



# UNITED STATES COAST GUARD

U.S. Department of Homeland Security

## MARINE SAFETY ALERT

### Inspections and Compliance Directorate

December 31, 2013

Alert 11-13

Washington, DC

### Entanglement Accidents

A recent marine casualty involving a severe injury to a crewmember aboard an inspected passenger vessel reminds us that these hazards happen in any segment of the maritime industry. Moving, rotating, and reciprocating machinery may include (but are not limited to) rotating or spinning shafts, fan blades, fan or serpentine belts, gearing, hydraulic ram assemblies, couplings, arms, linkages, windlasses, drums, blocks, booms, and sheaves, etc.. In this instance, a crewmember's hair became entangled with a rotating propeller shaft as the crewmember was on watch and conducting rounds. The crew member sustained life-threatening injuries and is permanently disfigured. Although the investigation of this casualty is not complete, initial observations serve to remind all vessel owner / operators, and crew members of the hazards onboard vessels of all types.



The Coast Guard **strongly recommends** that vessel owner /operators evaluate their vessels for the presence of moving, rotating, reciprocating or articulating machinery hazards, and implement documented common-sense policies, procedures, and safety measures:

- ✓ Never wear loose fitting clothing, jewelry or personal gear in the vicinity of such equipment.
- ✓ Keep long hair tied back to avoid entanglement;
- ✓ Install and maintain guards and protective equipment to prevent personnel contact;
- ✓ Post appropriate hazard signs;
- ✓ Never energize machinery unless certain that all personnel are well clear;
- ✓ Follow proper lock-out tag-out procedures when working near or on such equipment, and ensure it has been verified that local or remote motor controls have been tagged-out or disabled and completely de-energized;
- ✓ Develop procedural safeguards that eliminate, as far as practicable, personnel's need to be in proximity to hazardous machinery when in operation;
- ✓ Regularly conduct onboard safety training to emphasize safety procedures and the hazards of machinery, include deck and engine department, cargo equipment, and tools;
- ✓ Always be vigilant for new risks and dangers presented to your crews and passengers.



This alert is for informational purposes only and does not relieve any domestic or international safety, operational, or material requirement. Developed by the Fifth Coast Guard District, Portsmouth, VA. Questions may be addressed to LCDR Ken Morton, (757) 398-6284, or may be forwarded to [D05-DG-Prevention-DPI-PFB-Staff@uscg.mil](mailto:D05-DG-Prevention-DPI-PFB-Staff@uscg.mil).



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U.S. Department of Homeland Security

## **MARINE SAFETY ALERT**

### ***Inspections and Compliance Directorate***

December 31, 2013  
Washington, DC

Alert 10-13

## **Attention on Deck! Commercial Fishing Vessels**

According to U. S. Bureau of Labor statistics, in 2012 commercial fishing was the second most dangerous occupation in the country, with over 117 fatalities per 100,000 workers.<sup>i</sup> This alert serves to remind commercial fishing vessel owners, operators, and crew members of the dangers associated with working around moving deck machinery, rigging, and equipment.

A recent marine casualty resulting in the death of a crew member highlights the need to remain ever-vigilant to unsafe practices and conditions. In this instance, the crew member was standing in a hazardous location on the vessel's working deck, near the stern between a section of interior bulwark and a large-diameter trawl wire which was supporting the weight of at least 1,400 pounds of deployed fishing gear. As the load on the wire increased and the direction of the load path shifted due to the sea state and the vessel's motion, the wire suddenly became taught against the vessel's bulwark where the crew member had been standing. As a result, the crew member was trapped in between and suffered fatal injuries. Although the investigation of this casualty is not complete and other causal factors may be discovered, initial findings indicate that failure to follow shipboard safety procedures and failure to recognize a dangerous situation may have contributed to this casualty.

