

From the Top Down: Enhancing Safety Through Culture Change

By Robert Pater, Strategic Safety Associates

The maritime industry can be tossed by rolling waves of injuries, both shipboard and shoreside. Mariner accidents can drain profits and erode productivity, teamwork and morale. In addition to high Jones Act payouts in the U.S., missteps and mishandling can result in costly equipment damage, raise operating costs – and put future contracts at risk.

The bad news is that many executives are seemingly adrift when implementing strategies aimed at higher-level safety performance, cost-control, and cultural change. Interventions to cut pervasive injuries often work only to a certain point. Beyond that, even well-intended actions can run aground, wasting limited resources and time, or even backfire.

The good news is that safety at its highest level – joining enhanced performance with efficient cost-control – has been resoundingly achieved in the maritime industry by Alaska Tanker Company (ATC). And if they can do it, so can you.

Shipping oil between Alaska and the Lower 48, ATC (www.aktanker.com) is the safest tanker company in the world – and the recipient of the gold Benkert Award, the U.S. Coast Guard's highest environmental honor. In the past seven and a half years, ATC has logged over thirteen and a half million hours without a lost-time injury. Not surprisingly, the company has excellent systems for loss control and safety.

But it wasn't always that way. When Anil Mathur took over as CEO in 2001, ATC's record was average. So how did ATC climb to its current level of success? It changed the culture. It began with executive-driven leadership. According to Anil, "We initially developed a series of management-led interventions that were highly prescriptive. As our culture improved and evolved, the need for these kinds of strong interventions went away. We've now reached a stage

in our culture where our workforce 'owns' safety. I truly believe all accidents are preventable."

Navigating the Course: What Kinds of Injuries?

Common maritime injuries tend to be "soft tissue" or "personal": slips/trips/falls, strains/sprains (e.g., back injuries) and damage to the hands, wrists, fingers or arms. Contributing factors include:

- » *exposure to the environment (temperature extremes, high winds, rain, ice) that lowers*
- » *body temperature, heightens discomfort, fogs glasses, creates slippery decks, etc.*
- » *turning valves, or changing them out*
- » *traversing ladders*
- » *consistent motion of the vessel – listing and rolling, vibration, etc.*
- » *using heavy tools*
- » *operating and maintaining equipment*
- » *entering and leaving the dock – tying/untying lines, hooking up to terminals, etc.*
- » *oil and grease on surfaces*
- » *changing elevation*
- » *working long hours, often with interrupted sleep patterns.*

The list goes on and on – all lying in wait even for mariners who are young and fit, and not all are.



MARITIME PROTECTIVE SERVICES, INC.

- * US & UK Gov't Certified MTTSA/ISPS Code Training
- * Security Assessments, Plans & Amendments
- * Security Plan Audits & Reviews
- * Drills & Exercises
- * Security Plan Maintenance
- * Offshore Security Programs
- * Anti-Piracy Teams & Technology

Course Dates US: 8/18-21, 10/13-16 & 12/1-4/2009
UK: 8/24-27, 9/21-24, 2009

US PH. 561-330-2020—FX. 561-330-2260
UK PH. +44(0)1202684686—FX. +44(0)1202684687

MPS

MARITIME PROTECTIVE SERVICES, INC.

www.mpsint.com

Avoiding the Shoals: What Not to Do

Regrettably, many companies have barely dented the hard problems of soft-tissue injuries or slips/trips/falls. Approaches to loss-control typically include signs or verbal reminders ("Pay attention when you lift something heavy!"), personal protective equipment such as lifting aids or footwear, training that doesn't focus on specific maritime applications, or disciplining workers for getting injured. While these strategies may help to a point, they haven't engendered breakthrough-results in most companies.

Anil Mathur contends that the right mindset, skill set and tool set are critical to high-level safety performance. In this vein, here are five shoals that are shipwrecks-in-waiting, along with strategies for steering around them.

Shoal 1: Treating soft-tissue injuries (sprains/sprains, back injuries) as acute, single-source problems when instead they are predominantly wear-down issues that build over time. Think of soft-tissue injuries as "the straw that broke the camel's back." In reality, many get hurt from relatively low-risk tasks they've done thousands of times before (stepping down, bending over to tie a shoe, etc.). While trying to close a heavy valve might seem to have precipitated the back pain – and can certainly be a contributing factor – it's often the myriad number of smaller tensions over time

that result in a breakdown (just as metal fatigues).

