JUDGMENT : THE HONOURABLE MR. JUSTICE CRESSWELL. Commercial Court. 7th February 2002.

INTRODUCTION

1. On 23 July 1998, a fire started on Deck 4 of the pure car carrier 'Eurasian Dream' whilst in port at Sharjah. The fire, which was not contained or extinguished by the Master and crew, eventually destroyed or damaged the vessel's cargo of new and second-hand vehicles and rendered the vessel itself a constructive total loss. In this action, the claimants, who are the relevant cargo interests, claim against the carriers in respect of destruction or damage to the vehicles.

2. The claimants' case is that the Eurasian Dream was unseaworthy in many respects and that there was a wholesale failure by the vessel's technical managers, Univan Ship Management of Hong Kong ("Univan") to exercise due diligence. Unseaworthiness and lack of due diligence are, say the claimants, inextricably intertwined in the present case. The serious failings of Univan led to a ship and a crew unfitted for the foreseeable eventualities of the voyage. The negligence and incompetence of Univan's Management resulted in an incompetent crew and an unseaworthy ship. The claimants say that the first defendants (bill of lading carriers) were in breach of their obligations under Art. III.1 of the Hague/Hague-Visby Rules. As to the alternative case under Art. III.2, the claimants say that the evidence shows the fault or privity of Univan for the purposes of the fire exception. The claimants point to the fact that a single fire was allowed to result in the total loss of the vessel and her cargo. They say that this fact has been thrown into even greater relief by the evidence of Captain Haakansson (an expert called by the claimants) that car fires on pure car carriers are far from uncommon yet such fires, in Captain Haakansson's considerable experience, have never led to the loss of a vessel (in all but two cases fires were immediately controlled with hand extinguishers). Thus say the claimants it is clear that the crew of the Eurasian Dream must have got things seriously wrong.

The Chain of Charters

3. The chain of charters in the present case was as follows:
   (1) Bareboat charter (Barecon 89) between Dream International Navigation SA of Panama and Crescent Shipping & Chartering Corporation of Manila ("Crescent") dated 6 May 1994.
   (2) Time charter (NYPE 46) between Crescent and Maritime Cargo Express SA of Panama ("Maritime Cargo") dated 6 May 1994.
   (3) Time charter (NYPE 46) between Maritime Cargo and Hyundai Merchant Marine Co Limited, the first defendants dated 25 March 1994.

4. By agreement between the parties Hyundai Merchant Marine Co. Ltd ("Hyundai" or "the defendants") are to be treated as the bill of lading carriers. By letter dated 20 December 2001, Hill Taylor Dickinson (solicitors for the defendants) confirmed that title to sue issues are not pursued in these proceedings. Hyundai dispute the claimants' case set out in paragraph 2 above.

5. In a letter dated 19 December 2001, Hill Taylor Dickinson and Richards Butler (solicitors for the claimants) helpfully set out the agreement reached as to quantum issues. They enclosed:-
   (1) Revised Quantum Schedule 1 listing each of the claims; and
   (2) Quantum Schedule 2 indicating the agreement reached on the value of the claimants' cars on each deck of the vessel and each fire zone.

6. The solicitors have agreed package limitation for both the new and secondhand cars. This is reflected in the agreed values per deck and zone. No point is taken on the sum of US$500,000 agreed by W. K. Webster with Williamson and Horrocks for salvage of the Hyundai cars and this has been agreed with owners' solicitors. The only item in the claimants' claim which remains in dispute is the fee of W. K. Webster.

7. Claims between Maritime Cargo and Hyundai are being arbitrated. Hyundai has pleaded a case of unseaworthiness in the arbitration. It is of course unsatisfactory that similar issues are being considered by two separate tribunals.

The Characteristics and Layout of the Vessel

8. Beneath its boat deck, the vessel had 12 car decks, numbered in descending order.

9. External access to these car decks was provided by means of 3 ramps, one located at the stern and one on either side of the vessel. Internal access between car decks was provided by internal ramps.

10. The decks were internally segregated into five Fire Zones lettered A to E, separated by the solid decks or horizontally by the transverse bulkheads. The Zones were as follows: A (the Boat Deck, Car Decks 1 & 2); B (Car Decks 3 & 4); C (Car Decks 5, 6 & 7), D (Car Decks 8 to 12, hold 2), E (Car Decks 8 to 12, hold 3). Further, the internal ramps leading from one Zone to another were fitted with gas-tight doors, manually operated by a wire-pull mechanism and air cylinders. Thus, Zone B had 4 gas-tight fire doors: 2 on the fore and aft ramps up to Deck 2 (Zone A) and 2 on the fore and aft ramps down to Decks 5/6 (Zone C).

The Timetable Prepared by the Master

11. A timetable prepared by the Master after the casualty is set out below.

"1530	Disch started 3 p.m. 313 units [?] used cars
1610	Bunkering started
1845	C/o informed by 3/o about fire
1845/50	Fire alarm sounded
1845	Fire pump started by 2/E
1850	Muster the crew
1855	Master went to car deck
1900	Master went back to bridge
1905	Master instructed to shut blowers
1910	Bunker barge full away
1915	2 tugs came started spraying water
1920	Master informed port control
1925	Master informed Univan
1930	Master called Univan again
1945	Evacuated first group (19 crew)
1950	Master informed C/E to release CO^2
2000	Evacuated 2nd group (3 crew Master C/E E/O)"

This timetable should be read subject to my findings set out below.

The Evidence Generally

12. The account of the Master, crew and managers cannot in my judgment be relied upon for, among others, the reasons set out below.

13. Further, in my view the "briefings" of the crew by Univan and others after the incident went beyond what was proper in the circumstances. Indications of this are found in the contemporary documents:-

"I interviewed crew asap. Simon Scott put on job... Police have requested all 22 crew to visit police station tonight for inquiry... Khan was trying to avoid same by telling them that some crew have gone out etc... Please check if P & I lawyer can brief crew before they are sent to police station today. (Mr. Pereira) said he will assemble them and brief them... Police want full crew to be interviewed and their statements taken tonight... Tell everyone [? regarding] stevedores... [Vroon] called [Mr. Pereira] and informed that they are sending lawyers to interview... CID now on scene. Minimum information given to them...

Khan... what statements already made Naseeb.

RS Anand Crew stories... What statements already made...

Khan told that if anyone asked he should tell about stevedores being the cause for fire... CID is now on scene. Minimum required information given to them... Captain was informed about Pereira's and RS Anand's arrival Dubai and not to give statements to third parties prior to their arrival."

14. There are further matters that have caused me concern.

15. First, the Chief Engineer said in cross-examination that he spoke to Mr Pereira (a Univan representative) four days after the fire and was told to go back on board to open the CO^2 pneumatic valve (which Mr. Pereira had found shut). The Chief Engineer accepted that Mr. Pereira had told him that a fire investigator was going to inspect the ship. I find that the most likely explanation is that Mr. Pereira recognised that the Chief Engineer had not

operated the valves properly, and wanted the investigator to find them fully opened. In trying to force the pneumatic valve into the open position, the Chief Engineer and the Electrical Officer broke the spindle. The Chief Engineer conceded in cross-examination that Univan realised he had not shut off the air to the pneumatic valve. This episode is an example of an attempt to interfere with evidence before the vessel was inspected.

16. Second, Dr. Alan Craggs (on behalf of the claimants) conducted an inspection of the vessel between 31 July and 2 August. Access was granted to the vessel on the condition that no evidence was disturbed. Owners' representatives provided the minimum information necessary for a safe tour of the vessel and a request for plans of the vessel was refused. Guidance was however provided to certain areas in which the fire experts expressed an interest.

17. Third, none of the personnel who were sent out to Dubai/Sharjah following the casualty were called to give evidence, namely Mr. David Pereira, Mr. R. S. Anand, Mr. Khan and Mr. Simon Scott. Further, Dr. Goudsmit (the fire expert who inspected the vessel for the vessel's owners and P & I Club with Dr. Craggs) was not called by the defendants as an expert witness.

18. Fourth, the managers and owners did not provide timely disclosure. The transcript of the trial evidences the various times at which (throughout the trial) highly relevant documents were disclosed piecemeal. A considerable number of documents were disclosed as final speeches were due to start. The parties asked the Court to press on with the trial despite deficiencies in disclosure. So far as I could tell the solicitors acting for the owners/managers made considerable efforts to ensure that full disclosure was provided. These included a visit to Hong Kong during the course of the trial by a partner (who was most regrettably taken ill in Hong Kong). Despite these efforts I am left in doubt as to whether the owners/managers had, by the conclusion of the trial, provided full disclosure.

19. Further to the above, certain particular features of the case call for comment.

20. First, although it is necessary to make appropriate allowance for mistakes that can easily be made in times of emergency/panic, it is noteworthy that the following references were made to Deck 5 (as opposed to Deck 4 where the fire in fact started):-
    (i) At 19.25 hours on 23 July a contemporary note of a telephone call from the Master to Hong Kong records the master as saying "...there is a fire on vessel in No. 5 Deck and it is spreading to No. 6 Deck."
    (ii) The Chief Engineer is recorded as telling the Police "I saw on the board/screen that a fire had broken out on the fifth deck..."
    (iii) Able Seaman Palconit is recorded as telling the Police "...I brought the fire extinguisher to the fifth deck and I and my friend tried to extinguish the fire, but without success."

21. Second, it was common ground at trial that no witness spoke of hearing the CO^2 alarm on the car decks.

22. Third, there is no evidence that any member of the crew discharged a fire extinguisher, although five were found lying on Deck 4.

23. The manuscript timetable of events prepared by the Master and set out above must be viewed with considerable caution for the reasons set out below. Further contemporary manuscript documents contradict certain entries in the timetable. For example, "24.30 p.m. released CO^2" and "19.40: Muster".

WITNESSES CALLED BY THE DEFENDANTS

Captain Alwyn Villondo - the Master

24. Captain Villondo ("the Master") joined the Eurasian Dream on 21 April 1998 at the port of Jeddah as Master. The Master had previously served as a Master mainly on bulk carriers. He had no previous experience of car carrying vessels. In 1989 the Master had been on a fire fighting course. He had no on-board training in relation to fire fighting or anything else after joining the vessel in April 1998.

25. In his statement to Police the Master said:-

    "At exactly 6.50 p.m. on Thursday 23 July 1998 I was in my cabin on the said vessel when I heard the fire alarm. I proceeded to the control cabin on the top level aft. On checking the control screen which displays a plan of all parts of the ship, I saw the fire light on in the fourth level. The light was exactly in the fourth level and in the hall No. 2. Since the fourth floor was fully loaded with cars, I immediately notified the officer in charge of the fire location and he in turn called the crew and they all went to the fourth level where they found the fire erupting in several cars. They tried to control the fire but failed and the fire started to spread. We all left the ship without taking anything with us. The port officers contacted the civil defence who rushed quickly to the fire location. ...I can't determine the [cause of the fire], but it is likely to be a cigarette thrown by one of the workers or it could be one of the used cars."

26. When asked whether he received training in the use of the vessel's fire fighting appliances after joining the vessel in April 1998, the Master said that any training was restricted to the Chief Engineer taking him round the CO^2 room and showing him where everything was. The Master agreed that none of the manuals on board the ship dealt with how to fight a fire on a car deck and that there should have been a more specific manual. The Master said that he was not given any manual or instructions about how to prepare the ship to deploy CO^2. The Master agreed that there were no standard procedures for evacuating fire zones. The Master said that he had not had proper instructions from the owners in relation to fires on car carriers. He added that he had not been properly instructed or trained as to dealing with the fire that broke out on the Eurasian Dream.

27. Although he made reference to a Mitsubishi manual, the Master said that none of the Univan manuals or instructions informed him that gas tight doors had to be shut before CO^2 was used. The Master added that he had not thought about gas tight doors as an important means of controlling fire, before the fire occurred. The Master accepted that the crew had not been trained or drilled in shutting gas tight doors and deploying CO^2 in the car decks.

28. The Master said that the reason why he disobeyed the order to carry out weekly fire drills was because other drills needed to be carried out. There was no drill which required the crew to shut the gas tight doors or which simulated the deployment of CO^2 on the car decks.

29. When referred to a document dated 1 June 1998 which recorded that only two of the four walkie-talkies were working properly, the Master maintained that at the time of the fire all four were working properly. He could not say however when they were repaired/replaced.

30. The Master said that he now realised that there are special risks when a car carrier is in port, but he had not appreciated this at the time and no one had warned him.

31. The Master said he did not know the cause of the fire while he was still on the ship. He added that the Third Officer first told him that he was there when the fire started, when they were both off the ship. The Master agreed that he gave orders for hoses to be used without knowing the circumstances of the fire.

