



# NSF Wire Pool

Eric Trotto



**UNOLS**  
UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM



WOODS HOLE  
**OCEANOGRAPHIC**  
INSTITUTION



# What is the Wire Pool

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- The Wire Pool supports the tension members needs of the U.S. Academic Research Fleet
  - Maintaining an inventory
  - Coordinating requests
  - Conducting break tests
  - Maintaining a wire database



# Maintain An Inventory of Wire Rope, Cable, and Synthetic

One Wire Pool, two storage facilities

- East Coast - Woods Hole Oceanographic Institution (WHOI)
- West Coast - Scripps Institution of Oceanography (SIO)

Inventory of commonly used tension members

- 3x19 Wire Ropes:  $\frac{1}{4}$ ",  $\frac{1}{2}$ ",  $\frac{9}{16}$ "
- Cables: .322" EM, .680" Coax, .681" power optic

Other tension members

- Synthetics:  $\frac{9}{16}$ " Plasma HiCo



# **Requesting New Wire**

- Wire Pool fields all requests for new and used tension members
- Determine availability of requested item (inventory)
- Wire Pool prepares package for NSF consideration
- If approved, arrange for shipping to nearest domestic port

## **Long Lead Times**

.681": 8 Month lead time

3x19: 4 Month lead time

# Break Testing

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- Barbara Callahan, Wire Testing Coordinator
- Submit break test request via the Wire Pool database
  - Testing mandated by Appendix A of RVSS and funded by NSF (no cost to vessel)
- Evaluate
- Recommendations





# Wire Pool Database

**Andrea Harvey, Wire Pool Database Administrator**

## **Manage wire and cable assigned to your Institution's vessel(s)**

- Update wire status (e.g. 'In use' or 'Stored')

- Manage Safe Working Load (SWL) information for cable and wire in use or onboard a vessel

- Report events (lubrication, cutback/re-termination, splits, end-for-end, document uploads)

- Submit break test requests and view results/recommendations

## **Other Features**

- Request wire or cable from the Wire Pool

- Add a tension member to a vessel (report a reel)

- Break test request

- Disposal request

- Add new users (full access or read-only)

- User-centric



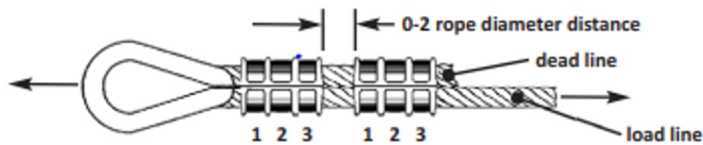
# How are your terminations holding up?