Strategy: Be wise. Think beyond strenuous lifting or slippery decks. Focus on small changes that leverage into significant improvements in soft-tissue strength, control and balance. Develop strategies that address seemingly minor exposures – lifting light loads, climbing low heights, traversing dry as well as wet decks – before they result in an injury.

Shoal 2: Assuming engineering fixes will save the day. Even in land-based sites, it's almost impossible to control all exposures. People still manage to trip crossing dry decks in calm seas (or clear parking lots) as well as injure their shoulder/back/knees when lifting relatively light loads. It's not possible to control maritime exposures through design-only interventions. Strong, safety-focused systems, processes and behaviors are what is needed.

Strategy: Be improvement-focused. Experience has shown that the best results come from combining work/tool modifications with behavioral improvements – what we call ergonomics, which we define as improving the fit between crew and work. We do this by (1) bringing tasks "closer" to workers through cost-effective ship design and tools, and (2) enhancing mariner skills for making small physical and judgmental adaptations that reduce the buildup of tensions and stresses.

MARINE EMERGENCY

Response Training

STCW and USCG approved basic through advanced courses

Center For Marine Training & Safety

Galveston, Texas

- Oil Spill Control School
- At-sea search and rescue
- Survival at sea and helicopter egress
- IADC Rig Pass®
- ISPS Security

Call 409-740-4850 to register.

Brayton Fire Training Field

College Station, Texas

- Basic and advanced firefighting
- LNG emergency response
- Technical assistance
- NIMS / ICS

Call 866-878-8900 to register.



TEXAS ENGINEERING EXTENSION SERVICE

A Member of The Texas A&M University System



www.teex.org/fire

Shoal 3: Believing changes in awareness or motivation alone will somehow "fix" these problems. Without question, motivation affects safety, but it is not enough. Specific mental and physical skills are needed to prevent strains/sprains, slips/trips/falls and hand injuries.

Strategy: Be strategic. Transfer needed skills, not just "awareness." Experience in the maritime industry world-wide has shown that the following mental and physical skills are critical for injury prevention.

Mental Skills:

- » *Personal stress control (not allowing excess physical or emotional attention to "wag the dog."). Over-tension can lead to the soft-tissue danger zone, just as a taut cord is easier to cut than one that's slacked. Further, unmanaged stress can upset physical balance.*
- » *Team connection – doing tasks seamlessly with others. For example, safer two-person lifting can be coordinated by employing small eye confirmations and verbal gestures.*
- » *Thinking forward, cumulatively and 24/7, as in "what can go wrong here," as well as realizing that small levels of tension can build into nagging soft-tissue problems.*
- » *Ability to better direct attention. Upgrade attention*

skills such as scanning for best options (e.g., safest path), selecting where to focus, sustaining attention on priorities, switching back to an important task when distracted, and sequencing parts of a task for greatest efficiency and safety (e.g., securing load against the body, seeing condition of steps, sighting handrails, situating feet for best balance, spying where stairs end).

Physical Skills:

- » *Ability to maximize personal leverage and strength through best alignment, position and connected movement.*
- » *Significantly improved balance and coordination*
- » *Improving flexibility and range of motion*
- » *Strategies for fatigue reduction*
- » *Synchronizing breath with tasks (e.g., when bending down to pick up/lift, most people hold their breath, thereby increasing pressure on the lower back while significantly weakening balance. The right training can reduce this at-risk habit and enable greater lifting strength).*
- » *Developing methods for practical recovery, employed as early as possible, to steer away from potential major problems; for example, should you begin to*

Where The Mariner Counts We Add The Personal Touch

- » Flexible scheduling to accommodate work schedules
 - » Small classes means personal attention
 - » No added fees – one cost covers all
 - » Limited Berthing Available

We Offer

- » STCW – BST and PSC
- » Masters – OUPV, 100 & 200 Ton
- » Able Seaman (Any Grade)

Conveniently Located In Jacksonville, Fl.