32. The Master said that he knew there was only enough CO^2 for the largest fire zone. When asked why he released CO^2 into all the decks of the vessel at the same time he replied "*...I...released...the* CO^2 *into zone B...since we (were) abandoning the vessel...I...opened all the bars leading to other fire zones for whatever it (was) worth, since I (was) ...aware that the* CO^2 *is not effective any more because the ramps and the gas tight doors (were) still open. We were not able to close those... doors and the ramps on the vessel*". The Master said that he did not think of the CO^2 system as the first line of defence, because he had not been told that. He added that he did not use the CO^2 first because there were still persons unaccounted for. The Master said that after hand held fire extinguishers, he thought the fire should be fought with hoses and water before CO^2 was used.

33. The Master's account of his telephone calls to Univan's (Hong Kong) office differed from the contemporary notes made at the time in Hong Kong. The first note recorded the Master as saying "*there is fire ...on No. 5 Deck*" (emphasis added).

34. The Master accepted that no gas tight doors were shut after the fire broke out.

35. The Master was in my view an unsatisfactory witness. His accounts were inconsistent and inaccurate in material respects. I refer to my general comments on the evidence.

Rosalino H De Guzman - the Third Officer

36. Mr. Guzman ("the Third Officer") joined the Eurasian Dream on 17 June 1998 at the port of Ulsan as Third Officer. He had sailed on the vessel previously in 1996 for six months.

37. In his account to the Police on 24 July, the Third Officer said "*...a fire erupted at level 4 while I was having lunch at the first level... I could not (proceed to level 4) because of the intensity of the smoke rising as I was on the first level...*". He said that he gave this account because he was scared and tired. He gave an entirely different account at trial.

38. In his witness statement dated August 1998 the Third Officer said that at about 18.10 hours he proceeded to car Deck 4 where the discharge of vehicles was continuing. A service truck on car Deck 4 was manned by a driver and an assistant stevedore. He estimated that the service truck was used several times to jump-start vehicles from the time he arrived on car Deck 4 between 18.10 - 18.15 hours and the time of the incident 18.50 hours. He did not recall any fuel being put into any vehicle at this time. His account continued "*At about 18.50 hours I was about four - five metres aft of the ramp on Deck 4 which leads up to Deck 3... I saw a stevedore trying to start a Hiace Toyota van on the starboard side of the ramp...the service truck was called over...to assist starting the van. ...I next saw the stevedore at the side of the Hiace bending into the van... apparently feeding some part of the leads into the back of the pick-up and then lean into the van. This was followed by a spark or flash in the back of the service truck, then followed by an explosion and a fireball coming towards me at about waist height. The fireball did not reach me and fell to the ground where the fire continued to burn. ...immediately I called on the radio that there was a fire on Deck 4, Hold 2... I then turned to run to the portside stairwell where there is a fire extinguisher. I grabbed the fire extinguisher and started to turn back towards the service truck, when one of the stevedores grabbed the fire extinguisher from me. He ran back towards the fire... The stevedore was having difficulty discharging the fire extinguisher and I ran towards him and pulled the pin out and showed him how to operate it by operating the handle. ...Deck 4 was very rapidly filling with thick black smoke... I ran to the starboard stairwell to grab another fire extinguisher... As I returned to the ramp I could see that the fire on the service truck was still burning fiercely and the vehicles on the starboard side including the Hiace... were also now all well alight. The fire was producing thick black smoke. It was clear that the fire was beyond fire extinguishers... I was coughing badly because of the effects of the smoke. Almost immediately, I met the Master in the stairwell by car Deck 4... He took my radio and instructed me to make my way to the boat deck to put on a breathing apparatus set and to continue fighting the fire using hoses. Before leaving car Deck 4, as I was making my way to the starboard stairway I saw the Third Engineer, Fourth Engineer and Deck Cadet coming into the car deck by the port stairway. They were carrying at least one fire extinguisher between them. ...*"

39. The Third Officer produced a copy of an entry made by him in a notebook (allegedly shortly after the fire) which read "*Start fire 1850 location - 4D 2H cause of fire when stevedores finish a series of connection...vehicle starboard...battery...to the pick-up which cause a spark and hit gasoline which is also inside the pick-up causing a fire. We tried to stop the fire by fire extinguisher but with too much smoke suddenly the surrounding became too dark*".

40. The Third Officer said that there was no fire alarm on the fourth deck and that he did not hear any fire alarm. When asked about Able Seaman Palconit's first statement to the Police ("*...when the fire broke out I was about 14 metres from its centre and the Third Officer was standing close to the site where the fire began...*") the Third Officer said that Mr. Palconit was lying "*I was...alone at the time when it happened*". According to the Third Officer, Mr. Palconit was on the stern ramp when the fire started. The Third Officer said that at 18.00 hours no one was supervising the gang working on Deck 4, the gangs on Decks 6 and 7 and the unlashing gang on Deck 3. The Third Officer added that at the time the fire started he was watching the gang that was working on Deck 4, but nobody was watching the gangs on Decks 6 and 7 and the unlashing gang on Decks 2 and 3. The Third Officer agreed that it was a serious breach of his instructions to allow gangs to work on the ship without any crew supervision. The Third Officer said that during the discharging operation he did have a walkie-talkie, but he could not communicate with the Master, the Chief Officer or the Duty Able Seaman. This represented "a very serious lack of communication". According to the Third Officer he had never been given orders to ensure that fuelling operations and jump-starting operations never took place on the same car and in the same area of the ship. He agreed that it would be very dangerous to refuel a car and to try and jump-start it at the same time. The Third Officer said he did not see fuel being poured into the van that caught fire. Asked "*Did you see a jerry can that the stevedores were using to carry fuel?"* He said "*I don't remember that*". The Third Officer was referred to a document from Univan's office in Hong Kong (which recorded a telephone call from Mr. R. S. Anand) which referred to someone pouring fuel into a carburettor. The Third Officer said that he had seen stevedores pouring fuel into a carburettor at other ports. When asked "It appears that fuel was poured into the carburettor and the jump leads ignited the gasoline that was there?", the Third Officer said he did not know about that. He had not seen a stevedore pouring gasoline into the carburettor. He added that he would have stopped it if he had seen this happening. The Third Officer said he didn't use a fire extinguisher himself because a stevedore took one from him. He did not use a second fire extinguisher because of the thick black smoke coming from the deck. He did not shut the ventilators or tell anyone else to shut them. The Third Officer could not remember whether the lights went off.

41. The Third Officer gave evidence of the checks he allegedly conducted in respect of the fire extinguishers. In this connection it should be remembered that he rejoined the Eurasian Dream on 17 June 1998. He agreed that from his checks he had no idea whether there was CO^2 in any of the extinguishers. He added that the Master's evidence as to the monthly checks in relation to the CO^2 capsule was wrong.

42. The Third Officer was in my view a profoundly unsatisfactory witness. His accounts were inconsistent and inaccurate in material respects. I refer to my general comments on the evidence.

Roseller P. Quimat - Chief Engineer

43. Mr. Quimat ("the Chief Engineer") joined the Eurasian Dream on 9 February 1998 as Chief Engineer.

44. In his statement to Police the Chief Engineer said "*On 23 July 1998 at about 6.45 in the evening...while I was in the engine room I saw on the board/screen that a fire had broken out on the fifth deck, whereupon I turned off all the engines and went up to the upper deck. The crew was called and they sprinkled coolant on board the ship and I turned on the hydrants to all decks to extinguish the fire, but on account of the intense smoke we evacuated the vessel and got out all of us. ...the fire started in the middle, on the fifth deck*" (emphasis added). The Chief Engineer denied telling the Police that he saw on the board/screen that a fire had broken out on the fifth deck whereupon he turned off all the engines and went to the upper deck.

45. In his witness statement the Chief Engineer said that at about 18.40/18.50 hours he was in the engine room control room when he first heard of the fire. He was one of the first to arrive at the boat deck. His emergency station was in the CO^2 room. He saw the Master and said that he would make the CO^2 systems ready for discharge. The electrician arrived. At this time he heard the ventilation fans being switched off. He checked the CO^2 system together with the electrician. Both the pneumatic valve and manual valve were stiff, but were opened and shut one by one. He opened the valve for zone B. He was satisfied that the CO^2 system could be released and he reported this to the Master. At about 19.50 hours he was in the CO^2 room. The first valve he opened was the pneumatic valve which was stiff and had not opened fully. He then opened the manual valve fully. It took both the electrician and the Chief Engineer to open both these valves. As soon as this valve was opened he could hear the hissing of gas and the line beginning to frost up to zone B. After a few moments the Master came into the CO^2 room and the Chief Engineer confirmed that CO^2 had been released into zone B. Shortly afterwards the Master instructed him to release CO^2 into all other car decks. The Chief Engineer did this by opening the other manual valves.

46. The Chief Engineer said that when he was in the engine room he heard from the Third Officer by walkie-talkie there was a fire on the car decks. The Third Officer did not say which car deck. The Chief Engineer agreed that he did not obey the instruction to supervise bunkering personally. The Chief Engineer agreed that he had left his station (the CO^2 room) when he was supposed to remain at it. He agreed that he gave no orders to close ventilators or dampers. The Chief Engineer said that on his first visit to the CO^2 room after trying out hand valve one, he closed it. Thus he forgot to put the manual valve in the open position. He made a mistake and shut it. He

agreed that it was an extremely dangerous thing to leave the CO^2 room having shut manual valve number one, when there was a fire on board the ship. This was an incompetent and crazy thing to do. The Chief Engineer agreed that something was obviously wrong with the system if it took two men to open the valves. The Chief Engineer said that the manual valve may have been subject to corrosion. He agreed that the difficulty he had in opening the pneumatic valve was to do with the air. He also agreed that he had not checked the manual valve before 23 July to see whether it could be turned easily. The Chief Engineer agreed that he had to ask the electrician which fire zone car deck 4 was in.

47. The Chief Engineer said that he returned to the vessel several days after the fire because Mr. Pereira (a Univan representative) told him to make sure both valves were in the open position. He returned to the vessel on 28 July 1998. He was asked by Mr. Pereira to examine the pneumatic valve in the CO^2 room. When he saw the valve, it was not in the position it had been left in before the vessel was evacuated. They tried to move the valve but the spindle broke. Mr. Pereira had said that he had found the pneumatic valve shut. He wanted the Chief Engineer to open the top cover and move the spindle to see if it was a spring loaded valve. Mr. Pereira told him to go back on board and put the pneumatic valve into the open position. Mr. Pereira said that there would be investigators going to look at the ship and the valves.

48. When referred to the manual issued following the fire ("Before any manual operation to the pneumatic valves can be undertaken it is important that the air to these pneumatic valves is turned off"), the Chief Engineer agreed that Univan had realised after speaking to him that he had not shut off the air. The Chief Engineer was referred to the fact that following evacuation of the vessel, the Electrical Officer went back on board ship. When asked whether this was to do something to the CO^2 system, the Chief Engineer said he could not recall that. When asked about a Univan note which appeared to read "24.30 released CO^2" ("We wonder if that is a reference to the Electrical Officer's return to the vessel around midnight and whether it is telling us that he released CO^2 on that occasion. Is that possible?), the Chief Engineer replied "I do not have knowledge about this". When it was pointed out to the Chief Engineer that he did not tell the Police that he had used CO^2, he replied "I could not remember that".

49. The Chief Engineer was in my view a profoundly unsatisfactory witness. His accounts were inconsistent and inaccurate in material respects. I refer to my general comments on the evidence.

Mark Palconit - Able Seaman

50. Mr. Palconit joined the Eurasian Dream on 28 March 1998 as an able seaman. According to his first statement to the Police Mr. Palconit said "*When the fire broke out I was about 14 metres from its centre and the Third Officer was standing close to the site where the fire began. I also saw a quantity of diesel fuel on the floor and spilled or pouring between the vehicles loaded on the ship, and I saw the fire burning at the same place, where the diesel fuel was. When the smoke intensified I saw the Third Officer plus five persons escaping from the deck doorway onto the port quay. The five of them were from the group which starts and off-loads the vehicles to the port yard*". Mr. Palconit disputed making this statement to the Police.

51. In his second statement to the Police Mr. Palconit said that he was in hold number 6 when the fire broke out. When asked who was present at the place where the fire flared up Mr. Palconit is recorded as saying "Sayed Nazar Ahmad, an Indian national. He works as a mechanic in Port Khalid with Raja Muni Gia, an Indian national who is a worker in the port... they were there to charge the batteries of the vehicles". Mr. Palconit's second statement to the Police continued "*On 23 July at about 6.30 in the evening while I was in the lower part of the ship I saw an intense fire on the ship... at that time I had a radio with me. I called to the workers that there was a fire on the ship but no one heard me. So I went down to the lower part of the ship and contacted them through the alarm system and I took the fire extinguisher in the lower part of the ship and... brought the fire extinguisher to the fifth deck and I and my friend tried to extinguish the fire but without success...*" (emphasis added) . Mr. Palconit disputed most but not all of his second statement to the Police. He said that the Police had, however, accurately recorded that he was not present when the fire broke out.

