Neutral Citation Number: **[2024] EWHC 1935 (Comm)**

Case No: CL-2021-000625

IN THE HIGH COURT OF JUSTICE
KING'S BENCH DIVISION
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
COMMERCIAL COURT

Royal Courts of Justice, Rolls Building
Fetter Lane, London, EC4A 1NL

Date: 26th July 2024

Before :

The Honourable Mrs Justice Dias

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Between :

MOK PETRO ENERGY FZC **Claimant**

- and -

(1) ARGO (NO. 604) LIMITED **Defendant**
(on its own account and on behalf of all other underwriting members of Syndicate 1200 for the 2017 year of account)

(2) ANTARES UNDERWRITING LIMITED
(on its own account and on behalf of all other underwriting members of Syndicate 1274 for the 2017 year of account)

(3) CHINA RE UK LIMITED
(as the sole underwriting member of Syndicate 2088 for the 2017 year of account)

(4) LIBERTY CORPORATE CAPITAL LIMITED
(as the sole underwriting member of Syndicate 4472 for the 2017 year of account)

(5) NEWLINE CORPORATE NAME LIMITED
(as the sole underwriting member of Syndicate 1218 for the 2017 year of account)

(6) BARBICAN CORPORATE MEMBER LIMITED

(as the sole underwriting member of Syndicate
1955 for the 2017 year of account)

(7) PREMIA CORPORATE NAME (3) LIMITED
(on its own account and on behalf of all other
underwriting members of Syndicate 1884 for the 2017 year of account)

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Guy Blackwood KC and David Walsh KC (instructed by **HFW LLP**) for the **Claimant**
Simon Rainey KC and Benjamin Coffer (instructed by **Wikborg Rein LLP**) for the **Defendants**

Hearing dates: 18-20, 25 June 2024
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Approved Judgment

This judgment was handed down remotely at 10.30am on 26th July 2024 by circulation to the parties or their representatives by e-mail and by release to the National Archives.

Mrs Justice Dias :

INTRODUCTION

1. Although nominally an insurance claim, this is in substance a dispute about fuel contamination and, specifically, about the phase separation temperature of a cargo of M20 gasoline.

2. The Claimant ("MOK") is an oil trading company based in Dubai which was insured by Cedar Insurance & Reinsurance Co. Ltd ("Cedar") under an all-risks marine cargo open cover for shipments of petrochemical cargoes declared during the period 21 April 2017 to 20 April 2018. The Defendants are London market insurance companies who reinsured Cedar on back-to-back terms and are directly liable to MOK in respect of any valid claim under the Policy pursuant to a cut-through clause. It is accordingly unnecessary to draw any distinction between the primary policy and the reinsurance and I refer in this judgment simply to "the Policy".

3. By an Endorsement No. 2 dated 10 May 2017, a declaration was made to the Policy in respect of a cargo of 11,800 MT (+/- 5%) of gasoline (the "Cargo") to be carried from Sohar in Oman to (in the event) Hodeidah in Yemen on board the vessel F1 with an insured value of US$7.5 million.

4. MOK's primary case in very broad outline is that the Cargo was on-specification at the load port as certified by Inspectorate Bureau Veritas ("Inspectorate"). However, it was fortuitously contaminated by around 9 MT of water during loading (most likely from tank washing residues in the vessel's tanks and pipes) which had the result of raising its phase separation temperature

("PST") to 29°C, thus rendering it off-specification and unmarketable. It was rejected by the purchasers and, after investigations into remedial measures had proved unsuccessful, was ultimately sold to a salvage buyer.

5. MOK accordingly claims an indemnity under the Policy for the difference between the sound value of the Cargo and its actual value under the Policy (together with associated costs and expenses) on the basis that this represents its loss attributable to damage fortuitously caused by the water contamination. I outline later an alternative case on fortuity advanced by MOK in its skeleton argument.

6. The Defendants' case, in equally broad outline, is that the Cargo could never have been on-specification as certified at the load port but in fact had a PST of around 17°C and so was always off-specification and commercially unmarketable irrespective of any subsequent water contamination. Since (as is agreed) there is no difference in value between a cargo with a PST of 29°C and a cargo with a PST of 17°C, MOK has suffered no loss.

7. Alternatively, the Defendants assert that any claim under the Policy is precluded by virtue of MOK's breach of a survey warranty in the Policy.

THE POLICY

8. The Policy was expressly governed by English law and contained the following provisions:

> *" GEOGRAPHICAL LIMITS: At and from any Port of Ports, Place or Places in the WORLD to any Port of Ports, Place or Places in the WORLD via any route and/or as original policy(ies).*

…

EXPRESS WARRANTIES: …

Quantitative/Qualitative survey carried out by internationally recognised marine surveyor at loading port/discharge port at owners cost, including inspection/certification of the cleanliness of the vessel tanks at load port and the shore tanks at discharge port and the connecting pipelines between the vessel and the shore tanks at both load and discharge port.

Failure to comply with a warranty will, in normal circumstances, void this insurance policy."

9. The Endorsement by which the Cargo was declared to the Policy contained the first paragraph of the above survey warranty along with the following details:

"Voyage: From Sohar port Oman to Mukalla or Hodeidah/Ras Isa port Yemen.
Vessel: MT F1 (imo 9037006)
Date of attachment: ***MAY 8TH 2017***
Cover: Shore Tank to Shore Tank.
Institute Cargo clause "A"
…"

10. The parties also relied on the following clauses of ICC(A) which were incorporated into the Policy:

RISKS COVERED

Risks Clause

1. This insurance covers all risks of loss of or damage to the subject-matter insured except as provided in Clauses 4, 5, 6 and 7 below. "MINIMISING LOSSES

…

EXCLUSIONS

General Exclusion Clause

4. In no case shall this insurance cover

…

4.4. loss damage or expense caused by inherent vice or nature of the subject-matter insured

…

DURATION

Transit Clause

8 8.1. This insurance attaches from the time the goods leave the warehouse or place of storage at the place named herein for the commencement of the transit,

continues during the ordinary course of transit…

…

Forwarding Charges Clause

12. Where, as a result of the operation of a risk covered by this insurance, the insured transit is terminated at a port or place other than that to which the

subject-matter is covered under this insurance, the Underwriters will reimburse the Assured for any extra charges properly and reasonably incurred in

unloading storing and forwarding the subject-matter to the destination to which it is insured hereunder. This Clause 12, which does not apply to general

average or salvage charges, shall be subject to the exclusions contained in Clauses 4, 5, 6 and 7 above, and shall not include charges arising from the fault

negligence insolvency or financial default of the Assured or their servants.

…

Duty of Assured Clause

16. It is the duty of the Assured and their servants and agents in respect of loss recoverable hereunder

16.1. to take such measures as may be reasonable for the purpose of averting or minimising such loss…"

THE FACTS

11. Save where otherwise indicated, the following account of the facts was largely uncontroversial.

Phase separation

12. In the present case, the Cargo was a blend of gasoline and oxygenate. Oxygenates are oxygen-containing, ashless organic compounds which can be blended with conventional gasoline to improve the octane rating of the fuel, or for environmental or supply reasons. The oxygenates most commonly used for this purpose are alcohols (such as ethanol) and ethers (such as MTBE). In the present case, the oxygenate used was an alcohol, methanol.

13. Gasoline and water are almost entirely immiscible and gasoline can only dissolve small amounts of water. It follows that the stability of a non-oxygenated gasoline blend is not affected by any increase in water because it will not be absorbed into the blend and phase separation is therefore not an issue. By contrast, gasoline/methanol blends are particularly prone to phase separation. This is because methanol is hygroscopic, which means that it readily absorbs water from its surrounding environment. It is also fully miscible with water in all proportions. As a consequence, when the blend comes into contact with more water than can be dissolved, phase separation takes place to form a gasoline-rich upper layer and a more dense, alcohol-rich aqueous lower layer comprising alcohol, water and alcohol soluble hydrocarbons.

14. Phase separation is undesirable for many reasons, not least because the lower phase can be corrosive and will potentially damage any engine into which it is fed, and also because the upper layer will be depleted of alcohol and alcohol-soluble hydrocarbons, thereby almost inevitably reducing the octane number and putting the product off-specification.

15. The amount of water which a gasoline-alcohol blend can retain in solution is known as its water tolerance. The water tolerance of a particular blend is variable and depends upon a number of factors:

    i) Temperature: in general terms, the water tolerance of a blend is greater at higher temperatures;

    ii) Type and concentration of alcohol in the blend;

    iii) Hydrocarbon composition of the gasoline;

    iv) Presence of co-solvent alcohols: addition of co-solvents, such as ethanol generally increases water tolerance.

16. It follows that the greater the proportion of water in a blend, the higher the temperature required to maintain its stability. The temperature below which a blend will phase separate is known as its phase separation temperature ("PST").

The Sale Contract

17. Pursuant to a contract dated 5 May 2017 concluded between MOK and PetroChina International (Singapore) Pte Ltd ("PetroChina"), MOK purchased a cargo of 11,800 MT (+/- 5%) 92 RON unleaded gasoline FOB one safe port/berth Sohar. Title and risk were to pass at the Vessel's permanent flange connection at the load port.

18. The contract included a table of specification limits and what appeared to be a set of results against each of those specifications. The provenance of this table was unclear. It looked very much as if it had been inserted into the contract

from another document. In particular, there was no indication as to what sample or samples of what cargo or cargoes had been tested to produce the results, and the parties proceeded on the basis that they had no contractual significance in themselves. It was, however, agreed that the specification limits and test methods set out in the table formed part of the contract.

19. For present purposes, it is sufficient to note only that:

i) The contract specified a minimum RON (Research Octane Number) of 92, a maximum RVP (Reid Vapour Pressure) of 10 @ 37.8°C and maximum limits for benzene (5%/vol), aromatics (40%/vol) and oxygenates (15%/vol);

ii) The stipulated test methods for RON, distillation and oxygenates all require the test sample to be cooled below 10°C and the RVP test method, in particular, requires cooling of the sample to below 1°C.

20. The contract provided for quantity and quality to be determined and certified at load port by a jointly appointed independent surveyor on the basis of shore tank samples taken prior to loading. There was also an express clause excluding any *"guarantees, conditions, warranties or representations, express or implied (whether by statute or otherwise)* [by PetroChina] *in relation to the quality, merchantability, fitness or suitability of the product for any particular purpose or otherwise, which extend beyond the description of the product and any specifications contained in this contract."*

Events at the load port

21. The Cargo was loaded at the OTT terminal at Sohar between 12-14 May 2017. It was made up of separate components of methanol and gasoline drawn from four individual shore tanks, which were blended on board the Vessel during the loading process.

