Zweite Ms “Philippa Schulte” Shipping GmbH & Co KG & another *v* PSA Corp Ltd [2012] SGHC 135

Case Number : Suit No 82 of 2009

Decision Date : 28 June 2012

Tribunal/Court : High Court

Coram : Tan Lee Meng J

Counsel Name(s) : Mohamed Goush Marikan and Syed Isa bin Mohamed Alhabshee (Oon & Bazul LLP) for the plaintiffs; Toh Kian Sing SC, Vellayappan Balasubramaniam and Lim Junming (Rajah & Tann LLP) for the defendant.

Parties : Zweite Ms "Philippa Schulte" Shipping GmbH & Co KG & another — PSA Corp Ltd

Tort – Negligence

28 June 2012 Judgment reserved.

Tan Lee Meng J:

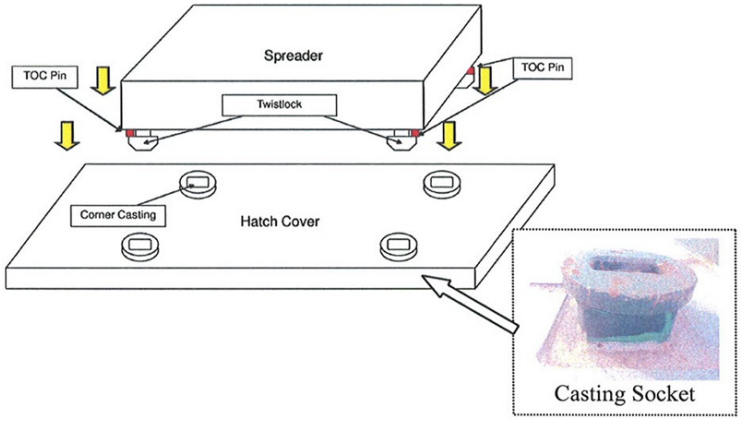
1 This first plaintiff, Zweite MS “Philippa Schulte” Shipping GmbH & Co KG, claimed that it was the owner of a container vessel, *The APL Sokhna* (“the vessel”), when an accident occurred on 6 January 2009 while she was berthed at a container terminal belonging to the defendant, PSA Corporation Limited (“PSA”), which provides port operation services. The second plaintiff, St Philonas Shipping Co Ltd, claimed to be the demise charterer of the vessel at the material time. The plaintiffs alleged that the PSA negligently lifted and dropped one of the vessel’s hatch covers (“the hatch cover”) during cargo discharging operations. This accident (“the accident”) damaged the hatch cover, the vessel and the PSA’s property. The PSA denied liability and counterclaimed against the plaintiffs for, *inter alia*, damage to its wharf.

Background

2 On 6 January 2009, the vessel berthed at the PSA’s Brani Container Terminal Berth 06 at around 11.12 am. She moored port side alongside Berth 06.

3 Four quayside gantry cranes were deployed to discharge the vessel’s cargo. One of the gantry cranes was Gantry Crane 901 (“the gantry crane”). A Spreader, numbered BSPT 16, (“the Spreader”) was installed onto the gantry crane. The Spreader’s task was to lift hatch covers and containers from the vessel to the wharf and vice-versa.

4 For the purpose of lifting hatch covers, the Spreader was fitted with four twistlocks and four Top of Container Pins (“TOC Pins”), which are also known as “landing pins”. Hatch covers are fitted with fixed lifting points, known as “lifting sockets” or “casting sockets”, to enable them to be lifted by the Spreader. The Spreader twistlocks lock within the lifting sockets of a hatch cover before the cover is lifted. A schematic diagram of the Spreader and the hatch cover lifting sockets (“the lifting sockets”) is set out below:



5 The gantry crane system has various built-in operational and safety features. It is equipped with a lighting system that will indicate to the gantry crane operator that the Spreader twistlocks have properly engaged the hatch cover lifting sockets so that he knows that it is safe to lift the hatch cover.

