

Working Together

Safe Voyage[®]



SMS BASICS

Your Internal Auditing Team

HEALTHY MARINER

The Galley Chef

ART OF TOWING

Safety and Personal Stress

SAFETY DECK

Good Marine Practice

LEGAL BITTS

When Bad Things Happen

BRIDGING THE GAPS

The Power of Partnerships

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What's Your Leadership Role?



“Leadership consists not in degrees of technique but in traits of character; it requires moral rather than athletic or intellectual effort, and it imposes on both leader and follower alike the burdens of self-restraint.”

~ Lewis H. Lapham

We would like to dedicate this edition of Safe Voyage to our colleague and friend Mike Doyle, who passed away in April of this year. Mike was passionate about the industry he served. It was important to him that mariners were safe on the water and he dedicated his life's work to this noble task. He had a reputation of being an extremely thorough surveyor and auditor, not leaving anything to chance. This was his way to ensure that nothing unforeseen happened on the vessel(s) that resulted in negative consequences for the crews.

Mike was a great leader and a humble servant to the maritime industry. With great sadness we say goodbye.

There was another great loss to the maritime industry in March of this year when the Seattle-based ship Alaska Ranger sank in the Bering Sea. As most of you are aware the four crew members who lost their lives were the top officers staying on the boat to shepherd the other forty-two crewmembers to safety. These men sacrificed their lives for the lives of others and took their responsibility as leaders seriously.

Please enjoy this next edition of Safe Voyage, which we present to you with appreciation for the leaders in this industry and to those leaders who have contributed their time and energy to write the articles to help ensure your safety and well-being.

Enjoy and Safe Voyage,

Dean & Dione

Safety and Personal Stress

by Captain Jeff Slesinger

Director—Safety & Training
Western Towboat Company



The SAT Phone Rings

It's the call that every seaman dreads while at sea. The SAT phone rings (or the email alert sounds) with a message that something is seriously wrong on the seaman's home front. It can be an accident, illness, or death in the family. Or a payroll glitch that prevents wages earned from making a mortgage payment. Or a medical report that ambiguously calls for "more tests" for a loved one.

Today's communication technology is a wonderful gift; it's also a curse. Voice and internet connection enable the seaman to have as much detailed knowledge of the crisis as if he were present, but he remains physically absent and ineffectual. He knows what's going on, but he's not there to help. He can share the suffering of those for whom he cares but can do nothing about it.

Opportunity To Ruminare

One thing he does have in abundance—time. But that only extends his absence from the situation ashore and gives him more opportunity to ruminate about it. That's the one thing he can do—think about it. Think and think and think. He plays out all the possible scenarios—from disastrous to fortuitous. His mind rewinds and plays the filmstrip of events over and over, always with the byline of "if only." If only he were there...but he's not, and he's not going to be. He can't get it out of his head, and he can't do anything about it.

Life on a near-coastal or ocean voyage can be and often is mundane and routine. The vessel has many miles to cover, and the seaman's mind has much time to wander. And when something in the seaman's shore life is seriously wrong, his mind may bypass the stretch of open water and travel ashore. If he's the officer on watch, he may appear to be looking out the pilothouse window. But what he sees is the crisis ashore, not the vessel two miles away on a collision course.

Unshakable Distraction

The important point is that a seaman's stress at sea can have consequences greater than the person's state of mind. Personal stress can be an unshakable distraction, which can impact not only the individual, but the crew, vessel, and company as well. The stakes are high for all three.

Personal stress may undermine the awareness of crewmembers at all levels of responsibility—individual, supervisory or command. A deckhand tending a line may lose track of the growing tension of a line and

place himself in the path of parted line. A mate may miss his helm over point in a narrow channel and cause the vessel to go aground. A captain may lose focus during a docking maneuver, misjudge his rate of closure, and cause thousands of dollars in dock damage. An individual's stress may be a personal matter, but all parties have a vested interest in helping to manage it.

Release From Obsessing

For an individual to remain safe at sea during times of high stress, the key is to find a way to release his mind from obsessing about the situation. This can be accomplished through two pathways—one is physical, the other mental.

Strenuous physical activity may be an effective path. Some sort of exercise or the performance of physically demanding but mentally unchallenging tasks can serve as convenient and benign vents for stress. So when a captain or mate starts polishing brass in the engine room, he may be looking for more than his image reflected in the bright metal. He is using a time-tested means to reflect on the stressful circumstances ashore that have followed him at sea.

The other pathway to neutralize the distracting effect of stress requires mental discipline. Some people possess (or develop) the skill to push thoughts out of their heads or to compartmentalize and “box” them. This is a trait used by seasoned athletes to get “in the zone.” It is also a prerequisite for someone who is or aspires to be a licensed officer. A licensed officer at sea must be able to put the safety and best interests of crew and vessel ahead of his personal agenda, using that same ability to manage the stress induced by a crisis ashore.

Many persons probably use a mix of the two pathways. However, either or both may not necessarily or always be enough. There are times when, no matter how fast one pedals on the exercise bike or how high one's level of mental discipline, one simply can't shake the distracting effect of a crisis ashore.

