MSTS

DAMAGE CONTROL BULLETIN

ISSUED QUARTERLY BY THE TRAINING DIVISION, IRO, MSTSPAC FOR DISSEMINATING USEFUL AND TIMELY INFORMATION ON DAMAGE CONTROL, IN ACCORDANCE WITH COMSTS LTR [illegible] OF 28 FEBRUARY 1969.

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FIRE HAZARDS IN SHIPS MACHINERY SPACES

The following information is quoted from a recent message addressed by Commander-in-Chief, U. S. Pacific Fleet, to all operating forces:

Naval Safety Center review of 26 recent Board of Inspection and Survey reports reveals serious fire hazards in machinery spaces of 75 percent of ships inspected. The most prevalent fire hazards are:

A. Safety shields are not installed around flanged joints of flammable liquid piping systems in areas of potential fire hazard.

B. Protective shields are not installed around duplex lube and fuel oil strainers.

C. Flash guards are not installed on boiler lighting-off torches.

D. Accumulations of lube oil and fuel in the bilges.

E. Extensive corrosion of the fuel oil transfer lines.

Attention is directed to guidance provided in NavShipInst 9480.64A with Supplement 1 for installation of protective shields and guards in flammable liquid systems. It is essential for continued safety that these devices be reinstalled after removal for maintenance.

Every opportunity should be taken to rid bilges of accumulated lube oil and fuel. Equally important is that source of contamination be located and corrected and that potentially hazardous fuel system piping be examined for deterioration and renewed as necessary.

WALKIE-TALKIES BOTH A HELP AND DANGER

Walkie-talkie sets aboard ship have helped speed up the time consumed in docking and undocking, but they also have caused a number of unusual accidents, the National Safety Council reported.

In one incident, the Council said, the Master of a docking ship ordered the Chief Mate to "let go the port anchor", and the command was carried out. However, the Chief Mate of another ship maneuvering half

a mile away heard the order, and believing it was from his Captain, let go his ship's anchor. A collision resulted. Investigation disclosed that the walkie-talkie sets of both ships were on the same radio frequency.

To overcome similar confusion and possible mishaps, a command should always be preceded by the name of the person to whom it is directed.

Thus, an order should be given: "Chief Mate Jones, let go the port anchor." Just hope there aren't too many Chief Mates named Jones.

NYLON + WOOL = DANGER!

The following safety precaution is reprinted from the Information Bulletin of Service Force Atlantic. All MSTS mariners may well take heed. Better be safe than sorry.

Recent evaluation of nylon foul weather jackets has indicated that a definite spark hazard exists when the insulated extreme cold weather nylon jacket, type A-1 is worn next to woolen clothing. The static electricity charge built up when wearing this combination is more than the 2,800-volt limit established as the point where hazards from sparks are a danger when handling ordnance or volatile fuel. When worn over cotton clothes, the nylon jacket does not produce these dangerous voltages, but when the jacket is taken off the wearer may be left with a charge greater than 2,800 volts.

As a result of these investigations, ComNavOrdSysCom has directed observance of the following Safety Precaution:

That whenever nylon or other synthetic clothing is worn for protection against the weather, the inner garments be cotton and that individuals after removing nylon clothing not handle ordnance or fuel until they have grounded themselves to discharge the static electricity.

THAT DREADED OCCURRENCE--A FIRE AT SEA

What could have been a major disaster was held down to a minor fire on board the MSTSPAC ship USNS PENDLETON by quick acting crewmembers while the ship, fully-laden with high explosives, steamed in the Gulf of Thailand enroute to Sattahip, Thailand.

On the morning of Oct. 26, fire broke out in the power cable to a topping lift winch on the ship's foredeck. Immediate and effective response to the situation by the ship's Boatswain and Carpenter controlled the fire until the Chief Engineer, in response to the ship's fire alarm, de-energized the circuit permitting the fire to be extinguished.

Years of training and drills paid off--the fire was put out in a matter of minutes and damage was restricted to the cable leading from the mast-house junction box.

