

QUESTIONS AND ANSWERS

This session was chaired by **Lord Clarke of Stone-cum-Ebony** ([Link to his CV](#))

Mr Martin Arne Sagen was representing the **Norwegian Skagerrak Safety Foundation**, created in 1990 as a support group for the survivors and their families. He commented on Dr. Payne's reference to "the dreadful fire aboard the passenger ship the Scandinavian Star in 1990 when some 158 people lost their lives. Perhaps our subject should be the Achilles Keel of Passenger Ships!"

In the aftermath of the Costa Concordia, attention has been focussed on design and stability. Yet the ultimate nightmare for passenger ships is fire.

There was an engine room fire on board a Norwegian passenger ship, the MS Modliese, in September 2011. The fire could not be put out and the outcome was fatal. According to the rules and regulations, the engine room crew should have been evacuated. Ultimately, two persons were found to be missing and the captain did not activate the stationary CO2 fire extinguishing plant.

Other cruise ships could be facing the same problem by using poisonous CO2 gas for extinguishing fires. Here is a conflict for the captain as he wishes to save his crew but by delaying for up to half an hour the fire would probably be failing. He is in a "terrible squeeze." Does he give priority to saving one or two members of his crew or 1,000 passengers. This dilemma is not acceptable. There are still some 30 to 40 per cent of cruise ships which are more than 10 years old and there are still several other ships with this great problem.

Dr Stephen Payne

Fire is most probably the most difficult thing we have to design against and mitigate on passenger ships. Fires in the engine room are almost the most difficult thing to control. The decision to fire off CO2 or not is a very difficult one for the master. However, it is his job to make that decision. We are progressing with alternative systems. I am sure we will have, in time, proper water mist systems. However, I cannot stress enough that where fire is concerned, passenger ships are safer now than they have ever been.

From the various aspects of the Scandinavian Star, it was realised that we could not have any more dead-end corridors. On the Scandinavian Star, a number of passengers and crew trying to escape from the ship crawled along the corridors, ended up in dead-ends and suffocated. A Rule was brought in dispensing with dead-end corridors. From each of these terrible accidents, we learn lessons and incorporate them into the rules.

James Brewer - Journalist

Would a more intense involvement of the insurance industry, with its risk assessment and risk management techniques, at an earlier stage of ship operation assist in curtailing some of these terrible incidents?

Rear Admiral John Lang

Instinctively, my reaction is yes. It must do. The more involved insurance people and risk assessors become, the more minds will concentrate on getting it right, particularly when a ship comes into service. From an investigation point of view, we do not normally home in on insurers. There is no doubt that ship owners, managers and operators do try and get it right---but will try to do so at minimum cost. Inevitably, that will reduce some standards in the long run.

Michael Kelleher – West of England P & I

He reflected on Admiral Lang's observation that public and criminal enquiries "take over" and hamper investigations into causation, delaying the latter and impeding getting to grips with what would be learned from such investigations. However, the experience of P & I Clubs points to a reality check.

When we get a major casualty, such as the Costa Concordia, we look at the types of claim that might emerge and the level and number of such enquiries. We then consider what we might and might not support financially for defence costs. However, in recent years, in all jurisdictions, civil and criminal enquiries will be set up straight away. We just have to recognise this is a fact of life with which we have to deal. As a result, civil (maritime investigation) enquiries are put back and their outcomes are delayed, sometimes by years while the criminal enquiry or investigation takes place first. Everything else is stayed pending the outcome of the criminal enquiry. I don't think that is going to change.

Lord Clarke

Can anything be done about it?

Michael Kelleher

Public expectations reflect a blameworthy culture out there and there is zero tolerance of an investigation without an outcome. It is an easy knee-jerk reaction for authorities to investigate or set up yet another enquiry or criminal investigation to alleviate the spotlight on the local authorities. I am not sure much can be done but we need to recognise that this culture obtains in jurisdictions worldwide, not just the UK.

Admiral Lang

I fully accept that this a reality but I am going to look at it from a completely different perspective.

As a Chief Inspector, I was probably one of the very few who used to talk to the families of victims. My customers were very largely from the fishing communities. I used to spend an unlimited amount of time going through what had happened. Inevitably, I found devastation, deep sadness and anger. Somebody must be responsible for what happened. Discussions would go on for several hours. What really mattered to them was that they did not wish me to have to speak to another widow or mother or sister in the same circumstances. They would really press me. Make sure that what happened to my husband is not going to happen again.

