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Case No: 2012 FOLIO 198

**IN THE HIGH COURT OF JUSTICE**  
**QUEEN'S BENCH DIVISION**  
**COMMERCIAL COURT**

Rolls Building  
Fetter Lane, London, EC4A 1NL

Date: 15/01/2015

**Before:**

**THE HONOURABLE MR JUSTICE FLAUX**

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**Between:**

(1) SUEZ FORTUNE INVESTMENTS LTD **Claimants**  
(2) PIRAEUS BANK AE

- and -

(1) TALBOT UNDERWRITING LTD **Defendants**  
(2) HISCOX SYNDICATES LTD  
(3) QBE CORPORATE LTD  
(4) CHAUCER CORPORATE CAPITAL (NO.  
2) LTD  
(5) MARKEL CAPITAL LTD  
(6) CATLIN SYNDICATE LTD  
(7) APRILGRANGE LTD  
(8) BRIT UW LTD  
(9) NOVAE CORPORATE UNDERWRITING  
LTD  
(10) GAI INDEMNITY LTD

**“M/V BRILLANTE VIRTUOSO”**  
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**Mr Peter Macdonald Eggers QC Mr Tim Jenns and Mr Richard Sarll** (instructed by **Hill Dickinson LLP** for the **First Claimant** and by **Reed Smith LLP** for the **Second Claimant**) for the **Claimants**

**Mr David Goldstone QC & Ms Nichola Warrender** (instructed by **Norton Rose Fulbright LLP**) for the **Defendants**

Hearing dates: 19th, 20th Nov, 24th to 27th Nov, 1st, 2nd, 4th, 10th and 11th Dec 2014

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**Approved Judgment**

I direct that pursuant to CPR PD 39A para 6.1 no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

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THE HONOURABLE MR JUSTICE FLAUX

## The Honourable Mr Justice Flaux:

### Introduction

1. In early July 2011, the tanker *Brillante Virtuoso* (“the vessel”) owned by the first claimant (“the owners”) was en route from Kerch in Ukraine to Qingdao in China, carrying a cargo of 141,000 metric tons of fuel oil. The vessel was insured against war risks under a policy issued by the defendants (“the insurers”). The owners and the second claimant (“the bank”), which was the mortgagee of the vessel, were, on the claimants’ case, co-assured under the policy. The claimants’ case is that the bank was also the assignee and named loss payee under the policy. The status of the bank in relation to the insurance remains disputed by the insurers. The agreed value of the vessel under the hull and machinery section of the policy (Section A) was U.S. \$55 million and a further U.S. \$22 million under the increased value section (Section B).
2. Since the vessel was due to transit the Gulf of Aden and the Indian Ocean where there is a risk of pirate attacks, the owners had made arrangements for an unarmed security team to embark at Aden. The claimants’ case is as follows. Whilst the vessel was waiting off Aden on 5 July 2011, armed uniformed men in a small boat approached describing themselves as the “port authorities” and were permitted to board, but they were in fact pirates. Once on board, they threatened the Master and ordered him to sail to Somalia. After the main engine stopped and could not be restarted, the armed men detonated an explosive device in the purifier room in the engine room. The insurers have put in issue the identity of the persons who boarded, what they threatened or demanded whilst on board, exactly what happened in the engine room and whether those persons detonated the explosive device in the purifier room, although it is common ground that an explosive device was detonated and that the explosion caused a fire which engulfed the engine room and accommodation and engine funnel casing. The vessel was a dead ship without power.
3. The crew raised the alarm in the early hours of 6th July 2011 (by which time the armed men had left the vessel) and were soon rescued by the U.S. navy vessel *USS Philippine Seas*. On the same day the owners entered into a LOF salvage contract with Five Oceans Salvage (“FOS”). Salvage operations were carried out between 6 July 2011 and 7 October 2011 which included ensuring that the fire on board was extinguished and dewatering the engine room, before towing the vessel to Khor Fakkan where a ship-to-ship (“STS”) transfer of the cargo was undertaken. After the STS operation the salvors redelivered the vessel to the owners on 7 October 2011. The vessel remained a dead ship anchored in international waters and the owners hired two tugs to stand by the vessel from 7 October 2011 until 15 March 2012 when she was delivered to buyers to whom she was sold for scrap.
4. The vessel was inspected twice during the salvage operations by the owners’ consultant surveyor Mr Paikopoulos of New York Ship Surveyors (on each occasion in company with a surveyor for the insurers and on the second occasion fire experts). After the redelivery of the vessel, Mr Paikopoulos inspected the vessel for a third time, prepared preliminary and final repair specifications and then sought repair quotations from various shipyards in the Middle East and China for the cleaning and repair of the vessel. He formed the opinion that the cost of repair would exceed the insured value of U.S. \$55 million. Accordingly on 7 December 2011, the owners tendered notice of abandonment (“NOA”) to the insurers declaring the vessel a

constructive total loss (“CTL”). The insurers rejected the NOA the same day but agreed that the question whether the vessel was a CTL should be determined as of that date.

5. Thereafter, on 12 December 2011, the owners instructed shipbrokers, Allied Shipbroking to sell the vessel to a suitable buyer for scrap. However, a month later, Allied reported that, despite extensive efforts to find a buyer, they had not been able to generate any real interest because of the problems with the vessel.
6. On 8 February 2012 the claim form in these proceedings was issued. Thereafter, the UK Club, the vessel’s P & I Club declined to renew the P&I cover with effect from 20 February 2012 on the basis that the vessel was “commercially lost”. The owners were still incurring expenses and the sale of the vessel became imperative. On 20 February 2012, Allied procured an offer to purchase the vessel from Aryana Shipping Limited, a nominee of GMS, well-known middlemen for scrap sales, of U.S. \$700,000 “as is where is”. The owners’ insurance brokers emailed the insurers informing them that the vessel would be sold for scrap unless the insurers objected by close of business that day with full and adequate reasons. No objections were received and accordingly, on 21 February 2012, a memorandum of agreement (“MOA”) was signed by the owners and Aryana Shipping.
7. Until towards the end of the trial, the insurers were disputing whether that sale price of U.S. \$700,000 represented the real value of the vessel in a damaged, uncleaned condition. They called as a factual witness a ship broker, Mr Phillip Hadfield, who said he had had an offer from a supposedly interested party for a much higher price which he passed to Arrow, ship brokers in London whom he understood acted for the owners, but I am quite satisfied that whatever else may have happened, that offer was never passed to the owners as it is inconceivable that if it had been, the owners would not have followed it up. The parties exchanged expert valuation evidence from ship brokers, but in the event it was not necessary to call that evidence, because it was agreed between the parties, for the purposes only of calculating the partial loss indemnity, that the damaged value of the vessel was U.S. \$700,000 and the repaired sound value of the vessel was U.S. \$10,200,000. In the circumstances, it is not necessary to refer in any more detail to the evidence of Mr Hadfield or the course of negotiations for the sale of the vessel.
8. The claimants’ primary case is that the vessel suffered loss and damage by reason of a peril or perils insured against, namely the acts of pirates and/or persons acting maliciously, alternatively terrorists and/or persons acting from a political motive and/or the vessel suffered loss and damage by reason of piracy, vandalism, sabotage, violent theft and/or malicious mischief. The claimants claim an indemnity for (i) a CTL, alternatively (ii) if the vessel is not a CTL for partial loss and loss of hire and (iii) sue and labour expenses incurred.
9. The insurers’ primary defence is that the claimants are not entitled to cover under the policy because, by delaying transit through the Gulf of Aden and/or calling at a port or place within the Gulf, the owners were in breach of the Talbot Gulf of Aden warranty which provided: “*When transiting, vessels/craft shall not call at any port or place or delay their passage in the transfer of cargo, stores, personnel or the like*” and/or the owners were in breach of the warranty by failing to apply Best Management Practices to Deter Piracy. The claimants deny that any such defence is

available, contending that the call off Aden to embark the security team was with the insurers' knowledge and consent and there was no failure by the owners, managers or Master to follow Best Management Practices to Deter Piracy.

10. The insurers dispute the extent of the damage to the vessel and the cost of repair, although by the end of the trial, the difference between the parties as to the extent of damage had narrowed considerably and the real dispute between the expert surveyors was as to what repairs were necessary and their cost. The insurers dispute that the vessel was a CTL and take issue with the claimants on their calculation of the alternative partial damage claim and as to their entitlement in that event to loss of hire cover. The insurers also dispute the amount and the period of the sue and labour expenses claimed.
11. At the case management conference on 8 November 2013, I ordered a split trial, with the issue as to whether the vessel was a CTL and the other quantum issues to be tried first, on the ground that it was agreed between the parties that this was a sensible course, since once the parameters of the recoverable amount of any successful claim were known, it was likely the parties would be able to resolve their differences.

The issues

12. At the outset of the trial, the issues to be determined at this stage were as follows:
  - i) Was the vessel a CTL?
  - ii) Have the claimants lost the right to claim for a CTL by the sale of the vessel?
  - iii) Was the NOA served on behalf of the bank?
  - iv) If the vessel was not a CTL, what is the measure of indemnity recoverable by the claimants for a partial loss?
  - v) Are the claimants entitled to an indemnity for Loss of Hire?
  - vi) Are the claimants entitled to an indemnity for salvage, tug hire and port expenses incurred since the date of the casualty in respect of the vessel as (a) salvage, (b) sue and labour, and/or (c) by reason of an election made by the insurers under section 63 or 79 of the Marine Insurance Act 1906?
13. In closing submissions, Mr David Goldstone QC on behalf of the insurers abandoned any suggestion that the NOA was not served on behalf of both the owners and the bank, so the third issue fell away. Also, although he did not formally abandon the second issue, that the owners had lost the right to claim for a CTL by selling the vessel, he did not address any specific submissions concerning that issue. For reasons I will deal with shortly later in the judgment, the suggestion that the owners had lost their right to claim for a CTL by selling the vessel is misconceived.

The terms of the policy

14. The Policy incorporated the Institute War and Strikes Clauses - Hulls - Time (1.10.83), as amended by the Violent Theft, Piracy and Barratry Extension, and contained *inter alia* the following provisions:

## **“1 PERILS**

Subject always to the exclusions hereinafter referred to, this insurance covers loss of or damage to the Vessel caused by: ...

1.2 capture seizure arrest restraint or detainment, and the consequences thereof or any attempt thereat ...

1.5 any terrorist or any person acting maliciously or from a political motive ...

1.7 violent theft by persons from outside the Vessel

1.8 piracy ...

## **2 INCORPORATION**

The Institute Time Clauses - Hulls 1/10/83 ... are deemed to be incorporated in this insurance in so far as they do not conflict with the provisions of these clauses ...”

15. The Institute Time Clauses - Hulls 1/10/83 incorporated into the Policy contained *inter alia* the following provisions:

### **“11 GENERAL AVERAGE AND SALVAGE**

11.1 This insurance covers the Vessel’s proportion of salvage, salvage charges and/or general average ...

### **13 DUTY OF ASSURED (SUE AND LABOUR)**

13.1 In case of any loss or misfortune it is the duty of the Assured and their servants and agents to take such measures as may be reasonable for the purpose of averting or minimising a loss which would be recoverable under this insurance.

13.2 Subject to the provision below and to Clause 12 the Underwriters will contribute to charges properly and reasonably incurred by the Assured their servants or agents for such measures ...

13.6 The sum recoverable under this Clause 13 shall be in addition to the loss otherwise recoverable under this insurance but shall in no circumstances exceed the amount insured under this insurance in respect of the Vessel ...

### **18 UNREPAIRED DAMAGE**

18.1 The measure of indemnity in respect of claims for unrepaired damage shall be the reasonable depreciation in the market value of the Vessel at the time this insurance terminates arising from such unrepaired damage, but not exceeding the reasonable cost of repairs ...

## **19 CONSTRUCTIVE TOTAL LOSS**

19.1 In ascertaining whether the Vessel is a constructive total loss, the insured value shall be taken as the repaired value and nothing in respect of the damaged or break-up value of the Vessel or wreck shall be taken into account.

19.2 No claim for constructive total loss based upon the cost of recovery and/or repair of the Vessel shall be recoverable hereunder unless such cost would exceed the insured value ...”.

16. The Institute Time Clauses - Hulls - Disbursements and/or Increased Value (Total Loss Only including Excess Liabilities) (1.10.83) incorporated into the Policy contained *inter alia* the following provisions:

### **“9 CONSTRUCTIVE TOTAL LOSS**

9.1 In ascertaining whether the vessel is a constructive total loss, the insured value in the insurance on hull and machinery shall be taken as the repaired value and nothing in respect of the damaged or break-up value of the vessel or wreck shall be taken into account.

9.2 No claim for constructive total loss based upon the cost of recovery and/or repair of the vessel shall be recoverable hereunder unless such cost would exceed the insured value in the insurance on hull and machinery ...”

17. The Policy provided for cover against Loss of Hire in these terms:

“Including War Loss of Hire cover, conditions:

This policy to pay up to total amounts as above, fixed and agreed, chartered or unchartered for up to 180 days in all each vessel.

Excess 7 days any one accident each vessel, but nil where deductible is applied.

Underwriters hereby agree to include the risks of Piracy and Mutiny herein in respect of Loss of Hire.

Subject to Loss of Charter Hire Insurance as LPO454 and LPO444 as far as applicable but this policy only to pay claims

in consequence of Loss, Damage or occurrence covered by Institute War Strikes Clauses - Hulls (01.10.83) Clause 3 period and that in LPO444 amended to pay after the expiry of 180 days and cover continues whether vessel(s) chartered or unchartered - Clause 4 amended to permit above trading ...

It is hereby noted and agreed that in the event that a vessel is hijacked or detained by Pirates with or without damage, this policy will respond in respect of Loss of Hire for the period of hijack or detention by pirates up to policy limits ...

No claim to attach to this insurance if the occurrence in respect of which such claim arises the cause of the vessel becoming a Total Loss (Actual or Constructive) excluding however, Constructive Total Loss covered by Institute War Strikes Clauses - Hulls (1.10.83) Clause 3 as amended by London Blocking and Trapping Addendum LP0444 ...”

18. The LPO454 wording incorporated into the Policy contained *inter alia* the following provisions:

“1. If in consequence of any of the following events:

- (a) loss, damage or occurrence covered by ... Institute War and Strikes Clauses - Hulls (1/10/83) ...

occurring during the period of this insurance the Vessel is prevented from earning hire for a period in excess of [7 days if applicable] then this insurance shall pay [US\$65,000] of the sum hereby insured [US\$11,700,000] for each 24 hours after the expiration of the said days during which the Vessel is so prevented from earning hire for not exceeding a further [180] days in respect of any one accident or occurrence ...provided that the repairs in respect of which a claim is made hereunder are completed within 12 months of the expiry of the period covered by this policy.

2. No claim to attach to this insurance if the occurrence in respect of which such claim arises is the cause of the vessel becoming a Total Loss (Actual or Constructive) ...
8. It is understood and agreed that if the Vessel is prevented from earning hire on separate occasions, which shall not in any event exceed three, in respect of any one accident or occurrence falling within this insurance, for the purpose of ascertaining the amount claimable hereunder the total time that the Vessel is off hire shall be taken into account, provided that the repairs are completed within 12 months of the expiry of this insurance.



12. The Assured shall effect, or cause to be effected, all repairs (temporary or permanent) with due diligence and dispatch.”

The witness evidence

19. Before considering the chronology of the casualty in more detail, I should set out my findings about the witness evidence called by the parties. The claimants called Mr Elias Bezas, who is the sole director of the first claimant who said in his first witness statement that he had the role of coordinating commercial matters, including accountancy. If one took his witness statements at face value, one would think that he had been involved with the coordination of the salvage operations from the owners’ perspective, with the instruction of Mr Paikopoulos and with the efforts to sell the vessel. However, somewhat surprisingly, in cross-examination, he purported to have had minimal involvement or responsibility for any of those matters, notwithstanding that he had produced witness statements dealing with them. What emerged was that the primary responsibility for dealing with the casualty was that of Mr Marios Iliopoulos, who was evidently the ultimate beneficial owner of the vessel or at least the person Mr Bezas recognised as “the boss”. As a consequence, Mr Bezas’ evidence both in his witness statements (which were essentially a collation of information gleaned from others within the owners, principally Mr Iliopoulos) and in his oral evidence, in which, as I have said, he purported to know very little, was of very limited assistance to the court. To an extent, I felt he downplayed his involvement, particularly as to whether he discussed the casualty with Mr Paikopoulos (who volunteered that he was in the next door office) and I accepted Mr Paikopoulos’ evidence that he had discussed the casualty and his inspections not only with Mr Iliopoulos, but also with Mr Bezas.
20. The ostensible reticence of Mr Bezas no doubt fuelled the insurers’ suspicions and, in their written closing submissions, they were highly critical of the owners’ failure to call Mr Iliopoulos and maintained that there had been a failure on the part of the owners to give full and proper disclosure. Whilst it may very well be the case that Mr Iliopoulos could have assisted in relation to a number of matters, I did not regard the failure to call him to give evidence as in any sense sinister or suspicious. As I pointed out during the course of oral closing submissions, this is not a case where the insurers have ever alleged that the claim being advanced by the owners was deliberately exaggerated or fraudulent and, in those circumstances, there was no necessity to call Mr Iliopoulos simply to be knocked down as an “Aunt Sally” in relation to an unpleaded defence. Equally, in my judgment, if there are gaps in the owners’ disclosure, they are not deliberate but no more than what inevitably happens in many cases, that certain documentation cannot be found or may not have existed in the first place.
21. Mr George Paikopoulos, as I have said, was a marine consultant and surveyor from NYSS, based in the same office building in the Piraeus as the owners. He has 42 years of relevant experience. He gave his evidence by video link from Greece assisted by an interpreter. Although the interpreter was excellent, there were inevitably limitations with the video link in assessing him as a witness. In their written closing submissions, the insurers launched what can only be described as a full frontal attack on his objectivity and integrity, suggesting that his remuneration was dependent upon the successful outcome of these proceedings and that he had produced exaggerated repair specifications and changed his assessment of the cost of repairs from U.S. \$23-27

million to more than U.S. \$55 million, when he discovered the insured value of the vessel. I consider this attack was unfair: he had received some remuneration of about €59,000 during the course of 2012 and was expecting further payment up to U.S. \$300,000 for all the work he had done, but he denied that it had been agreed that this would only be paid if the claim for a CTL succeeded. In any event, even if that were the case, I do not consider that, absent a pleaded case that the claim was an exaggerated or fraudulent one, there is any basis for impugning his integrity. His original estimate of the cost of repair was based on the limited initial inspection he was able to undertake on board on 12 and 13 July 2011 at a time when the engine room was still flooded after the fire fighting efforts of the salvors. His subsequent assessments of the costs of repairs were, as he explained in evidence, his own internal calculations and, although he was taxed about these in cross-examination, I do not consider there is any basis for saying that he deliberately exaggerated the extent of the damage or the cost of repairs. Overall I considered that he was expressing views which he honestly held and was trying to assist the court.

22. In any event, his assessment of the cost or repairs is, in broad terms, supported by the various quotations that he obtained from shipyards, by the quotations obtained by the owners from Chinese shipyards in response to a repair specification prepared in March 2012 by Tecnicas, a division of Bureau Veritas, the well-known classification society and by the expert opinion of the claimants' expert surveyor, Mr John Lillie. Certainly, even if there were any force in the criticisms levelled at Mr Paikopoulos, that formed no basis for any suggestion (which seemed to be made in the insurers' written closing submissions) that the quotations he obtained from the various shipyards, specifically from Drydocks World in Dubai and ASRY in Bahrain were in some way unreliable. At the outset of his oral closing submissions, Mr Goldstone QC made it very clear that it was not being suggested by the insurers either that the claim was fraudulent or that there had been some sort of collusion between the owners or Mr Paikopoulos and the various shipyards which provided quotations for repairs, to produce exaggerated quotations. In those circumstances, not only were the criticisms levelled against Mr Paikopoulos unfair but they were irrelevant to the issues I have to decide. Either the repair specifications he prepared (on the basis of which the yards quoted) were accurate or they were not. In fact, Mr Lillie did not agree with every aspect of Mr Paikopoulos' repair specification (specifically the amount of steelwork renewal required and Mr Paikopoulos' assessment that all the machinery and equipment in the engine room required replacement) and he carried out adjustments to the quotations to reflect those differences of view.
23. The owners also called Mr Nikolaos Pappas, the managing director of FOS, the salvors. He gave evidence, by reference to the various situation reports ("sitreps") produced by the salvage master Captain Papadelis, about the salvage operations. He also attended the STS operation throughout. He was a knowledgeable and impressive witness. Only two aspects of his evidence were critical to the issue of whether the vessel was a CTL. The first was his evidence that he saw oily residues on top of the ballast water in one or two ballast tanks during his inspection prior to the STS operation, confirming that the ballast on board was dirty and contaminated with oil residues. I am quite satisfied both that he did observe what he said he saw and that what he was describing was contaminated ballast.

24. The second aspect was concerned with the fact that, prior to towing the vessel from Aden to Khor Fakkan, the salvors pumped out the seawater with which they had flooded the engine room and pump room in order to extinguish the fire. The insurers' case at the outset of the trial, supported by their preservation expert, Captain Stirling, was that the salvors should have left the engine room flooded during the tow to Khor Fakkan and only dewatered at Khor Fakkan, to enable cleaning and preservation work to be carried out on the main engine and other machinery at Khor Fakkan. The pleaded case was that this was a breach by the owners of their duty to avert or minimise the loss under clause 13.1 of the Institute Time Clauses-Hulls or under section 78(4) of the Marine Insurance Act 1906.
25. In his opening submissions at the trial Mr Goldstone QC made it clear that he was not putting this matter as a breach of duty by the owners on the basis that, as he put it, it was clear from a very early stage that the vessel was never going to be repaired, so that the cleaning and preservation works were never going to be carried out. Rather, the way he put it was that, in considering the question whether the vessel was a CTL, where the court has to consider what a prudent uninsured owner would have done, I should decide that a prudent uninsured owner would not have dewatered before the tow and would have carried out cleaning and preservation works which, overall, would have reduced somewhat the cost of repair, since there would have been less corrosion of machinery. However, Mr Goldstone made it clear that he was not criticising the salvors or suggesting that they were negligent.
26. Mr Pappas had produced a second witness statement setting out the factors the salvors had in mind in deciding to dewater the engine room prior to commencing the tow. These included establishing that the vessel was watertight for the tow and that there were no uncontrolled leaks, avoiding the risk of structural failure and the environmental risk of an engine room full of oily water and avoiding issues as to the stress and stability of the vessel. He was cross-examined about these factors by reference to Captain Stirling's views, but remained firm in his position that dewatering was the prudent course for the salvors to take. In the event, the preservation experts, Mr Chell for the claimants and Captain Stirling for the insurers were not called to give evidence. Mr Goldstone QC accepted in his oral opening submissions that, if I accepted the evidence of Mr Pappas, that was the end of this point. I do accept his evidence, including his conclusion in his second witness statement (on which he was not specifically challenged) that the risk of further damage to the vessel and the engine room, including damage caused by the physical impact of sloshing water, was considerably higher than the cost of any corrosion damage which would have been saved by towing the vessel with a flooded engine room. In my judgment, the decision to dewater the engine room before commencing the tow to Khor Fakkan was not only one any prudent salvor would have taken, but one the prudent uninsured shipowner would have taken.
27. The claimants called Dr James Cleland, an independent corrosion expert who attended the vessel off Fujairah on 13 February 2012 at the request of Mr Moschos of Moss Marine Management S.A., consultants retained by the bank. He was called as a factual witness giving evidence about his observations during his attendance on board. He was on board at the same time as Mr Drikos a surveyor from Moss Marine and three technicians carrying out work with laser equipment to measure for any irregularities in the main deck plating over the cargo tanks. There was another man

there whom he thought was British who was there in some sort of supervisory capacity which he thought was to do with removal of oil from the cargo tanks. To the extent that the insurers sought to rely upon this to suggest that some tank cleaning took place before delivery of the vessel to Aryana, I reject that suggestion. For reasons I will come back to in detail later, the preponderance of the evidence is that there was no tank cleaning prior to delivery under the MOA. I do not consider Mr Cleland's rather vague evidence about this person, which may be mistaken as to his role, a reliable basis for a contrary conclusion. Apart from this point, Dr Cleland's evidence as to his observations on board was essentially in line with other surveyors and consultants who were on board.

28. The claimants also called Mr Panagiotis Papagiannis, managing director of Moss Marine who specialises in ship condition and damage surveys. Moss Marine were instructed by the bank on 6 September 2011. He went on board the vessel on 25 October 2011, together with Mr Paikopoulos and an inspector from the vessel's classification society, the Russian Maritime Register of Shipping. His evidence was that conditions in the engine room were difficult with sludge all over the decks and ladders at the lower levels. It was dark and he had to proceed with a torch. Privilege was waived by the claimants in the survey report he produced and he was cross-examined principally about his observation recorded in that report that all the machinery and equipment in the engine room was scrap and required complete renewal. Mr Goldstone QC showed him photographs of certain items, the coolers, the cargo pumps and the boiler feed pumps where it was difficult to see any physical damage, but he insisted that everything in the engine room had been affected by overheating and thus had suffered heat damage. It seemed to me that this was his genuinely held view, but he was not called as an expert, whereas Mr Lillie, who was the claimant's expert and who also attended on board, concluded that not all the machinery in the engine room required replacement.
29. The claimants were proposing to call Dr Alan Mitcheson the well known fire expert of JH Burgoyne & Partners who attended on board the vessel on behalf of the owners between 24 and 26 August 2011 together with Dr Alan Craggs of Minton Treharne & Davies Limited for the insurers and other fire experts. He was to be called as a witness of fact as to his physical observations on board, as was Dr Craggs. In the event, the insurers did not require Dr Mitcheson to attend for cross-examination so that his witness statement is unchallenged evidence as to the damage he observed on board during his attendance. Since the insurers elected not to cross-examine Dr Mitcheson, the claimants elected not to cross-examine Dr Craggs.
30. Finally, the claimants called Mr Grigorios Leotsakos, the manager of the shipping branch of the bank. His evidence was concerned with confirmation that the NOA was given with the bank's knowledge and approval and that, although the bank's consultant initially had reservations that the sale price was too low, he changed his view after further research and the bank consented to the sale and agreed to release the mortgage. Mr Leotsakos was clearly a straightforward and impressive witness and it was something of a surprise that the insurers required to cross-examine him at all. Given that the third issue has been abandoned by the insurers and the unrepaired value agreed at the sale price figure for the purposes only of calculating the partial loss indemnity, his evidence was ultimately unnecessary.