## 3x19 Wire rope

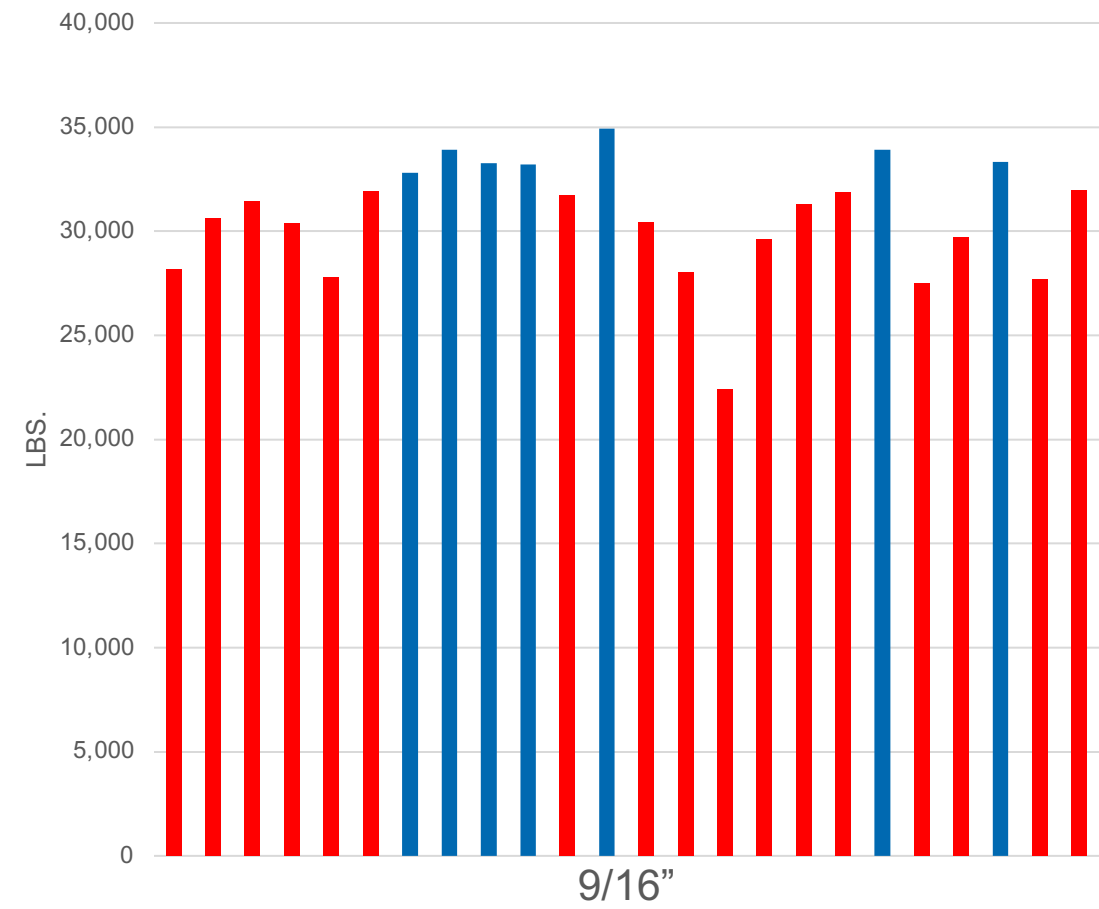
