SHIPS' SAFETY BULLETIN

Prepared by Naval Safety Center
RAdm. Stephen A. Turcotte, Commander
Steve Scudder, Editor
(DSN) 564-3520 Ext. 7115
e-mail: steve.scudder@navy.mil
Homepage:
http://www.safetycenter.navy.mil
Fred Klinkenberger, **Writer**
ETC(SW) DuPlantier, **Layout**

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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:

Preparing Sailors for Maintenance Periods

By ETC(SW) Leon DuPlantier
Naval Safety Center

With ships returning from the war in Iraq, many will be placed in maintenance availability. Reworking the deployment cycle as well as the maintenance cycle will be a challenge for all hands involved. The greatest challenge however will be keeping everyone safe in the process. How do you raise the awareness level of personnel whose ship is headed for a maintenance availability? One way is to hold a meaningful, well-planned safety stand-down before the availability. During this session, address the common pitfalls. Soon after the availability starts, hold another stand-down to discuss what people can do in specific areas to ensure overall success.

The Naval Safety Center developed a "Guide to Safety in Availability" handout to help safety officers. It offers information on several topics, including what to do before, during and after the availability. It also explains the interface among SupShip, the repair activity, and the ship. The handout is available on the Naval Safety Center's website at http://www.safetycenter.navy.mil/afloat/surface/availability/default.htm

Take advantage of all the tools available, because mishap reports show that availabilities continue to be the most dangerous events in ships' schedules. Many factors contribute to the increased mishap rate. With all the hard work and long hours, crew morale and enthusiasm deteriorates. People also are affected by the noise, heat or cold, vapors, dust, and dirt. These conditions often distract people and expose health and safety issues.

Take a round turn to raise the awareness level of shipmates so they better understand the hazards they face during availabilities.

NavSafeCen Point of Contact:
ETC (SW) L. DuPlantier
(757) 444-3520 Ext. 7117 (DSN 564)
E-mail: henry.duplantier@navy.mil

COMMANDER, NAVAL SAFETY CENTER, 375 A St. NORFOLK, VA 23511-4399

Who is in Charge?

By LCdr Walter Banks
Naval Safety Center

During any given daily routine, supervisors too often task Sailors on what to do but fail to provide the necessary leadership to safely and correctly carry out those tasks. I have found during recent safety surveys, that, in many cases, though the job might be complete, there was no follow-up to make sure work was done correctly.

The *Joint Fleet Maintenance Manual* (JFMM), ComLantFlt and ComPacFltInst 4790.3 (w/Chg 5) require quality assurance (QA) checks to verify jobs are completed correctly. This requirement—along with other QA guidance—is found in a ship's SORM, POD, standing orders, notices, ship bills, and type-commander instructions.

When things go wrong, it usually is because of human error: taking a shortcut, haste, unqualified Sailors doing the work--the list goes on. Senior supervision is needed--during all aspects of the daily routine--to watch for unsafe conditions and practices.

For example, let's say your ship just pulled into homeport and requires rigging for shore power. Senior leadership should give a safety brief-- including ORM, NSTM 300, *Electric Plant—General*, and PMS requirements--before rigging cables. If electrical deficiencies requiring repairs are found, the electrical division officer and the LCPO should be involved to monitor their people's safety.

How many of our LCPOs and LPOs question why ventilation is secured in a crew berthing space or in a HAZMAT stowage room, when they find it shut down? Yes, it may make a specific work area comfortable in the short term for a select few, but for the long term, this discrepancy poses a danger to the whole crew. How many of you daily—out of habit--poke your head into each of your assigned spaces to check on your people and the space's material condition? You might be surprised at what you find.

