



National Science Foundation Wire Pool

A User's Guide to the UNOLS Wire Database

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Section A: Introduction

The UNOLS Wire Pool database assists Vessel Operators and their designees with managing their tension members. At the time the database was developed there were only a few types of wire ropes and cables in use. Over time the database has grown to include a variety of types and sizes of cables, wire ropes and synthetics in use on the National Science Foundation (NSF) academic research fleet. Some of the general all-encompassing terminology that was appropriate in the early Wire Pool days such as wire and cable are now often referred to as tension members. Today a distinction is made between wire and cable with wire referring to wire rope and cable to a tension member with internal conductors or other means of transmitting data such as optical fiber. The name, Wire Pool, harkens back to when the pool consisted of only wire rope but for now there are no plans to change the name despite it being a little antiquated.

Conventions used in the Wire Pool database and in this User's Guide.

Each tension member in the database is assigned a Wire Pool reel number. If the tension member was purchased by the Wire Pool for future distribution it is given a designation that begins with the letters NSF. A reel purchased by the Wire Pool for future distribution would have a reel number with the following format: NSF-XX-YY###. The XX is the last two digits of the year the tension member was purchased, the YY is a code for the type of tension member and ### is a sequential number. The code for the type of tension member may be a single character or multiple characters. An example of an NSF reel number is NSF-18-C120. The 18 refers to the year the tension member was purchased. The C is a code for .322 Electromechanical cable and the number that follows indicates it was the 120th reel of .322 cable purchased by the Wire Pool. Other codes used by the Wire Pool are shown in [Table 1](#).

Table 1: Tension member codes and corresponding descriptions

Tension Member Code	Description
C	.322" dia. Electromechanical Cable
CX	Coax Cable
EO	Electro Optical Cable
FO	Power Optic Cable, i.e. .681
H	Hydrographic Wire, i.e. .25" or .375" dia.
T	Trawl Wire, i.e. 1/2" or 9/16" dia.
SYNT	Synthetic

If a vessel has a tension member that was not originally distributed by the Wire Pool but it wants to include it in the vessel's wire database it is given an OTH number. The OTH (OTHER) number has the following format: OTH-###. The ### is a sequential number. Unlike the NSF number the OTH number does not contain a standard code for the type of tension member since the vessels tend to purchase a variety of products outside the standard complement of tension members available from the Wire Pool. An example of an OTH number is OTH-003 where the 003 indicates the third OTH reel logged in the database.

Underlined items in the database indicate they are linked to additional information and can be "drilled into" by clicking on the underlined expression. For consistency between the User's

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Guide and the database itself, titles that are bold or bold and underlined in the database are similarly bold or bold and underlined in the User's Guide. Apart from the User's Guide Table of Contents, list of Figures and list of Tables which are linked to the appropriate section in the User's Guide, the underlined titles embedded in the User's Guide do not redirect the user to other pages. The italics words in the User's Guide identifies terminology that appears in the database.

There are certain actions that can only be initiated by the Database Administrator or Wire Pool manager. One is re-assigning a tension member to a different vessel and the other is moving a tension member to a different institution. If your institution has more than one vessel and you want to move a tension member from one vessel to another you will need to contact the Database Administrator or Pool manager. Although not normally requested at the user level, a tension member cannot be moved from one institution to another without the assistance of the Database Administrator.

This User's Guide explains how to navigate the database to accomplish some very specific tasks. In so doing there are many details embedded in the instructions. For more brief instructions, an abbreviated list has been added to the end of each section.

Section B: Overview of the NSF Wire Pool Database

The following is an overview of the **UNOLS WIRE POOL SHIP REPORT** one can expect to see in the database. The details regarding specific topics are in subsequent sections.

Access to the database requires a password that is assigned by the Database Administrator. Section C of this User's Guide describes what the user needs to do to get started.