31. The same was true of Mr Philip Hadfield of D.C. Miles who was a ship broker originally instructed by the cargo interests to value the vessel in the context of the salvage arbitration, but who was called by the insurers. Given that values are now agreed for the purposes only of calculating the partial loss indemnity, his evidence is no longer really relevant and, although he was a straightforward witness who was trying to assist the court, his evidence was of limited assistance.
32. The insurers also called Mr John Gibson of Brookes Bell Singapore who was instructed by the insurers to carry out an inspection of the vessel which he conducted in the company of Mr Paikopoulos on 16 February 2012. He was called as a witness of fact to give evidence about his observations on board. He was very fair in his evidence, accepting for example that there may have been damage by indentation of the hull as observed by Dr Mitcheson, even though he had no recollection of seeing it himself. As set out in more detail below in relation to the damage to the main deck, he said in cross-examination that he could not recall the extent of the damage on the cross alleyway between the accommodation block and the engine funnel casing, but accepted that to the extent that there was extensive fire damage to the second deck in the engine room below, that would indicate that there would have been heat damage and buckling to the main deck above.
33. The only expert evidence ultimately called by the parties was from the expert surveyors who gave evidence about the extent of damage and the cost of repairs. Mr John Lillie called by the claimants is an engineer and surveyor with wide-ranging experience of casualties and repairs, having overseen repair works all over the world and held senior positions within the Salvage Association. He was an impressive and measured witness who gave his evidence clearly and fairly, whilst maintaining his opinion where he considered it justified. His evidence about the cost of repairs at shipyards in the Middle East was effectively unchallenged (save in those limited areas where there was a difference between the experts as to the extent of repair required). Mr Goldstone QC submitted that he had limited experience of repairs in a Chinese shipyard when compared with Mr Brendon Cuffe, the insurers' expert from Brookes Bell in Shanghai. I was unimpressed by that submission. I considered Mr Lillie an expert of immense experience all over the world including China and from that experience was able to challenge the suggestion made by Mr Cuffe that repairs could have been performed much more cheaply in China than in the Middle East. I found Mr Lillie's evidence compelling that what might be described as Mr Cuffe's "bargain basement" approach to the cost of repair in China was not what happens in the real world.
34. In contrast I found Mr Cuffe's evidence unsatisfactory in a number of respects. First, his maintenance of the position that repairs could have been undertaken in China without the whole vessel being cleaned to a "gas free for hot works" standard but only some form of "gas free for safe man entry plus" standard, in the face of the other overwhelming evidence that any responsible shipyard would have required all the tanks to be cleaned to a hot works standard before commencing any repairs, showed an obduracy which cast doubt on his objectivity generally. I will need to deal with this point in more detail below, but I simply did not accept his evidence on this issue.
35. Second, although he had not conducted an inspection of the vessel himself, in contrast to Mr Lillie and Mr Gibson, Mr Paikopoulos and Dr Mitcheson, amongst others and was thus often dependent on photographs for his opinions about the extent of the

damage, he maintained his position on the limited extent of the damage to certain areas and items (specifically the main deck in way of the accommodation, the boilers and the generators) in the face of contradictory evidence from those who had inspected the vessel. Some of his recommendations also contradicted those of Class.

36. Third, some of his evidence as to the cost of repair was derived from Mr Chen, the Marketing Manager, Ship Repair Business Department, of Chengxi Shipyard. Nothing is known of the expertise of Mr Chen, nor was he called to be cross-examined, so that although I would not go so far as to accept the claimants' submission that such evidence was inadmissible, very little weight can be attached to it.
37. There is also the general point that Mr Cuffe's experience and expertise was limited to shipyards in China and he lacked the broad experience and perspective of Mr Lillie. Save in those instances which I identify below in the detailed sections of the judgment, where Mr Lillie and Mr Cuffe differed as to the extent of damage and the cost of repair, I prefer the evidence of Mr Lillie.

#### Detailed chronology

38. On 15 June 2011, the vessel was voyage chartered to Solal Shipping SA to carry a cargo of fuel oil from Kerch, Ukraine to Qingdao, China, at a lump sum freight of U.S. \$3,210,000. She sailed from the load port on 23 June 2011 with approximately 141,000 metric tons of cargo on board. Having transited the Suez Canal, she stemmed bunkers at Jeddah. At about 21.00 hours local time on 5 July 2011, the vessel arrived outside Yemeni territorial waters and waited to embark the security team. During that night whilst the vessel was drifting, the vessel was attacked by an armed group of men who approached in a small unlit boat. The precise circumstances of the attack and of the events of that night are disputed by the insurers and are issues for determination at the subsequent trial of stage two of the case. However, it is common ground that an explosive device was detonated in the purifier room on the third deck of the engine room which caused a fire which spread outwards and upwards, destroying a substantial proportion of the machinery and equipment on the third deck and the second deck of the engine room above it and then gutting the accommodation block and main engine funnel casing above main deck level. The engine room and pump room were flooded to just above the bottom of the turbine deck level (being the deck below the third deck) either by fire fighting water or leakage or a combination of the two.
39. As already noted in the Introduction, the armed men abandoned the vessel in the early hours of 6 July 2011 and the crew raised the alarm, being rescued by the U.S. navy. The LOF salvage contract between the owners and FOS was signed at 07.00 hours Greek time that day. Mr Pappas engaged Poseidon Salvage based in Yemen as sub-contractors to provide immediate assistance to the vessel. Poseidon's tug *Voukefalas* arrived at the vessel's location from Aden on 6 July 2011 at about 07.00 hours local time and commenced fire fighting and boundary cooling operations at 14.00 hours local time. FOS mobilised their powerful salvage tug *Caribbean Fos*, with 110 metric tons bollard pull from Lavrion in Greece.
40. After the LOF was entered with FOS, later on 6 July 2011 the vessel's managers Central Mare entered a second LOF with Tsavliris Salvage, without the owners' authority. This was apparently done because of a concern that a powerful standby tug

was needed, but the *Caribbean Fos* was too far away, whereas Tsavliris had another tug, the *Mubarak Challenger*, much closer to the casualty. That tug arrived at the casualty at about 19.15 hours local time on 7 July 2011. Although the insurers reserved their position the following day about the fact that there were two LOFs, any problem this might have caused was resolved by FOS agreeing to charter the *Mubarak Challenger*. Although the insurers maintained that this issue of the competing LOFs was one of the issues on which they would have wished to cross-examine Mr Iliopoulos, this was a complete non-point quickly resolved by the salvors FOS.

41. The Poseidon tug continued the fire fighting, having connected the towrope and towed the vessel away from the coast, to outside Yemeni territorial waters. By 22.00 hours on 7 July 2011, the fire in the accommodation block had been extinguished and by 11.00 hours on 8 July 2011, the fire in the engine room had been extinguished. A fire fighting team remained on board to cool down the engine room and extinguish small pockets of smoke and it was reported that by 10.00 hours on 9 July 2011, all fire and smoke on board had been extinguished.
42. On 8 July 2011, the salvors produced a preliminary salvage plan which provided for two options: (i) towage of the vessel to Oman or the UAE for a STS transfer of the cargo and (ii) a longer tow to the discharge port in China. The plan set out various actions to be taken before any tow commenced, including pumping out the fire fighting water from the engine room and pump room and sealing off the sea chests and water intakes. As Mr Pappas explained in evidence, this was necessary to ensure the vessel was watertight for any tow. The U.K. Club, the vessel's P & I Club, subsequently indicated that the STS operation was the more sensible option and it was highly unlikely they would hold covered for a tow to China. The charterers and the salvors also ruled out the option of a tow to China.
43. On 12 and 13 July 2011, the vessel was surveyed by Mr Paikopoulos together with Captain David Mockett of Noble Denton instructed by the insurers. At that stage, the engine room was still full of oily water and sludge up to the turbine deck level and the conditions on board were hazardous, so that a full and thorough inspection was not possible. In cross-examination Mr Paikopoulos said that there was a lot of pitching and rolling so it was impossible to see the situation clearly. Noble Denton reported recommending an STS operation off Aden or Djibouti followed by tow to a repair yard in the Gulf or, if that was not possible, STS operations off Khor Fakkan followed by a tow to Dubai or Bahrain for repair. They were unable to make a full assessment of the damage, other than stating it was extensive, that the accommodation block right up to the bridge was gutted and the engine room was likely to require to be completely refitted. Mr Paikopoulos issued a preliminary casualty report to the owners following that survey in which he gave a preliminary estimate of the cost of repairs of U.S. \$23-27 million "without prejudice".
44. The salvage operations continued, including the use of a floating crane which caused some damage to the shell plating of the hull. The FOS tug *Caribbean Fos* arrived at the casualty on 17 July 2011. After delay in Aden due to financial demands from the Yemeni authorities, the second FOS tug *Coral Sea Fos* arrived at the casualty on 26 July 2011. Between 17 and 22 July 2011 contaminated water had been pumped out of the engine room and pump room into the slops receiving tanks of the floating crane. I have already stated above that I accept Mr Pappas' evidence that it was necessary to

pump out the water before commencing the tow and there is nothing in the insurers' point that the engine room should have been kept flooded during the tow to enable preservation works to be carried out thereafter.

45. After a fair amount of to-ing and fro-ing with the UAE authorities, permission was given to carry out the STS operation at Sharjah. On 27 July 2011, having prepared for the tow, including arranging armed guards for the two FOS tugs, the salvors commenced the tow to Sharjah. The tow encountered heavy weather and there were problems with yawing of the vessel. On 8 August 2011, following further deterioration of the weather, the main towing wire of the *Caribbean Fos* broke and was not reconnected until 12 August 2011. There was an improvement in the weather and the convoy arrived off Sharjah at about 06.30 hours on 21 August 2011.
46. After some further difficulties with securing permission to conduct the STS and other problems not relevant for present purposes, the UAE authorities gave permission on 26 August 2011 for the STS operation to take place at Khor Fakkan anchorage. Between 23 and 26 August 2011 prior to the vessel leaving Sharjah for Khor Fakkan, she was surveyed by a number of different surveyors and consultants, including Mr Paikopoulos for the owners, Mr Richard Wyborn of Noble Denton for the insurers (Captain Mockett having sadly been murdered in the Yemen) and the various fire experts including Dr Alan Mitcheson for the owners and Dr Alan Craggs for the insurers. I set out in detail below the findings made, particularly by Dr Mitcheson, as to the damage to the vessel.
47. Between 4 and 27 September 2011, the STS transfer of the cargo from the vessel into the vessel *Amore Mio II* took place offshore Khor Fakkan. At the end of that operation, ROB/OBQ certificates were issued quantifying the unpumpable cargo remaining on board the vessel as 1,819.28 cubic metres.
48. During September 2011 following his second inspection, Mr Paikopoulos prepared a draft preliminary repair specification which he sent to various shipyards including COSCO in China and Drydocks World in Dubai for quotations. This allowed for 2,500 metric tons of steel to be replaced. On 8 September 2011 Mr Paikopoulos produced an internal estimate of the cost of repair marking up that preliminary repair specification. In his manuscript he increased the amount of steel renewal to 3,000 metric tons. At the time of this internal estimate, he had not received any quotations back and made his estimate based on his previous experience of other repairs. The manuscript on the first page of the estimate states: "*very realistic prices in China only*". He arrived at a cost for items in his preliminary specification of U.S. \$45 million odd, to which he added prices for renewals, painting, towage, wharfage, attendance of surveyors and unforeseen items to arrive at a total of U.S. \$59,360,500. To this he then added another U.S. \$13 million of other items not included in the specification such as the boilers, piping, extra cleaning, general services and insurance.
49. In their written closing submissions the insurers were critical of this exercise, suggesting in effect that Mr Paikopoulos was deliberately "bumping up" the prices, in contrast to his original preliminary estimate of U.S. \$23-27 million, now that he knew that the insured value of the vessel was U.S. \$55 million, in order to achieve a CTL. Ultimately, as I said above, this point and other points like it, which verged on a suggestion that the claim was deliberately exaggerated by the owners, were not



pursued by Mr Goldstone QC on behalf of the insurers. However, in fairness to Mr Paikopoulos I should record that I do not consider there was anything in this point. This was an internal estimate for Mr Paikopoulos' own purposes, not intended to be submitted to insurers and the increase in the estimate from his original preliminary estimate is to be explained, as he said in evidence, by the fact that he had now conducted a much more detailed inspection and had been able to go into the engine room and his prices were revised in the light of that inspection and further consideration.

50. On 20 September 2011, Mr Paikopoulos sent photographs of the damage to the vessel to COSCO to assist them in preparing a quotation. It is evident from a subsequent letter to COSCO of 26 September 2011, that Mr Paikopoulos received a quotation from COSCO between those two dates. Despite searching his files he has not been able to locate that quotation. The suggestion made by the insurers in their written closing submissions that this quotation was somehow deliberately being held back because it did not assist the owners' case is a serious allegation which, again, was ultimately not pursued, but frankly the suggestion is preposterous: why would the owners disclose correspondence which referred to the quotation if they were going to deliberately withhold the quotation? Furthermore, since COSCO quoted later in May 2012, on the basis of the Tecnicas repair specification (which is not that different from Mr Paikopoulos' specification), a total repair cost of U.S. \$54,865,296 after discount, it is inherently unlikely that the cost they gave in their quotation of September 2011 was wildly different. It is clear from Mr Paikopoulos' letter to COSCO of 26 September 2011 that this quotation was on the basis of cutting out and replacing the entire stern section of the vessel (as was the May 2012 quotation). Mr Paikopoulos' recollection is that the September 2011 quotation was about U.S. \$50 million.
51. In his emailed letter and a further email to COSCO on 26 September 2011, Mr Paikopoulos asked COSCO to include in their quotation the cost of cleaning 200 tons of fuel and lube oil in the engine room spaces from broken pipes, 1,000 tons of contaminated oily water in the engine room bilges and of pumping out 700 tons of contaminated bunkers in the two engine room bunker tanks and cleaning those tanks. Although his email refers to waiting for the revised quotation by the following day, he has not located any revised quotation. His evidence was that, because they were proposing to cut out and replace the entire stern section rather than repair the vessel he left matters there and did not take it further. There certainly does not seem to be any further correspondence with COSCO.
52. In late September 2011, Mr Paikopoulos prepared on behalf of the owners a Cleaning Specification for the cleaning and gas-freeing of cargo tanks and lines, slop tanks, the pump room and piping and the engine room, engine room tanks and piping. On the basis of that specification, quotations were sought from a number of companies. The evidence of Mr Paikopoulos and Mr Bezas was that these quotations were being sought in order to clean the vessel to the necessary hot works standard for the vessel to be accepted for repair at a yard in the UAE and as part of assessing the overall cost of repair in order to establish if the vessel was a CTL.
53. In response to that specification, quotations were received: (i) on 27 September 2011 from Dourosteel in Fujairah for U.S. \$5.45 million plus a 20% contingency; (ii) on 28 September 2011 from EMEPCO (or Akron) in Fujairah for U.S. \$7,232,500; (iii) on 2 October 2011 from Drydock World Dubai for U.S. \$6,894,940 and (iv) on 8 October

2011 from DULSCO in Fujairah for U.S. \$6.7 million. These quotations were all for cleaning to the hot works standard and separate quotations were not provided for only cleaning to a gas free for safe man entry standard. However, shortly before the trial, on 22 October 2014, Dourosteel (whose quotation is the one used by Mr Lillie in his pricing of the cleaning element in his assessment of the cost of repair, whether in Dubai or China) stated that if asked to prepare its September 2011 quotation on the basis of cleaning to a gas free safe for man entry standard, the quotation would have been U.S. \$4.1 million, rather than U.S. \$5.45 million.

54. Upon completion of the STS operations on 27 September 2011, the owners asked their local agent, Archipelago Middle East Shipping LLC (“Archipelago”), to confirm whether a lay-by berth was available to enable the LOF to be terminated and the owners to take safe delivery of the vessel. On 29 September 2011, the UAE authorities gave permission for the vessel to leave Khor Fakkan and be towed to Drydocks World in Dubai for repair. On 30 September 2011 Archipelago responded that no lay-by berth was available in the UAE due to the vessel’s current status and the vessel would need to be cleaned and gas-freed before any such berth would be made available. The vessel was towed to outside the UAE limits and dropped anchor 24 nautical miles off Khor Fakkan.
55. Also on 30 September 2011, Mr Paikopoulos sent his preliminary repair specification to Drydocks World and asked them to quote for repair, including for cropping off and replacing the entire aft section if they considered that cheaper. The owners and Mr Paikopoulos were unable to locate a copy of any preliminary quotation provided by Drydocks World in response to this.
56. By 2 October 2011, the owners had not been able to reach agreement on redelivery from the LOF and berthing at Drydocks World. The owners considered that it would take too long and be too expensive to clean the vessel so as to get it into a state where it would be accepted for repair by a UAE yard such as Drydocks World (which would clearly have been to a hot works standard). In those circumstances, in order to render the vessel safe and bring the LOF to an end, the owners elected to take over the salvors’ two standby tugs on a commercial basis. At about 21.00 hours on 7 October 2011, the salvors redelivered the vessel to the owners where she was anchored outside Fujairah port limits. The certificate of redelivery signed by both the owners and the salvors stated that: *“As vessel is presently not in a safe position and condition Owners in this respect have, upon termination of the LOF, simultaneously engaged the two tugs presently alongside in a Tow Hire Standby / Towage Agreement.”*
57. In accordance with that statement, the owners entered into two contracts for the hire of the tugs on the Towhire 2008 Form: (i) with FOS in the case of the *Caribbean Fos* at a hire rate of U.S. \$22,500 per day excluding fuel and lubs and (ii) with Archipelago (presumably on behalf of her owners Radunia International Corporation) for the *Debba V* at a hire rate of U.S. \$23,500 per day excluding fuel and lubs. In their closing submissions, the insurers sought to make much of the fact that each hire contract contained an additional clause 34 under which U.S. \$10,000 per day and U.S. \$5,750 per day respectively would be paid to the tugowners every seven days in arrears with the balance payable when the owners collected their claim from the insurers, but in any event, not later than 100 days after the termination of the services under the hire contract. I do not consider there is anything in the insurers’ point: the

overall contractual obligation was to pay the stated daily hire rate and those additional clauses simply provided owners who were strapped for cash with 100 days credit.

58. In the event, the vessel was attended by (i) the *Caribbean Fos* from 7 October 2011 until 6 February 2012, (ii) the *Debba V* pursuant to this hire contract from 7 October 2011 until 11 January 2012 and then by a further hire contract at the rate of U.S. \$22,700 per day (without any additional clause) from 11 January 2012 until 15 March 2012 when the vessel was delivered to Aryana and (iii) by the *Debba III* in replacement of the *Caribbean Fos* pursuant to a hire contract at a rate of U.S. \$18,750 per day (again without an additional clause) from 6 February 2012 until 15 March 2012.
59. Immediately prior to the redelivery by the salvors, on 6 October 2011 the owners received a Risk Assessment from Alpha Marine Services, marine consultants. That identified as the hazard: *“After completion of the STS operation, the vessel will remain anchored off Khor Fakkan...escorted by one tugboat [identified in the ‘Existing Control Measures’ as of 90 tonnes minimum bollard pull] which will be alongside the vessel. The vessel should always be safely anchored in position and her accommodation and cargo spaces in such condition as to prevent the risk of fire or explosion. The vessel has no power (black out condition) and no crew on board. Therefore the vessel needs the assistance of the tugboat...to heave her anchor, to move or for any other work on board...”* In the section headed ‘Additional Risk Control Measures’ it is provided: *“An additional tugboat, with at least 40 tons bollard pull, should be engaged and be stand-by, in order to assist vessel’s towage in this congested area if for any emergency reason vessel’s movement is required, i.e. anchor dragging, emergency evacuation of the anchorage area for any reason etc.”*
60. That Risk Assessment also recorded the presence on board of 1,700 cubic metres of un-pumpable oil sludge in the cargo tanks and slop tanks, 300 tons of sludge in the engine room, 1,000 tons of oily contaminated water in the engine room bilges and 700 tons of bunkers.
61. A further Risk Assessment was provided by the vessel’s managers Central Mare also dated 6 October 2011. For the hazard of *“Collision/Grounding-Stranding”* the control measures identified include: *“Emergency towing tug assistance (Caribbean Fos and Debba V)”*. Against the hazard *“Oil Pollution/Fire/Explosion”* is stated: *“Cargo and slop tanks contain about 1056.28 m<sup>3</sup> un-pumpable oil/sludge – E/R contains about 300 tons FO and lubricant spillage which has become rubberized sludge – Bilges found with about 1,000 tons oily, Contaminated water – Bunker Tanks contain approximated 700T of FO”*. The control measures for that hazard include: *“Pollution mitigation equipment onboard the attending tug boats deployable within 4-10 hours upon request/Daily Reports by tug boats”*.
62. On 10 October 2011, Mr Paikopoulos produced another internal costs estimate in which the cost of repairs has gone up from the U.S. \$45 million in his September internal estimate to about U.S. \$56.5 million. He explained that this was another working document on which he was calculating prices based on the information he was getting, mainly orally and on his personal experience. As with the earlier document, it seems to me any criticism by the insurers of Mr Paikopoulos is misplaced: this was an internal working document not intended to be sent to insurers.

63. On 25 October 2011, Mr Paikopoulos inspected the vessel for the third time, accompanied on this occasion by Mr Papagiannis on behalf of the bank and a surveyor from the classification society, the Russian Maritime Register of Shipping. Mr Paikopoulos attended to assist his finalisation of his repair specification and both he and Mr Papagiannis were also there to estimate the cost of repairs. The class surveyor issued a survey certificate dated 25-26 October 2011 which recorded the following findings:
- i) in the engine room all machinery equipment were completely destroyed by fire / conductive heat / flooding and debris;
  - ii) the engine room was contaminated by substantial amounts of residual oils and rubberized oil from pipes systems which had been broken open by fire / conductive heat;
  - iii) the engine control room was completely destroyed by fire;
  - iv) engine room equipment damaged by fire / conductive heat to be renewed;
  - v) all auxiliary systems damaged by fire / conductive heat to be renewed;
  - vi) superstructure and all accommodation spaces to be renewed;
  - vii) main deck between frames 5 to 55 found buckled / heat and fire affected and ship's funnel structure to be renewed;
  - viii) side shell plating, PS and SB, between frames 59-101 was damaged or dented; substantial quantity of guard railing damaged; starboard gangway; to be renewed as necessary;
  - ix) cargo tanks and slop tanks had about 1700 tons of sticky oil residuals;
  - x) the water in ballast tanks of the vessel was contaminated by oil.
64. The class surveyor concluded:

*“1 As a result of the survey now held the ship has been found in severely damaged condition with heavy damages of items subject to technical supervision of the Class.*

*2 Class of the ship is suspended.”*

65. On 9 November 2011, Mr Ioannis Tzanos, a chemical engineer based in Greece advised the owners that it would not be possible to issue a gas free certificate “for safe man entry” for the tanks and engine room unless there was “*the total removal of 1700 tons, 700 tons of sludges from the bottom and removal of oil residual from the engine room*” even if, after gas-freeing, the atmosphere was at normal levels. On 10 November 2011, Archipelago stated that, further to an investigation with the UAE authorities, the vessel could not proceed to any port or berth in the UAE unless the engine room and cargo tanks were properly cleaned outside territorial waters by an

authorised contractor and a surveyor for the UAE authorities issued a gas-free certificate.

66. On 11 November 2011, Mr Paikopoulos prepared his final repair specification, which he sent to Drydocks World in Dubai, Arab Shipbuilding and Repair Yard Co in Bahrain (“ASRY”) and which the owners sent to Yiu Lian Dockyards in China for formal quotation. His repair specification, as with his preliminary specification, called for the replacement of far more steelwork (including far more of the main deck to be cropped and renewed) than either Mr Lillie or Mr Cuffe recommend, 3,000 metric tons in all. The specification also fails to mention removal of asbestos at all, although Drydocks World quote for its removal. Mr Paikopoulos said in cross-examination that he had overlooked it but then said he may have mentioned it to the yards.
67. In late November 2011 Mr Paikopoulos and the owners’ technical adviser Mr Kasfikis met and agreed that the cost of repairs would exceed the insured value and that the vessel was a CTL. At a meeting on 6 December 2011 between the owners and the bank, it was agreed that a NOA should be tendered. It is no longer necessary to dwell on this, as insurers now accept that the NOA tendered on 7 December 2011 was tendered on behalf of both the owners and the bank.
68. Repair quotations were received from the three yards Mr Paikopoulos and the owners had approached during January 2012; (i) from Drydocks World dated 12 January 2012, with an estimate of U.S.\$58,204,940; (ii) from ASRY dated 16 January 2012 with an estimate of U.S. \$55,053,670 and (iii) from Yiu Lian with an estimate of U.S. \$55,643,680. In his Final Report to the owners of 20 January 2012, Mr Paikopoulos stated that, taking account of additional costs such as towage, insurance, machinery and consultants’ fees and allowing a 3-5% margin for unforeseen costs, those estimates understated the total costs of repairs by some U.S. \$ 16-17 million. In his oral closing submissions. Mr Goldstone QC for the insurers made it clear that he was not seeking to impugn any of these quotations from the various yards, although there seemed to be some suggestion to that effect in the insurers’ written closing submissions. In my judgment, there was and is no basis for any attack on the quotations from the yards or for any suggestion that they did not represent the yards’ genuine quotation for the work required in Mr Paikopoulos’ final specification.
69. Mr Lillie considered these repair quotations required adjustment, not only because they catered for more steel renewal than he required but because they did not include other expenses which he considered would have been incurred. He focused particularly on the Drydocks World quotation which formed the basis for his assessment in his Supplementary Report of the total cost of repairs in Dubai (having taken account of matters in Mr Cuffe’s first report which he accepted) of U.S. \$66,492,091. He was not challenged on that overall figure or its constituent elements in cross-examination. Obviously, since his assessment included items which he also included to the same extent in his assessment of repair cost in China, on which he was cross-examined, if I considered there was an element of overstatement in his Chinese assessment, that would feed through to his Dubai assessment. For example, both assessments were for replacement of 1,016 metric tons of steel, rather than Mr Paikopoulos’ estimate of 3,000 metric tons, for which the yards had quoted. This was one of the respects in which the repair quotations required a downward adjustment. Had I considered that Mr Lillie’s assessment that 1,016 metric tons of steel required renewal was an over-estimate (which I did not), it would have required a further

downward adjustment. In the event, for reasons set out in more detail below, by and large I much preferred Mr Lillie's evidence as to the repairs required and their cost in China to that of Mr Cuffe, so any corresponding adjustment to Mr Lillie's repair costs in Dubai would be relatively minor.