22. Prior to loading, a Certificate of Quality was issued on 7 May 2017 by Inspectorate which stated that it was based on *"Shore tank composite samples drawn before loading "MT F1" sampled and tested on 07th May 2017."* The certificate indicated that the samples had been tested by the contractually specified test methods. The results (to which I will return later) met the contractual specifications in all respects.

23. It was common ground between the experts that where, as here, a cargo is made up of two components of differing densities, it is standard practice to load the higher density component first (in this case the methanol) so that when the lower density gasoline is subsequently fed into the bottom of the tanks, it rises through the methanol allowing mixing of the two to take place.

24. In this case, the methanol was therefore loaded first from shore tanks 5B2 and 5B7 followed by the gasoline from tanks 206 and 411.

25. The undisputed evidence of Mr Noel Sciortino of Inspectorate was that each shore tank at the OTT terminal has a header pipe feeding into a main shoreline. The shoreline used for the methanol tanks in this case was JLC2, a 6" diameter dedicated methanol line, while the shoreline for the gasoline tanks was JL2, a 24" diameter line which was also used for other products.

26. The Vessel tendered NOR at Sohar on 8 May 2017 and berthed on 12 May 2017. A pre-loading survey inspection of the Vessel's tanks and lines was carried out by Inspectorate between 0600 and 0642, who issued a Tank Inspection Certificate confirming that the Vessel's tanks had each been cold water washed for 2 hours and mopped by hand and were acceptable to receive the nominated cargo. A subsequent certificate issued by Inspectorate on 1 July 2017 further confirmed that the Vessel's tanks had been inspected prior to loading and that all cargo tanks, lines and pumps had been found to be clean and suitable to load the Cargo.

27. There is an issue between the parties as to whether and, if so, how and to what extent, Inspectorate also checked the emptiness and cleanliness of the shorelines. This gives rise to the Defendants' breach of warranty defence.

28. Loading commenced at the AA1 Berth at 1010 on 12 May 2017 from methanol tank 5B2, followed by tank 5B7. The Vessel then shifted further along the jetty to load the gasoline component starting with tank 206 followed by tank 411. Following loading, the two methanol shore tanks were drained, although significant quantities remained in the gasoline tanks.

29. At the conclusion of the operation, the main shorelines (but not the tank headers) were blown with nitrogen and, in the case of line JL2, "pigged". This means, in effect, that a rubber bullet was blown through the line to force out any residues.

30. I was referred to a spreadsheet entitled *"Auburn Ship Management – Hourly Log (Loading)"* which referred to the MT F1 at OTT Sohar and purported to

record the quantities loaded into the Vessel's tanks on an hourly basis from 1100 on 12 May 2017 to 0600 on 14 May 2017. However, the spreadsheet also contained a separate tab purporting to be an Ullage Report after Loading for a completely different vessel , the MT "N" ARM OF GRACE at Lome on 27 November 2013.

31. Despite the doubts cast by the Claimant's expert, Mr Wall, on the provenance, purpose and accuracy of this spreadsheet, I am satisfied on a balance of probabilities that the Hourly Log relating to the MT F1 is what it purports to be, namely a record of quantities actually loaded into the Vessel on an hourly basis. I reject Mr Wall's suggestion that it was no more than a provisional planned loading sequence. In particular, although I accept that the precision of the figures (to three decimal places) would not be unusual for a computer-generated plan, the references in the document to density, average temperature and average loading rates are only explicable in my view on the basis that the document was a record of the actual loading process.[1]

32. Following completion of loading, Inspectorate Sohar issued a further Certificate of Quality dated 14 May 2017, this time certifying that ship's tanks composite samples drawn after loading had been sampled and tested on 14 May 2017 yielding results which also met the contractual specifications.

Events at Hodeidah and thereafter

[1] There is a discrepancy between the final loaded figures shown on the Hourly Log and the final quantity reported in the Ullage Report. However, I consider that this discrepancy is satisfactorily explained by the fact that the last figures in the Hourly Log were recorded at 0600 on 14 May 2017 whereas loading was not in fact completed until 0700 during which time the gasoline shoreline JL2 was pigged. It is noteworthy that the entries for the three tanks which were the last to be fully loaded, namely 4P, 4C and 4S, were highlighted in yellow.

33. On 14 May 2017, MOK on-sold the Cargo to Star Plus Yemen Trading Limited Co. ("Star Plus") pursuant to a contract which described the cargo as *"Gasoline 92 RON with no more than 15% Oxi* [i.e. oxygenates] – *according to quality standards and requirements in Yemen."* The on-sale contract provided for quality to be determined *"by official Yemeni competent authorities."*

34. The Vessel tendered NOR at Hodeidah at 1700 on 1 June 2017 where the Cargo was inspected by the Yemen Petroleum Company (the "YPC") in order to ascertain whether it could be authorised for import into the Yemen. The YPC is an organ of the Yemeni state charged with responsibility for sampling, testing and authorising imports of gasoline in the Yemen. The YPC specification in force at the time required cargoes to have a minimum RON of 92. However, it appears that their testing facilities were fairly basic and that while they could (and did) test for density they could not test for RON.

35. The YPC collected samples for testing in clear plastic bottles and phase separation was observed in some samples even at the high ambient temperatures prevailing in the Yemen. Some of the samples were sent for testing to the Aden Refinery Company which confirmed that the Cargo was off-specification for RON. It is not in dispute that the phase separation caused the YPC to reject the Cargo and to refuse authorisation to import it into the Yemen. The Vessel thereupon diverted to Fujairah where she tendered NOR at 0530 on 15 July 2017.

36. Joint sampling and testing was carried out at Fujairah by Intertek (on behalf of cargo insurers) and SGS (instructed by MOK). This also showed that the Cargo was undergoing phase separation with a consequent reduction of RON. Further

joint testing was carried out in Cardiff in August 2017 by MTD, this time with the participation of Brookes Bell on behalf of MOK.

37. The Vessel remained at Fujairah until 0124 on 4 August 2017 whereafter she proceeded to Hamriyah in Sharjah where the Cargo was eventually discharged and sold to a salvage buyer.[2]

38. In June 2018, further joint testing of various samples took place at Inspectorate Fujairah in an effort to establish the cause of the phase separation. These tests were attended by MTD on behalf of the Defendants, Brookes Bell on behalf of MOK and CWA on behalf of the shipowners. On this occasion, the samples tested included retained shore tank samples. It is on the basis of the results obtained from these tests that the Defendants' assert that the PST of the Cargo as blended was around 17°C and that it could never have been below 1°C so as to permit the specified test methods to be correctly and properly applied.

39. This is hotly disputed by MOK. Although MOK accepts that the results of the tests carried out in 2018 indicate that the Cargo had a PST of around 17°C, it argues that that the uncertain provenance of the shore tank samples and their likely degradation during some 15 months' storage meant that no reliance could be placed on any results that they yielded.

THE ISSUES

40. The following was common ground between the parties:

[2] Despite investigation, no viable method could be found to bring the Cargo back on-specification.

i) The contractual specification included certain parameters for which the stipulated test methods, if correctly and properly applied, would have required the cargo samples to be cooled to below 10°C and, in the case of RVP, to below 1°C.

ii) The Cargo was certified by Inspectorate in accordance with these test methods to be on-specification at Sohar, both before and after loading.

iii) Taken at face value, these certificates indicated that the Cargo had a PST of less than 1°C.

iv) If the PST of the Cargo had in fact been above the applicable test temperatures, any phase separation would not only have been apparent visually but would also have been reflected in unexpected and non-compliant test results. Put simply, Inspectorate could not have obtained the results recorded in the Certificates.

v) Around 9 MT of water was introduced into the Cargo during the loading process at a time when (subject to the Defendants' breach of warranty defence), the Defendants were on-risk. (It was MOK's case that at least a substantial portion of this water comprised tank washing residues undetected in the Vessel's tanks and this was not seriously disputed by the Defendants);

vi) The introduction of this water, however it occurred, was fortuitous;

vii) The introduction of the water increased the PST of the Cargo to 29°C from whatever it had been previously;

viii) The elevated PST of 29°C led to the rejection of the Cargo at Hodeidah;

ix) The costs of remediation would have been roughly the same whether the PST of the Cargo was 17°C or 29°C.

x) The value of the Cargo as certified by Inspectorate at the load port was US$65.79/bbl while its value with a PST of either 29°C or 17°C was around US$36/bbl.

41. MOK's primary case is that these admitted facts establish all the ingredients necessary to make good a claim under the Policy for the difference between the sound value of the Cargo and its actual value.

42. The Defendants do not dispute that if MOK can rely on the Inspectorate load port Certificates of Quality as a true reflection of the quality of the Cargo on loading, then it can sufficiently establish that the Cargo was damaged by a fortuity and, subject only to the breach of warranty defence, recover its loss under the Policy. The Defendants' case, however, is that the Inspectorate Certificates do not accurately reflect the quality of the Cargo.

43. There was undoubtedly a paucity of evidence to what sampling and testing actually occurred at Sohar. And, with the considerable benefit of hindsight, all manner of additional samples might usefully have been taken at different stages during the cargo transfer and jointly tested contemporaneously in all sorts of different ways. This being the real world, things did not happen in that way and unfortunately there is no evidence or documentation at all relating to the pre- or post-loading analyses carried out by Inspectorate at the load port.

44. The parties and the court can only work with the material available. However, it will immediately be apparent that there is a stark divide between the respective cases, neither of which is entirely straightforward. Thus:

i) If the Defendants are correct that the 2018 joint analyses can be relied upon to suggest that the Cargo was off-specification on loading irrespective of any subsequent water contamination on board the Vessel, then the load port Certificates of Quality have to be rejected on the basis that, for whatever reason, they cannot be correct. This is notwithstanding that they were issued by a reputable independent inspection company who could be expected to have noticed and reported any phase separation that had taken place during testing.

ii) Conversely, MOK's case requires the court to reject the results of the tripartite joint testing in 2018 in which MOK participated fully through its then expert, Brookes Bell.

iii) Moreover, if the Inspectorate pre-loading certificate of 7 May 2017 is reliable, it is not immediately apparent how the post-loading analysis carried out on a tank composite sample could also have been correct, given that the methanol would have mixed with any residual tank washing immediately on loading and subsequently become homogenised with the gasoline as a result of the loading process. In other words, any water contamination from tank washing residues could be expected to have manifested itself by the time the post-load samples were taken.

iv) This led Mr Wall to posit a number of theories, namely that the methanol and gasoline might not have fully mixed by the time of sampling, alternatively that the water contamination from the tank residues might have taken the Cargo to just below its water tolerance threshold such that it did not separate immediately but only required minimal subsequent additional water contamination during the voyage which tipped it over the edge.