Checklists and other tools designed to help you succeed as a senior supervisor are only as reliable as the person using them. Refer to established procedures and checklists to make sure you comply. Review the JFMM to help you generate your own checklists, along with those required. You can find the JFMM on the web at: http://www.submepp.navy.mil/jfmm/index.htm. The answers on these check-sheets are yes or no and, when correctly used, can be a real "tool-box" asset. If you uss them to make you and your people feel good when things are really bad, then you must ask yourself, "Am I taking care of my people and promoting a good and safe work environment?"

The bottom line is: Follow all available guidance and inspect regularly. Then, and only then, will you get what you expect from your Sailors: battle readiness!

NavSafeCen Point of Contact:
LCdr W. Banks
(757) 444-3520 Ext. 7116 (DSN 564)
E-mail: walter.banks@navy.mil

Correcting Unsafe Practices and Conditions

By CW04 Tony Evans
Naval Safety Center

Don't wait until after a mishap to eliminate poor working practices and conditions that caused, or contributed to, the mishap. Be proactive and walk through your divisional and departmental spaces to identify those areas needing extra attention. The following are some questions whose answers can determine just how safely your division is doing business.

- Does your department have an organized plan for making sure all spaces are regularly inspected? See Paragraph A0303b of OpNavInst 5100.19D (w/Chg

1) and paragraph 4a of ComNavSurfForInst 3120.1, Zone Inspections.

- Are there plans for prompt remedial action when an inspection uncovers hazards? See paragraph 0404a of OpNavInst 5100.19D.

- While work requests to eliminate a hazard flow through the chain of command, do plans exist for possible interim safety measures and could they be quickly implemented? See paragraph A0405a of OpNavInst 5100.19D.

- Are individual supervisors held accountable for unsafe conditions in their areas of responsibility? See Chapter A2 of OpNavInst 5100.19D.

Are division officers and petty officers genuinely concerned with, and involved in, correcting workplace hazards and striving to eliminate potential mishaps?

NavSafeCen Point of Contact:
CW04 T. Evans
(757) 444-3520 Ext. 7113 (DSN 564)
E-mail: tony.evans@navy.mil

CSOSS Ties With Safety

By ETC(SW) Leon DuPlantier
Naval Safety Center

Combat Systems Operating Sequencing System (CSOSS) was developed to make sure ships got the most out of their combat system suites during war and peace-time operations. It consists of in-depth procedures, diagrams and guidance for operating combat systems equipment safely and efficiently.

The effectiveness of CSOSS depends on a ship's combat systems watch organization and technical information available to it. Up-to-date diagrams and procedures foster effective combat systems suites. However, inaccurate diagrams and procedures can compromise equipment operation and personnel safety.

Since CSOSS diagrams are referenced during equipment tag-out and casualty control, the most current and safe procedure should be available. For example, during an availability period, power, water, or air-system configuration changes might be made. Without proper documentation and diagrams, Sailors routinely tagging out gear might miss some critical isolation components. This could lead to electrical shock, burns, or equipment damage. It is crucial to keep such tag-out information current.

If a new system has been installed and requires CSOSS coverage, or an error is discovered in CSOSS, a feedback report (FBR) should be submitted through your chain of command to Fleet CSOSS Development and Implementation Team (FCDIT). Guidance for submitting a FBR is contained in a standard note in every CSOSS book. FBR information is also available on the FCDIT's web site at

http://www.cnsl.spear.navy.mil/fcdit/index.htm.

FCDIT is responsible for implementation and validation of all CSOSS procedures and diagrams, including verifying power, water, air systems, checking valve positions, and labeling.

CSOSS is a valuable and timesaving tool for an organized approached to inherently dangerous systems. Always thinking safety will keep this tool "polished and calibrated" by making sure procedures and documentation are current and correct. Submit feedback and ask questions. Remember, safety never should be a problem; rather, it should become part of the daily routine. When it isn't, you will have a problem.

