

Inspection of “Ocean Researcher 2”

Date: 03 May 2009

Location: Pier 4, Kaohsiung, Taiwan

Inspection – Mark Landow, with Harm Von Avendonk (sp ?) + Tan Kin Wang (Science Party)

Vessel Particulars:

Official # 012620

HP = 1305

Single main propulsion engine, controlling 1 propeller via RPM control and “controllable pitch” propeller.

2 auxiliary engines for electricity, and Tunnel bow thruster.

Documents:

Vessel has class survey, dated 23 Feb 2009

Also inspected by Keelung Harbor Unit (Coast Guard ?) 19 Feb 2009

Crew:

Master has been with the vessel 7 months. He has a 1st class Master’s license (apparently this means unrestricted by area or tonnage), and has GMDSS operator certification, as well as ARPA, and the standard Basic Safety Training. The master didn’t speak much English in our conversation, but seemed to understand some of what I said in English.

Chief Mate has been with the vessel for 10 years, and he has a 1st class license as Chief Officer, as well as GMDSS, etc. The Chief Officer had some English language skills and only needed some of my questions translated by Tan Kin Wang.

2nd Mate has been with vessel for 3 years. I did not inspect his certification. He spoke some English.

I comment on the Officer’s English language skills, so the scientists could receive instruction and direction in case of an emergency, as well as their ability to effectively communicate during deck operations.

Total crew of 12, including Master.

Comments on Survey – in addition to the 4 page survey report (Annex D of the RVSS)

1. All items not checked or commented on in the 4 page survey were either not found or not inspected.

2. Deck crane was not labeled with SWL, but verbal information listed it at 10,000 Lbs, which seems somewhat higher than I would guess by visual inspection. I don't know what safety factors they were using in the SWL determination. I do think the crane is generally capable of launching and recovering the OBS instruments that are the focus of their mission.
3. Deck crane was found with badly rusted lifting hook, with no safety latch and the swivel rusted solid (pointed out by SIO-OBS crew). Suggested to vessel crew that hook should be removed from wire and replacement hook or no hook be used during the operation. If hook was used it should have a safety latch. Hook was cut off (no way to remove hook since wire was swaged directly onto hook's eye) during the inspection. Final equipment to be used on the end of the wire not yet determined.
4. Ship was fitted with bulwarks and railings and they were sufficient to protect the crew and science party.
5. Portable fire extinguishers were examined – found with recent inspection and with good pressure on gauges, but surface rust common on the extinguishers.
6. There is NO fixed fire fighting system with remote activation to cover engineering spaces. In any significant fire in the E/R, I would think it irresponsible to send a crewman into the space with the single SCBA/turnout gear set, to either fight a fire with water or portable extinguishers. 1 large dry chemical extinguisher in the E/R with hose was found, but this of course requires a person in the space to operate.
7. The SCBA + turnout gear consisted of 1 set of gear, which was stowed under the seats of the mess deck settee. I found it difficult to access the gear. The SCBA looked in order, but the bag it was stowed in was wedged partly under a brace, and the metallic coated turn out gear was still in a plastic shopping bag. This also being in the mess deck was very close to the galley, and would be difficult to access if a galley fire were to occur. A safety line was present, but with only 1 set of SCBA, there is no suitably equipped second person to rescue/assist the person at the end of the safety line in case of an emergency.
8. Emergency Station information was found to be only in Chinese. Suggested to the crew that this needed to be translated so the English speaking science party could understand their muster locations and duties, as well as the meaning of all emergency signals.
9. Medical equipment was only found in the mess deck in 2 drawers of a cabinet. The medical supplies was quite limited, and consisted of no Oxygen, no backboard or stokes litter, and very limited supply of medications and bandages.

I think the vessel is generally capable of conducting the mission goals of launching and recovery of OBS. It being of limited size, weather will be a very significant factor if operations can be carried out safely.

The vessel was apparently lacking in gear to secure the OBS equipment storage racks in preparation for sea. The SIO-OBS team borrowed from the Langseth chain binders and they reported that chain would be obtained locally before departure to secure the OBS racks to the vessels main deck.

End of comments.

