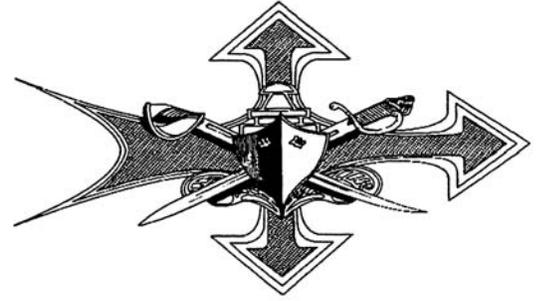


# SHIPS' SAFETY BULLETIN

Prepared by Naval Safety Center  
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JANUARY-MARCH 2010

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Suggested routing should include CO, XO, department heads, division officers, CMC, CPO mess, petty officers' lounge, work-center supervisors, and crew's mess. Blanks provided for initials following review:

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## Recent Electrocutions Generate Fleet-Wide Messages

By EMCM (SW/AW) Jim Burke,  
Naval Safety Center

**T**here have been two recent electrocutions in the afloat community. As a follow-on to those deaths, COMNAVSEASYSKOM has released three messages comprised of the following:

NAVSEA's 031606Z DEC 09 (NOTAL) readdressed to ALNAVSURFOR by COMNAVSURFOR 16004Z DEC 09 (NOTAL): Upon receipt of the message, ships had 60 days to inspect all electrical enclosures for excessive corrosion, tightness of fasteners and hardware, charred insulation, and general integrity. If discrepancies were present, ships were directed to tag out and correct the issues. Enclosures which could not be corrected immediately were to be entered on the CSMP for future maintenance. If enclosures were deemed severely

corroded by ship's force, they were directed to be tagged out until repaired unless operational necessity dictated their use. In that case, they would be treated as deranged equipment and precautions according to NSTM 300-2.5 would be adhered to until enclosure could be tagged out and repaired.

NAVSEA's 011200Z MAR 10 (NOTAL): This message directs all afloat units to verify that any locally generated guidance, work and electrical safety training are in compliance with NSTM 300, *Electric Plant-General*. Additionally, all maintenance workers and supervisors are tasked to understand NSTM 300 basic principles. Furthermore, it directs all work documents to clearly identify controls and precautions and to ensure that any work on energized gear is deemed "low risk." This message states that the "preferred method" of troubleshooting and repair is circuit isolation, and that tag out and working on energized gear is the exception and not the rule. This includes the racking out of circuit breakers. Also, this message states that

“visual inspection” is allowed if design presents “minimal risk of contact” and worker follow safety precautions.

NAVSEA's 041604Z MAR 10 (NOTAL): This message was directed at naval industrial facilities and is similar to the message to afloat units. The only differences are that industrial facilities (shipyards) must insure that their policies and locally generated guidance are in compliance with Chapter 230 of the *Naval Shipyard OSHE Control Manual for Electrical Safety*, instead of NSTM 300. Additionally, electrical safety training must be held with workers and supervisors and retention of that training must be tested via exam or “comparable means.” This message again directs that during availabilities, de-energized work should be maximized with work on energized gear being the exception and not the rule.

Personnel in all electrical ratings should be familiar with the content of these messages.

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## Correction to Airflow Alarm Set Points

By LT Christine Davy,  
Naval Safety Center

I would like to apologize for an incorrect parameter in the *Ships' Safety Bulletin* (July-December 2009) article concerning airflow alarm set points. The article stated: "Airflow rate settings for

actuating the alarm shall be designed as a **point midway** between: the airflow indicator pointer position, with supply and exhaust fans operating; and the pointer, with supply fan operating and exhaust fan secured. Compartment access need to be secured for both conditions.”

The most recent version of PMS MIP 4361/002 for Air Flow Alarm Panels (digital and analog) requires the alarm set point to be at **70% of the measured exhaust airflow**.

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## Web Enabled Safety System (WESS) has Transitioned to PKI Access Only



WESS migrated to a new security access method and is only available via use of PKI certificate instead of using UserID and password. The migration of existing accounts for those accounts that had been associated with the account owner's PKI to the new access module took place on 26 March 2010.

Existing WESS accounts that had not been associated with a PKI card were not migrated to the new security access module. If you are uncertain whether

you had completed the association process, you may go to <https://wess.safetycenter.navy.mil> and click on the PKI login button on the left side of the screen. If the association had been completed, you will be logged into WESS. If the association was not completed, you will be prompted with and must accept the terms on the WESS "Terms and Conditions" page. After doing so, you will be prompted with two entry screens you must complete to initiate the account creation process.