NavSafeCen Point of Contact:
ETC (SW) L. DuPlantier
(757) 444-3520 Ext. 7117 (DSN 564)
E-mail: henry.duplantier@navy.mil

Inspect Your Hooks and Wire Rope

By BMCS Danny Tidwell
Naval Safety Center

Though relatively routine, shipboard crane operations are among the most dangerous evolutions performed aboard ship. If cranes and associated equipment are not maintained properly, a simple equipment offload can turn into a nightmare should a piece of equipment fall over the side because of faulty crane gear.

The crane operator is responsible for conducting an equipment inspection before load-handling operations. The crane operator's daily checklist (ODCL) is used for these checks, and should be completed every 24 hours while the crane is in continuous use. The checklist comes directly from NSTM 589, *Cranes,* and outlines crane operation requirements.

The manual further stipulates that wire rope exposed to, or immersed in, seawater shall be flushed with fresh water and cleaned with a suitable solvent before inspection. To clean the wire rope, observe all hazardous material handling requirements and don the correct personal protective equipment. Then, use JP-5 or turbine oil (2190) to remove wire rope lubricant from running lengths exposed to maximum wear, exposure, and abuse. Re-lubricate the rope after inspection.

Pay particular attention to portions of rope parts that constantly come into contact with, or rub against the hoisting mechanism during routine rigging, traveling, or when de-energized.

Use vernier calipers to measure wire rope diameter at six or more places to comply with NSTM 613, *Wire and Fiber Rope and Rigging.* Compute the average diameter. Count the number of broken wires in each rope lay-length and each strand lay-length.

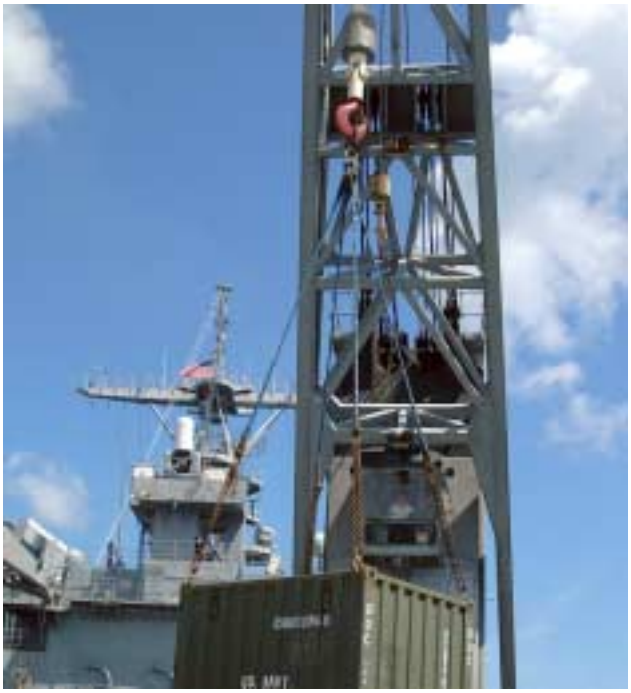
Allowable Reduction in Wire Rope Diameter

Wire Rope Diameter (Fractional Inch)	**Permissible Reduction Diameter (Fractional Inch)**
Up to 5/16	1/64
Over 5/16 to 1/2	1/32
Over 1/2 to 3/4	3/64
Over 3/4 to 1-1/8	1/16
Over 1-1/8 to 1-1/2	3/32
Over 1-1/2 to 2	1/8
Over 2 to 2-1/2	5/32

Replace wire rope, according to paragraph 613-1.10 of NSTM 613.

Any hoisting block and hook discrepancies must be corrected before a crane can be re-certified as safe to operate. Always review prescribed crane maintenance before any crane operations; if necessary, review NSTM 589.

NavSafeCen Point of Contact:
BMCS(SW/AW) D. Tidwell
(757) 444-3520 Ext. 7123 (DSN) 564
E-mail: danny.tidwell@navy.mil



Watertight Integrity?

