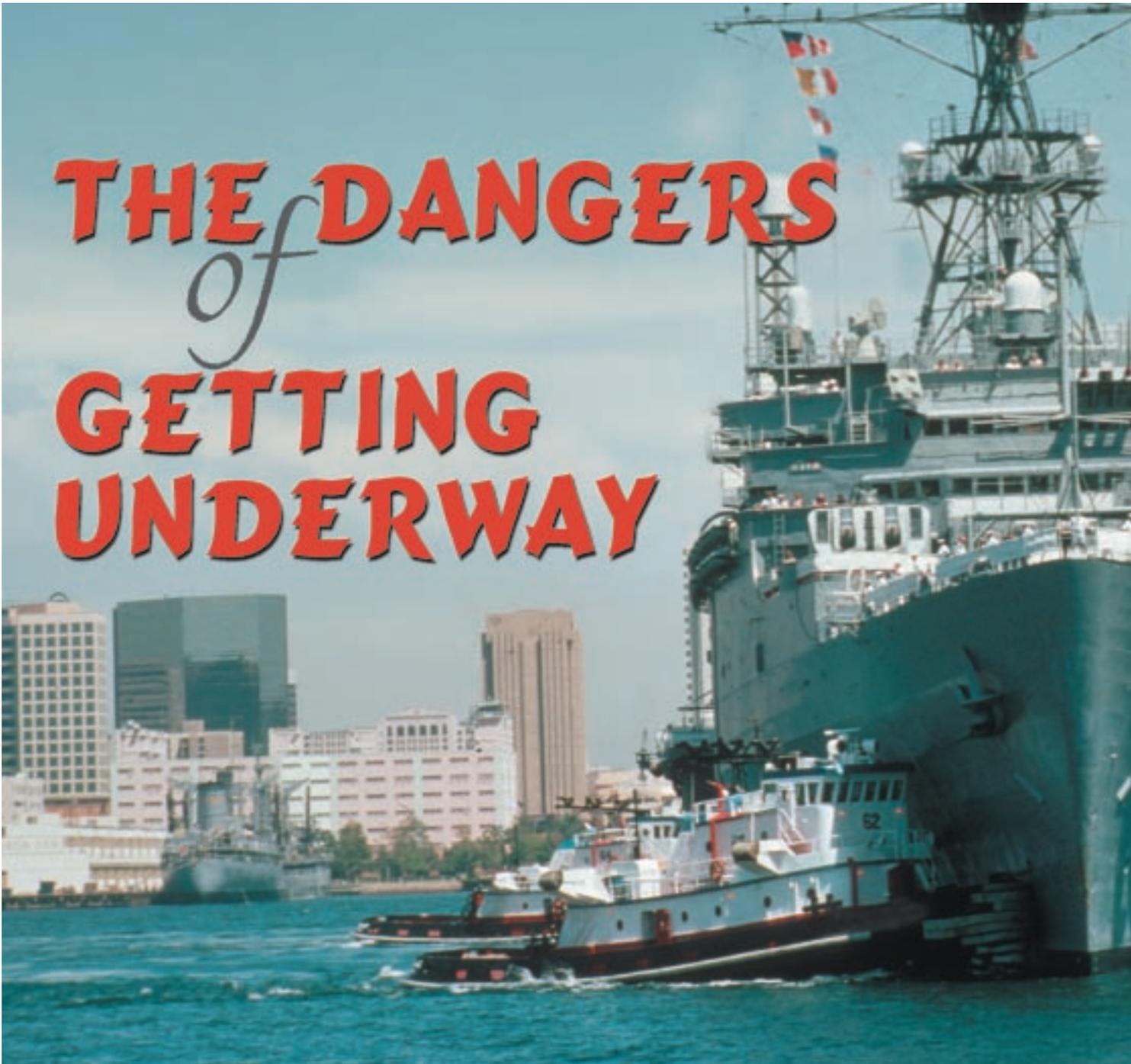


THE DANGERS *of* GETTING UNDERWAY



By Cdr. Ron Keim,
Naval Safety Center

When shipboard Sailors hear a short, crisp whistle blast, followed by the familiar announcement, “Underway, shift colors,” they know they’re starting another stint at sea.

To a ship’s first lieutenant or safety officer, that announcement usually means a dangerous line-handling event has been completed without incident. When tugboats are assisting, one more hazardous line-handling task remains, and it requires everybody’s head—from the CO to the

seaman recruits handling the lines—to be in the game.

Without that kind of attention, disaster can strike at any moment. Just ask two former Sailors who walk with artificial limbs today. They lost their legs because of a mishap that occurred aboard their ship as tugboats were helping it leave a foreign port.

For the crew of this ship, the early-morning evolution started off well enough. The skies were clear to slightly overcast, the temperature was a comfortable 70 degrees F, and the inner-harbor



Navy photo by PH1 R.J. Oriez

When tugs maneuver a ship out of port, no one in the ship's deck force can rest easy until all the line-handling operations are secured.

seas were calm, despite brisk 18-knot winds. With plenty of room available, the tugboats effortlessly maneuvered the ship to avoid the routine inbound harbor traffic. Problems started, though, when the order was given to cast off the forward and after tugs.