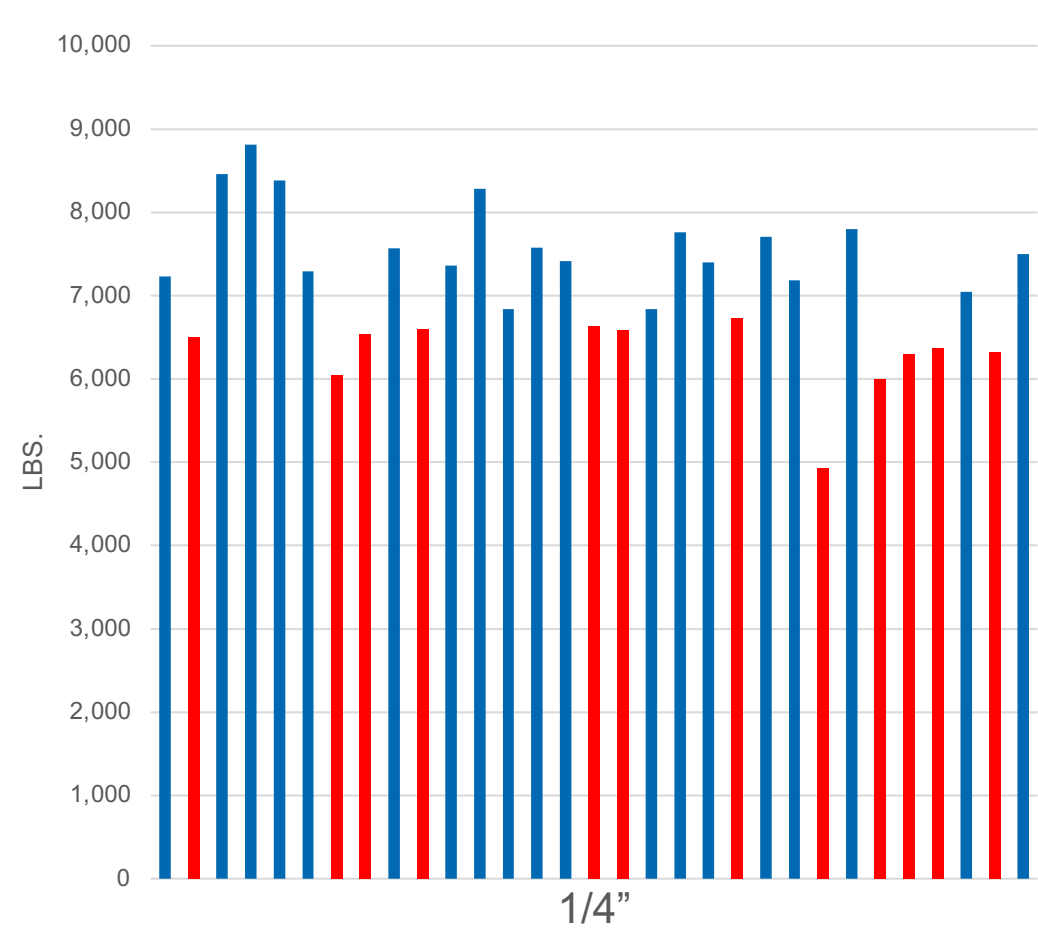
Most comely used termination is NICO press