52. In his witness statement Mr. Palconit said that he first knew of the fire at about 18.50 hours. He was standing on the stern ramp. He saw smoke coming from the ramp on car Deck 6, which was connected to car Deck 4. He made an announcement that there was a fire on the car decks from a telephone (connected to the public address system) at car Deck 6. He then proceeded up through the starboard stairwell to Deck 5, where he picked up a fire extinguisher and proceeded looking for the fire. He opened the door from the stairwell into car Deck 4 and could see a fire. He saw one stevedore and gave him the fire extinguisher. He did not see the stevedore use the extinguisher. He then proceeded to the boat deck to his fire station. Under the instruction of the Chief Officer he put on breathing apparatus. He started to proceed down the stairwell with a fire hose. He managed to proceed down about one deck but the smoke was very thick, it was dark and he could not see. Subsequently he abandoned the vessel by way of the outside ladder over the poop onto the stern ramp.

53. When giving evidence Mr. Palconit said that he did not have a radio at the time. His job was to keep watch on the moorings and the ramps and the vehicles being discharged. He agreed that it would be very important for a person doing that job to have a radio.

54. Mr. Palconit was in my view a profoundly unsatisfactory witness. His accounts were inconsistent and inaccurate in material respects. I refer to my general comments on the evidence.

Palecanda Bopanna Subbiah

55. Mr. Subbiah's role within Univan Ship Management is to monitor the ISM compliance of the fleet. He is in essence a compliance officer. Mr. Subbiah said that the Univan employee who had chief responsibility for the safety of the Univan fleet was the manager of the safety and audit division, Captain Luthra. (Captain Luthra was not called to give evidence). Mr. Subbiah said that he tried to ensure that the people within the office were performing their duties in accordance with the procedures laid down in the office manuals. Mr. Subbiah was concerned to consider the fleet's system and manuals and instructions and check that they were ISM compliant. As designated person Mr. Subbiah was responsible for documenting the actions of the emergency response team. I do not consider that Mr. Subbiah fulfilled this duty properly. Further, as stated above, the disclosure of relevant documents by Univan to the claimants and defendants was most unsatisfactory. As a result time was taken up at trial, while the claimants (perfectly properly) sought to identify and obtain missing documents. Material documents were disclosed piecemeal throughout the trial.

56. Mr. Subbiah did not accept that the Master should have been provided with a manual which addressed fire fighting procedures for car carriers, because Univan had not foreseen that a fire such as occurred on the Eurasian Dream could happen. He said that Univan had not envisaged the difficulties associated with fighting a fire on a car carrier. Mr. Subbiah was now prepared to agree (after the experience of the Eurasian Dream) that a Master of a car carrier ought to be provided with comprehensive guidance as to how to respond to an emergency such as a fire. When questions were put to Mr. Subbiah as to obvious deficiencies in the manuals provided to the Master, he answered that he was not a technical person. Mr. Subbiah accepted that Univan did not give the Master any information about shutting gas tight doors or any specific advice as to when and how quickly to deploy CO^2. Mr. Subbiah accepted that the Safe Sailing notice prepared after the fire contained a lot of information that a responsible manager should draw to the attention of Masters of car carriers. In addition reference was made to the Eurasian Alliance manual, again prepared after the fire. Mr. Subbiah accepted that it was the duty of a manager to give specific instructions and advice to his crews as to the special risks inherent in the cargoes they are carrying. He was asked a number of questions about the instructions contained in the Eurasian Alliance manual. Mr. Subbiah accepted that hindsight was not necessary to appreciate the need to give certain instructions (for example "Decision to release CO^2 must not be delayed"). He also accepted that the Master of the Eurasian Dream was submerged in paper, some of which was relevant, some of which was irrelevant. Mr. Subbiah agreed that it was a feature of the Univan management style to delegate matters relating to safety to the Master. He said his colleagues should perhaps have appreciated that fire drills were only being carried out once a month on the Eurasian Dream. Mr. Subbiah said he did not know whether the Master was put on the Eurasian Dream without any training as to how to prevent or control fires on a car carrier. So far as possible Univan bring officers to Hong Kong for briefing, but the Master of the Eurasian Dream did not receive the benefit of such a briefing. Mr. Subbiah said there was no overlap between the previous Master and Captain Villondo. He could not remember whether a superintendent was sent out to assist Captain Villondo in taking up his position as Master.

57. Mr. Subbiah said that at the time of the fire the Eurasian Dream was not ISM certificated and was not obliged to be so. Nevertheless the ship was provided with copies of the fleet ISM procedural documentation and was subject to the same company procedures as all other vessels in the fleet.

58. Mr. Subbiah was in my view a most unsatisfactory witness.

Jessie Rex Pilapil Martin

59. Mr. Martin was the superintendent responsible for the day to day operation of the Eurasian Dream at the time of the fire in July 1998.

60. Mr. Martin referred to the various inspections he had conducted of the Eurasian Dream. The fire extinguishers had not been changed or renewed since the vessel was built in 1984. The last occasion on which he visited the vessel prior to the fire was when the vessel dry docked at Ulsan in Korea in June 1998.

61. Mr. Martin referred to a superintendent inspection checklist which he completed between 13 and 17 October 1997. When he inspected the fire extinguishers there was no indication that the fire extinguishers, or parts of them, had been weighed. They were supposed to be weighed once a year. Records in the safety equipment register did not reflect this. As to October 1997 Mr. Martin said:- "*I invariably pick the labels of say in one car deck sometimes they would consist of say 18 or maybe 20. I would say that if I had seen something like 7 or 10 of them on the labels that it was not weighed, then I consider that it is due to be weighed. And it was confirmed by me in the safety equipment register that it has not been done.*" In October 1997 he had said that all portable fire extinguishers were to be inspected and weighed by 27 November 1997. He said he was on the ship from 13 to 17 October. He left on the morning of the 18th. Although he said by the time he left "We were through with more than half of them...the records of the vessel reflected that the weighment was completed on 18 October", I am not inclined to accept this evidence.

62. Mr. Martin referred to an inspection he carried out on 27 March 1998.

63. Mr. Martin also referred to an inspection report relating to the Eurasian Dream dated 1 June 1998. This inspection report was prepared by a Fourth Engineer from the Manila office (Mr. Excel C. Apura). Mr. Martin said that in June 1998 the fire extinguishers were not dismantled and there was no examination of the CO^2 cartridges. Mr. Martin referred to the cargo ship safety equipment certificate issued in June 1998.

64. Mr. Martin agreed that the Master was a novice in three senses, he was new to the ship, new to this type of ship a pure car carrier and new to Univan. Although the briefing letter to Captain Villondo was in substantially the same terms as the briefing letter to the previous Master (who had considerable experience of car carriers) there was a material change to paragraph 17. Mr. Martin said it could take the Master weeks to read the manuals. He agreed that the Master should have been given specific training with regard to car carriers. Mr. Martin said that in October 1997 the CO^2 manual was in the Chief Engineer's cabin. Mr. Martin accepted that the handing over form to the Master did not include any reference to the CO^2 manual. Mr. Martin agreed that as a matter of priority the Master should read a manual dealing with emergency procedures. The CO^2 manual would be about one of 150 equipment manuals, each of which would run to about 75-100 pages or more. The letter to the Master did not tell him which of the manuals were relevant to him as Master.

65. Mr. Martin said that while he was on board the Eurasian Dream attending the dry docking he had a conversation with the Master which convinced him that the Master had the clear understanding of the operation of the CO^2 system on board the ship. There was no reference to this conversation in Mr. Martin's witness statement and I find that it did not take place. In my view Mr. Martin on several occasions adjusted his evidence to try and meet obvious deficiencies.

66. Mr. Martin did accept that his failure to notice that the vessel was only carrying out fire drills once a month was an omission. He agreed that it was obvious that the vessel was not complying with orders to carry out weekly drills. A simple inspection of the log abstracts would have shown that the ship was not complying with his letter of instruction. Mr. Martin accepted that a ship should carry out fire drills to deal with fires in port, although he said there were practical limitations on doing this.

67. Mr. Martin said that he purchased four walkie-talkies in June 1998 at dry dock. He agreed that with hindsight it was unacceptable that there was only one walkie-talkie for the deck officers and crew on duty. Mr. Martin would now say that a vessel like the Eurasian Dream should have a least nine walkie-talkies. As to BA sets it was pointed out to Mr. Martin that the Eurasian Alliance manual refers to seven sets. He said that this was a matter for the safety department.

68. Mr. Martin was in my view a most unsatisfactory witness. I refer to my general comments on the evidence.

Gigimon Kalambattu John

69. Mr. John is employed by Univan as Deputy Head of Fleet Personnel.

70. Mr. John said that Captain Villondo was selected by Captain De Mello, although he was interviewed by Captain Thakur in the Manila office. In a number of respects the appointment of Captain Villondo differed from the usual appointment. Within a week "he had gone from nowhere to the man in charge of" the Eurasian Dream. It was normal for a Master or Chief Engineer joining the fleet to have a detailed briefing in the Hong Kong office, but there was not time for this in the case of Captain Villondo. Such a briefing in Hong Kong would involve a briefing by seven different persons. The briefing in Manila was not a proper instructional briefing process, but the best that Univan could do in the time available. Mr. John could not be sure of the content of any briefing by Captain Thakur. The Master had no briefing from the head of the safety and audit department.

71. Mr. John's evidence was of limited relevance.

Statements and other materials admitted under the Civil Evidence Act 1995

72. A considerable number of further statements/statements given to Sharjah/Dubai Police were admitted by agreement under the Civil Evidence Act 1995. These are contained in bundle B1. I record that I have carefully considered all these statements and given them such weight as I consider appropriate.

EXPERT EVIDENCE

Common ground between the expert witnesses

73. The following was common ground between the expert witnesses.

1. The gas tight doors between zones B and C could physically have been closed very soon after the fire alarm sounded.
2. No one gave any thought to closing the gas tight doors and this suggests that the crew had not been adequately trained.
3. The Emergency Procedures Manual was not as clear as it should have been, because it required the Master to select parts which applied to his ship and to ignore parts which did not apply to his ship.
4. The experts could not explain the Chief Engineer's actions in repeatedly closing and opening the manual CO^2 valve.
5. Two sets of breathing apparatus were not sufficient for this particular vessel (although two represented the minimum number required by SOLAS).
6. Four walkie-talkies were insufficient.

Expert Witnesses called by the claimants

Captain Haakansson

74. Between 1966 and 1999 Captain Haakansson worked for a major Swedish shipping company (Wallenius Lines "Wallenius") which first put the RORO (Roll On, Roll Off carriage of vehicles and other self-powered cargo) concept to use in the civilian context. Wallenius has commissioned a number of specialist car-carrying vessels.

Captain Haakansson was Master of the first in 1975. He was later responsible for implementing ISM and ISO 9002 safety, pollution prevention as well as cargo handling standards.

75. His first report concluded as follows:-

"The simple and revealing facts are that fighting of the fire was unsuccessful still after a full hour. The fire in one vehicle led to the total loss of the vessel. I am of the opinion that the procedures, the implementation of these procedures, the maintenance of equipment or the experience/training/motivation of crew, or - most likely - a combination of all of these are to be blamed for this unhappy event. In short and as said above in my report I conclude that:

- There was no proper fire manual with specific instructions for dealing with fire in a cargo of vehicles.

- Crew response was disorganised.

- There was a lack of proper communication means.

- The major failure was not to use CO^2 properly and very quickly.

- The crew had a basic misunderstanding of use of CO^2 as a front-line fire control system.

As a consequence of these failures, a fire that should have been able to have been controlled early on was able to destroy the cargo and the vessel."

76. Captain Haakansson explained the differences between CO^2 systems for bulk carriers and for car carriers. The former have a high pressure system, the latter a low pressure system. Bulkers are loaded and discharged vertically and sealed horizontally. Car carriers load and discharge horizontally and are sealed vertically.

77. Captain Haakansson said that the danger of a car catching fire is an ever present danger if one is transporting thousands of cars on a car carrier, but the risk is mainly upon loading and just after a vehicle has been parked, and again once discharging starts. He had never heard of a vehicle catching fire during transit, after one or two hours had elapsed from the time vehicles had been parked. Captain Haakansson said that out of 35 ships for which he was responsible, there would be a report of a car catching fire on one of the ships about every two months on average. His experience extended from 1961 to 1998. During this period although there was a fire every two months in one of the vessels in the fleet of 35, a vessel was never lost. On two occasions only during this period the fire was put out using the CO^2 system. On all other occasions the fire was put out with one hand held extinguisher.