6 The PSA deployed three key persons at the time the hatch cover was lifted. They were the gantry crane operator, Mr Wong Chee Hong ("Mr Wong"), the ship traffic assistant, Mr Udaiyappan Balraj ("STA Balraj") and the wharf operations supervisor, Ms Nur Aleena, ("WOS Nur Aleena"). Mr Wong was tasked to operate the gantry crane to lift containers and hatch covers from vessels and to land them safely onto the wharf. STA Balraj, an employee of Goldin Enterprise Pte Ltd, a contractor of the PSA, was deployed to check that all hatch covers to be lifted by the gantry crane operator were clear of people and foreign objects and safe to be lifted. He was the gantry crane operator's eyes on the ground and responsible for guiding the latter in lowering the Spreader twistlocks into the opening of the lifting sockets and for ensuring that the Spreader sits squarely on all the four lifting sockets. STA Balraj and Mr Wong each had a radio set, which enabled them to communicate with each other. After a container or hatch cover had been hoisted past the vessel's rails, it was WOS Nur Aleena's task to ensure that cargo operations were carried out safely at the wharf side.

7 At the material time, the plaintiffs deployed able-bodied seaman, Managbanag F Clemente ("AB Clemente") to monitor the lifting of the hatch cover from the vessel. He explained in a statement on 6 January 2009 that he had been deployed on deck to "observe and watch for possible damage to the hatch cover and also damage of [the] ship's superstructure".

8 Before the accident occurred, many containers and two hatch covers were lifted from the vessel without any mishap. At around 9.35 pm, STA Balraj, who was on the vessel, informed the crane operator, Mr Wong, through his radio set that their next task was to lift the hatch cover. The vessel's deck was well lit by floodlights. After the deck had been cleared of loose matter and the hatch cover cleats had been unfastened, Mr Wong lowered the Spreader to position it onto the hatch cover for its twistlocks to fit into the openings of the lifting sockets. This is a precise operation and it is not uncommon for a few attempts to be made before the twistlocks land properly within the openings of the casting sockets of a hatch cover.

9 The parties' position on what followed after the Spreader landed on the hatch cover differed. The plaintiffs asserted that AB Clemente stood with STA Balraj on top of the starboard side hatch cover during the lifting operation and asserted that the latter did not walk around the Spreader to check whether the Spreader twistlocks had properly engaged the hatch cover lifting sockets. On the other hand, the PSA contended that STA Balraj walked around the Spreader after it had landed on the hatch cover to check whether it was properly aligned with the lifting sockets and that AB Clemente, who followed STA Balraj, appeared to be conducting the same checks. The PSA added that

after confirming that all four corners of the Spreader had landed properly on the hatch cover, STA Balraj gave an "all ok" hand signal to Mr Wong to proceed with the lifting of the hatch cover. As the lighting system in the gantry crane cabin confirmed that the Spreader twistlocks had properly engaged the lifting sockets, Mr Wong started to lift the hatch cover.

10 According to the PSA, after the hatch cover had been lifted slightly above the vessel's deck, the lifting operation was paused as part of the safety measures. After **Mr Wong** observed that the hatch cover remained stable in its suspended position, he proceeded to lift it to a height of about 10 meters under the close supervision of STA Balraj. However, the hatch cover suddenly dropped down and landed diagonally on the wharf, with one side leaning on and damaging the gantry crane. Damage was also caused to a portion of the PSA's wharf at Berth 6, a gantry over-height frame and the gantry crane sea side sill beam and left-side portal beam.

11 After the accident, the PSA inspected the Spreader and its twistlocks. A piece of casting socket that was detached from the hatch cover was found attached to the Spreader's forward starboard twistlock. The detached casting socket was removed from the Spreader. In his preliminary report dated 8 January 2009, just two days after the accident, Mr Sio Beng Huat ("Mr Sio"), the surveyor appointed by the vessel's hull and machinery insurers, recommended a metallurgical examination of the detached lifting socket as well as the part of the hatch cover plate from where the lifting socket was ripped off because he was concerned that the lifting socket may have been defectively welded to the hatch cover. However, no action was taken by the plaintiffs to implement his recommendation.