Realizing that the safety of the ship and crew depends ultimately upon the skill, readiness, and knowledge of the crew to react successfully to any emergency at sea, practical damage control and firefighting training is conducted by COMSTSPAC in San Francisco, by COMSTSLANT in Bayonne, New Jersey, and on board all MSTS ships underway. All MSTS Damage Control Instructors are experienced licensed deck or engineer officers specificially qualified to teach these subjects.

This same practical training ashore is available to the men who sail in commercially-operated ships through application to the Maritime Administration office in New York or San Francisco.

LESSON FROM CASUALTY - PARTING OF WIRE ROPE LIFEBOAT FALLS

During a man overboard drill on a special projects ship, the boat was being hoisted when suddenly the after wire rope fall parted. Investigation revealed that when momentary slack in the wire rope developed due to lifting of the lifeboat in a swell, it allowed the fairlead block to fall to a vertical position. The block, being hinged, is held in a horizontal position when under strain. When the block dropped to a vertical position, the wire rope jumped the sheave and was cut by the block housing.

To correct this condition, a metal brace was welded under the fairlead block, and metal stops were put on both sides of such block. Check your boat fall fairlead blocks to ensure that this same casualty cannot occur in your ship!

SMOKE POTS USED FOR DRILL

In March an MSTS ship reported that seven Smoke Pots, Oil, MK6 exploded during attempts to use them in drills. Another such incident occurred in April in another MSTS ship. You will recognize these smoke pots as the device set off to simulate realistic fire conditions during drills.

Fortunately no injuries or damage were caused in the above incidents. On reviewing the first case, NAVORDSYSCOM authorized continued use of the MK6 Smoke Pots but with the precaution that a portable foam or CO2 fire extinguisher be available prior to ignition. It was stressed that just before pulling the safety pin, the tape covering three vent holes was to be removed.

Notwithstanding this last precaution, the second casualty occurred. As a result, COMSTSLANT suspended from use all MK6 Smoke Pots in assigned ships. This information was passed to other commands so that similar

action might be taken if necessary. As of the date of publication neither COMSTSPAC nor COMSTSFE has suspended them from use, but information concerning two faulty lots has been provided to ships.

In the meantime, the MK6 Smoke Pot is undergoing design changes to eliminate the cause of blow-ups. Unwanted items should be turned in to the nearest ammunition issuing activity. Further information concerning improvement will be provided as soon as available. Meanwhile, observe the following:

SAFETY PRACTICES FOR USE OF SMOKE CANDLE/POT

The following excerpts are quoted from OP 2217, Miscellaneous Chemical Munitions:

OPERATION

To operate the candle, proceed as follows:

1. Remove the tapes covering the vent holes.
2. Grasp the candle with the lever held firmly against the candle body.
3. Withdraw the safety pin, keeping a firm grasp around the candle and lever.
4. Place the candle in a bucket or large metal can and step back.

STOWAGE

The candles are considered a fire hazard only. They may be stored as, and with, all pyrotechnics other than water-activated types in accordance with the provisions of OP 5.

Stowage temperature should not exceed 110°F and the material should not be stowed in direct sunlight or near steam pipes, explosives, or flammable material.

Stowage afloat should be topside and away from air intakes which might draw smoke into the ship.

COLLISIONS

The Pilot Chart of the North Atlantic for June 1969 contains an excellent article titled "Collisions." The article reports on a ten year study (1958-1967) of world shipping casualties for vessels over 500 gross tons. More than one-third of all the ships considered in

this study suffered a casualty of some sort during this period. About 20 percent of these casualties were collisions. It is significant to note that this 20 percent collision average is unchanged from a previous five year study (1957-1961). On the basis of the consistency with which collisions occur each year, it is predicted that almost seven percent of the world's fleet of 1700 to 1800 ships will suffer a collision during the coming year. This means that one ship in every 15 would be involved in a collision in any given year.

The article contains a narrative and analysis of each of four collision cases involving ships with operational radar in head-to-head meeting situations during limited visibility. These lessons from casualties warrant careful study by all deck officers because "A collision at sea can ruin your entire day" (Thucidides) and "He who gains wisdom from the mistakes of others is truly wise" (Publilius).