70. At around this time in December 2011 as noted in [5] above, the owners instructed Allied Shipbroking to find a scrap buyer for the vessel, but a month later, their efforts had achieved nothing. Eventually, on 20 February 2012, Allied Shipbroking broked sale terms for Aryana Shipping Limited, a nominee of GMS at U.S. \$700,000. Since it was agreed by the end of the trial that this represented the value of the vessel in a damaged, unrepaired condition, for the purposes only of calculating the partial loss indemnity, it is not necessary to dwell on the efforts made to sell the vessel. The owners were clearly in an invidious position, particularly once the P & I Club indicated that the P & I cover would not be renewed from 20 February 2012, but, in any event, in my judgment the owners and Allied Shipbroking on their behalf procured as good a price as they could for the vessel "as is, where is", in all the circumstances.
71. Further inspections of the vessel took place in February and March 2012 both prior to her sale and prior to her delivery to Aryana. The owners sought and obtained two weeks of extension of the existing liability cover in respect of various surveyors and workmen going on board. On 13 February 2012 Dr Cleland inspected the vessel to ascertain the heat damage caused in the engine room and accommodation block. As I have already found at [27] above, Dr Cleland's findings were essentially in line with those of other surveyors and, although he gave some rather vague evidence about meeting someone on board whom he thought was British and had a supervisory role in relation to tank cleaning, I am quite satisfied on the totality of the evidence that there had been no tank cleaning on board the vessel prior to her delivery to Aryana. A number of workmen including a Mr Gkikas did embark with Dr Cleland but they either disembarked at the same time or soon thereafter.
72. On 15 February 2012, at the owners' request, Spectrumlabs Quality Control Laboratories attended on board and took samples in the engine room and accommodation from which they confirmed the presence of asbestos fibres, in a report dated 23 February 2012. Although the insurers were sceptical about this and through Mr Cuffe produced an email from the yard in Korea where the vessel was built stating; "*Currently we have no records of ever having used asbestos*" that can hardly be regarded as an unequivocal statement that they had not used asbestos in the manufacture of this vessel. I see no reason not to accept the Spectrumlabs report, which was borne out by both Mr Paikopoulos' evidence of having noted the presence of asbestos during his inspections and by the statement dated 14 May 2013 from Mr Ansari of Aryana which stated: "*The vessel had a substantial amount of asbestos present*". In cross-examination Mr Lillie explained that the age of the vessel was such that she was not so modern that there could be no question of asbestos having been used in her manufacture. Although he also accepted that it was less likely that asbestos was used in the accommodation than in the engine room, I still see no reason to doubt what is said by Spectrumlabs in their report.
73. Also on 15 February 2012 at the request of the owners, Mr Ralf Schulze a superintendent engineer from the main engine manufacturer, MAN, attended on board to inspect the main engine and the auxiliary engines. His report concluded that they

were all beyond economic repair and should be replaced. Mr Gibson surveyed the vessel on behalf of the insurers on 16 February 2012, accompanied by Mr Paikopoulos and a surveyor on behalf of the P & I Club. I deal in more detail below with Mr Gibson's findings and the extent to which in cross-examination he very fairly accepted, in large measure, the findings previously made by Dr Mitcheson.

74. At the suggestion of COSCO, the owners appointed Tecnicas, a company within the Bureau Veritas group, to conduct a condition survey and to prepare a detailed specification for repairs for submission to Chinese yards, including COSCO, for a quotation. Mr Paikopoulos had nothing to do with this exercise and was against using COSCO. Two surveyors from Tecnicas inspected the vessel on 6 and 7 March 2012. Before dealing with their findings in a little more detail, I should just deal with the three rather puzzling "Gas Free Safe for Entry Permits" issued by Mercator Marine Services FZE in Fujairah at the request of Archipelago on behalf of the owners.
75. The first which purports to be a "Gas Free Safe for Entry Permit" was issued at 14.30 hours on 7 March 2012 and expired 24 hours later at 14.30 hours on 8 March 2012. It purports to record that all the cargo tanks and slop tanks were found gas free and safe for entry. The second also purports to be a "Gas Free Safe for Entry Permit" which was issued at 14.30 hours on 7 March 2012 and valid for the same 24 hour period. As with the previous permit, this purports to record that the accommodation and engine room are safe for entry. The third permit was issued at 15.00 hours on 7 March 2012 and purports to record the state of the ballast tanks, stating that tanks 1S and 6P were found empty and the other tanks were found with clean seawater ballast.
76. Mr MacDonald Eggers QC submitted that these permits or certificates were an aberration, which bore no resemblance to the true position, as apparent from all the other evidence, that at the time of the inspection by Mercator and of delivery to Aryana just over a week later, the engine room still had sludge and oil residues in it, the cargo tanks had unpumpable cargo residues in them and the ballast water was contaminated. Mr Goldstone QC sought to make much of these certificates, pointing out that the owners had not only paid for them, but had failed to call any evidence to explain how they came to be issued or what inspection had in fact been undertaken and why. He invited the court to take at face value at least the certificate recording that the ballast water was clean. There is force in these points, but notwithstanding the absence of evidence from the owners about the provenance of the certificates, once it is recognised, as I consider it has to be, that the permits purporting to state that the engine room and cargo tanks were gas free cannot be correct, at least if they are seeking to suggest there were no residues of oil in those spaces, the accuracy of the certificate relating to the ballast tanks must also be in doubt. I suspect, although there is no direct evidence to this effect, that the production of these permits has something to do with the attendance on board of the two Tecnicas surveyors which took place at this time.
77. The survey report from Tecnicas begins by stating the limitations of the inspection, that there was no power and lighting was only provided by flashlights and there was sludge and debris caused by the fire and the fire-fighting (in itself an indication that the relevant Mercator permit cannot be correct). The report concluded that the engine room spaces were severely damaged by fire and that the main and auxiliary engines, boilers and generally all machinery and equipment in these spaces were found severely burnt/overheated and damaged by fire and fire-fighting operations.

78. In relation to the cleaning works required before any repairs could commence the report states:

“...all cargo tanks, pump room, engine room and accommodation spaces must be cleaned and gas freed so that they become safe for hot works.

All cargo tanks and slop tanks...must be cleaned, sludges removed and tanks be prepared for hot works.

It has not been possible to ascertain the exact amount of sludges that need to be removed but as vessel’s last cargo was removed by emergency equipment without any COW operations a big amount of sludge remaining on board is anticipated.”

79. This passage in itself demonstrates that the two certificates issued by Mercator purporting to show that, at the same time as the Tecnitas survey, the engine room, accommodation and cargo tanks were gas free simply cannot be correct. The report then goes on to list the repairs required. As with Mr Paikopoulos’ repair specification, Tecnitas would have required steel renewals in excess of those which Mr Lillie considers necessary. Their report calls for the renewal of 2,500 metric tons of steel, as against his 1,016 metric tons. However, in my judgment, there was no warrant for the suggestion in the insurers’ written closing submissions that the court should infer that: “*consciously or unconsciously the specifications provided [by Mr Paikopoulos and Tecnitas] to the yards contained exaggerations in relation to the extent of the damage with a view to increasing the quotation figures*”. As with other allegations in those written submissions, this smacked of a suggestion that the claim was deliberately exaggerated by the owners in order to claim that the vessel was a CTL when she was not, in effect an allegation of fraud. At the beginning of his oral submissions Mr Goldstone QC fairly and properly eschewed any such suggestion.
80. On the basis of the Tecnitas report, the owners sought repair quotations from COSCO and Shanhaiguan Shipyard in China. COSCO quoted a lump sum price after discount of U.S. \$54,865,296. Shanhaiguan quoted a repair cost of U.S. \$60,088,793. Whilst those quotations would require adjustment downwards to reflect the lesser amount of steel renewal Mr Lillie would require and various other matters, they would still remain in the U.S. \$50-55 million range which has two consequences: (i) when account is taken of other expenses such as the costs of towage to China and of ballasting the vessel back to an area where she could have picked up a cargo after repair and of the contingencies and risks considered in the section of the judgment dealing with the place of repair and of the “*large margin*” of which Vaughan Williams LJ speaks in *Angel v Merchants Marine Insurance Co* [1903] 1 KB 811 (see [90] below), these quotations (and the one from Yiu Lian obtained earlier by Mr Paikopoulos) provide strong support for the owners’ case and Mr Lillie’s expert opinion, that, even on the basis of repair in China, the vessel was a CTL; and (ii) the obverse is that these quotations provide a “reality check” as to whether Mr Cuffe’s opinion that the repair work required could have been carried out in China for U.S. \$30 million or less is realistic or is instead a considerable underestimate.



81. On 14 March 2012, the net sale proceeds of U.S. \$672,000 (net of 4% commission) were paid by Aryana to the owners. The owners' intention then and since was and has remained that the sale proceeds would be accounted for to the insurers in the event that they paid a claim for a CTL under the policy. On 15 March 2012, the owners' expert Mr Lillie went on board the vessel and conducted a survey. The vessel was delivered to Aryana the same day.
82. In their written closing submissions, the insurers sought to make much of the owners' involvement in assisting the buyers immediately before and after delivery of the vessel. On 6 March 2012, the owners asked Akron, one of the companies which had quoted for the cleaning and gas-freeing of the vessel to confirm that a price quoted at the end of 2011 for mobilising, pumping and disposing of oily water residues from the vessel was still U.S. \$98 per metric ton, which Akron confirmed the same day. Mr Bezas said in cross-examination that this was done by Mr Kosmas on behalf of the owners to assist the buyers, which is puzzling since GMS was based in Dubai and presumably had ready access to cleaning companies. It may well be that the owners were seeking to confirm the price of pumping out dirty ballast for the purposes of their CTL claim and, indeed, Mr Lillie uses the Akron price to assess the cost of removing the dirty ballast for the purposes of his estimate of the cost of repair in Dubai. In my judgment, there was nothing sinister in this.
83. The insurers also focused on an email from the owners on 6 March 2012 to the salvors which asked urgently for a surveyor's report referring to the ballast water remaining on board during latest operations. The "latest operations" being referred to which involved FOS are almost certainly a reference to the STS operation during which there was some pumping in of ballast water, but, as Mr Pappas explained in cross-examination, no pumping out, because he had found the ballast water contained oil residues. In my judgment, the owners were simply asking FOS for details of the quantity and disposition of ballast water on board after the STS operation and again there is nothing sinister in this request. Indeed, in the email to Akron sent later on 6 March 2012 referred to in the previous paragraph, the owners refer to approximately 28,700 metric tons of oily water mixtures in the ballast tanks, which may have been information that came from Mr Mitsotakis of the salvors. It is striking that although this is one of the matters which insurers' written submissions describe as "*very curious and obscure*", Mr Pappas was not cross-examined about it.
84. Part of this picture which the insurers sought to paint in their written closing submissions of matters "*going on behind the scenes about which little or nothing has been revealed [which] are very curious and obscure*" included the involvement of the owners after the delivery of the vessel to Aryana. However, as I pointed out in argument, unless the insurers were contending that the owners were making a deliberately exaggerated and therefore fraudulent claim (which has never been alleged, let alone pleaded), none of this was of any relevance to the issues the court has to decide in this case. Ultimately, as I have already indicated, these matters were not pursued by Mr Goldstone QC in his oral submissions. It seems to me that they are no more than an indication of the extent to which the insurers were suspicious of the owners' claim without having any proper or sound basis for their suspicions.
85. In October 2012, there was a LOF salvage arbitration before Mrs Elizabeth Blackburn QC as arbitrator, at which the salvors, the owners and the cargo interests were represented, where the only issue was the salvaged value of the vessel. The arbitrator

concluded in her Award dated 13 November 2012 that the salvaged value was U.S. \$6,564,000, on the basis of which the owners' contribution to the salvage award was just over U.S. \$2.3 million. Given the agreement of the parties before the end of the trial that, for the purposes only of calculating the partial loss indemnity, the damaged value of the vessel was U.S. \$700,000 and the sound value was U.S. \$10,200,000, the salvage arbitrator's valuation is of no relevance to the issues I have to decide. I need only record that the owners appealed against the Award and that appeal is currently stayed pending the outcome of these proceedings. For the purposes of the owners' sue and labour claim, they seek an indemnity from the insurers against whatever their liability is to the salvors.

The law on constructive total loss

86. Under section 60(2)(ii) of the Marine Insurance Act 1906, the vessel is a CTL "*where she is so damaged by a peril insured against that the cost of repairing the damage would exceed the value of the ship when repaired*". This provision is further qualified by clause 19 of the Institute Time Clauses-Hulls set out at [15] above, under which the damaged value of the vessel is left out of account and no claim for constructive total loss based on the cost of repair will succeed unless the cost of repair would exceed the insured value. Accordingly, to succeed in establishing that the vessel was a CTL, the claimants must prove that the cost of repairing the vessel would have exceeded the insured value of U.S. \$55 million, even though the agreed sound repaired value of the vessel was only U.S. \$10,200,000. The insured value reflected the purchase price the owners had paid, which Mr Bezas said was U.S. \$46 million, and the indebtedness to the bank. There has been no suggestion in this case that the vessel was fraudulently over-valued, so that under section 27(3) of the Act, that value is conclusive as to the insurable value. The enquiry into whether the vessel was a CTL is to be undertaken as at the date of rejection of the NOA, 7 December 2011, pursuant to the insurers' agreement to that effect.
87. In assessing the costs of repair, the approach the court should take is to ask what a prudent uninsured shipowner in the position of the claimants would have done in deciding whether or not to repair the vessel and where and how the repair should be carried out. This test was formulated in these terms by Patteson J, giving the advice of the judges of the Exchequer Chamber, adopted by the House of Lords in *Irving v Manning* (1847) 1 HL Cas 287, 306-307:
- "The principle laid down in these latter cases is this: that the question of loss, whether total or not, is to be determined just as if there was no policy at all; and the established mode of putting the question, when it is alleged that there has been, what is perhaps improperly called, a constructive total loss of a ship, is to consider the policy altogether out of the question, and to inquire what a prudent uninsured owner would have done in the state in which the vessel was placed by the perils insured against."
88. This test has been adopted most recently by Andrew Smith J in *Venetico Marine S.A. v International General Insurance Co. Ltd* ("*The Irene EM*") [2013] EWHC 3644 (Comm); [2014] 1 Lloyd's Rep 349 at [438]:

“The proper approach to the question of what was the cost of repairs is, as I understand the law, what would be their cost to a prudent uninsured shipowner. In *Roux v Salvador*, (1836) 3 Bing NC 266, 286 (cited in Arnould (loc cit) para 28-020,) Lord Abinger CJ put it in terms of whether "... a prudent man, not insured, would decline any further expense in prosecuting an adventure, the termination of which will probably never be successfully accomplished".”

89. The present case illustrates the practical difficulties which the court faces where the vessel is never in fact repaired or even cleaned before being sold for scrap. All the surveyors and consultants who inspected the vessel did so in circumstances where there was no power on board and there was still oily sludge present in the engine room, all of which made access difficult and hazardous in places. Inevitably this meant that it was not possible to determine with complete accuracy the actual extent of damage to the vessel. This limitation is apparent from the findings made by Dr Mitcheson and others, which I refer to in the section of the judgment dealing with the extent of damage. It applies particularly in relation to the main engine and other items of machinery and equipment in the engine room, such as the auxiliary engines and turbochargers. None of these items was opened up and, several times in cross-examination, Mr Cuffe accepted, in relation to items of machinery and equipment that appeared to him from photographs to be undamaged or to have suffered limited damage, that, unless they had been opened up and strength tests and other physical tests conducted, you just did not know whether or not they were damaged and required repair or replacement. An inevitable consequence is that it was never possible to draw up a detailed and completely accurate repair specification.
90. Some assistance as to the approach the court should adopt when faced with such difficulties is to be found in the judgment of Vaughan Williams LJ in *Angel v Merchants Marine Insurance Co* [1903] 1 KB 811 at 816-817:

“Precise estimates are, of course, impossible, and it seems to me that, unless the insured shipowner is to take upon himself risks which ought not to be borne by him (such as the risk whether the ship will be got afloat at all, or, having been got afloat, will arrive at a port for temporary repairs, and ultimately at home for permanent repairs), a large margin ought to be added to the figures of cost of repair to cover risks of this sort—risks which a “prudent uninsured owner” would certainly take into consideration in determining whether he should repair or sell ...

Now in my judgment the “prudent uninsured owner” test was clearly accepted as the proper test at least down to 1873. The recognition of the test in *Irving v. Manning* 1 HL Cas 287 and in *Rankin v. Potter* LR 6 HL 83 puts the matter, to my mind, beyond argument. Nor do I think that it is possible to say that *Moss v. Smith* 9 CB 94, which was cited in *Rankin v. Potter*, had then been recognised as substituting for the “prudent uninsured owner” test an arithmetical test turning on the difference between estimated totals. The prudent uninsured

owner test was, I think, adopted for the very purpose of covering considerations which cannot be embodied in the figures of an arithmetical calculation.”

91. To like effect is a later passage in his judgment at 819-820 deprecating the adoption of an arithmetical comparison between rival estimates:

“It is said that, at the time of the adoption of the “prudent owner” test, the master, through difficulty of communication and inability to secure with any certainty means of repair, was in practice apt to consider seriously the question whether he should sell the materials of the ship, or the ship as she lay, rather than make the attempt to repair. But it is said that nowadays such a case rarely arises, and that when it does the old test can be applied; but that now the conveniences of modern times, telegraphic communication, the salvage associations, and Lloyd's agents everywhere, throw on the master but rarely the old alternative, “repair or sell”; and that in modern times the shipowner ought to guide his conduct as an insured owner desirous to have regard to the interests of all concerned, and that the damaged ship ought, whenever it is possible, to be taken to the port where permanent repairs can be effected, and the arithmetical test applied with something like precision. Such a rule seems to me too favourable to the underwriter. I think that this contention is open to the criticism that the shipowner at the moment of election, when he has to exercise the option of giving notice of abandonment, has really no precise data upon which to act, and that there must always be a quantity of items, especially the cost of the temporary repairs and the getting of the ship to the ports of temporary and permanent repair, as there were in the present case, which do not admit of precision. I doubt whether under the absolute arithmetical test the underwriter really takes upon him the whole of the risks of the perils of the sea. I think it was a doubt of this sort which made lawyers of the United States of America adopt the 50 per cent. rule.” [A reference to the fact that in the United States the rule is that the vessel is a CTL if the cost of repair exceeds 50% of her insured value.]

92. It seems to me that the effect of this approach is that, in relation to matters which cannot be determined with precision, such as the extent of damage to items of machinery and equipment which were not opened up and tested, the court has to apply to any repair estimate what Vaughan Williams LJ describes as a “large margin”. That is by no means the same thing as giving the assured the benefit of the doubt in a manner which reverses the burden of proof, which is always on the assured to prove that the vessel was a constructive total loss. It is simply recognising that a margin of error has to be applied in relation to the extent of the damage where, as in the present case, it was not possible to investigate fully and the assessment of the cost of repair has to take account of the fact that the items which were not opened up and tested

might well have required replacement, so that a prudent uninsured owner would have replaced them.

93. In relation to the place of repair, some assistance is to be found in the judgment of Porter J (as he then was) in *Carras v London & Scottish Assurance* (1935) 52 Ll L Rep 34 at 42. Although his actual decision was overturned in the Court of Appeal, this passage was not queried:

“Phillips, 5th Ed., Sect. 1548, founding himself upon the American authorities, seems to assume that the usual port of repair is the port of necessity, but that it is a question of fact in each case what a prudent uninsured owner would do—see *American Insurance Company v. Center*, 4 Wend. N.Y. 45; *Hall v. Franklin Insurance Company*, 9 Pick. Mass. 466; *Orruk v. Commonwealth Insurance*, 21 Pick. Mass. 456. All three, of course, are American reports. I think that Phillips expresses the true view, and that in determining at what port to repair all the circumstances must be taken into consideration, including the loss of time necessary to reach the substituted port, the expense of reaching it, and the lack of facility to obtain freights there as compared with the port of refuge. But I think, myself, that at any rate, provided the repairs can be effected at the port of necessity, the assured is entitled to regard that port as the natural place of repair and to regard the cost of repair at any other port as substituted expenses, i.e., he would be entitled to be recouped (a) the necessary cost of temporary repairs at the nearest port; (b) the necessary cost of any further temporary repairs at the nearest repairing port; (c) the cost of permanent repairs at the ultimate repairing port, together with the necessary cost of getting to and from the various ports. ”

94. In my judgment when one considers that passage as a whole, contrary to the submission which Mr MacDonald Eggers QC appeared to be advancing, at least in his opening submissions, Porter J was not saying that there was some presumption in favour of the nearest port to the casualty as the port of necessity or refuge where repairs should be carried. It is, as the learned judge said, always a question of fact dependent upon all the circumstances of the case, where the prudent uninsured owner would have carried out the repairs. Whilst cost is always an important factor, it cannot necessarily be determinative, given the presence of other factors, such as are present in this case, including the need for cleaning before any long tow, the costs, time and risks of a long tow, the reputation of the rival yards, the risk of delay in those yards and the difficulties of repositioning the vessel for gainful employment after repairs have been undertaken. I return to consider all these factors in more detail in the section of the judgment dealing with the place of repair.

The extent of the damage to the vessel

95. The extent of the damage to the vessel as a consequence of the incident can be discerned from the unchallenged evidence of Dr Mitcheson, together with the evidence of other surveyors and consultants who went on board, including Dr Cleland, Mr Gibson and Mr Lillie. Much of this is not in dispute between the parties

and where Mr Cuffe (whose opinions on the extent of the damage are dependent on assessment of photographs, since he did not inspect the vessel) differs from those who had the opportunity to inspect the vessel, I prefer their evidence.

*The lower areas of the engine room*

96. Dr Mitcheson considered the decks of the engine room in ascending order starting at the floor deck level. He did not see any evidence of fire or heat damage at either the floor deck level or the turbine deck level above it, which seemed to have remained relatively cool. He says that whilst he does not recall the condition of the deck head along the forward end of the turbine deck, he would not be surprised if it had been distorted by heat from the fire venting through the forward door of the purifier room on the third deck above. There was oily sludge present on the platform of the turbine deck and a tide mark visible just above the deck to where the oily water had reached prior to the pumping out operations.

*The third deck level*

97. On the third deck, there was severe fire damage in the purifier room, where the explosive device had been detonated, and along the forward bulkhead to the fresh water generators and in the aft port side corner, where the nos. 1 and 2 diesel generator sets or auxiliary engines (which comprised in each case a generator or alternator forward and a diesel engine aft) had been severely affected by heat. Paint had lifted off the alternator and exhaust of the third set which was just outside the area of severe heat damage recorded by Dr Mitcheson, although an electric panel between the nos. 2 and 3 sets was also severely heat damaged. Plant on the starboard side had heavy soot deposits but did not appear affected by heat except for the main engine air receivers, where the paint had cracked and flaked off.
98. The extent of damage to the top of the main engine and to other machinery at third deck level was in dispute. In response to Mr Gibson's assertion in his witness statement that there was no evidence of heat damage to the main engine other than in limited areas at the uppermost part of the cylinder heads, Dr Mitcheson said in his second witness statement: "*The cylinder heads were visibly heat damaged from the exhaust valves at the very top as far down at least as the entablature. Discolouration of paint from scorching was evident across all six cylinders, becoming progressively more severe towards the aft*". In his first statement Dr Mitcheson had described the damage to the cylinders and turbochargers in these terms: "*Paint had also flaked off the turbochargers and exhaust manifold and uptakes at this level ... Within the open area at the centre of the engine room, the main engine covers and injectors had been scorched and discoloured by heat radiation on their aspects that faced upward and to port ...*" This evidence (which as I say was not challenged because the insurers did not require Dr Mitcheson to attend for cross-examination) seems to me to be support for Mr Lillie's opinion that paint flaking and discoloration is evidence of heat damage to the relevant machinery or equipment.
99. Although Mr Gibson began in cross-examination by asserting that there was significant heat damage only to the upper reaches of the two aft cylinders and that the damage did not progress down the engine as Dr Mitcheson described, having been shown one of Dr Mitcheson's photographs viewing the main engine from forward, he accepted that there was damage to all the cylinder heads. He also accepted that,

although he did not see any damage to the cylinder skirts/jackets, there could have been such damage. Having been shown photographs of the forward air ends and aft gas ends of both turbocharger units, he agreed that they were damaged. Mr Gibson also accepted that there was paint blistering and smoke damage to all three generator sets, although he said that it was more marked at the forward generator end than aft.

100. Mr Lillie's evidence was also that the cylinder heads and turbochargers were all so heat damaged as to require replacement. He refuted the suggestion in cross-examination that his task was one of looking at photographs and inferring from the damage he could see on the photographs whether the damage was such as to require replacement, saying: "*I was there. I saw these things. I also have a great deal of experience in engine room fires ... I've never seen a cylinder or an engine top as badly damaged as this that was ever repaired*". I found that evidence compelling.
101. I also found compelling his evidence at a slightly earlier point in his cross-examination about the conditions during the fire on board the vessel, which supported his opinion that the cylinder heads and jackets and turbochargers required replacement:

*"... this fire was not a kind of polite drawing room fire which strayed somehow out of its grate and licked paint here and there with flame. This was a raging inferno that started with an explosion, and spread throughout the engine room at temperatures, at the hottest parts of the flame, probably 800 or 900 degrees centigrade, and created an oven the whole of the top of this engine room, where the ambient temperature for several hours was probably in excess of 600 degrees ... At 500 degrees carbon steel starts to re-crystallise, which means that the smooth molecular structure starts to break down, it loses its tensile strength and its hardness, and increases its ductility; that's one thing. But the other thing that's going on at the same time, and is more germane to the top of this engine, is expansion. At 500, 600 degrees, all of these pieces that are bolted together expand at different rates, differential expansion. I would expect to find, when these places were taken apart, that there were multiple fractures, that there was extension of the studs and the bolts and the tie rods, and that this engine was certainly at the top no longer fit to carry the loads and the pressures it's required."*

102. He gave similar evidence in relation to the turbochargers:

*"Those turbochargers, in common with all the other areas from the third deck upwards, were subjected to very high temperatures, and you may think I am not an expert in this field and shouldn't mention temperatures, but I disagree with you. These temperatures were in excess of 500 degrees. Turbochargers rotate at 16,000 plus revs per minute. The elevated temperatures in that engine room, ambient, would be enough to distort these turbocharger casings, even if they didn't cause actual damage to the rotors which they would of*

*course and the aluminium would have softened at the compressor ends. Those turbochargers were not fit to be ever used again, in my opinion.”*

103. In relation to the alternators within the three generator sets, Mr Lillie considered that they were all so heat damaged as to require replacement. When it was put to him in cross-examination that the starboard most no. 3 set was less damaged than the port no. 1 set and so may not have required replacement, he responded graphically that:

*“when you are talking about degrees of heat exposure, it’s a little bit like saying that somebody is less dead than somebody else, even though they are both in the graveyard. The position is that that machine had to expand for that paint to crack. So the parent metal underneath that paint, which is quite thick, because these are 20-year-old machines that have been originally coated to a high standard and then coated many times since by the crew, has cracked, which means that the casing has expanded.”*

104. The need for replacement of part of the main engine from the third deck upwards, including the cylinder covers and the generator sets, was also confirmed by Mr Paikopoulos in his evidence about his second inspection on board (at the same time as Dr Mitcheson and Dr Craggs). It was also the view of the engineer from the main engine manufacturers MAN, Mr Ralf Schulze, who attended on board on 15 February 2012 and reported: *“From our experience on similar incidents the 3 auxiliary engines and 1 main engine are beyond economical repair in order to ensure reliable operation standards and replacement of all 4 engines is considered as the most economical repair solution”*. The surveyor from the classification society RS who attended on 10 October 2011 found: *“In engine room area all machinery equipment ... are completely destroyed by fire / conductive heat / flooding and debris”* and also concluded: *“Any operational tests of above mentioned equipment in engine room is not possible due to heavy destructions”*.