A lot of these people got the press to support their case initially. By doing so, the media provided impetus towards this blame culture. I agree that it would be terribly difficult to change this. However, I have this dream of people changing their views: not going for litigation; not going for compensation; not getting people put in jail for incidents; making sure there is not another widow I have to talk to afterwards. Ultimately, that is to me the most revealing aspect of the whole process of investigation. I hope my contribution this evening is just a tiny bit in that direction.

Lord Clarke

Perhaps Admiral Lang is being “a bit naïve. Maybe a distinction has to be drawn between the civil liability and the criminal liability. Recently perhaps, there has been an urge among the public for criminal responsibility in these cases. Would you agree that almost all casualties are caused by somebody’s fault, maybe more that one person’s?

Admiral Lang

Of course, a casualty occurs because somebody has made a mistake. When it comes to apportioning liability, particularly for the collision, one

ship is probably more at fault than the other. When somebody makes a mistake and, boy, they make mistakes, there will be a reason for it. With a criminal or civil claim, it stops at that stage. This man, this woman is at fault.

What I do is go underneath to find out the reasons for that mistake. Sometimes, it is very deep down. You may eventually find it is the whole selection process whereby that individual went to sea in the first place and how he had been trained. The biggest factor in casualties today is the culture from which individuals come. For some nations, there is a natural culture for safety in seamanship. For others, it is a completely alien feature. If we can identify these problems, particularly the human element, perhaps we would not have so many claims. But yes, you are quite right. There must be ultimately somebody who has made the mistake when it comes to apportioning liability.

Dan Tindall – Clyde & Co

Given what might have happened had the Costa Concordia not been blown onto shore, should there be any limitation on the size of passenger ships in the future?

Dr Payne

The size of passenger ships is dictated by market forces and the facilities passengers want. Some mass market lines, like Carnival and Royal Caribbean have been building bigger and bigger. People want to join ships like the Oasis of the Seas (220,000 tonnes)----with 6,000 other passengers----to enjoy a range of facilities which could not be provided on a smaller ship. The economies of scale and the economics of running the ship, including fares charged and profitability, dictate its size.

Regulation is a whole different ball park. Do we think that IMO with all the maritime nations contributing to the debate have got the rules and regulations correct? That is the real crux but I think they have. At the present time, passenger ships have never been safer.

In response to **Lord Clarke's** contention that being on a passenger ship with 5,999 other people would not be for everybody, **Dr Payne** pointed out that cruise lines have different

Brands. Carnival Group has several. The mass market Carnival ships cater for several thousand passengers in a party atmosphere. The Seabourn brand is at the complete opposite end of the market. You choose which you want to travel on.

In response to **Lord Clarke's** concern about the possibility of a ship carrying 6,000 passengers becoming a casualty, **Dr Payne** agreed this certainly needed to be considered. You have to think as IMO does and the regulators do on how we build ships. Cruise vessels are designed to sustain a certain amount of damage and still return safely to port and offload passengers. It is all about risk.

Risk assessments, in liaison with the insurance industry, are now very actively pursued by all the cruise companies, including Carnival. Royal Caribbean does very, very rigorous risk assessments in assessing how passengers are going to move about the ship, embark on lifeboats etc. That is very rigorously done.

Christopher South – West of England P & I

The Titanic, Sea Diamond and Costa Concordia all incurred running tears across their hulls which led to their inevitable sinking. The real concern is an accident, perhaps a fire, occurring well offshore, perhaps in the middle of the Pacific. How do you then get the passengers off the ship?

Let us turn to the aviation industry and aircraft certification. My understanding is that for the A380, the double decker Airbus, they put about 670 people on board with a full crew for about five hours. Then the alarm is rung. The cabin crew can use only 50 per cent of the doors but have to get everybody out of the aircraft within 90 seconds. If they can't do that, the aircraft does not get a ticket to fly. I am concerned that when people are designing these ships, they don't actually look at the practicalities of evacuation. The very limited number of lifeboats tend to be on one deck. I would like to raise this aspect with ship designers. Do they really look into getting the passengers off using a limited number of the facilities on board. When an accident happens, you will not necessarily have access to all the lifeboats. The ship may be listing, there may be a fire etc. Can you get the passengers and the crew out?