Several circumstantial events preceded the impending mishap. First, there was a significant language barrier between the ship's bridge team and the pilot and tug masters. That language barrier increased the hazards of the evolution by increasing the risk of miscommunication and reducing reaction times. Put simply, the bridge

team could not control the tugs, directly or through the pilot.

Second, because the tugs at this port normally helped merchant ships with high freeboards, the messenger lines on their towing hawsers were extra long (80 to 100 feet). These longer messenger lines were necessary to reach line handlers on the main decks of merchant ships.

Third, as soon as the tug masters saw the eye of their towing hawsers were free of the ship's bitts, they began backing down with engines and hauling in the hawsers by winch. These actions, coupled with the weight of the towing hawsers and a ship maneuver to swing the stern away from the tugs, made it difficult for the ship's line handlers to control paying out the messenger lines.

Last, the ship's after line-handling station, where one of the tugs was made up, had numerous design flaws that factored into the mishap. To start with, a low 5-foot overhead forced line handlers to stoop over in an unbalanced position. The cramped configuration of the space also made it impossible to fake out the 80-to-100-foot messenger lines and provided no safe haven in case of a mishap. The station's enclosed design restricted visibility between line handlers and tugs.

After the order was given to cast off the tugs, the bridge team watched the forward tug clear the ship. The forward line-handling station was enclosed, too, so the bridge team wasn't immediately aware of the difficulties the forward line handlers had trying to control the long messenger line as it ran out the chock.

Meanwhile, back aft, the tug still was made up to the ship, and the towing hawser rose out of

the water because of tension. When the OOD asked for a status report, the petty officer in charge (POIC) responded with a plea for the tug to slack the aft line so it could slip off the bitt. The OOD instantly yelled to the pilot to have the after tug slack its line. Soon, the after line-handling station ceased responding to inquiries from the bridge, so the ship's bosun ran aft to investigate. About the same time, a sound-powered phone talker on the bridge reported he heard screaming and yelling over the line.

The scene on the after line-handling station had become mayhem. Seeing no action by the tug to slack tension, the POIC turned away from his team so he could try to signal the tug through a viewing port. He signaled desperately for the tug to close the ship and slack the line.

While the POIC was signaling, a line handler managed to manhandle the eye of the tug's towing hawser off the bitt. Three other handlers quickly picked up the messenger and fed it hand-over-hand out the chock. Because there wasn't room to fake out the messenger, it had been coiled and placed by a set of bitts. Another line handler picked up the coil, but no one took the messenger to the bitts with round turns, which were needed to control easing out the messenger.

As line handlers passed the eye of the towing hawser through the chock, the after tug started backing down and winching around on the hawser. That action, coupled with the weight of the hawser, caused the messenger to surge out the chock. The four line handlers, with messenger in hand and off-balanced, suddenly were pulled toward the chock.

Someone shouted, "Drop the messenger!" as if the line handlers weren't already doing so. The seaman holding the coil of line dropped it to the deck. The messenger began whipping through the



A 5-foot overhead in a ship's after line-handling station has this effect on someone who stands more than 6 feet tall. The ensign in this story stands 6 feet 4 inches.

station and caught the leg of the seaman closest to the chock. It dragged him across the deck toward the chock and pinned his leg against it. The messenger stopped running out, but it continued tightening its grip on the seaman's leg.

The POIC quickly ran to the chock, reached through a viewing access, and tried to cut the messenger with his knife. The safety observer on the after line-handling station, an ensign, rushed to the fallen shipmate and tried to free him. Soon, the seaman's leg gave way to the tremendous pressure, and the whipping messenger grabbed the left leg and right ankle of the ensign. He, too, was dragged to the chock until his legs were jammed across it. In seconds, the ever-tightening messenger amputated both of his legs below the knees. The bridge watch finally received a report,

“Man down in the after line-handling station.”

After medical personnel had treated and stabilized both victims, they were taken to a hospital where they began their long road to recovery (*see sidebar*).

Mishap investigators learned the ship’s crew used operational risk management (ORM) techniques at the safety and navigational briefs before getting underway. The same risks identified in other similar evolutions were discussed. Consequently, the ship’s crew was comfortable; they thought doing as they had before would mitigate the risks of this operation. They failed to realize,

however, that each operation has its unique risks or hazards.

The ORM process helps people react and navigate through such situations. For example, step five of the process is to supervise, which includes watching for change. If an unexpected hazard develops during an operation, Sailors should use the time-critical (on-the-run) ORM process to analyze the hazard, make new risk decisions, and implement new controls. If that means canceling an event, going to all stop, or dropping the anchor, so be it. ☺

The author’s e-mail address is rkeim@safetycenter.navy.mil.

Returning to the Scene of a Tragedy

*By JOC Mary Camacho,
Staff, ComNavSurfPac*

A ship’s bell rings twice, and a voice on the IMC announces, “Ensign, United States Navy, retired, departing.” For anyone new aboard this ship, you’re probably wondering why an ensign is retired and why he’s being rendered honors while departing. For those Sailors who were aboard this ship in a foreign port last year, though, the answer is more apparent.

Navy photo by Ltjg. Jeff Hilton



Deck Seamanship