12 As for the Spreader, no cracks or other defects were found on it or its twistlocks. Functional tests were conducted and as the Spreader was found to be in good order, it was re-deployed for cargo operations.

13 The plaintiffs wanted the PSA to pay for the cost of repairing the hatch cover, which amounted to $203,548, as well as the cost of surveys. When the PSA denied liability for these expenses, the plaintiffs instituted the present proceedings and sought damages as well as an indemnity for claims and losses suffered by third parties as a result of the accident.

14 Apart from denying liability, the PSA filed a counterclaim against the plaintiffs for damage to its property.

The expert witnesses

15 The plaintiffs called two expert witnesses. The first expert witness, Dr Jonathan Sykes ("Dr Sykes"), is the director of the Singapore office of Dr JH Burgoyne & Partners (International) Ltd, a firm of consulting forensic scientists and engineers. The second expert witness, Captain Jonathan Lee Lai Chuan ("Capt Lee"), is a marine surveyor at GL Noble Denton, which provides consultancy services for, *inter alia*, maritime casualties.

16 The PSA called one expert witness, namely Captain Nicholas Edward Haslam ("Capt Haslam"), a Master Mariner and the managing director of London Offshore Consultants Pte Ltd, a company that provides marine surveying and consultancy services to the shipping industry.

Whether the plaintiffs are entitled to sue the PSA

17 The PSA contended that the first and second plaintiffs were not entitled to sue it because they did not prove that they were the owner and bareboat charterer of the vessel respectively.

18 In *Leigh & Sillavan Ltd v Aliakmon Shipping Co Ltd* [1986] 1 AC 785, the House of Lords held that it has long been established that for a plaintiff to have a right to claim in negligence for loss or damage to property, he must have had either the legal ownership or a possessory title to that property when the loss or damage occurred. The first and second plaintiffs averred in paragraphs 1 and 2 of their Statement of Claim that they were and are the owners and bareboat charterers of the vessel respectively at the material time. When the PSA filed its defence more than 2 years ago in May 2009, it made it clear that these averments were not admitted. As such, the plaintiffs had to prove that they were entitled to commence the present proceedings against the PSA.

19 Considering that the question of title to sue had been an issue since 2009, it was surprising that the plaintiffs did not furnish the court with the certificate of registration, which is regarded as *prima facie* evidence of ownership: see ***The Opal 3 ex Kuchino*** [1992] 2 SLR(R) 231 and *The Ivanovo* [2001] 1 SLR(R) 263. Neither did they adduce evidence from any of their own staff with personal knowledge of the ownership and bareboat charter of the vessel. Instead, they chose to rely on the evidence of Mr Frank Wilhelm Heidrich ("Mr Heidrich"), who was merely the technical director of the technical managers of the vessel, Ocean Shipmanagement GmbH.

20 The plaintiffs, relying on *Jet Holding v Cooper Cameron* [2005] 4 SLR(R) 417 ("*Jet Holding*"), asserted that Mr Heidrich had sufficient "involvement" with the vessel to have personal knowledge of the ownership of the vessel. They pointed out that Mr Heidrich had testified that he had been "working" for the first and second plaintiffs since 2007. Their reliance on *Jet Holding* was totally misplaced. In *Jet Holding*, the first plaintiff purchased a drill ship from the second plaintiff, who then became the bareboat charterer of that ship. The person who testified on ownership of the ship and the bareboat charter was a Mr Perret, who was the director and executive vice-president of the bareboat charterer as well as the executive vice-president of the shipowner. He was personally involved in the purchase by the second plaintiff of the ship from the Sheriff of the Supreme Court of Singapore and in the sale and lease-back arrangements between the first and second plaintiffs. He was also closely involved with the commercial aspects of the operation of the ship. In these circumstances, it was understandable that Belinda Ang J held that Mr Perret's involvement in the two companies was sufficient to place him in a position to testify generally on ownership of the drill ship and the bareboat charter.