The Coast Guard **strongly recommends** that owners, operators, and crew members of commercial fishing vessels implement the following, common-sense safety measures:

- Develop and post safety plans that include identification of "pinch points" and other dangerous locations on deck;
- Regularly conduct onboard safety training emphasizing on-deck hazards and other potential dangers;
- Remain ever-vigilant to the changing nature of potential dangers in the presence of moving deck machinery, rigging, and equipment;
- Follow vessel safety procedures and avoid placing oneself in peril!

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<sup>i</sup> U. S. Bureau of Labor 2012 Census of Occupational Injuries: <http://www.bls.gov/iif/oshcfoi1.htm#rates>. The national occupational fatality rate is 3.2 deaths per 100,000 workers; logging is the most dangerous occupation with 128 deaths per 100,000 workers.



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## **MARINE SAFETY ALERT**

### ***Inspections and Compliance Directorate***

August 30, 2013  
Washington, DC

Alert 09-13

#### **BRIDGE RESOURCE MANAGEMENT IN PILOTAGE WATERS**

This Safety Alert serves as a reminder to the maritime community that navigation watch teams should at all times use Bridge Resource Management (BRM) best practices and techniques even when the ship is being directed by a properly licensed pilot.

#### **What is Bridge Resource Management?**

BRM is the effective management and utilization of all available resources, both human and electronic, by the navigation watch team to ensure the safe navigation of the vessel. The essence of BRM is a safety culture and management approach that facilitates communication, cooperation, and coordination among the individuals involved in a ship's navigation. BRM is required by the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers.

#### **Recent Case Highlights BRM Failure in Pilotage Waters**

A recent marine casualty investigation of a bridge allision involving a deep draft tank ship revealed the local pilot was navigating the vessel in highly reduced visibility conditions without any substantive navigation assistance or input from the vessel's bridge watch team. The pilot and both watch officers on the vessel's bridge had taken a BRM course within the last five years. The pilot's course was a "BRM-P" course (i.e., a BRM course designed and approved to focus on the functions, tasks, experiences, and needs of compulsory pilots). The vessel's operating company had policy and procedures in place requiring crews to utilize BRM yet communications between the crew and the pilot were lacking.

#### **Effective BRM Requires Proactive Action by Owner/Operator, Master and Pilot**

Masters are reminded they are ultimately responsible for the bridge watch team's conduct and safe navigation. This includes maintaining discipline in promoting teamwork and information exchange, especially when cultural or language barriers may exist between the pilot and the vessel's crew. The presence of a properly licensed pilot does not relieve a vessel's bridge team of its responsibilities for safe navigation.

The Coast Guard **strongly recommends** all vessel owners, operators, and masters ensure effective BRM is being utilized aboard their vessels, and that mechanisms exist to ensure that a *cooperative, mutually-supportive working relationship* is developed between the bridge team and the pilot in recognition of their respective responsibilities for safe navigation. **Vessel operators** are encouraged to utilize a robust audit program to frequently monitor and evaluate the extent to which BRM principles are being practiced. The Coast Guard also recommends **vessel pilots** employ appropriate mechanisms to facilitate effective BRM to the maximum extent possible, including a thorough Master-Pilot exchange, and effective communication and collaboration while navigating, particularly during periods of restricted visibility, maneuvering, or heavy traffic.

This Safety Alert is provided for informational purposes and does not relieve any foreign or domestic requirement. Developed by the Coast Guard Sector San Francisco. Questions may be addressed to LT. Jon Lane; [Jon.D.Lane@uscg.mil](mailto:Jon.D.Lane@uscg.mil).