Upon logging into the database, you will encounter a dashboard that displays the vessel(s) affiliated with your institution. If your institution has more than one vessel listed in the database, click on the vessel you want to manage and you will land on the **SHIP REPORT** for that vessel. A sample **SHIP REPORT** appears in **Figure 1**. It has three basic sections: The left-hand block is the **contact section** and contains information about the people who are responsible for the tension members on the vessel. The upper block contains all the **Wires Assigned to this Vessel** and the lower block contains the **Safe Working Load Information** for all the wires that are in use on the vessel. More information about each section is included below and in subsequent sections.

Figure 1: Example of a Ship Report

Ship Report for Atlantis

Institution
Woods Hole Oceanographic Institution

Vessel
Atlantis

Shipping Address
266 Woods Hole Road
W.H.O.I.
Woods Hole, MA 02543d
Phone: 508-289-2416
Fax: 508-457-2178

Primary Contact
Paul Gallagher
Director of Ship Operations
Office Phone: 508-289-2624
Paul.gallagher@ocean.wpi.edu

Address
266 Woods Hole Road
Iselin Ship Operations, Mail Stop 27
Woods Hole, MA 02543

Secondary Contact
Christopher Griner
Senior Engineering Asst I
Office Phone: 508-289-3587

Per UNOLS Wire Pool Policy, transfer of UNOLS wire to another vessel or institution requires prior approval. Request Wire Report a Reel

Wires Assigned to this Vessel

Size and Type	Manu. Reel No.	Wire Pool Reel No.	Date Distributed to this Institution	Current Length (m)	Last Lubrication (see Policy)	Wire Status	Add Event
0.322 EM	Q60962-C1	NSF-20-C190	12/05/2024	10,078	12/17/2024	InUse	Select
0.322 EM	Q2169-C1	NSF-17-C179	01/01/2019	9,612	09/25/2024	InUse	Select
0.322 EM	Q4636-C1	NSF-05-C128	12/13/2017	8,461	12/13/2021	InUse	Select
0.322 EM	Q6772-C3	NSF-09-C152	01/19/2012	4,397	none reported	NotAccount	Select
0.681 PowerOpticTube	Q2172-C1	NSF-17-FD13-A	08/05/2019	6,752	03/26/2024	InUse	Select
0.681 PowerOpticTube	Q2172-C1	NSF-17-FD13-B	08/05/2019	2,713	03/26/2024	Avail	Select
1/4 3x19	SJ83242-01	NSF-07-H30	06/02/2021	9,107	09/26/2024	InUse	Select
1/4 3x19	BB00998-04	NSF-20-H25-B	09/20/2007	300	none reported	NotAccount	Select
9/16 3x19	BB51148-04	NSF-07-739	09/16/2010	8,485	09/24/2024	InUse	Select

The wires listed below are those reported above as "In Use or Onboard Vessel", which are required to be in compliance with Appendix A: Rope/Cable Safe Working Load Standards in UNOLS Research Vessel Safety Standards. Each row in the form represents a particular winch system, wire rope or cable, and fairlead combination.

Safe Working Load Information

1	2	3	4	5	6	7	8	9	10	11	12	13	
System Description	Wire Pool Reel No.	Rope/Cable	NBL (lbs)	TBL (lbs)	Test Date	ABL (lbs)	Minimum Sheave DIA (in)	Grooving Code	D/d	Tension Logging Freq.	FS	SWL (lbs)	Actions
Manu. Reel No.	Q60962-C1	0.322 EM	10,000	11,276	03/17/2024	10,000	28.00	A	06.06	20.0	2.0	10,000	...

Contacts

The left-hand **contact section** includes the names of the *Primary* and *Secondary contacts*, as well as their contact information. Also listed in this section are other users who are authorized by the *primary contact* to edit the database as well as read-only users. Section D of this User's Guide will explain how to **Edit the contact list**.