21 In contrast, in the present case, Mr Heidrich is not an employee of either of the plaintiffs. He is employed by Ocean Shipmanagement GmbH, the vessel's technical managers and Document of Compliance ("DOC") company, whose role was rather limited. In essence, a DOC is issued by the flag state for a vessel which complies with the International Safety Management Code, which provides for an international standard for the safe management and operation of ships and for pollution prevention. As for technical managers, their role is to take care of matters relating to the day-to-day running of the vessel, such as crewing and maintenance. In his affidavit of evidence-in-chief ("AEIC"), Mr Heidrich did not exhibit any document relating to either ownership or a bareboat charter and he did not mention anything about the bareboat charter. When cross-examined, he said that he did not have to exhibit any documents relating to ownership of the vessel in his AEIC because he was "simply a technical manager". Any comparison of the position of Mr Heidrich with that of Mr Perret in *Jet Holding* is unwarranted and more was required to prove the plaintiffs' right to sue the PSA.

22 The plaintiffs next contended that the copies of the Certificate of Registry and Certificate of Bareboat Registry found in their Supplementary List of Documents filed on 3 October 2011 proved their title to sue. They asserted that all the documents in this list are deemed to have been admitted pursuant to O 27 r 4 of the Rules of Court since the PSA did not file any Notice of Non-Admission. This was absolutely incorrect as the PSA filed a Notice of Non-Admission with respect to these documents. It followed that the authenticity of the said documents was challenged and these

documents were not admitted as evidence. As the plaintiffs took no steps to prove the authenticity of the copies of the certificates in question at the trial, they are now in no position to rely on them as proof of their title to sue.

23 The plaintiffs also sought to rely on the vessel's Continuous Sypnosis Records ("CSR"), which are compliance documents required to comply with the International Convention for the Safety of Life at Sea. A day before the trial commenced, the plaintiffs filed a Supplementary List of documents and affidavit verifying the said list, which included a number of documents described as "Continuous Sypnosis Record Nos (1) to (5)". When the trial commenced on 3 October 2011, the plaintiffs filed another Supplementary List and affidavit verifying this List, which included five documents described as "Continuous Sypnosis Record Nos (6) to (10)". The plaintiffs then sought leave to admit the documents enumerated in the two said Supplementary Lists as *secondary* evidence on the basis that the originals were no longer in the possession, custody and control of the plaintiffs. The PSA vigorously opposed the application, which was heard in chambers on 5 October 2011. In the face of the PSA's objections, the plaintiffs withdrew their application. The trial resumed and Mr Heidrich was cross-examined.

24 On 5 October 2011, the plaintiffs' solicitors went to the office of the PSA's solicitors at around 5.30 pm to 6 pm and furnished for the latter's inspection "originals" of the documents listed in their Supplementary List of Documents dated 2 and 3 October 2011. The PSA's solicitors did not accept the authenticity of these documents and filed a Notice of Non-Admission of Documents pursuant to O 27 r 4(2) of the Rules of Court.

25 On 6 October 2011, the plaintiffs sought to admit copies of the CSR as part of the Agreed Bundle of Documents and invited the PSA's counsel, Mr Toh Kian Sing SC ("Mr Toh"), to cross-examine Mr Heidrich, who had already been released as a witness, on the documents in question. However, Mr Toh retorted that the plaintiffs had failed to prove that the requirements for adducing secondary evidence under s 66 of the Evidence Act had been complied with. He added that as Mr Heidrich had been released as a witness, the plaintiffs would have to apply to have him recalled if he was to give any evidence in relation to the CSR. The plaintiffs closed their case without recalling Mr Heidrich to testify. It followed that no evidence was led on the documents in question.