The general conclusion of this article is that the prevalent cause of each of the four collisions was violation of Rule 16, Speed in Fog. It has long been recognized that excessive speed in limited visibility is a major cause of collisions, as is failure to reduce speed or stop as required by Rule 16(b). "Risk of collision increases with speed and reduction of range." It is for this reason that the MSTS wheelhouse poster (MSTS Form 3530/2) cautions: "Safety first, schedule second--your schedule is more flexible than your ship."

Proper use of radar is essential to ship safety. This includes checking the accuracy of your radar calibration just as you check your compass error and making due allowance for any radar errors. Radar range scales should be switched periodically to ensure picking up both distant and close-in targets. The importance of a radar relative motion plot to determine the other ship's true course and speed and CPA in sufficient time cannot be overemphasized.

It almost seems unnecessary to repeatedly call attention to the requirement of Rule 16(c) for "early and substantial action to avoid a close quarters situation." Make course changes early enough and large enough so that there can be no doubt of your intention and so that it would be impossible to collide. Which way to turn in meeting situations? Generally it is best to change course to the right for the customary port-to-port passing. Turns to the left are always risky and starboard-to-starboard passings should be avoided unless so well clear that there is no risk of collision.

Quoting from the article: "Fortunately, all Rule violations don't necessarily result in collision, but very few instances have been recorded in which a collision was not the result of some Rule violation. Obviously, successful collision avoidance depends, in no small way, upon a strict adherence to the Rules of the Road by all parties concerned." Let's ensure that MSTS ships do not become part of these collision statistics.

SEARCH AND RESCUE OPERATIONS

Ever since MSTS was established about 20 years ago, those who sail our ships have displayed an exceptionally high degree of ability, knowledge, and willingness to assist other mariners. This is in keeping with the best traditions of the sea, with new chapters continually being written.

In many rescue missions, the message traffic and other information is not readily available. To illustrate the effort and coordination required, we are quoting a news item and Naval messages concerning a search and rescue mission in which an MSTSPAC ship participated.

From an American newspaper published in Taipei, Taiwan:

Taipei, Feb 6 (UPI) Thursday U. S. and Nationalist Chinese rescue planes resumed their search at dawn Thursday for 13 U. S. Air Force flyers whose C-130 Hercules crashed at sea Wednesday while on another search mission for survivors of a Japanese freighter which sank Tuesday night.

The planes joined a fleet of nine U. S., Japanese and Chinese ships which spent the night unsuccessfully searching the stormy seas 70 to 100 miles south of Taiwan where the Hercules crashed.

Only one member of the big propeller-driven plane's 14-man crew had been rescued by 2300 GMT Wednesday--nearly 20 hours after its last radio contact.

The survivor, identified by a spokesman at Clark air base in the Philippines as Airman 1/C James Phelps, was picked up Wednesday by the 8,500-ton Japanese merchant ship Zuiten Maru. He was later transferred to a sea plane and taken to a U. S. military hospital in Okinawa.

The spokesman said his condition was satisfactory. The Japanese ship reported Phelps was suffering from leg injuries and burns.

The plane crashed in stormy seas with waves 12 to 15 feet high while searching for survivors of the 1,599-ton Japanese freighter Shoka Maru. The ship sank Tuesday night with a cargo of lumber enroute from Cambodia to Japan.

Japanese ships in the region said 16 of the 23 Japanese crewmen had been rescued.

From a message addressed by the Master, USNS BARRETT to Commander, Naval Forces, Philippines: (evening of 5 Feb)

Have arrived at scene 12 ships presently in area with more joining. Will make general search thru night. At 0400H will CQ all ships and

suggest rendezvous on me at 0600H at position 3-5 miles to windward of downed position. Will suggest set up line of bearing 2000-3000 yd intervals and will sweep downwind for 25 miles. Rescue aircraft at scene and JRCC Clark have been queried and concur this plan. Two monitor ships have agreed by voice. Houston Maru Jahf is officially control vessel at scene will request his concurrence.