Wires Assigned to this Vessel

The section of the **SHIP REPORT** called **Wires Assigned to this Vessel** contains all tension members assigned to the vessel including those that may not currently be in use. This section has detailed information about each tension member including the *Wire size and type*, the *Date distributed to this institution*, its *Current length (m)*, the date of *Last lubrication* and the current

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Wire Status. In addition, the user can request new wire (**Request wire**) as well as request to have wire that may not have come from the NSF Wire Pool included in the vessel's database (**Report a reel**). More information on each of these is provided in section E below. Specific events can be recorded for each tension member listed in the **Wires Assigned to this Vessel**. Section F describes how to navigate the **Wires Assigned to this Vessel** section.

Safe Working Load Information

The **Safe Working Load Information** table contains information that pertains to the safe use of each tension member that is currently in use on the vessel. Much of the information in this section is about how the tension member and associated over boarding equipment is configured on the vessel and whether the vessel is following the requirements of Appendix A of the UNOLS Research Vessel Safety Standard. The minimum sheave diameter in the over boarding sheave train, sheave grooving, break test results, the chosen factor of safety and the tension logging frequency are part of the **Safe Working Load Information**. How to edit and update this information as well as the details of requesting a break test are found in section G below titled Updating Safe Working Load Information.

Section C: Getting Started

Access to the Wire Pool database is password protected. Access will allow the user to see only the tension member(s) that have been identified as being associated with their institution and vessel(s). The URL for the database is <https://wirepool.whoi.edu>. This takes the user to a login page that asks for the user's email address and password. To get an assigned username and temporary password, or if there are any questions about the database, contact the Database Administrator or Wire Pool manager at unolswirepool@whoi.edu.

Section D: Who can access the database, the levels of access and how to change access levels

As noted in section C, each user of the database should have their own login. This is useful since changes made to the database refer to the name of the person who entered the information. Users have varying levels of access which reflect their level of responsibility for the tension members on their vessel. The *primary contact* is typically the Marine Superintendent or Director of Marine Operations. The tension members assigned to a vessel are a resource of the National Science Foundation and as such must be kept in good condition with regular maintenance. Generally speaking, it is the responsibility of the *primary contact* to see that their vessel(s) maintains the tension members that they have received from the National Science Foundation. Most *primary contacts* choose to delegate that responsibility, and it is usually assigned to the person identified as the *secondary contact*. The *secondary contact* is often the person who is organizing the maintenance activities, updating the information in the database, requesting break tests and depending on the organization may submit requests for new wire. They are an alternate person if the *primary contact* is not available. In addition, there can be *other authorized users* who have read and write privileges and *read-only users* that have read-only access. **Table 2** shows the actions permitted for each level of access.

Table 2: Allowable actions for each of the levels of access to the Wire Pool database

Activity	Primary contact	Secondary contact	Authorized user	Read-only user
Move a reel to another vessel at your institution	Contact Wire Pool Manager or Database Administrator			
Move a reel to another institution	Contact Wire Pool Manager or Database Administrator			
Add Primary Contact	Contact Wire Pool Manager or Database Administrator			
Add a New User	Y	N	N	N
Add/Edit Secondary Contact	Y	N	N	N
Add/Edit Authorized User	Y	N	N	N
Add/Edit Read-Only User	Y	N	N	N
Edit Contact Information for Self	Y	Y	Y	Y
Request Wire	Y	Y	Y	N
Report a Reel	Y	Y	Y	N
Enter Events	Y	Y	Y	N
Request A Break Test	Y	Y	Y	N
Update Safe Working Load Information	Y	Y	Y	N

D.1 Adding a New User (can only be done by the *primary contact*)

The *primary contact* can request a new user. Users can be given full access to the database with read and write privileges or they can be designated as a read-only user and therefore could view the database but not make changes. The *primary contact* also designates the *secondary contact*. If the *secondary contact* wants to add a new user, they must either ask the *primary contact* to do it through the database or ask the *primary contact* to send an email to the Database Administrator or Wire Pool manager requesting the new user. The Wire Pool wants to make sure the *primary contact* is aware of and approves of adding a new user who will have access to the vessel's wire database. The Database Administrator can always add individuals as well as designate a new *secondary contact* if the change is authorized by the *primary contact*.