That's why the crew has a significant and twofold role. One is to monitor the individual and his ability to work safely. The other is to provide onboard support.

Available Now

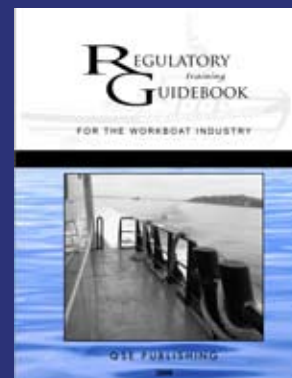
Safe Voyage® Safety Meetings

The Safe Voyage® Safety Meetings were developed to meet regulatory training requirements by mariners for mariners. Each topic includes guidelines to facilitate discussion onboard the vessel and includes a place to add your company logo.

For a list of topics, email office@qsepublishing.com

Available June 2008

Regulatory Training Guidebook for the Workboat Industry

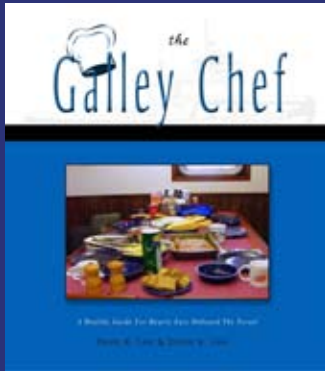


This comprehensive book is a must have for anyone interested in understanding the myriad of training requirements for workboat mariners. It includes: a training summary, sample training matrix, training elements by position; the regulatory agency or organization requiring these elements; website links; as well as, frequency and duration of required training.

To reserve your copy today, email office@qsepublishing.com

New Workboat Book

"Healthy and Hearty Eats
Onboard the Vessel"



The Galley Chef was developed to provide mariners with the basic tools to safely create simple and nourishing meals onboard the vessel. Topics include: the importance of eating right and food quality; organization; storage; safe food handling and sanitation; personal hygiene; and, serving techniques. In addition, cooks from various workboats share some of their favorite recipes and ideas, including Premier Chef Captain Chris Starkenburg. Captain Starkenburg has and will delight crewmember palates with his delicious, yet easy recipes and meal planning suggestions for cooking onboard the vessel.

Whether you are an experienced cook or just starting off, you will enjoy reading, referencing and trying out the great recipes in this helpful book.

To order your copy of *The Galley Chef*, go on-line to www.qsepublishing.com.

You can pay by major credit card through Paypal and you don't need an account.

On-Board Support

The crew's primary task is to ensure that the affected seaman executes his duties in a safe manner. This may mean protecting the seaman from himself. Like most crewmen, he feels a sense of loyalty to his shipmates and doesn't want to let them down. He may insist on carrying out sensitive duties or engaging in high-risk tasks associated with the vessel's operation.

In fact, he may be capable of performing these activities, and doing so might help relieve his personal stress. But he could be incapable and not realize it. A person under severe stress is his own worst judge. From the master on down, the crew must carefully observe the affected shipmate to make certain that both his head and body are present on the vessel. If not, he should be removed from safety-sensitive or operationally critical duties.

Crewmen can also provide a network of emotional and social support. Most seamen don't like to talk about the "soft" side of being on board a vessel. But it plays an important role in managing stress and can bear directly on the vessel's safety. Humans under stress cope in many ways. One is to talk. Some people need sounding boards to validate their emotions, to help process the mix of fact and frustration that they can't get out of their heads. Others are more private; they tend to internalize their emotions and not speak about them. Both are among the ways that people cope. For the crew, the key is to identify the affected individual's ways of coping and assist him as best they can, but not compromise the safety of the vessel.

If a mate just learned that his son was in a serious auto accident, he may need to talk about it. That may be part of his way of coping, and crew members should respect it. However, it's one thing if that conversation occurs in the galley or off watch. But it's another—one that crew and master should disallow—if it takes place while the mate is navigating, piloting, or on watch in the wheelhouse.

Shore-side Resources

Although we've been addressing at-sea situations, a company's shore-side resources and infrastructure also play important roles. When a crewman is in crisis at sea, the company can offer shore-based resources to mitigate the at-sea consequences. It can serve as a communication conduit of critical information between the crewman and his family ashore. The company may have

communication technology that is accessible only through pathways under company control. Given the circumstances, opening up this business tool for personal messaging may be appropriate.

The company can also arrange for a relief crewman and transportation to get the affected crewman home at the next port. This may be an expensive item in the short term but may provide a long-term benefit. The cost of removing and replacing a crewman who is under high personal stress, whether he is the master or another crew member, may turn out to be inexpensive insurance against potentially serious consequences.

Those who have not worked at sea may find it hard to imagine how significant the foregoing actions can be. But to the seaman, the assurance that a party ashore looks out for him and takes steps to keep him and his family “in the loop” is a relief beyond words. It gives the seaman a sense of empowerment, that he is able to take real steps toward resolving the crisis.