45. Perhaps in recognition of these potential difficulties, MOK belatedly added a second string to its bow in the form of an alternative case on fortuity should the court accept that the Cargo as blended was always off-specification as alleged by the Defendants. This alternative case was first raised in MOK's written opening submissions and it is fair to say that it continued to evolve thereafter.

46. In its final incarnation, however, the argument ran as follows: (i) the only contractual limit as regards blending proportions was that oxygenates should not exceed 15% by volume; (ii) PetroChina could therefore have blended the component blend stocks in any proportions within this limit and/or added additional co-solvent; (iii) it was wholly fortuitous from MOK's point of view that PetroChina chose to blend in the proportions in fact adopted (the "Actual Blend Proportions") without the addition of any other co-solvents; (iv) had different blend proportions been adopted, this could and would have produced an on-specification cargo since it must be assumed that PetroChina intended the Cargo to meet its contractual specification; (v) the adoption by PetroChina of the Actual Blend Proportions was accordingly a fortuity within the meaning of the Policy which damaged the Cargo in the sense of inducing phase separation

and/or creating a propensity to phase separate; (vi) MOK is therefore entitled to recover its loss by this alternative route.

47. In these circumstances, battle was joined on the following principal issues:

i) In relation to MOK's primary case:

a) Can the 2018 joint analysis results be relied upon for any purpose at all and, if so, what do they show?

b) In the light of the court's decision on a), can MOK establish that the Inspectorate Certificates of 7 and 14 May 2017 accurately reflect the cargo quality on loading given MOK's suggested mechanism of water contamination?

c) What consequences flow from the court's decisions on a) and b)?

ii) In relation to MOK's alternative fortuity case:

a) Was the choice of blend proportions a fortuity for the purposes of the Policy?

b) If so, what, if any, damage was caused to the Cargo as a result?

iii) Was there a breach of the survey warranty in relation to the shorelines?

48. The Defendants had a further pleaded defence of inherent vice, although this did not feature significantly in argument and in truth seemed to me to be little more than a corollary of their case that MOK had suffered no loss because the Cargo was always off-specification.

BURDEN OF PROOF

49. Given the way in which the argument on MOK's primary case was developed by both sides, it seemed to me that the burden of proof might assume greater prominence than usual. Since the incidence of the burden was to some extent contentious, I invited further submissions on the point which were provided in writing after the hearing.

50. In relation to MOK's primary case, it was common ground that MOK bears the legal burden of persuading the court (a) that the Cargo was damaged by a fortuity and (b) as to the measure of indemnity attributable to that damage. It was also common ground that the Defendants bear the evidential burden of raising matters sufficient to suggest that in fact no damage was caused by the alleged fortuity and/or that no monetary loss is attributable thereto.

51. The difference between the parties in the context of the present case was whether, assuming that the Defendants could discharge the evidential burden of showing that the Cargo would always have had a PST of 17°C, they also bore the legal burden of making good this contention on a balance of probabilities. On behalf of MOK, Mr Guy Blackwood KC argued that they did on the basis that "he who asserts must prove". Mr Simon Rainey KC for the Defendants argued to the contrary. He submitted that once the Defendants had satisfied any evidential burden resting on them, the legal burden remained on MOK to satisfy the court on a balance of probabilities that the Cargo was nonetheless in the condition certified by Inspectorate.

52. In my judgment, Mr Rainey is correct. This is not a question of the Defendants having to prove what they assert. Rather it is MOK who asserts that the Cargo suffered a diminution in value between its sound condition as certified by Inspectorate at Sohar and its actual condition on arrival at Hodeidah. Prima facie, it proves this by relying on the Inspectorate certificates. However, if the Defendants adduce sufficient evidence to cast plausible doubt on the accuracy of those certificates, the legal burden remains on MOK to persuade the court on a balance of probabilities that the Cargo was nonetheless in fact in the condition certified. Unless MOK can satisfy me on this point, it follows that its primary case must fail on the burden of proof.

53. As regards MOK's alternative fortuity case, it was common ground that the burden was on MOK to show (a) that blending in the Actual Blend Proportions was fortuitous and also (b) that if different proportions had been adopted (or an alcohol co-solvent added), the PST would have been improved.

54. The Defendants further argued, however, that it was not sufficient for MOK simply to show that the PST of the Cargo would have been better. It was necessary to go further and show that it would have been so much better that the Cargo would have had a higher value than its actual value on arrival at Hodeidah. Mr Rainey submitted that there was simply no evidence to this effect, since the only evidence of value related to the Cargo's value with a PST of 17°C or above, and its sound value as certified by Inspectorate. There was no material which bore on its value with a PST lower than 17°.

55. For completeness, it was common ground that the burden of establishing a breach of warranty rested on the Defendants.

THE WITNESSES

56. I heard oral evidence from the following factual witnesses on behalf of MOK, both of whom gave evidence remotely.

57. Mr Sciortino is currently the Vice President of the Commodities Market in the Middle East Region for Inspectorate BV. He gave evidence remotely. Although he was not personally involved in the events surrounding the loading of the Vessel at Sohar, he was responsible for operations at the port. He had also spoken to Mr Gaudencio, the Operations Manager at the time, and also to Mr Eric Merin, the main inspector at the time, and Mr Srinivas Kauru, who respectively carried out the ship and shoreside inspections at the time of loading. On the basis of these conversations he gave evidence as to the standard practices that the inspectors would have followed. I found him to be a fair and balanced witness who recognised the limitations of the evidence he was in a position to give and frankly acknowledged that there appeared to have been some flaws and mistakes in the conduct of the inspection and in Inspectorate's record-keeping procedures. Ultimately, however, through no fault of his own, I did not find that his evidence was of much assistance in relation to the disputed issues.

58. Mr Kauru was, as just indicated, the inspector who carried out the shoreline inspection. He also gave evidence remotely but unfortunately technical problems with the link meant not only that his cross-examination was plagued by frequent interruptions and disjointed for that reason, but also that he very often had difficulty in hearing and understanding the questions that were being put to him. Bearing in mind those limitations, which were none of his making, I found him to be a straightforward and pleasant witness, although I had some

doubts as to the extent of his independent recollection of events other than as refreshed by reference to the loading notebook. These doubts were not allayed when he appeared to have some difficulty in confirming whether certain entries in the notebook were in his own handwriting or that of a colleague. Nonetheless, I was satisfied that he was doing his best to assist the court honestly to the best of his ability.

59. MOK also relied on the written evidence of Mr Faqih, the purchasing manager and partner of Star Plus, the purchasers of the Cargo. His evidence related to the rejection of the Cargo at Hodeidah and was not controversial. So far as relevant it is reflected in the summary of the facts set out above.

60. On behalf of the Defendants, Captain Pinto of Minton Treharne & Davies provided a witness statement detailing the nature and circumstances of the sampling which was carried out both at Fujairah in July 2017 and at eventual discharge in Sharjah in November 2017. Since his evidence was also not controversial, he was not called to give oral evidence.

61. By far the most important evidence in the case was that given by the two expert chemists, Mr Craig Wall of Petrus Cargo Assurance Services Ltd on behalf of MOK and Mr Richard Minton of Minton Treharne & Davies on behalf of the Defendants. Both men clearly had considerable expertise in hydrocarbon chemistry and were agreed on many matters. I am confident that they both gave honest evidence to the best of their ability. Where they differed, however, I found Mr Minton to be the more credible and balanced of the two. He was happy to make concessions where appropriate whereas Mr Wall seemed

unwilling even to contemplate abandoning the rock of absolute certainty on which he had firmly planted his colours.

62. To take just two examples, Mr Wall (who had not himself been party to the joint testing carried out in August 2018) was adamant that no reliance could be placed on the results of the test for any purpose whatsoever, because (amongst other reasons) it could not be independently verified that the shore tank samples tested were in fact samples taken from the blend stocks loaded on to the Vessel. He also refused to accept that the Auburn Ship's Hourly Log referred to above could be relied upon as a record of the actual loading process since there was no independent evidence to this effect other than the document itself.

63. While I accept that in strictly scientific terms, he was correct that these matters could not be conclusively demonstrated, his insistence on dealing only in certainties rather than probabilities made him appear unrealistic and more than a little defensive. It was noteworthy that he did not regard the Inspectorate certificates with similar scepticism despite the total absence of any evidence as to the circumstances in which the sampling and testing had been performed. I also found some of the theories which he advanced in support of MOK's case to be frankly implausible. By contrast, Mr Minton readily conceded the inevitable limitations of the analyses that he had carried out, albeit he maintained that they nonetheless yielded some useful and reliable information.

64. I discuss the substance of the expert evidence in more detail when addressing the issues.

65. Since the valuation evidence was agreed, neither valuation expert gave oral evidence.

DISCUSSION AND ANALYSIS

MOK's primary case

Can the 2018 joint analysis results be relied upon for any purpose and, if so, what do they show?

66. The 2018 test programme was designed to establish the cause of the phase separation and encompassed the following samples:

i) Samples of the individual shore tanks provided by PetroChina. This was the first time that any shore tank samples had been available for testing.

ii) Inspectorate's retained samples taken during loading comprising:

a) 2 manifold samples;

b) 45 individual tank samples drawn from the top, middle and bottom layers of each tank;

c) 1 ship's composite sample;

iii) Pre-discharge ship's tank samples taken in November 2017;

iv) Post-discharge shore tank samples taken in November 2017.

67. None of the samples in i) or ii) above had previously been sealed. Indeed, none of the samples taken at loading seems to have been sealed save for the post-load ship's tank composite which could no longer be located. It is important to note

that "sealing" in this context has nothing to do with the integrity of the sample container or making it airtight. Each container has a metal insert or stopper for that purpose with a screw cap over the top. The seal consists simply of a string secured to the screw cap and the handle of the container in such a way as to make it impossible to unscrew the cap without breaking the string. The samples had, however, been sealed by Inspectorate in a witnessed operation before being despatched to Fujairah in 2018. Moreover, it was observed on receipt that all the metal inserts in the containers were intact.