Figure 2: Requesting a new user and assigning an existing user's role

Contacts for Woods Hole Oceanographic Institution

Paul Gallagher
 Director of Ship Operations
 Paul.gallagher@example.com

Neil Armstrong | [View Ship Report](#)

Role	Name	Title	Phone	Email		
Secondary	Christopher Griner	Senior Engineering Asst I	774-382-9011	cgriner@example.com	Edit	Remove
Other	Eric Benway	Port Captain	508-737-7180	ebenway@example.com	Edit	Remove
Other	Owen Harvey			owen@example.com	Edit	Remove
Other (readonly)	Chiefmate Armstrong			chmate@example.com	Edit	Remove
Other (readonly)	Master Armstrong			master@example.com	Edit	Remove
Other (readonly)	SSSG Armstrong			sssg@example.com	Edit	Remove
Other (readonly)	Sarah Fuller			sfuller@example.com	Edit	Remove
Other (readonly)	Catie Graver			cgraver@example.com	Edit	Remove
Other (readonly)	Finn Morrison			fmorrison@example.com	Edit	Remove

Assign Secondary Contact
Assign Authorized User
Assign Read-only User
Request New User

Steps for adding a new user (can only be done by the *primary contact*)

- From your Dashboard, click **Contact List** for the vessel you want to update
- Click **Request New User**
 - Note: The three blue buttons (Assign Secondary Contact, Assign Authorized User, Assign Read-only User) are only to be used for assigning existing users to various roles who are not currently assigned.
- Fill in the information requested about the new user.
- Click on **Submit**
- After the new user has been approved by the database administrator, the level of access to the database can be established by clicking on one of the three blue buttons as noted above depending on the desired access level.

D.2 Changing the Level of Access for an Existing User (can only be done by the *primary contact*)

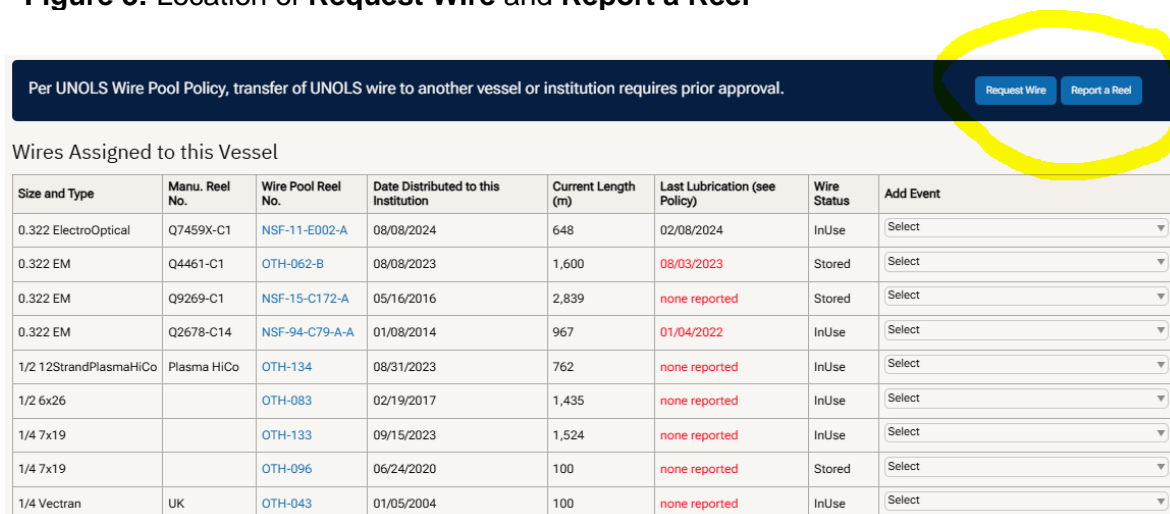
- To change a user's role, click **edit** next to their name for each vessel you want to update. Use the pulldown menu to change their role.

