

# Human Resources Solutions Company of Master Mariners, Newfoundland Division **SAFETY OF LIFE AT SEA-THE HUMAN ELEMENT**



October 2, 2008

Horseshoeshoe Bay Marine Group  
K. Joseph Spears



# Research Findings K. Joseph Spears

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- These comments are based upon 30 years in the marine industry and 20 years as a maritime barrister and a wealth of experience in the investigation of marine incidents and SAR incidents on all three coasts.



# Risk Management

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- The focus of this presentation will examine the safety of Life at Sea from the Human element. (Seamanship)
- In an increasingly technological world the human element or human factors are often pushed aside in favor of increased regulatory requirements.

# Risk Management



The elements of risk management can be broken down into three simple elements:

1. Prevention
2. Protection
3. Financial Protection/ Recovery



# Safety Management System

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- Transport Canada across all modes of transportation has published in April 2007 **Moving Forward-Changing the Safety and Security Culture. (TP 14678)**

It sets the stage for a new direction for safety and security management.



# Seaworthiness

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The seaworthiness of the vessel means it is reasonably fit in all aspects to encounter the perils of the sea.

The fitness, training and medical condition of the Master and crew are an integral part of the ship's seaworthiness. This embraces all three aspects of risk management.



# Marine Legislation

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Much of the Marine Safety Legislation at the national and international level has been a response to marine incidents.

Canadian Maritime Law seeks uniformity both domestically and internationally.

The legislation is the Canada Shipping Act, 2001



# The Safety of Life at Sea is a Function of:

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- Technical Standards
- Training
- Human Element



# The Human Element

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- What is it.
- It includes all aspect of the manning of the vessel. In the marine investigation context, it is often that human factors are looked into as to causation. These are trailing indicators.
- From a risk management standpoint, we need to look at leading indicators.



# The Human Element

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- In the regulatory context we see manning and certification requirements.
- These are regulatory minimum standards.
- We need to consider the human factor in a more holistic fashion.



# Some Trends At Sea

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- More Codification of processes-ISM
- Better Communication
- Better Real Time Navigational Information
- Criminalization of Offences
- Heightened Environmental Awareness
- High Speed Vessels

# What does this mean for the Seafarer



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- All of the increased information, greater use of technology and reporting requirements put more stresses on the seafarer. These all have an impact on the individual seafarer which is a basic building block for a risk management approach.



# What could this mean for the Seafarer!

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Salvage is Expensive

*Megaphone*

The SEA VICTORY, 173 gt. Salvage vessel was brought in to tow the bow section off the beach. The tug did not have a long enough tow line which caused an extra delay. A longer line eventually arrived from Holland and on March 2 towing commenced. Another storm defeated this operation and the bow went aground again, this time 70 miles north of Coos bay. A new line was brought in from California, and on March 11 the NEW CARISSA's bow was finally sunk in deep water using gunfire and a torpedo from a US Navy submarine.

The whole six week affair employed 300 people, on average, each day, involving 37 different agencies and cost over US\$14.6 mn in the first three weeks alone. The total costs are now, at the time of writing in April, approaching US \$16 mn and with law suits being threatened these costs are bound to rise. The torpedo had not yet been costed in and that is said to be worth US\$ 1.2 mn! The stern still lies embedded in the sand near Coos Bay.

Professional Mariner



# Human Element

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- Little attention has been given to this subject in a holistic fashion. The welfare of the seafarer and his or her mental and physical health, is likely the most important element of a safety management system adopted by regulators and companies.



# Examining Events

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- From the humans factors side it is important in a safety management to examine both accidents and incidents.
- Incidents are the near misses.
- We also need to look closely how stresses contribute the event.



