



Verification Procedure & Results

Test Procedure Document No.: 3166-70105	Test Procedure Rev.: 1-01
Test Plan Document # 3166-70000	Test Plan Rev.: 1-01
Test End Date:	
Approval Signature <i>[Signature]</i>	Date 2013-07-01
Approval Signature <i>[Signature]</i>	Date 2013-06-28
Approval Signature <i>[Signature]</i>	Date 2013-06-28
QA:	Date
Test Dir.	Date

Test Case Name: Straight Line Proof Load of Load Cage & Spheres		Test Plan Document # 3166-70000	Test Plan Rev.: 1-01	Test End Date:
Test Conductor (Print Name)	Signature	Design Engineer (Print Name) Taylor Semingson	Approval Signature <i>[Signature]</i>	Date 2013-07-01
Test Director (Print Name)	Signature	System Engineer (Print Name) Sheri N. White	Approval Signature <i>[Signature]</i>	Date 2013-06-28
Witnessed by (Print name)	Signature	QA/QC Engineer (Print Name) Gary Cook (I&T Lead)	Approval Signature <i>[Signature]</i>	Date 2013-06-28
DOORS Verification Procedure ID Ver-CG-265	DOORS Verification Event ID CG-VE-3023	Test Results Reviewed	QA:	Date
			Test Dir.	Date

Test Description
This test will be performed to ensure that mooring riser components meet the requirements for straight line proof load.

- Requirements Addressed**
- L4-CG-MO-RQ-288 Instrument Frames on Global subsurface moorings shall be designed to sustain a straight line proof load of 6,000 lbs.
 - L4-CG-MO-RQ-289 Sub-surface spheres shall be designed to sustain a straight line proof load of 6,000 lbs.
 - L4-CG-MO-RQ-267 Universal joints shall be designed to sustain a straight line proof load of 10,000 lbs.
 - L4-CG-MO-RQ-290 Mooring Riser weldments shall be designed to sustain a straight line proof load of 6,000 lbs.
 - L4-CG-MO-RQ-280 Dualing brackets shall be designed to sustain a straight line proof load of 10,000 lbs.

- Test Environment**
- Main controller is located in load cage at burn-in site.
 - Secondary controller is located in 64" sphere cage insert assembly at burn-in site.
 - DOSTA, PHSEN, and FLORT are connected to secondary controller in 64" sphere cage insert, located at burn-in site.
 - Inductive bypass cables are connected through cages and inductive instruments, all located at burn-in site.
 - Test conduct will be in accordance with Scripps EH&S policies located at: <http://blink.ucsd.edu/Blink/External/Topics/1,1105,7,00.html>

- Test Setup**
- Pre conditions
- 64" sphere weldments and Adapter Style B to Inductive on either end but without instruments
 - 62" ADCP spheres
 - Instrument Frames
 - Dualing bracket assembled with two acoustic releases and drop chain
 - Universal joint assembled with Adapter Style B to Inductive on either end
- Hardware preparations
- Lifting device, eg. forklift, with appropriate WLL
 - 10 ton dynamometer with logging functionality
 - 6,000lbs weight, anchor modules or similar, for load cage, 62" sphere, and 64" sphere
 - 10,000lbs weight, anchor modules or similar, for dualing bracket, universal joint, and instrument frame
 - Lifting slings and hardware with WLL > 10,000lbs.
 - 64" sphere weldment assembly on site
 - 62" ADCP spheres on site
 - Instrument Frames on site
 - Dualing Bracket on site
 - Universal joint on site

Test Artifacts
Test Artifacts consist of the Pass/Fail results for steps contained within this procedure.

Test Procedure 3166-70105 Rev 1-01				Test Results		
Step#	Instructions	Expected Results	Requirement ID	Observed Results	Pass/Fail	Notes
1	Attach instrument frame arbor eye to lifting device using appropriate slings and shackles with 10 ton dynamometer in between, turned on in logging mode					
2	Attach instrument frame arbor eye opposite the end attached in Step 1 to 6000lbs weight using appropriate slings and shackles					
3	Lift and hold the instrument frame and weight assembly off the ground for 1 minute	Verify that the instrument frame can sustain a 6,000lbs load for the test duration. Record maximum load from dynamometer.	L4-CG-MO-RQ-288			
4	Repeat the previous 3 steps for each instrument frame	Verify that each instrument frame can sustain a 6,000lbs load for the test duration	L4-CG-MO-RQ-288			
5	Attach the top 64in sphere Adapter Style B to Inductive eye to lifting device using appropriate slings and shackles with 10 ton dynamometer in between, turned on in logging mode					
6	Attach the bottom 64in sphere Adapter Style B to Inductive eye opposite the end attached in the previous step to 6000lbs weight using appropriate slings and shackles					
7	Lift and hold the 64in sphere and weight assembly off ground for 1 minute	Verify that the top weldments for the 64in sphere can sustain a 6,000lbs load for the test duration. Record maximum load from	L4-CG-MO-RQ-290			
8	Rotate the sphere 180degrees so that the top weldments are now on the bottom and repeat the previous 2 steps leaving the 10 ton dynamometer on top.	Verify that the bottom weldments for the 64in sphere can sustain a 6,000lbs load for the test duration. Record maximum load from dynamometer.	L4-CG-MO-RQ-290			
9	Repeat the previous 4 steps for each 64in sphere	Verify that each 64in sphere can sustain a 6,000lbs weight for the test duration.	L4-CG-MO-RQ-290			
10	Attach the top 62in ADCP sphere arbor eye to lifting device using appropriate slings and shackles with 10 ton dynamometer in between, turned on in logging mode					
11	Attach the bottom 62in ADCP sphere arbor eye opposite the end attached in the previous step to 6,000lbs weight using appropriate slings and shackles					
12	Lift and hold the 62in ADCP sphere and weight assembly off ground for 1 minute	Verify that the top arbor eye on the 62in ADCP sphere can sustain a 6000lbs weight for the test duration. Record maximum load from dynamometer.	L4-CG-MO-RQ-289			
13	Rotate the sphere 180degrees so that the top arbor eye is now on the bottom and repeat the previous 2 steps leaving the 10 ton dynamometer on top.	Verify that the bottom arbor eye on the 64in sphere can sustain a 6,000lbs load for the test duration. Record maximum load from dynamometer.	L4-CG-MO-RQ-289			
14	Repeat the previous 4 steps for each 62in ADCP sphere	Verify that each 62in ADCP sphere can sustain a 6000lbs weight for the test duration	L4-CG-MO-RQ-289			
15	Attach dualing bracket eye to lifting device using appropriate slings and shackles with 10 ton dynamometer in between, turned on in logging mode					
16	Attach acoustic release drop chain to 10,000lbs weight using appropriate slings and shackles					