Winch Monitoring for Increased Safety

…And Compliance with Appendix A

Installation Update

Presented by

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Managing Director

MEASUREMENT Technology NORTHWEST

Equipment Installed

- Group Purchase
  - 9 vessels
    - 25 instrumented sheaves or blocks
    - 30 LCI-90i displays
- Independents
  - 8 vessels
    - 27 instrumented sheaves or blocks
    - 51 LCI-90i displays

Work In Progress

- Pelican
  - Computer interface
- Walton Smith
  - New force transducers ordered
- Nathaniel B. Palmer
  - Equipment delivery April 29th
  - No installation
    - Tech trained at MTNW
- SCRIPPS
  - Upgrade
    - Standardize to fleet wide firmware
    - New Horizon, Sproul : May 18th
    - Melville: June 8-10th
- Thompson
  - Upgrade spare

Calibration Results

- All winches except one were calibrated to Appendix A tension specifications
- All winches calibrated for payout
- Tension calibration tools
  - Analog dial dynamometers are most common
  - Digital dynamometers are a better choice
    - Tied to deck with cleats
  - Calibration weights the best and safest
    - Concrete/railway wheels/water bags

Sample Data

- R/V Wecoma, Oregon State University
- CTD Winch
- Wire = 0.322”
- Calibration Full Scale 5000 lbs
  - Load Pin full scale of 17,682 lbs
  - Only using 28% of sensor’s range

DYNAMOMETER	LCI-90i LBS	ERROR LBS	% ERR (FS)
50	48	2	0.04
1000	1008	-8	-0.16
2000	2011	-11	-0.22
3000	3000	0	0.00
4000	4001	-1	-0.02
5000	4996	4	0.08
50	51	-1	-0.02
	RUN AVERAGE %		-0.04

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