904-766-4797

www.bluewatermaritimeschool.com



BLUEWATER
MARITIME
SCHOOL

Organized By **MERISIS**
www.merisis-asia.com

29–30 October, 2009
Shanghai, China

3rd Asia Ship Industry Summit

第三届亚洲船舶行业峰会

Examine Intelligent Alternative Strategies for Each Individual Sector

- Market & policy analysis and future prediction
- High value added ship & Offshore Engineering
- Financing & Contract Renegotiations and Cancellations
- Ship repairing & recycling & Alternating

Please see the full programme online

www.merisis-asia.com/ship

For more enquires, please contact:

Marketing Department, Merisis Consulting,

Tel: 86 21 62478608 Email: lily.qian@merisis-asia.com

fall, how to reflexively regain vertical balance without straining muscles.

All the above are tangible, easily transferable skills, proven to significantly reduce soft-tissue injuries and slips/trips/falls. The MoveSMART® system for injury prevention, as applied within ATC, transfers these skills. Anil Mathur says, "MoveSMART® is the program most favored by our sea staff. Our work environment aboard tankers in the Gulf of Alaska is full of 'slips, trips and falls' hazards. MoveSMART® is a practical program that helps them execute their tasks without getting hurt."

Shoal 4: Thinking "inside the box" that strains/sprains, hand injuries and slips/trips/falls are unrelated problems requiring never-the-twain-shall-meet solutions.

One company attributes all tool drops onto feet as caused by an incipient slip or trip. In reality, such incidents have a base of common causes that include attention breakdowns, balance disturbances, failure to think through approaches and bailouts in advance, suboptimal position and alignment, lack of synchronized breath control and more.

Strategy: Be efficient. Simultaneously address root causes of strains/sprains, slips/trips/falls and hand injuries.

Shoal 5: Becoming a Lone Ranger. It's easy for some executives who have sighted the Valhalla of high-level

safety to become frustrated or even give up. Anil Mathur reveals, "I didn't believe for many years that others had the same commitment to safety as I did because of the lapses I saw between their words and actions. I now realize that through advocacy, inquiry and recognition, one can form strong partnerships in safety."

Strategy: Be inclusive. Deputize everyone as a safety advocate. But, according to Anil, what's most important is to be true to yourself as a leader: "Don't go down the safety journey unless you truly believe in it yourself. Embarking on this journey with only superficial commitment produces deep cynicism in the workforce. Safety pays many dividends, but the irony is that, if those dividends are your sole motive, your safety drive will most likely fail."

With the right leadership and training, personal injuries in the maritime industry can be overcome and safety performance can exceed the highest expectations – and generate higher crew engagement, morale and efficiency. **MarEx**

Robert Pater is Managing Director of Strategic Safety Associates and creator of the MoveSMART® system for preventing strains/sprains, slips/trips/falls and hand injuries (www.movesmart.com). He has worked for many years with Alaska Tanker, BP Shipping and many other companies worldwide.

**The Classes You Need
The Schedule You Want
Prices You Can Afford**

...Spread The Word!

Our Courses Include:

- Able-Seaman
- PSC
- BST/Refresher
- BRM
- 1 Day Radar
- 5 Day Radar
- 100 Ton Masters
- 200 Ton Masters
- RFPNW
- Custom Training

www.CompassCourses.com



**COMPASS COURSES
MARITIME TRAINING**

**877.SEA.BUOY
(877.732.2689)**

110 West Dayton Street, Suite 101
Edmonds, Washington, 98020

**Custom Engineered
Winch Solutions
...Since 1947**



*Towing Machines • Hawser Winches • Traction Winches
Anchor Windlasses • Capstans • Oceanographic Winches
Cable Laying Systems • Hose Reels • Fairleaders
Chain Jacks & Stoppers*

**TE TIMBERLAND
EQUIPMENT
LIMITED**

**ALMON
JOHNSON
LIMITED**

Timberland Equipment Limited
P.O. Box 490, 459 Industrial Avenue
Woodstock, Ontario, Canada N4S 7Z2
Tel.: (519) 537-6262 Fax (519) 539-5853
email: sales@tewinch.com
Web Site: www.timberland.on.ca