Distributed by the Office of Investigations and Casualty Analysis: <http://Marineinvestigations.us>  
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**UNITED STATES COAST GUARD**  
U.S. Department of Homeland Security

## **MARINE SAFETY ALERT**

### ***Inspections and Compliance Directorate***

August 30, 2013  
Washington, DC

Alert 08-13

### **CONFINED SPACE ENTRY DANGERS** ***Understanding Hazards***

This Safety Alert serves as a reminder to Coast Guard personnel and the maritime community of the potential dangers of confined space entries. During two recent inspections, Coast Guard Inspectors' gas meters alarmed, preventing a potential loss of life or serious injury.<sup>1</sup>

In the first case, an inspector was on board a tank vessel to conduct a Port State Control Examination. In anticipation of the examination, the crew opened the hatch to the Freefall Lifeboat to let it air out. As the Inspector entered the lifeboat his gas meter alarmed and he quickly exited. Upon investigation, it was confirmed with ship's equipment that Carbon Monoxide had collected in the lifeboat. Wind conditions had been blowing exhaust from the main stack into the lifeboat. Although not a confined space by OSHA or Coast Guard standards, the risks were the same.



In the second instance, while inspecting the #1 deep ballast tank on a deep draft container ship, an experienced marine inspector was going to climb through a box-like structure formed by floors and longitudinals in the #1 bay, just aft of the collision bulkhead. The "box" had only two lightening holes. Prior to entering the first lightening hole the inspector put his 4-gas meter through. It immediately alarmed for low O<sub>2</sub>. The inspector exited the ballast tank. While the ballast tank had been ventilated and was safe, the inspector failed to recognize that the "box" formed a confined space within a confined space and had not been cleared by the shipyard competent person.

In both instances, the proper use of a gas meter likely prevented tragic consequences. The Coast Guard **strongly reminds** all shipboard personnel and those associated with inspections, surveys or audits of vessels worldwide, that hazardous atmospheres are frequently present onboard vessels and pose a great risk to personal safety. Besides the use of a personal gas meter for immediate protection, all organizations should have policies and procedures in place that address accessing these areas and make available the appropriate safety equipment for personnel.

This Safety Alert is provided for informational purposes and does not relieve any foreign or domestic requirement. Developed by the Office of Traveling Inspectors, Washington, D.C. For additional information contact Commander Thomas Griffitts: [Thomas.A.Griffitts@uscg.mil](mailto:Thomas.A.Griffitts@uscg.mil).

Photograph: IACS Confined Space Entry - [http://www.iacs.org.uk/document/public/Publications/Guidelines\\_and\\_recommendations/PDF/REC\\_72\\_pdf212.pdf](http://www.iacs.org.uk/document/public/Publications/Guidelines_and_recommendations/PDF/REC_72_pdf212.pdf)

Office of Investigations and Analysis: <http://marineinvestigations.us>  
To subscribe: [kenneth.w.olsen@uscg.mil](mailto:kenneth.w.olsen@uscg.mil)

<sup>1</sup> The Coast Guard uses a personal meter that measures Oxygen, H<sub>2</sub>S, CO and LEL.



# Enclosed Space Entry

## STOP

You must not open or enter an ENCLOSED SPACE unless authorized by the master or the nominated responsible person and unless the appropriate safety procedures laid down for the particular ship have been followed

## THINK

Before entering an ENCLOSED SPACE, you must have a Permit to Enter completed by the master or responsible person and by any persons entering the space

## ASK

Have I received instructions or permission from the master or nominated responsible person to enter the enclosed space?

IF YOU DO NOT HAVE A PERMIT TO ENTER AND HAVE NOT RECEIVED INSTRUCTIONS OR PERMISSION FROM THE MASTER OR NOMINATED RESPONSIBLE PERSON, THEN **DO NOT ENTER ANY ENCLOSED SPACE**

### What is an ENCLOSED SPACE?

ENCLOSED SPACE means a space which has any of the following characteristics: limited openings for entry and exit; inadequate ventilation; and is not designed for continuous worker occupancy.

Adapted from, and in support of, IMO Resolution A.1050(27) – Revised recommendations for entering enclosed spaces aboard ships.