68. The tests performed included:

i) Visual appearance

ii) Density @ 15°C

iii) Water content

iv) Chloride content

v) PST

vi) Oxygenate content

vii) Gas chromatography profiling

69. Gas chromatography provides information about the composition of the constituent parts of a sample. It was referred to by Mr Minton as "fingerprinting", although he accepted that in the absence of a specific unique feature, it could never establish that two samples were taken from an identical

source, merely that they were from sources with the same or very similar characteristics.

70. Unsurprisingly, MOK made no criticism of the tests carried out or the manner in which they were performed. It accepted that the experts in attendance did the best with what they had. Nonetheless, its case was that the shore tank samples tested were inherently unreliable and that any results derived from them were necessarily also unreliable. It was therefore unsafe to attempt to draw any meaningful conclusions from them.

71. This is a somewhat unattractive argument, given that MOK participated in the joint analysis through its then expert, Brookes Bell. Brookes Bell discussed and agreed the joint testing protocol without raising any concerns or objections and without, more importantly, entering any reservations as to its utility or the reliability of the results obtained. MOK did not call anyone from Brookes Bell to give evidence as to the conduct of the tests.

72. Be that as it may, on the basis of Mr Wall's evidence, MOK identified four supposed "flaws" which, singly and certainly in combination, it said meant that no reliance could be placed on the results of the joint testing for any purpose whatsoever.

(1) Chain of custody

73. It was common ground that there was no documented chain of custody for the shore tank samples. There was nothing in the Inspectorate report which referred to retained shore tank samples and it seems that no-one was even aware they existed until Brookes Bell was able to ascertain in 2018 that PetroChina might

be prepared to make them available. There was no evidence as to the circumstances in which they had been stored meanwhile.

74. The labels attached to the shore tank samples when they were sealed in 2018 identified a shore tank number and a date. The samples purporting to come from tanks 5B2 and 5B7 simply bore the date of "26 April" without specifying any particular year. The sample purporting to come from tank 206 was dated 27 April 2017 while that from tank 411 had a date of 23 April 2017. Mr Wall maintained that in the absence of primary evidence as to the provenance of the samples, it could not be certain that these identifiers were correct.

75. As to this, it is theoretically possible that they were in fact samples taken from completely different tanks on completely different dates, but I regard that as very unlikely. While there is no evidence which positively identifies them as samples taken from the identified tanks on the identified dates, there is equally no evidence to suggest otherwise. It is also fair to say that MOK could have called evidence from Inspectorate as to the provenance of the samples but chose not to do so. It seems unlikely that they would have failed to do so had there been any positive evidence that the samples were not what they purported to be.

76. On a balance of probabilities, I conclude that, notwithstanding the lack of documentation, these were samples taken from the relevant shore tanks on the dates specified. Despite the failure of the samples from tanks 5B2 and 5B7 to identify a specific year, the samples had been provided by PetroChina as samples relevant to this specific loading. There is no good reason why they would have sent samples which were nothing to do with the case and the overwhelming likelihood is that they were therefore drawn on 26 April 2017.

Certainly, they were accepted as correct samples by Brookes Bell on behalf of MOK.

77. However, that leaves the more substantial point that even if the dates are correct, each of the shore tank samples was drawn some 10-14 days before loading and there is no evidence at all as to what may have been pumped into or out of each tank thereafter. While it can be assumed that only broadly similar blend stock would have been pumped in, it is a matter of speculation as to whether or how the composition of the bulk contents might have been altered by the time of loading as a result.

78. Mr Minton's answer was to point to the gas chromatography fingerprint analysis which was carried out on both the shore tank samples and the samples taken from the vessel at Fujairah in November 2017. His evidence was that the results indicated that the hydrocarbon composition of both sets of samples was the same, save for a loss of light ends indicated by a difference in density.

79. I accept that it is impossible to state conclusively that they were the same product in the absence of a unique identifier, of which there was none here. Moreover, no similar fingerprinting had been carried out at the load port, so it was not possible to do a direct comparison in any event. Equally, however, there is nothing which leaps out of the results to suggest that the two sets of samples did not come from the same source. Even Mr Wall accepted that the results indicated that the shore tank samples were *"very, very similar"* to the Cargo and that they were approximately from the same source, notwithstanding that some of the results obtained in 2018 were outside the reproducibility range when compared with results obtained at different stages in the custody chain.

80. I therefore reject the suggestion that the results of the 2018 analysis should be disregarded on the basis that it has not been conclusively established that the shore tank samples tested were drawn from the tanks used to load the Vessel at or shortly before the time of loading. I am equally satisfied that the gas chromatography testing demonstrates that they were taken from a source which is sufficiently similar to the Cargo to justify treating them as broadly representative of that Cargo.

(2) Evaporation

81. It was common ground that samples of gasoline are not – indeed must not – be hermetically sealed otherwise there is an obvious risk of explosion. Sample cans are therefore provided with metal inserts which minimise evaporation, but which are not airtight and so cannot exclude it altogether. For example, it was not in dispute that one of the post-load ship's tank samples had leaked by the time it reached Fujairah. It is accordingly inevitable that there will be a loss of light ends if a sample is stored for any length of time, particularly in hot countries. The experts in 2018 were well aware of this possibility and indeed it was one of the aspects investigated by means of gas chromatography, which showed that there had indeed been a loss of C4 and C5 paraffins.

82. In addition, Mr Minton conducted a unilateral test in June 2021 on samples with a similar hydrocarbon composition in order to investigate specifically the effect of evaporation on PST. This involved leaving the samples exposed to the hot sun over the course of several hours and testing the PST at different densities. As Mr Minton was at pains to point out, this was not a test which was intended to mimic the behaviour of the actual samples, but was simply designed to give

a general indication of what would happen if fuel was allowed to evaporate to different densities. He found that evaporation slightly decreased the PST but otherwise had very little effect. This, he said, was consistent with the fact that the aromatic content of the retained load port samples in 2018 was very close to the aromatic content determined by Inspectorate at loading. As noted above, aromatic content is one of the critical factors affecting water tolerance and a comparison indicated that very little had been lost over time.

83. This was accepted by Mr Wall, who said that he would not regard it as likely that any substantial quantity of aromatics had been lost. However, he suggested that even with an aromatics loss as low as, say, 0.1% it was completely unknown whether this would affect the balance of the overall composition of the Cargo in such a way as to cause phase separation. He pointed out that gasoline is a complex hydrocarbon made up of over 100 constituent ingredients working together, each of which has a different rate of evaporation. Altering the balance between them, even slightly, might therefore affect their behaviour. He also drew attention to research which suggests that evaporation is an exponential rather than a purely linear process. If so, then evaporation over a short period of time effectively magnifies the loss of the lighter components.

84. I assume for the present that Mr Wall is right about evaporation being an exponential process[3] but even so I am satisfied that Mr Minton's unilateral test

[3] I query whether "magnify" is strictly the right word to use here. Each component will evaporate at a different rate and how much is lost will depend on how long it is left to evaporate and at what temperature. Presumably it will continue to evaporate until there is no more left but there is no right or wrong temperature or period of time in this regard. If a sample is stored for two months at a low temperature, the evaporative losses will obviously be different to those after storage for 12 months in high temperatures. Moreover, storage at higher temperatures will accelerate losses across the board and not just of the light ends. I therefore do not consider that it is necessarily right to say that the loss of light ends itself is "magnified"; it is simply that light ends will be lost more quickly compared to the

was capable of giving a useful indication of the likely effect of evaporation on PST. Many tests involve an acceleration of processes which would naturally happen more slowly and I do not see why evaporation should be any different in this respect. What the test did undoubtedly show was that for a reasonably similar hydrocarbon blend, the loss of light ends did not appreciable affect either the level of aromatics or the PST. Even Mr Wall accepted that there was unlikely to have been a substantial loss of aromatics. His argument was simply that a small loss could nonetheless have affected the complex interactions between the constituent components, although he was unable to suggest how or with what effect.

85. On the basis of the evidence presented to me, I am not satisfied on a balance of probabilities that evaporation would have had any significant effect on the behaviour of the samples.

(3) Auto-oxidation

86. Auto-oxidation was a late arrival at the chemists' ball. It was not pleaded. It was not covered in any of MOK's expert reports and it emerged only in the cross-examination of Mr Minton.

87. The experts agreed that there was no relevant research of which they were aware into the effects of auto-oxidation on the water tolerance of gasoline cargoes. The uneducated layman might be forgiven for taking this as an indication that it is not thought to be a particularly pressing or prevalent problem. The most

heavier fractions, so that the discrepancy between the two will be greatest after a short time period whereas leaving the sample for a longer period will eventually result in the light ends being exhausted and the loss of heavier fractions catching up.

Mr Wall could point to was two documents relied on by Mr Minton which referred to the possibility of oxidation during storage. The first of these was a 2024 Rislone blog which stated, *"In general, pure gas begins to degrade and lose its combustibility as a result of oxidation and evaporation in three to six months, if stored in a sealed and labelled metal or plastic container."* The second was the Automotive Fuels Handbook which on one of its 870 pages stated, *"Both gasoline and diesel fuel can oxidize during storage, giving rise to the formation of gums and gum precursors that can cause deposit formation in engines and seriously influence their performance. Biodiesel is particularly prone to oxidation… Hydrocarbon fuels containing olefinic components, arising mainly from cracking operations, are the most susceptible to gum formation and therefore may need some special processing or the use of antioxidants."* A subsequent paragraph stated that olefins were most susceptible to forming oxidation gums, followed by aromatics and then paraffins.

88. None of this was really controversial and on the basis of this material, MOK submitted that it was highly probable that significant auto-oxidation would have occurred during storage of the shore tank samples. However, I can see no basis for such an ambitious submission. There may have been some auto-oxidation, but it is noteworthy that:

i) This was not suggested as a potential concern by any of the experts attending the 2018 testing;

ii) Mr Wall did not raise it in either of his reports;

iii) It was not raised in either Mr Blackwood's written or oral openings.

89. It was, however, put to Mr Minton in cross-examination. He accepted that no tests had been carried out for auto-oxidation which would enable a comparison to be made, but his evidence was that there was nothing in any of the results to suggest that auto-oxidation was likely to have had any significant impact since aromatic content is a key influence on PST and the aromatic content here remained consistent from loading to 2018.

90. The evidence regarding auto-oxidation was frankly exiguous and I am not persuaded that it would have been a significant factor or that it undermines the results of the 2018 testing.