Good Employees, Staying Safe

The above types of actions by the company go a long way toward retaining good employees. Whether working on deck or navigating in the wheelhouse, a seaman’s safety and wellbeing depend on the actions of his shipmates. Seasoned seamen learn to live by an unwritten code—you watch my back and I’ll watch yours. When a seaman is in unnerving personal circumstances, and a company pro-actively acts on his behalf, the code and the feelings behind it resonate deeply and go a long way toward bonding a seaman with his company.

While at sea, a seaman’s personal crisis ashore is not a remote issue. It is truly additional cargo brought on board the vessel, and it has a weight that affects vessel and crew. If not managed and stowed wisely, it may directly affect the vessel’s stability and safety.

Your Internal Auditing Team

by Dione Lee
President - QSE Solutions



Teamwork is critical for quality, safety and environmental management systems to succeed and sustain within an organization. One of the best functions to apply a teamwork approach is with required internal audits. The more qualified individuals you can involve in this process, the more commitment and dedication you will have towards achieving your management system goals and objectives.

The following are guidelines for choosing an internal auditing team. Auditors should:

- Avoid auditing the same area 3 times in a row.
- Get external audits done on time to avoid a required follow-up audit.

**VOLUNTARY ISM COMPLIANCE
DOES NOT MEAN PARTIAL
COMPLIANCE.**

1. Be selected based upon their familiarity with the operations.
2. Have some form of internal auditing training.
3. Have a positive attitude and team approach.
4. Believe that the purpose of the audit is for continual improvement and not an opportunity to find deficiencies.
5. Have direct access to top management (this direct line can be achieved through the Audit Team Leader).
6. Audit areas outside their area of responsibility.

It is important for the team to choose an Audit Team Leader who: has experience as an auditor; possesses the skills for mentoring other team members; has a thorough knowledge of system requirements to be audited; and, is well organized. The Audit Team Leader may or may not be the Designated Person Ashore (DPA).

QSE Solutions has partnered with individuals and organizations to implement customized quality, safety and environmental management and learning systems for 20 years. They have developed and fine tuned an integrated, innovative, and dynamic teamwork approach for bringing positive and sustainable change within organizational operating environments. To learn more visit us at www.qsesolutions.com.

When Bad Things Happen

by Thomas G. Waller

Safety management systems have substantially improved working conditions at sea in recent years. The breadth and benefits of those programs are not always recognized, but should be self-evident to marine and waterfront employees. Despite the effectiveness of those safety programs, mishaps and misfortune still occasionally occur. When bad things do happen, everyone needs to be attuned to the reporting and testing requirements, from regulatory authorities to employers that follow upon such unfortunate events. A brief review of federal marine incident reporting standards and potential penalties is offered below. The reporting requirements for the individual states (mostly related to environmental harms) is not discussed.

Immediate Reporting

Federal regulations require immediate notification to the Coast Guard (after addressing resultant safety concerns) of reportable marine casualties. The casualties that require immediate notification include:

- accidental groundings and unintended bridge strikes;
- intentional groundings or intended bridge strikes meeting other criteria, or creating a hazard to navigation, the environment or vessel safety;
- loss of propulsion, steering or other control systems causing a reduction in maneuverability;
- any occurrence materially and adversely affecting seaworthiness;
- loss of life;
- injuries requiring more than first-aid;
- any property loss or damage exceeding \$25,000; or

- an occurrence involving “significant harm to the environment.”

The reporting obligation is jointly shared by the owner, agent, master, operator and “person in charge” of the vessel.

Reportable environmental harms are, for most purposes, governed by the “sheen rule” in coastal and inland waters. Beyond the territorial sea, the sheen rule may give way to the MARPOL allowance of 15 ppm (regardless of any sheen) so long as a verified monitoring system is in place.

The substance of the “immediate” notice to the Coast Guard (and National Response Center if a discharge is involved) must include the following:

1. the name and official number of the vessel;
2. the name of the owner/agent;
3. the nature and circumstances of the casualty;
4. location (e.g., lat./long.); and,
5. the extent of injury to person and the damage to property.

The notice need not be exhaustive. There is, for instance, no requirement that the notice include the known or assumed cause of the casualty and a mariner should therefore be cautious in offering or discussing with the investigating authorities information beyond the minimum regulatory requirements. Criminal, civil and licensing penalties may be at stake. Cooperation is of course required, but the “nature and circumstances” of a casualty should be objectively stated. The captain or other reporting officer should thoughtfully consider, as safety concerns are evaluated, what details are fairly needed by the Coast Guard to allow it to perform

its function of protecting the vessel personnel, the public and the environment. Candid discussions about potential causes of the casualty, or admissions of fault (not otherwise required by regulation), have later been met with regret by reporting officers.

CG-2692

A marine casualty meeting any of the criteria above (e.g., groundings, bridge strikes, collisions, injuries) must be reported, in writing, within five days if it involves a U.S. vessel. The requisite reporting form is CG-2692, "Report of Marine Accident, Injury or Death" and, if applicable, Form CG-2692A, "Barge Addendum". There are reporting exceptions for public and recreational vessels. (The fishing industry, too, has special rules, the most important of which is a statutory mandate calling for fishermen to notify the master or a company official of any illness, disability, or injury no more than seven days after the triggering incident.)