Section E: How to request a new tension member or add a tension member to a vessel's database

At the top of the Ship Report page there is a section titled **Wires Assigned to this Vessel**. On the right-hand side of this section there are two common processes the user can initiate from the Database:

- **Request Wire**: Use this button when requesting a tension member from the Wire Pool.
- **Report a Reel**: Use this button when reporting a tension member that was not previously distributed by the Wire Pool if you would like to include it in the vessel wire Database.

Figure 3: Location of **Request Wire** and **Report a Reel**



Per UNOLS Wire Pool Policy, transfer of UNOLS wire to another vessel or institution requires prior approval.

[Request Wire](#) [Report a Reel](#)

Wires Assigned to this Vessel

Size and Type	Manu. Reel No.	Wire Pool Reel No.	Date Distributed to this Institution	Current Length (m)	Last Lubrication (see Policy)	Wire Status	Add Event
0.322 ElectroOptical	Q7459X-C1	NSF-11-E002-A	08/08/2024	648	02/08/2024	InUse	Select
0.322 EM	Q4461-C1	OTH-062-B	08/08/2023	1,600	08/03/2023	Stored	Select
0.322 EM	Q9269-C1	NSF-15-C172-A	05/16/2016	2,839	none reported	Stored	Select
0.322 EM	Q2678-C14	NSF-94-C79-A-A	01/08/2014	967	01/04/2022	InUse	Select
1/2 12StrandPlasmaHiCo	Plasma HiCo	OTH-134	08/31/2023	762	none reported	InUse	Select
1/2 6x26		OTH-083	02/19/2017	1,435	none reported	InUse	Select
1/4 7x19		OTH-133	09/15/2023	1,524	none reported	InUse	Select
1/4 7x19		OTH-096	06/24/2020	100	none reported	Stored	Select
1/4 Vectran	UK	OTH-043	01/05/2004	100	none reported	InUse	Select

E.1 Requesting Wire from the Wire Pool

To submit a request for wire from the Wire Pool, click on **Request wire**. This will bring up a form called: **Initiate a Request for Wire or Cable for [institution name]**.

Steps for requesting a new tension member from the Wire Pool:

- Go to the **SHIP REPORT** page
- Click on **Request Wire**
- Enter the date needed, the type and size of tension member being requested, and the length required.
- Enter a detailed explanation of why a new tension member is required. Lack of information will delay the processing of the request. *
- Click on either **Submit** to submit the request or **Cancel** to return to the **SHIP REPORT**
- The request will be reviewed by the Wire Pool Manager and NSF.

**Most important is the explanation as to why a new wire or cable is being requested. Please enter as much information as possible to support/justify your request.*

The Wire Pool manager will then review the inventory and consider the overall historical stewardship of wire previously distributed to the vessel. In particular, the **Safe Working Load Information** on the **UNOLS WIRE POOL SHIP REPORT** will be reviewed to make sure it is up to date and in compliance with Appendix A of the UNOLS Research Vessel Safety Standard. The package of information is then sent to NSF for review.

E.2 Report a Reel (add a tension member to a vessel's database)

To add a tension member that was not previously distributed by the NSF Wire Pool, go to the **SHIP REPORT** page and click on **Report a reel**. This section describes the procedure to be followed when a user wants to include a tension member, not distributed by the Wire Pool, in their vessel's Database.

Steps for reporting a reel on your vessel:

- Go to the **SHIP REPORT** page
- Click on **Report a reel**
- Enter the date the reel was put into service (if known) or the current date if unknown.
- Select the appropriate category: *Steel cable, steel rope, synthetic cable, or synthetic rope*
- Select diameter
- Select type
- Enter the manufacturer name, manufacturer part number, and manufacturer reel ID (serial number) if known.
- Enter breaking strength (lbs.) and current length (m).
- Select the status from the dropdown menu (in use/on board vessel or in storage)
- Click **Submit** or **Cancel** to go back to the previous page.
- The request will be reviewed by the Wire Pool Manager and once approved it will show up on the ship report.