## What we see wrong?

- Improper dies and spacing
- Pressing in incorrect order
- Wrong thimble

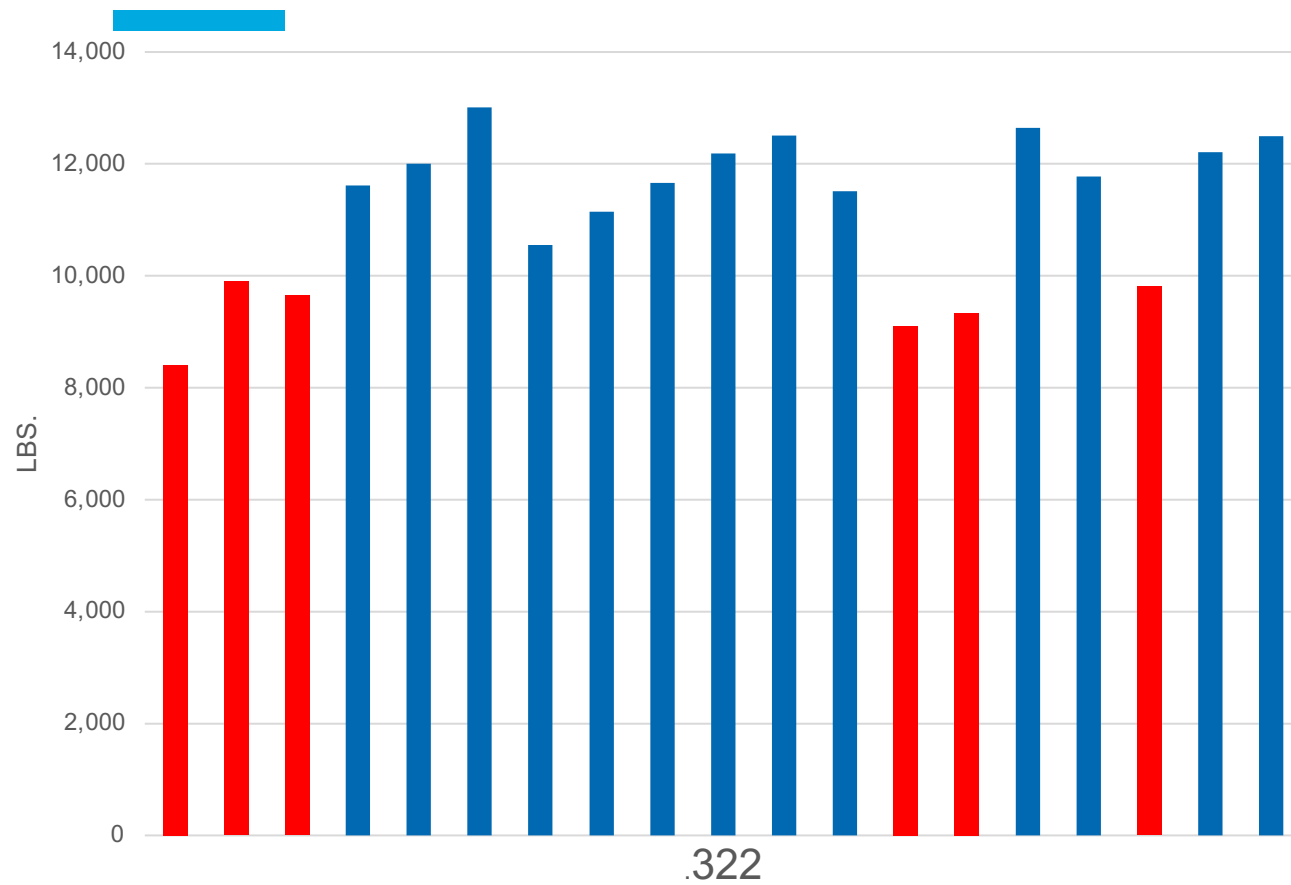