The two page Report (CG-2692) is straightforward enough, but Section IV, "Description of Casualty," should be carefully considered before filing with the Coast Guard. In particular, Section IV asks for "recommendations for corrective safety measures." If not carefully considered, the comments offered in Section IV could result in adverse administrative findings and unfavorable evidence in court hearings. It is therefore a good practice to have a company operations or safety officer investigate the incident and either participate in the completion of Section IV or leave it blank.

As an aside, company accident reports often ask whether anyone was "to blame," or "at fault" for marine incidents. The reports might also ask whether company policies were followed or breached, whether equipment or gear failure caused or contributed to the incident or whether the incident could somehow have been avoided. The written statements of one or more witnesses -- who may or may not have been direct witnesses to the incident -- are often included in the intra-company accident/incident file. Thus, many reports

and witness statements will contain subjective information that may or may not have resulted from actual knowledge or thoughtful reflection. There is every reason, however, to complete the company reports (including witness forms) consistent with the CG-2692, such that they contain only objective facts rather than insights or recommendations.

Chemical and Drug Test Reports

Form CG-2692B, "Report of Required Chemical Drug and Alcohol Testing Following a Serious Marine Incident," is required for chemical and alcohol testing of all personnel directly involved in a "Serious Marine Incident" (SMI). An SMI must involve a commercial vessel and includes:

1. death;
2. any injury requiring medical treatment;
3. property damage exceeding \$100,000;
4. loss of an inspected vessel;
5. loss of an uninspected, self-propelled vessel over 100 g.t.;
6. discharge of oil of more than 10,000 gallons in U.S. waters; and,
7. discharge or release of a reportable quantity of hazardous substance into U.S. waters or the environment.

For any such SMI (but not for mere "marine casualties"), alcohol testing must be completed within 2 hours of the incident. (The test need only search for the presence of alcohol, with no requirement that the amount of alcohol in the mariner's system be determined.) As such, companies must carry on board their vessels alcohol testing devices unless testing ashore can be completed within a 2-hour time limit. Drug specimen collection is required within 32 hours of the incident, with the results submitted to the Coast Guard upon receipt.

8. No individual may be compelled to provide specimens for alcohol and drug testing, but the failure to submit to the testing must be met with immediate relief from all duties directly affecting the safe operation of the vessel. Refusal to submit to testing also exposes the mariner to suspension and revocation proceedings.

-
9. Penalties. Failure to give timely notice of overboard discharges or hazardous substances may (and likely will) result in substantial company and personal fines, action against a violator's license and, in severe cases, imprisonment. Maximum fines of \$27,500 are allowed for failing to immediately report other marine casualties or failing to submit a CG-2692 within five days of the reportable incident. All of the reporting requirements also have potential adverse licensing consequences, including charges of misconduct for regulatory violations.
-

Tom Waller practices maritime law in Seattle with Bauer Moynihan & Johnson, LLP.



Bending the Line

by Justin Poulsen

California Maritime Academy Graduate
License: 3rd Mate Unlimited
Current Position: Assistant Port Captain

Maritime Academy Graduates vs. Hawsepipers

In the wake of recent regulatory changes regarding the licensing and certification of qualified mariners, particularly in the towing industry, a debate between “hawsepipers,” mariners who have advanced up from the lowest ranks, and maritime academy graduates has gained momentum. While much of the argumentation is based on generalities, assumptions, and stereotypes, some points and counter-points are valid. However, the conflict itself can only be productive if the identified training deficiencies of both sides are used proactively to make the maritime industry safer via mentorship and company sponsored training programs. Part of the conflict, I believe, is related to the U.S. Coast Guard’s attempt to constrict the hawsepipe and force mariners to attend more schooling. In response, established hawsepipers have vocally defended the “training by experience” pathway, and effectively questioned the qualifications of new maritime academy graduates. Additionally contributing to the conflict are the misconceptions regarding maritime academy programs, and the graduates they produce. Despite an apparent sense of confidence, new graduates are often generally described as unprepared or lacking enough experience to stand a navigational watch safely.

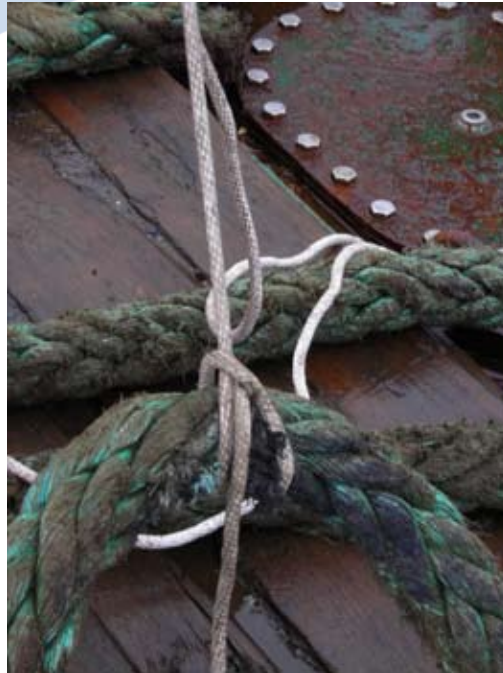
Academy Education is a Foundation for Onboard Learning