Section F: Navigating and Editing the Wires Assigned to this Vessel section

At the top of the **SHIP REPORT** there is a section titled **Wires Assigned to this Vessel**. This section provides basic information about each of the tension members assigned to the vessel, including those in storage. The information includes *Wire size and type*, *Manu. Reel No.* (manufacturer's reel number, if known), the *Wire Pool Reel No.*, *Date* the reel was *distributed to this institution* or reported by the vessel, *Current length*, date of *Last lubrication* and *Wire Status*.

F.1 The Wire Pool Reel No.

The *Wire Pool Reel No.* can be drilled into for more information about that specific reel and its history.

Event History is a historical record of a single tension member. It should include as much information about the tension member from the time it first arrived in the Wire Pool to the time it is retired. The completeness of the record depends on the diligence of the authorized database users to enter the information. The results of all tests conducted by the Wire Pool are uploaded in the Event History.

F.2 Entering Event information

To add an event, go to the section **Wires Assigned to this Vessel**. From the drop-down menu, choose the event you would like to report: *Lubrication*, *Cut back/re-termination*, *End for End Wire*, *Split*, *Update Wire Status*, *Disposal Request* and *Upload Documents*. Each event, when selected, brings up a simple form for entering the information about the selected action.

F.2.1 Lubrication Event

Select *Lubrication* and enter details related to the event. If the wire has been lubricated it is important to enter the event into the database.

If there is a document containing any information about the lubrication it can be uploaded as well (PDF documents only). By clicking *Submit* the information will be added to the tension member's **Event history**.

F.2.2 Cut Back/Re-termination Event

Tension members frequently need to be re-terminated and/or it may have been necessary to remove a length less than 200 meters due to damage, excessive corrosion or was recommended by the Wire Pool due to poor break test results. The result is that the length of UNUSABLE wire was removed resulting in a shortened tension member. After entering the information *Submit* the form and the information will be added to the **Event History**.

If, however, the tension member had to be cut, and the piece removed is greater than 200 meters and the removed length is in USABLE condition then there is a different event called *Split* that should be used to report the event. The tension member may not be considered usable by the vessel or the institution to whom it was distributed, but the Wire Pool may consider it to be useful to another user or smaller vessel. See more about *Split* in the section below.

F.2.3 End for End Wire Event

After a tension member is removed from a winch it may get used again but the end that was originally at the core of the winch drum may become the new working end due to an intervening spooling operation. This can possibly extend the life of a tension member. The *End for End Wire* event requests the *Date* it occurred and the *Reason*. After entering the information *Submit* the form and the event is entered into the **Event History**.

F.2.4 Split (removed usable tension member of 200 m or more)

If a tension member must be cut and the piece removed is greater than 200 meters and the removed length is in **USABLE** condition, there is an event called *Split* that should be used instead of *Cutback* to report the event. The tension member may not be considered usable by the vessel or the institution to whom it was distributed but it may be valuable to another user or smaller vessel.

When a split has occurred, two segments are created. The two resulting lengths are given the same designation as the parent reel but with the suffix of –A and –B. For example, if *Wire Pool Reel No.* NSF-10-C100 is split into two pieces each resulting length would have a new designation, NSF-10-C100-A and NSF-10-C100-B. It is the responsibility of the vessel to properly identify the two resulting lengths with their new complete NSF reel numbers particularly if one goes into storage. It can sometimes be difficult to know which is which if their lengths are similar.

The *Split* event tab brings up a form to help the user keep track of the two segments. The *Date* when the split occurred is requested along with the *Reason* for the split.