78. Captain Haakansson said that the Wallenius standard for vessels in 1998 was ahead of the field. The yardstick he applied to the Eurasian Dream was the Wallenius yardstick. Thus he applied a standard to the Eurasian Dream which was not necessarily a standard generally adopted in the car carrying industry. Captain Haakansson accepted that his commendably high standard was not a required standard in 1998 for car carrying vessels. He added that the operators of vessels such as the Eurasian Dream would not apply his standard. I should record that I have made allowance for the fact that at times Captain Haakansson applied a (commendably) high standard. In the course of his oral evidence he was directed to the standard of the prudent owner and it is this standard that I have applied in this judgment.

79. Captain Haakansson was asked about a manuscript note (16.15 Hong Kong time) made by Mr. Sanjay Anand of a telephone call from Mr. R. S. Anand in Sharjah - ("...service truck - poured some fuel carburettor [?] (disconnected the jumps & threw it - spark gasoline [? catch] fire"). He said that pouring fuel into a carburettor does happen. It is a very dangerous practice that should not be permitted on the decks of a PCC. If such an operation happened it was very dangerous. As to the most likely mechanism that led to the start of the fire, Captain Haakansson said that the jump leads must have shorted. He thought it possible but unlikely that fuel had leaked from the vehicle.

80. Captain Haakansson said that the CO^2 alarms would sound as sirens in the cargo holds; in the engine room there would be a flickering light and ringing bells. The only alarm in the cargo hold was the CO^2 alarm. That would have been set off by either manual initiation or release of the CO^2.

81. As to radios/walkie-talkies, Captain Haakansson said that the norm would be 6-8, but he recommended one per crew member and one per BA. It was not safe or prudent for the Eurasian Dream to have only 4 radios. With a crew of 22 a safe and prudent number of radios would be 26 or 28. As to BA, Captain Haakansson said it was not safe or prudent to have only two sets of BA. A safe and prudent number would have been 5 full size and 2, 3 or 4 escape systems.

82. As to the Master, Captain Haakansson said:

(i) That the briefing and instructions given to the Master were not safe and prudent to enable him to carry out his job properly.

(ii) That he did not consider that the Master was properly instructed and trained to deal with a fire on the ship.

(iii) That a proper briefing to a master of a car carrier would have underlined the special risks that apply when a car carrier is in port.

(iv) That the Master should have been allowed to read important manuals before taking command. There was a need for an overlap period between old and new masters.

(v) That the Master should not have attempted to fight the fire with hoses before using CO^2.

(vi) If the Master only asked himself where the stevedores were at or after 19.30, this was unacceptable.

(vii) That he would not have allowed the Master to take command of the vessel.

83. As to the crew, Captain Haakansson said:
    (i) That there should have been drills which required the crew to shut the gas tight doors and simulate the deployment of CO^2 on the car decks.
    (ii) That there are always at least part ballast voyages in this trade, and that fire drills should be carried out in an empty (or partly empty) cargo hold.
    (iii) That two members of the crew should have been on a fire fighting leader training course.
    (iv) That jump-starting and refuelling are allowed on a car deck provided the ventilation is running. These operations should be carried out in an open space, separately (the two operations should not be permitted at the same time).
    (v) That gangs of stevedores should be properly supervised. There should be one member of crew supervising each full gang. Such member of crew should ensure that fuelling operations and jump-starting operations are separated. If refuelling and jump-starting operations were being carried out at the same time, this should have been stopped by the supervising member of crew.

84. Captain Haakansson said that the system of manuals provided to the Eurasian Dream was not a safe and prudent system of manuals. There should have been a check list near a fire control point so that the crew could check that everything had been covered (for example closing gas tight doors).

85. Captain Haakansson was in my judgment an impressive witness whose evidence was of very considerable assistance. I repeat that in this judgment I have applied the standard of the prudent owner.

Dr. Alan Craggs

86. Dr. Craggs has the following qualifications: B.Sc. (Hons) Chemistry; M.Sc. Gas Phase Reaction Kinetics and PhD. Electro Analytical Chemistry. Dr. Craggs is a consultant scientist with the Fire and Explosion Investigation Division of Minton, Treharne and Davies Limited. He specialises in the investigation of fires and explosions worldwide in marine, industrial, domestic and transport markets.

87. Dr. Craggs' conclusions in his main report were as follows. The fire on the Eurasian Dream most probably started on car Deck 4 where stevedores were engaged in starting a vehicle for discharge. The source of ignition was probably the system of batteries and jump leads used by the stevedores for this operation. Ignition could have been caused by sparking/arcing or electrical overheating following a short circuit. The initial fuel involved was probably a flammable liquid. None of the personnel who were at the scene when the fire broke out appear to have been burned by flame contact or by radiant heat. The indications are, therefore, that the initial fire was relatively small. Attempts to extinguish the fire with portable extinguishers were unsuccessful and the fire spread out of control and affected cargo, the ship's engine room and accommodation. There is evidence that portable dry powder extinguishers on the vessel were defective, which may account for the failure of the initial attempts to control the fire. The vessel was divided into fire zones, each capable of being isolated, and was equipped with a CO^2 system that could be directed into an individual zone. The zone of fire origin was not sealed and CO^2 was not directed into it until the fire had probably spread into at least the zone above. The witness accounts suggest that the late deployment of CO^2 was at the Master's discretion, although there is also evidence that there were mechanical problems with the system and/or that the Chief Engineer was unfamiliar with its operation. Although the other cargo deck fire zones were not sealed, the already depleted supply of CO^2 was subsequently directed into these also. The CO^2 could not be effective under these circumstances and the Sharjah port authority eventually insisted that the vessel be towed out to sea, where the fire was allowed to burn itself out. In short, the CO^2 system was not promptly deployed in the zone of origin of the fire and was not effective. If the fire had been confined to its zone of origin it is likely that the other vehicles in that zone would have been damaged to some extent by fire, heat, smoke and other combustion products.

88. When giving evidence Dr. Craggs referred to the manuscript note timed at 16.15 Hong Kong time ("*...service truck - poured some fuel carburettor [?] (disconnected the jumps & threw it - spark gasoline [? catch] fire*"). He said that the most likely source of ignition was arcing of the jump leads, although he could not rule out other possibilities. A photograph showed what appeared to be clear arcing damage to one of the crocodile clips. Two possible sources of fuel were the stevedores' vehicle and the vehicle that they were attempting to start. A likely source of fuel would be an operation involving pouring fuel into a carburettor. If such an operation took place this would be the more likely place for the fire to start. The most likely source of fuel was the stevedores action of pouring petrol or transferring fuel in some way - refuelling or pouring into a carburettor. If the fuel had been poured into a carburettor and an attempt had been made to start the engine there would be a source of ignition for a continuing fire, if fuel had also been spilled in the vicinity of the carburettor. The manuscript note incorporates the necessary requirements for the start of the fire, in that a spark has been produced and there was fuel in the vicinity. The carburettor was probably on the vehicle that was being started. Since fuel was being poured into the carburettor it would be a logical deduction that the fuel was likely to be in or near the carburettor. The photographic evidence indicates that the leads were still within the vicinity of the vehicle. Had the fire been accessible to fire extinguishers it should have been controlled with one or more extinguishers. If fuel had flowed beneath the vehicle which was being started towards the rear of that vehicle, then it would have been in the most difficult position to reach with an extinguisher. But almost everywhere else in that vicinity was quite open. With one extinguisher with more than about a gallon of fuel it would be quite difficult to extinguish a fire. If fuel was being poured into a carburettor about an egg cup full would be required. To spill a litre would be remarkably clumsy and haphazard. Assuming (i) that the approximate amount that might be expected to be used

in relation to a carburettor was used and (ii) that the fire extinguishers were working and (iii) that the crew were there and competent, they should have been able to put the fire out. Dr. Craggs said that a puzzling aspect of the case was that at least five fire extinguishers were found in the vicinity of the initial outbreak, but the evidence from witnesses does not account for the presence of five extinguishers.

89. Dr. Craggs said that from his physical inspection of the vessel he saw evidence that CO^2 had been released. The indications in the hold were that CO^2 was released, but that did not tell him anything about when that release might have occurred.

90. As to the statement from the salvors that they used a number of extinguishers to extinguish small fire spots and smoking cars, Dr. Craggs said that if the extinguishers had been used, he would have expected to see residual powder in the hoses and the outlets of such extinguishers, and he found no sign of powder in some of the extinguishers. The evidence was not consistent and Dr. Craggs said that the evidence indicates that some of the fire extinguishers were not operational. Basing his evidence on what he saw at the time of inspection of the vessel Dr. Craggs said:-

"The four extinguishers that had not, apparently, discharged much, (if any) of their contents on the weather deck and the three that were found on deck 7...that would suggest that perhaps five (at the most) of those were defective. Five...out of nine...my conclusion is the evidence indicates to me that they could have been defective. I cannot discount, for example, Captain Abell's somewhat elaborate demonstration that it is possible to pressurise an extinguisher without ejecting the powder but...in my view the salvors would have been very unlikely to have undertaken such an exercise themselves. They would either use the extinguisher as they felt necessary or if they were in the process of testing it they would wish to see powder being ejected from the extinguisher... I cannot speak for what the salvors did, but the size of fires that would be extinguishable using such small amounts of powder are relatively small and would be of the size where one might consider just stamping it out... It just seems an unlikely thing to use a powder extinguisher on a very small fire like that."

91. Dr. Craggs said that he saw one label on fire extinguishers. This label was photographed. He saw no labels on the extinguishers on the weather deck. Having looked at his photographs, he believed he could see some labels on some of the other extinguishers on the lower decks. He did not physically inspect any label close up, other than the one in the photograph. He believed he would have paid attention to and remembered any label on any fire extinguisher which purported to record monthly inspections.

92. Dr. Craggs was in my judgment an impressive witness. I have no hesitation in accepting his evidence.

Expert witness called by the defendants

Captain Abell

93. Captain Abell is a Senior Lecturer, Maritime Fire Fighting School (Warsash Maritime Centre) and a Fire Consultant.

94. In his first report Captain Abell concluded that the Master did all that was possible in the prevailing conditions and circumstances to contain the fire within the provisions of SOLAS and was successful in his primary task of ensuring that no one was injured and no lives were lost. In a supplementary report dated 30 November 2001, Captain Abell concluded that the fire started very quickly and was beyond the capability of fire extinguishers because of the rapid growth of the fire and the time taken to muster all personnel. The Master could not even consider closing the gas tight doors until the stevedores were all accounted for. This was not until 19.30 hours. The gas tight doors could not be closed in the prevailing conditions and the fire zones sealed in readiness for discharge of the CO^2 (even if the muster had been completed and stevedores accounted for 10 minutes after the fire). Even if the gas tight doors could have been closed, the CO^2 could not realistically have been discharged into zones A and B for 40 to 50 minutes after the outbreak of the fire.

95. In a supplementary letter dated 15 December 2001 Captain Abell said "The evidence that I have read suggests that no-one gave any thought to closing the gas tight doors and I accept that if this was the case it would suggest that the crew had not been adequately trained. ...I accept that Emergency Procedures Manual was not as clear as it should have been because it required the Master to select those parts which applied to his ship and to ignore the other parts. It has nothing specific to car carriers and this was an important omission. ...Someone should have the duty that as soon as the alarm has sounded and crew mustered, that a responsible person should go to the gangway to affirm, with the stevedores' foreman, that all stevedores were accounted for. ...Two breathing apparatus sets is the minimum required by SOLAS however four breathing apparatus sets are normally carried on a vessel such as this...The four radios held aboard the Eurasian Dream were not adequate...I believe six radios to be the absolute minimum for communications within this vessel."

96. I regret to say that in my judgment Captain Abell did not, in presenting his evidence, conform to the guidelines set out in the Ikarian Reefer [1993] 2 Lloyd's Rep 68 at 81. His first and second reports contained only very limited criticism of the owners, the Master and the crew. These reports should be contrasted with the position that obtained at the end of his evidence as set out below.

97. Captain Abell did not inspect the Eurasian Dream after the fire. He had no sea going experience working on board a pure car carrier. He had never been to sea on such a vessel. To the extent that he had any knowledge of pure car carriers this was derived from a four hour visit to two ships in September 2000. He was thus not an expert in car carriers. His last sea going experience was in 1980. Since 1980 he has been a lecturer at Warsash. He has no experience of shipping management, having gone straight from being master at sea to lecturing. In

particular he has had no experience in the management or operation side of a fleet of pure car carriers. Captain Abell agreed that he is not an expert in fire and explosion investigation, nor an expert in the forensic analysis of casualties of this kind. He had simply regurgitated the crew's statements without acknowledging in his report that he was relying on some parts, but not taking into account other parts which were contradictory. Captain Abell said that he did not have relevant expertise to assist the Court as to how the fire started.

98. In a letter dated 3 December 2001 (written for the purposes of the case) Captain Abell stated "I have not met Dr. Goudsmit, owners' representatives...or any of the witnesses to discuss evidence." In fact Captain Abell had two meetings at More Fisher Brown's offices with Dr. Goudsmit and inspected two car carriers with him.