There is a PowerPoint document available to assist with setting up a new account on our WESS "Users' Guide" page located at <http://www.safetycenter.navy.mil/wess/tutorial/index.asp>.

If you are experiencing any other issues associated with this process, please contact the WESS help desk at [nrfk\\_safe\\_wesshelp@navy.mil](mailto:nrfk_safe_wesshelp@navy.mil) or call 757-444-3520 ext. 7048 (DSN 564) during normal business hours, Monday-Friday, 0800 to 1630 Eastern time.

## It's Been Eight Years - Why Are We Still Finding Recalled CO<sub>2</sub> Cylinders?

By BMCS (SW/AW) Burt Higgins  
Naval Safety Center

**N**AVICP 072331Z FEB 02 (NOTAL), and the January/February 2002 Defective Material Summary (DMS), reported that defective CO<sub>2</sub> cylinders for the Mk-1 and abandon ship life preservers were in the supply system. A February 2002

stock screening advisory requested the fleet to inspect all CO<sub>2</sub> cylinder stock for the following four cage codes and/or contractors: Jefferson Metal Stamping (0ZGE6), Sparklet Devices, INC. (87286 and 50527), and SDI INC. (0XML1). The CO<sub>2</sub> cylinders (NSNs 4220-00-543-6693 and 4220-00-372-0585) are used in the Mil-spec Mk-1 and abandon ship life preservers and were included in this screening advisory.

During safety surveys, we continue to find these out in the fleet. There are many Mk-1 and abandon ship life jackets with these CO<sub>2</sub> cylinders installed. Supervisors must inspect Mk-1 and abandon ship life preservers to see if they have the recalled CO<sub>2</sub> cylinders installed. If your cylinders are identified as "Recalled," do not use them.



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## Traffic Safety Note

**I**n some states, the law requires that if you use your windshield wipers, you must turn on your headlights. Makes sense--if

you're having trouble seeing because of the rain, the other guy is, too.

## **General Safety Note Corner:**

**M**ost mishaps start with what folks considered a "minor oversight" or "acceptable chance" just seconds before the pain started. They were doing things that they had done hundreds of times before without any problem and they got just comfortable enough to let their guard down. Bad things don't happen just to bad people. - *From the archives of the Summary of Mishaps*

## **Are Your Self-Contained Electric and Steam Jacketed Kettles Equipped With the Correct Relief Valves and are They Configured Correctly?**

*By CWO4 Don Tripp,  
Naval Safety Center*

**S**afety surveyors have found 59% of self-contained electric and steam jacketed kettles equipped with relief valves set to the incorrect pressures and not tagged according to PMS and NSTM 651, *Commissary Equipment*. In addition to these common deficiencies, they have found many cases of relief valves not equipped with exit piping that extends to just within the coaming (para C1905g(6) of OPNAVINST 5100.19E) and are missing the required pull chains

to allow activation from a safe distance. Additionally, surveyors discovered many kettles with missing hydrostatic test tags or are not hydrostatically tested according to PMS.

*General Specifications for Overhaul of Surface Ships* (GSO) section 651(c) states, "Safety relief valves shall be pull chain actuated from a safe position." Para C1905g(4) of OPNAVINST 5100.19E also provides guidance that states, "Ensure safety relief valve levers are equipped with an 18-inch chain to allow activation from a safe distance. Chains must be mounted in such a way that the need to reach over or between/behind hot kettles is eliminated."

Use individual equipment technical manuals and shipboard PMS to determine the correct setting of the relief valves and to ensure you tag the relief valve properly. Recommend that when undergoing galley modernization, ship's force become fully engaged with the process to ensure that all of the above requirements are met before job completion.

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## **Explosion-Proof Lighting?"**

*By LT Christine Davy,  
Naval Safety Center*

**A**re there spaces onboard your ship protected by explosion-proof lighting? If so, ensure

qualified personnel do the proper maintenance.

In the last nine safety surveys conducted onboard ships, all had significant discrepancies with their explosion-proof lighting. The main problems seem to stem from ownership and lack of training for those who perform the maintenance.