The *Status* of each segment needs to be specified. There are three status options on the pull-down menu. They are: *In use or onboard vessel*, *In storage ashore for future use by this institution*, *In storage ashore and available to other institutions*.

The user can then input the corresponding lengths of what will become Segment A and Segment B. If the entire length of one or the other is not usable an estimate of the usable length of each segment is requested.

Finally, the wire *Condition* for each segment can be selected from a pulldown menu: *good*, *partially damaged*, *poor*, *needs evaluation*, or *unknown*. If the tension member is a cable the *Wire Condition* should be an evaluation of not only its mechanical condition but also its electrical conductors and, if applicable, the optical fibers. Additional details can be added to the comments section.

Once the information is filled in for both Segment A and Segment B it can be *Saved* and the event will appear in the **Event History**. In addition, the two segments will now appear on the vessel **UNOLS WIRE POOL SHIP REPORT**. Each segment will be tracked separately. By clicking on the link to either new segment the **Reel Information** contains a link to the parent reel. Each new segment now has its own event history that starts with the creation of the segment. Any history prior to the split can be obtained through the link to the parent reel.

F.2.5 Update Wire Status

This event tab allows the user to easily update the status of the tension member as it changes over time. The status options include *In use or onboard vessel*, *In storage ashore for future use by this institution*, *In storage ashore and available to other institutions* or *Disposal Request*. If the tension member is being made available to other institutions, please enter the estimated usable length.

F.2.6 Disposal Request

A disposal request should be accompanied by a detailed description as to why the tension member needs to be disposed. The Wire Pool tries to maximize the life of these NSF resources and there may still be life left in the wire/cable. Tension members are to remain assigned to a vessel and be maintained by the institution while in their custody until they can be reassigned or disposed. This includes the time while they are in storage and available to other institutions. Tension members are not to be transferred from one institution to another without approval from the Wire Pool.

Disposal requests are reviewed by the Wire Pool and then submitted to NSF for approval. If approved, you will be notified that the tension member can be disposed of.

F.2.7 Upload Documents

You may upload documents associated with your tension members. These documents will be included in the Event History. It can be anything that provides information about the tension member. File types can include *Wire Log*, *Lubrication/Maintenance Report*, *Condition Report*, *Damage Report*, *Catastrophic Damage*, *Wire train*, *Photographs*, *Break Test Results* (if done outside of the Wire Pool), *e-kink Test Results*, *Mandrel Wrap Test Results* (if done by the vessel), *Conductivity Test*, *Manufacturer Documents* and *Other file type*. If *Other file type* is selected there is a box to the right for entering a descriptive phrase that best describes the uploaded document. The *File type* selected from the drop-down menu or that which was entered in the *Other file type* box will appear in **Event History**.

Note: PDF and Excel files may be uploaded.

Section G. Requesting a Break Test & Updating the Safe Working Load Information

The middle section of the **SHIP REPORT** is titled **Safe Working Load Information**. The tension members listed in this section are only the ones whose **Wire Status** is reported as *in use or onboard vessel*. In this section the user can **Request a break test** as well as **Edit SWL info** (or add SWL information if none exists).

G.1 Requesting a break test

To request a break test, go to the **Safe Working Load Information** and select 'Request break test' from the Actions pulldown menu on the far right. Fill in the required information and click Submit. Each long (5-7m) sample that is sent to the Wire Pool for testing should be accompanied by its own break test request form. Please **print** the confirmation page and affix it to your sample before sending it to the Wire Pool for testing.

Mail samples to:

Woods Hole Oceanographic Institution

Attn: Eric Trotto

NSF UNOLS Wire Pool

266 Woods Hole Road

Woods Hole, MA 02543

Note: The Wire Pool is funded to perform break tests on wire samples submitted by the vessels at no cost to the Vessel Operator. If you do have a test performed outside of the Wire Pool, please use the *Upload Documents (F.2.7)* function to upload test results and any other supporting documentation.

