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Amenities:

I gratefully accepted the invitation to speak at SeaTrade because I had been looking for a forum to talk about a timely subject that is on all of our minds this week. I refer, of course, to college basketball: March Madness and the conference tournaments leading up to Selection Sunday this weekend.

Actually, I haven't had much time to watch basketball lately, so I don't think my opinion on the ACC tournament would mean a whole lot. Maybe I'd better stick with my announced topic of cruise ship safety.

I am grateful to SeaTrade for hosting this forum and for sharing it with the Coast Guard.

I. Introduction.

I have said in several speeches and interviews over the past couple years that fostering cruise ship safety and preventing further introductions of aquatic nuisance species in ballast water are the two most pressing marine safety and environmental protection issues confronting the U.S. Coast Guard.

The urgency of finding the right approaches to ballast water management should be obvious—the existence of a serious and unsolved problem is undeniable. But cruise ships are another matter. Considering the industry's excellent safety record—more than 20 years without a fatality caused by a shipboard casualty—why should cruise ship safety paint such a large image on my radar?

The special attention is merited for two reasons: managing risk and managing change.

II. Vigilance and Risk Management:

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One of our professional military journals recently carried an article challenging the widely held opinion that the global security environment is less stable today than it was before the Soviet Union collapsed. Many national security experts point to the proliferation of asymmetric and transnational threats—especially those posed by terrorists, smugglers, and other criminals—and observe that national security was

actually easier to manage when the free world faced a single, apparently monolithic, adversary. Seeing the broad consensus as evidence of group-think, the authors of this article analyzed the number and intensity of armed conflicts over the past decade, discovered there have been fewer and less horrible conflicts since the wall came down, and concluded that the world is actually more safe today.

As a rule, I am predisposed to look favorably on any challenge to conventional wisdom, but I think that these authors missed the point—a point that is relevant to the cruise ship industry. Successfully managed risks and unrealized disasters do not indicate the absence of danger. Just as the comparative paucity of wars over the past decade says little about the actual risk of war, the excellent safety record of the cruise lines can make us lose sight of how much has to go right to conduct a single safe voyage.

All of us who have spent time at sea know the danger of complacency. Our common challenge is to ensure that we do not let a strong safety record cause us to underestimate the risks that are managed when millions of passengers embark on cruise ships each year.

Two recent cruise ship incidents, neither of which endangered any passengers, call us all to re-affirm our commitment to manage those risks carefully. Last December, the Coast Guard was called upon to rescue the crew of the *Sea Breeze I*, and we had to set a record for most survivors ever crammed into an H-60 helicopter in order to complete the evacuation before the ship sank. And last week, a cruise ship loaded with passengers grounded in the Caribbean.

Even granting that the *Sea Breeze I* was an older ship, that it was not certified to carry passengers, and that it was not staffed by the extensive and well-trained crew that would have been aboard any ship carrying passengers, the fact that it did sink—and sink in a storm that should not have threatened such a large ship—forcibly intrudes itself on our attention. Similarly, the circumstances of last week's grounding—and I speak only from press accounts and other second-hand information, as the United States Coast Guard has no official role in the incident—remind us of the importance of human factors even in the best equipped and maintained ships.

I'm not hinting even a little bit that these two isolated and individual cases signal any sort of an industry-wide problem. But I do believe it is worth our while to call incidents like these to mind as reminders that the sea is not a tame place—and that the risks associated with bringing large numbers of customers to sea may be managed, but they will never be eliminated.

This constant need for vigilance and risk management would not by itself land passenger vessel safety at the top of my list of concerns most likely to cause the Commandant to lose sleep at night.

After all, vigilance and risk management are essential to every segment of marine transportation. And ICCL and its member companies are certainly demonstrating their commitment in this regard.

This commitment is reflected in ICCL's leadership in the IMO's work program on large passenger vessel safety . . . by the ICCL's decision to upgrade its voluntary guidelines for medical facilities and for locally sounding fire alarms—holding its members to standards that exceed any flag-state or port-state requirements . . . and by the industry's cooperation with the Coast Guard on contingency planning.

The industry's responsiveness in managing the known risks of today inspires confidence; but managing the incredible changes in the industry will be a tougher nut for all of us to crack.

III. Managing Change: *Victory* and *Warrior*:

SeaTrade is not a group that needs to hear a lecture on the safety challenges associated with the dramatic increases in passenger vessel size, speed, and complexity. We know the issues, and we're working together on them.

But it may be helpful to spend a few minutes thinking about how we can make sure that the Coast Guard works with industry and the rest of the international community to manage change intelligently.

I have been particularly concerned about what I regard as the near certainty that some of the safety systems and regulatory regimes that work well on today's cruise ships will not be well suited for newer ships. What has proven effective for vessels in some range of size or complexity can be extrapolated only so far to larger, more complex vessels before it stops promoting safety. We must prepare for the day we wake up and realize that years of "more" and "bigger" have so markedly transformed the category we call "large passenger vessels" that our bundled assumptions about the category no longer hold true.

This vibrant industry produces so much innovation that the similarity between a cruise ship built in, say, 2020 to a cruise ship built in 1980 may begin and end with the fact that they carry passengers. When that occurs, I don't want to find us managing safety on the 2020 ship as if it were a 1980 ship.

As each innovation breaks forth, we increase the probability that something important about our concept of safety will change—and that we won't notice it.

Let me offer an illustration of the kind of "big picture" issue we could overlook.

Lovingly preserved at the Naval Base in Portsmouth, England, are two famous ships that illustrate the point I would like to make. The first is *HMS Victory*, Admiral Nelson's flagship at Trafalgar. The second is *HMS Warrior*, the mightiest ship in the world when first commissioned in 1861 and still a ship of great significance in the evolution of modern warships.

