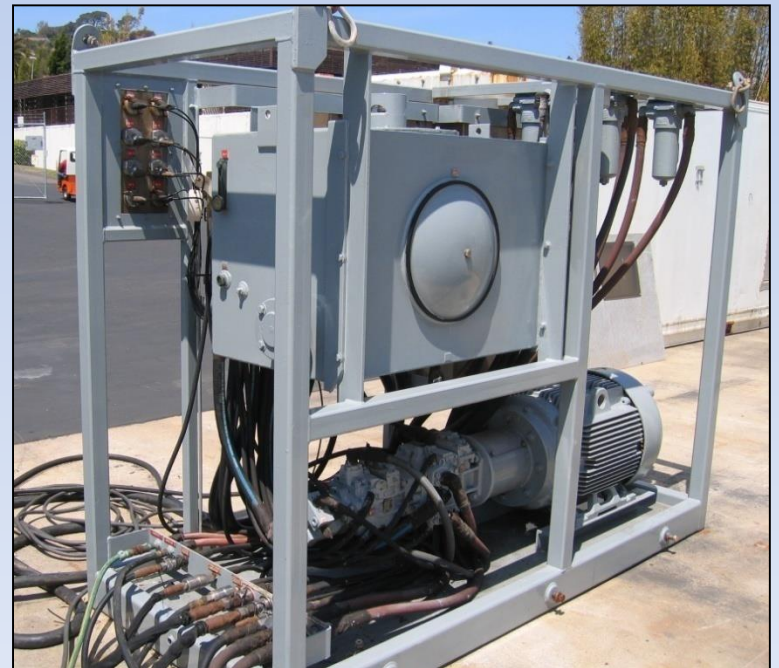
Heavy-Duty Winch



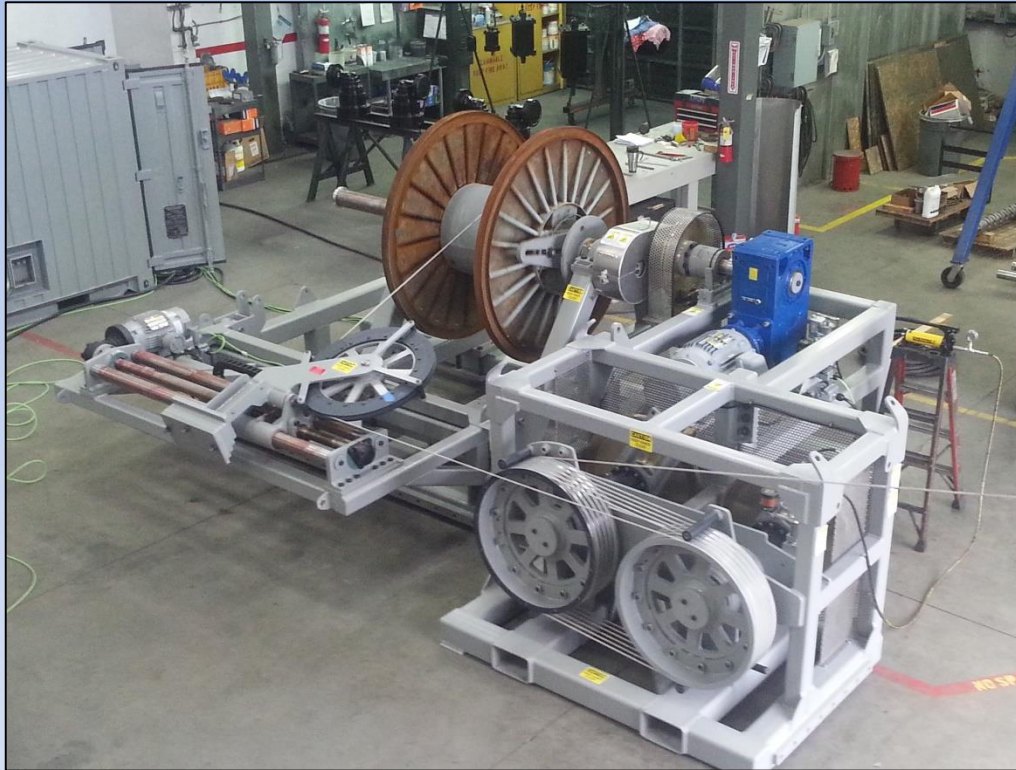
Dynacon Traction Winch

Up to 25,000 lbs pull.
Holds 10,000 m of .681 cable.

(Remote operating station not shown.)



Tensioning/Spooling Machine



Markey Tensioning Spooler

Ø.250 " to Ø.681"
cable /wire rope/line
Spools up to 66" wide,
Ø90", and 25,000 lb.

Line Tensioners



Blue

$\frac{1}{4}$ "
.322"



Pengo

$\frac{9}{16}$ "
.680"
.681"
.842"



Gearhart

$\frac{1}{4}$ "
.322"

Projects 2017-2018

- WCWP 2018-2022 proposal.
- UNOLS RVSS Appendix B (review/feedback).
- Analysis of TSE drum crushing strength.
- Analysis of R/V T.G. Thompson deck w/Dynacon 664 winch.
- Analysis of R/V R. Revelle deck w/Geotracas
- Lots of spooling.

Projects 2017-2018

Spooling: USCGC Healy



Projects 2017-2018

Spooling: R/V Sikuliaq



Projects 2017-2018

Spooling: R/V Oceanus



Projects 2017-2018

Spooling: R/V Roger Revelle



Projects 2018-2019

- Mooring winch.
- Another light-duty winch (retire old ones).
- Mooring blocks.
- Light net-towing block for R/V Sally Ride.
- Recovery hooks.
- Lots of spooling.

Contact Us

Capt. Eric Buck, Manager
(858) 534-5568
ebuck@ucsd.edu

Aaron E. Davis, PE, Engineer
(619) 251-6368
aed001@ucsd.edu

#NSF winch pool