26 After the first tranche of the trial, the plaintiffs tried by way of Summons No 5870 of 2011 when the trial resumed in January 2012 to furnish for the court's inspection what they claimed were the vessel's CSR. According to them, these records showed that the first and second plaintiffs were the owners of the vessel and bareboat charterers respectively at the time of the accident. The PSA objected to the plaintiffs' application and submitted that this was an attempt by the plaintiffs to adduce evidence to substantiate their case *after* they had already closed their case in the earlier tranche of the trial. Mr Toh pointed out there was no reason why the plaintiffs could not have tendered original copies of the CSR to the court during the first tranche of the trial as the vessel was in Singapore waters at that time.

27 The plaintiffs, who pointed out that the documents in question were not included in the Agreed Bundle because the PSA had refused to accept their authenticity, relied on *The Shravan* [1999] 2 SLR(R) 713 for the proposition that the court can rely on documents contained in a plaintiff's bundle of documents. However, this was not what was decided in *The Shravan*. In that case, one of the issues was whether the plaintiff, who claimed to be the holder of a bill of lading, was the holder of the same when the action was commenced. Chao Hick Tin J pointed out (at [11]) that the plaintiff's own bundle of documents contained a letter from the sellers of the cargo to the plaintiff, which suggested that the latter could not have been in possession of the bill of lading at the date of the writ. He explained that as this letter was included in the plaintiff's own bundle, it may be assumed

that the plaintiff had received the said letter. It was under these circumstances that Chao J was not satisfied that the plaintiff had shown that they were in possession of the bill of lading at the commencement of the writ. The position in that case is totally different from the present case, where the plaintiffs tried to rely on documents in their own bundle without having proven the authenticity of the said documents. This cannot be countenanced.

28 In any case, the plaintiffs did not establish the authenticity of the CSR during the second tranche of the trial. They argued that no one had to prove the contents of the CSR because these are public documents. However, what cannot be overlooked was that no one who had personal knowledge of the authenticity of the documents filed an affidavit affirming that the documents presented to the court were indeed originals. Instead, one of the plaintiffs' lawyers, Mr Syed Isa, who had no personal knowledge of the authenticity of the documents, filed an affidavit to assert that on the basis of instructions received from his clients, the CSR were authentic. This was unsatisfactory as O 41 r 5 of the Rules of Court makes it clear that an affidavit may contain "only such facts as the deponent is able of his own knowledge to prove". Apart from this, some of the copies of the CSR exhibited in Mr Syed Isa's affidavit did not bear the signature of vessel's master whereas the purported originals of the CSR shown to the court had been signed by the master. The PSA pointed out that such discrepancies underscored the point that it would be risky to regard the documents in question as originals, and especially so when the master had not deposed an affidavit to establish that he had signed the documents bearing his signature. Subsequently, Mr Syed Isa, who had no personal knowledge of the discrepancies, filed an affidavit on 13 January 2012 to explain that based on his clients' instructions, the copies of the CSR exhibited in his AEIC were copies of documents that had not been handed over to the master for his signature. The PSA rightly pointed out that as no one testified on the authenticity of the CSR, its counsel was denied the opportunity to test the claim of authenticity of the CSR by cross-examination. I accept that there was insufficient evidence to prove the authenticity of the CSR.

29 The plaintiffs next asserted that their Sea-Web searches were *prima facie* evidence of ownership of the vessel by the first plaintiff. They relied on *The Andres Bonifacio* [1991] 1 SLR(R) 523 and *The Kapitan Temkin* [1998] 2 SLR(R) 537. However, these cases concerned entries in the Lloyd's Register and not Sea-Web search results. In any case, as the PSA disputed the authenticity of the plaintiffs' Sea-Web search results and filed a Notice of Non-Admission of Documents, the plaintiffs' witnesses should have but did not introduce the Sea-Web search results as evidence during the trial. Furthermore, as these search results were retrieved from computers, it was regrettable that the plaintiffs took no steps to establish that the requirements of s 35 of the Evidence Act in relation to proof of computer outputs were met.