While it is true that an academy graduate has a fraction of the shipboard experience a hawsepiper does, it is inaccurate to imply that a junior mate is required to act with the experience of a master. What is expected, and what is developed during the academy program, is the self-awareness to recognize limits of ability, and more importantly, when those limits have been breached and it is time to ask for help. Additionally, it is well established that a cadet’s education does not end with graduation; rather, he or she is merely embarking upon another phase of curriculum. Academy grads are fully aware that the academy education is simply a foundation, and that towing a fully loaded oil barge or being the PIC on an LNG cargo transfer requires specialized training from experts in the field. Over the course of the academy program, cadets are taught directly and indirectly to respect the shipboard hierarchy, and understand that everyone, particularly those with experience, has something valuable to teach, regardless of background or training.

Inherent Skills Can Only be Derived from Experience

Where academy graduates are deficient, hawsepipers are the strongest. It is undeniable that there are certain inherent skills that can only be derived from experience, some of which are crucial to the safety of the crew. On deck, the most important characteristic to possess is a developed sense of situational awareness, or the innate ability to engage with surroundings, even when focused on a specific task. Similarly in the wheelhouse, the ability to process the picture seen through the bridge windows instinctively and use that information to plan ahead can only come from experience. These are skills that hawsepipers and others with experience can expose to new academy graduates, and in the process introduce safer and more effective tactics.

Even though academy graduates have a lot to learn, at the same time, they have a wealth of knowledge and a vast array of abilities to share. Recent grads can pass on license exam preparation tips and techniques, as well as help shipmates study complex subjects such as stability and celestial navigation.



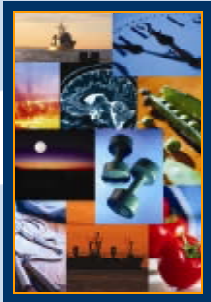
Cultural Conflicts

While the debate over preferred training methods has certainly produced many logical and constructive ideas, much of the argument is rooted in social classification fears and personal emotions. Sailors are traditionally incredibly hard workers, who have sacrificed time at home to embrace a difficult life at sea, and are immensely proud of all that they have accomplished. This indelible pride is a direct result of professional maturity and hard earned respect. It is also indicative of a wariness of those who have bypassed familiar and traditional career paths, specifically academy graduates. Historically, members of society who possess the highest level of education occupy positions of greater responsibility and nobility. While shipboard hierarchies don't follow the same ideals, it is easy to imagine an environment where people feel threatened. These emotions are in large part fueling the debate, and are contributing factors in clouding the real issues.

Coming Together

Instead of focusing on the negative outcomes, arguments should highlight the best of each training method, and identify how each side can compliment the other. It is impossible to expect everyone to work together in harmony, though it is reasonable to work toward an environment where shipmates value each other as learning resources, and share common safety goals.

If you have something you would like to share with other crewmembers or questions you would like answered to ensure safe voyages, this is the forum. Please submit your thoughts or questions to office@qsepublishing.com. In the subject header type: Mariner's Forum. Thank you.



The following excerpt is from the “Crew Endurance Management System Awareness Workbook”, Pacific Marine Towing Industry Partners 2007

The Importance of a Healthy Diet

Just like diesel fuel gives a vessel the energy it needs to travel the seas, food fuels your body. It gives you the energy you need to survive. The healthier your diet, the more efficiently your body will process food and distribute it for vital functions. In addition, you’ll also feel better physically and psychologically. As a result, you’ll have more energy, which increases your endurance.



TIPS FOR IMPROVING YOUR DIET

- Eat a balanced diet of lean proteins; whole, fresh fruits and vegetables, whole-grain carbohydrates, and moderate to low amounts of mono- and poly-unsaturated fats.
- Eat your heaviest meal after waking up from your longest sleep of the day.
- Eat smaller, lighter meals within four hours of your sleep period. Heavier meals close to bedtime will keep you awake.
- Don’t eat immediately before going to bed. This will hinder sleep.
- Drink water on a regular basis, even if you’re not thirsty. Drink at least eight, eight-ounce glasses of water every day. This amount may increase, depending on your levels of physical activity, perspiration, and work environment.
- Drink extra water when sweating heavily, or if urination becomes less frequent or darker than usual.
- Replace electrolytes with fruit juices, V-8 juice, bananas, or commercial sports drinks if you do not receive these through regular salt consumption.
- Avoid drinking any caffeinated beverages (coffee, tea, chocolate, and soft drinks) four hours before bedtime. Also do not take any medications containing caffeine four hours before bedtime.

The Food Balancing Act

Eating a balanced diet of lean proteins, fresh fruits and vegetables, and whole grains gives you the energy you need to maintain peak performance. A balanced diet also helps you feel better physically and psychologically.