# UNITED STATES COAST GUARD

U.S. Department of Homeland Security

## MARINE SAFETY ALERT

### Assistant Commandant for Prevention Policy

July 22, 2013  
Washington, DC

Alert 07-13

#### Parasailing Operations **Know Your ROPES**

A series of parasail incidents resulting in fatalities and injuries have occurred over the last few years. Since 2006, there have been 11 deaths and 52 injuries as a result of parasailing activities. There have been several common factors in all of these incidents that are unique to parasailing. The following mnemonic '**Know Your ROPES**' was designed to remind parasail operators of important safety issues that may help prevent future casualties:

**Remember** that most parasail fatalities and injuries are related to the failure of the towline. Failures have occurred at tensions significantly below the rated towline strengths due to a variety of reasons that may include cyclic loading, long term exposure to environmental elements, the presence of knots creating a weak point, and overloading.

**Observe and monitor** weather conditions continuously. Increases in wind speed impacts the relative speed against the chute, where limits of the towline and/or chute can quickly be exceeded. As wind speed doubles, the load on the towline may quadruple. Be vigilant in monitoring weather conditions noting the formation of squalls, thunderstorms, or whenever weather fronts are expected to pass through your operational area. Cease operations well before such weather conditions impact your parasailing operation. ASTM Standard F2993-13 published on April 1, 2013 is a 'Standard Guide for Monitoring Weather Conditions for Safe Parasail Operation'. It is available for purchase and download on line at <http://www.astm.org/>.

**Prepare for emergencies** by having well documented procedures and conducting crew training to ensure proficiency in responding to emergencies such as towline breaks, winch failures, propulsion failures, and any other concerns that impact crew/passenger safety.

**Ensure** that all of your equipment is properly maintained on a continual basis. This includes the winch and drive motor, hydraulic brakes, hoses and piping, spooling systems, and other tackle. Also check your chutes, harnesses, and related components for stitching failures, degradation, and the need for general repairs. Immediately correct identified problems.

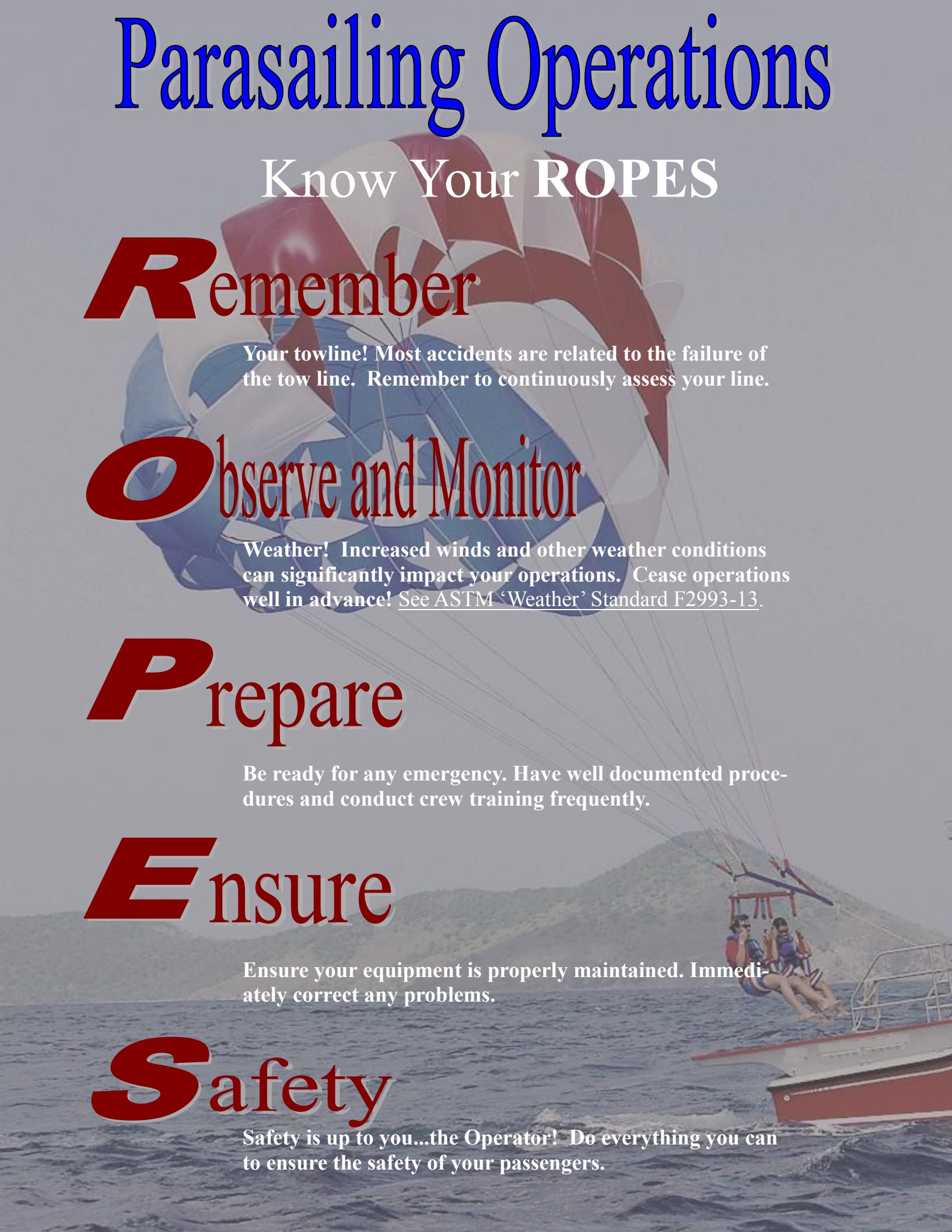
**Safety is up to you** the Operator. Coast Guard Credentialed Operators are expected to provide an adequate level of safety during vessel operations, to include the monitoring of weather conditions and maintenance of equipment.