30 The plaintiffs, who relied on *Zheng Yu Shan v Lian Beng Construction (1988) Pte Ltd* [2009] 2 SLR(R) 587, asserted that the court ought to take judicial notice of the their Sea-Web search results. In that case, the Court of Appeal pointed out that before a question of judicial notice arises, the fact in question must be certain and considered by all to be factually incontrovertible. The Court added (at [33]) that there is no "licence for counsel to presumptuously (or, one might even say, optimistically) rely on the doctrine of judicial notice to fill up evidential gaps in their cases". A similar approach was adopted in a more recent case, *City Chain Stores (S) Pte Ltd v Louis Vuitton Malletier* [2010] 1 SLR 382, where the Court of Appeal noted (at [82]) that "before taking judicial notice of any fact, the court should carefully consider whether that fact is of such an unassailable character" and that any doubt as to the public notoriety of any fact which is alleged to be judicially noticeable ought, as a general rule, to be resolved against the party seeking to rely on that fact.

31 Sea-Web search results on ownership of a vessel are not unassailable. In fact, even entries in the Lloyd's Register have been successfully challenged. In *The Kapitan Temkin*, GP Selvam J pointed

out (at [7]) that an entry in the Lloyd's Registry of Shipping was merely a good "starting point" and in *The Andres Bonifacio*, Karthigesu J stated (at [24]) that while this Registry provides ready information as to the ownership of vessels, "total reliance cannot be placed on the information it contains". Furthermore, in *The Saudi Prince* [1982] 2 Lloyd's Rep, 255, 257, Sheen J observed that the Lloyd's Register is "not infallible" even though it is a very useful guide for those who wish to find out about the identity of the owners of a ship. Not surprisingly, the plaintiffs were unable to cite any case where the court has taken judicial notice of the Lloyd's Register or Sea-Web searches when considering the question of ownership of vessels. I thus find that there is no basis for this court to take judicial notice of the Sea-Search results submitted by the plaintiffs and that the Sea-Search results did not prove the plaintiffs' entitlement to sue the PSA.

32 As the first and second plaintiffs failed to prove that they were the owner and demise charterer of the vessel respectively at the material time, their claim against the PSA is dismissed.

The law on negligence

33 Although I have found that the plaintiffs did not prove that they were entitled to sue the PSA for negligence, I will, for the sake of completeness, consider the position had they been entitled to do so.

34 To succeed in their claim in negligence against the PSA, the plaintiffs must establish that the latter owed them a duty of care, that the latter breached that duty and that the breach caused them damage. In *Spandeck Engineering (S) Pte Ltd v Defence Science & Technology Agency* [2007] 4 SLR(R) 100 ("*Spandeck*"), the Court of Appeal explained (at [21]):

> It is trite law that, in order to succeed in a claim under the tort of negligence, a claimant has to establish that (a) the defendant owes the claimant a duty of care; (b) the defendant has breached that duty of care by acting (or omitting to act) below the standard of care required of it; (c) the defendant's breach has caused the claimant damage; (d) the claimant's losses arising from the defendant's breach are not too remote; and (e) such losses can be adequately proved and quantified: see, for example, *Clerk & Lindsell on Torts* (Sweet & Maxwell, 19th Ed, 2006) at para 8-04.

35 In *Spandeck*, the Court of Appeal pointed out (at [73]) that a coherent and workable test to determine the existence of a duty of care for claims of negligence can be "fashioned out of the basic two-stage test premised on proximity and policy considerations, if its application is preceded by a preliminary requirement of *factual* forseeability". What matters is the closeness of the relationship between the parties, including physical, circumstantial and causal proximity, supported by the twin criteria of voluntary assumption of responsibility and reliance. If a positive answer to the threshold question of factual foreseeability and the first stage of proximity was assumed, a *prima facie* duty of care arose.

36 In this case, the vessel berthed at the PSA wharf for cargo operations. As such, this is a situation where it was foreseeable that negligence on the part of the PSA or the plaintiffs could result in damage to the other party's property. As such, they owed a duty of care to each other. There are no policy considerations to negate the duty of care imposed on the parties with regard to the lifting operations.