Please send samples that are 5 to 7 meters long from the working (wet) end of the tension member and ship them to the Wire Pool*. The Wire Pool encourages the vessels to submit two break test requests and to send two samples from the same reel. One sample should have at least one vessel applied termination typical of what is used at sea so that the vessel terminated tension member can be tested as an assembly. This way the vessel can learn the magnitude of the loads their terminated tension member can withstand. If the vessel-terminated sample breaks below the manufacturer's minimum breaking strength, it may be due to the tension member itself or the termination. The Wire Pool will conduct a second break test using the second sample if one is provided. The second sample should also be 5 to 7 meters long and does not need to be terminated. The Wire Pool will terminate the second sample with Wire Pool terminations, break the sample and report the results.

*Refer to RVSS Appendix A (A.5.2) for wire rope and cable sample requirements and (A.5.3) for synthetic sample requirements.

If only one wire or cable sample is provided from the reel and it is supplied with terminations on both ends please include a short piece that is approximately 18" long so that the additional tests that the Wire Pool conducts can be performed on the individual wires that make up the wire rope or cable armor. If there are samples from more than one reel in a shipment please identify which 18" piece is associated with each long sample.

Note: The *Evaluating Wire* option is selected when the tension member is not due for testing but rather may have had an event that caused concern and the vessel wants the tension member tested. If the sample is terminated, please indicate the *Termination type* that is applied. Examples of types of terminations include poured socket such as with epoxy or a low melting temperature metal, compressed sleeve such a Nicopress® fitting, helical cable grip termination such as the PMI CABLE-GRIP®, or wire rope clips such as the Crosby® G-450 Wire Rope Clip. Reusable terminations will be returned to the vessel operators after the testing is completed.

At the time the break test request is submitted the vessel operator is also required to provide a copy of the wire history or wire log information with the sample. The minimum requirements of the wire log are listed in section A.5.2 of the UNOLS Research Vessel Safety Standards, Appendix A. UNOLS Rope and Cable Safe Working Load Standards. They are also summarized on the break test request form. Please upload a wire log from the Ship Report page in the Action column/upload documents.

G.2 Adding or Editing Safe Working Load (SWL) Information

The vessel operator is required to input safe working load (SWL) information for each tension member that is *in use or onboard the vessel*. To operate at increasingly smaller factors of safety, the vessel is required to meet the requirements defined in Appendix A of the UNOLS Research Vessel Safety Standard. Information about the sheaves used to overboard the tension member as well as the frequency that tension data is collected is required.

To edit/update the **Safe Working Load Information**, select 'Edit SWL' from the Actions pulldown menu on the far right. Fill in the required information and click Submit.

- *System Description*: Provide a brief description of the winch system on which the tension member is wound.
- *Minimum Sheave DIA (in)* is the minimum sheave tread diameter in the entire sheave train that is used to overboard the cable from the winch to and including any portable hanging blocks. Only enter the numerical value (no units) of the diameter in inches
- *Grooving Code*: Enter a letter designation as defined in the Sheave Groove Radii chart that can be accessed from the link at the bottom of the **SHIP REPORT** (see #9).
- *Tension Logging Frequency*: Enter the sampling frequency of the tension monitoring equipment. Only enter the numerical value (no units) of the frequency in Hz.
- *Safety Factor** refers to the factor of safety (FS) that will be used for the selected tension member. FS is defined as the ratio of the maximum stress that a material can withstand to the maximum stress estimated for it in its planned use. For the purposes of this standard, FS shall be considered the value selected by the operator.

*To determine appropriate Factors of Safety (FS), refer to RVSS Appendix A (A.8.2) for steel tension members and (A.8.3.1) for synthetic tension members.

As a tool to alert the vessel operators to a problem, the values in Boxes 8-13 will be red in color if any information is missing or if the safe working load information that was input does not meet the requirements of Appendix A. A message also appears indicating that Information is missing OR not consistent with Appendix A.