105. Mr Cuffe, whose opinion about the damage to the main engine and other machinery and equipment on the third deck level could only be derived from photographs rather than an actual inspection, considered that the paint cracking to the cylinder heads did not necessarily mean that they required renewal but he accepted that he was unable to say that they were not damaged underneath: *“I can’t say for sure, no, I just don’t think it’s enough, from what I’ve seen, that it warrants renewal”*. He also accepted that if Mr Lillie’s view that there was a loss of strength of the steel was correct then the cylinder heads would have to be replaced.

106. In relation to the turbochargers, whilst he would only have written off the air inlet casing and the compressor wheels, Mr Cuffe accepted that: *“but after that you just don’t know... unless and until you actually open them up and carry out some strength tests, you wouldn’t know”*, in other words, even on his evidence, the turbochargers may have been damaged beyond repair. In relation to the alternators forming part of the generator sets, whilst his opinion was that they could simply be re-wound, he accepted that this was *“another example of something where, unless you stripped it down, you wouldn’t know”* and whether it would require replacement or rewinding is *“one of those things where you don’t know until you open it up.”*



107. In my judgment, in relation to the cylinder heads and jackets of the main engine, the turbochargers and the alternators, the evidence of Mr Lillie that the damage to these items in the fire was such that they required renewal rather than just repair is much to be preferred to that of Mr Cuffe and is in line with the findings made by the other surveyors and consultants. Even if that were not so, they were all items where, as Mr Cuffe accepted, the full extent of the damage could not be known until they were opened up and tests were conducted, so that an allowance for their replacement would have to be made within the “large margin” of which Vaughan Williams LJ spoke in *Angel* even if one accepted Mr Cuffe’s figures for mere repair.

*The second deck level*

108. Dr Mitcheson’s unchallenged evidence about the fire and heat damage at the second deck level was as follows: “*The entire area of the Second Deck suffered severe heat damage up to and including the deck head at Main Deck level. From the Second Deck upwards the fire had consumed virtually all combustible materials that had been present ...Therefore, the engine control room and all installed equipment...were destroyed.*” Mr Lillie likewise said in his report that: “*Upon entering the Second Deck of the Engine room during my survey, it was clear to me that it was completely gutted by fire*”.
109. Mr Gibson’s evidence was that: “*All combustible material within the Engine Control Room, on the 2nd Deck, had been fully consumed by fire with only the outer steel casings remaining for the control equipment ... The heat was also evidently intense outside the Engine Control Room on this level on the Starboard side ...*”. He confirmed in cross-examination that the damage was along the whole length of the control room. The extent of the severe fire damage on the starboard side was shown by his photograph of the refrigerating compressors on that side which were burnt.
110. Notwithstanding that clear evidence of extensive heat and fire damage, there is a dispute as to the extent of the damage to the plating of the second deck itself. Mr Cuffe contends that any renewal of plating should be stopped at 7,300 mm from the centre line on the starboard side, whereas Mr Lillie’s opinion was that the damage to the second deck was such that the plating should also be replaced across the remainder of the second deck to starboard. In my judgment, given that the evidence is that the second deck was completely gutted by fire, Mr Lillie’s opinion is clearly to be preferred. Ultimately, this point was all but conceded by Mr Cuffe. When it was put to him in cross-examination that Mr Gibson was saying that the deck was damaged or there was extensive damage, Mr Cuffe accepted that, even if you could not see it on a photograph, you could infer there was extensive damage to the second deck itself.
111. Dr Mitcheson’s evidence was that the forward bulkhead between the engine room and the pump room, which was forward of the engine room running right up to main deck level, was severely damaged by heat from the third deck upwards. Mr Cuffe suggests that any replacement of the steel should stop at 7,300 mm off the centre line starboard, whereas Mr Lillie contends that it should extend to 12,300 mm off the centre line starboard. In my judgment, Mr Lillie’s assessment is correct. The evidence is that there was damage along the whole length of the engine control room which extends to 12,300 mm off the centre line starboard, from which it follows that in all probability the forward bulkhead which is at the forward end of the control room was heat damaged as well and required replacement.

*The main deck*

112. The main deck was obviously also the deck head in the engine room so that, irrespective of specific findings of the various surveyors and consultants about damage to the main deck plating, one would expect the main deck above the engine room to be buckled and/or heat damaged, given that it is common ground that (a) the second and third decks of the engine room below were severely damaged by fire and, in the case of the second deck immediately below, gutted and (b) the accommodation block above was gutted by fire. To the extent that Mr Cuffe sought to maintain, in the face of that evidence about catastrophic damage above and below, that parts of the main deck in that area may not have been so damaged as to require renewal, I found his evidence wholly unconvincing and indicative of a tendency to under-estimate the extent to which replacement of items was necessary, notwithstanding evidence from those who had inspected the vessel that pointed to the necessity of replacement. Quite apart from the unimpressive nature of Mr Cuffe's evidence about the limitations as he saw it on the repairs necessary to the main deck, the evidence from the various other surveyors and consultants supports the conclusion that the damage to the main deck was such as to require replacement of substantial quantities of deck plating between frames 12 and 53 as advocated by Mr Lillie.
113. The evidence of Dr Mitcheson was of damage to the main deck plating in the accommodation block and on the cross alleyway between the accommodation block and the funnel casing, in other words where the main deck was the deck head of the engine room:

*“The main deck within the accommodation was also the deck head of the engine room and was subjected to fire attack from both sides. It was seen to have been heat damaged in areas such as the cross alleyway...[T]he deck plating between the accommodation and engine casing superstructures also formed a section of the engine room deckhead and was seen to be distorted...Very severe heat damage was evident internally throughout all the decks in the accommodation block, extending from frame 32 to 51, with virtually all combustible materials having been consumed. All levels of the accommodation block had been totally gutted by fire.”*

114. In cross-examination Mr Gibson stated that he could not actually recall the extent of the damage on the cross-alleyway, but he accepted what was put to him, that: *“to the extent that there was extensive fire damage to the second deck below, then ... that would indicate that there would have been heat damage to the main deck above, and buckling therefore of the main deck above as a consequence of that heat from below”*. Photographs produced by Mr Gibson of the deck head of the second deck showed extensive heat damage and buckling of the frames. These were taken at the starboard limits of the area which Mr Cuffe allowed for steel renewal of the main deck at 7,300 mm off the centre line on the starboard side, whereas Mr Lillie allowed for renewal up to 12,300 mm off the centre line on the starboard side. In my judgment, given the extent of the structural damage to the deck head of the second deck shown in the photographs, it is inherently unlikely that there was not the extensive damage to the main deck above for which Mr Lillie's proposed steel replacement caters.

115. As I have already said, Mr Cuffe's suggestion in cross-examination that somehow not all the main deck above the engine room was damaged although the structure above and below was gutted, was wholly unconvincing. Equally, as Mr MacDonald Eggers QC pointed out, Mr Cuffe's suggestion that the longitudinal bulkhead at 7,300 mm off the centre line on the starboard side provided some protection from the fire is contradicted by the fact that the two engine room stores which were outboard to the starboard of the bulkhead were clearly gutted by fire. In all the circumstances, I accept Mr Lillie's assessment of the extent of the damage to the main deck and of the plating which required replacement.

*The boilers*

116. The vessel was equipped with two auxiliary oil fired boilers and a composite or packaged boiler. The boiler flat on which the two auxiliary boilers stood was at the aft end of the second deck. They were 23 feet high, running up into the funnel casing. The evidence of Dr Craggs, the insurers' own fire expert, in his witness statement was that the boiler flat had sustained severe fire damage. In the schedule to his witness statement, Dr Mitcheson said; "*Boilers severely attacked by fire*". In his second witness statement, he described by reference to photographs, paint loss on the common bulkhead between the engine room and the steering gear room to the aft, on the steering gear room side, stating: *Moreover, my photographs...show the common bulkhead viewed from inside the steering gear room and areas of paint loss caused by heat conduction through the bulkhead from the engine room can clearly be seen. What these images demonstrate is that the heat damage was very extensive in way of the aft side of the boilers, not just in way of the front side of the boilers as stated by Mr Gibson. In fact, the whole of the boiler area was gutted by fire.*" Dr Mitcheson also made the point in his first witness statement that the extensive burning off of the paint on the outside of the funnel casing suggested there had been: "*severe heat damage in all of the upper sections*".
117. In cross-examination, Mr Gibson accepted that there was significant heat damage to the outside of the auxiliary boilers from top to bottom. In his witness statement he said this in relation to the composite boiler: "*Progressing up through the Funnel Casing via the access ladders on the Port side ... it was clear that the heat had been intense in this area. The Composite Boiler ... had suffered from intense heat and fire, as evidenced by the discolouration and the burning of all combustible material. The steel walkways and bulkheads, particularly the forward facing bulkhead, were also found to be distorted.*" That all three boilers were overheated and distorted was the finding made by Tecnicas in their survey.
118. Notwithstanding this evidence of damage to all three boilers, Mr Cuffe maintained the position that all three only required overhaul. As Mr MacDonald Eggers QC says, that position is remarkable in relation to the composite boiler, given Mr Gibson's findings set out above. In relation to the auxiliary boilers, Mr Cuffe considered that the boiler insulation would have protected the boilers from heat damage. Mr Lillie was not impressed with this suggestion and his view was that, although the insulation could provide some slowing down of the transmission of heat to the boilers from the huge outside temperature, it would not be very effective. His opinion in cross-examination was that: "*these boilers, subjected as they were for several hours to abnormally high temperatures, could not be re-used.*"

119. I accept that opinion and consider that, in all probability, the two auxiliary boilers, like the composite boiler were all so heat damaged as to require replacement. However, even if this were not so, as Mr Cuffe accepted in cross-examination, these were also items in respect of which the full extent of the work required could not be known until they were opened up and examined, so that an allowance for their replacement would have to be made within the “large margin” of which Vaughan Williams LJ spoke in *Angel*.
120. So far as the common bulkhead between the engine room and the steering gear room is concerned, it is clear from the passage in the second witness statement of Dr Mitcheson quoted at [116] above, that the aft end of the engine room in way of the boiler flat sustained severe heat damage and that the bulkhead was affected, with some heat induction causing blistering of paint on the steering gear room side. In fact, As Mr MacDonald Eggers QC pointed out in his oral closing submissions, Mr Lillie was only proposing the renewal of a small area of the bulkhead, at second deck level, some 7 x 4 metres, as part of his steel renewals. This seemed to me to be justified.

*The accommodation block and funnel casing*

121. It was common ground between all the surveyors and consultants who inspected the vessel that the accommodation block at main deck and higher levels above the engine room, together with all materials and equipment in it, was gutted by fire and required total replacement. Although the insurers’ pleaded defence denied that all the steelwork of the funnel casing required replacement, that point was not pursued and in any event, Dr Mitcheson’s uncontested evidence was that: “*the primary route for the escape of hot gases from the engine room fire was up the funnel casing and out through the ventilation grilles...and this caused extensive paint loss and substantial damage to the funnel casing...*” Both the experts agreed that the funnel casing needed to be cropped and renewed completely.

*The hull plating and handrails*

122. Dr Mitcheson noted indentation to the starboard shell plating of the hull in way of the no. 2 side ballast tank between frames 97 and 107. Mr Lillie confirmed this from the photographs and also a further area of indentation aft on the starboard side from frames 50 to 44. Although Mr Gibson did not notice any indentation during his inspection, he very fairly accepted in cross-examination that the damage could have been there. In any event, it was agreed in the Experts’ Joint Statement that about 6 metric tons of steel was needed for repair in way of frames 50 to 44 and 27 metric tons of steel for repair in way of frames 97 to 107.
123. Mr Lillie also agreed with Dr Mitcheson that there was damage to the starboard handrails in four distinct locations. The extent to which handrails required renewal was agreed between the experts.

*The place of repair*

124. As Porter J held in *Carras*, it is always a question of fact dependent upon all the circumstances of the case, where the prudent uninsured owner would have carried out the repairs. Whilst cost is an important factor, it is not determinative, particularly where the price differential between a more expensive quotation from a shipyard close

to the casualty and a cheaper quotation from a shipyard at a much greater distance from the casualty is not enormous. In such a case, I consider the prudent uninsured owner would consider all the other factors which might well make the more expensive but closer yard the proper and appropriate place for repair. Those factors will include (i) the risk to the tug and vessel and to the environment of a long tow to a distant repair yard, such as would be the tow from Khor Fakkan to a Chinese yard; (ii) the cost of the tow and of insurance for the tow; (iii) the reputation of the respective yards, not just as regards the quality of the workmanship but the accuracy of costs estimates and the risk of delay; (iv) loss of income during the repair period and (v) the relative location of the yards in question to the vessel's next employment after repair. In considering those various factors, it seems to me that the prudent owner is entitled to take account of the views of the surveyors and consultants who inspect the vessel and from whom advice is available.

125. In the present case, Mr Lillie provided costings for repair in the Middle East of U.S. \$66,492,091 inclusive of a 10% contingency. That evidence was unchallenged in cross-examination and Mr Cuffe had no equivalent figures for repair in the Middle East. By his own admission his experience is heavily biased towards China where he is based and he did not have sufficient information on costs in Dubai from any previous repairs, with which to challenge Mr Lillie's figures. Nonetheless, as I have already said, there are some limited items in Mr Lillie's costings for repair in Dubai which, as in his costings for China, require adjustment, specifically the reductions in respect of the cost of boilers, the machining of the crankshaft and the cost of painting preparation and application referred to in [246] below, which amount to U.S. \$1,876,700. In broad terms, I consider the appropriate figure to take for repair in Dubai is about U.S. \$64.4 million, inclusive of a 10% contingency.
126. For the reasons set out in detail below, I consider that the equivalent figure to take for the cost of repair in China (including the cost of towage to a Chinese yard and insurance) with the same 10% contingency as Mr Lillie allowed for repair in Dubai, is U.S. \$53 million. Compared with the equivalent figure for repair in Dubai, the difference is about U.S. \$11.4 million or 17½ %.
127. Notwithstanding that difference, I consider that the prudent uninsured owner would still, on balance, have favoured repair in Dubai, for the following reasons. First, repair in China would involve a lengthy tow from Khor Fakkan, which would take some two months. Despite Mr Cuffe's assertion that such lengthy tows are common and his evidence about seeing them going past Brookes Bell's Singapore office, I still consider that the prudent uninsured owner would think long and hard about embarking on such a tow rather than having the vessel towed to a convenient port close to the casualty. Quite apart from the cost of the tow and insurance of the vessel during the tow, towage of a dead ship for that distance does involve risks, particularly of damage to the vessel and pollution, grounding or collision with other vessels.
128. So far as the risk of damage is concerned, although the vessel was severely damaged and worth only U.S. \$700,000 in a damaged and uncleaned condition, the prudent uninsured owner would not have wanted to risk a further casualty on a long tow to China, whether by way of collision or grounding. Quite apart from the loss of the vessel, this could lead to substantial liabilities to third parties for damage to property and pollution.

129. Although it is true, as Mr Goldstone QC submitted, that a dead ship with no cargo on board would be easier to tow and manoeuvre than a dead ship with 140,000 tons of oil cargo on board, the fact remains that, even when the vessel was under tow from Aden to Khor Fakkan by the powerful FOS tug *Caribbean Fos*, the vessel was yawing and the tow rope parted in bad weather and took four days to reconnect. Irrespective of the weight of the vessel being towed, there would always remain a risk of yawing and of the tow rope parting in bad weather increasing the risk of collision with another vessel or grounding, with, in either event, the risk of a breach of the structural integrity of the vessel and consequent pollution. The longer the tow, the greater the exposure to those risks. I agree with Mr MacDonald Eggers QC that the exposure to these risks would be an important consideration for a prudent owner favouring repair at a yard proximate to the casualty, even if repair in China was more than U.S. \$10 million cheaper.
130. Second, repair in a Chinese yard would involve the potential for further delays beyond the delay caused by a tow for two months from Khor Fakkan. There is also a considerable risk of project overrun at a Chinese shipyard. This risk and its deleterious financial consequences were described graphically by Mr Lillie in cross-examination in relation to the experience of a client of his:

*“The physical risks are obviously the risk of towage over a very long distance, which I think is fairly obvious to most people, the perils of the sea, and so on. The commercial risk is being trapped there. Dockwise had experience of having a ship in COSCO for a damage, and the period under repair overran – this was a favour to them, I think, and the period under repair overran, and I think they were charged upwards of \$80,000 a day for dock dues for the extra days. It’s not unknown, that. That’s the worst I’ve come across, but it’s not unknown, but that’s one of the commercial risks. The other is that if you are in a shipyard for a year, people lose interest, the shipyard loses interest, there is no guarantee that they will have a steady flow of workers on the job, something new comes in, they take away the people, the thing breaks down, the times goes down, and the site team is there for a long time, there is friction, they fall out with the yard managers, everybody blames everybody else and work goes downhill. Then there is the low level corruption that just poses a risk to everything, to try and keep the wheels oiled. Those are the sorts of things that Dockwise took into account.”*

131. In that context, it is striking that in Mr Cuffe’s worst case scenario, the period of repair in China could be as long as 570 days as against his best case of 360 days, which in broad terms corresponded with the sort of repair period Mr Lillie would expect in the Middle East. Of course delay can occur at any shipyard, but on the basis of what Mr Lillie said (which was implicitly recognised by Mr Cuffe’s worst case scenario) it would appear the risk of such extended delay is greater in Chinese yards than elsewhere.
132. In addition to the enhanced risk of delay in Chinese yards, the evidence of both Mr Paikopoulos and Mr Lillie was that there was a risk of cost overruns and initial repair estimates proving inaccurate. Mr Paikopoulos put it this way in cross-examination:

*“But I also need to say something which is common knowledge in the trade, that when a vessel goes to China for a project, let’s say 1 [million], then it always becoming something more, 3.5 million. And you can cross-check this with everyone in the trade.”*

133. Mr Lillie described the same problem in his evidence in these terms by reference to a specific instance of repair in China in the recent past:

*“At the beginning of last year, or the end of 2012, I was asked by the North of England P&I Club to attend in a German owner’s office with respect to a relatively newish – by which I mean under two years old, I don’t remember exactly – ship that had been built in China, and had suffered a grounding damage, I think off the mouth of the Yangze, somewhere like that, and it was salvaged, and on the basis of a quotation from the local shipyard, underwriters had agreed to place the repairs in hand. As it happens, the overall cost turned it into a CTL, mostly because – not mostly perhaps – but largely because of the extended time.”*

134. Mr Cuffe considered that the risk of cost overrun could be avoided by skilful contract negotiation in the first place. I was not convinced by that evidence and it seemed to me that Mr Lillie’s evidence was far more realistic. He described how his most recent experience of repair in China involved scrutinising repair quotations on behalf of a major shipowner with more than 300 ships who could not rely on either budget or time: having been quoted for something, the actual invoice was for far more. Mr Lillie also described the prospect of a Chinese yard adhering to tariff prices for steel in these terms: *“the Holy Grail that shipowners are looking for, that they are going to get the one really cheap and really good deal in China. It’s possible I don’t know”*.
135. Of course, as with delay, there may be cost overruns with any repair, whichever yard is used, but it would seem that the risk of both delay and cost overrun is greater in China than elsewhere. I agree with Mr MacDonald Eggers QC that in those circumstances, what may initially be perceived as a cheaper quotation from a Chinese yard may well ultimately prove more expensive than an ostensibly more expensive quotation from the Middle East.
136. Third, delay would inevitably have adverse financial consequences for the owners. The owners relied upon the fact that (i) at the time of the casualty, the vessel was on a voyage charter with a lump sum freight payable of U.S. \$3,210,000 and (ii) according to Mr Bezas’ evidence, at that time negotiations were underway for a one year time charter at a daily hire rate of U.S. \$26,500 to U.S. \$28,500. It emerged in cross-examination that this information was not from Mr Bezas’ own knowledge but obtained by him from the owners’ chartering department. I have to say that I am very sceptical as to whether the vessel could have obtained any such long term fixture. In the recent past, she had traded on the spot market with voyage charters and her age and condition suggests that pattern would have continued.
137. Mr Goldstone QC put to Mr Bezas that in fact the vessel had been loss making in the previous two years before the casualty, 2009 and 2010 and in the first six months of

2011. Mr Bezas responded that 2009 and 2010 had been difficult years for shipping globally but there had been some improvement in 2011. However, even accepting that the vessel would have continued to be loss making and even assuming that certain expenses (such as crew wages and bunkers) would have been saved whilst the vessel was out of service, there would be management and other fixed costs which would be incurred in any event. In all the circumstances, it is tolerably clear that the overall loss suffered by the owners would have been greater if the vessel had been idle for an extended period (for example under tow to China for two months, then being repaired at a Chinese yard for more than a year and a half) than if she had been towed to a local yard in the Middle East, repaired there in about a year, then gainfully employed. It seems to me that the prudent owner would have wanted to keep to a minimum the period the vessel was out of service.

138. The same considerations would have influenced the prudent owner in relation to repositioning the vessel for employment after repair. The sort of cargoes she would have picked up of fuel oil or similar would be available to load in Europe or the Middle East, not in the Far East or China. It follows that, whereas if repairs had taken place in Dubai the vessel would have been well positioned to load a cargo within a short time and limited steaming distance, from a Chinese repair yard, the vessel would have had to steam back in ballast to the Middle East or Europe, with a consequent delay and expense and loss of income.

139. Fourth, despite what Mr Cuffe said, I accept Mr Lillie's evidence that there can be issues with the quality of the workmanship in Chinese yards. This was a point which he put in this way in his supplementary report:

*"In my opinion it is not sufficient to just look at China and to dismiss other repair areas without due consideration. As with shipbuilding, where it is well documented in online articles by Reuters ... and others that new ship deliveries can be long delayed in China and quality is not uniform. As with new build so too with repairs and so there are many factors an owner must weigh in making the decision on where to carry out major repairs ..."*

140. By way of a counter to this, Mr Goldstone QC put to Mr Lillie in cross-examination material taken from the internet about alleged financial difficulties of Drydocks World and the effect of political instability in Bahrain on the ASRY shipyard. None of this was pleaded by the insurers or addressed by expert evidence so that it is impossible to assess properly whether those are matters which would have deterred the prudent uninsured owner from having the repairs done at Drydocks World or ASRY. Since these matters were not properly in evidence, I propose to disregard them.

141. Overall, it seems to me that the prudent uninsured owner in the circumstances of this case would have been entitled to conclude that it was preferable to carry out the repairs in the Middle East, rather than towing the vessel for two months to a Chinese yard, even if the quotation from the Chinese yard was as much as U.S. \$11.4 million or 17½% cheaper. Accordingly, in my judgment the place of repair which the prudent uninsured owner would have chosen is Dubai or elsewhere in the Middle East.



142. In closing submissions, Mr Goldstone QC invited the court to state in the judgment what the maximum price differential between the cost of repair in China and the cost of repair in Dubai would have to be before the court would conclude that the place of repair should have been China rather than the Middle East. Although I understood the forensic reasons for this request, I decline to be drawn further than saying that, if I had accepted Mr Cuffe's evidence of the cost of repair in China, which for the reasons set out in detail hereafter I do not, then the repairs would have been so much cheaper that I would have concluded that the place of repair should be China despite the risks and delays involved.

#### The cost of repair in China

143. Although I have concluded that the place of repair would have been a yard in the Middle East, it is still necessary to make detailed findings about the cost of repair in China, in order to determine the cost of repair in China with which Mr Lillie's figure for the cost of repair in Dubai is to be compared. During the course of the discussions between Mr Lillie and Mr Cuffe both before and during the trial, a measure of agreement was reached both on the extent of repair required and its cost. An Excel spreadsheet was prepared by the experts which highlighted where there were differences and agreement on prices. In this section of the judgment I have used the item numbers from that spreadsheet in setting out my findings on the cost of repairs. I have focused principally on what Mr Goldstone QC described as the "big ticket" items. Where the differences between the two experts were minor, I have accepted Mr Lillie's figures, both because I found his evidence overall more reliable than that of Mr Cuffe and because I considered his approach to the work likely to be required more realistic.

#### *Cleaning of cargo tanks and slop tanks (Items 1-8, 14-15 and 17)*

144. In relation to the cleaning of the vessel, two issues arise: (i) what level of cleaning is required before commencing a tow to China and (ii) what level of cleaning is required before the vessel can enter a Chinese shipyard for repair work.
145. In relation to the first issue, in their closing submissions the insurers asserted that there is no evidence before the court that cleaning of the cargo tanks to the gas-free for man entry standard was required prior to the commencement of any tow to China on safety or any other grounds. The basis for this assertion was that the claimants had agreed not to rely upon the evidence of Mr Lillie as to towage warranty requirements or the risk of pollution posed by towage of the vessel with residues in her tanks, since those matters were not covered by the order for expert evidence. However, contrary to that assertion and irrespective of Mr Lillie's opinion, in my judgment there is clear evidence from a number of sources that cleaning of the tanks to safe man entry standard would have been required before the vessel could be towed to China.
146. First, the owners received clear advice that cleaning of the vessel would be required before any movement of the vessel could occur, even within the Gulf. This was the effect of what the owners were told by their port agents Archipelago in the email referred to at [54] above. Furthermore, in an email of 22 September 2011 Clyde & Co advised that the "*P&I Club correspondent has advised that the vessel will be required to comply with the following requirements before allowing any move of the vessel...Gas freeing of all cargo oil tanks and bunker tanks*". It was also the

unchallenged evidence of Mr Bezas that the information the owners had from the flag state and Class was that the vessel could not be towed at all, given, inter alia, the presence of dirty oil residues.