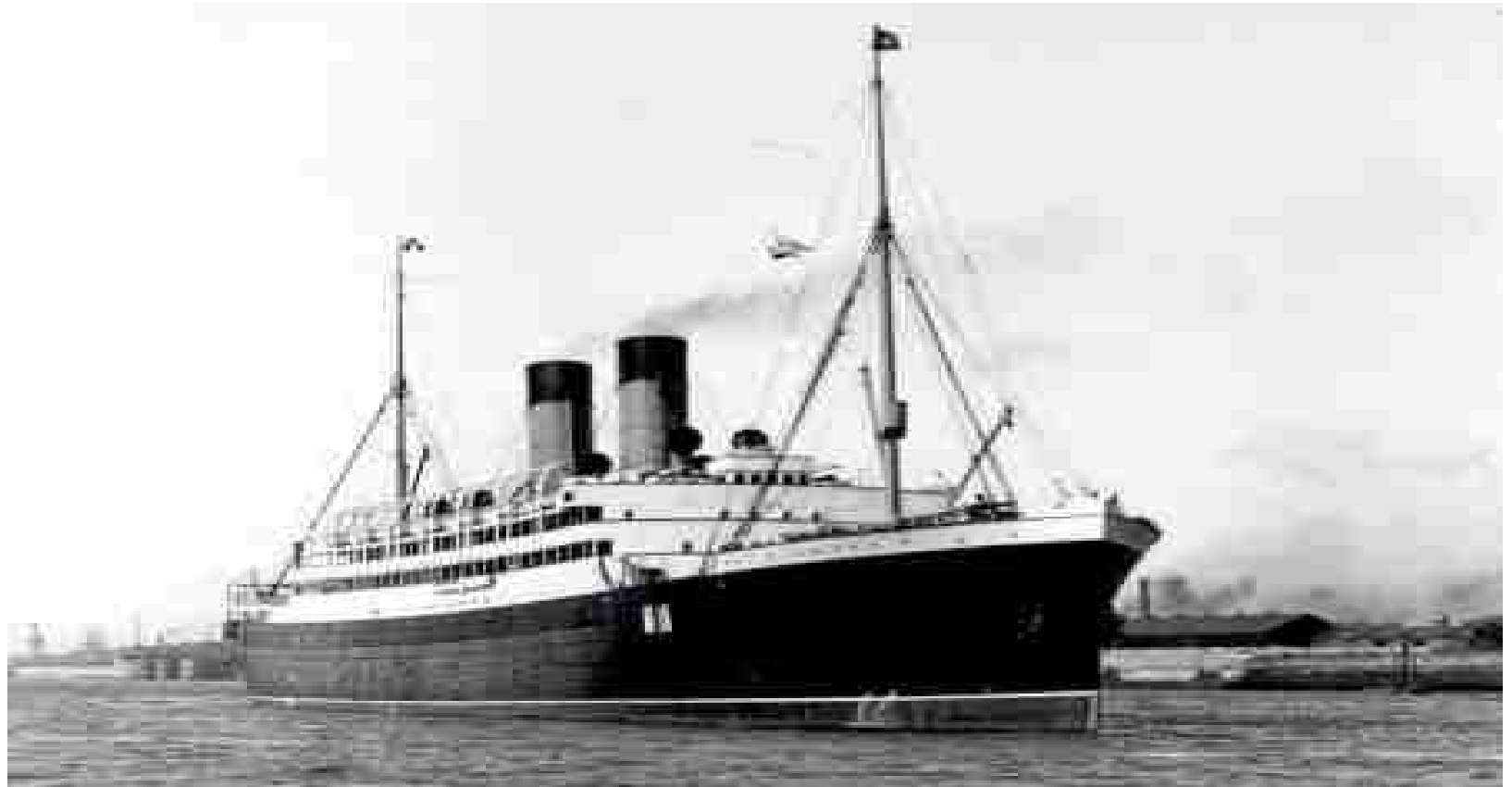
# Empress of Ireland

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One only has to look at the a case that  
arose not far from Quebec City in the  
last century.