(4) ASTM D6422

91. The 2018 analysis involved testing samples for PST using test method ASTM D6422. Since the attending scientists recognised that the samples from the methanol shore tanks would very likely have absorbed water during storage which would affect the results, they carried out what was effectively a "control" by testing for PST on a composite sample made up in the correct proportions from the gasoline shore tank samples but using reagent grade methanol with an extremely low water content instead of the actual methanol shore tank samples. Self-evidently, therefore, the test was carried out on a composite sample with a completely different methanol product from that loaded into the Vessel. The PST of this composite sample was found to be 13°C – much lower than 29°C but still too high.

92. MOK levelled two complaints at this testing. The first, somewhat pejorative, criticism was that it was effectively an attempt at reverse engineering. The second was that the test method adopted, ASTM D6422, had been withdrawn and was not in current use.

93. I am not persuaded that there is any substance in the first complaint. Given the obvious risk that the extremely hygroscopic methanol shore tank samples would have absorbed moisture from the atmosphere during storage, it would have been pointless to test a composite sample made up using the original methanol. Since it was not suggested that there was anything in the composition of the reagent grade methanol as compared with the loaded methanol which might have affected the PST, apart from the water content, it seems to me that this was a sensible and useful test to carry out.

94. As to the second complaint, the reason for withdrawing ASTM D 6422 was apparently that no acceptable precision statement could be derived from the round robin tests which were conducted when it was published. However, round robin tests involve different laboratories conducting tests on the same sample in possibly different conditions. In the case of the 2018 tests, the same chemists were carrying out the same test in the same way in the same laboratories on the same occasion under controlled and witnessed conditions. This would have eliminated at least one potential source of variability in the results.

95. Accordingly, even if the test cannot be regarded as altogether reliable for the purposes of fixing a specific PST, I consider that the results obtained are nonetheless useful and valid for the purposes of comparison with each other,

irrespective of what results might have been produced in a different laboratory on a different occasion. I note again that none of the attending experts suggested that this was an inappropriate or futile test to carry out. Moreover, MOK accepts that the Cargo on arrival at Hodeidah had a PST of 29°C based on the 2018 PST results. In my view, it must also accept that those results can validly be compared with the results of other PST tests carried out at the same time.

Conclusion on the 2018 testing

96. As I have already indicated, I am satisfied on a balance of probabilities that the shore tank samples tested in 2018 were taken in April 2017 from the same shore tanks as the Cargo. I reject the suggestion that the samples are likely to have been so degraded by auto-oxidation or evaporation that no reliance could be placed on them at all. While gas chromatography cannot conclusively establish that the shore tank samples are identical to what was loaded on the Vessel, I am satisfied that they are likely to be very close to identical.

97. I reject Mr Wall's suggestion that this is all simply guesswork and prefer Mr Minton's evidence that the 2018 results were sufficiently consistent with both the results obtained in July 2017 and the tests carried out on the post-load samples to give confidence that they provide at least a reasonable indication of how the Cargo would have behaved.

98. I accept that the PST tests were sufficiently reliable to give an indication that a cargo blended in the Actual Blend Proportions would always have had a PST substantially in excess of what was required so as to put it off-specification. As the Defendants submit, it does not really matter what the precise PST of the

Cargo was since it would have been off-specification unless it could pass all the contractually required tests and these required it to be cooled without phase separation to below 1°C.

99. The Defendants also placed considerable reliance on the testing carried out by Intertek at Fujairah in July 2017 when ship's tank samples were tested for water content. Mr Rainey pointed to the result obtained for a sample taken from 6P middle which had a comparatively low water content (below 500 ppm) and yet was observed to have phase separated at temperatures above 18°C. He submitted that one could extrapolate from this result how the Cargo would have behaved even if no significant water contamination had occurred on board the Vessel.

100. On this point, however, I agree with Mr Wall that a single result for 6P middle is not a solid basis for saying that the Cargo would have separated in any event irrespective of the admitted water contamination. 500 ppm was Mr Wall's rule of thumb for a "safe" water content for blending purposes, but it was only a rough guide based on experience, not a hard and fast rule. Moreover, the sample in question had been taken some six weeks after loading when the water contamination had already occurred and the homogeneity of the tanks was not known. Had similar results been observed for other tank samples, the argument might have been stronger but, as it is, I am not satisfied that it is appropriate to give it any weight here. The most that can be said is that it is not inconsistent with the Defendants' thesis.

101. Nonetheless, even without support from this particular argument, I conclude that the Defendants have sufficiently discharged their evidential burden of casting doubt on the Inspectorate certificates.

Do the Inspectorate Certificates of 7 May 2017 and 14 May 2017 nonetheless accurately reflect the quality of the Cargo on loading?

102. The main problem facing the Defendants is that their case involves the wholesale rejection of the Inspectorate Certificates as regards all those tests which required the samples to be cooled. As noted above, Mr Wall accepted that if the tests had been correctly carried out, the PST of the Cargo must have been less than 1°C. It was moreover common ground that if the tests had been properly conducted, any phase separation would have been detected, either visually or through unexpected results and that this would have been recorded. Mr Wall's evidence was that the analysts (probably more than one) would have had to be utterly incompetent not to notice this.

103. The Defendants say that the inevitable inference from these facts is that the samples cannot have been properly cooled. They relied heavily on an email dated 12 June 2017 which seems to have been part of an exchange between Mr Almokbily of MOK and an unidentified person from PetroChina after the problem had been discovered.

104. It is clear from the email that Mr Almokbily had complained to PetroChina that the cargo was phase separating on being cooled to 10°C[4] and that PetroChina had responded with their comments. PetroChina insisted that the Cargo was in

[4] The reference to 10% is almost certainly an inadvertent error.

line with the contractual specification that they had been supplying from the start of the year and suggested that the problem may lie in the testing equipment and techniques used in the Yemen. More pertinently, they referred to having carried out their own tests, and warned that samples should not be cooled below 10°C when testing for distillation because of the risk of phase separation. They reported that there was no phase separation at 10°C when they tested the post-load samples but suggested that the temperature in a car engine would be much higher so that the fuel would be unlikely to separate in use.

105. It is difficult to know quite what to make of this. No further documents relating to this exchange have been disclosed by MOK and there was no explanation as to why not. The position is therefore highly unsatisfactory. Mr Rainey argued that the email was an implicit recognition that the Cargo might separate below 10° but that PetroChina did not regard this as a problem because it would never be subjected to temperatures that low in actual use. It is of note that PetroChina did not specifically address the need to cool below 1°C for the purpose of testing RVP. Mr Rainey speculated that, knowing the cargo was going to the Yemen, Inspectorate simply did not bother to cool the samples before running the tests. However, he did not invite me to make any findings to that effect on the basis that if the Inspectorate Certificates were incorrect, it did not matter why.

106. Mr Rainey also drew attention to a passage in Mr Sciortino's evidence in which he recognised the risk of phase separation below 10°C but said that if that had occurred prior to the tests being carried out, they would simply have remixed or re-homogenised the samples before testing.

107. I accept that Inspectorate's procedures left something to be desired in relation to:

i) The almost total absence of any documentation relating to the loading of the Vessel, despite supposedly having a document retention policy requiring them to keep documents for six years. Not even the joint instructions from Petrochina/MOK to carry out the load port inspection could be located, which is all the more surprising given that a complaint regarding the Cargo was made within days of loading;

ii) Insertion of some patently incorrect dates in the reports;

iii) Omission of samples from the Sample Distribution List;

iv) Lack of sealing.

108. It is therefore certainly possible that Inspectorate did not bother to cool the samples for the reasons suggested by Mr Rainey. However, that would be pure speculation. Moreover, Inspectorate is a reputable independent inspection company and it would require fairly compelling evidence to find as an affirmative fact that they had not correctly or properly carried out the tests which they certified they had been carried out.

109. However, the difficulty for MOK is that if the 7 May 2017 Certificate is reliable and correct and if (as Mr Wall contended) the substantial majority of the water contamination was due to tank washing residues, then it is impossible to explain the results shown in the 14 May 2017 Certificate. And if the 14 May 2017 Certificate is suspect, that inevitably casts doubt on the earlier Certificate,

particularly given the very close correspondence in results. This, of course, is an objection to MOK's case which does not involve any reliance on the 2018 testing results. It is indeed a little surprising that many of the results in the 7 May 2017 and 14 May 2017 Certificates were identical even though the tests had been carried out on samples that had been prepared and handled in completely different ways – a shore tank composite in the case of the former and a ship's tank composite in the case of the latter. One might have expected there to be some variation in the results, if only very slight.

110. Mr Wall accepted, albeit with reluctance, that any water in the Vessel's tanks and pipes into or through which the methanol was loaded would have mixed immediately with the methanol upon contact since they were 100% miscible. I find it wholly implausible that (as he at one time suggested) there could have been pockets of water in one or more tanks which somehow evaded contact with the methanol when it was loaded into those tanks. Moreover, as discussed in paragraphs 30-31 above, I accept the Ship's Hourly Log as an accurate contemporaneous record of the loading process and this shows that methanol was loaded into all the tanks used for the Cargo. Calculations carried out by the Defendants after the hearing at my request showed that the relative proportions of methanol and gasoline loaded into each tank were broadly the same.

111. I accept the possibility that there may have also been some water in the pipes used to load the gasoline component which, since gasoline and water are not miscible, would either have been pushed into the cargo tanks as a slug of fresh water or would have become entrained in the gasoline. The experts agreed that, either way, such water would have been picked up by the methanol/water

mixture already in the tanks. The question was how long this would have taken. There was no serious dispute that any slug of fresh water pushed into the tanks ahead of the gasoline would have been absorbed by the methanol instantaneously. Any water entrained with the gasoline would have been absorbed as the gasoline mixed with the methanol. Mr Minton said that it would have been fully absorbed by the time the ship's tank samples were taken; Mr Wall said that it could have taken longer and that the tanks were not necessarily fully homogenous when sampling took place. He nonetheless conceded that it was probably still possible to take samples which would give a fairly accurate set of results. Ultimately, his position was that he was unable to say one way or the other whether the tanks were homogenous at the time of sampling, but he accepted that, if they were, then the PST of the ship's composite sample as tested by Inspectorate could not have been below 1°C.