The Coast Guard encourages owners and operators to work with each other and related industry associations to share best practices and develop operational standards to maximize safety and prevent marine casualties. *Enforcement action may be taken against the operator* for misconduct or negligent operation.

This alert is provided for informational purposes only and does not relieve any domestic or international requirement. Developed by the Office of Investigations and Analysis, USCG Headquarters, Washington, DC.



# Parasailing Operations



## Know Your **ROPES**

### **R**emember

Your towline! Most accidents are related to the failure of the tow line. Remember to continuously assess your line.

### **O**bserve and Monitor

Weather! Increased winds and other weather conditions can significantly impact your operations. Cease operations well in advance! See ASTM 'Weather' Standard F2993-13.

### **P**repare

Be ready for any emergency. Have well documented procedures and conduct crew training frequently.

### **E**nsure

Ensure your equipment is properly maintained. Immediately correct any problems.

### **S**afety

Safety is up to you...the Operator! Do everything you can to ensure the safety of your passengers.



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U.S. Department of Homeland Security

## ***MARINE SAFETY ALERT***

### ***Inspections and Compliance Directorate***

June 18, 2013  
Washington, DC

06-13

#### **COAST GUARD TERMINATION OF ITS 2 MHZ DISTRESS WATCHKEEPING SERVICE**

Effective 01 August, 2013, the U. S. Coast Guard will terminate its radio guard of the international voice distress, safety and calling frequency 2182 kHz and the international digital selective calling (DSC) distress and safety frequency 2187.5 kHz. Additionally, marine information and weather broadcasts transmitted on 2670 kHz will terminate concurrently.

The Coast Guard will continue to maintain a continuous watch on VHF FM channel 16 (156.8 MHz) and on existing voice and DSC frequencies in the 4/6/8/12 MHz bands as described in the Coast Guard Navigation Center website <http://www.navcen.uscg.gov/?pageName=cgcommsCall>.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Spectrum Management and Telecommunications Policy Division (COMDT CG-652), USCG Headquarters, Washington, D.C.. Questions may be addressed to Ms. Sonia Kendall [Sonia.L.Kendall@uscg.mil](mailto:Sonia.L.Kendall@uscg.mil).