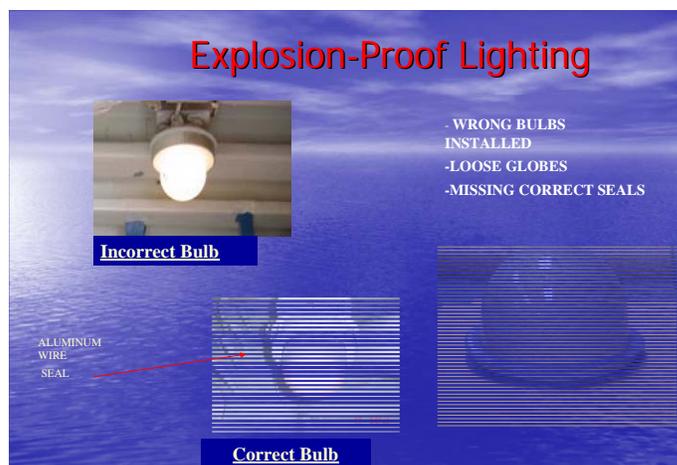
On most ships, the required PMS, MIP 3301/008, 18M-1 is assigned in SKED to an electrical work center. Often times, I find the electricians do not have EGLs, so maintenance does not get performed on **all** light fixtures onboard.

**Bulbs:** In spaces that are used heavily, e.g., hazmat where the light bulbs require frequent replacement, the fixtures are not tightened properly and tamper seals are not installed. The MRC requires an electrician to conduct maintenance on the fixtures. However, frequently personnel tell me that personnel assigned to the effected space are replacing the light bulbs without consulting the electrician's mates. Therefore, they are installing incorrect bulbs. Ensure you use a 110-watt, 120-volt reflector-type bulb. Replace burned out or incorrect bulbs with NSN 6240-00-578-6820.

**Gaskets:** The globe fixture is sealed using two lead gaskets, an upper and lower. Both must be installed to ensure an explosive-proof seal. Since they are lead and easily compressed, the globe must be checked for tightness, and gaskets replaced if the globe is loose when the 1/8-inch seal holes are aligned. You can order the correct lead gaskets using NSN 5330-01-046-0440.

**Seals:** In fixtures designed for seals, align the 1/8 inch hole in the globe supporting ring to match the slot in the box flange and install an aluminum seal. Only in spaces subjected to heavy vibration causing frequent bulb replacement or tightening, can you use plastic tamper seals. Order the correct aluminum seals using NSN 5340-00-522-2514.

Explosion-proof lighting can be effective in the prevention of fires **ONLY** when properly maintained. Senior leadership, this is an outstanding check to perform a spot check on, and should be checked on regularly.



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## **SURGE SUPPRESSORS 101**

By *EMCM (SW/AW) Jim Burke,*  
*Naval Safety Center*

**W**alk in any office or work space on the ship and odds are you

will find a surge suppressor, or more commonly known as a “power strip”, being used for a multitude of plugged in mobile equipment (TV’s, computers, printers and monitors to name a few).

Why do we need them and how do they work?

The surge suppressor protects equipment that is plugged in by absorbing “inductive kick” caused by sudden power outages. When power is shut off, magnetic fields present in all electrical cables quickly collapse and cause a “surge” of current that is dangerous to sensitive electronic circuitry. The surge suppressor is designed to act as a buffer by interrupting both the “hot” conductors traveling between the load and the source before the “surge” reaches that new flat-screen television.

Why are there only certain types of surge suppressors allowed for shipboard use?

To answer this question, one must have a basic understanding of the differences between shipboard and civilian electricity. In your house, for example, you have three wires connected to your wall receptacle: a “hot” (120 volts), a “ground” (which ties back to your electrical panel via ground rods driven deep in the earth), and a “neutral” (non-current carrying “return path” which also eventually connects to ground). A ship’s receptacle, however, consists of two “hots” (60 volts each) and a ground wire connected to ship’s hull. The difference between both applications means that most civilian surge suppressors only interrupt one conductor, the “hot,” whereas shipboard suppressors must

interrupt two conductors (both “hots”). In addition, “marine-type” surge suppressors must contain dual thermal fuses, provide for common and normal modes of protection, be fully encased in a metal shell (plastic cases may catch fire), and be safety checked annually or when moved from their original location (MIP 3000/001 A-4R). NSTM 300, section 2.7.3.5 provides a stock number for a unit meeting these requirements: NSN 6150-01-362-7192.

NOTE: This stock number is for an all-metal unit manufactured by EFI Electronics (MP-6 model) that meets all requirements for shipboard use. Some customers who ordered the above stock number received a Belkin model with a plastic bottom ( Belkin Model# F9D601-08, P/N A-A-50622). This model is **not authorized**. The plastic casing might not contain the heat caused by an internal short! If this occurs, please return the item to supply and fill out a QDR (Quality Deficiency Report).

Which division has control of your ship’s surge suppressors? PMS coverage of surge suppressors is different on many platforms. In a nutshell, anyone who carries the 3000 MIP is capable of safety checking these units (e.g., ET, EM, IC, FC, IT, GM).