By DCC(SW) James Cash
Naval Safety Center

Watertight doors are critical for maintaining watertight integrity, fume-tight integrity, and controlling battle damage. They always must be in 100 percent working order. Additionally, in today's weapons of mass destruction (WMD) military environment, these doors provide protection against chemical and biological attack. With that in mind, it is distressing that recent safety surveys indicate a fleet trend of not maintaining these doors properly.

Common discrepancies found by safety surveyors include:

- Ripped gaskets
- Incorrect hinge pins installed
- Improperly hinged dog assemblies
- Gaskets gapped more than the allowable 1/8-inch.

All of these common discrepancies can and should be identified during planned maintenance. MIP 1671/008, S-1 and MIP 6641/003, Q-33 and Q-34 apply. We strongly urge work-center supervisors to check that maintenance is being done according to established standards and procedures and to train their maintenance personnel to make sure they understand watertight door PMS requirements. To support watertight door maintenance training, we also recommend attending the two-day *Watertight Closures Inspection, Maintenance and Repair* course (CIN: K-495-0401), offered by the Fleet Training Centers (FTC) in San Diego and Norfolk and ATG MidPac in Pearl Harbor.

NavSafeCen Point of Contact:
DCC(SW) J. Cash
(757) 444-3520 Ext. 7123 (DSN 564)
E-mail: james.cash@navy.mil

Repeat Offenders: Life Rafts

By BMCS(SW/AW) Danny Tidwell
Naval Safety Center

Your day could start badly if the bridge calls you because the ship just lost one of its life rafts. Why did the ship lose it? Could it have been because PMS was not done properly? The MRC explains, step-by-step, how to secure the life raft in its cradle.

During recent safety surveys, we found the following recurring life-raft problems:

- Rafts and sea painters are not secured according to PMS.
- Rafts are stowed in their racks with more than a 15-degree horizontal angle. In this position, drain holes are not at the lowest point of the container. This results in water accumulation.
- Hydrostatic-release devices are painted.
- Securing harnesses are worn out.
- There is incorrect lashing between hydrostatic-release devices and securing harnesses.

I could list more problems, but I'm sure you get the picture. Remember: A life raft will take care of you only if you take care of it. LCPOs and LPOs must get out there and inspect all the lifesaving gear. Read the MRC and conduct unexpected spot-checks to make sure your Sailors are not only performing the checks and maintenance, but doing so correctly.

NavSafeCen Point of Contact:
BMCS(SW/AW) D. Tidwell
(757) 444-3520 Ext. 7123 (DSN) 564
E-mail: danny.tidwell@navy.mil

Q. Where can I find answers to questions to just about anything in the U.S. Navy?
A. Ask the chief! Your questions can be answered by asking at www.anchordesk.navy.mil or calling 1-877-4-1-TOUCH.

Shipboard Irons

By EMC(SW/AW) Manuel Carretero
Naval Safety Center

You can find guidance authorizing flat irons for shipboard use in paragraph 300-2.7.3.6.7 of NSTM 300, *Electrical Plant General.* It states that electrical equipment such as flatirons, coffee pots, hand-held hair dryers, electric typewriters, sewing machines, vibrator massagers, dry-cell battery chargers, and hobby equipment all must comply with paragraphs 300-2.7.3.1 through 2.7.3.5.4.

Each piece of equipment used also will be provided with a portable cable meeting the requirements in paragraphs 300-2.7.4 through 300-2.7.4.3 of NSTM 300. The NSTM clearly states the command shall procure electrically-safe flatirons having a three-wire, grounded plug or double insulation, for shipboard use.

Many portable tools and equipment are available from the commercial market, but often they don't meet shipboard safety requirements. Navy policy authorizes using commercially available tools and equipment if they comply with the previously mentioned NSTM requirements and other applicable regulations.

The following steam flatiron you get using NSN 9Q/7290-01-369-7966 has a three-pronged plug and costs $42.58. This iron meets all shipboard-use requirements listed in paragraph 300-2.7.3.6 in NSTM 300, under the approval-of-portable-electrical-equipment section.