APPENDIX D
Inspection Check List for Chartering Non-UNOLS Vessels

Vessel Name:	OCEAN RESEARCHER #2
Owner:	NATIONAL TAIWAN OCEANO.
Address and Contact Information:	
Operator:	SAME
Address and Contact Information:	
Licenses held:	SEE COMMENTS
Vessel Type and General Description:	
Length Overall:	40 m 38.92 m LOA
Displacement:	
Tonnage [GT/GRT/NT] :	GT 294
Draft:	3.4 m
Radio Call Sign	BP 3015
Number of Passengers/Scientists that can be carried:	8 SCIENCE / 20 PERSON ON BOARD
Charterer – PI and Institution	
Dates of planned charter:	04 MAY - MAY 13, 2009
Area of operations:	TAIWAN STRAITS, N. PACIFIC (EAST COAST TAIWAN)
Type of operations or activities planned:	OBS DEPLOY + RECOVER
Number in planned science party:	7 SCIENCE

[Use Reverse Side for additional information]

Inspection Check List for Chartering Non-UNOLS Vessels

Check each category listed below as appropriate for the charter mission and operating area. Ensure necessary equipment is aboard and operates properly.

Bridge and Navigation Equipment:

- Compass *Mag + Gyro*
- Two GPS Systems
- Depth Sounder
- Radar
- Navigation Lights
- Ships Bell
- Whistle or Sound Device
- Emergency Alarm
- Pyrotechnics
- Expiration Date Not Exceeded? *8/2010*
- Navigational Charts and Publications
- ECDIS or Electronic Charting/Navigation Programs

Communications Equipment:

- Radios, VHF and/or SSB
- INMARSAT, Iridium or Other Satellite phone system
- Cellular Phone
- Emergency Radio with backup battery or power
- EPIRBs *Nov 2010*
- SART *NAUTEX ✓*
- Lifboat RADIO*
- SET - w batt ✓*

Documentation:

- Ensure vessel can be legally chartered based on certificate of inspection, letter of designation or limitation of charter to less than 6 persons.
- Ensure documentation, ownership, inspection certificate, load line certificate and stability letter are current and appropriate for planned mission.
- Ensure Master's license is current and appropriate for vessel being chartered.
- Ensure crew size and credentials are appropriate for charter's mission.
- Ensure insurance coverage meets chartering Institutes minimum requirements for charter duration.

Inspection Check List for Chartering Non-UNOLS Vessels

Life Saving Equipment:

- PFDs
 - NONE Immersion Suits
 - Inflatable Life Rafts 15/9/09 DUE 20/1/2010 15/9/09 20/1/2010
 - Life Ring Buoys
 - None Rescue Boats
 - Water Lights/Strobes
- DATES ON RAFTS
DUE FOR RE-INSPECTION

Exterior Decks and Equipment:

- Anchors and Associated Equipment
- Watertight Doors and Hatch Comings - Bridge Main Deck
- Freeing Ports
- Deck Vents
- Cargo and Weight Handling Equipment (Safe Work Load posted & tested, 46CFR189.35 requirements, Appendix A requirements if appropriate).
- Deck Surfaces Non-Skid NO SWL POSTED
- N/A Life Lines and Safety Chains VERBAL 10,000# FOR DECK CRANE

Fire Fighting Equipment:

- NO FIXED Fixed and Portable Fire Extinguishers OK Inspection Dates Current?
- Smoke and Fire Detectors - KITCHEN + E/R ONLY
- Fire Stations and Hoses
- Self Contained Breathing Apparatus - 1 unit ONLY w/ 1 - SCBA
- Fire and Damage Control Locker Fire exposure SUIT
- Emergency Stations Bill

CHINESE ONLY - suggest translate +
Post in Public

Inspection Check List for Chartering Non-UNOLS Vessels

Engineering:

- Gas Engines. Check flame arrestor, vents, gas hoses, no sparking devices in bilges.
- Diesel Engines. Check oil and exhaust leaks, starting system, maintenance, hours since last overhaul.
- Inspect overall cleanliness and condition of power sources.
- Check emergency lights.
- Check bilge and ballast systems and pumps.
- Check fueling system and pumps.
- Check refrigeration systems.
- Check fire pump.
- Check engine room fire suppression capability. *NO FIXED SYSTEM*
- Check all manifolds for saltwater, fuel, etc.
- Check condition of switchboards, wiring and auxiliary generators.

Structural:

- Tank Inspections/Record of Inspections

Miscellaneous:

- First Aid Kits and Medical Supplies - *limited - only kit in MESS/HOUSE*
- Damage Control Equipment - *NO O₂, NO BACKBOARD*
- Emergency Steering
- General Appearance and Cleanliness
- Oil Pollution Placard and other required notices are posted.
- Sanitary System Operations
- Assess vessel's overall stability
- Assess vessel's overall ability to perform charter mission. Include laboratory and deck space, berthing and feeding capability, scientific equipment and winches, etc.