Spicy Red Sauce - Large Batch

Courtesy of Captain Chris W. Starkenburg, Harley Marine Services

½	cup olive oil	½	Tablespoon kosher salt
2	med sweet onions, diced	2	Bay leaves
8-10	cloves fresh garlic, smashed and rough chopped	¾	Tablespoon crushed red chili's, add more, less or none depending on the amount of heat you want
1-1½	red bell pepper, chopped	2	1 ounce packages fresh basil leaves, no stems or add 1½ Tablespoons more of Italian seasoning
1 ½	Tablespoon fennel seed or 1 large fresh fennel bulb, diced	1	cup carrot, grated
1	Tablespoon Italian seasoning	2	#10 cans (6lbs 6.5oz) = 8 quarts diced seeded tomatoes in juice
2	Tablespoon whole dried oregano or 1½ Tablespoon Fresh	2	12 ounce jars chili sauce (optional)
¾	Tablespoon fresh ground black pepper	1	12 ounce can tomato paste
1	cup red wine or non alcohol wine, watch the salt - it has a tendency to be salty.		

1. In a large heavy pot (one that will hold at least 2½ gallons and preferably stainless or a non stick) on medium heat add olive oil, onions, garlic and bell peppers.
2. Cook until tender, then add all the rest of ingredients in order.
3. Simmer on low heat for about 6-8 hours.
4. Continue to stir during the simmer to help the tomatoes break down.
5. Remove from heat and with a hand blender (outboard motor) blend until desired consistency. You can use a blender but be careful of blending hot sauce; it has a tendency to expand. I like to do this to about 80% of the sauce to maintain some texture. If you prefer a smoother sauce, blend all of it.
6. After you have blended, return the sauce to the stove and simmer for another hour, this will help to reduce the sauce.
7. Then remove from heat and cool.

Food Preparation Suggestions: I recommend that you make the sauce the day before you need it. This is a very versatile sauce can be used for just about every type of pasta dish, so make big batches. It is also a vegetarian sauce as is or you can add different meats, poultry and seafood depending on the desired dish.

Storing Suggestions: The other reason I like to make large batches is that this sauce freezes well and can easily be pulled out of the freezer for quick healthy meals.

If you have a healthy and hearty dish you would like to share, please submit your recipe to office@qsesolutions.com. Thank you.



Guided by the Principles of “Good Marine Practice”

by Mike Doyle

Worldwide, commercial fishing remains a very dangerous occupation. The other industrialized countries have generally taken a more proactive role than the United States regarding fishing vessel safety, notably; Australia, Canada, Iceland, Norway, New Zealand and the United Kingdom. Those countries have installed safety regimes that variously include safety management and external auditing as the central element. While a full-blown mandated safety management regime may not be practical for the US fishing industry at this time, the concepts of safety management are notable where safety of the vessel and crew are the key maintenance and operational objectives.

First and foremost, vessel owners and operators must acknowledge that safety of the vessel and crew is the most important element of their fishing operation.

With safety of the vessel and its crew as the key maintenance and operational objectives, higher levels of efficiency, productivity, and reliability are additional benefits that subsequently and naturally occur. A well maintained vessel has less downtime while fishing, fewer unscheduled repairs, better claim history and more insurance options, and higher resell or asset value. Crews respond well to a visible commitment towards safety and maintenance, and their levels of professionalism increase.

There is a considerable amount of fishing vessel safety, maintenance, and operational information made available as voluntary standards, recommendations, regulations, and guidance notes, by various industry and government organizations. Unfortunately, the information is scattered in both domestic and international publications. Several major reports from the US, UK, Canada and New Zealand have been recently released on the current state of safety in the commercial fishing industry.

However, the necessary information is available, and fortunately, the fishing industry is international in nature, and good marine practices are applicable to all vessels.

With the limitation of comprehensive statutory regulations and guidelines for US commercial fishing vessels, owners, operators and other interested parties should be guided by the principles of “good marine practice”. Good marine practice is an ambiguous yet valuable principle, and is well suited to the development

“vessel owners and operators must acknowledge that safety of the vessel and crew is the most important element...”

of a fishing vessel maintenance and inspection program. Good marine practice may be defined as:

“Accepted practices and procedures designed to maximize the reliability of equipment operating in the marine environment. “

Being ambiguous, the term is subject to interpretation, but should be GUIDED by the following fundamental principles:

- Compliance To Statutory Regulation
- Suitability For The Intended Service
- Readiness For Service
- Critical System Redundancy / Back-Up Capability
- Preventative and Predictive Maintenance
- Critical Spare Part Inventory
- Prudent Seamanship
- Good House-keeping
- Periodic Inspection
- Record-keeping

The principles of maintenance management are applicable to all vessels regardless of the size, arrangement, and area of operation of the individual vessels. Small vessel maintenance is relatively simple. Larger vessels require a higher level of sophistication corresponding with vessel size, the amount of equipment, and the number of personnel carried on board.