147. Second, it is clear that the vessel would have to be cleaned before any tow, even for demolition. This is what the owners were told by Seven Oceans in an email dated 8 November 2011: *“the vessel cannot proceed to any port / berth even to a demolition yard before such cleaning procedure takes place”*. After the sale, Aryana had to carry out cleaning works as described in their statement of 14 May 2013: *“Following the delivery of the vessel from the Sellers, extensive cleaning works including the necessary gas-freeing of the vessel, neutralisation and disposal of dirty sea ballast water, removal of hazardous materials, oily waste and cargo residues etc. were carried out.”* These works evidently had to be carried out before the tow to Pakistan, not least because the warranties applicable under the towage policy obtained by Aryana for the tow to Pakistan included: *“warranted cargo tanks gas freed”*.
148. Third, in cross-examination Mr Cuffe accepted that if the owners’ professional consultants had advised that cleaning to the gas free safe for man entry standard should be undertaken before the tow took place, then he would expect the owners to act on the advice of their professional consultants and that it would be reasonable for the owners to act on such advice. It is clear from the matters I have referred to that that either is or would have been the advice the owners received. Furthermore, contrary to Mr Goldstone QC’s submission, I consider that I can take judicial notice of the fact that the towage of a dead and damaged vessel containing oil residues in her cargo tanks and engine room would pose at least a risk of pollution, so that cleaning to the gas free safe for man entry standard should take place before any tow to China was undertaken.
149. So far as the cost of cleaning to that standard in the Gulf is concerned, I agree with Mr MacDonald Eggers QC that there is no basis for doubting or impugning the evidence from Dourosteel themselves in their recent email that if they had been asked just to undertake cleaning to that standard, the cost would have been U.S. \$4.1 million. Mr Goldstone QC sought to construct an argument by analysis of their actual quotation that the cost would only have been some U.S. \$1.5 million, but that analysis was not supported by evidence and, in particular, Mr Cuffe did not express any opinion on the Dourosteel email, let alone suggest they were overpricing the exercise. I accept the evidence in the Dourosteel email.
150. So far as the second issue as to the standard of cleaning that would have been required for entry into a Chinese yard to carry out the repair work is concerned, there is a great deal of evidence that the vessel would have had to be cleaned throughout (including in the cargo tanks, not just in the engine room and other spaces where hot works would be required) to the hot works standard.
151. First, there is the clear evidence of Mr Lillie, whose evidence on this issue I much prefer to that of Mr Cuffe. In his first report, Mr Lillie stated: *“It should be noted here that none of the yards (those which quoted for repairs or any others) will allow hot work to begin until a thorough cargo and slop tank cleaning is carried out”*. He explained the reasons for this in detail in cross-examination:

*“Ships and shipyards become integral. When you look at the risk in a shipyard, you have to look at the - I am talking about property risk here now, not commercial risk - what the ship can do to the shipyard and what the shipyard can do to the ship in way of damage. I am not aware of anywhere in the world, nowhere in my experience can you put a tanker with dirty tanks in a shipyard for a year, at the minimum, for any time but let’s just say a year. There are lots of reasons for this. One is if you have only cleaned for gas free man entry, which I think nobody would argue with is at least a prerequisite, in order to maintain that gas free status - and, as you have seen, every yard wants to check every tank every day with a chemist and charge you a vast amount of money for it, then you have to have the tank lids open on the main deck. You cannot maintain a gas free status if the lids are closed. So there has to be ventilation.*

*If you have got oil residues in the tanks, then you are at risk, all the time you are at risk. Not just the work on your own ship, though that’s part of it, here we are cutting huge amounts of the accommodation off, there is hot work everywhere. But other ships, if I have a ship in the shipyard for a year or more it’s going to be shifted from one berth to another, there will be ships outside it, there will be ships – maybe it will be outside another. There will be hot work everywhere in the shipyard, and I don’t think, it’s certainly not my experience, that any shipyard in the 21st century will accept a dirty ship in its shipyard ...*

*[E]ven if you could find a shipyard that would allow that, then no prudent owner would allow his ship to be in that condition, and no professional person in my position could ever put their name to such a practice, it is not right, it’s an ethical engineering point, as I say.”*

152. It was put to him in cross-examination that those concerns would not arise because the last cargo carried was fuel oil, a point on which Mr Cuffe sought to place emphasis in his evidence. Mr Lillie emphatically disagreed: *“[I]n these days of crude oil washing and other things, people load cargo on top of cargo, and you could have fuel oil, you could have light Iranian crude, you could have all sorts of things down there, as residue ... I don’t know any chemist that would tell you there is no risk of explosion with a dirty tank, I’ve never met one.”*
153. Second, Mr Lillie’s opinion received strong corroboration from the evidence of Mr Paikopoulos, a marine surveyor and consultant with 42 years experience. When it was suggested to him in cross-examination that it was only necessary to clean to the hot works standard those spaces where hot works were to be carried out and adjacent spaces, which in this case would not include the cargo tanks he said:

*“No shipyard will accept a vessel with oil residues in it, or a vessel which is not very well cleaned, according to the hot works standards. So the rule is that the ships and tankers in*

*particularly have to be cleaned, they have to be gas free not only for people or entry man, but also for hot work...*

*You never know what the workers will do inside the vessel, inside the hull. You cannot know what they are going to touch or what part of the structure might be overheating, and then convey the heat further inside the vessel. All this is common knowledge and people in trade are aware of that. And this is why, if a tanker is to stay in a drydock, shipyard still demands that tankers be cleaned for hot work, unless you go to a place where people respect no standards and no laws...*

*There are so many objects that get carried in order to - over the hull. All this is very risky, and that is why shipyards do not undertake such repairing projects unless the vessel is thoroughly clean and is gas free for hot work”*

154. The evidence of Mr Lillie and Mr Paikopoulos is supported by the fact that all the shipyards which quoted for the work in response to the specifications of Mr Paikopoulos and Tecnicas did so on the basis that all tanks and the engine room should be cleaned to the hot works standard with chemical cleaning. This included the Chinese yards: Yiu Lian in response to Mr Paikopoulos and COSCO and Shanhaiguan in response to Tecnicas. It might be said that they did so because they were asked to quote on that basis, but as Mr MacDonald Eggers QC pointed out the Chinese yards did not simply follow unquestioningly the recommendations of Tecnicas. For example they proposed complete stern replacement rather than conventional repair, on the basis that it was more economic and it seems to me that if they had thought that cleaning of all the tanks to the hot works standard was unnecessary, given the cost involved, they would have said so.
155. In fact, it is clear from the COSCO quotation that they required the vessel to be gas free cleaned to the hot works standard, since their quotation stated: “*the vessel should be in the condition of gas free approved by yard and ready for hot works*”. COSCO set out an identical requirement in the quotation for the vessel upon which Mr Cuffe based some of his pricing but which he did not identify on grounds of confidentiality. Mr Goldstone QC sought to argue that this requirement should be interpreted as meaning that only those areas and spaces where hot works were to be undertaken required to be cleaned to that standard. I consider that argument unsustainable: the requirement of being ready for hot works is not qualified in any way and it seems to me that if the requirement had been limited as Mr Goldstone QC suggests, the quotations would have said so.
156. On the other side on this issue, Mr Cuffe was in a minority of one. He maintained that in his experience, Chinese yards would only have required the vessel to be cleaned to the hot works standard in the spaces where hot works were to be undertaken and adjacent spaces, but that elsewhere some form of “gas free safe for man entry plus” cleaning (i.e. without the need for staging and chemical cleaning all the tanks) would be sufficient. I cannot accept that evidence. Quite apart from the fact that it is against the weight of the evidence on this issue, it is inconsistent with the requirements of COSCO referred to in the previous paragraph. As I said at [34] above in my assessment of the witnesses, I found Mr Cuffe’s somewhat obdurate maintenance of

his position on this issue in the face of the other evidence unimpressive and it cast doubt on his objectivity generally.

157. As for the cost of cleaning to the hot works standard, the claimants relied upon the Dourosteel quotation of U.S. \$5,450,000. Mr Lillie's opinion was that, given that the vessel would have to be cleaned to a safe for man entry standard in the Gulf prior to commencement of the tow to China, it would make no commercial sense to do some cleaning in the Gulf and the balance in China. This would lead to a duplication of effort and would not ultimately lead to major savings in terms of either money or time. On the basis that the cost of cleaning even to the safe for man entry standard would have been U.S. \$4.1 million as quoted by Dourosteel, it seems to me Mr Lillie is plainly right on this issue.
158. Of course, Mr Cuffe's primary position was that no cleaning at all was required before the tow commenced, but I have rejected that evidence. I am equally unimpressed by the suggestion that it would have been cheaper to clean to the safe for man entry standard in the Gulf then "top up" with cleaning to the hot works standard in China. It seems to me that in all likelihood, taking that course would, as Mr Lillie said, have led to duplication of effort and may well have ended up costing more and taking longer. In that context, it is striking that the quotations obtained from the Chinese yards for cleaning the tanks to a hot works standard were not wildly dissimilar to the Dourosteel quotation, supporting the conclusion that if some or all of the cleaning had been done in China, the cost would not necessarily have been that much cheaper than the Dourosteel quotation.
159. Shanhaiguan quoted a price of U.S. \$4.95 million for tank cleaning including staging and pumping out bunkers remaining on board. Yiu Lian quoted U.S. \$4.2 million for "*cleaning/removal of oil sludges/oily water on board*". The COSCO quote was more expensive at U.S. \$5.9 million but that included cleaning the engine room. Mr Cuffe stated in his supplementary report that cleaning to a hot works standard in China would cost U.S. \$3,251,000 but it is not clear where that figure derives from, as it is not based on any of the quotes actually provided. In cross-examination, Mr Cuffe was pressed as to whether, on the basis of the prices quoted by the Chinese yards, the estimate of Dourosteel on which Mr Lillie relied must be regarded as a reasonable estimate and responded: "*I expect you could argue that, yes*". In my judgment the price of U.S. \$5,450,000 is a reasonable one and that is the price I have taken.

*Removal and disposal of contaminated ballast water (Item 10)*

160. The cost of removal and disposal of contaminated ballast water in China is agreed between the experts at U.S. \$1,500,000 based on the Shanhaiguan quotation. So far as removal and disposal in the Gulf is concerned, Mr Lillie's evidence that the cost would have been U.S. \$2,810,000, the price quoted by Akron, was unchallenged. The only real issues between the parties were whether there was contaminated ballast water on board the vessel and whether the contamination was caused by the casualty.
161. Although the insurers sought to maintain a case, essentially based on the Mercator certificate, that the water in the ballast tanks was clean, it seems to me that the weight of the evidence points very clearly to there being contaminated water in the ballast tanks. The evidence of Mr Pappas of the salvors, whom I found to be a truthful and impressive witness, was that prior to the STS operation: "*we attempted to make an*

*inspection of the ballast tanks, we started with the aft ballast tanks, I mean, I don't remember now the exact number, so we opened up the manhole, and it was by smelling and seeing a shine surface in one or two of these ballast tanks, so we stopped this effort, because for us it was not of use any more, so we decided then to amend the ballasting sequence in such that only ballast is going to be filled in and not being taken out."* Although Mr Goldstone QC sought to question this evidence on the basis that there was no record of finding contaminated ballast water in the salvors' Statement of Facts, Mr Pappas explained that it was of insufficient significance to the salvage operation to be reflected in the Statement of Facts.

162. I am quite satisfied that Mr Pappas was accurately stating what he saw in the one or two tanks he inspected and that what he was describing was oil residue on the surface of the ballast water, indicating there was contamination. Mr Goldstone QC sought to argue that, even if I accepted this evidence, it only demonstrated that one or at most two ballast tanks were contaminated and, accordingly, I should only allow for the costs of cleaning out at most two tanks. I reject that argument. Whilst Mr Pappas only looked at two tanks at most, the vessel had a common ballast system so that if one ballast tank contained contaminated water, the likelihood was the contamination was in all the tanks. There is other evidence pointing to widespread contamination of the ballast water, not limited to one or two tanks. In particular, the report of the Class surveyor following his inspection on 25 October 2011 was that: "*The water in ballast tanks of the vessel is contaminated by oil residuals, which seen from the main deck through the deck holes*".
163. On 19 January 2012, in response to a request from the owners to confirm that the ballast water on board was clean sea water, FOS, the salvors, stated that the ballast water on board was partially oil contaminated. It was on the basis that the ballast water tanks contained approximately 28,700 metric tons of oily water that, on 6 March 2012, the owners then sought the quotation from Akron for a price for removal. The buyers, Aryana, subsequently confirmed in the statement they provided that on delivery the vessel still had contaminated ballast on board. I see no reason not to accept that evidence and, to the extent that the Mercator certificate suggests the contrary, I agree with Mr MacDonald Eggers QC that it is aberrant and should be ignored.
164. On the basis that the ballast on board was contaminated, it seems to me that it required removal at any repair yard. I accept the evidence of Mr Lillie on this point in answer to me in cross-examination:

"MR JUSTICE FLAUX: I understand your opinion to be, though, that you would still, if there was dirty ballast water in the ballast tanks, never mind where it came from, but assuming there was, that that's something that any prudent yard would also require to be -- or need to be dealt with?

A. Oh, there is no question about that, my Lord. If this ship has to go into drydock then you have to deballast or part deballast or shift, and if you have to deballast and there is any suggestion of dirty ballast, then it has to be disposed of and cleaned, otherwise you can't reballast."

165. As to the cause of the contamination, the claimants' case was that in all probability it arose as a consequence of the casualty. The insurers had no positive case to the contrary. However, there is no evidence of any pre-casualty defect in the ballast system. The vessel had a clean Class Certificate with no conditions outstanding and, if there had been contamination of the ballast water prior to the casualty, this would surely have been detected. The first observation of any contamination was by Mr Pappas at the time of the STS operation in September 2011. It seems to me that, even if the precise cause of the contamination cannot be identified, the water clearly became contaminated during the salvage operation which was necessitated by the casualty, so that the contamination was caused by the casualty. I will allow the cost of removal and disposal in full at U.S. \$1,500,000.

*Cleaning of debris and removal of damaged items from pump room (Item 18)*

166. Although there is no dispute that debris had to be cleared and damaged items removed from the pump room, there is a dispute as to the cost. Mr Lillie allows U.S. \$110,000 on the basis this covers the cost of all damaged items, such as pipes and ladders from the top of the pump room. Mr Cuffe allows only U.S. \$6,000 although the spreadsheet states that he includes pipe removals and other items elsewhere. The difference between them appears to be in relation to the cargo pump discharge pipes in the pump room. Mr Lillie's evidence by reference to one of the photographs was that the cargo pump discharge piping was burned and he considered that the piping systems would require removal, cleaning and testing. Mr Cuffe however did not consider that the upper lengths of the cargo piping needed renewal. In my judgment the evidence of Mr Lillie is to be preferred on this issue. The Class survey report noted that the pump room had been highly affected by fire and heat and by damage from seawater used in fire fighting. In the circumstances, I allow U.S. \$110,000 in full for this item.

*Cleaning of engine room and bunker tanks (Items 25 and 27-30)*

167. In relation to these items, Mr Goldstone QC contends that Mr Lillie has double-counted, because these items of cleaning are already included in the Dourosteel cleaning quotation of U.S. \$5,450,000. It seems to me that this is a false point. Whilst the Dourosteel quote provides for cleaning the engine room to hot work standard, Mr Lillie explained at the meeting between the experts on 26 November 2014 of which the court was provided with a note, that his item 25 of U.S. \$150,000 is to allow for further cleaning at the shipyard. This seems to me perfectly sensible.
168. Items 27 to 30 relate to cleaning of bunker tanks and other tanks in the engine room. Contrary to Mr Goldstone QC's contention, this aspect of cleaning is not allowed for in the Dourosteel quote. Furthermore in the note of the meeting of 26 November 2014, it is stated that the scope of this work is agreed, but the cost is not. In other words, Mr Cuffe was not suggesting that this work was already encompassed in the Dourosteel quote. For these items Mr Cuffe has allowed just short of U.S. \$140,000 as against Mr Lillie's figure of U.S. \$336,320. This difference was not explored in cross-examination of the experts. In fact the bulk of the difference is on item 30, cleaning of pumps, purifiers and auxiliary equipment where Mr Lillie considered that Mr Cuffe underestimated the number of hours necessary for cleaning. On the basis that Mr Lillie inspected the vessel whereas Mr Cuffe did not, I consider Mr Lillie was better placed to judge the cleaning necessary. I accept Mr Lillie's evidence on the cost of these items.

*Asbestos removal and disposal (Item 32)*

169. I have already set out at [72] above my reasons for accepting the report of Spectrumlabs that there was asbestos present in both the engine room and the accommodation. In terms of the cost of removal and disposal, Mr Lillie took the Drydocks World quotation of U.S.\$1.5 million for removal of asbestos from the engine room and doubled that figure to cover the cost of removal of asbestos from the accommodation as well, which Mr Cuffe accepted was a reasonable thing to do. On the other hand, the figure of U.S. \$400,000 put forward by Mr Cuffe is one of his figures derived from Mr Chen. As I said at [36] above, very little weight can be attached to evidence derived from Mr Chen and, in any event, this figure was no more than provisional, as Mr Chen said: *“Final cost will be based on actual work done”*.
170. Mr Cuffe’s explanation for his cost of asbestos removal in China being so much lower than the Drydocks World quotation was that the work would be carried out by shipyard workers not specialists, although he admitted in cross-examination that he had no actual experience of asbestos removal and it is evident that this was simply what he had been informed by Mr Chen. I consider that evidence is inherently unreliable. It is clear that removal of asbestos has to be carried out by specialist workers and is expensive. As was stated by Spectrumlabs in their report: *“Asbestos removed after a fire incident is a very special and expensive procedure. Qualified personnel and continuous attendance is needed”*. Likewise, COSCO stated in their quotation for repair of the vessel: *“Asbestos is excluded and will be removed/disposed by specialists”*. In my judgment, the evidence of Mr Lillie is much to be preferred on this issue and I allow U.S. \$3 million in full for the cost of removal and disposal of asbestos.

*Steel repairs to the engine room, hull, funnel casing, accommodation, ladders and handrails (Items 36-38, 206 and 47-48)*

171. I have already found in the section of the judgment dealing with the extent of damage to the vessel that I prefer the evidence of Mr Lillie as to the steel renewal required in the engine room and its decks and the main deck of the vessel to that of Mr Cuffe, in other words the correct amount of steel renewal required in those areas was 530 tons rather than 316 tons as stated by Mr Cuffe. The amount of renewal required in other areas was agreed between the experts: 39 tons in the hull, 129 tons in the upper engine room and funnel casing and 318 tons in the accommodation. Overall, therefore, I accept Mr Lillie’s figure for steel renewal of 1,016 tons.
172. Apart from the difference between the experts as to the amount of steel renewal required, they disagreed as to the cost which would be charged by a Chinese yard. There was broad agreement as to the base cost of steel at U.S. \$1.1 to \$1.34 per kg for ordinary flat pieces, but the experts disagreed as to the uplift to be applied to that figure. Mr Cuffe took a price of U.S. \$1.5 per kg which was based on prices that had been charged on actual jobs in China and said he was confident that he could have negotiated that price in relation to this vessel. On the other hand, the figure taken by Mr Lillie was U.S. \$3 per kg. That included the cost of x-ray and ultrasound testing



and of staging. It also took account of the disproportionately greater price charged by shipyards for smaller pieces such as brackets and for shaped plates or high tensile steel.

173. Mr Lillie's evidence on this issue is supported by the Shanhaiguan quotation for this vessel which gave a price, including small pieces of U.S.\$3 per kg and although Mr Cuffe referred to another Shanhaiguan quotation for the unnamed vessel of U.S.\$1.85 per kg, that did not include any mark up for various items including small pieces where a minimum weight of 10kg was to be charged. On the other hand, that lower price is to an extent supported by the quotation from Yiu Lian for the present vessel which was U.S. \$1.75 per kg for mild steel plate, U.S. \$2.15 per kg for high tensile steel plate and mild steel shape bar and U.S. \$2.65 per kg for high tensile shape bar.
174. Mr MacDonald Eggers QC provided a "Hypothetical Steel Calculation" designed to demonstrate how, on the basis that 10% of the steel required was small brackets where the minimum weight charged would be 10kg, Mr Lillie's average figure of U.S. \$3 per kg could be justified. However, despite the ingenuity of the calculation, I agree with Mr Goldstone QC that it was likely to involve an unrealistic number of brackets. On balance, I considered the figure of U.S. \$3 per kg somewhat excessive but, on the other hand, I thought Mr Cuffe's figure of U.S \$1.5 per kg was unrealistically low. I propose to allow an average figure for the cost of steel of U.S. \$2.5 per kg. It follows that the cost of steel renewal in China set out in Mr Lillie's costings on the spreadsheet fall to be reduced by U.S. \$508,000.
175. The cost of renewal of ladders and handrails are agreed at U.S. \$10,000 and U.S. \$12,000 respectively. Equally, the cost of removal of debris and damaged material and of removal of the damaged accommodation and funnel casing are agreed between the experts at U.S. \$200,000 and U.S. \$250,000 respectively.

*Main engine (Items 56, 57 and 59)*

176. For the reasons I have already given in the section of the judgment dealing with the extent of damage, I accept Mr Lillie's opinion that the main engine cylinder heads and jackets and turbochargers were all heat damaged and required replacement. On that basis, as Mr Cuffe essentially accepted in cross-examination, Mr Lillie's figures for the cost of replacement parts of U.S. \$2,050,000 and for the cost of labour of U.S. \$1 million are reasonable and I propose to allow those figures.
177. Although Mr Lillie did not consider that there was any further damage to the main engine, both experts recognised that the full extent of the damage would not be ascertained until it was opened up and examined. Mr Lillie provided "worst case" figures for the eventuality that the entire main engine required replacement of U.S. 2,800,000 for the cost of the engine and U.S. \$2,200,000 labour, overall U.S. \$1,950,000 more than I have allowed for items 56 and 57. Although I have not made any allowance for that "worst case" scenario in assessing the cost of repairs, some margin has to be built in to the assessment of the cost of repairs to cater for that eventuality (either by way of whatever percentage contingency is allowed or as part of the "large margin" of which Vaughan Williams LJ spoke in *Angel*).
178. Item 59 relates to the crankshaft. That was not heat damaged but it was agreed between the experts that it would have suffered corrosion during immersion in

seawater. The issue between the experts is as to whether the extent of that corrosion would have been such that hand polishing would have sufficed to restore the smoothness of the crankshaft as Mr Cuffe contended or whether machining would have been required as Mr Lillie contended. Ultimately, the extent of the corrosion and how much work would be required could not have been ascertained unless and until the crankshaft was opened up and examined. However, Mr Lillie's evidence was that, in his experience, polishing would not suffice where there has been immersion in seawater: *"I wouldn't rule it out, but it's never been my experience that the crankshaft can be recovered from immersion, corrosion with hand polishing. I wouldn't rule it out but it's not very likely."*

179. Mr Goldstone QC relied upon the fact that the claimants' own corrosion expert Mr Chell (who was not in fact called to give evidence) had expressed the opinion in his report that there would only have been surface corrosion of the crankshaft which could have been removed by hand (i.e. by polishing) and any rusting of bearing surfaces such as journals and crankpins could also be removed by polishing. As Mr Goldstone QC pointed out, that evidence is really wholly inconsistent with Mr Lillie's evidence that machining would have been necessary.
180. It does seem to me that this is an issue on which the claimants should not be permitted to go behind the views of their own expert Mr Chell and that only the cost of polishing should be allowed for at U.S. \$12,000.

*Auxiliary systems (Items 61, 65-68, 70-71)*

181. A number of items concern the auxiliary systems. On most of these the experts agree on pricing, but on a few Mr Cuffe has a lower figure, specifically removal and renewal of the oil mist detector where his price is U.S. \$10,000 against Mr Lillie's U.S. \$15,000 and the renewal of main luboil pumps where his figure is U.S. \$5,000 against Mr Lillie's U.S. \$13,000. Where the experts differ, I prefer the evidence of Mr Lillie, since Mr Cuffe had a tendency to downplay the amount of work required.

*Electrical generation (Items 76 and 77)*

182. These items are the three generator sets on the second deck comprising in each case an alternator forward and a diesel engine aft. As I found in the section of the judgment dealing with the extent of damage at [107] above, I prefer the evidence of Mr Lillie that all three alternators were heat damaged so as require replacement to the evidence of Mr Cuffe that they simply required rewinding. This is an appropriate point to deal with one of the other points made by the claimants, namely that because, as I found at [104] above, the Class surveyor found that all this equipment in the engine room required replacement, the owners would have had to replace the alternators to keep the vessel in Class. The claimants submitted that whilst, if both consultant surveyors were of the opinion that a particular item of equipment did not require replacement, the Classification Society would in all probability have deferred to their combined opinion, where they disagreed and Mr Lillie was saying a particular item required replacement (in line with the Class surveyor's own findings) whereas Mr Cuffe was saying it did not, in all probability the Classification Society would have insisted on replacement.

183. Essentially the same argument was rejected by Andrew Smith J in *The Irene EM* at [469]:

“Mr Templeman based another argument on this email: that, if she were not repaired by the section method, the "Irene EM" would not have been given classification, that therefore she could not have been insured, and so that she could not have been operated. In other words, for practical purposes the position adopted by BV and stated in the email took out of the claimants' hands any decision about how the repairs might be done. I reject that argument: as I have said (at para 197), I accept Mr Templeman's interpretation of what BV meant in their email, but it does not follow that after further inspection of the damage, in particular the damage to the double bottomed structure, they would not have agreed to another method of repair; nor that, if the claimants had adopted another method of repair, BV would not have accepted the vessel back into class when they saw the results. While the claimants were contemplating the section method, BV had no reason to object to it even if they thought that the claimants were being more cautious than necessary. It does not mean that, if the claimants had re-assessed the damage and had proposed less expensive repairs, BV would not have considered them. After all, it was not for a classification society to insist on particular repairs: their role was to survey the vessel after repairs had been done and to decide whether to accept the vessel back into class. Of course, it was sensible for the claimants to seek BV's views about what repairs might be acceptable to them, and for BV to give them guidance. But in the end, if the vessel was to be repaired, it was for the claimants to decide what repairs would (i) restore the vessel to her pre-incident condition and (ii) meet classification requirements. Indeed, if the claimants had had the vessel properly repaired to their surveyor's satisfaction but BV declined to classify her, the claimants were entitled under BV's rules to challenge the decision.”