The Sinking of the Empress of Ireland.  
May 28, 1914

# Empress of Ireland



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# Empress of Ireland

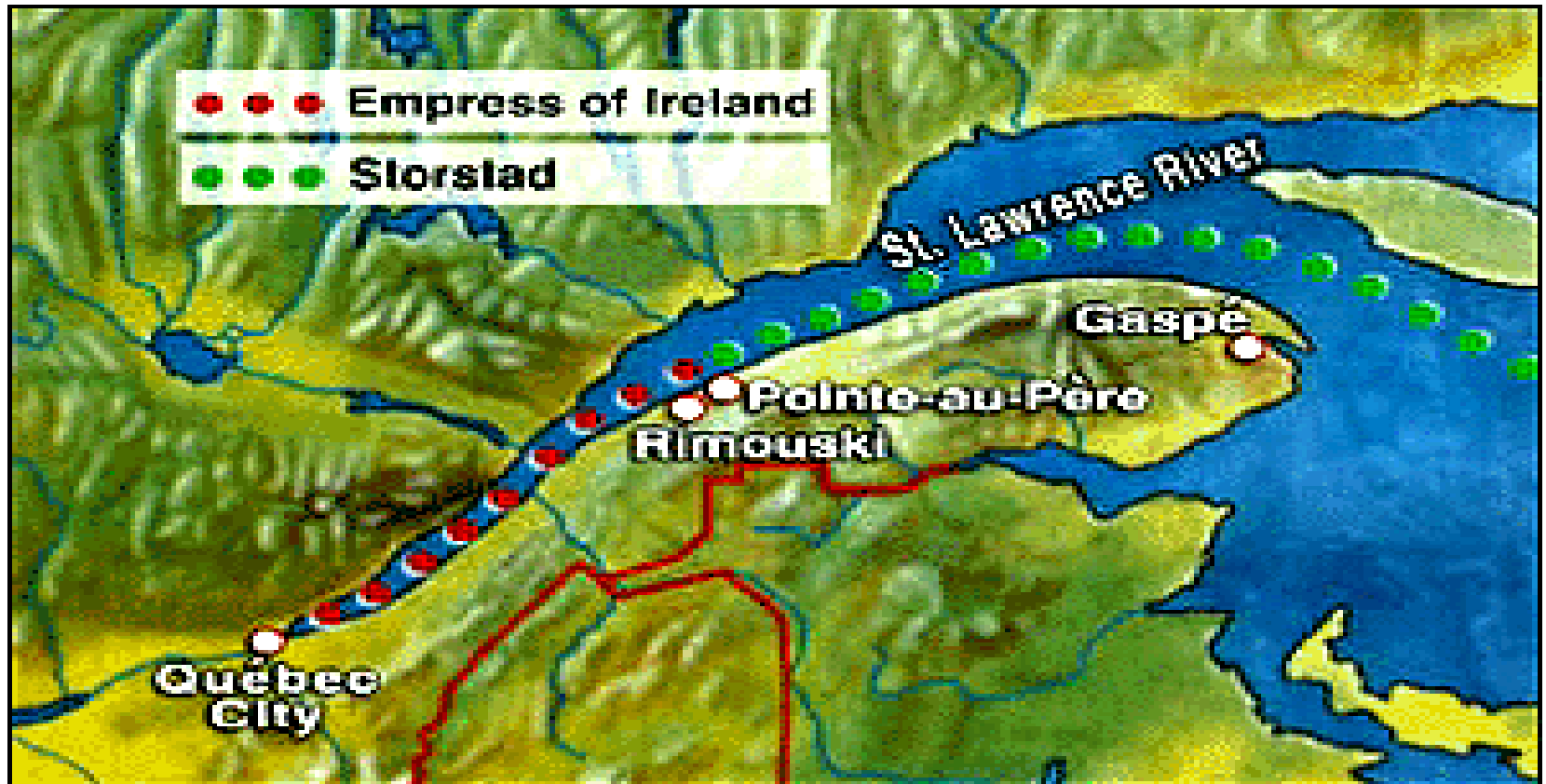
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The vessel collided with the Norwegian vessel STORSTAD in heavy fog off Rimouski.

The vessel sank rapidly (14 minutes) with a loss of 1,078 lives. 397 lives were saved.

Unlike the Titanic there were sufficient lifeboats.

# Empress of Ireland



# Empress of Ireland



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# Safety of Life at Sea is a Primary concern of Transport Canada.

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As the Federal Court stated in a recent judicial review decision in *Trude Kalke v. HMTQ*: “The respondents [Marine Safety] have a positive obligation and duty for the administration of safety of life at sea as set out in the Canada Shipping Act, supra.”