On larger decks, I’ve seen this PMS split between divisions and across departments. For example, E-Div (EMs) can be responsible for engineering, deck, supply, medical, and admin spaces. The ETs can be responsible for all combat system spaces, the ITs for all of communications, and the FCs can be responsible for the rest of the ship. This is particularly effective during zone

inspection or DITS. When a surge suppressor is out of periodicity or not checked, a quick look at the bulls-eye in the space would reveal responsibility for coverage of that unit. This system helps in overall shipboard compliance and ensuring EGL accountability throughout the ship is accurate.

Any program you have on board is fine as long as it is clearly delineated in your ship's electrical safety instruction and is effective in ensuring all surge suppressors on board are of the correct type and within current periodicity. For more information on surge suppressors, read NSTM 300, section 2.7.3.5e.

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## Deck Safety Surveys

*By BMCS (SW) Burt Higgins,  
Naval Safety Center*

**T**he deck safety survey starts with an in-brief for command representatives. The usual schedule then calls for a visit to the bos'n's locker and deck office to review departmental bills and the deck safety survey checklist, (available on the Naval Safety Center's website). Next, a walk-through topside to inspect life-lines, anchoring and mooring systems, Baxter bolts and deck screws, deck lighting, small boats and their associated gear, boat davits, RAS/FAS stations, and the non-skid condition. The list also includes looking at deck life-saving equipment: life jackets (MK-1, inherently buoyant, and abandon ship), rafts and buoys, SAR

gear, and distress-marker lights. The review also includes a look at the ship's safety harness program.

The deck safety surveyor will walk through all other deck spaces; again, this is not a zone inspection but serves to identify and discuss material discrepancies that could cause mishaps or result in equipment loss. The following is a list of discrepancies commonly found during the safety surveys:

**Problem:** *MK-1, abandon ship, and inherently buoyant life preservers are not being maintained as prescribed by PMS. Discrepancies include: expired batteries in DMLs, retaining line on DMLs too short and incorrectly terminated, sea dye markers do not meet PMS guidelines, wrong size CO<sub>2</sub> cylinder installed in inflation assemblies, recalled CO<sub>2</sub> cylinders installed in inflation assemblies, and wrong type shear wire installed in inflation assemblies, MOBI not installed.*

**Reference:** PMS 5832/014 and NSTM 077.

**Recommendation:** Conduct a ship-wide self-assessment to determine the extent of this discrepancy. Train crew maintenance people to make sure they adhere to PMS standards. Supervise PMS completion and conduct random spot-checks to ensure PMS is performed according to the MRC.

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## Time Critical Risk Management

The Naval Safety Center operational risk management folks have prepared a multi-media Job Performance Aid (JPA) to introduce a new way of thinking about personal and organizational risk management through a process called Time Critical Risk Management (TCRM). The JPA introduces a new tool that will help improve performance in all that we do while remaining true to the four principles of risk management:

- Accept risk when benefits outweigh the cost.
- Accept no unnecessary risks.
- Anticipate and manage risk by planning.
- Make risk decisions at the right level.

This JPA is a multi-faceted tool for use as a stand-alone training opportunity for the individual or as the point of discussion for group discussions. Everyone must know there are consequences for the decisions we make and it's better is to make an informed risk decision. The target audience is the individual Sailor but supervisors can use it as a tool for their on-going leadership and personal development training.

After completion of all or part of training provided in the JPA, Sailors will have a better understanding of managing risks and resources and be better prepared to succeed at the mission, both on- or off-duty.

The TCRM JPA multi-media training module is available through the Navy Knowledge On-line website and:

[www.safetycenter.navy.mil/orm](http://www.safetycenter.navy.mil/orm)

The latter has a multitude of risk management resources.

If you require assistance or have questions, contact our ORM folks at 757-444-3520 ext. 7816 or send an email, with your command's name, address and point of contact to: M\_NRFK\_SAFE\_ORM\_FEEDBACK@navy.mil

## OpRep-3 Reporting

OpNavInst F3100.6J, Special Incident Reporting (OpRep-3, Navy Blue and Unit SitRep), dated 22 Dec 09, contains the requirement to include COMNAVSAFECEN as an info addressee on almost all OpRep-3 reports "if incident is potentially reportable as a mishap or an actual mishap".

Paragraph 8 of Section III of Chapter 2, of OPNAVINST F3100.6J, includes the following on page 2-11, "... Only the final record message report will include a mandatory RMKS set, which shall include one of the following statements, as appropriate:

- a. 'MISHAP REPORT NOT REQUIRED,' or
- b. 'MISHAP REPORT TO FOLLOW,' or
- c. 'MISHAP REPORT SUBMITTED''