37 The plaintiffs have the burden of proving on a balance of probabilities that the PSA breached its duty of care and that this breach was the cause of the accident. In relation to causation, in *Sunny Metal & Engineering Pte Ltd v Ng Khim Ming Eric* [2007] 3 SLR(R) 782, the Court of Appeal explained

(at [52]-[53]):

> 52 The first broad inquiry involves causation, which, as alluded to earlier, is in turn made up of causation in fact and causation in law. Causation in fact is concerned with the question of whether the relation between the defendant's breach of duty and the claimant's damage is one of cause and effect in accordance with scientific or objective notions of physical sequence. It is concerned with establishing the *physical connection* between the defendant's wrong and the claimant's damage. The universally accepted test in this regard is the "but for" test, which we will elaborate on later.
>
> 53 However, satisfying the "but for" test is by no means a sufficient condition because the all important "causation in law" test must be satisfied as well. The reason for this is that to adopt the "but for" test without limit would lead to absurd results…. Consider that a mother gives birth to a son who, when he grows up, commits murder. Adopting the question of factual causation, it is clear that if the mother had not decided to have a child in the first place, the murder would never have happened; the "but for" test is amply satisfied. She is thus a cause in fact of the murder by virtue of a physical sequence that is unbroken by scientific and objective notions of logic. Yet, it is equally true that the law regards the mother as bearing no responsibility for the murder on account of lack of negligence or other tortious activity on her part; it is the *law* which removes her from being a cause of the murder. This is causation *in law*. The rationale is to prevent indeterminate liability resulting from causation in fact alone….
>
> [emphasis in original]

Whether the PSA breached its duty of care

38 The plaintiffs accepted that the appropriate standard of care for the hatch cover lifting operation was that set out in the PSA's Standard Operating Procedure ("SOP") as well as in the guidelines and instructions given to the crane operator, the STA and the WOS during their on-the-job training. They contended that the accident occurred as a result of the following sequence of events:

> (i) the Spreader was misaligned with the lifting sockets of the hatch cover when the crane operator lowered it heavily onto the hatch cover during the lifting operation;
>
> (ii) the misalignment was such that only the forward twistlocks were secured inside the forward lifting sockets whilst the aft twistlocks were displaced outside the aft lifting sockets;
>
> (iii) STA Balraj failed to check whether or not the Spreader was properly connected to the hatch cover before signalling to the crane operator to lift the hatch cover;
>
> (iv) the hatch cover was therefore lifted in circumstances where the aft twistlocks were precariously connected only to the underside of the outer flange of the aft lifting sockets; and
>
> (v) the hatch cover was lifted in that condition to a height of about 10 metres and the crane operator then proceeded to trolley the hatch cover laterally towards the wharf. It was during this time that the aft twistlocks slipped off the underside of the aft lifting sockets causing the hatch cover to drop.

39 To establish negligence on the PSA's part, the plaintiffs pleaded a very long list of particulars of negligence, which included the following rather serious allegations against the PSA in paras 17(c), (d), (e), (g), (h), (i) and (j) of the Statement of Claim:

17(c) Failure to provide proper/sufficient signalmen and/or to provide sufficient assistance to the handler of the [gantry crane] to, amongst others, check if the gantry crane spreader was properly and/or safely locked/secured into the twistlock casting sockets of the subject hatch cover before lifting off the same;

(d) Failure to provide proper training to and/or supervision [of] the handler of the [gantry crane] to, amongst others, check if the gantry crane Spreader was properly and/or safely locked/secured into the twistlock casting sockets of the subject hatch cover before lifting off the same;

(e) Failure to properly equip the [gantry crane] with sufficient alarm systems to detect and alert the handler of the [gantry crane] in good time of situations when any of the twist locks of the ... Spreader ... fail to properly lock and/secure into the twist lock casting sockets of a hatch cover (including that of the subject hatch cover);

(g) Failure to provide a safe working system for their employees/servants agents (including the handler of the [gantry crane]) when conducting cargo loading/discharge operations on board the APL SOKHNA at the material time;

(h) Failure to ensure that the [crane] was in good working order and condition at the material time;

(i) Failure to properly maintain the [gantry crane]; and

(j) Failure to provide proper instructions/guidelines to the handler of the [gantry crane] and their other servants/agents involved in the loading/discharge operations at the material time.