At first glance, these ships could hardly be more dissimilar. *Victory*, made from 6,000 oak trees, is what comes to mind when imagining the archetype of an eighteenth century warship: magnificent stern gallery, row upon row of gun ports. *Warrior's* keel was laid about a 100 years later than *Victory's*, and the newer ship reflects a hundred years of engineering progress.

Warrior is clearly the product of an industrial age. She is twice as long and twice as fast as *Victory*. She features an iron hull . . . horizontal trunk steam engine . . . screw propulsion . . . breech loading guns . . . rifled instead of smooth bore . . . better stability through the innovative configuration of her single gun deck . . . watertight bulkheads . . . a sleek clipper bow. Every detail of *Warrior* shows at least one, sometimes two or three leaps forward over comparable features on the *Victory*.

Well . . . almost every detail

They are alike in one apparently minor—but telling—feature. On the gun decks of the *Victory* and on the single gun deck of the *Warrior*, mounted on the bulkheads by each gun are the boarding weapons to be used when the fighting got up close and personal.

Do you understand the significance of this detail? Despite 100 years of progress in hull design, propulsion, and weaponry—and 100 years of technological improvements in just about every other facet of ship design, the ships were basically designed to fight by the same tactics.

Nelson famously said on the eve of Trafalgar that, “No Captain can do very wrong if he places his Ship alongside that of an Enemy.” That was sound advice in 1805 from an admiral commanding a fleet of ships designed to be fought in that manner. But it may not have made much sense for a ship like *Warrior* in the 1860's.

Wouldn't it seem that the point of designing a ship with greater speed, better maneuverability, heavier fire power, and superior range would be to avoid fighting on terms that permitted battles to be decided by the physical strength of the sailors and marines?

Creatively deployed, a ship like *Warrior* could have forced any ship then floating to surrender without having to draw alongside. Instead, it appears that she was prepared to fight the very sort of clawing battle her innovative design and features should have rendered unnecessary. Having the newest boarding arms mounted on the gun deck is an example of getting the technology right but failing to grasp its larger significance.

If you're not a naval history buff, you probably never heard of *Warrior* before today. There's a reason for that. Within ten years of commissioning, she was obsolete; within 10 more years, she had been removed from active service and launched on a new career as a supply depot, a refueling hulk, and a source of electrical power supply for other hulks. She never fought. Never did what she was designed to do. That's what happens when we field great technology without understanding its implications.

The relevance to the cruise ship industry is clear. It is a lesson on the importance of properly incorporating technological advances in an era of accelerating change.

Warrior's boarding arms are a good example of what we don't want to see happen in the cruise ship industry. It is very important for the Coast Guard, the international maritime safety community and the industry to make sure we think through the implications of the innovations that we introduce . . . to make sure we're not giving ourselves the best weapons for fights that no longer need to be fought.

Many issues merit careful examination. Evacuating thousands of passengers at sea is everybody's worst nightmare. Maybe we need to rethink our approaches to evacuation. Will we ever reach a point at which passenger safety is no longer facilitated by having more lifeboats lining longer rails ever higher above the waterline? Are better lifeboats and stronger davits really the answer? How else could people be evacuated? I can tell you right now that the Coast Guard doesn't have the platforms to do the job, but we do have to figure something out.

On this issue and on the other challenges facing the cruise ship industry, the Coast Guard will do our part. We will uphold our regulatory responsibilities and maintain our leadership role in international forums, pressing always to raise the bar.

We will also look for ways to increase our partnerships with industry. In the tanker industry, pollution rates have dramatically decreased, partly because of practical applications of the recognition that government and industry share a common goal in keeping oil out of the water. One of our goals is to avoid imposing regulations that freeze out innovations or that add costs incommensurate to their benefits. Stronger partnerships with a forward-thinking industry makes it easier for us to keep a light hand on the tiller. I welcome the opportunity to discuss ways to make that happen.

IV. Conclusion:

Over the past year, I have had several occasions to cite the 1980 case of the cruise ship *Prinsendam* to make a point about how we achieve progress in marine safety.

I won't re-tell the whole story here, but the Coast Guard rescued more than 500 people when a fairly good-sized passenger ship caught fire and sank in waters off the Alaska coast. One reason the evacuation succeeded is that our rescue coordinators knew how long it would take for fire to consume the ship.

Prinsendam had been built to the latest IMO fire protection standards—standards that were designed to permit fires to spread to adjacent compartments only at a controlled and specified rate.

The Coast Guard’s chief fire protection engineer was on the phone to the Rescue Coordination Center throughout the rescue operation. He held the ship’s design plans in one hand and the fire protection standards in the other. Knowing where the fire started, he predicted with a surprising degree of detail and accuracy how long it would take for the fire to spread from compartment to compartment.

This specific knowledge of how fire protection standards would apply to the *Prinsendam* gave the rescuers the confidence to conduct the evacuation without an excessive urgency that could have endangered either our rescue personnel or the passengers and crew of the *Prinsendam*.

I told the story to make the point that the passengers on the *Prinsendam* were actually saved in the 1960’s—years before the passengers thought of booking a cruise. Visionary leaders saw the need to protect passengers against fires like the one that broke out in 1980. They found innovative engineering solutions. And they cooperated with each other to get the standards adopted by IMO. By addressing the issue years before the *Prinsendam*’s high pressure fuel supply line began to leak, they gave the rescue crews a chance.

It took leadership, innovation, and cooperation to prevent *Prinsendam* from being listed among the great ship disasters of all time. As we consider the safety and environmental implications of the mega-ships now on the drawing boards, we have the same obligations—leadership, innovation, and cooperation—to make sure we manage the risk and manage the change.

I think that we have the team—Coast Guard, industry, and the IMO—that can work through these challenges.

Semper paratus.