99. When cross-examined Captain Abell:-

(a) Accepted that by the standards of the Eurasian Alliance manual, there were certainly things that were wrong and there was no question that the crew were far from perfect.

(b) Repeated the statement in his letter of 15 December that if no one gave any thought to closing the gas tight doors, this would suggest that the crew had not been adequately trained.

(c) Agreed that the crew's reaction to tackling this fire was below standard.

(d) Said that to the extent the Master failed to consider the whereabouts of the stevedores, this was another appalling bad error.

(e) Repeated the statement in his letter of 15 December that as soon as the alarm sounded a responsible person should have gone to the gangway to affirm, with the stevedores' foreman, that all stevedores were accounted for. A properly trained crew would have implemented this procedure.

(f) Accepted that a properly trained crew would have deployed CO^2 much earlier if the head count was correct.

(g) Agreed that Univan's emergency procedures for this vessel were defective.

(i) Accepted that the procedures and instructions provided by Univan should have been precise and comprehensive to the Eurasian Dream and should have included precise and comprehensive instructions as to how to prevent and deal with fires.

(j) Accepted (contrary to what appeared in his first report) that the Emergency Procedures Manual was defective. It contained nothing specific to car carriers and this was a fundamental omission. As a result the Master (provided with the manual) was not properly instructed in cargo carrier procedures and would not have been competent to take command of the vessel without proper instructions in such procedures.

(k) Accepted that there should have been specific instructions to the Master and crew about the special dangers of fire inherent in car carriers.

(l) Agreed that there should have been proper procedures in place on board the ship to ensure that gangs on decks were properly supervised.

(m) Accepted that if stevedores were engaged in jump-starting and refuelling operations they should have been closely supervised.

(n) Agreed that the managers should have specifically prohibited jump-starting and refuelling in the same place; this should have been spelt out in an emergency manual and particularly in the case of a new master. The absence of a prohibition by the owners to the crew never to allow simultaneous refuelling and jump-starting was a very serious omission.

(o) (It being common ground that there is no evidence that the Hyundai Pure Car (Truck) Carrier operation manual was on the ship) agreed that it was an extremely serious failure that such a manual was missing from the ship.

(p) Accepted that the instructions provided to the Master and crew with regard to an emergency should have spelled out all the procedures to be followed, including fundamental procedures (for example, shutting gas tight doors and evacuating spaces).

(q) Accepted that there are certain fundamental and basic rules to fighting a fire (shutting gas tight doors, carrying out a head count, evacuating spaces and deploying CO^2). The crew did not follow these fundamental and basic rules. The reasonable conclusion to be drawn is that the crew was not familiar with the fundamentals and was therefore not a competent crew.

(r) Agreed that the action of the Chief Engineer in shutting the manual CO^2 valve was idiotic. His ignorance of which fire zone Deck 4 was in was extraordinary; it pointed to the Chief Engineer not being competent to operate the ship's CO^2 system.

(s) Agreed that it would have been better to use CO^2 and not to waste time with hoses, CO^2 being the primary means of controlling fires.

THE CLAIMANTS' CASE

100. The claimants' case is that the Eurasian Dream was unseaworthy in numerous respects. The claimants provided a summary of their case in a document entitled 'Unseaworthiness Summary', under the following headings:

- The vessel's equipment;
- Competence/efficiency of the Master and the crew;
- Adequacy of the documentation supplied to the vessel.

101. As to the vessel's equipment, the allegations include the following. The vessel was not supplied with an adequate number of functioning walkie-talkies. Certain of the fire extinguishers recovered from the vessel appear to have

been defective. The main valve for the CO^2 system appears to have been corroded. At least two fire hydrants were found tied with rope. There was an inadequate number of BA sets on the vessel.

102. As to competence/efficiency of the Master and the crew, the allegations include the following. The Master and crew were ignorant as to the peculiar hazards of car carriage and car carriers and the characteristics and equipment of the Eurasian Dream. The crew were improperly or inadequately trained in fire fighting. The crew failed to supervise the stevedores.

103. As to adequacy of the documentation supplied to the vessel, the allegations include the following. No ship specific manual dealing with fire prevention control was provided to the Eurasian Dream. The vessel was provided with a large amount of irrelevant and/or obsolete documentation. The documentation placed on board by Univan was too voluminous to be digestible. The Master was directed by a standard form briefing letter to read all the literature on board the vessel. This was an inadequate means of instructing the Master. The Emergency Procedures Manual (and the other Univan manuals) failed to give proper guidance. In accordance with SOLAS, fire-fighting instructions (and procedures in particular) should have been concentrated in one concise and clear manual, catering specifically for the Eurasian Dream. The vessel was not (but ought to have been) provided with specific documentation dealing with a number of important matters.

104. As to the crew witnesses, Mr. Priday for the claimants submitted that their evidence was riddled with inaccuracies, inconsistencies and evasions and betrayed scant regard for the truth. All aspects of the crew's evidence showed clearly that incompetence was endemic in this crew. Mr. Priday further submitted that Univan's management had been shown to be lamentable. Incompetent management produced an incompetent crew. Management as poor as Univan's led to the result that the Master was not fitted for his command, and the crew were no better trained themselves. The systemic failures of Univan led naturally to an incompetently crewed and unseaworthy vessel.

105. Mr. Priday submitted that the breach of Art III.1 was irresistible. As to Art III.2, the crew acted wrongly at every turn. He submitted that there is no protection for defendants in the fire exclusion, because the crew's fault was directly attributable to the negligence/incompetence of Univan itself.

106. As to causation, the claimants' case was as follows:
   (i) The fire resulted from the ship's lack of proper procedures for, and the crew's failure to supervise, the stevedores. In particular, the crew permitted simultaneous and proximate refuelling/jump-starting which should have been prohibited by Univan. Univan should have alerted the crew to these special risks. Had the crew (and in particular the Third Officer) followed these elementary procedures there would not have been a fire.
   (ii) Further or alternatively, the original fire was not large and should have been within the capabilities of a competent crew (if they had been in attendance), equipped with functioning extinguishers. The fire damage could have been limited to only one or two vehicles.
   (iii) Further or alternatively, the failure properly to deploy CO^2 within zone B meant that the fire was not extinguished in that zone. Had it been, the damage would have been contained as set out in Dr. Craggs' first report.
   (iv) If CO^2 had had to be deployed in both zones A and B, a similar position would have obtained, although the smoke damage would have been less in zone A.

THE DEFENDANTS' CASE

107. Mr. Charkham on behalf of the defendants made a number of admissions on the final day of the trial. First, it was conceded that the vessel was not supplied with an adequate number of walkie-talkies before and at the beginning of the voyage. Second, it was conceded that at least two fire hydrants were found by Dr. Craggs tied with rope, and that the rope affected the utility of those particular hydrants. Third, it was conceded that there was not an adequate number of BA sets on board the vessel, before and at the beginning of the voyage. Fourth, it was conceded that the Emergency Procedures Manual failed to give appropriate guidance in certain respects. In my judgment these admissions were inevitable.

108. Mr. Charkham submitted as follows. At the heart of the issue to be decided is whether the vessel was seaworthy before and at the start of the voyage. The correct test/bench mark is what the ordinary prudent owner of a pure car carrier would have required in 1998. The Wallenius yardstick is not the right yardstick, because Wallenius were not representative of the ordinary prudent owner of comparable car carriers in 1998.

109. The time for the application of the test was before and at the start of the voyage i.e. June 1998. This must be remembered in order to avoid the trap of applying hindsight.

110. It is common ground that at the time, the vessel was not required to be certified for ISM. It is therefore erroneous to criticise the vessel or her owners/operators for failing to ensure that the vessel was ISM certified or equipped for ISM certification.

111. There is a tendency to require manuals to be over specific and all inclusive. The Master is responsible and should be allowed discretion.

112. In asking what a reasonably prudent ship owner would require at the start of the voyage, one must ask what knowledge the defendant carrier had in June 1998. The relevant facts in this case are:
   (i) It is to be expected that from to time a car will catch fire without the intervention of fault on the operator or carrier's part.

(ii) The most likely time for such a fire to happen is during/immediately after loading and during/immediately before discharge.

(iii) If a fire does happen at these times, the danger of rapid spread will be greater than normal, because of the absence of very large open decks on pure car carriers.

The defendants did not have this knowledge. When they acquired it they took appropriate action.

113. Mr. Charkham further submitted that it is neither fair nor balanced to criticise a man, merely because he takes an irrational action in the heat of the moment. Due latitude must be allowed for the circumstances in which decisions had to be taken. Adequate training and information was provided to the Master.

114. Mr. Charkham accepted that the fire probably started on Deck 4, in the vicinity of the truck and the Hiace van. He submitted that the immediate cause of the fire remains a matter of speculation. There was clear evidence that jump leads were being used to start the van. There is no direct evidence that petrol was poured either into the carburettor of the car being started or into the fuel tank of that car.

115. As to speed of spread of smoke, Mr. Charkham submitted that smoke spread with rapidity.

116. As to closing gas tight doors, Mr. Charkham submitted that whilst no one had the pre-assigned duty of shutting gas tight doors in the event of an emergency, it does not follow that if they had had such a duty, the doors could have been shut.

117. As to the CO^2 system, Mr. Charkham submitted that this had recently been inspected and passed. As to fire extinguishers, Mr. Charkham submitted that the fire extinguishers were checked by the Third Officer on a weekly, monthly and quarterly basis.

118. For the above and other reasons set out in his opening and closing submissions, Mr. Charkham submitted that the claimants' case should be rejected.

119. I record that I have carefully considered and taken into account all Mr. Charkham's opening and closing submissions.

THE RELEVANT LEGAL PRINCIPLES

120. The parties helpfully provided a summary of the relevant legal principles which were largely agreed.

121. It was common ground that the bill of lading contracts in the present case incorporated either the Hague or Hague-Visby Rules ("the Rules"). For the purposes of liability, nothing turns upon the distinction between the two sets of Rules.

122. The Hague/Hague-Visby Rules provide so far as material:

"*Article III. Responsibilities and Liabilities*

1. The carrier shall be bound, before and at the beginning of the voyage, to exercise due diligence to (

(a) Make the ship seaworthy;

(b) Properly man, equip and supply the ship;

(c) Make the holds, refrigerating and cool chambers, and all other parts of the ship in which goods are carried, fit and safe for their reception, carriage and preservation.

2. Subject to the provisions of Article IV, the carrier shall properly and carefully load, handle, stow, carry, keep, care for and discharge the goods carried.

Article IV. Rights and Immunities

1. Neither the carrier nor the ship shall be liable for loss or damage arising or resulting from unseaworthiness unless caused by want of due diligence on the part of the carrier to make the ship seaworthy, and to secure that the ship is properly manned, equipped and supplied, and to make the holds, refrigerating and cool chambers and all other parts of the ship in which goods are carried fit and safe for their reception, carriage and preservation in accordance with the provisions of paragraph 1 of Article III.

Whenever loss or damage has resulted from unseaworthiness, the burden of proving the exercise of due diligence shall be on the carrier or other person claiming exemption under this section.

2. Neither the carrier nor the ship shall be responsible for loss or damage arising or resulting from-

...

(b) Fire, unless caused by the actual fault or privity of the carrier;

..."

The burden of proof

123. (1) The burden of proof is on the claimants to prove that the vessel was unseaworthy, pursuant to Article III, rule 1, before and at the beginning of the voyage.

(2) The claimants must then also prove that the loss or damage was caused by that unseaworthiness: The Europa [1908]p84 at 97-98.

(3) If the claimants discharge the burden in respect of (1) and (2), the burden passes to the defendants to prove that they and those for whom they are responsible exercised due diligence to make the ship seaworthy in the relevant respects: ***The Toledo*** [1995] 1 Lloyd's Rep. 40 at 50.

(a) If they fail to do so, the defendants are not entitled to rely upon the exceptions in Article IV, rule 2, including the 'fire' exception.

(b) If the defendants are able to do so, they can rely upon the 'fire' exception as a defence to breach of Article III, rule 2, subject to the claimants proving that the loss or damage was 'caused by the actual fault or privity of the carrier': ***The Apostolis*** [1996] 1 Lloyd's Rep. 475 at 483 rhc; Scrutton on Charterparties (20th ed.), p. 444.

(4) In relation to due diligence, proof of unseaworthiness fulfils the same function as res ipsa loquitur does in ordinary cases of negligence: ***The Amstelslot*** [1963] 2 Lloyd's Rep 223 at 235 per Lord Devlin; T***he Fjord Wind*** [2000] 2 Lloyd's Rep. 191 at 205. In practical terms, the reasoning is: '*a ship should not be unseaworthy if proper care is taken*' (per Stuart-Smith LJ).