Mike Doyle passed away on April 2, 2008. He leaves his wife, Jeannette, and 3 children, Byron, Amanda, and Michael. He will be missed by his many friends and colleagues on the waterfront.



The Power of Partnerships

By Dale Sause - President &
Jeff Hill - Senior Port Captain

Sause Bros.

In response to a current shortage of qualified and licensed mariners in the United States, 19 tugboat companies have come together as a coalition of tug companies to work closely with Pacific Maritime Institute (PMI), one of the leading maritime education facilities in the United States, to support their Workboat Mate program.

It is our contention, as a result of this kind of responsible cooperation demonstrated industry-wide that the graduates of the PMI program entering our fleet may perhaps be the most well-rounded and thoroughly prepared Mates available to the industry today. We base this contention on three observations:



- **Evaluation**-Before a prospective Mate enters the PMI program under our sponsorship he or she undergoes an extensive and thorough interview and evaluation process. We are therefore able to select those individuals for the program that we believe have a very strong likelihood of success. We monitor the progress of our prospective Mates very closely during the classroom phase of the program in conjunction with PMI, and during the sea phase. The individualized and structured mentoring and training that takes place on board our vessels is unparalleled in the industry.
- **Preparation**-Until this point there were essentially two “methods” of training for prospective Mates: (1) the up-through--the-hawsepipe method, and (2) the maritime academy. Both have strengths and weaknesses. Hawsepipe training is hit or miss because it has no structure, it is dependent upon the strengths (or weaknesses) of the Captains and Mates conducting the training. Significant gaps in both knowledge and seamanship skills are often evident.

And for all of the strengths of the U.S. maritime academies, the sea phases of academy training are far less extensive and hands-on than the PMI program. The Workboat Mate program is a well-organized 21st century program that takes the best of the hawsepipe and academy methods, eliminates their weaknesses, and addresses the gaps left by each.

- **Culture**-Upon graduation, the new Mates entering our fleet will come through the door with two years of training in our company's policies, procedures, and safety culture. They will be familiar with the International Safety Management code, ISM 9001:2000, the AWO Responsible Carrier Program, and our own internal Safety Management System. They will know our boats, our area of operations, our trade routes, our regular ports of call, our equipment, our dispatch system, and our people.

The first PMI Workboat Mate graduating class this June will be a welcome addition to the Sause Bros. fleet. As highly trained professional mariners they will strengthen our company by bringing with them the latest in knowledge, education, and seamanship skills. The towing industry can no longer rely on training methods with significant and recognized gaps; which is why, 19 companies have pooled their expertise and resources and partnered with PMI to create the Workboat Mate program. Its graduates will be welcome additions to the industry.



Electronic Monitoring and Reporting Comes to the Maritime Industry

By Dale Neef

Years ago, when I was in pilot training with the Air Force, one of the key instruments for making young pilots behave sensibly when out alone flying was the g-load meter. The dial had two needles; the first moved with the current g-force, but the second needle always stayed stubbornly fixed at the highest g-force level that the pilot pulled in any flight.

Back then, anything above 6.6 gs and the plane could suffer structural damage that might make it dangerous to fly. It was an easy thing to do – pulling up too hard from a loop, or turning too tightly – but if a pilot overstressed the frame it could mean very real danger to himself at the time, and if he didn't report it, for anyone taking the plane up in the future. That second needle was checked after each flight, and could only be “zeroed out” by the crew chief – so there was no way to cover-up a violation.

I've always been suspicious of “Big Brother” types of monitoring, but the value of the dial was obvious. Not only did it warn pilots that they were nearing dangerous g-force levels, but the transparency of the information recorded on that dial – and the certainty that others in authority would see it – meant that we obeyed important rules about not overstressing the plane that we might otherwise have ignored. Although pilots often did stupid things when out alone in a plane, because of that dial, at least they never exceeded 6.6 gs.

I often wondered, though, how many pilots would have stayed within those limits if that dial hadn't been there? More importantly, how many would have voluntarily risked punishment and reported the fact that they had exceeded the plane's g-force level – something that, if not reported, could have meant potential catastrophe to themselves and to other pilots – if that dial hadn't accurately and unalterably recorded what we were doing?

That lesson – that when it comes to safety, automated and unalterable verification of performance can encourage good behavior – has long been appreciated in the military and in commercial aviation. In fact, automated reporting is a way of life in most industries. Airlines have their black box recorders. Monitoring of good laboratory practice (GLP) is a normal requirement in pharmaceuticals; and SOPs and electronically-generated reports have been required from most land-based manufacturing industries by the EPA for more than a decade.

In the maritime industry we are now in an era of criminalization for magic pipe incidents, and ever more strict enforcement of environmental laws covering emissions, waste water, sewage and ballast water. Under pressure to perform, and assuming the anonymity of the sea, it is easy for a crew member to do something

dangerous or stupid. So why do shipping companies - on vessels worth many millions of dollars and carrying hazardous materials, waste water and sewage that can harm the crew, the public, or the environment - still manage to get away with hand-written and easily doctored logs for their environmental, health and safety reporting?