184. It seems to me that this analysis must be right. Ultimately, it is for the prudent owner to decide what repairs to undertake, not for the Classification Society to dictate. Of course, where, as in the case of the alternators, the views of the Class surveyor as to the need for replacement accord with those of Mr Lillie, that provides strong support for Mr Lillie's opinion, but the views of Class cannot be determinative.
185. As for the cost of replacement of the alternators, Mr Lillie's figure is U.S. \$400,000, whereas Mr Cuffe's figure is U.S. \$314,151. The difference was accounted for by the fact that Mr Cuffe did not allow for any mark up by the shipyard by way of handling fee on items bought in by the owners or for any import surcharges in China for items bought in from Japan, as these alternators would have been. Although Mr Cuffe said that he had been involved in cases where a handling charge was not made, he accepted that there may be a handling charge. Overall, he accepted that Mr Lillie's

estimate was a reasonable one. I will allow the figure of U.S. \$400,000 for replacement of the alternators.

186. The experts were agreed that the diesel engines would require overhaul and that the cost would be U.S. \$310,000. There was also no dispute that, if when the units were opened up and examined, the entire units (i.e. both the alternators and the diesel engines) required replacement, the cost would be U.S. \$1,200,000. That is U.S. \$490,000 more than I have allowed for items 76 and 77 and, as with the main engine, some margin for this eventuality has to be built in to the assessment of the cost of repairs (either by way of whatever percentage contingency is allowed or as part of the “large margin” of which Vaughan Williams LJ spoke in *Angel*).

*Oil fired and composite boilers (Item 87)*

187. As I have already found at [116] to [119] above, I consider that Mr Lillie is correct in his assessment that all three boilers were so heat damaged as to require replacement. In relation to the cost of replacement, Mr Lillie put forward a figure of U.S. \$1.25 million per boiler for the auxiliary boilers and U.S. \$500,000 for the composite boiler. This was not based on information from the actual boiler manufacturers, Alfa Laval, but as he explained in his supplementary report, from a former director of a U.K based marine boiler specialist. Mr Cuffe on the other hand did obtain figures from Alfa Laval, but not for identical boilers, since the particular type of boiler is no longer made. Alfa Laval provided “budgetary” figures for equivalent boilers of €650,000 per boiler for the auxiliary boilers and €250,000 for the composite boiler. These budgetary figures were obviously subject to change as Mr Cuffe accepted in cross-examination and since he did not provide the vessel’s IMO number to Alfa Laval, it is not possible to say precisely what the cost would have been, added to which there would probably have been a mark-up by the yard. I propose to allow for a cost in between the rival contentions of U.S. \$1 million for each of the auxiliary boilers and I see no reason not to accept Mr Lillie’s figure for the composite boiler of U.S. \$500,000.
188. To those figures must be added the costs of transport to the yard, together with labour and alterations to the peripherals and foundations on the boiler flat required when new boilers are installed. Mr Lillie allowed for an additional U.S. \$500,000 overall. Mr Cuffe provided a transport figure of €40,000 for transport to the Shanghai area based on advice from Alfa Laval. He said that he had allowed for labour elsewhere in his figures, but it is not clear where. So far as the cost of alterations is concerned, he claimed in cross-examination that there would have been no greater cost than if the original boilers were being refitted, but that seems to me to overlook that the replacement boilers were equivalent but not identical. It does seem to me that there would have been some alteration costs. Mr Lillie’s figure of U.S. \$500,000 for “extras” is on the high side, so it seems to me an appropriate figure is U.S. \$300,000. Overall in relation to item 87 I allow U.S. \$2,800,000, U.S. \$700,000 less than Mr Lillie’s figure of U.S. \$3,500,000.

*Piping and valves (Items 96 to 100)*

189. The difference between the experts is as to the rates which would have been charged for overhaul and renewal of piping. Mr Cuffe has an overhaul rate of U.S. \$23 per metre and a renewal rate of U.S. \$60 per metre, whereas Mr Lillie’s rates are U.S. \$78

and U.S. \$120 per metre respectively. None of the quotations from the Chinese yards provides any figures for these costs. The COSCO quotation says these would be quoted for after drawing preparation. Mr MacDonald Eggers QC sought to justify Mr Lillie's figures by reference to the 2011 tariff from COSCO with percentage uplifts. However, as Mr Goldstone QC pointed out, that tariff made it clear that a discount of 50% could be provided by the yard. Whilst it is correct that such a discount would not necessarily be agreed by the yard, I see no reason for concluding that it would not have been in this case.

190. That conclusion is supported by the fact that on the quotation for the unidentified ship provided by COSCO in 2012 which Mr Cuffe produced, much lower tariff rates for piping renewal are quoted which work out at an average of U.S. \$56.6 per metre. The Guangzhou Dockyards quotation contains figures which average out at U.S. \$70 per metre. These quotations are far more in line with Mr Cuffe's figures in the present case than Mr Lillie's. Although it was put to Mr Cuffe in cross-examination that these quotations related to a different, smaller ship, there was much force in his response: *"Well a pipe is a pipe. It doesn't know what ship it's in"*.
191. In relation to valve renewal, the cost is agreed at U.S. \$50,000 and on valve overhaul and refit, Mr Cuffe's figure of U.S. \$68,000 is in fact higher than that of Mr Lillie. On this issue of piping and valves overall, I prefer Mr Cuffe's figures of U.S. \$344,000 to those of Mr Lillie of U.S. \$592,000.

*Cargo-handling equipment (Items 103-106, 109-11, 113 and 115)*

192. In relation to cargo-handling equipment, there is a large measure of agreement except for item 113, pump room equipment renewal. Mr Lillie allows U.S. \$150,000 for this but the spreadsheet states Mr Cuffe includes these items elsewhere. Neither expert was cross-examined on this issue, which is not a criticism since I agreed that it was neither necessary nor proportionate to cross-examine on every single item. However, as a consequence it is not clear where Mr Cuffe has included these items or how many he has allowed for. Given the extent of damage to the pump room, it seems to me that Mr Lillie's allowance is entirely reasonable. In relation to the other items, I also accept Mr Lillie's figures.

*Engine room insulation (Item 124)*

193. The difference between the two experts was explained by Mr Lillie in his supplementary report in these terms:

*"Mr Cuffe uses a lump sum quote from Mr Chen at USD 100,000 whereas I estimate that some 2000m<sup>2</sup> of sheet insulation will be required at up to USD 100/m<sup>2</sup> as per my first report and in addition there will be approximately 1600m of pipe insulation making a total figure of USD 450,000 in China. I note that, on the basis of the area which I have calculated to be 2000 m<sup>2</sup> Mr Chen's figure of USD 100,000 would be the equivalent of about USD 5 per m<sup>2</sup> which I regard as quite unrealistic."*

194. Mr Lillie was cross-examined about this item briefly. Although he accepted that he had no direct experience of the cost of engine room insulation in China, he said that generally he had seen figures ranging from U.S. \$100 to \$300 per square metre, so that U.S. \$100 per square metre seemed reasonable. I accept that evidence, which I prefer to that of Mr Cuffe, which is essentially the untested assertion of Mr Chen on this issue. Accordingly I allow the sum of U.S. \$450,000 for this item.

*Electrical distribution (Items 127 to 131)*

195. The experts agreed in their Joint Memorandum that repairs were necessary as per Mr Paikopoulos' specification. The principal difference between them is as to the cost of approximately 50 km of electric cable that required renewal. Mr Lillie takes a rate of U.S. \$75 per metre, totalling U.S. \$3,750,000 whereas Mr Cuffe takes a much lower figure of U.S. \$9 per metre, totalling U.S. \$450,000, so in financial terms, this difference is of considerable significance.
196. Both in cross-examination of Mr Cuffe and in closing submissions, Mr MacDonald Eggers QC sought to justify Mr Lillie's figure by reference to the actual quotations from COSCO and Shanhaiguan. The former quoted a lumpsum of U.S. \$4.9 million for all electrical installation and equipment. Although Mr MacDonald Eggers QC sought to suggest only the cost of bridge navigation, fans, motors and switchboard fell to be deducted from that (which on Mr Lillie's figures is about U.S. \$1.2 million) to arrive at a figure for the cost of cabling which is in the same ballpark as Mr Lillie's figure, I agree with Mr Goldstone QC that this is wrong. When one compares the Tecnitas specification to which the COSCO quotation was responding with the section of the quotation dealing with electrical installation and equipment it is clear that the reference to "automation/control" is to all the navigation and safety equipment in the engine control room/bridge.
197. In other words, in order to arrive at an approximation of the cost of the cabling alone for which COSCO were quoting, it is necessary to deduct all the other electrical items in the engine control room and cargo control room on the spreadsheet including items 133 (engine control room), 141 (cargo control room) and 193 (navigation/safety equipment). As Mr Goldstone QC submitted, on Mr Cuffe's figures, this would involve a deduction from the global COSCO electrical quote of U.S. \$4.9 million of just over U.S. \$3.5 million, leaving just under U.S. \$1.4 million in respect of cabling.
198. This equates to about U.S. \$27 per metre, which is much more in line with the COSCO 2011 tariff which has prices of U.S. \$13 to \$24 per metre. Although, as Mr MacDonald Eggers QC points out, the notes to the tariff make clear there are extra charges for accessory work for laying cable such as erecting staging and other matters, I do not begin to see how the difference between the tariff price and Mr Lillie's U.S. \$75 per metre could be accounted for by those extra charges. It is much more likely that the extra charges would increase the average cabling price up to U.S. \$27 per metre or slightly more.
199. Although the Shanhaiguan quotation of U.S. \$5.6 million for "Electrical Equipment, Cable, Automation and Switchboard, Navigation Communication, Elevator, Fire Detection, Public Address etc supply and fit" was not analysed in cross-examination of Mr Cuffe, it too was in response to the Tecnitas specification and is clearly a quote for all the electrical equipment. The suggestion made in Mr MacDonald Eggers QC's

written closing submissions that only the cost of navigation equipment falls to be deducted to arrive at a price for cabling is manifestly wrong.

200. On the other hand, I consider Mr Cuffe's price of U.S. \$9 per metre is unrealistically low. Although he relied on the quotations received for the unnamed vessel, that was a smaller ship with a narrower scope of repair and I do not consider it necessarily a reliable indication of what the cost of cabling would have been for this vessel. It seems to me that the best evidence is from the COSCO quotation for this vessel with the deductions Mr Goldstone QC suggests, with some uplift to reflect extra charges. I propose to allow the sum of U.S. \$1,500,000 in respect of electric cabling.
201. In relation to the cost of replacing the main switchboard and motor starter panels (Item 128) Mr Cuffe allows U.S. \$580,000 whereas Mr Lillie allows U.S. \$900,000. Again there was no cross-examination on this issue, but in his supplementary report Mr Lillie considered Mr Cuffe's figure as too low, since the cost of the switchboard alone could be U.S. \$500,000 and it would be necessary to include other repairs in this item including replacing transformers, motor starter panels, etc. Thereafter, Mr Cuffe sought to justify his figure by reference to a quotation from Chinese manufacturers but as Mr Lillie said in the Errata and Corrigenda to his reports, that quotation was of little use as it gave no indication of what systems were included in the switchboard. I consider Mr Lillie's figure for this item of U.S. \$900,000 much more realistic.
202. In relation to the other items of electrical equipment (Items 129 to 131) there is substantial agreement between the experts, but where there is not, I prefer Mr Lillie's figures.

*Engine Control Room (Item 133)*

203. The experts are agreed that all the equipment in the engine control room required renewal and the only issue is as to cost. Mr Cuffe's figure of U.S. \$1.6 million was based on a lump sum figure provided by Mr Chen which Mr Lillie considered was too low. It also took account of the Guangzhou quote for the unnamed vessel, but as the notes to the quotation made clear, the quote was indicative only and the final cost charged would be the actual purchase price. In cross-examination Mr Cuffe accepted that it would not be unreasonable to add another 20% given that the actual purchase price could be higher. In my judgment, Mr Lillie's figure of U.S. \$2 million is more realistic and is to be preferred.

*Cargo Control Room (Item 141)*

204. Again the experts agree that all the equipment in the cargo control room required renewal and the only dispute is as to cost. Mr Cuffe again relies on a lump sum figure of U.S. \$400,000 provided by Mr Chen, but as Mr Lillie said in his supplementary report, the figure did not take into account the cost of running a tank level indicator system back to all the cargo tanks. I consider that Mr Lillie's figure of U.S. \$500,000 is more realistic.

*Electrical motors and auxiliary system and other equipment (Items 145 to 147, 152-156, 158-161, 164, 165, 167 and 174)*

205. There is a large measure of agreement between the experts on the cost of replacing or repairing the remaining equipment on board and where there is not, I prefer the figures put forward by Mr Lillie, given Mr Cuffe's tendency to downplay the amount of work needed and the fact that Mr Lillie actually inspected the vessel and saw the extent of the damage. The only item it is necessary to mention further is the sewage treatment plant (Item 158) which Mr Lillie considered required renewal, whereas Mr Cuffe considered it only required overhaul. Given the proximity of the plant to the purifier room on the third deck where the explosive device was detonated and the fact that it is in the area of severe heat damage identified in Dr Mitcheson's evidence, Mr Lillie's evidence that it required renewal is clearly to be preferred.

*Agency Fees (Item 178)*

206. It is common ground that agency fees would have been incurred, but the difference is as to cost. Mr Lillie's figure is U.S. \$500,000 to cover assistance with transport, customs, hotels, visas, health and general bureaucracy. Mr Cuffe has a much lower figure of U.S. \$114,000 but appears to accept in his supplementary report that the actual charge would depend upon the amount of work undertaken. Given Mr Cuffe's tendency to downplay the extent to which the vessel was damaged and how much work is needed, I consider Mr Lillie's evidence on this issue much more realistic and I accept his figure.

*System commissioning and sea trials (Item 182)*

207. Mr Lillie's figure for the cost of system commissioning and sea trials, inclining test etc is U.S. \$1 million. As he explained in cross-examination it includes the cost of the attendance of Class surveyors at the commissioning. Mr Cuffe's figure is much lower at U.S. \$120,000. Mr Lillie's figure is supported by the Shanhaiguan quotation of U.S. \$1 million for: "*precommission, inclining test and sea trial/dock trial*" and by the COSCO quote of U.S. \$900,000. Although, as Mr Cuffe pointed out, that figure also included main deck treatment (presumably limited to damage caused by salvors) it excluded the cost of Class attendance.
208. Mr Lillie explained his approach in cross-examination: "*[This figure is] for the cost of the sea trials and also the cost of commissioning various items of equipment not only at sea trials but, if it's done before then, then before then. It includes the attendance of Class at that commissioning and the attendance of specialists at that commissioning... Part of the problem is that, when you are doing a repair in China with a lot of stuff from elsewhere, be it Japan or Korea or wherever, you have to bring in specialists. Some of them might be local, but there is a lot of specialists travelling in and out... And besides, the COSCO view of this was 900,000, and it seemed to me that they had not included everything, or at least I inferred that they hadn't included everything, so I moved it up a bit.*"
209. In my judgment, Mr Lillie's evidence about this reflects his considerable experience of attending and supervising the repair of casualties. Given the complexity of the systems involved and that what is contemplated is repair in China, so that as he said, specialists have to be brought in from elsewhere, it seems to me his assessment of the



yard costs of such matters is more realistic than that of Mr Cuffe and I accept Mr Lillie's evidence on this issue.

*Workshop Design (Item 185)*

210. Despite the terminology, it emerged from the evidence of Mr Lillie that this item included all the costs involved in developing a repair project from concept to reality including drawings and the fees of professional consultants and surveyors appointed by the owners. Mr Lillie's figure for this item was U.S. \$1 million whereas Mr Cuffe's figure including his allowance for owners' procurement (Item 180) was U.S. \$180,000. Mr Lillie's figure drew on his experience on other projects. Mr Goldstone QC put to him in cross-examination that the figure was essentially based on the YEOMAN BONTRUP, one of the projects with which he had been involved, to which his response was:

*"I mean, the cost of all of these things for all of those cases was high, very high in fact. The Class involvement in doing these drawing approvals – and the older the ship, the worse it gets – can be \$100,000 on its own. Every system that's going to be recommissioned here, every drawing has to be redone, everything has to be approved, all of the new equipment that replaces obsolete equipment, or change of style, the insulation, the soundproofing, the anti-vibration, all of this stuff has to be re-approved by Class. So that's what goes into that, that and the planning, the procurement. Trying to find out where you can buy a similar engine or engine parts or boilers that need to be renewed, all of that stuff takes time and planning. I have included there in the planning things like Mr Paikopoulos, and myself to some extent, and other things, and all of these fees add up."*

211. As he also explained in cross-examination, his figure for Class approval and site attendance of the Class surveyor (Item 187) of U.S. \$300,000 was for all the other things that Class has to do other than attendance at sea trials and commissioning, in other words regular attendance during the repairs to ensure that Class Rules are complied with and the scope of repairs agreed. Mr Lillie was adamant that there was no overlap between that item and this Item 185. Despite Mr Goldstone QC's submission that Mr Lillie's figure was grossly excessive, I accept that his evidence was based on his considerable experience of repair projects and that it constitutes a reasonable assessment of the likely cost of the matters comprised within this item, whereas Mr Cuffe's figure is far too low.

*Replacement bunker fuel oil, diesel oil and luboil (Item 188)*

212. This item consists of the cost of replacing the various fuels and luboil on board at the time of the casualty. The dispute is not as to the price but as to the quantity remaining on board. The claimants rely upon the information provided by the Master to the vessel's managers by email on 5 July 2011, setting out a formal bunker and lub report and a print out from the vessel's computer which showed a total of 1,050 tons on board. It is submitted that this report is more reliable than the noon report the same day to charterers and cargo interests in which the Master referred to the vessel having

721.6 tons of fuel oil on board. On the other hand, Mr Goldstone QC relies upon that noon report, submitting that if one deducts the likely consumption between then and when the intruders boarded some ten hours later, the figure arrived at is about 700 tons, which corresponds with the figure of bunkers recorded as remaining in the tanks after the casualty.

213. Although, since the Master did not give evidence, there is no explanation for the discrepancy between his two reports, I agree with the claimants that the formal report to the managers is more likely to be accurate. Furthermore, although Mr Goldstone QC's analysis seems at first blush to suggest that the noon report correlates with the quantity remaining on board after the casualty, that overlooks the fact that, as Mr Gibson found, fuel oil had leaked into the engine room through ruptured tanks and pipes. Whilst Mr Goldstone QC is quite right that Mr Gibson does not put any figure on the quantity which had leaked out, the NYSS Specification referred to about 250 tons of sludgy rubberised fuel and lubeoil dispersed through the engine room spaces. This seems to me to be more consistent with the formal report provided by the Master to the managers. Accordingly I find that the quantity to be replaced was 1,050 tons and the cost was U.S. \$950,000.

*Navigation/Safety Equipment (Item 193)*

214. There is a difference between Mr Lillie and Mr Cuffe in relation to the cost of this item of U.S. \$254,000 almost entirely due to the cost of specialists. Whereas Mr Cuffe considers that specialist attendance was not necessary as all installation could be left to shipyard staff, Mr Lillie considers that specialist attendance for the installation of important safety equipment is warranted. In my judgment, Mr Lillie's evidence on this point is to be preferred and I accept his figure of U.S. \$869,000.

*Accommodation (Item 206)*

215. Mr Lillie has allowed an overall figure of U.S. \$4,460,000 of which U.S. \$954,000 comprises the cost of steel renewal at U.S. \$3 per kg. I have already found above that the appropriate figure for the cost of steel renewal is U.S. \$2.5 per kg, so that figure falls to be reduced to U.S. \$795,000. The balance of U.S. \$3.5 million is the cost of outfitting. Mr Cuffe's equivalent figure is U.S. \$2,758,000.
216. Mr Lillie explained the constitution of his U.S. \$3.5 million figure in his Errata and Corrigenda document in these terms:

*"Of this, some USD 1.5 million is the cost of modular cabin construction with bathrooms to be fitted with a constructed framework, USD 250,000 to construct and outfit the wheelhouse (excluding the cost of navigation equipment, USD 125,000 for the galley and USD 1.6 million for the internal build of partition and framework and all other spaces ..."*

217. His cost for the cabin construction is based on 30 cabins at U.S. \$50,000 per cabin. This is where the principal difference between him and Mr Cuffe lay, since Mr Cuffe had price information from a supplier indicating a cost of U.S. \$10,000 per cabin for 30 cabins. On the other hand Mr Lillie said in cross-examination that he had recent information from a subsidiary in China of a Korean yard that builds accommodation

blocks that, fitted out with a bathroom for each cabin, worked out at about U.S. \$50,000 per cabin. Mr MacDonald Eggers QC also relied upon the fact that the price quoted by Shanhaiguan for accommodation construction including all fittings was U.S. \$3.5 million.

218. However, as Mr Goldstone QC pointed out in closing submissions, the Yiu Lian quotation for the accommodation was U.S. \$2.7 million which supported Mr Cuffe's figure. Mr Goldstone QC also sought to suggest that since U.S. \$50,000 (or its sterling equivalent of £30,000) would outfit a comfortable bedroom and bathroom in a London flat, the suggestion that a cabin unit on a prefabricated merchant ship would cost that much was inherently implausible. I am not sure I accept the analogy since what is apparently being described is the cost of outfitting within an existing building, not a proportion of the overall building costs of a new flat and there is no evidence as to what those costs would be.
219. Ultimately, this was an issue on which the court did not receive much assistance but I have concluded that I should accept Mr Lillie's evidence based upon the information he had from the Chinese subsidiary of the Korean yard and because, in relation to most of the items of renewal and repair, I found his evidence more reliable than that of Mr Cuffe.

*Painting (Item 212)*

220. After correction of an error by Mr Lillie as to the area for application and painting, his total figure for the cost of painting is U.S. \$2,106,300, whereas Mr Cuffe's figure is U.S. \$570,000. The difference between the experts arises from a number of matters. First the areas which required painting, on which Mr Lillie has a higher figure of 40,800 square metres (as against Mr Cuffe's figure of 36,000 square metres). Mr Lillie's figure is to be preferred. In his written closing submissions, Mr Goldstone QC criticises Mr Lillie for accepting in his Errata document Mr Cuffe's spreading rate of 2.5 square metres per litre because it leads to an increase in his costing, inviting the court to conclude that he has deliberately changed his spreading rate to increase the costing. I consider that to be an unfair criticism. In cross-examination Mr Lillie had said he deferred to Mr Cuffe on this as Mr Cuffe said he was an expert on paint. In my judgment, Mr Lillie's figure for the cost of painting the new steel and the fire damaged areas of U.S. \$616,000 in all is a reasonable one which I accept.
221. Mr Lillie also gave very clear evidence that after eight months motionless at Khor Fakkan, the vessel would have lost its underwater anti-fouling protection and the bottom would have required repainting. I accept that evidence. Mr Goldstone QC contended that, even if the bottom of the vessel did require repainting, the cost of that repainting should not be brought into account as part of the cost of repairs for the purposes of assessing whether the vessel was a CTL. He relied upon the fact that clause 15 of the Institute Time Clauses-Hulls only allows the recovery of the cost of surface preparation and painting of the vessel's bottom if and to the extent that it is necessary to allow welding to be carried out to damaged areas of the bottom.
222. He also relied upon a passage in the judgment of Roskill J in *The Medina Princess* [1965] 1 Lloyd's Rep 361 at 513 where having referred to clause 12 of the then Institute Time Clauses which provided: "No claim shall in any case be allowed in respect of scraping or painting the Vessel's bottom, Roskill J said: "Underwriters are

therefore not liable for the cost of repainting the vessel's bottom. Item 42 is thus wholly disallowed". With the greatest respect to that learned judge he provides no reasoning to support that conclusion and I do not see how the fact that the cost of repainting the bottom would not be recoverable from insurers on a partial loss claim precludes the inclusion of the cost of repainting the bottom (if necessitated by the casualty as was the case here) as part of the exercise of determining whether the overall cost of repairing the vessel exceeds her insured value so that she is a CTL.

223. On this point I prefer the reasoning of Andrew Smith J in *The Irene EM* at [453] where the learned judge rejected a similar argument that certain costs would not have been recoverable from insurers and so should not be brought into account in deciding whether the vessel was a CTL:

"Mr Smith submitted that some of these items, namely office expenses, costs for consulting and attendances, and adjusters' fees, would not have been recoverable from insurers, and so should not be brought into account when deciding whether the vessel was a CTL. This point was not expanded in submissions before me, and no authority was cited about it. On a simple reading of section 60 of the 1906 Act, the relevant costs are not defined by what would be recoverable from insurers: subject to the policy terms, in cases of damage to a ship what matters is "the cost of repairing the damage". The policies in this case referred to "the cost of recovery and/or repair of the vessel". However, my decision does not depend upon this point, and I do not determine it: it is better decided in a case in which there have been full submissions from the assured and the underwriters."

224. Mr Goldstone QC also attacked Mr Lillie's figure for the cost of painting the underwater area of U.S. \$380,000 on the basis that it contemplated four coats of paint, which he submitted was grossly excessive, based upon Mr Cuffe's evidence that what the owners would have done was high pressure water wash, hand scrape, spot blasted, touched up the anti-corrosive and the entire bottom and applied one full coat. However, as with so many other aspects of Mr Cuffe's evidence, that seems to me to downplay the extent to which the anti-fouling would have gone. I prefer Mr Lillie's evidence on this. When challenged in cross-examination as to whether it was necessary to apply four coats to the bottom he said: "*Of the vessel's bottom, yes. You can't do less, you can't just strip off the anti-fouling and [paint] underneath. So, yes, to do a proper job, you grit blast, prime, paint.*"
225. The other principal difference between the experts concerns the cost of surface preparation and application. Mr Cuffe had ignored the cost of surface preparation in his report but said in cross-examination it would be U.S. \$6.5 per square metre. In his supplementary report Mr Lillie had originally allowed U.S. \$12 per square metre for both preparation and application which he considered reasonable. However, in his Errata document, this figure had increased to U.S. \$18.5 per square metre, comprised of U.S. \$12 per square metre for surface preparation and staging and U.S. \$6.5 per square metre for application. The only explanation he could provide for the increase in cross-examination was that he had re-thought it and done some more research. I did not find this at all convincing and consider that his original figure of U.S. \$12 per

square metre for all preparation and application is the one which should be taken. On this basis, Mr Lillie's overall figure for painting of U.S. \$2,106,300 falls to be reduced by U.S. \$6.5 x 59,800 square metres or U.S. \$388,700.