The Duty to provide a Seaworthy Ship (Article III, rule 1)

124. The absolute duty at common law to provide a seaworthy ship is displaced by Article III, r.1 of the Rules, which requires the carrier to exercise due diligence to provide a seaworthy ship 'before and at the beginning of the voyage': ***Maxine Footwear v. Canadian Government*** [1959] AC 589. This is an '*overriding obligation*' ([ibid] at 603).

125. The classic definition of seaworthiness is contained in the judgment of Lord Justice Scrutton in ***F.C. Bradley & Sons Ltd v Federal Steam Navigation Co.*** (1926) 24 Ll.L.Rep 446 at page 454, approving a statement from Carver on Carriage by Sea:-

'*The ship must have that degree of fitness which an ordinary careful owner would require his vessel to have at the commencement of her voyage having regard to all the probable circumstances of it. Would a prudent owner have required that it (sc the defect) be made good before sending his ship to sea, had he known of it*?'

126. Seaworthiness is not an absolute concept; it is relative to the nature of the ship, to the particular voyage and even to the particular stage of the voyage on which the ship is engaged. (Moore-Bick J in ***The Fjord Wind*** [1999] 1 Lloyd's Rep. 307 at 315 (approved by Clarke LJ at [2000] 2 Lloyd's Rep. 191 at 197)).

127. Seaworthiness must be judged by the standards and practices of the industry at the relevant time, at least so long as those standards and practices are reasonable.

128. The components of the duty (as illustrated by the case law) are as follows:-

(1) The vessel must be in a suitable condition and suitably manned and equipped to meet the ordinary perils likely to be encountered while performing the services required of it. This aspect of the duty relates to the following matters.

(a) The physical condition of the vessel and its equipment;

(b) The competence / efficiency of the Master and crew;

(c) The adequacy of stores and documentation.

(2) The vessel must be cargoworthy in the sense that it is in a fit state to receive the specified cargo.

129. As to the competence or efficiency of the Master and crew:

(1) Incompetence or inefficiency may consist of a '*disabling want of skill*' or a '*disabling want of knowledge*':

'*It is not disputed, I think, that a ship may be rendered unseaworthy by the inefficiency of the master who commands her. Does not that principle apply where the master's inefficiency consists, whatever his general efficiency may be, in his ignorance as to how his ship may, owing to the peculiarities of her structure, behave in circumstances likely to be met with on an ordinary ocean voyage? There cannot be any difference in principle, I think, between disabling want of skill and disabling want of knowledge. Each equally renders the master unfit and unqualified to command, and therefore makes the ship he commands unseaworthy. And the owner who withholds from the master the necessary information should, in all reason, be as responsible for the result of the master's ignorance as if he deprived the latter of the general skill and efficiency he presumably possessed.*' *(**Standard Oil v. The Clan Line Steamers** [1924] AC 100 per Lord Atkinson at 120-121).*

(2) Incompetence or inefficiency is a question of fact, which may be proved from one incident and need not be demonstrated by reference to a series of acts*: **The Star Sea** [1997] 1 Lloyd's Rep. 360 at 373-374 (per Leggatt LJ)*. However, one mistake or even more than one mistake does not necessarily render a crew-member incompetent: ***The Star Sea*** *[ibid] at 374:*

'*It is true that in **The Makedonia** Mr Justice Hewson found at p. 336 -*

> *... a shocking history of sheer inefficiency, a succession of negligent acts ... amounting to a state of inefficiency far beyond casual negligence ...*

*but we can find nothing to support the proposition that a series of acts must always be necessary in order to establish incompetence or inefficiency. Indeed, at an earlier stage of the judgment, Mr Justice Hewson quoted the well known passage from Lord Atkinson's speech in **Standard Oil Co. of New York v. Clan Line Steamers Ltd.** [1924] AC 100 referring to Lord Atkinson's view that "**disabling want of skill and disabling lack of knowledge**" equally renders the master unfit and unqualified to command. It seems to us that it must be possible, in certain circumstances, to draw the inference from one incident that someone had a "**disabling lack of knowledge**". ...*

*We do entirely accept (as the Judge in his judgment recognized) that one mistake or even more than one mistake does not necessarily render a crew member incompetent. Anyone can make a mistake without the conclusion being drawn that he has either "**a disabling want of skill**" or a "**disabling lack of knowledge**".*'

(3) Incompetence is to be distinguished from negligence and may derive from:-

(a) an inherent lack of ability.

(b) a lack of adequate training or instruction: e.g. lack of adequate fire- fighting training (**The Star Sea** [ibid]).

(c) a lack of knowledge about a particular vessel and/or its systems: **Standard Oil** (ibid); ***The Farrandoc*** [1967] 2 Lloyd's Rep. 276; **The Star Sea** [ibid] (operation of the CO^2 fire-fighting system).

(d) a disinclination to perform the job properly:

'*In considering efficiency, the matters to be considered, in my view, are not limited to a disabling want of skill and a disabling want of knowledge. A man may be well qualified and hold the highest grade in certificates of competency and yet have a disabling lack of will and inclination to use his skill and knowledge so that they are well nigh useless to him. Such a man may be unable efficiently to use the skill and knowledge which he has through drunken habits or through ill-health. Mr MacCrindle has submitted that a lack of application in the use of skill and knowledge is not within the ambit of "competence", though in certain cases he would be prepared to accede that drunkenness and physical unfitness might be.*

This is a matter to which I have given considerable thought and I can see no real difference between those two, that is, drunkenness or physical unfitness on the one hand and a disabling lack of will to use the skill and knowledge on the other. The reason why I can see no distinction is that the result is the same, or may be.'

(***The Makedonia*** [1962] 1 Lloyd's Rep. 316 at 335 per Hewson J).

(e) physical or mental disability or incapacity (e.g. drunkenness, illness): **Moore v. Lunn** (1923) 15 Ll.L.Rep. 155; ***Rio Tinto v. Seed Shipping*** (1926) 24 Ll.L.Rep. 316.

(4) The test as to whether the incompetence or inefficiency of the Master and crew has rendered the vessel unseaworthy is as follows:- ***Would a reasonably prudent owner, knowing the relevant facts, have allowed this vessel to put to sea with this Master and crew, with their state of knowledge, training and instruction?*** (per Salmon J in **Hong Kong Fir Shipping v. Kawasaki** [1962] 2 QB 26 at 34.)

(5) As to causation, unseaworthiness must be 'a cause or, if it is preferred, a real or effective or actual cause' and '*In truth, unseaworthiness ... can never be the sole cause of the loss. ... It must, I think, always be only one of several co-operating causes. ... I can draw no distinction between cases where the negligent conduct of the master is a cause and cases in which any other cause, such as perils of the seas, or fire, is a co-operating cause. A negligent act is as much a co-operating cause, if it is a cause at all, as an act which is not negligent. The question is the same in either case, it is, would the disaster not have happened if the ship had fulfilled the obligation of seaworthiness, even though the disaster could not have happened if there had not also been the specific peril or action.*' (per Lord Wright in ***Smith, Hogg & Co v. Black Sea and Baltic*** [1940] AC 997 at 1005).

The defendants accept this as a general statement of principle, but say that it is not directed to the case of fire and does not help resolve the question. Thus, for example, the question may potentially arise: what if a fire is not caused by unseaworthiness in that its origin is unrelated to unseaworthiness, but it spreads in a way that it would not have done because the vessel is unseaworthy? The claimants' position (which I accept) is that, in such circumstances, the carrier is liable for the loss or damage caused or aggravated by the unseaworthiness, unless it exercised due diligence.

The exercise of due diligence

130. The duty of '*due diligence*' is an '*inescapable personal obligation*' (Scrutton on Charterparties (20th ed.), p. 429); it is non-delegable. The carrier will therefore be responsible for negligence of those to whom it delegates due diligence. The question is whether unseaworthiness is due to any lack of diligence in those who have been implicated by the carrier in the work of keeping or making the vessel seaworthy. Such persons are the carriers's agents whose diligence or lack of it is attributable to the carrier: ***The Muncaster Castle*** [1961] AC 807 per Lord Radcliffe at 862. See also Viscount Simonds at 843-844. This principle is relevant in two respects:

(1) the carrier under the bills of lading is liable for the want of due diligence by the owners or managers (The Fjord Wind [1999] 1 Lloyd's Rep. 307 at 315 and Carver on Bills of Lading (1st ed.), para. 9-125).

(2) the carrier is liable for the want of due diligence of the Master insofar as the carrier or the owners or managers have delegated to him their duties as to seaworthiness.

131. The exercise of due diligence is equivalent to the exercise of reasonable care and skill: 'Lack of due diligence is negligence; and what is in issue in this case is whether there was an error of judgment that amounted to professional negligence.' (*The Amstelslot* [1963] 2 Lloyd's Rep. 223 at 235 per Lord Devlin.) See also: Scrutton on Charterparties (20th ed.), p. 429: 'The standard imposed by the obligation to exercise due diligence appears to be equivalent to that of the common law duty of care.'

(1) It is relevant to consider '*what other skilled men do in comparable circumstances*' (***The Amstelslot*** [ibid] at 230 rhc per Lord Reid). The claimants' position (which I accept) is that general practice is relevant but not conclusive; it is no excuse for negligence that everyone else was negligent too: Morris v. West Hartlepool Steam Navigation [1954] 2 Lloyd's Rep. 507 at 510 per Denning LJ.

(2) The mere fact that with hindsight it is possible to see that extra precautions could have been taken does not necessarily mean that due diligence was not exercised: 'In a great many accidents it is clear after the event that if the defendant had taken certain extra precautions the accident would or might have been avoided. The question always is whether a reasonable man in the shoes of the defendant, with the skill and knowledge

which the defendant had or ought to have had, would have taken those extra precautions.' ([ibid] at 230 per Lord Reid) (Carver on Bills of Lading (1st ed), para. 9-123).

132. If the vessel is found to have been unseaworthy due to the incompetence or inefficiency of the Master or crew, it is for the carrier to show that it has exercised proper care in relation to the following:

(1) the appointment of a generally competent Master/crew: ***The Makedonia*** [1962] 1 Lloyd's Rep. 316 (at 337-338 per Hewson J). That is to say, the owners / managers must have taken care to see that the Master / crew were '*suitable men for the post*' (**Moore v. Lunn** (1922) 11 Ll.L.Rep. 86 at 93 (per Bailhache J). The owners / managers must take reasonable steps to satisfy themselves of this. They must satisfy themselves by inspection of the seaman's documents, interviews and inquiries from previous employers that he is reasonably fit to occupy the post to which he is appointed: ***The Makedonia*** [ibid]; Scrutton on Charterparties (20th ed.), p. 430.

(2) the specific competence of the Master in relation to the vessel and voyage in question. It will not necessarily be enough to rely on certificates of competence held by the seaman: ***The Farrandoc*** [ibid] (Can.Ex.Ct) (Scrutton on Charterparties (20th ed.), p. 430). The owners/managers must provide the Master / crew with reasonably necessary specific instruction and supervision, on an ongoing basis, in relation to the vessel and voyage(s).

'*To my mind, a person taking reasonable care for his own ship or cargo or seeking to discharge this obligation even when told that the person to be employed in a position involving responsibility held a qualifying certificate would scarcely fail to make further inquiries as to his ability and experience. Even after making such inquiries he would, in my opinion, inquire how far the man's experience fitted him for service in the particular ship and take steps to see that the man was adequately instructed with respect to any features of the particular ship with which it was necessary for him to be familiar to properly discharge the duties of his position and to avoid damage to the ship and her cargo.*' (at 282)

(See also: ***Standard Oil*** (ibid); ***The Makedonia*** [ibid] at 338) Some forms of supervision by the carrier were considered by Lord Brandon in ***The Marion*** [1984] 1 AC 563 at 575:

'*The forms of supervision used vary considerably, depending no doubt on the size of the companies concerned, the number and types of ships which they operate, and the trades in which such ships are employed. The forms of supervision used, however, include, first, regular or random checks by marine superintendents or other qualified managerial staff when ships are visited by such persons in port; secondly, the complete overhaul, in the form of inspection and checking of chart rooms and their contents, at regular or irregular intervals; and, thirdly, the complete landing of the contents of chart rooms for inspection and checking, again at regular or irregular intervals.*'

133. By analogy with the approach to owners' or managers' "*fault*" in the context of limitation actions, it is not permissible, in the exercise of due diligence, 'for owners or managers to wash their hands ... of all questions ... or to leave everything to the unassisted discretion of their masters' (per Sir Gordon Willmer in ***The England*** [1973] 1 Lloyd's Rep. 373 at 383; approved by Lord Brandon in ***The Marion*** [ibid] at 577).

Article III, rule 2

134. The obligation under Article III, rule 2 is to carry and care for the goods '*properly and carefully*'. The rule imposes a duty to adopt a sound system (***Albacora v. Westcott*** [1966] 2 Lloyd's Rep. 53) and to exercise reasonable care in its operation.