112. Having considered the evidence, I find it more likely than not that the Cargo was almost, if not completely, homogenous by the time the samples were taken. This is because the nature of the loading process ensures that the gasoline, being the less dense component, has to diffuse through the entirety of the methanol in order to rise to the surface. Any bubbling effect as it was pumped in would have contributed further to the mixing effect. Moreover, ship's tank samples were taken at three levels in all tanks. Any lack of homogeneity should therefore have been apparent in differing density results, yet the densities of all the samples were consistent. This was specifically confirmed by Inspectorate in their later certificate of 1 July 2017, although I treat that with some caution given the attacks made against Inspectorate's other certificates.

113. The only remaining possibly postulated by Mr Wall was that even if the tanks were fully homogenised by the time of sampling, 9 MT of water was insufficient to induce phase separation at the prevailing ambient temperature and that there was further absorption of moisture during the voyage which tipped it over the edge by the time the Vessel reached Hodeidah. Only two possible sources of such additional moisture were identified:

i) Cross-contamination when the Vessel took on fresh water. However, neither expert supported this as a likely explanation;

ii) Absorption from the atmosphere when the cargo tanks were opened to add red dye. However, that strikes me as exceedingly improbable. As Mr Minton explained, the tanks would only have been opened for this purpose for a few minutes and the positive vapour pressure in the tanks would have meant that vapours were escaping rather than air being drawn in. I regard it as vanishingly unlikely that the tanks were not fully secured after opening, not least because there would then have been gas vapours on deck which must inevitably have been noticed.

114. I therefore reject both these possible sources of additional water ingress into the Cargo.

115. This leaves the court in a difficult position, somewhat akin to that in the *Popi M,* [1985] 1 WLR 948, where none of the possible explanations on offer seems particularly likely. It is clear that I cannot simply prefer one explanation simply because it is the least unlikely unless I am also satisfied that it is more probable than not. If all else fails, I must simply apply the burden of proof which in this

case requires me to ask myself whether MOK has discharged what I have held to be its legal burden of persuading me on a balance of probabilities that the Inspectorate Certificates are accurate.

116. In the event, I have not found it necessary to rest my decision on the burden of proof. Having weighed the evidence carefully, I cannot be satisfied that the Certificates accurately represent the quality of the Cargo on loading. On the contrary, I find it more likely than not that the Cargo in fact had a PST well above 10°C and probably around 17°C. This may not be altogether surprising bearing in mind that it was an M15 blend with a maximum of 15% oxygenates. The Fact Sheet produced by the Methanol Institute annexed to Mr Minton's second report suggests that M15 blends have low water tolerance in the absence of co-solvent additives. It is undisputed that the aromatic content of the Cargo was also very low and that it had no co-solvent additives. In many ways, therefore, it was a prime candidate for phase separation.

117. It is not necessary for me to make any findings as to how or why the Inspectorate Certificates came to be inaccurate in this regard and I do not do so.

118. The consequence of this finding is that MOK's only theoretical claim is for the difference between the sound and damaged values of the Cargo at destination. The agreed evidence is that there was no material difference in the value of cargoes with PSTs of either 17°C or 29°C. There was no evidence of what its value would have been with any other PST but the agreed expert valuation evidence does not suggest that it is likely to have been very different.

119. It follows that MOK's primary case fails.

Alternative case on fortuity

120. This was an ingenious argument albeit one which I have concluded is wrong. It was constructed by Mr Blackwood on the basis of three propositions:

i) The decision by PetroChina to blend in the Actual Blend Proportions was a fortuity;

ii) The fortuitous choice by PetroChina to blend in the Actual Blend Proportions caused damage to the blended cargo, such damage consisting of either actual phase separation at 17°, or a propensity to phase separate at 17°C;

iii) MOK suffered loss because it would have been possible to blend the same stocks in such a way as to create a contractually compliant cargo.

Fortuity

121. The only contractual constraint imposed on PetroChina by the contract so far as blending was concerned was that the oxygenate content of the blend should not exceed 15%. PetroChina could therefore have blended from these particular shore tanks in any proportions within that limit. To the extent that it chose to blend in the Actual Blend Proportions, such choice was clearly deliberate on the part of PetroChina. Mr Rainey further relied on the Inspectorate Certificates to show that the aromatic/benzene content of the shore tank composite sample and the ship's tank composite sample were identical and that what was actually loaded must therefore have been in the same proportions as intended by PetroChina. I discount this argument, however, since the alternative case on

fortuity only arises once I have concluded that the Certificates cannot be relied upon as accurate. I do not see that Mr Rainey can cherry-pick in this respect.

122. Be that as it may, he maintained his broader point which was that the choice of the Actual Blend Proportions was deliberate on the part of PetroChina as evidenced by the email of 12 June 2017 referred to in paragraph 103 above in which they confirmed that the Cargo was of the same specification that they had been supplying from the start of the year. In response, Mr Blackwood argued persuasively that it was irrelevant that PetroChina may have made a deliberate choice; it was nonetheless fortuitous so far as MOK was concerned. There is some force in this point and since I have concluded that the alternative case fails for other reasons, I am prepared to assume it in his favour.

Damage

123. More problematic from Mr Blackwood's point of view is the question of damage. I note at the outset the imprecision in MOK's case as to whether the relevant damage was actual phase separation or the fact that the Cargo had a PST of 17°C, in other words a propensity to separate at 17°C. In its Supplementary Submissions served on Day 2 of the trial at the court's request, MOK asserted that the relevant damage was *"phase separation at 17°C".* By the time of oral closings, however, this had been modified to a suggestion that the damage rather consisted of the propensity to phase separate.

124. The difficulty with both ways of putting the case is that the so-called "damage" is inherently elusive and uncertain. Thus, whether or not a blend actually phase separates depends on its ambient temperature which can obviously vary from

time to time depending on where it happens to be. The PST of a blend and therefore its propensity to separate can likewise vary from day to day depending on whether it has picked up water from its surroundings. A randomly variable target is not an obvious yardstick by which to assess whether a blend has sustained damage or not.

125. Actual phase separation: As to the argument that the relevant damage was actual phase separation, Mr Blackwood accepted that the concept of damage requires some changed physical state, although he pointed out that this did not have to be visible and need only be at a sub-molecular level: see *Quorum AS v Schramm,* [2002] CLC 77. He also relied on *Pilkington United Kingdom Ltd v CGU Insurance plc,* [2004] LRIR 891 at [51] for the proposition that it was sufficient for such alteration in physical state to be harmful in the commercial context. He submitted that this requirement was satisfied here because a cargo with a PST of 17°C would not have been marketable in the Yemen.

126. In one sense, of course, phase separation does indeed involve a changed physical state. However, as *Pilkington* makes clear at [50] the precise borderlines of this definition depend on the context (in that case of the words used in the relevant insurance policy). In the present case, there was certainly no change at sub-molecular level since the separation was reversible when the temperature was increased – in much the same way that water changes state from liquid to vapour when boiled and back again to liquid when condensed. That being the case, I am unable to accept that actual phase separation can be regarded as "damage". To my mind, it is no more than the natural behaviour of a particular product which reverses when the temperature gradient is reversed.

It is true that the phase separation observed in one sample at Fujairah in July 2017 was not reversed merely by returning it to ambient temperature, but it is possible that there was another reason for this or that reversal would have been achieved if the temperature had been increased further.

127. A further difficulty in this way of putting the case is that there does not in fact appear to have been any actual phase separation in the cargo tanks, no doubt because the ambient temperature was too high. Only individual samples were observed to separate when cooled for testing. Mr Minton's evidence was that the Cargo had almost certainly not separated, otherwise there would have been noticeable differences in density as between individual samples taken at different levels and no such differences were revealed. This evidence was uncontradicted. The Intertek test results also show that the majority of samples had not phase separated prior to testing.

128. Since MOK's claim is in respect of the entire Cargo and not just the cooled samples, it is therefore difficult to resist Mr Rainey's submission that even if actual phase separation is regarded as "damage", MOK has failed to establish that the Cargo as a whole was damaged in this way. In response, Mr Blackwood argued that the samples were representative of the whole, and that if the samples separated it must be assumed that the rest of the Cargo would have done so as well. However, this is just another way of saying that the relevant damage was in fact the propensity of the Cargo to separate rather than actual separation itself. I therefore accept Mr Rainey's submission that actual phase separation was merely a function of the PST of the Cargo and its ambient temperature and did not amount to damage in and of itself. There was certainly no evidence to

suggest that there was any difference in value between a cargo with a PST of, say, 20°C which has not yet separated, and the same cargo which has separated when exposed to cooler conditions.

129. Propensity as damage: Mr Blackwood accordingly argued in his oral closing submissions that the propensity to separate could itself be regarded as damage. However, I fail to see how this can be, given that a mere propensity involves no change in physical state but is simply a characteristic or attribute of the blend.

130. A further and even more substantial difficulty facing Mr Blackwood was that the insured cargo never existed without its propensity. Under ICC(A), cover was against all risks of loss of or damage to the subject matter insured. By Endorsement No. 2, the subject matter insured with effect from 8 May 2017 was *"the following shipment"*. The details given of the shipment identified a cargo of 11,800 MT +/- 5% to be carried on the Vessel. Even though the blend stocks from which the Cargo was made up existed in bulk in the shore tanks, it is in my judgment impossible to say that there was any "shipment" as defined (and thus any insured cargo) at least until the appropriate quantities had been pumped out of the shore tanks and appropriated to the shipment.

131. In this regard, I accept Mr Rainey's submission that this was a transit policy and that until the quantities for loading had been separated from the undivided bulk in the shore tanks, there was nothing which could be said to constitute a shipment or a cargo. Mr Blackwood argued that this was inconsistent with the fact that the insurance cover was on a shore tank to shore tank basis. However, I do not see that this makes any difference. Clause 8 of the ICC(A) terms provides for the insurance to attach from the time the goods leave the warehouse

or place of storage. The express provision in the insurance certificate that cover was on shore tank to shore tank terms merely reflects that position and confirms that the individual blend stocks are covered once they are pumped out of the shore tanks into the pipelines for loading. In other words, it displaces the normal presumption that the risk does not attach until the ship starts on the voyage assured: see *The Prestrioka*, [2003] 2 Lloyd's Rep. 237 at [47]-[48].

