



MANAGEMENT SYSTEM MANUAL

WF 6.1.0 R/V Western Flyer ROV Handling System Operations

Originator:	Approved By:
Chris Grech / Ian Young	Steve Etchemendy

1. Purpose

The purpose of this procedure is to set forth the standards for ROV Umbilical Handling System (UHS) operations and the qualification for training operators aboard R/V Western Flyer.

2. Responsibility

ROV Umbilical Handling System operations are conducted with the approval of the Master. The maintenance of the Dynacon ROV handling system structures, lubrication, and related hardware and sheaves are the responsibility of both the Deck and Engineering departments. Mechanical, electrical and hydraulic issues are the responsibility of the Engine Department. The Chief Mate is responsible for the care of the primary ROV umbilical cable. A record of umbilical cable uses is maintained by the Officer of the Watch and is entered into the ship's log. The Chief Mate will update the "wire log" for all transferred, retired, or removed from the ship, the wire records will be updated accordingly.

3. General

The ship's ROV umbilical handling system is a custom-built Dynacon traction winch, motion compensated crane and storage drum. The system is currently designed to handle only .68-inch cable, umbilical Rochester electro /optical cable.

Because of its complexity and operation, specialized training is deemed necessary. It is, however, required that the person operating the unit follow directions while maintaining situational awareness for the task at hand.

Standard operations have a qualified member of the engineering department run the UHS storage drum, mo-comp crane, moonpool doors, and traction unit,. These are all operated in coordination with a qualified member of the deck department who operates the ROV handling "EFFER" crane. In port a qualified member of the ROV crew can run this UHS winch system and moonpool doors.

To become qualified for operations of this equipment a candidate must received orientation from a qualified member of the engineering department. A checklist of operational items for this system is attached to this document., and must be completed to be qualified.

The UHS Winch has fixed controls on the left side and remote control and display for use as needed. The winch also has automatic and manual level wind. Joystick control is achieved by pushing forward to pay out and pull back for recovery. Speed is controlled by how far the joystick is pushed.



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The UHS control microprocessor offers several important and convenient options and settings that are tied in to alarms. Among these options are: speed out/in and tension display. Additionally, a number of CCTV cameras are provided for the control room and bridge for operational monitoring.

Cable operations are managed using a Dynacon supplied motion compensated crane, which is designed to handle the ROV umbilical.

Procedures for rigging, handling, overboarding and recovery the ROV are as in all procedures, designed to provide as safe an operation as is prudent and reasonable. Deck set up, rigging, overboarding and recovery will be at the direction of the Chief Mate who will instruct all participants and direct deck operations.

The Moonpool doors strength relies on eight hidden locking pins, which must be retracted before attempting to open the doors. Damage will occur to these pins if not properly used.

The moonpool deck area is secured to all non-essential personnel while all operations are being conducted.

All operations involving new equipment or unusual configurations are to be pre-approved by the Master in advance of the scheduled deployment

4. Maintenance

All maintenance conducted by the ship's crew will be recorded and the information will be entered in MP2. Adjustments to the settings of the handling system need to be approved with the Chief Engineer.



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R/V Western Flyer ROV handling system Operator Certification Worksheet & Check Off List

Name of person being certified: _____

Date begun: _____ Date Completed _____

Certified By: _____

Check Off List:

Orientation: _____ ROV handling system / Moonpool doors

1. Terms, names, nomenclature.

- | | | |
|---------------------------------------|------------------------------|------------------------------|
| a. Controls | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| b. Wire/sheaves/spool/booms | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| c. Slew gears & lube points | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| d. Communications | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| e. Safety | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| f. Switches, lights, on/off | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| g. Hydraulics & limits & overrides | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| h. Boom crutching & heavy wx securing | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |

2. Operations:

- | | | |
|---|------------------------------|------------------------------|
| | In Port | |
| a. Pre-start visual inspection | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| b. Warning lights inspection | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| c. Check status and position of umbilical | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| d. Start up warm up | (Y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| e. Boom exercises | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| f. Moonpool door exercises | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| g. Mo Comp Slew exercises | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| h. Remote control operation | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| i. Multi function coordinated exercises | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| j. ROV launch & recovery | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| k. Line counter set up | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |
| l. Mode selection | (y) <input type="checkbox"/> | (n) <input type="checkbox"/> |

3. Operations at Sea:

The at sea phase of the training process will be active and on-the-job training. This is predicated on demonstrated performance during the dockside training. Field experience has shown that this method works quite well. It is recognized, however, that not all persons trained dockside will have the ability to perform equally well at sea on a moving platform. In those cases or where either the operator or the Chief Engineer Mate feels uncomfortable, another operator will be assigned.

4. Certification:

The above named trainee has been directed and observed to have successfully operated the ROV handling /Moonpool controls through the required at-sea functions and has demonstrated proficiency and competency to the satisfaction of the ship's Chief Engineer and is hereby certified as a Ships Crane Operator for the type crane currently listed.