The exceptions under Article IV, rule 2

135. The exceptions under Article IV, rule 2, may not be relied upon where the carrier is in breach of the 'overriding obligation' to provide a seaworthy ship under Article III, rule 1 and that breach is causative of the loss/damage: Maxine Footwear [ibid] at 113 per Lord Somervell; ***Standard Oil v. Clan Line*** [ibid]. (Scrutton on Charterparties (20th ed.), p. 444)

136. In relation to cases of fire, the 'fire' exception may apply (in relation to a breach of Article III, rule 2) unless the loss or damage was caused by 'the actual fault or privity of the carrier' (Article IV, rule 2(b)).

ANALYSIS AND CONCLUSIONS

137. I apply the legal principles set out above.

138. Fire is one of the greatest threats to ships at sea. The ship's fire fighting ability and, therefore, its seaworthiness is crucially dependent upon the competence of its crew as the fire-fighters and, in particular, the Master as their leader. The CO^2 system is a potent weapon in the fire-fighters' armoury. Knowledge of when and how it should be used is essential. (See Tuckey J in ***The Star Sea*** [1995] 1 Lloyd's Rep. 651 (at 658))

139. The "Star Sea" was a reefer. The cargo of a car carrier presents a serious fire risk, particularly during loading and unloading operations. To the extent that Mr. Charkham submitted that the defendants did not have this knowledge until after the fire on the Eurasian Dream, I reject this.

140. It is to be noted that the Hyundai Pure Car (Truck) Carrier Operation Manual was not on the vessel at the material time. Chapter 12 of that manual provided under the heading '*Fire Prevention*':

"*12.2 Duty Officer and crew members should keep constant watch throughout the loading and discharging operation, so that any faulty conditions of the vehicles can be detected in the early stage. During their watch of cargo operation pay due attention to the following point:*

Point 1 When a dead car is being discharged, direct fuel supply to the carburetor must be prohibited. If it is necessary to supply fuel to it, fuel must be poured into the tank. Fuel must not be supplied (sic) in the same compartment where the flat battery is being charged from another car."

141. The ISM Code became mandatory for passenger ships, tankers of all types and bulk carriers on 1 July 1998 and will become mandatory for all other types of ships including mobile offshore units on 1 July 2002. The International Association of Classification Societies ("IACS") noted that the number of phase 2 ships (of which the "Eurasian Dream" was an example) holding Safety Management Certificates on the 30 June 1998 was 1704 out of a total of approximately 17,000 classed with ICAS. The fact that the vessel did not hold a Safety Management Certificate at the time of the fire was no more than a reflection of the fact that none would be required until 2002.

142. Mr. Subbiah said that at the time of the fire the Eurasian Dream was not ISM certificated and was not obliged to be so. Nevertheless the ship was provided with copies of the fleet ISM procedural documentation and was subject to the same company procedures as all other vessels in the fleet.

143. Captain Haakansson said that "the ISM Code ... is a framework upon which good practices should be hung. Even for companies - or for that matter vessels - who have waited until the last minute to apply for certification the principles are so general and good that a prudent manager/master could very well organize their companies/vessels work following those (at present) guidelines - unless hindered to do so by other instructions that has yet not been withdrawn."

144. The account of the Master, crew and managers cannot in my judgment be relied upon for, among others, the reasons set out above.

145. Further, in my view the "briefings" of the crew by Univan and others after the incident went beyond what was proper in the circumstances.

146. There are further matters that have caused me concern as set out above under the heading 'The Evidence Generally'.

147. Further to the above, certain particular features of the case call for comment as set out under the heading 'The Evidence Generally'.

148. My findings as to the events on 23 July 1998 are as follows:

(1) The vessel called at Dubai, where approximately 300 cars were discharged. At about 13.00 hours, the vessel sailed for the nearby port of Sharjah.

(2) The vessel arrived at the Sharjah pilot station at about 14.10 hours and was alongside at 15.06 hours.

(3) 15.30 hours - Discharge started. Discharge of vehicles commenced at about 15.30 hours through both the stern ramp and the starboard side ramp.

(4) 16.10 hours - Bunkering started. Between 15.30 and 16.00 hours, the bunkering barge came alongside the vessel (port side) and bunkering commenced at about 16.10 hours. It was continuing at the time of the fire.

(5) The stevedores had service trucks on car Decks 4 and 6, which were used to assist in relation to vehicles which would not start. The service truck on Deck 4 was manned by a driver and an assistant stevedore. The service truck had three containers and a large battery set on the flat bed at its rear.

(6) Simultaneous and proximate refuelling and jump-starting operations were undertaken by stevedores on Deck 4. What happened was reflected in the contemporary manuscript note of R. S. Anand's telephone call to Hong Kong records : 'service truck - poured some fuel carburettor [?] (disconnected the jumps & threw it - spark gasoline [? catch] fire'. (See also the notes of Mr. Khan's calls to Hong Kong '3/O present during Jumper connection. Jerry can nearby. ... Panic all over' and 'As per Khan - Name of person who was using jerry can for fuelling - Naseeb').

(The "Safe Sailing No. 11" circular sent out by Univan to its fleet on 31 July 1998 was an early appraisal of and response to the circumstances of the fire on the Eurasian Dream. It highlights the perils of simultaneous and proximate refuelling and jump-starting and is an indication that Univan recognised that this may have been what happened on the Eurasian Dream. The circular stipulated that :-

(i) 'Direct fuel supply to the carburettor is prohibited'.

(ii) 'If it is necessary to pour fuel into the tank, same should be done without spilling it over... In any case if any fuelling is to be done, duty officer must be informed and this must be done in his presence.'

(iii) 'Charging battery and the Jerry cans containing fuel must not be carried on the same pick up truck.'

(iv) 'Fuelling must not be done in the same compartment where the flat battery is being charged from another car or from the pick up truck.'

(v) 'If any leakage of fuel is observed, battery charging operations must be stopped'.

The Eurasian Alliance '*Fire Prevention and Fire Fighting*' manual prescribed the following fire precaution (amongst others): 'Battery charging operations and fuel replenishment is not being undertaken at the same time and in the same compartment.')

(7) The Third Officer was due to take over the watch from the Second Officer at 18.00 hours. Of the (at most) 4 walkie-talkies on board, 3 radios would usually be held by the Master, the Chief Officer and the Duty A/B, but 3 radios were in fact being used by the engineers during the bunkering of the vessel. I have reservations as to whether the one remaining walkie-talkie was in the possession of the Third Officer at the material time.

It is unclear whether the Third Officer did actually go to Deck 4:

(a) In his Police interview, he told the Police that he was having a meal at the time of the fire and he disavowed all knowledge of the circumstances surrounding the fire. He gave a different account in his witness statement.

(b) A/B Palconit is recorded as having told the Police in his first interview that, at the time of the fire, he was on Deck 4 with the Third Officer and that, when the fire broke out, he 'saw the Third Officer plus five persons escaping from the deck doorway onto the port quay'. The Third Officer said that this was a lie.

What should have happened?

I have no doubt that the Third Officer (i) should have been supervising the operations of the stevedores on Deck 4; (ii) should not have permitted simultaneous and proximate refuelling and jump-starting operations (had the Third Officer followed these elementary procedures, there would not have been a fire); and (iii) (even if, contrary to the above, a fire had broken out) should have immediately raised the alarm and summoned assistance and should have been able to put out the fire with one or more fire extinguishers operated by himself and other members of the crew.

The analysis in (iii) above assumes:

(a) That the Third Officer and other members of the crew had a sufficient number of walkie-talkies. I find that they did not at the time (bunkering operations apart) have more than one between them. (I have serious reservations as to whether the one remaining walkie-talkie was in the possession of the Third Officer at the material time).

(b) That the fire extinguishers on Deck 4 were in proper working order. I find that the probability is that the fire extinguishers on the Eurasian Dream had not been properly serviced.

(c) That the Third Officer and other members of the crew had been properly instructed, trained and drilled. I find that the Master and the crew (including the Third Officer) had not been properly instructed, trained and drilled.

I emphasise that speed of reaction was critical. As the Eurasian Alliance manual states: "In fire fighting speed is the most important factor." Speed of reaction was in turn dependent on proper instruction, training and drills. The Master and the crew had not been properly instructed, trained and drilled. If there was not a speedy reaction, the fire would quickly become beyond the point when it could be put out with fire extinguishers.

The above findings are consistent with Captain Haakansson's experience. Captain Haakansson said that out of 35 ships for which he was responsible, there would be a report of a car catching fire on one of the ships about every two months on average. His experience extended from 1961 to 1998. During this period although there was a fire every two months in one of the vessels in a fleet of 35, a vessel was never lost. On two occasions only during this period the fire was put out using the CO^2 system. On all other occasions the fire was put out with one hand held extinguisher.

Even if, contrary to the above, the fire could not have been put out with fire extinguishers, I find that it should have been possible to evacuate and shut off zone B and utilise the CO^2 (without endangering life), and thereby prevent the spread of the fire to other parts of the ship. This again assumes that the vessel was in a suitable condition and suitably manned (with a competent and efficient Master and crew) and suitably equipped.

What in fact happened

I have no doubt that there was an attempted cover-up. The Third Officer realised ex post facto that he should have been supervising the operations of the stevedores on Deck 4 and realised ex post facto that simultaneous and proximate refuelling and jump-starting operations should not have been permitted (and that had he taken the elementary step of prohibiting this dangerous practice, there would not have been a fire). Further the Third Officer realised ex post facto that (even if a fire had broken out) he should have been able to put it out with one or more fire extinguishers operated by himself and other members of the crew. The Third Officer told the Police that he was having a meal at the time of the fire. In his witness statement he changed his account and said that he was on Deck 4 at the material time, mentioned jump-starting but omitted any reference to simultaneous and proximate refuelling operations (involving the pouring of petrol into the carburettor) and exaggerated the nature and extent of the early stages of the fire.

It is possible that no member of the crew was on Deck 4 purporting to supervise the stevedores on Deck 4, at the time of the outbreak of the fire.

It is also possible and perhaps more likely that, having been on Deck 4 at the material time and having wrongly permitted the stevedores to engage in dangerous simultaneous and proximate refuelling and jump-starting operations and having failed to respond appropriately when the fire broke out, the Third Officer lied to the Police and lied (in different respects) in his evidence to this Court. There are references in the contemporaneous Univan documents to the Third Officer being the eye-witness to the incident (e.g.: "Captain Villondo confirmed that Third Officer De Guzman is the witness").

If (as I consider more likely) the Third Officer was on Deck 4 at the material time, having wrongly permitted the stevedores to engage in dangerous simultaneous and proximate refuelling and jump-starting operations, he failed to respond appropriately when the fire broke out. He had (I find) been inadequately instructed, trained and drilled and he panicked. Further, the shortage of walkie-talkies probably affected the adequacy of the response. The vessel only had (at most) 4 walkie-talkies. It was usual during bunkering operations for

the bunkering team to take 3 of the walkie-talkies. This left only one walkie-talkie. Thus the Third Officer being the officer on duty (if he had that walkie-talkie with him) had no means of communicating with the Master, Chief Officer or Duty A/B. I have serious reservations as to whether the one remaining radio was in the possession of the Third Officer at the material time. (The Chief Engineer said in his witness statement that he had a radio, as did the Second Engineer and (he believed) the Electrical Officer. But none of these persons when interviewed by the Police, are recorded as telling the Police that they first heard of the fire over the radio from the Third Officer). The shortage of radios probably further explains why the response to the fire was inadequate and why no member of the crew discharged a fire extinguisher. The Third Officer was probably impeded in raising the alarm quickly and appropriately by walkie-talkie (and then proceeding to use a fire extinguisher himself) either (a) because he did not have a walkie-talkie and for this reason left the scene to raise the alarm or (b) (if he did have one) because he was unable to communicate with the Master, Chief Officer and Duty A/B by walkie-talkie.

(8) The fire broke out shortly before 18.50 hours; the fire alarm sounded after 18.50 hours.

(9) As the Third Officer accepted, none of the crew actually used a fire extinguisher.

(10) As to the fire itself:-

(a) It started in the vicinity of the Hiace van.

(b) Initially, the fire was relatively small in size. The fireball described by the Third Officer was a deliberate exaggeration. None of those who claim to have been present when the fire started appear to have been severely affected by radiant heat or by direct flame contact. The stevedores who were in close proximity to the Hiace van suffered no injuries whatsoever. The initial fire was small. If (as I find) fuel was being poured into a carburettor, about an egg cup full would be required. As Dr. Craggs said, to spill a litre would be remarkably clumsy and haphazard.

(c) The Master and crew's descriptions of the smoke in the early stages were deliberate exaggerations.

(11) 19.10 hours - Bunker Barge full away.

(12) 19.15 hours - 2 Tugs started spraying water.