Shipboard equipment must meet certain guidelines since shipboard 115-volt, 60-Hz isolated receptacle circuits are ungrounded and both line conductors are above ground potential. The chassis in many pieces of electrical gear designed for normal residential circuits ashore (in which one of the line conductors is neutral) forms part of the circuit. Exposed metal parts in this equipment can become energized, or "hot," when powered from a shipboard ungrounded system, creating a shock hazard to Sailors touching them.

Moreover, grounding the metal parts to the ship structure would place a ground on the 115-volt system, jeopardizing power continuity to other equipment. For these reasons, don't use commercially available tools and personal equipment afloat unless they comply with paragraph 2.7.3.6 of NSTM 300, which clearly states those requirements to be met before a command can inspect, tag, and authorize electrical equipment for shipboard use.

NavSafeCen Point of Contact:
EMC(SW/AW) M. Carretero
E-mail: manuel.carretero@navy.mil

Flooding, Flooding, Flooding!

By LCdr Walter Banks
Naval Safety Center

It's springtime on the waterfront, and winter's drudgery has turned to the thoughts and sounds brought by spring and summer. Yet, among us lurks the seafarer's age-old enemy, and as far as this enemy is concerned, everything always remains the same.

He lurks during the ship's daily routine, waiting and watching for complacency. This enemy thrives on the lackluster attitudes we surface warriors acquire when we think all is well. Those who think their job is for only eight hours of the normal workday are sadly mistaken, because we always must remain watchful for this lurking enemy: Flooding!

Statistics indicate that, between 1992 and March of 2003, the Navy had 164 reported floodings that resulted in significant damage. Flooding has been around a long time, and, even today in a Navy having state-of-the-art equipment and safety devices, we still experience flooding. The most critical factors in preventing floodings are the watch stander and using safety devices--like bilge-level alarms in the normal position.

During recent shipboard visits I have found bilge-level alarms in the cutout position without the commanding officer's permission. To make

matters worse, I also noticed improper watch-standing when a watch stander failed to enter a space to take a required reading. Rather, he simply copied what the previous watch stander had logged.

Did you know: In an hour, a 15-25 gallon-per-minute leak can flood most spaces on your ship to the point you would have significant problems? Don't be the watch stander who does not physically check all assigned areas.

While you are on watch, forget about being on the beach and thoughts of riding the surf. Do not let spring cloud your mind and mire your thought-process in complacency. If you do, the next thing you hear might be, "Flooding, flooding, flooding!"

NavSafeCen Point of Contact:
LCdr W. Banks
(757) 444-3520 Ext. 7116 (DSN 564)
E-mail: walter.banks@navy.mil

Tag-Out Authorizing Officer 101

By EMC(SW/AW) Manuel Carretero
Naval Safety Center

Have you ever had a danger Tag-out Record Sheet (TORS) stay active because a repair activity (RA) representative didn't sign the clearance sheet? How about a caution TORS having ditto marks on the tagged position or condition?

During recent afloat tag-out audits, surveyors noted numerous, obvious discrepancies from previous audits that crew members had overlooked. Examples are:

- Tags were hung with missing signatures (an authorizing officer, a first person, and a second person). Despite this, audits were completed and no discrepancies were noted!
- The tagged position portion was left blank, or the physical position of the affected circuit or valve did not match what was written on the tag and on the TORS.
- The repair activity representative did not sign the back of an active TORS for repair activity witnessing block after signing the tag out for accuracy and completeness on the front section of the TORS.
- Many ships were not complying with the Sept. 2000 Tag-out User's Manual (TUM) as the governing tag-out document.

Tag-out training should include using the current tag-out manual and TORS. Personnel must be qualified 3M 301 and should know the TUM before conducting tag-outs, signing tags, and auditing tag-out records. Also required is the use of technical reference diagrams, tag guide lists (TGL), and work authorization forms (WAF), Job Sequence Number (JSN) for equipment and system tag-outs.