132. For the same reason, the fact that cover attached under Endorsement No. 2 with effect from 8 May 2017 seems to me to make no difference. It simply makes clear that the Cargo was not covered before that date. It cannot mean that if the Cargo itself does not yet exist, there is somehow cover for components which may or may not be used to create it. In the present case, the evidence shows that the Vessel tendered NOR at Sohar on 8 May 2017. It is therefore entirely plausible that cover was incepted from that date to cover the possibility that she was loaded immediately. To take a further more homely example, I may agree to bake a wedding cake for a wedding on 10 June and I may wish to insure it. However, I may not be quite certain when I will actually make it because I want it to be as fresh as possible and I am not sure precisely when I can arrange appropriate transport. I might in those circumstances decide to insure the cake from 1 June to be on the safe side, even if I do not actually bake it until 5 June. It seems to me that it would be very difficult in those circumstances to say that I was covered from 1 June for the separate ingredients sitting in my pantry, an undivided part of which were intended in due course to be used.

133. In further support of his argument, Mr Rainey relied on *Simon, Israel & Co. v Sedgwick*, [1893] 1 QB 303 where goods were insured under an open cover for

transit from Bradford to Madrid but were in fact shipped on a vessel going to Cartagena which was subsequently lost. It was held that the insurance did not respond because the goods never embarked on the insured voyage. This is clear Court of Appeal authority for the proposition that the goods must be appropriated to the insured voyage. In the present case, the stipulated voyage was a voyage on the Vessel and the Cargo was only appropriated to that voyage once the blend stocks left the shore tanks for loading. Likewise, in *The Prestrioka (supra)*, a cargo of rice was insured under an all risks marine cargo policy for a voyage from Kohsichang to Dakar on ICC(A) terms including clause 8. Potter LJ at [47]-[48] affirmed the principle that the voyage insured is a specific voyage from A to B and that if the goods never embark upon that voyage, there is no liability under the policy.

134. In both those cases, the question was whether there was cover where a different voyage was undertaken, in other words whether the goods in question had been appropriated to the specific *voyage*. Nonetheless, the principle seems equally apt to apply to the situation here where the question is not as to the voyage undertaken, but as to whether any cargo was actually *appropriated* to that voyage. In response, Mr Blackwood argued that MOK had an insurable interest in the undivided bulk in the shore tanks. That is undoubtedly true and MOK could no doubt have taken out cover for a share of that undivided bulk: see *Quadra Commodities SA v XL Insurance Company SE*, [2023] EWCA Civ 432. However, the subject matter of an insurance policy depends on the construction of its terms. In this case, cover was for a specific shipment on a specific vessel and in my judgment there was no such shipment until at least the constituent parts of the cargo had been appropriated to the voyage.

135. That being so, it is impossible to see how it can be said that the *Cargo* was damaged when the methanol and gasoline were blended so as to produce a product with a propensity to separate at temperatures below 17°C. The individual blend stocks were not damaged; all that happened was that they combined to form an inherently defective product. Even if they were individually covered during their passage through the shorelines, there could have been no conceivable damage at that stage because nothing had been blended which was capable of separation. Self-evidently, the propensity to separate could not exist until the blend stocks had been combined. The situation thus seems to me to be entirely analogous to the well-known Bacardi Breezers case where Bacardi Breezers were manufactured using carbon dioxide which had inadvertently been contaminated with benzene: *Bacardi-Martini Beverages Ltd v Thomas Hardy Packaging Ltd,* [2002] EWCA Civ. 549, [2002] 2 Lloyd's Rep. 379. The claim in that case was brought under a supply contract and the questions for determination related to the quantification of damage, which in turn depended, in particular, on whether it could be shown that there had been any *"direct physical damage to property".*

136. In his judgment at first instance Tomlinson J held that this was not a case where the ingredients of the Bacardi Breezer had themselves been damaged. Nor could it be said that there had been damage to the Bacardi Breezers themselves. Although the end product was valueless, it did not exist at all except through the process of manufacture and if the thing alleged to have been damaged did not exist prior to the alleged infliction of damage, it was not correct to say that there had been any direct physical damage to property as opposed to the creation of a defective product. His decision was upheld on appeal where it was held that the

finished product came into existence at the moment of admixture and that what resulted was not damaged constituent ingredients but rather a defective new product. This new product was not damaged in any way but was merely defective from the moment of its creation.

137. Mr Blackwood submitted that *Bacardi-Martini* was not an insurance case and was therefore irrelevant. However, the concept in issue was precisely the same, namely whether, where two or more ingredients are combined to form a defective product, it can be said that the act of combination has caused damage to the end product. Note that in *Bacardi-Martini* one of the ingredients was itself harmful and so might have been said to be capable of causing damage to the end product but Tomlinson J and the Court of Appeal were quite clear that where the end product did not exist save as a result of the admixture, it could not be said to have sustained damage in any way. I can see no relevant difference between that and the present case.

138. Two further points should be noted. First, every methanol/gasoline blend must have a PST, whether high or low. In other words, a PST is an inherent feature of such a blend; it is not itself a defect. Secondly, the "defect" relied on here is the fact that the actual PST of a particular cargo may render it unmarketable (as here). But that is essentially a contractual matter.

139. I therefore hold that the mere fact of blending caused no relevant damage. There was no damage to the blended product because it never existed in any other state. Nor were the individual blend stocks damaged by the admixture; they simply combined to form an end product with a particular attribute which made it unmarketable, namely an excessively high PST. However, the cover under

the Policy was for all risks of loss and damage to the Cargo itself, not for economic loss due to the Cargo being defective.

140. Mr Blackwood makes a good forensic point that if the Defendants are right about this, it would also be the answer to MOK's primary case based on fortuitous water contamination occurring on board the vessel. That may be right, but the Defendants have not sought to withdraw their concession that they would be liable if the primary case succeeded and it is not really for MOK to complain if the Defendants choose not to take certain points. In any event, the point would have had considerably more force if the alternative case on fortuity had been pleaded from the outset. As it was, it only emerged in its final form during the course of the trial, and in those circumstances it is unsurprising that the Defendants did not have the leisure to think through its implications in full. I am certainly not prepared to read their failure to withdraw their concession on the primary case as an acknowledgment of weakness in their defence to the alternative case.

141. In any event, I am also not satisfied that MOK has succeeded in proving any loss on this way of putting the case. Mr Blackwood accepted that the burden was on his clients to prove that an on-specification cargo could and would have been produced. He suggested that increasing the proportion of gasoline loaded from tank 206 or adding co-solvent would have been effective to increase the water tolerance of the Cargo sufficiently. Mr Minton agreed that, other things being equal, that would indeed be the case.

142. However, that only takes Mr Blackwood part of the way because it is not enough to show merely that the water tolerance could have been brought below 17°C.

MOK would also have to show not only that the Cargo could have been cooled below 1°C in order to allow all the contractual tests to be performed, but also that the Cargo would have remained on-specification in relation to all other parameters as well. However, there was a complete lack of evidence on this point. It is fair to say that Mr Minton did not suggest that increasing the proportion of gasoline from tank 206 would obviously have put the Cargo off-specification in any other respect, but he did point out that it would have been necessary to investigate the effect on the other parameters. As it was, therefore, there was no positive evidence that it would have been possible to alter the blend proportions as suggested so as to produce a cargo that was on-specification and could have been cooled below 1°C to allow all the contractual tests to be met.

143. Finally, there was no evidence that a cargo with a PST below 17°C would be any different in value from one with a PST of 17°C or 29°C.

144. For all these reasons, I find that the alternative case on fortuity likewise fails.

Inherent vice

145. Given my conclusions thus far, it is unnecessary to deal with the Defendants' defence based on inherent vice which, as I have already indicated, added little if anything to their arguments above.

Breach of warranty

146. This defence is likewise rendered moot by my rejection of MOK's claim. However, since a considerable amount of time at trial was devoted to arguing it, I deal with it briefly.

147. The relevant warranty is set out at paragraph 8 above. The alleged breach is that no proper survey of the shorelines was carried out at Sohar or, if it was, it did not include any inspection or certification of their cleanliness.

148. There is no evidence that Inspectorate were in fact instructed to inspect or certify the cleanliness of the shorelines as required by the warranty. As already noted, there was no disclosure of any instructions given to Inspectorate even though Mr Sciortino said that they would probably have been received by email so that they should in theory still be available. Mr Rainey submits that it is therefore a legitimate inference that Inspectorate were not instructed to inspect and certify the cleanliness of the shorelines, otherwise they would have done so in the same way that they certified the cleanliness of the ship's tanks in their pre-loading report. Any actual inspection of the shorelines was thus purely coincidental.

149. Even leaving aside the lack of instructions, I agree that the lack of any contemporaneous certification concerning the shorelines strongly suggests that Inspectorate were not instructed expressly to inspect or certify their cleanliness. However, I do not see that this makes any difference if in fact the necessary inspection and certification can be proved.

Inspection

150. As to this, the evidence of Mr Sciortino, based on his conversations with Mr Kauru and confirmed by the latter in his written and oral evidence, was that Inspectorate did everything that could have been done to verify that the shorelines were empty. Thus:

i) Mr Kauru opened the drain valves of both shorelines JL2 and JLC2 at their lowest point (which was at the jetty) to check visually for any residues. Any product left in the line would drain out at that point.

ii) He also checked the lines by tapping them and listening for a hollow sound to indicate whether they were empty.

151. Although there was some hesitation in confirming his manuscript, Mr Kauru confirmed that he had recorded in his notebook that the JL2 gasoline line was empty before loading. He explained that he had not made any similar entry for JLC2 because this was a dedicated methanol line and it was not necessary to do so as there was no possibility of cross-contamination. He was adamant that he had nonetheless carried out the same checks on JLC2 as he had performed on JL2. It has to be recognised that the logic of this explanation could equally well lead to an inference that Mr Kauru did not check the methanol line for emptiness at all because he regarded it as unnecessary. However, having seen and heard him give evidence, I am prepared to accept his testimony that he did carry out the checks described and satisfied himself that the line was empty.

152. The question then is whether this is sufficient to satisfy a requirement that the shorelines be inspected as to "cleanliness". Applying the well-known principles of construction, I hold that "clean" in this context cannot mean clean in the sense that there are no residues at all in the shorelines. There will inevitably be clingage to the walls of the pipes which cannot be removed except by wholesale cleaning and it is impossible to inspect a pipeline internally save with a camera. Such a construction would therefore be wholly uncommercial and impractical. In my judgment, "clean" as used in this particular warranty can only mean clean

in the sense that any residues are compatible with the cargo to be loaded. I emphasise that this is a question of construction and not an acceptance that impossibility of compliance is a defence to a breach of warranty. It is well-established that it is not.