Dr Payne

Do you honestly think that we in the marine industry do not take that into consideration? We have very rigorous assessments on how people are going to evacuate ships. We make sure there is space, staircases and alternative routes should one be blocked. Even though all the lifeboats may become damaged, there are also life rafts. This is very carefully regulated. I can say categorically that we do look at this and take due care to follow the Regulations. The US Coastguard will not allow any

American on a passenger ship unless they are absolutely convinced that all aspects of the design and operations of that ship are being done correctly. We cannot do more than we are doing at present.

Michael Everard

I am not from an insurance company. I am a past **President of the Institute of Marine Engineers** and a sea-going engineer. My concern is that people seem to be too keen to lock up the sea going staff and do not give them support when they need it. People have to realise the cost of an incident is far greater than any cost you can put in there to prepare for an incident happening. I know we are talking about passenger ships but we have big container ships going around the world. Sooner or later, there may be a big container ship incident. The insurance companies have the opportunity to make preparations for incidents whether in passenger ships or other vessels.

I believe we really ought to be looking at training and at the corporate side of things. If people at the top are prepared to instil an ethos throughout the system, the people sailing the ships will have that ethos with them. Better training of staff, better processes and procedures, and better ship operation will all help to prevent an incident happening. God Forbid they will still happen but the cost of an incident is far, far greater than the cost of preparing to stop it. The salvage industry needs support from the insurance companies. The container and passenger sectors need to look on the peripheral side as to how to help prevent the accidents. Yes the design is one means of preventing accidents and reducing their scale. However, the processes and procedures and how you operate ships and support the crew when an incident happens seems at times to have been forgotten about.

Lord Clarke

Would anyone like to comment on the role of corporate manslaughter in this area?

Admiral Lang

This was an issue for the Herald of Free Enterprise. In my view, the spectre of corporate manslaughter is not going to help improve safety. Everyone will try to pass the buck to somebody else. All the effort will be into defending positions. Safety is about involving everybody and everybody will be looking for some excuse as to why they are not part of it. The best way to improve safety is to share a culture to achieve that safety. It involves everybody.

You look at some of the big tanker companies' vetting processes. Their safety record is incredibly good because they really work at it. They want to deliver cargoes without spilling oil, on time, in the right place and in good condition. That should be the aim of all shipowners. I am not convinced corporate manslaughter is going to help that process. The right culture will.

Efthimios Mitropoulos---Former Secretary-General, International Maritime Organization

I agree entirely with Dr Payne. I don't know how many times he used the word "categorically" in emphasising the message that he feels certain that passenger ships and, in particular large passenger ships, are as safe as could be.

Let me give you a piece of history. In 1999, the Commandant of the US Coastguard, Admiral Lloyd, came to the IMO for discussions with my predecessor Mr O'Neil and with me in my capacity as the Director of the Maritime Safety Division. His two main concerns were with IMO and what IMO was doing.

One was about aquatic invasive species which, through the medium of ballast water, might enter the very fragile ecosystem of the Great Lakes between the US and Canada. Accordingly, we developed the Water and Ballast Management Convention.

The second was the safety of large passenger ships. Although at the time and today, most of these large passenger ships did not fly the American flag, his concern was that most of the passengers were American citizens and would disembark from the Port of Miami. The first problem was one of definition. What constitutes a large passenger ship? Would a ship carrying 4,000 passengers and above be considered large and have to comply, therefore, with certain safety measures while one with only 3,999 passengers would not? We decided to start a very large comprehensive revision and review of passenger ships overall.

There were two themes which the Maritime Safety Committee and IMO decided to pursue. As mentioned twice by Dr Payne, this was "safe return to port." The second, which answers some questions raised tonight is avoiding abandoning a ship which has suffered a safety problem. The answer was "safe havens" on board. If something happens, such as an explosion in the engine room, a fire or a collision, all the passengers and the crew members not engaged in fighting the

problem would assemble in the safe haven and stay there. The ship would not sink while the crew were tackling the problem: extinguishing the fire, waiting for outside help, making her fast or taking her to a safe port.

The construction of the gigantic Oasis of the Seas and the Allure of the Seas was brought to the IMO's attention by the shipyard during building and by the owners, Royal Caribbean. There were discussions at IMO and in Southampton with the naval architects, marine engineers, Classification Society, port states and representatives of states at whose ports the ships would call. IMO wanted to make sure that these ships would be as safe as possible.

I agree with Dr Payne. I believe passenger ships, small and large, are as safe today as they can be. Safety is difficult to regulate and I thank Dr Payne for saying that IMO has done this well. The only thing you cannot regulate is getting people, especially people entrusted with thousands of people on expensive ships, to display common sense.