# 3x19 Nico Pressed wire



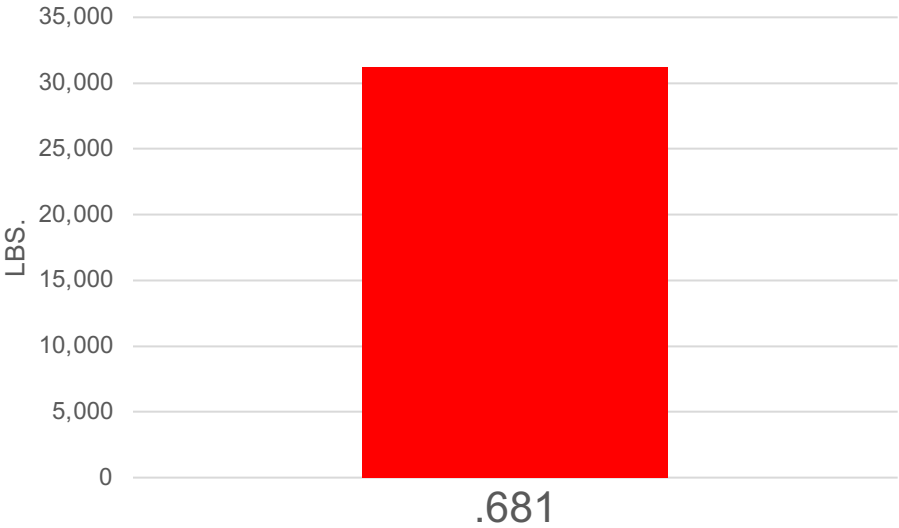
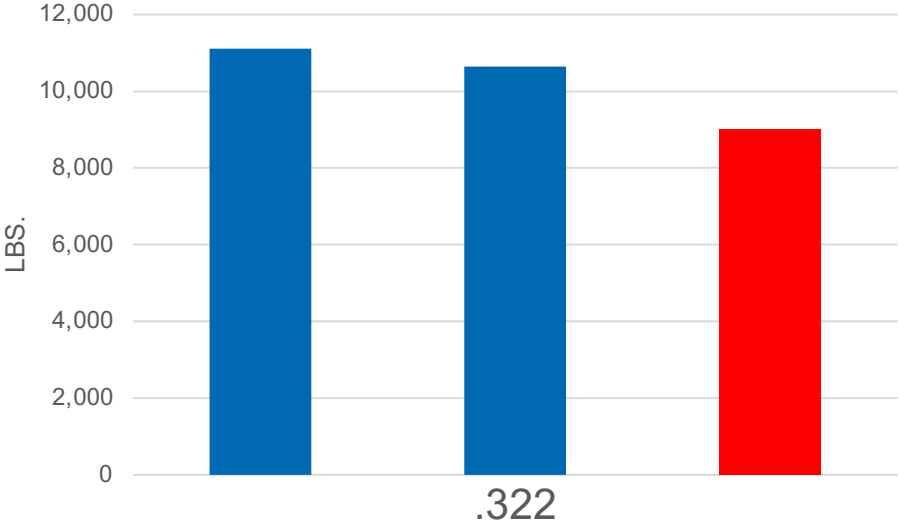
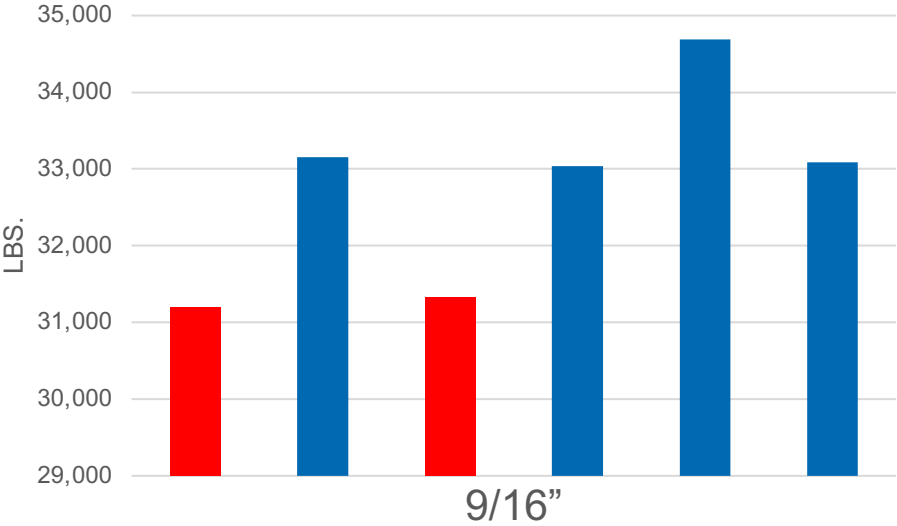


