

Safety Clicks

Learning from
others' mistakes

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Train hard, fight easy

By Shannon Smith

The end of the year is a time to reflect on what has been accomplished, progress made and lessons learned. One of the things the HSE team has really focused on this year is improving all aspects of our training.

HSE Manager James Howell summarizes the goal of all our training in a single sentence, **"Training is to get you to think before you act, and then act safely."**

While much of this work has been behind the scenes, our goal is that the employees working on the vessels, performing the core work of our company, will be better trained to handle the everyday challenges of working in the field.

That is why we are stepping up vessel involvement by having our bridge crews and Party Chiefs conduct our Core Safety Training; because there is no better way to really understand something than to teach it to others.

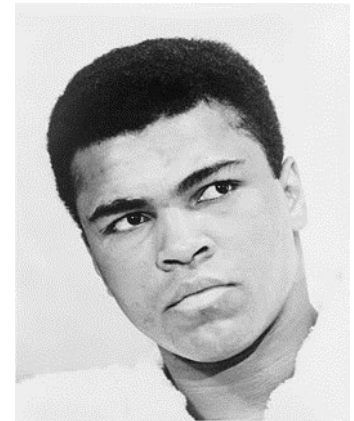
However, having the information isn't enough. Knowing the policies and following the procedures is just the first step. You have to be aware of multiple hazards in a constantly changing environment and make decisions that will minimize the risks to yourself and your crewmates.

If someone gives you a book on survival at sea, that does not automatically mean you will be able to flip a life raft that deployed upside down while wind and waves are throwing you around in rough seas. Watching a video about vessel security does not mean you will know what to do if you find an armed intruder on your vessel.

Emergency drills are the best way to prepare crews to think and act in a crisis. What would happen if there was an engine room fire on your vessel?

This month's lesson learned comes from the fire on the *Marguerite L. Terrel*. The crew had company procedures to follow in case of a fire, but were unprepared to execute them. Let's learn from their mistakes.

Training is Hard...



"I hated every minute of training..." **Muhammad Ali**

Having information is not the same as being prepared.



"An untrained or uneducated Marine deployed to the combat zone is a bigger threat to the mission ... than the enemy." **Retired Marine Corps General James Mattis**

TOP 3 Safety Card Hits

(Fleetwide last month)

Housekeeping 6

Tools & Equipment 3

Safety Attitude 2

Training the Trainers

Several of our management level personnel underwent third party instruction to become Rigging Inspector Trainers in order to increase the number of qualified riggers in the fleet.

(Right: Jimmy Brooks and Matthew Mattern demonstrate proper crane signals during Rigging Training class.)



Engine Room Fire on Board Towing Vessel *Marguerite L. Terral*



Stern of vessel showing fire damage. (Photo by US Coast Guard)

In June 9, 2012, about 1705 central daylight time, the towing vessel *Marguerite L. Terral* was pushing 12 empty barges on the Mississippi River near Hickman, Kentucky, when the vessel's port engine caught fire. The six person crew tried unsuccessfully to extinguish the fire before evacuating onto one of the barges. No one was injured and no pollution resulted from the fire. The damage to the vessel was estimated to be \$2.6 million.

The captain, who was making a round of the vessel before taking his watch, saw flames through an open engine room door about the same time as an alarm sounded in the wheelhouse. The vessel was equipped with a fixed CO₂ fire suppression system for the engine room, but flames prevented the crew from releasing the CO₂ from one of the remote release stations near the engine room door. The crew could also have activated the fire suppression system from the steering gear room; however no evidence indicates that the crew attempted to do so.

Shortly thereafter, the crew used portable fire extinguishers to try to control the fire. However the crew had not shut off the ventilation or closed the doors to the engine room; therefore oxygen was readily available to sustain the fire.

At 1710, the captain ordered everyone to evacuate onto the nearest of the 12 barges, and one of the

deckhands shut off the fuel supply to the vessel's engines before leaving.

Local responders arrived on scene, and together with the crew of the responding towing vessel *Edna T. Gattle*, they used portable and onboard pumps to fight the fire. Finally, about 2200, the fire was extinguished. *The Marguerite L. Terral* was extensively damaged as the fire spread to nearby rooms on the vessel. The damage was estimated to be \$2.6 million.

Because the crew was unable to access the ventilation shutdown levers in the fire, the US Coast Guard Inspection and Compliance Directorate issues Safety Alert 05-12, titled, "Pressure Switch Location for Fixed Fire Suppression Systems," in December 2012. The Coast Guard Published this safety alert to educate the marine industry about issues involving the installation and locations of control systems associated with fire suppression systems. The safety alert emphasized that control switches for fire suppression systems should not be located in the space they are designed to protect.

Probable Cause

The National Transportation Safety Board could not determine the origin of the engine room fire on board the *Marguerite L. Terral*. **Contributing to the extent of the fire damage was the crew's failure to set fire boundaries, shut down the ventilation, and use the onboard fire suppression equipment effectively.**

**THE MORE YOU SWEAT
IN PEACE, THE LESS
YOU BLEED IN WAR.
...
US NAVY SEAL MOTTO**

Summary of Lessons Learned from Accident Investigations

The National Transportation Safety Board compiled incidents it had investigated in 2014 and looked for common root causes among them. Three of the four important issues identified that are applicable to our operations are paraphrased below.

CONTROL SYSTEM UNDERSTANDING: As bridge systems become increasingly technologically advanced, it is important that the operators have a thorough understanding of the systems they are using. In two casualties reported this year, a lack of understanding of vessel control systems led to accidents.

PROPER MAINTENANCE: Proper maintenance is of the utmost importance... Two accident reports from this publication highlight this fact. In both accidents the... vessels had maintenance issues that had been identified, but repair work was deferred. Both vessels encountered problems when facing heavy weather and both sank as a result.

CREW TRAINING: Several accidents from this publication highlight the importance of training. **Know your vessel and its systems. Use realistic drills.** Inadequate response to a fire on the *Marguerite L. Terral* and flooding on the *Ricky B* led to the loss of both vessels.

TDI-Brooks wishes all our employees and their families a safe and happy holiday season!

Safety Tips– Word Find

EMERGENCY PREPAREDNESS

F P O T E Q I L P O D D D S S O L A S Z
 L D V N T O M O K X I Z E E B P H M M O
 O N T I U S E R I F B I T R N F J H G S
 O Z A K H Z T A J P B X C A T I X Z R S
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 A O J J B R I S E F I L T L R F I A R M
 L N F G O L T T R U Q I P O E K O R E P
 A S Q Z A E A E I J H S O B W S N G E B
 R B Q V T D T M E E I T V Q O N S E T A
 M E C N Q U S S S X B X Y Y P U T E S R
 X M B S B W P M E D E V A C B Z X U V O

- SOLAS
- FIRE SUIT
- STATION BILL
- COMPLICATIONS
- FIRE PUMP TEST
- AUXILIARY SYSTEMS
- CRITICAL SPARES
- FUEL SHUTOFF
- GENERAL ALARM
- COMMUNICATIONS
- MEDEVAC
- STEERING LOSS
- INTRUDER
- VESSEL SECURITY PLAN
- RESCUE BOAT
- SCBA
- MUSTER LIST
- UNEXPECTED
- PERSON IN CHARGE
- POWER LOSS
- FLOODING
- BATTERIES