153. Nonetheless, merely taking steps to check that the lines are empty does not of itself mean that any residues are necessarily compatible. The experts agreed that Inspectorate could have taken manifold samples and/or first foot samples, although both carry the inevitable risk of shutting the stable door after the horse has bolted unless the parties are prepared to suspend loading while the samples are tested. However, while I accept that this might have been best practice, there was no evidence that it was invariably or even customarily done as part of a load port survey. It would therefore have required specific instructions. Moreover, first foot samples could not reveal very much about the cleanliness of the shorelines because the Cargo would by then have been loaded into the Vessel's tanks and would already have been contaminated by anything already there.

154. In its express terms, the warranty merely requires an inspection. It is not prescriptive as to how such inspection is to be carried out and I incline to the view that, as a matter of construction, it only requires such steps to be taken as are usual in the industry to ascertain compatibility. In the absence of any evidence that it is industry practice to take first foot or manifold samples, I am not prepared to find that MOK was in breach of warranty merely because that was not done in this case. In my view it is sufficient if the inspector takes steps to satisfy him or herself that any residues will be compatible.

155. In the present case, the evidence of Mr Sciortino (confirmed by Mr Kauru) was that Inspectorate checked for compatibility by getting information from the terminal regarding previous cargoes. I accept that evidence and am prepared to proceed on the basis that there was sufficient compliance with the inspection part of the warranty.

Certification

156. It is not in dispute that Inspectorate did not provide any certificate relating to the shorelines similar to that which they produced for the ship's tanks until March 2023. This raises two questions:

i) Is certification part of the warranty at all?

ii) If so, is there any temporal limit on when it can be provided?

157. As to the first of these, it is clearly the inspection which is the critical feature of the warranty. The certification has only evidential value, although that is not to say that it is unimportant. Of course, where a survey company is expressly instructed to carry out an inspection of the shorelines for cleanliness, a certificate to that effect will almost certainly be included as part of the survey report and the present situation is unlikely to arise. Here, however, there were almost certainly no such instructions and it therefore is unsurprising that it was not covered in Inspectorate's report.

158. It might be thought unlikely that the parties intended the assured to lose all cover merely because there was no certification of a perfectly satisfactory inspection. However, I can see that a certificate has independent value for evidential

purposes and the fact is that the parties in this case expressly provided for the warranty to cover both inspection and certification. They can hardly have intended the warranty to be satisfied by one or the other, since certification without inspection would be a commercial nonsense. The natural reading of the warranty is accordingly that it stipulates for both.

159. It follows that certification is an independent and discrete part of the warranty. The alleged unmeritorious nature of the Defendants' case is neither here nor there. If there is a breach of warranty, the Defendants are entitled to rely on it, no matter how technical the argument might be.

160. As to the second question, there is no express temporal limit on when the requisite certificate is to be provided. There is therefore an issue as to whether it must be provided prior to loading, or at the very latest prior to the commencement of proceedings. In support of the former, Mr Rainey made the powerful point that the inspection and certification were part of a package which was to be carried out at the load port. However, there must be many cases where there is a delay in issuing a load port survey and I consider it unrealistic to require that the certificate necessarily be provided prior to loading. In my judgment, the warranty requires it to be provided within a time which is reasonable in the industry. I therefore equally reject the suggestion that there is no temporal limitation at all. As Mr Rainey pointed out, if that were right insurers would never be able to rely on a breach of warranty in failing to provide a certificate since the time for compliance would never arrive and there could therefore never be a breach.

161. MOK nonetheless relied on a certificate issued on 3 March 2023 by the successor company to Inspectorate Sohar. I am quite satisfied that this was not a reasonable time. Self-evidently, the certificate was not provided as part of the load port survey. On the contrary, it was issued years after the loss had occurred and well after these proceedings were commenced. It also only purports to certify that the shorelines were *"clear (in the sense of emptiness from residues of previous cargoes) and acceptable to be used as designated lines for loading the nominated cargo."* Even if confirmation that the lines were "acceptable" for loading the Cargo can be read as certifying compatibility with previous cargoes, that does not alter the fact that it is far too late to amount to compliance with the warranty. I therefore hold that the certificate produced in March 2023 does not avail MOK.

162. Mr Rainey further relied on section 10(4)(b) of the Insurance Act 2015 to argue that remedying a breach of warranty does not restore cover for losses occurring before the breach is remedied. However, section 10(4)(b) presupposes that a breach has occurred, which will not be the case unless the Defendants are right that the certificate was out of time. It therefore adds nothing to the argument.

163. Given these conclusions, it is unnecessary to explore the question of whether there is any rule of law which precludes the provision of a certificate so as to cure *ex post facto* a breach of warranty which existed at the date of the claim form. This is without doubt an interesting question, but it is one that deserves far more detailed consideration than time permitted in this case.

164. For completeness, MOK also relied on Inspectorate's certificate of 1 July 2017. However, this does not deal with the shorelines at all and so plainly does not

satisfy the requirements of the warranty even if it can be said to have been provided within a reasonable time, as to which there was no evidence one way or the other.

165. I am therefore satisfied that the Defendants have established that MOK was in breach of the survey warranty.

166. The final question under this head is whether the Defendants are nonetheless estopped from relying on the breach. This turns on the whether the wording in the Policy that *"Failure to comply with a warranty will, in normal circumstances, void this insurance policy"* amounts to an agreement to contract out of the 2015 Act. Mr Blackwood argued that it did and that although the parties had thereby agreed that a breach of the warranty would *"in normal circumstances"* render the Policy void, the Defendants were estopped from so asserting by virtue of their conduct in defending the claim on the basis that it was not void.

167. Two issues thus require to be resolved: (i) did the parties agree to contract out of the 2015 Act? (ii) what are "normal circumstances"?

168. As to the first, despite the eloquence of Mr David Walsh KC who argued this part of the case on behalf of MOK, I am not persuaded that these words amounted to an agreement to contract out of the Act. The arguments to the contrary advanced by Mr Rainey were powerful. He submitted that:

i) On its natural and ordinary reading, the wording suggests a warning rather than a statement with contractual effect.

ii) The wording is not replicated in the actual certificate of insurance and only appears in the cover note and (although not directly relevant) the reinsurance slip.

iii) It refers to warranties in general rather than being limited to this specific warranty.

iv) The parties can only plausibly be said to have agreed to contract out of the Act by using these words if they provide for consequences other than those which would ensue in the normal course. However, identical wording is used elsewhere in the Policy in relation to conditions precedent where it does fairly reflect the consequences of non-compliance. Plainly this wording was not intended to produce any different effect in that context, so why would it be construed any differently in relation to warranties?

v) The wording is insufficiently clear to amount to an unambiguous statement that a breach of warranty will render the contract void, given the inherent scope for disagreement as to what constitutes "normal circumstances".

vi) It also leaves the position wholly obscure where the circumstances are not "normal".

169. These are powerful arguments to which Mr Walsh had no real answer. Ultimately, I have concluded that the words were not intended to have contractual effect. It is unclear whether the transparency requirements of section 17 apply to a term which is relied upon by the assured. If they do, then

the ambiguity of the wording would have prevented it from being given effect in any event.

170. If I had concluded that there was a contracting out, I accept that there is nothing to suggest that the circumstances of this case were not normal. The impossibility doing more to check the shorelines for cleanliness (which was not in any event the case, since manifold or first foot samples could have been tested) does not mean that the circumstances were abnormal. In that scenario, the Defendants would therefore have been entitled to assert that the Policy was void, subject to any estoppel.

171. As to this, the pleadings clearly disclosed a common assumption that the Policy was not void. The only question is as to reliance. I agree with Mr Rainey that an argument that MOK relied on the assumption by continuing with its claim is implausible. The reality is that MOK would have continued with the claim anyway. It is possible that it might have approached it in a different way but the problem for MOK is that it adduced no evidence to this effect. I would not therefore have held that the estoppel argument succeeded.

172. The final question under this head concerns the effect of sections 10 and 11 of the 2015 Act, which provide in material part as follows:

> *"**10 Breach of warranty***
>
> *…*
>
> *(2) An insurer has no liability under a contract of insurance in respect of any loss occurring, or attributable to something happening, after a warranty (express or implied) in the contract has been breached but before the breach has been remedied.*
>
> *…*

(4) Subsection (2) does not affect the liability of the insurer in respect of losses occurring, or attributable to something happening—

(a) before the breach of warranty, or

(b) if the breach can be remedied, after it has been remedied.

…

11 Terms not relevant to the actual loss

(1) This section applies to a term (express or implied) of a contract of insurance, other than a term defining the risk as a whole, if compliance with it would tend to reduce the risk of one or more of the following—

(a) loss of a particular kind,

(b) loss at a particular location,

(c) loss at a particular time.

…

(3) The insured satisfies this subsection if it shows that the non-compliance with the term could not have increased the risk of the loss which actually occurred in the circumstances in which it occurred.

(4) This section may apply in addition to section 10."

173. In the absence of evidence as to what a reasonable time would have been for production of the relevant certification, it is unclear whether the loss in this case had occurred before or after the breach. If before, then the Defendants would be liable. If after, it is necessary to consider section 11. However, this section only applies to the warranty in this case if compliance would tend to reduce the risk of loss of a particular kind, at a particular location or at a particular time. Only the first of these is relevant here.

174. In the Defendants' written closing submissions, it was argued that a failure to carry out a proper inspection could have affected the risk of water contamination. Mr Blackwood's riposte was that the breach in this case related only to the lack of certification. However, it seems to me that Mr Rainey is

correct in submitting that for the purposes of applying section 11 it is necessary to look to the relevant term as a whole. There is nothing in the wording of the section to suggest that where a term can be breached in more than one way, it is only the particular breach which must be looked at. On the contrary, it seems to me that section 11 is directed at the effect of compliance with the entire term and not with the consequences of the specific breach. Indeed, this is confirmed by paragraph 96 of the Explanatory Notes to the Act.

175. I therefore conclude that Mr Rainey is right about this. There was no serious dispute that compliance with the warranty as a whole was capable of minimising the risk of water contamination from either the shorelines or the Vessel's tanks and that therefore non-compliance could have increased the risk of the loss which actually occurred. It follows that the Defendants' breach of warranty defence is not precluded by section 11.

176. In conclusion, therefore, had I held the MOK succeeded in principle on either its primary or its alternative case, the claim would nonetheless have failed on grounds of breach of warranty.

177. In the circumstances, it is unnecessary to deal with quantum although I am grateful to Mr Walsh and Mr Coffer who made submissions on behalf of their respective clients in relation to this part of the case.