From another message as above: (midnight, 5 Feb)

Position 21-39N 122-18E CSE 220 Speed 8. At this time am attempting to secure agreement of vessels in company to make a joint sweep starting at daylight. Will start from a point 020 4 miles from site of downed aircraft and sweep downwind for 4 hours. Believe majority of 10 vessels in company are Japanese. To secure cooperation am suggesting southbound sweep for possible aircraft survivors then a 12 mile transfer to the east and a northward sweep for possible ship survivors. One ship LLXS at site of downed aircraft reports a possible body sighted and is remaining there to join us at daylight. Will report degree for cooperation in this suggested evolution at 052000Z with sitrep two.

And a third: (noon, 6 Feb)

At 060400Z position 21-47N 122-15E CSE 01C Speed 8. At 060430Z will take course 220 Speed 8. Have sighted various debris thru morning passed via separate report to aircraft. Twenty minutes ago Hathushima Maru reported passing a body in yellow life preserver. He attempted to mark spot but lost sight of both body and his marker buoy. His position given as 21-39N 122-10E. By our reckoning he is 5 miles east of our position. Believe impractical this vessel to attempt relocate body. We will recover any sighted here using swimmers if sharks not present; launching boat still hazardous. Ships are holding with us and maintaining good relative positions if a little wider than we would like. They have all agreed to continue search to 060900Z. Final sitrep and new position at 060900Z if no further developments.

And a fourth: (afternoon, 6 Feb)

At 060900Z position 21-39N 122-45E have concluded search and released all searching vessels. Our future movements by separate new positreps. Throughout the afternoon two more sweeps have been conducted and several aircraft sightings have been checked out by various vessels. Except for expected debris no bodies or survivors have been sighted. Have taken the liberty of expressing the appreciation of JRCC Clark and COMNAVPHIL to all ships on scene who have at various times comprised Japanese, Liberian, Indian, British, Israeli and U. S. Flag vessels. Some ships have been searching for 48 hours. In particular their cooperation in movement has been outstanding and has made possible a more effective search pattern. The lines of bearing have not been Naval but intervals have been rigidly maintained and this was the important thing. Regret our sweeps have been unproductive but am morally certain that we have missed nothing.

A final message from Commander, Naval Forces, Philippines:

Quote in closing this report, I would like to pass to the USNS BARRETT'S Captain [illegible] the appreciation [illegible] of 13th AF Search and Rescue for the outstanding job [illegible] organizing [illegible] the surface search in the most adverse conditions [illegible]

Your knowledge of SAR procedures and display of [illegible] ship which resulted in the cooperation of ships [illegible] noted with much pleasure. Your willingness and [illegible] professionalism [illegible] commendable. Thanks [illegible] well done. Signed [illegible] Kauffman [illegible]

A NOVEL AND [illegible]

On the evening of March 6th, 1968, [illegible] 7000 [illegible] bombs and rockets for use in Vi[illegible] Francisco [illegible] setting off more than [illegible] hours of [illegible]

The United States Line freighter, American [illegible] pier crosswise at approximately 7 PM while [illegible] Station in Port Chicago to the special [illegible] the middle of the bay.

According to the Coast Guard, she rammed the pier [illegible] to avoid another freighter, the [illegible] The [illegible] American Producer was pushed 100 feet out of the [illegible]

Most of the cargo of fragmentation bombs and rockets [illegible] in the forward hold. The Coast Guard took immediate [illegible] the Embarcadero off to all traffic, piers 12 to 37 [illegible]

The American Producer lay in her awkward [illegible] hours before the signal was given to tow her loose. [illegible] was harrowing.

"The only hazard is friction," said Coast Guard Captain John Doherty. "My only concern is what will happen if sparks are generated while getting her off."

To prepare the American Producer for the dangerous [illegible] which was eventually completed by 6 tugs, the exposed part of the [illegible] and all of the immediate pier area were hosed down with foam to minimize friction. The ship was then towed to a berth for unloading.

A very dangerous situation was handled with ingenuity. The crew of the American Producer remained on board at their stations throughout the ordeal and no injuries were reported.