# .322 Poured Socket



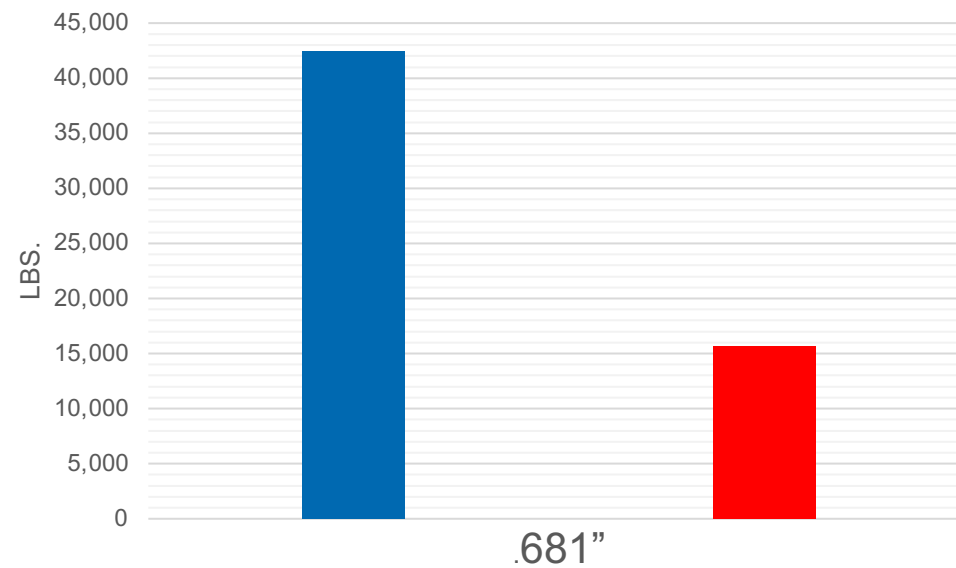
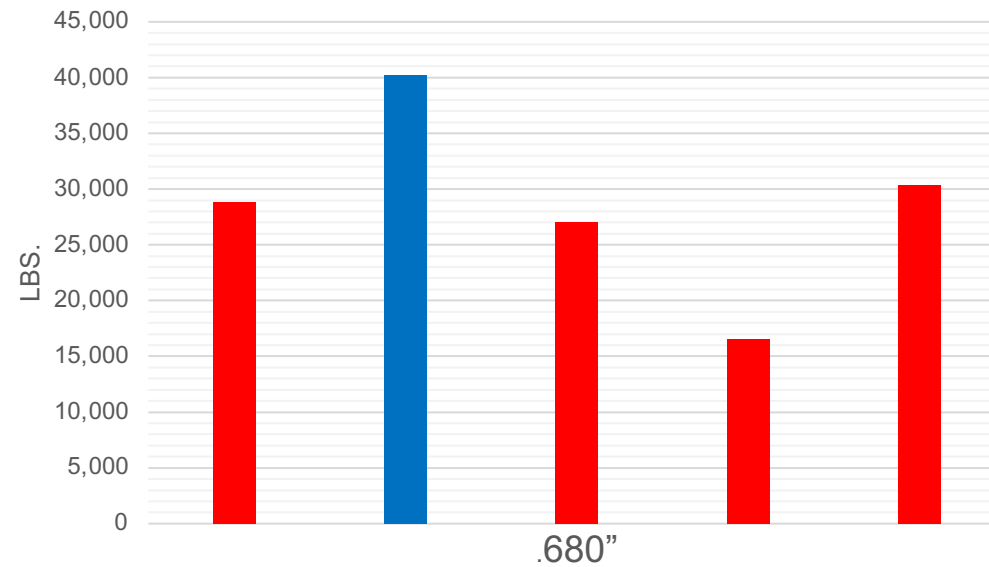
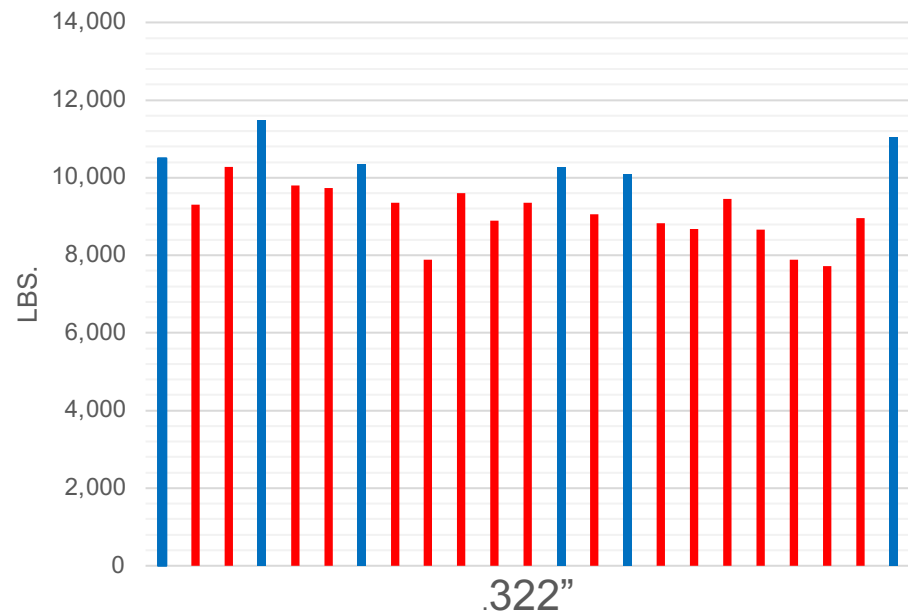


# Mechanical





# Helical Termination





# Spooler

- Hawboldt Industries spooler capable of spooling 10,000 M reels of .681
  - Allows the Wire Pool to inspect and lubricate factory reels
  - Cut from factory reels to distribute to vessels, saving on shipping costs





An aerial photograph of the ocean with white-capped waves breaking. The water is a deep blue, and the foam of the waves is white. The perspective is from directly above, looking down at the sea.

# Questions?