*General Services (Items 225, 228-232, 238, 241, 243-245, 247-248, 253, 255-256, 258-259, 261, 263-264, 266-267, 269-270, 274-276)*

226. On the spreadsheet there is then a long list of small individual items comprised within "General Services". The most significant are Dockage, Wharfage and Fire Watchmen/Security Patrol which I deal with separately below. So far as the other items are concerned, in relation to some of them there are differences between Mr Lillie's figures and Mr Cuffe's figures, even on Mr Lillie's best case basis (i.e. a repair period of 360 days). Those differences are not great and the reasons for them were not explored in cross-examination. On these items, I prefer the evidence of Mr Lillie on the basis that, overall, I found his evidence more reliable and realistic. I adopt his best case figures.
227. In relation to Dockage, Mr Lillie allows U.S. \$809,000 on the basis of 92 days in drydock, whereas Mr Cuffe allows only U.S. \$246,000 on the basis of 25 days in drydock. It is difficult to see on what basis Mr Cuffe arrived at his 25 day period. The limited evidence available (consisting of the ASRY quotation which refers to 90 days in drydock and Mr Cuffe's own supplementary report which refers to 90 days in drydock in Drydocks World without suggesting that was an overestimate) suggests Mr Lillie's figure is much more realistic and I propose to accept that figure.
228. In relation to Wharfage, Mr Lillie has used a daily rate of U.S. \$2,000 per day for 360 days, totalling U.S. \$720,000. That rate is in fact way below the rates quoted by the various Chinese yards. COSCO quoted ("after discount") U.S. 4,400 per day, Shanhaiguan quoted U.S. \$3,900 per day and Yiu Lian quoted ("after 50% discount for gross price) U.S. \$3,850-5,800 per day depending on whether wharfage is during "leading time". Thus, as I see it Mr Lillie's rate for wharfage is very conservative and a higher rate could have been easily justified.
229. By comparison, Mr Cuffe's daily rate of U.S. \$650 per day bears no relation to those quotations, even allowing for the most generous discount. Although he sought to justify his rate by reference to quotations from Chinese yards for a different vessel, I consider his rate is wholly unrealistic for this vessel and I much prefer the evidence of Mr Lillie on this issue.
230. In relation to fire watchmen and security patrol, Mr Lillie has allowed U.S. \$200,000 for each of those items, U.S. \$400,000 in all, equivalent to U.S. \$900 per day. In contrast, Mr Cuffe's total is U.S. \$43,200 in all, equivalent to U.S. \$120 per day. Mr Lillie's figure is in line with the quotations from the Chinese yards for the vessel. Shanhaiguan quoted U.S. \$450 per day for fire watch alone but omitted to quote for security. Yiu Lian quoted U.S. \$240 per man per day for fire watch, allowing for three men, so the equivalent of U.S. \$720 per day, but again omitted to quote for security. COSCO quoted on the basis of three men for fire watch per day and one man for security patrol and their tariff allows for U.S. \$120 per man per day for both activities, equivalent to U.S. \$480 per day. Mr Lillie's estimates are much more in line with these actual quotations whereas Mr Cuffe's are much lower. Mr Lillie's evidence is to be preferred.

*Towage (Items 279-281 and 292)*

231. In relation to towage, the costs are agreed save in relation to item 280, the actual cost of the tow to China, in relation to which there is a difference between Mr Lillie and Mr Cuffe both as to the size of tug needed and the daily hire rate. On size of tug, Mr Lillie considered it necessary to have a tug of 150 tons bollard pull, whereas Mr Cuffe considered a tug of 125 tons bollard pull would suffice. Mr Cuffe accepted in cross-examination that he is not a towage expert. In contrast, Mr Lillie has great experience in such matters and I accept his evidence in cross-examination as to why a 150 tons bollard pull tug was required:

*“30 odd years of experience, most of it working for The Salvage Association, great lumps of it as a warranty surveyor. I know towing, I know ships, and I can tell you that to do a trip like this with a 125 tonne bollard pull in all of those miles of mostly adverse currents, is asking for trouble. If you were to look at the documents surrounding the tow to Pakistan, in that case with very light ballast, ballast suitable for beaching, they chose a smaller tug and they managed to achieve 3.5 knots as a voyage average over several days. That’s not enough at sea. To do 3.5 knots between Khor Fakkan and China, you would be doing it for, I don’t know, 69 days, 65 days, in that region. ... I’m telling you categorically to do that trip you need deep ballast. With a 125 tonne bollard pull with an average of seven to nine metres draught with a trim, you would be struggling to do four knots. It’s not enough.”*

232. Mr Lillie estimated the cost of towage at U.S. \$3,600,000 based on a daily rate of U.S. \$60,000. This was based upon a quotation from Marint for towing a vessel using a 150 tons bollard pull tug of U.S. \$60,000 per day, together with the fact that a prospective tow of the *Mighty Servant 3* from Cape Town to China was priced at U.S. \$5.06 million. Mr Cuffe also relied on a quote from Marint for a lump sum towage charge from the Persian Gulf to China in 2011 of U.S. \$1,350,000 to justify his much lower estimate of U.S. \$1,740,000. However, as Mr MacDonald Eggers QC pointed out, the quotation Mr Cuffe obtained does not seem to have focused on what bollard pull of tug would be required. Furthermore, Mr Lillie’s estimate is in line with tug hire estimates for towage of the vessel from the UAE to Pakistan for demolition which corresponded to U.S. \$65,000-70,000 per day. In all the circumstances, I accept Mr Lillie’s estimate.

*Stores and spares (Items 282 to 284)*

233. There are differences between Mr Lillie and Mr Cuffe concerning the likely cost of replacement of spares, tools, deck stores and accommodation stores for which Mr Lillie provides an estimate overall of some U.S. \$2 million based upon his considerable experience. Mr Cuffe provided an estimate of U.S. \$1.02 million based on three items in Mr Paikopoulos’ estimate in his report of 20 January 2012. As Mr

MacDonald Eggers QC correctly pointed out, that omitted Mr Paikopoulos' estimate of U.S. \$500,000 for spares for the main engine and machinery, so Mr Cuffe's figure is too low anyway. To the extent that it is based on a doubt on his part as to whether the vessel was fully stocked, I can see no justification for that doubt. Mr Lillie was shown a photograph in cross-examination on the basis that it purported to show empty drawers in the engine room stores, but he rightly pointed out that the drawers in question were not suitable for the sort of stores and spares he was talking about and that there were other photographs of store rooms in the engine room showing lots of parts. In my judgment, there is no reason not to accept Mr Lillie's estimate.

*Insurance (Item 285)*

234. The total figure for insurance put forward by Mr Lillie is some U.S. \$2.38 million of which U.S. \$100,000 relates to insurance whilst under repair in China, which does not seem to be in dispute. What is seriously in dispute are the costs of towage insurance and war risk insurance during the tow from the Gulf to China. It appears to be agreed that the overall rate is 4% but what is in dispute is to what insured value that is to be applied.
235. Mr MacDonald Eggers QC's position was that the prudent uninsured owner in the present circumstances would have insured the vessel during the tow for U.S. \$55 million, her insured value under the policy, essentially on two grounds: (a) because although the vessel was severely damaged in the incident, they would wish to protect their investment in circumstances where they had paid U.S. \$46 million for the vessel and were committed to the bank by way of mortgage for U.S. \$55 million and (b) because clause 19 of the Institute Time Clauses-Hulls provides that: "In ascertaining whether the Vessel is a constructive total loss, the insured value shall be taken as the repaired value" and, accordingly, essentially as a matter of law, that clause is conclusive as to the amount for which the vessel would be insured during the towage to China.
236. I can deal with the second ground shortly, since it seems to me to be a false point. Clause 19 is simply providing that for the purposes of assessing whether under section 60(2)(ii) of the Marine Insurance Act 1906 the vessel: "is so damaged by a peril insured against that the cost of repairing the damage would exceed the value of the ship when repaired" the value of the vessel when repaired is taken as the insured value, here U.S. \$55 million. The clause tells one nothing about what the prudent uninsured owner would have done presented with the vessel in her damaged condition (that being the test for ascertaining whether there has been a constructive total loss), as regards insuring her for the tow to China and the clause certainly does not entitle the claimants to proceed on the basis that the damaged vessel would have been insured for the tow for U.S. \$55 million.
237. In relation to the first ground, Mr Goldstone QC put forward a number of reasons why it was misconceived. He submitted first that the prudent uninsured owner test involves looking at what objectively would have been done by the prudent uninsured owner faced with the vessel in a damaged condition, not the prudent uninsured owner burdened with the actual financial commitments of these owners, so that the claimants' approach was wrong in principle. Second he submitted that in any event, the short answer to the claimants' point about their financial investment was that it had been lost in a combination of the fall in the shipping market since the purchase of

the vessel and of the damage she had sustained in the incident. Either way, he submitted the prudent uninsured owner would only have insured the vessel for the tow prior to the repairs for her value in a damaged condition, which was agreed to be U.S. \$700,000, for the purposes only of calculating the partial loss indemnity.

238. In principle it seems to me that Mr Goldstone QC is correct. The prudent uninsured owner test is an objective test which must ignore the actual subjective circumstances of the particular owner, a fortiori any financial constraints he faces which might influence how he conducted himself. It seems to me that the prudent uninsured owner would only insure the vessel for the tow for her value in a damaged condition, not for her previous insured value or for her actual value after repairs had taken place. Even if it were appropriate to take account of the actual financial commitments of the owner, it seems to me that Mr Goldstone QC is right that the value of the investment was already lost by the time the tow would have taken place and no prudent uninsured owner would have wanted to insure the vessel in her damaged condition for some wholly notional insured value of U.S. \$55 million, even assuming (about which I have considerable doubts) that any insurers would have been prepared to insure the vessel for that value.
239. Where I disagree with Mr Goldstone QC is as to the figure for which the prudent uninsured owner would have wished to insure the vessel. The value of U.S. \$700,000 (for the purposes only of calculating the partial loss indemnity) is in a damaged, uncleaned condition. Since the vessel would have had to be cleaned and gas-freed before the tow commenced and since, as I have found, the owners would have cleaned her to a hot works standard in the Gulf before the tow began, it seems to me that the correct figure for which she would have been insured is her value in that cleaned, but damaged condition. Ultimately, because the valuation experts were not called, the court has little assistance as to the appropriate figure to take. However, I propose to take the lower value taken by the insurers' expert Mr Kingham of U.S. \$8 million. On the basis of that figure, the cost of towage insurance at 4% would have been U.S. \$320,000. With the addition of the U.S. \$100,000 for insurance whilst under repair for which Mr Lillie allows, the total cost of insurance which I allow is thus U.S. \$420,000.

*Site Team (Item 286)*

240. The difference between the experts in relation to the owners' site team is one of costs. Mr Lillie puts forward a figure of U.S. \$900,000 for his estimated repair period of 15 months. He explains the rationale for this figure in his report in these terms:

*“As stated above, owners’ engineering, bidding processes, technical support, site team, procurement services and general input for repairs will cost in the region of USD 10,000 per man per month including expenses. Repairs in the Gulf would require 4 men for say 12 months in the best case and 18 months in the worst case totalling USD 0.5 million to USD 0.75 million...As stated above, repairs in China require more supervision and I would expect there to be 6 people totalling*



*USD 0.9 million for 15 months in the best case and USD 1.2 million in the worst case on the basis of 20 months.”*

241. Mr Cuffe challenged the suggestion that more site team staff would be needed in China than in Dubai and said that monthly site team costs would be similar in both locations. His figure for a 360 day repair period was U.S. \$422,000. In cross-examination Mr Lillie explained why repair in China presents challenges and supervision was essential: *“if you are in a shipyard for a year, people lose interest, the shipyard loses interest, there is no guarantee that they will have a steady flow of workers on the job, something new comes in, they take away the people, the thing breaks down ...”* In my judgment Mr Lillie’s evidence and his figure on this issue are to be preferred.

#### *Removal of tailshaft (Item 290)*

242. Mr Lillie’s opinion was that whilst it would be possible to repair the main engine in situ, it would be more practical and economic to lift out the whole engine and overhaul it in a controlled environment ashore. Mr Cuffe envisaged removal ashore of those components which required repair or replacement. I consider Mr Lillie’s evidence is to be preferred on that issue. On that basis, Mr Lillie would also remove the tailshaft whilst the vessel was in drydock, as he explained in his supplementary report: *“[A]s a matter of good engineering practice and with the vessel in drydock, I would recommend withdrawing the tailshaft for cleaning and to assist with alignment checks and main engine repositioning after repairs.”* I agree with that opinion and allow the cost of removal of the tailshaft and related matters in the sum of U.S. \$300,000.

#### *Contingency*

243. Given the extent to which there were limitations in inspecting the vessel to ascertain the extent of damage and machinery and equipment could not be opened up and tested, I am very firmly of the view that the applicable contingency should be 10%. In cross-examination, Mr Cuffe said he would not criticise anyone for using 10% as the contingency percentage. This is also in line with the approach of Vaughan Williams LJ in *Angel* that a large margin should be applied to the arithmetical calculation of the cost of repair.

#### *Conclusion on cost of repair in China*

244. From the analysis which I have undertaken of the items in the spreadsheet, it will be apparent that, where Mr Lillie and Mr Cuffe differ, I have accepted Mr Lillie’s figures except in relation to (i) the cost of steel; (ii) the need to machine the crankshaft; (iii) the cost of replacement boilers; (iv) the cost of piping; (v) the cost of electrical cabling; (vi) the cost of preparation for painting and application and (vii) the cost of insurance.
245. Mr Lillie’s “best case” figure for the cost of repair prior to the application of the 10% contingency as set out in the spreadsheet was U.S. \$54,932,070 (having made a downward adjustment for the error in relation to the area requiring painting). On the basis of the matters referred to in the previous paragraph, the following sums fall to be deducted from that figure: (i) U.S. \$508,000 in respect of the cost of steel; (ii) U.S.

\$788,000 in respect of the crankshaft; (iii) U.S. \$700,000 in respect of the cost of boilers; (iv) U.S. \$248,000 in respect of the cost of piping; (v) U.S. \$2,250,000 in respect of the cost of cabling; (vi) U.S. \$388,700 in respect of painting preparation and application and (vii) U.S. \$1,980,000 in respect of the cost of insurance. This produces a revised figure before the application of the contingency of U.S. \$48,109,370. After application of the 10% contingency, this produces what I find would have been the overall cost of repair in China of U.S. \$52,920,307 or in round terms U.S. \$53 million.

Additional costs in determining whether the vessel was a CTL

246. For the purpose of determining the cost of repair in assessing whether the vessel was a CTL, a number of additional costs are to be taken into account including costs which “*would have to be expended to put the ship right*” (per Roskill J in *The Medina Princess* [1965] 1 Lloyd’s Rep 361 at 520). Some of those additional costs, such as the costs of cleaning and gas-freeing the vessel, the costs of towage to the port of repair and of insurance for that tow and the cost of replacement bunkers, have already been included in the respective figures for repair in Dubai and in China already set out above. However there are other costs not yet included.
247. Principal among these is the cost of salvage. The owners’ proportion of the salvage award is U.S. \$2,343,703.65. Although this is subject to an appeal by the owners, currently stayed, that is the figure for which they are currently liable and is the figure which I will take. There is no dispute about this.
248. The claimants also claim the cost of standby tugs (a) for the period from redelivery by the salvors on 7 October 2011 until the NOA on 7 December 2011 and (b) for a period of 100 days thereafter whilst the vessel was cleaned and inspected, a repair specification was prepared from which tenders were obtained, those tenders were reviewed and a repair contract with a yard was negotiated and concluded. Alternatively, if the court concludes that overall period is too long, the claimants seek the cost of standby tugs for that 100 day period commencing from an earlier date but no earlier than 7 October 2011, the date of redelivery by the salvors.
249. The insurers do not contest that the cost of standby tugs should be brought into account, but only to the extent that they are reasonably necessary to get the vessel repaired. They submit that the focus by the claimants on the date of the NOA is misconceived, relying upon the decision of the House of Lords in *Robertson v Petros Nomikos* [1939] AC 371, which made it clear that the question whether the vessel is a CTL is quite separate from the issue as to whether the assured has a right to bring a claim for a CTL. The insurers submit that the period should be a much shorter one after the redelivery by the salvors.
250. The precise period for which they contend varies depending on whether cleaning to a hot works standard was required before commencing the tow and entering the shipyard. I have already found against the insurers on that issue, concluding that the vessel would have had to be cleaned to a safe for man entry standard before the tow and to a hot works standard before commencing repairs at any yard, including in China and that the prudent uninsured owner would have undertaken all the cleaning works to a hot works standard in the Gulf. On that basis, the insurers contend that the

period for which the cost of standby tugs should be taken into account is about 80 days after redelivery of the vessel by the salvors.

251. I agree with the insurers on this point. The date of the NOA is irrelevant and I see no reason why the period of 80-90 days which the various cleaning contractors quoted for cleaning to a hot works standard could not have started promptly after 7 October 2011. During that period, the owners would have had ample time to inspect the vessel, prepare a repair specification, obtain and consider quotations from shipyards and award a repair contract. Allowing a margin, I will take a period of 90 days from 7 October 2011. Using the actual hire rates of the two standby tugs *Caribbean Fos* and *Debba V* and 6% of the hire rate for fuel and lubs per day gives a daily overall rate of U.S. \$48,760. For 90 days the total cost of standby tugs would be U.S. \$4,388,400.

The “large margin” and conclusion on whether the vessel was a CTL

252. With the additional costs of (a) salvage and (b) standby tugs of some U.S. \$6.7 million it can be seen that whether the costs of repair are taken as U.S. \$64.4 million in the Gulf or U.S. \$53 million in China, the overall cost of repair exceeds the insured value of the vessel of U.S. \$55 million, so that she was a CTL.
253. However, even if the overall cost as a result of all these arithmetical calculations had been to arrive at a figure in the range U.S. \$50-55 million, I would still have concluded that the vessel was a CTL, applying the principles set out by Vaughan Williams LJ in *Angel* of applying a “large margin” to the arithmetical calculation to take account of the various risks and uncertainties which the prudent uninsured owner would face if he decided to repair. In the present case those risks would include the risks entailed in a long tow to China including the risks of collision, grounding and pollution, all of which could lead to substantial liabilities to third parties and the risk of delay in effecting the repairs and repositioning the vessel with consequent loss of income. I should make it clear that I would not be including within that “large margin” the risks that the repairs required were more extensive and costly once the vessel and her machinery and equipment were fully inspected in a yard, since those risks are encompassed within the 10% contingency added to the costs of repair, which in itself goes some way towards accommodating that “large margin”.
254. Nonetheless, even without applying any margin pursuant to *Angel*, the overall cost, U.S. \$71.3 million if (as I have held would have been the choice of the prudent uninsured owner) repairs had been effected at Drydocks World in Dubai or U.S. \$59.6 million if repairs had been effected in China, is such that the vessel was clearly a CTL.

Have the owners lost the right to claim for a CTL?

255. The basis for the insurers’ contention that the owners had lost the right to claim for a CTL was that, by selling the vessel, the owners had acted inconsistently with a continued intention to abandon the vessel to the insurers and thereby lost the right to claim for a CTL: *Arnould: Law of Marine Insurance and Average* 18<sup>th</sup> edition [30-26]-[30-27]. As stated at the outset of the judgment, although this point was not formally abandoned by Mr Goldstone QC, he did not address any oral submissions on the issue.

256. The short answer to the contention is that the insurers were well aware throughout that the owners were proposing to sell the vessel and the insurers did not object to the sale. At all material times, the owners pressed the insurers to accept that the vessel was a CTL. Specifically, on 20 February 2012, immediately prior to the sale, the brokers wrote to the leading underwriters (the first and second defendants) asking whether the insurers were in a position to accept owners' submission that the vessel was a CTL. The brokers wrote to the leading underwriters again later the same day, stating that the owners considered that the vessel should be scrapped, that arrangements had been made to do this and unless the insurers objected by close of business that day with full and adequate reasons, the owners would proceed accordingly. In reply the first defendant did not respond specifically to the owners' proposal to sell the vessel, other than to reserve insurers' rights.
257. On 23 February 2012, Norton Rose on behalf of the insurers wrote to Hill Dickinson, the owners' solicitors, stating: "*Underwriters wish to put your clients on notice that if they do sell the vessel and, in due course sums become payable to them under the policy then they will have to account for the proceeds of sale.*" As Mr Bezas made clear in his evidence, the owners always intended to credit the insurers with the proceeds of sale in the event that a CTL claim was paid, in accordance with insurers' requirements.
258. In those circumstances, it is clear that this is not a case where, in selling the vessel, the owners were acting solely for their own account and thereby acting inconsistently with a willingness to treat the vessel as abandoned. Rather this is a case where in selling the vessel the owners were acting in the interests of both themselves and the insurers, so that no question of revocation of the notice of abandonment or of loss of the right to claim for a CTL could arise: see the analysis of the law by Rix J in *Royal Boskalis NV v Mountain* [1997] LRLR 523 at 557-8.

The measure of indemnity recoverable for a partial loss

259. Since I have concluded that the vessel was a CTL and that the owners have not lost the right to claim for a CTL, it follows that it is not strictly necessary to address the alternative case as to the measure of indemnity recoverable for a partial loss, but since the matter was fully argued, I will deal with it.
260. Section 69(3) of the Marine Insurance Act 1906 provides:

"Where a ship is damaged, but is not totally lost, the measure of indemnity, subject to any express provision in the policy, is as follows:—

...

(3) Where the ship has not been repaired, and has not been sold in her damaged state during the risk, the assured is entitled to be indemnified for the reasonable depreciation arising from the unrepaired damage, but not exceeding the reasonable cost of repairing such damage, computed as above."

261. The claimants put forward in their pleaded case and their submissions three different possible methods for calculating depreciation under a valued policy:
- (A) Insured value less damaged market value.
  - (B) The proportion of the vessel's actual depreciation (sound less damaged market values) applied to the insured value.
  - (C) Actual depreciation in market value.
262. For the purposes of this exercise, it is now agreed that the value of the vessel in a sound condition was U.S. \$10,200,000 and in a damaged condition was U.S. \$700,000. The claimants submit that method A is the correct method of calculating depreciation. Since the insured value is U.S. \$55 million and the value of the vessel in a damaged condition is agreed to be U.S. \$700,000, this would produce a depreciation (and thus an indemnity) of U.S. \$54,300,000. Alternatively, the claimants submit that method B should be adopted, in which event the depreciation (and thus the indemnity) would be U.S. \$51,225,490 (i.e. the percentage of actual depreciation, U.S. \$10,200,000 less U.S. \$700,000 or 93.14% applied to the insured value). The insurers contend for method C under which the depreciation and thus the indemnity is U.S. \$10,200,000 less U.S. \$700,000 or U.S. \$9,500,000.
263. Where the policy is a valued policy, in the absence of any express provision in the policy providing for method C, then the courts have adopted the approach that, because section 27(3) of the Act provides that the value fixed by the policy is conclusive of the insurable value, then either method A or method B and not method C is the correct method of calculating depreciation: see per Devlin J in *Irvin v Hine* [1950] 1 KB 555 at 572-3. There the learned judge rejected the insurers' contention that method C should apply but declined to decide whether method A or B should be preferred because both methods produced a figure higher than the cost of repair which provides a cap under section 69(3). Colman J in the subsequent case of *Kusel v Atkin* ("*The Catariba*") [1997] 2 Lloyd's 749 at 756 clearly preferred method B.
264. It was in order to avoid method B and the high indemnities that could produce in a partial loss case that insurers introduced the express provision which is now contained in clause 18 of the Institute Hull Clauses which provides:

## **18 UNREPAIRED DAMAGE**

18.1 The measure of indemnity in respect of claims for unrepaired damage shall be the reasonable depreciation in the market value of the Vessel at the time this insurance terminates arising from such unrepaired damage, but not exceeding the reasonable cost of repairs ...

265. In *The Catariba* at 758, Colman J referred to the materially identical provision in the Institute Yacht Clauses as an: "...express modification of the regime enacted in s69 [in] the reference to market value as a yardstick of measure of depreciation. That has the effect of simplifying the calculation of depreciation by avoiding the double

calculation necessary to apply the percentage reduction in market value to the insured value [i.e. method B].”

266. Notwithstanding this clear statement as to the effect of clause 18, Mr MacDonald Eggers QC persisted in the submission that depreciation should be measured by reference to insured value. His basis for doing so was that, notwithstanding the clear reference in clause 18 to market value, since section 27(3) of the Act renders the insured value conclusive of “insurable value” as defined in section 16, insurable value must also be referring to market value and therefore the insured value is conclusive of the market value.
267. In my judgment, the fallacy in that argument is that neither section 27(3) nor section 16 contains any reference to “market value” or suggests that when the Act refers to “insurable value” that is synonymous with “market value”. In my judgment, the intention and effect of clause 18 is to define depreciation by reference to the market value of the vessel rather than by reference to terms prescribed by the provisions of the 1906 Act such as “the value fixed by the policy” or “the insurable value”. I agree with the analysis of Colman J referred to above. Accordingly, the correct method for calculating the depreciation is method C and the maximum indemnity for a partial loss would be U.S. \$9,500,000, as the insurers contend.

#### Indemnity for Loss of Hire

268. The policy made it clear that, save in the case of constructive total loss caused by blocking and trapping, the loss of hire cover would only respond in the case of a partial loss, not a CTL. Since I have concluded that the vessel was a CTL, the loss of hire cover is inapplicable. However, since the point was fully argued, I will consider whether in principle loss of hire cover would have been available in this case, if this had not been a case of constructive total loss. The issue raised in the present case is whether an owner can recover under the loss of hire cover when the vessel is damaged but the owner does not carry out repairs within 12 months or indeed at all.
269. The insurers submit that the effect of the proviso to clause 1 of the LPO 454 wording: “provided that the repairs in respect of which a claim is made hereunder are completed within 12 months of the expiry of the period covered by this policy” together with clause 12 which provides: “The Assured shall effect, or cause to be effected, all repairs (temporary or permanent) with due diligence and dispatch” is that, where the cause of the loss of hire is an incident which damages the vessel as opposed to detention, it is a condition of any entitlement to recovery under the loss of hire insurance that the vessel should be repaired within 12 months. They submit that clause 8, which provides that if any one accident or occurrence prevents the vessel from earning hire on up to three occasions then the total time the vessel is off hire is to be taken into account, is to like effect, since it contains a similar proviso: “provided that the repairs are completed within 12 months of the expiry of this insurance”.
270. Mr Goldstone QC submits that the intention of these provisions was to ensure that insurers did not have to pay loss of hire insurance to an assured who has no intention of repairing the vessel, but intends to sell the vessel in her damaged condition. But for these provisions, such an assured could simply sit back, wait 180 days, sell the vessel and then claim loss of hire for the entire period between the date of the damage and the date of the sale.