NavSafeCen Point of Contact:
EMC(SW/AW) M. Carretero
(757) 444-3520 Ext. 7126 (DSN 564)
E-mail: manuel.carretero@navy.mil

Scuttle and Hatch Safety

By DCC(SW) James Cash
Naval Safety Center

We frequently receive mishap reports about severed or fractured fingers, and back and ankle injuries, resulting from Sailors transiting scuttles and hatches. While these accesses appear innocent, they have critical components that, when left unchecked and are not maintained, can cause serious injury to Sailors.

At every hatch with an attached ladder, that ladder must have handrails and all associated locking pins, stanchions, and chains. Locking pins will hold handrails in place, and the required stanchions around open horizontal scuttles keep the raised hatch from falling. Chains should be attached to each stanchion

supporting a hatch. While all of this equipment is presumed to be maintained through PMS, Naval Safety Center survey teams have found otherwise.

We have found pins missing that should lock a ladder onto its mount. Required stanchion chains often are missing or have been replaced with line. Not only have we found handrails with missing locking pins: In many cases entire rails were missing.

PMS 1671/008 S-1, 6641/003 Q-33 and Q34, require all such discrepancies to be corrected before signing off any maintenance as being completed. Damage control petty officers must pay attention to detail when conducting hatch and scuttle maintenance. Meanwhile, work-center supervisors should conduct spot-checks to make sure not only that PMS is done according to the MRC, but also that these seemingly innocent areas pose no danger.

NavSafeCen Point of Contact:
DCC(SW) J. Cash
(757) 444-3520 Ext. 7123 (DSN 564)
E-mail: james.cash@navy.mil

It's Your Environment, Too!

By LCdr. Walter Banks
Naval Safety Center

I recently have had numerous inquiries about what can be discharged overboard. My immediate answer is: Nothing. OpNavInst 5090.1B (w/Chg 3), *Environmental and Natural Resources Program Manual*, provides guidance for properly disposing of oily waste and water, waste-water, human waste, and other material.

Along with the discharge question, during recent surveys we found numerous eight-inch, refueling hoses that failed visual PMS inspection. Along with this major discrepancy, we also found fueling-station valves were not being maintained. We noted gauges exposed to the weather did not operate, fuel-sample valves were missing hand wheels, and flange shields were in poor repair.

When was PMS last conducted on your fueling station? When did you last inventory your spill kit? When was the last time you drilled you spill-containment team? Do you know whom to contact in response to a spill?

If and when you conduct in-port refueling evolutions, the engineering officer, main propulsion assistant, and the person designated in-writing as the ship's oil king, are all responsible for verifying system line-up and compliance with established procedures during any fueling evolution.

Illegal overboard discharges, whether accidental or intentional, are just some ways in which we contaminate our environment. OpNavInst 5090.1B states the requirements for conducting safe and uneventful fuel or lube oil evolutions. When operating schedules permit, ships must conduct fueling, de-fueling, internal fuel transfers, and oil offloading operations in restricted waters during normal daylight working hours. Paragraph 19-5.4 of OpNavInst 5090.1B requires such evolutions to be conducted by trained individuals. Ships should observe all precautions to minimize spills.

Our oceans are a precious resource, not just an environment for marine life. Oceans also are the environment for our Navy: Let's protect them.

NavSafeCen Point of Contact:
LCdr W. Banks
(757) 444-3520 Ext. 7116 (DSN 564)
E-mail: walter.banks@navy.mil

Q. Where can I find training information for safety programs afloat, respiratory protection, hazardous material, electrical standards, and several other safety related programs?
A. Visit www.norva.navy.mil/navosh or contact Naval Occupational Safety and Health, and Environmental Training Center at (757) 445-8778 or DSN 565-8778