(13) At 19.20 hours, the Master used the VHF radio to notify the Sharjah Port Control of the fire; by that time Port Control already knew of the fire, as they had dispatched tugs and fire crews. No-one on the vessel had spoken to them prior to this time.

(14) At 19.25 hours, the Master used the Inmarsat telephone to inform the vessel's technical managers, Univan, of the fire.

A contemporary note reads:-

"23/7/97 (sic) 23.25 - R/O called office and put Capt on line (JSL). He informed that there is fire on Vessel in No. 5 Deck and it is spreading to No. 6 Deck. They have shut the ventilation and fire doors.

Vessel is alongside at Sharjah. They have not been able to contact agent.

Two tugs and fire brigade are fighting the fire. All crew accounted for. JSL enquired about release of CO^2 but Captain said crew accounted for but not sure about stevedores. JSL told him to get in touch with Fire Brigade Chief and then release CO^2 if all ok."

(15) 19.29 hours - Second call from the ship to Univan.

A contemporary note reads:-

"23.29 - R/O called up. Suri took the line while JSL was calling Banerjee. R/O informed that it is becoming unbearable in accommodation and that they are vacating the vessel."

(16) Crew rigged up fire hoses to fight the fire.

(17) Crew started spraying.

(18) 19.40 hours: Muster. (Note: the Master alleges by his timetable that he mustered the crew at 18.50 hours).

(19) 19.45 hours or 24.30 hours: CO^2 released. It is difficult to say with confidence that CO^2 was in fact released at 19.45 or 19.50 hours as the crew have now alleged. No-one professes to have heard the CO^2 sirens which would have sounded if this had happened and a contemporaneous note gives an alternative time of 24.30 hours, a time at which a member of the crew had returned on board the vessel.

The Eurasian Dream was an Unseaworthy Ship

149. I find that the claimants have proved that the Eurasian Dream was unseaworthy before and at the beginning of the voyage in the following respects.

150. The Eurasian Dream was not in a suitable condition and suitably manned and equipped. Although it is convenient to categorise the findings of unseaworthiness under three headings (The Vessel's Equipment; Competence/Efficiency of the Master and the Crew; and Adequacy of the Documentation Supplied to the Vessel) I emphasise that these findings overlap and should be seen as one cumulative set of deficiencies.

The Vessel's Equipment

151. (1) The vessel was not supplied with an adequate number of functioning walkie- talkies.

(a) The vessel had (at most) only 4 walkie-talkies. It was usual during bunkering operations for the bunkering team to take 3 of the walkie-talkies. This left only one walkie-talkie. The officer on duty (if he had that walkie-talkie with him) had no means of communicating with the Master, Chief Officer or Duty A/B.

(b) There should have been a sufficient number of walkie-talkies so that at all times there was one each in the possession of the Master, Chief Officer and the other deck officers and all members of the crew engaged in supervising discharge (in addition to the three required for bunkering).

(2) Some of the fire extinguishers recovered from the vessel for examination appear to have been defective, in that they showed signs of having been operated but not having discharged their extinguishing agent. The fire extinguishers had not been properly serviced.

(3) There was an inadequate number of breathing apparatus sets on the vessel.

(4) The main valve for the CO^2 system appears to have been corroded: it took 2 men to open the main valve (according to the Chief Engineer).

(5) At least 2 fire hydrants were found tied with rope. This affected the utility of the hydrant. It also reflected the poor fire-fighting training and incompetence of the Master and crew.

Competence/Efficiency of the Master and the Crew

(6) The Master was new to:

(a) the vessel;

(b) car carriers in general;

(c) Univan.

He was a 'car carrier novice'.

(7) The Master and crew were ignorant as to the peculiar hazards of car carriage and car carriers and the characteristics and equipment of the Eurasian Dream. In particular, there was:-

(a) general ignorance of the fire hazards involved in the carriage of vehicles on a car carrier. For example, the Master did not appreciate that there were special fire risks when the vessel was in port during cargo operations.

(b) specific ignorance of the need to supervise stevedores on car decks, of the fire hazards created by simultaneous and proximate refuelling and jump-starting operations on a car deck and of the fact that simultaneous and proximate refuelling and jump-starting operations should not be permitted. The crew were not instructed by the Master to prevent refuelling and jump-starting taking place on the same vehicle or in the same area. The Master had himself received no such instructions from Univan.

(c) ignorance of the peculiar characteristics of the "Eurasian Dream" and her fire-fighting systems. In particular, the Master and the crew were ignorant as to:

(i) the function and importance of gas-tight doors as fire-fighting and safety equipment;

(ii) the importance of closing gas-tight doors for the efficient deployment of CO^2;

(iii) the function and efficient operation of the low-pressure CO^2 system and its components (including manual and pneumatic valves).

(8) The crew were improperly or inadequately trained in fire fighting.

(a) Fire drills were only undertaken once a month. Moreover, they were conducted on the first Sunday of the month, thereby removing any element of spontaneity.

(b) The Master and crew were ignorant as to the need to fight a fire according to its source and size:

(i) the crew did not inform the Master and the Master did not inquire as to the cause of the fire when steps were being taken to fight it;

(ii) no attempt was made by the crew themselves to use fire extinguishers on the fire in its initial stages;

(iii) an attempt was made to fight the fire using hoses and water. Water should not have been used as it was an inappropriate medium for fighting a fire which was caused by the ignition of fuel and its use simply delayed the deployment of CO^2.

(iv) CO^2 ought to have been considered from the outset and used as soon as it became clear that the fire had become beyond extinction or control by means of fire extinguishers.

These failures demonstrated a fundamental lack of fire-fighting knowledge.

(c) The Master and members of the crew failed to muster. Instead, they proceeded to car Deck 4.

(d) Moreover, the crew were not drilled or otherwise instructed in the following:

(i) responding to fire during cargo operations;

(ii) checking and shutting gas tight doors;

(iii) shutting external ramps;

(iv) deploying CO^2 on the decks;

(v) evacuating the car decks of personnel.

(e) The failure to conduct such drills or to provide such instruction compounded the incompetence of the Master and crew in relation to such fundamental safety matters.

(9) The crew failed to supervise the stevedores properly.

(10) Two fire hydrants were, but ought not to have been, tied with rope. Such a practice impaired their utility in an emergency and demonstrated a lax approach to fire-fighting and ignorance (on the part of the Master and crew) as to the need for a speedy response to a fire.

(11) There was a failure to use the CO^2 siren to warn people to leave the car decks.

(It is to be noted that prior to the fire it appears that the Master, the Chief Engineer and the Chief Officer had not been trained on an advanced fire fighting course. The Chief Engineer attended such a course shortly after the casualty).

Adequacy of the Documentation supplied to the Vessel

(12) It was of fundamental importance that the vessel be provided with a ship specific manual dealing with fire prevention and control. No such manual was provided to the Eurasian Dream.

(13) The vessel was provided with a large amount of irrelevant and/or obsolete documentation. Such documentation related (for example) to vessels other than car carriers and to procedures which were irrelevant to car carriers. Such documentation was potentially misleading. For efficiency and competence of response, only one code or set of procedures should have been prescribed for the Master of a pure car carrier.

(14) The documentation placed on board by Univan was too voluminous to be digestible.

(15) The Master was directed by a standard form Briefing Letter to read all the literature on board the vessel. This was an inadequate means of instructing the Master for the following reasons:-

(a) it was not given to the Master in advance of his attendance upon the vessel.

(b) it did not cater for the special position of Captain Villondo, who had no prior experience of car carriage, car carriers, the Eurasian Dream or Univan.

(c) the direction in the Briefing Letter required the Master to read a vast amount of documentation, including Univan manuals which ran to hundreds of pages and about 100 technical equipment manuals.

(d) the task of reading the Univan manuals would have occupied 2 to 3 weeks of the Master's time whilst on board the vessel.

(e) the Briefing Letter ought either to have summarised all the key guidance to be given to the Master in relation to emergency procedures or to have directed him in a focused manner to the relevant manuals or parts of manuals dealing with such matters.

(16) The Emergency Procedures Manual (and the other Univan manuals) failed to give guidance as to:

(a) the supervision of stevedores;

(b) the importance of gas-tight doors as fire-fighting equipment;

(c) the efficient use of the CO^2 system (including the speed with which it should be deployed and the steps to be taken to permit such deployment);

(d) the evacuation of personnel.

Instead, the Manual contained guidance for fighting fire on other types of vessel. Such material was irrelevant and the Manual was 'put to one side' by the Master on this basis. However, if acted upon, the Manual was misleading and dangerous: it stated (for example) that, in the laden condition, there was little that the Emergency Response Team could do in the event of a fire and made no mention of any steps which might be taken to fight such a fire.

(17) In accordance with SOLAS, fire-fighting instructions and procedures in particular should have been concentrated in one concise and clear manual, catering specifically for the Eurasian Dream. The Master himself complained of the fact that he had not been given such a manual. Univan should have provided the vessel with clear checklists of the essential actions to be taken in the event of fire: (a) at sea (b) in port.

(18) The vessel was not, but ought to have been, provided with specific documentation dealing with:-

(a) the characteristics of car carriers in general and the Eurasian Dream in particular;

(b) the carriage of vehicles in general and on the Eurasian Dream in particular;

(c) the danger of fire on car carriers;

(d) the precautions to be taken to avoid fire on car carriers, including:

(i) instructions for the safe handling of second-hand vehicles;

(ii) instructions for the supervision of stevedores and the prohibition of hazardous activities by stevedores or others, such as simultaneous and proximate jump-starting and refuelling operations in the same area or on the same vehicle.

(e) the importance of gas-tight doors in fire fighting;

(f) the importance of using CO^2 as a front line defence and without delay in the event of a deck fire and simple instructions for its use.

(g) procedures for evacuating the fire zones or keeping personnel out of such zones.

A reasonably prudent owner, knowing the relevant facts, would not have allowed the Eurasian Dream to put to sea with the Master and crew, with their state of knowledge, training and instruction.

The Loss or Damage was Attributable to the Unseaworthiness of the Eurasian Dream

152. I find that the claimants have proved that the loss and damage in question was caused by the unseaworthiness of the Eurasian Dream.

(i) The fire would not have broken out if the Master and the crew had been properly instructed and trained in the relevant respects identified above. The Master and crew were ignorant as to the peculiar hazards of car carriage and car carriers in the respects set out above. The Univan manuals failed to give guidance as to the supervision of stevedores. The vessel was not, but ought to have been, provided with specific documentation

dealing with the danger of fire on car carriers and the precautions to be taken to avoid fire on car carriers including the supervision of stevedores and the prohibition of hazardous activities by stevedores (such as simultaneous and proximate jump-starting and refuelling operations). The crew (and in particular the Third Officer) permitted simultaneous and proximate refuelling/jump-starting, which should have been prohibited. Had the crew (and in particular the Third Officer) been properly instructed and trained they (and in particular the Third Officer) would not have permitted simultaneous and proximate refuelling/jump-starting and there would not have been a fire.

(ii) Further or alternatively if:

(a) the Third Officer and other members of the crew had had a sufficient number of walkie-talkies; and

(b) the fire extinguishers on Deck 4 had been properly serviced; and

(c) the Third Officer and other members of the crew had been properly instructed, trained and drilled,

I find that the original fire (which was small) would have been contained and put out. The fire damage would have been limited to one or two vehicles.

153. In case I am wrong as to the above, further or alternatively I find that if the vessel had fulfilled the obligation of seaworthiness (and not been subject to the cumulative set of deficiencies identified above) the Master and crew would have properly and timeously deployed CO^2 within zone B (without any danger to life), with the result that the fire would have been confined to zone B. Had it been, the damage would have been contained as set out in Dr. Craggs' first report.

Due Diligence

154. I find that the defendants have failed to prove that they and those for whom they are responsible exercised due diligence to make the ship seaworthy in the relevant respects. The defendants as bill of lading carriers are liable for the want of due diligence by the owners/managers and for the want of due diligence of the Master in so far as the first defendants or the owners or managers delegated to him their duties as to seaworthiness.

155. The exercise of due diligence is equivalent to the exercise of reasonable care and skill. Lack of due diligence is negligence and in this case there were numerous failures and errors of judgment that amounted to professional negligence listed above under the headings 'The Vessel's Equipment', 'Competence/Efficiency of the Master and Crew' and 'Adequacy of the Documentation Supplied to the Vessel'.

156. I refer to my summary of the evidence of the witnesses of fact and the expert witnesses and the numerous failures and errors of judgment reflected therein.

Article III, rule 2

157. In view of my findings as set out above it is not necessary to consider the claimants' alternative case under Article III rule 2.

Conclusion

158. For the reasons set out above there will be judgment for the claimants.

Mr. C. Priday and Mr. S. Kerr (instructed by Richards Butler for the Claimants).
Mr. G. Charkham (instructed by Hill Taylor Dickinson for the Defendants).