271. In support of the insurers' case, Mr Goldstone QC relies upon what was said about the proviso to clause 1 in an earlier form of loss of hire wording by Lloyd LJ in *The Wondrous* [1992] 2 Lloyd's Rep 566 at 572-3:

“The purpose of the proviso is thus to enable the owners to recover for loss of hire resulting from damage during the currency of the policy, provided the repairs are carried out within 12 months of the expiry of the policy. This shows that the parties were contemplating loss of hire resulting from damage to the vessel, and the consequential need for repairs, as being the primary, and I would say only, cover afforded by the policy.”

272. Mr MacDonald Eggers QC relies upon the fact that the loss of hire cover clearly responds where the vessel is prevented from earning hire in consequence of “*loss, damage or occurrence covered by ...Institute War and Strikes Clauses-Hulls*”, in other words not just when there is damage to the vessel, but loss or an occurrence, and the perils insured against include not only perils which cause damage but perils which result in deprivation of possession (including capture, seizure, arrest, restraint or detainment). He points out that the Policy Declaration specifically contemplates that loss of hire is payable if there is a detention for 180 days or more. This demonstrates that there is loss of hire cover not only where there is no repair but also where there is no damage to the vessel. Mr Goldstone QC does not deny that the proviso does not apply where there is only detention and no damage, but submits that is irrelevant and provides no answer to how the proviso does apply when the vessel is damaged.
273. In relation to the proviso, Mr MacDonald Eggers QC submits that it does not impose a requirement that repairs must be undertaken for a loss of hire claim to be made where the loss of hire is as a consequence of damage to the vessel. The reference to “*a claim made hereunder*” is to a claim under the policy in respect of the cost of repairs, in other words a partial loss claim within section 69(1) or (2) of the Act where the vessel is repaired.
274. Mr MacDonald Eggers QC submitted that the decision of the Court of Appeal in *The Wondrous* was of no assistance to the court in construing this loss of hire insurance. He submitted that the present wording, covering as it does: “*loss, damage or an occurrence*” is much wider than that under consideration in that case. Furthermore, he submitted that the issue there was not whether loss of hire caused by unrepaired damage was covered, but rather whether, in order to recover under the loss of hire insurance in that case, the relevant event must also have been covered by a hull policy.
275. In my judgment, Mr MacDonald Eggers QC is correct in his submission that the words of the proviso to clause 1 and the similar wording in clauses 8 and 12 of LPO 454 only apply in cases where the vessel is repaired and the owner is making a claim for partial loss within section 69(1) or (2), which is the “*claim...made hereunder*” which the “*repairs*” are “*in respect of*”. Mr Goldstone QC sought to counter that natural and obvious meaning of the words by contending that the “*claim...made hereunder*” is the claim under the loss of hire insurance. However, that contention cannot be correct because the claim under the loss of hire insurance is never one in

respect of or in relation to repairs. It is only under the policy to which the loss of hire insurance is an adjunct that there is any claim for the cost of repairs.

276. Where there are no repairs, either because the vessel was not damaged (as in the case of detention) or because (as in the present case) the claim under the policy is an unrepaired damage claim within section 69(3), then there is no requirement by virtue of the proviso or otherwise to carry out repairs for the loss of hire insurance to be effective. If the intention had been to exclude loss of hire cover where there was an unrepaired damage claim within section 69(3), it seems to me LPO 454 would have expressly said so, in the same way as clause 2 expressly excludes loss of hire cover in the case of total loss.
277. I was unimpressed by Mr Goldstone QC's submission that the purpose of the proviso was to prevent the insurers having to pay out loss of hire insurance to an owner who has no intention of repairing his vessel but intends to sell. In commercial terms, it seems to me unlikely that an owner who decides not to repair but to sell is going to sit back for up to 180 days simply in order to claim loss of hire insurance. Such an owner is much more likely to try to sell the vessel as quickly as possible. I agree with Mr MacDonald Eggers QC that the purpose of the proviso is to ensure that, in a case of repaired damage, the assured cannot defer repairs more than 12 months after the expiry of the policy and then claim loss of hire when the shipping market is weak or when it suits for the owner's scheduled drydocking.
278. I also agree with Mr MacDonald Eggers QC that, when properly analysed, the decision of the Court of Appeal in *The Wondrous* does not require the insurers' construction of the proviso to be adopted and is of no assistance in the present context. In that case the Court of Appeal was concerned with the issue whether recovery for loss of hire was limited to cases where there had been loss of or damage to the vessel covered by the hull policy. This is clear from a lengthier citation from the judgment of Lloyd LJ at 572-3, to put the particular passage relied upon by the insurers in the present case in context:

“The inference is, I think, irresistible that the parties chose the Hulls Clauses because they intended to limit recovery for loss of hire to cases where there had been loss of or damage to the vessel. This makes good commercial sense. Insurance against loss of hire irrespective of loss of or damage to the vessel would no doubt have cost more ...

Although the words “risks enumerated in the Institute War and Strikes Clauses Hulls Time” may at first sight seem to indicate, and be confined to, the risks in the numbered sub-clauses, it is now accepted that the clause itself is incorporated at least to the extent that the risks are expressly made subject to the exclusions in cl. 4. Moreover there are other indications in the Jardine Glanvill wording which suggests that damage to the insured vessel is a prerequisite. I have in mind in particular provisos (a) and (c). Proviso (c) does not make grammatical sense as it stands. But it should presumably read:



Provided that . . . repairs if actually carried out in respect of damage are completed within twelve months of the expiry of this policy.

The purpose of the proviso is thus to enable the owners to recover for loss of hire resulting from damage during the currency of the policy, provided the repairs are carried out within 12 months of the expiry of the policy. This shows that the parties were contemplating loss of hire resulting from damage to the vessel, and the consequential need for repairs, as being the primary, and I would say only, cover afforded by the policy.

The learned Judge observed that the vessel would not be likely to be damaged by detention. This may be true. But detention is not the only risk covered. Other risks, such as war, mines, torpedoes, bombs and terrorist activity would all be very likely to cause damage to the vessel.

In summary I would hold that the parties deliberately chose the Hulls Clauses rather than the Freight Clauses, and that their purpose was to confine the loss of hire policy to loss of hire resulting from loss of or damage to the vessel.”

279. It also seems to me that Lloyd LJ cannot have been considering the question of repaired as opposed to unrepaired damage because had he been doing so, he would have been bound to consider the words in the proviso in that case: “repairs if actually carried out”. Those words demonstrate that, whilst it was a condition of the application of the loss of hire insurance in that case that there should be damage covered by the hull policy which required repair, it was not an additional condition that the repairs should actually have been carried out. In other words, in my judgment the wording of that proviso should, as in the present case, lead to the conclusion that loss of hire cover was available in a case of unrepaired partial loss. However, as I have already said, since I have found in the present case that the vessel was a CTL, clause 2 of the LPO 454 wording excludes any loss of hire cover.

#### Sue and labour

280. The owners claim that they reasonably and properly incurred expenditure for the purpose of averting or minimising a loss which would be recoverable under the insurance namely the actual or constructive loss of the vessel by fire and/or sinking. The expenditure in question consists of:

- (1) The owners’ proportion of the salvage award: U.S. \$2,343,703.65;
- (2) The cost of the various standby tugs from redelivery by the salvors on 7 October 2011 until the vessel was delivered to Aryana on 15 March 2012, as set out in [57]-[58] above, which total U.S. \$7,526,805.44;
- (3) Agency Fees and Disbursements paid to Archipelago in the sum of U.S.100,800.

281. The salvage expenses are claimed under clause 11 of the Institute Time Clauses-Hulls, alternatively as sue and labour expenses under clause 13. However that claim is put, the claimants are clearly entitled to an indemnity in respect of the owners' liability to the salvors.
282. In relation to the other expenses of standby tugs and agency fees, the owners seek to recover those pursuant to clause 13, the sue and labour clause and/or under section 78 of the Marine Insurance Act 1906. The insurers resist liability raising two issues of principle:
- (1) Whether upon the completion of the salvage services on 7 October 2011, it can be said that the peril covered by the war risks policy was still operating;
  - (2) Whether any sue and labour expenses are recoverable at all after the NOA on 7 December 2011 or once the claim form was issued on 8 February 2012.

*Whether the peril was still operating*

283. In relation to the first issue, the insurers pointed out that the cover under the war risks policy was in respect of specified perils including violent theft, piracy, vandalism, sabotage and malicious mischief. They submit that once the vessel had been redelivered by the salvors, any insured peril which had been operating (it remaining in dispute for determination at the stage two trial whether there was any insured peril) ceased to operate. Whilst the vessel was a dead ship, this was as a consequence of the peril, not because the peril was still operating. In so far as standby tugs were required (and the insurers queried the need for more than one tug, a matter to which I return below) that was no doubt to comply with international conventions in respect of matters such as pollution and to avoid such risks as pollution, or the anchor dragging or a collision, but none of those were insured perils under the war risks insurance. The relevant expenses would have been incurred whether the vessel was insured or not and were not incurred for the benefit of the insurers.
284. Mr MacDonald Eggers QC challenged that approach. He made the point that without the standby tugs, the vessel was not in a place of safety, as noted by owners on the salvors' redelivery certificate and as confirmed by the risk assessments. She was a dead and disabled ship which required the tugs to avoid her dragging anchor, grounding or colliding with another vessel. Until the vessel was in a place of safety the insured peril for which the claimants contend (of piracy leading to the fire and disablement of the vessel) continued to operate. Mr MacDonald Eggers QC relied in support of that submission on the decision of the House of Lords in *Leyland Shipping v Norwich Union* [1918] AC 350. Although not directly in point, he submitted that the analysis, particularly that of Lord Dunedin, supported his case.
285. In that case, the insurance was against perils of the sea, excluding war risks. The vessel was torpedoed by a German submarine about 25 miles from Le Havre, her discharge port. She was stuck well forward and settled by the head but with the aid of tugs reached Le Havre where she was taken alongside the quay in the outer harbour. A gale came which caused her to bump against the quay and the harbour authorities fearing she would sink and block the quay ordered her to a berth inside the breakwater

where she was then moored. She remained there two days taking the ground at each ebb tide until her bulkheads gave way and she sank and became a total loss. The owners claimed on the hull policy. The House of Lords determined that the grounding was not a *novus actus* and the torpedoing remained the proximate cause of the loss, so that the insurers were not liable for the loss.

286. The particular passage in the speech of Lord Dunedin on which Mr MacDonald Eggers QC relied is at 364:

“Summarised, the facts seem to me to come to this. After the torpedo struck her she was a doomed ship, unless she could get to a real place of safety. She nearly got to a place of safety, but never quite did so. What happened was in the circumstances the natural sequel to the injury by the torpedo. Water was admitted, at first only so far.”

287. By analogy with that case, Mr MacDonald Eggers QC submitted that, since the vessel was not in a place of safety, the original peril continued to operate, even after redelivery by the salvors, and since there remained a risk of the vessel dragging her anchor or grounding or colliding with another vessel which would still be caused by the original peril, the owners were averting or minimising loss covered by the policy in incurring the cost of the standby tugs.

288. In terms of the level of risk required to be able to recover the cost of averting or minimising the loss as sue and labour, Mr MacDonald Eggers QC relied upon the decision of the Court of Appeal in *Integrated Container Service Inc v British Traders Insurance Co Ltd* [1984] 1 Lloyd’s Rep 154 and, in particular, the judgment of Eveleigh LJ. Eveleigh LJ cited the famous passage in the judgment of Brett LJ in *Lohre v Aitchison* (1878) 3 QBD 558 at 566:

"If by perils insured against the subject matter of insurance is brought into such danger that without unusual or extraordinary labour or expense a loss will very probably fall on the underwriters, and if the assured or his agents or servants exert unusual or extraordinary labour...[then the assured can recover such expense as sue and labour]"

289. Eveleigh LJ then considered what was meant by “very probably” and concluded (at 158) as follows:

“There is nothing in the clause or statute which requires the assured to show that a loss would ‘very probably’ have occurred. There have been very few cases on the effect of the sue and labour clause. I do not think that Lord Justice Brett was choosing words which were intended to be given almost statutory force and to lay down the elements which have to be proved before the assured can recover under the clause. He was dealing with a case where a loss would very probably have occurred and where underwriters would very probably have had to bear it...”

Those words [of section 78 of the Act] seem to me to impose a duty to act in circumstances where a reasonable man intent upon preserving his property, as opposed to claiming upon insurers, would act. Whether or not the assured can recover should depend upon the reasonableness of his assessment of the situation and the action taken by him. It should not be possible for insurers to be able to contend that, upon an ultimate investigation and analysis of the facts, a loss, where possible or even probable, was not 'very probable'. As the right to recover expenses is a corollary to the duty to act, in my opinion, the assured should be entitled to recover all extraordinary expenses reasonably incurred by him where he can demonstrate that a prudent assured person, mindful of an obligation to prevent a loss, would incur expense of an unusual kind. In my opinion, this is the effect of the sue and labour clause ...”

290. On the basis of that judgment, Mr MacDonald Eggers QC submitted that all that it was necessary to show to recover expenses incurred as sue and labour was that the assured acted reasonably to prevent a loss or at least the risk of a loss occurring which would otherwise fall on the insurers. He submitted that the owners in the present case acted reasonably and in accordance with both the risk assessments they received, in hiring the two standby tugs which they did. The vessel was a dead ship and immobile and the causative influence of the original peril was still in effect.
291. Mr Goldstone QC submitted that the court should be careful not to place too much reliance on *Leyland Shipping*, as it was a very different case on its facts, in the sense that the damage caused by the torpedo was so serious that the eventual grounding was in effect the straw that broke the camel’s back, so that it is not difficult to see why their Lordships would have considered that the grounding was attributable to the original peril.
292. In relation to *Integrated Containers*, Mr Goldstone QC submitted that, although Eveleigh LJ had undoubtedly sought to put a gloss on what Brett LJ said in *Lohre v Aitchison*, the same could not be said of the other reasoned judgment of Dillon LJ. At 162, having referred to the judgment of Brett LJ, he said:
- “[he] emphasised...in giving the judgment of this Court, that the sue and labour clause is concerned with expenses incurred to avert or minimise loss by perils insured against which would very probably fall on the underwriters. The probability of loss is emphasised throughout the judgment.”
293. I agree with Mr Goldstone QC that Dillon LJ does not seem to be accepting the gloss which Eveleigh LJ put upon Brett LJ’s judgment and, since the third member of the Court, Griffiths LJ, agreed with the result for the reasons given by the other two lords justices, it is difficult to discern a clear ratio. Mr Goldstone QC submitted, very fairly, that there may be a case for saying that “very probably” is putting the requisite level of risk too high, but that there still needs to be a significant risk.
294. I consider that Mr MacDonald Eggers QC is correct in his submission that because, when the salvors redelivered the vessel on 7 October 2011, the vessel was not in a

place of safety as she was a dead and disabled ship anchored in international waters, the original peril of piracy or vandalism or malicious mischief continued to operate. Although Mr Goldstone QC is right that *Leyland Shipping* is a very different case on its facts, an important aspect of the reasoning of their Lordships (and indeed of the majority of the Court of Appeal) as to why the vessel remained in the grip of the original peril was that she was never in a place of safety and the risk of grounding was deliberately and reasonably run: see, in addition to the passage already quoted from Lord Dunedin's speech, per Lord Finlay LC at 356-7 citing the judgment of Swinfen Eady LJ, Viscount Haldane at 360-1, Lord Atkinson at 366 and Lord Shaw of Dunfermline at 370-1.

295. Of course, *Leyland Shipping* is not determinative in the present case and Mr MacDonald Eggers QC only relied upon it by analogy as demonstrating that where a vessel which has suffered loss or damage by reason of a particular peril has not reached a place of safety, that peril continues to operate or as Mr Wright QC as he then was (whose argument Lord Shaw particularly praised) put it at 353: "*The whole network of circumstances is the direct result of [the original peril]*".
296. Accordingly, I consider that, even after redelivery by the salvors on 7 October 2011, the vessel remained in the grip of the original peril. In terms of the level of risk of loss if the owners had not taken the steps of employing the standby tugs, it is not necessary to decide whether Eveleigh LJ in *Integrated Containers* is right that it is not necessary for the assured to show that a loss would very probably have occurred but for the steps taken. In my judgment, a completely dead and disabled ship anchored in international waters without any tug assistance posed a serious and obvious danger not only to itself but to other shipping. If there were rough weather it was highly likely that the vessel would drag her anchor and run aground or collide with another vessel. Anything of that kind which endangered the structural integrity of the vessel would lead to pollution. Whether the appropriate test is that formulated by Brett LJ or some refinement of that test, in my judgment the owners satisfy the test.
297. As for the insurers' submission that the employment of the standby tugs was only for the benefit of the owners, not the benefit of the insurers, that seems to me to be a false point. On the basis that the vessel remained in the grip of the insured peril, some further incident after the redelivery by the salvors, such as the vessel running aground, could have led to a breach of her structural integrity which could either lead to her becoming an actual total loss or sustaining even further structural damage which would have diminished her residual value even in a damaged condition or could have exposed the insurers to a larger claim. Either way, the cost of the standby tugs and the associated agency expenses were incurred not only for the benefit of the owners, but for the benefit of the insurers, so that they should be recoverable as sue and labour expenses (subject to the insurers' other point of principle to which I turn below and to the queries raised by the insurers as to the quantum of the expenses with which I will deal at the end of this section of the judgment).

*The effect of the issue of the claim form*

298. The insurers contend that the entitlement to recover sue and labour expenses came to an end either once the notice of abandonment was served on 7 December 2011 or once the claim form was issued on 8 February 2012. In support of this contention, they rely upon the judgment of Rix J in *Kuwait Airways v Kuwait Insurance* [1996] 1

Lloyd's Rep 664 at 696-7. Although that was not a marine insurance case, the learned judge applied principles of the law of marine insurance in considering the question whether the right to sue and labour extended beyond the time when notice of abandonment was tendered claiming for a total loss or a writ claiming for a total loss was issued. In that case the insurers contended that the sue and labour engagement came to an end either when the insured made a claim for a total loss by tendering a notice of abandonment or when the writ for such a claim was issued.

299. Rix J rejected the former date but accepted the latter in this passage:

“I do not see why the making of a total loss claim should bring the right to sue and labour to an end. It does not in the marine context. The date of payment ushers in the right of subrogation. It might be said that at that date, if the right to sue and labour were still extant, it made way for the insurer's right of subrogation: but that point has not been pressed. The date of issue of a writ for a constructive total loss, however, is a familiar date in the case of marine insurance. Up to that date any recovery by an assured goes to reduce his claim, even though notice of abandonment has already been given; after that date any recovery does not reduce the claim: *Polurrian Steamship Co. Ltd. v. Young*, [1915] 1 K.B. 922 at pp. 927-928, *Rickards v. Forestal Land, Timber and Railways Co. Ltd.*, [1942] A.C. 50 at pp. 84-85. That suggests that the date of issue of writ is a watershed in respect to not only the effect of recovery but also the right to sue and labour. Mr. Webb submitted that this was some irrelevant peculiarity of the concept of constructive total loss in marine insurance law. It seems to me, however, that if that were so, then the watershed date would be the date of notice of abandonment, rather than of issue of writ. In *Ruys v. Royal Exchange Assurance Corporation*, [1897] 2 Q.B. 135 at p. 142 Mr. Justice Collins said:

' . . . and much might be said for the view suggested by Lord Eldon and adopted in the American and other systems, that the rights of the parties should be finally ascertained upon a proper abandonment. But, the object of litigation being to settle disputes, it is obvious that some date must be fixed upon when the respective rights of the parties may be finally ascertained, and the line of the writ may be regarded as a line of convenience which has been settled by uniform practice for at least seventy years . . . '

Moreover, in *Roura & Forgas v. Townend*, [1919] 1 K.B. 189 at pp. 195-196 Mr. Justice Roche gave as the reason for the rule the general one that "an assured cannot, under a contract of indemnity, recover in respect of a loss if before action it has been made good to him". Although that explanation has been criticised as being circular (see *Arnould* at par. 1178), it seems to me to emphasize the point made by Mr. Justice Collins that it

is at the time of issue of proceedings that the rights of the parties must be viewed as crystallized. Since therefore recovery after action brought does not affect the total loss indemnity to which an assured is entitled as of that date, that also seems to me to be an appropriate date at which to find that an assured's right (and correlative duty under s. 78(4) of the MIA) comes to an end. In the present case that would be on July 30, 1991.”

300. The effect of the rejection by Rix J of the date of notice of abandonment as the date after which sue and labour expenses cannot be recovered is that the insurers' argument that those expenses cannot be recovered after 7 December 2011 when the NOA was tendered in this case is misconceived. There was no “writ agreement” or “writ clause” in this case, so that the basis upon which I distinguished *Kuwait Airways* in my recent judgment in *Atlasnavios v Navigators Insurance (“The B Atlantic”)* [2014] EWHC 4133 (Comm) at [339]-[345] does not arise in the present case.
301. However, the insurers are entitled to rely upon this passage, even if (as I found in *The B Atlantic* at [339]) it is obiter and Staughton LJ in the Court of Appeal in that case declined to express a view on the conclusion reached by Rix J, as the reasoning of an experienced and well-respected Commercial Court judge that, once a claim form has been issued, the entitlement to claim sue and labour expenses comes to an end. Mr MacDonald Eggers QC submitted that this analysis was wrong, essentially for two reasons.
302. First, he contended that as a matter of fact, merely because a claim form had been issued, the need to sue and labour, here to have standby tugs to protect the vessel, did not cease. It was just as great a need on the day after the claim form was issued as it had been the day before and, in that regard, there was no special magic in the issue of the claim form. Second, he submitted that at the time *Kuwait Airways* was decided in 1995, it was only possible to claim in an action for causes of action extant at the date of issue of the writ or claim form, but that is no longer the law and it is now possible to claim in respect of causes of action arising after the claim form was issued.
303. Those may both be perfectly valid grounds for reaching a different conclusion to that reached by Rix J but nonetheless, it seems to me that in that case he applied a principle recognised and applied in the earlier cases (albeit in relation to ademption of loss rather than sue and labour) that the issue of the writ or claim form crystallises the rights and obligations of the parties to the contract of insurance. Once the claim form is issued, the relations between the parties are governed by the Civil Procedure Rules rather than the contract of insurance. Hence, the duty of utmost good faith comes to an end once proceedings are issued: see the decision of the House of Lords in *The Star Sea* [2001] UKHL 1; [2003] 1 AC 469.
304. Furthermore, it seems to me that, even if I thought that the decision of Rix J in *Kuwait Airways* was wrong on this point, which I do not, comity suggests that I should follow and apply it and leave it to the Court of Appeal to determine if the analysis in that case is correct or not. In all the circumstances, I find that the claimants' entitlement to claim for sue and labour expenses ceased when the claim form was issued on 8 February 2012.

305. That conclusion makes it strictly unnecessary to decide the additional point raised by the insurers, that in any event they should not be liable for the cost of standby tugs from 29 February 2012 (the date when the vessel was due to be delivered to Aryana) until 15 March 2012 (when it was in fact delivered). Aryana agreed that extension of time at the owners' request essentially to enable the owners to gather further evidence for the purposes of the claim (including the attendance of Tecnicas and Mr Lillie). I agree with insurers that the cost of standby tugs for that period should not be recoverable as sue and labour expenses as the cost in that period was incurred solely for the owners' benefit. In a real sense, this is a demonstration of why the issue of the claim form is a watershed so far as sue and labour expenses are concerned and why Rix J is right that they should not be recoverable after that date.

*Election*

306. One of the arguments which the claimants advanced in support of their case that, in any event, the insurers were liable for the costs of the standby tugs, was that by their solicitors' letter of 23 February 2012 quoted at [255] above insisting that if the vessel was sold, then in the event a claim was paid, the claimants would have to account for the proceeds of sale, the insurers elected to take over the vessel. By doing so, the insurers succeeded to not only all the benefits of ownership, but all the burdens including the burden of the costs of the tugs.
307. In support of that proposition, Mr MacDonald Eggers QC relied upon the decisions of Tomlinson J, as he then was, in *The WD Fairway (No. 2)* [2009] EWHC 889 (Admlty); [2009] 2 Lloyd's Rep 191 at [26] and [45] and *The WD Fairway (No. 3)* [2009] EWHC 1782 (Admlty); [2009] 2 Lloyd's Rep 420 at [17]. However, the principles there under consideration concern the situation where the insurers have paid a claim for a CTL and the insurers then either elect to take over the vessel under section 63(1) of the Act, in which case they assume the burden as well as the benefit of ownership, or elect not to take over the vessel, in which case, they would not be entitled without more to the residual value of the vessel.
308. The short answer to the argument raised by Mr MacDonald Eggers QC is that the message on 23 February 2012 did not contain any acceptance that the vessel was a CTL (indeed, on the contrary, it repeated the rejection of the NOA), let alone an agreement to pay for a CTL, nor could it be construed in any sense as an election to take over the vessel or to assume liability to ongoing standby tug expenses. The principles discussed by Tomlinson J are simply inapplicable.

*Points on quantum*

309. The insurers also took a point about the number of standby tugs, contending that only one was reasonable and necessary, as the P & I Club appear to have thought. However, the owners had clear advice from the managers and from marine consultants who provided risk assessments that two tugs were required. As I pointed out during the course of argument, no doubt if, in the face of that advice, the owners had had only one tug and it had proved insufficient to prevent an incident, the insurers would have been arguing that the owners were in breach of section 78(4) of the Act. It seems to me that the attendance of two tugs was reasonable and necessary.



310. I have already indicated earlier in the judgment that I was unimpressed by the insurers' point as to the hire rates for the tugs. Although part of the hire was deferred, there is no doubt that the owners were liable for the hire rates set out in the towhire contracts. Although the insurers assert that the hire rates for the *Debba III* and *Debba V* after 7 February 2012 were excessive compared with the rate previously charged for the *Caribbean Fos*, there is no evidence to suggest that the hire rates agreed were excessive.

#### Conclusion

311. In the circumstances, for the reasons set out above, I have concluded that, subject to the defences of the insurers which are reserved for determination at the stage two trial:
- (1) The vessel was a CTL and the claimants are entitled to an indemnity on that basis.
  - (2) The claimants are entitled to an indemnity in respect of salvage and in respect of standby tug costs and agents' fees until the date of issue of the claim form, 8 February 2012.
312. I will hear submissions on the appropriate form of Order and on any consequential issues, including issues of costs.