Mr. Justice O’Keefe  
El Primero Decision  
*Trudy Kalke v. HMTQ*  
2002 FC 904



# Lessons Learned

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The Seafarers role cannot be dealt with in isolation. It is important to examine a number of recent events from the west coast.

We will use the story of the three Queens to look at risk management and the human factor.



# The Three Queens

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These three Queens all arose on Canada's West Coast, in British Columbia in this century. It is an interesting story and in the case of one, had an unfortunate tragic ending.

Each of the Queens will be examined.



# The Three Queens were:

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- Queen of Surrey
- Queen of Oak Bay
- Queen of the North

# QUEEN OF SURREY 2003



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# QUEEN OF SURREY 2003



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# QUEEN OF SURREY 2003

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The Queen of Surrey had an engine fire in Howe Sound. There were problems with the vessel's firefighting equipment. There was no loss of life. The ship's crew put out the fire.



# QUEEN OF OAK BAY

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Grounding in Horseshoe Bay, was it the cotter pin?

Only a Minor Injury. There were over 1200 people on board the vessel. The incident occurred on the Friday before the Canada Day long weekend.

# QUEEN OF OAK BAY



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# STATEN ISLAND FERRY

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In New York Harbor, the Staten Island Ferry killed 11 and injured over 80 passengers, many seriously.

The Queen of Oak Bay was lucky there was no injuries, unless you consider a sunburn a marine injury.

# Queen of the North Sinking



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# Queen of the North Sinking



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# The Queen of the North

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The TSB completed their investigation and the vessel remains at the bottom.

No one yet knows what happened on the bridge.

The story continues.

There was the loss of two lives.



# Further Information on ALERT

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- The Nautical Institute and Lloyds Registry jointly have developed an excellent website and publication on human factors. It is called The International Maritime Human Element Bulletin.
- It can be found at [www.he-alert.org](http://www.he-alert.org)



# Conclusion

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The human element, all aspects of the mariner including his health and training is very important when we take a risk (safety) management approach with respect to the safety of life at sea.

This has been adopted by Transport Canada in their Safety Management System.



# Conclusion Continued

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- The Human Element in all aspects must be included in a safety management system. More work needs to be done with respect to the importance of the seafarer as a critical component of risk management.

# Conclusion- The Future



- There needs to more attention given, in my view to the human aspect with an uncertain future.
- Conferences like this this one show the need and as the requirement for human resources increase we need to carefully consider these human factors.
- We will be a safer marine industry for it.



# Conclusion-Continued

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- The importance of the seafarer's key role cannot be overstressed in a risk management framework.
- We need to do more research into the human aspects and embrace this as an element of good corporate management and regulatory oversight.





# Importance of the Seafarer

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- The Seafarer on the frontline of the marine regulatory process plays an important role and, some would say, key role a safety management approach to the Safety of Life at Sea.
- Lets not allow the Seafarer to be overlooked in the coming years.



# Relevant Websites

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- [www.cfoa.ca](http://www.cfoa.ca)
  - Canadian Ferry Operators
- [www.tc.gc.ca](http://www.tc.gc.ca)
  - Transport Canada
- [www.tsb.gc.ca](http://www.tsb.gc.ca)
  - Transportation Safety Board of Canada
- [www.ssopfund.gc.ca](http://www.ssopfund.gc.ca)
  - Ship Source Oil Pollution Fund
- [www.admiraltylaw.com](http://www.admiraltylaw.com)
  - Contains great links to all the marine related websites you will ever need.
- [www.marinelaw.com](http://www.marinelaw.com)
  - Back issues of Mariner Life Legal Articles
- [www.lloydsagency.com](http://www.lloydsagency.com)
  - Lloyds Agency
- [www.marine-salvage.com](http://www.marine-salvage.com)
  - International Salvage Union
- [www.cmla.org](http://www.cmla.org)
  - Canadian Maritime Law Association
- [www.canllii.com](http://www.canllii.com)
  - Great Source of Canadian Maritime Law Cases