Trust Your Instruments

Part of the reason is that many shipping companies simply don't realize that it is possible to capture most, if not all, of the environmental (and to a large extent, health and safety) performance data on a ship electronically and automatically from its original equipment source. Onboard electronic systems these days can record exact real-time data in a multitude of areas: on engine performance, navigation, wind speed, fuel usage, tank levels, valve openings, oily water separator run-times, outputs from oil content monitors, and many other key indicators of a ship's environmental and commercial performance.



And although that data may come from many different onboard electronic systems, most shipboard system vendors use a compatible data format - allowing that data to be collected on the ship's local area network (LAN) and stored in a server database, where it can be extracted and viewed through easy-to-use software dashboards or scorecards. Hand-held data entry devices, using security technologies such as PIN IDs and time-stamped photos, can ensure verification of life-boat or safety drills. And satellite communications systems using broadband technologies allow all that data to be sent from ship to shore, so that the corporate office can be aware of every ship's performance - anytime, anywhere.

There are many obvious benefits. For one thing, having that level of real-time performance transparency helps management back on shore to re-think the way they govern their company. Ships are no longer treated as "black holes"; out of the company's control as soon as they leave port. Automated reporting allows not only the ship's officers, but also land-based company officers, to monitor what is occurring onboard their fleet in real-time. This forces fleet superintendents, QHS and Environmental officers on dry land to think about (and share responsibility for) important aspects of safety, crew welfare, and good environmental practice - areas that have traditionally been seen as out of their control once a ship leaves port.

Automating the data collection process also improves safety and morale aboard the ship by drastically reducing the crew's paperwork burden - eliminating the need to fill out many of the ponderous hand-written logs and reports that today occupy so much of the crew's time. And from a business perspective, that same data provides real-time, accurate, unadulterated information that can help company officers analyze the ship's operational and commercial performance, and to verify regulatory compliance to outsiders - shareholders, regulative authorities, vetting agents, auditors, or industry analysts.

Most important of all, as with the g-load meter, automated data collection encourages good behavior. After all, it is very difficult to persuade a 3rd engineer to install a magic pipe if the oily water separator, bilge water tank levels and oil content monitors can all be cross-referenced to provide an immediate violation warning to the master and to the corporate office. The certainty of auditable data ensures that crews comply with company policies – protecting them as seafarers from unfair pressure to commit violations, and protecting the company officers from shipboard incidents that can lead to their own prosecution or end up damaging the company's reputation.

If You Can Know, You Should Know

Skeptics claim that the reason that shipping companies don't want to invest in automated monitoring and reporting systems is that they really don't want to know what is happening on their ships. A high level of transparency might reveal the extent that regulatory violations – a magic pipe, committing ballast water infractions, nighttime dumping of sewage, etc. – continue to occur, covered up by doctored, hand-written logs.



Yet, many maritime lawyers would also contend that it is just this type of attitude that has led to the recent spate of criminal indictments of crew by the US Justice Department. After all, it is not usually the violation of MARPOL, ISM, US or EU environmental laws that result in criminal prosecutions; it is the fact that the crew member lies to officials – on forms or in testimony – about their activities. If that compliance information was recorded automatically and unalterably at source, the crew would have a powerful incentive (by use of both the carrot and the stick) not to violate safety and environmental rules in the first place.

Others contend that being caught violating environmental, health, and safety rules is still seen by many shipping companies as a worthwhile operational risk. Shipping companies have simply been able to get away with avoiding electronic monitoring and reporting systems until now because there was little chance of prosecution, and no appreciation by regulatory officials that onboard compliance information could so easily be captured, recorded and transmitted.

But those times are changing rapidly. The U.S. Coast Guard and the Justice Department have pursued shipping companies for violations costing the industry more than \$200 million in fines in the past decade. The fleets of many well-known shipping companies are being closely monitored while under court-supervised probation (via ECPs). And criminalization of ships' officers, and inevitably, of shipping company executives, will become even more commonplace. Worldwide, Exclusive Economic Zones (EEZ) and Sox Emissions Control Areas (SECAs) will continue to set increasingly demanding emissions standards, and

any future market for emissions trading will invariably require authenticated (i.e., electronic) reporting from ships and owner/operators before they will be allowed to claim for their emissions credits or debits.

In short, the time for electronic monitoring and reporting of shipboard environmental, health and safety data is coming rapidly to the industry, and the era when a ship's master or CE could simply fill out an unauthenticated paper log is on the way out. Company officers claiming not to know about poor safety or environmental practice onboard their ships will no longer have an acceptable excuse – if available systems mean that management “can” know, than authorities will soon argue that they “should” know. The best companies already see the light and are starting to change accordingly.

Dale Neef is the Managing Director of HNA Maritime LLC in Europe (www.hnamaritime.com) and DNA Maritime LLC (www.dnamaritime.com) here in the US; which are consultancies that provide shipping companies with compliance and reporting solutions for EMS issues (waste water, ballast water, garbage, emissions, fuel usage, etc.).