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**UNITED STATES COAST GUARD**  
U.S. Department of Homeland Security

## ***MARINE SAFETY ALERT***

### ***Inspections and Compliance Directorate***

June 17, 2013  
Washington, DC

05-13

## **RECENT FAILURES OF DYNAMIC POSITIONING (DP) SYSTEMS ON MOBILE OFFSHORE DRILLING UNITS**

This Safety Alert addresses dynamic positioning incidents resulting in a loss of position on drillships. A loss of position during a critical activity may result in a loss of well control and severe consequences including loss of life, pollution, and property damage. Critical activities are those activities where the consequences of equipment failure or loss of position are greater than under normal operating circumstances. Two examples would be a MODU conducting well operations with non-shearables through the blowout preventer (e.g., the blowout preventer's shear ram(s) cannot shear) or when the time to terminate operations is unacceptable (e.g., the MODU crew cannot reposition the non-shearable away from the BOP's shear ram in the time required to disconnect).

Recent incidents involving drillship loss of position and emergency disconnects have highlighted the importance of operating a dynamically positioned drillship within its design limits, ensuring dynamic positioning competency levels and ensuring appropriate precautions are taken during maintenance and testing of critical equipment. A loss of position on a dynamically positioned drillship can be mitigated by following dynamic positioning system guidance published in the 'DP Operations Guidance Prepared through the Dynamic Positioning Committee of the Marine Technology Society to aid in the safe and effective management of DP Operations,' March 2012 Part 2 Appendix 1 (dynamically positioned MODUs), available at:

[http://www.dynamic-positioning.com/dp\\_operations\\_guidance.cfm](http://www.dynamic-positioning.com/dp_operations_guidance.cfm) .

See our notice in the Federal Register (77 FR 26562) available at:

[http://www.uscg.mil/hq/cg5/cg521/docs/DP\\_FR\\_Notice\\_2012-10669.pdf](http://www.uscg.mil/hq/cg5/cg521/docs/DP_FR_Notice_2012-10669.pdf) .

In two recent incidents, dynamically positioned drillships lost functional thrusters due to an electrical disturbance when attempting to reconnect a faulty thruster after maintenance. When the thruster was reconnected it was not electrically isolated from other thrusters and the thrusters did not "ride through" the disturbance causing loss of thrust. During these incidents the drillship crews were unable to restore all functional thrusters and as a consequence these drillships lost position and had to initiate the emergency disconnect sequence (EDS).

In another incident a dynamically positioned drillship encountered severe weather with high, shifting winds that caused it to lose position and initiate the EDS. Despite receiving a weather alert for severe thunderstorms and high winds well before this incident, only half of the available diesel generators were on line when the storm hit and the DP Operator (DPO) ordered a significant heading change with a high rate of turn when the drillship began to lose position. The drillship was unable to achieve the ordered heading or bring all generators online before it lost position and had to initiate the EDS.

Based on these incidents, the **U.S. Coast Guard recommends** that owners and operators of dynamically positioned MODUs operating on the U.S. Outer Continental Shelf:

- Include appropriate material on preventing these incidents in *training programs* for DPOs and other key DP personnel. Training programs should maximize use of DP simulators to gain proficiency in maintaining heading (dynamically positioned drillships) and ensuring equipment is ready ahead of severe weather, ensuring communications with the drill floor (e.g. use of 'blue advisory'/risk assessment) and re-establishing thrust in emergency situations. (See Marine Technology Society (MTS) MODU Operations Guidance Section 4.13 and IMCA M 117 Rev.1 Appendix 4).
- Develop and implement a Critical Activity Mode of Operation (CAMO) and a Well Specific Operating Guideline per MTS, "DP Operations Guidance" to ensure that the most reliable DP system configuration is used during critical activities. Develop and utilize a CAMO for any activity you or your lessee identifies as critical. When developing a CAMO, consider requiring open bus operation during critical activities to prevent a worst case failure with a potential for zero thrust in excess of your drift off time to the Point of Disconnect (See MTS DP MODU Operations Guidance Section 4.8 and Appendix C "Example of a CAMO", "Power Distribution").
  - It may be possible to make a common power system fully fault tolerant in respect of single failure criteria for DP Class 2 and DP Class 3. However, in such designs fault tolerance depends on a very comprehensive range of protective functions and on many items of equipment being able to perform to capacity. Operating the power plant as two or more independent power systems reduces dependence on protective functions and vulnerability to hidden failures. It does not remove all common points between redundant systems. The potential to lose one part of the system is higher but the potential to lose the complete system is reduced (See MTS "DP Vessel Design Philosophy Guidelines" Section 10.8).
- Perform testing aboard MODUs to ensure functional thruster drives will ride-through a system disturbance. This testing should indicate how the system will react during a significant bus disturbance such as a short circuit on the main switchboard. Where ride-through capability is an essential part of the DP redundancy concept it should be proven by live short circuit and ground fault testing per Section 9.2.5 of the MTS "DP Vessel Design Philosophy Guidelines". This testing should be incorporated into the vessel DP Proving Trial (5-year).
- Perform regular thermal imaging surveys of DP system electrical equipment (e.g., switchgear, drives, motor controllers, etc.) as part of a preventative maintenance program to provide early detection of faulty or loose connections.

This Safety Alert is provided for informational purposes and does not relieve any foreign or domestic requirement. Developed by the Coast Guard Outer Continental Shelf National Center of Expertise. For additional information contact Commander James Rocco: [james.v.rocco@uscg.mil](mailto:james.v.rocco@uscg.mil) .



# UNITED STATES COAST GUARD

U.S. Department of Homeland Security

## MARINE SAFETY ALERT

### Inspections and Compliance Directorate

May 22, 2013  
Washington, DC

04-13

### Navigation Lights – Not!

The Coast Guard has recently become aware of the uninspected towing vessel industry using inappropriate navigation lights that fail to meet the criteria for use onboard any vessel; SEACHOICE Products LED Navigation Light, SCP #03201 shown below. Online research shows many outlets for the sale of this product. It is possible that this product may be in widespread use in the recreational boating industry as well.



The SEACHOICE Products and other catalogs advertise it as a “LED classic navigation light.” Packaged individually, the item looks as shown on the left. The package indicates incorrect usage as a “masthead light.” When web-searched the retrieved information presents it as a “masthead” or “navigation” light. Neither of these applications are correct and the fixture should not be used on any vessel in an effort to meet the navigation rules.

Masthead lighting requires an arc of 225 degrees visibility and stern lighting requires an arc 135 degrees visibility, for a total range of 360 degrees visibility. Depending on the type of vessel there are also light, color and range of visibility requirements.

The SEACHOICE product SCP 03201 has an arc of 180 degrees visibility and is not applicable to any requirement.

The Coast Guard **strongly recommends** that owners / operators of any vessel who installed this particular SEACHOICE product (#03201 only) as a masthead, stern or other type of navigation light to remove it and replace it with a proper light that meets the requirements for the vessel and application.

Recreational boaters who have questions should contact the Coast Guard Auxiliary. Commercial vessel owner / operators who have questions should contact the Coast Guard Sector or Marine Safety Unit.

Standards for color, intensity and arc of visibility can be found in Annex I of COLREGs or:

- 33CFR84.13 - Color specification of lights
- 33CFR84.15 - Intensity of lights
- 33CFR84.17 - Horizontal sectors
- 33CFR84.19 - Vertical sectors

Special thanks to Coast Guard Sector Detroit for identifying this issue.

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