40 On the first day of the trial, the plaintiffs abandoned the above-mentioned allegations and sought leave to amend their Statement of Claim. Although leave was granted to them to amend para 17 of their Statement of Claim, they must bear the costs relating to the abandonment of so many of their particulars of negligence. After all, the PSA had filed numerous AEICs to refute the abandoned allegations.

41 In para 17 of their amended Statement of Claim, the plaintiffs pleaded the following allegations of negligence on the PSA's part:

17(a) Failure of the handler of the [gantry crane] to operate [the crane] in a safe manner and in accordance with good industry practice;

(b) Failure to carry out proper supervision of the handler of [the crane] during cargo loading/discharge operations;

(c) Failure to provide safety guidelines to the handler of [the crane] to, amongst others, check if gantry crane spreader was properly and/or safely locked/secured into the twist lock casting sockets of the subject Hatch Cover before lifting off the same;

(d) Failure to ensure that the gantry crane spreader was properly aligned and/or correctly positioned over the four twist lock casting sockets of the subject Hatch Cover before attempting to press the "lock" button of the gantry spreader twist locks; and

(e) Failure to exercise reasonable and/or proper care over the subject Hatch Cover causing

damage to the same.

42 The plaintiffs offered only *one* explanation on how the accident occurred. When cross-examined, Dr Sykes confirmed that there was nothing in his AEIC on how the accident could have occurred if all the lifting sockets had been properly engaged by the corresponding Spreader twistlocks. It follows that the plaintiffs' case on negligence hinged on whether their sole explanation for the cause of the accident was substantiated.

43 The PSA contended that the plaintiffs' theory that the Spreader twistlocks did not properly engage all four lifting sockets of the hatch cover was fanciful and wholly unsubstantiated by the evidence. It pointed out that between 2008 to 2010, more than 80 million containers and countless hatch covers were lifted by its gantry cranes without a similar mishap. It added that it cannot be ruled out that the accident was caused by a defect in the lifting sockets of the hatch cover.

Plaintiffs' theory inconsistent with eye-witness accounts of accident

44 The plaintiffs faced many hurdles in proving their hypothesis that the hatch cover fell because the Spreader aft twistlocks did not properly engage its aft lifting sockets when it was lifted by Mr Wong. To begin with, this hypothesis was totally inconsistent with eye-witness accounts.

Allegation that Mr Wong was negligent

45 Having abandoned their allegation that the gantry crane was not properly maintained or was not in good working order, the plaintiffs pointed their fingers at the crane operator, Mr Wong. They made two allegations against him. The first was that he negligently landed the Spreader heavily on the hatch cover before it finally rested on the hatch cover and this caused the aft twistlocks of the Spreader to become misaligned to the portside of the two aft lifting sockets of the hatch cover whilst the two forward twistlocks were inside the forward lifting sockets. The second allegation was that he failed to comply with the PSA's SOP for the lifting of the hatch cover, which required him to follow the so-called "3-step hoist" when lifting a hatch cover.

The alleged misalignment

46 The alleged misalignment of the Spreader by Mr Wong was a key element in the plaintiffs' explanation of how the accident occurred. If, as the plaintiffs contended, the aft of the Spreader was misaligned to the port-side by 150mm, this would have caused the entire port-side aft lifting socket to be exposed. Capt Haslam pointed out that if the Spreader had sat in the manner claimed by the plaintiffs' experts, it would have been at an angle of 1.29 degrees from the fore and aft plane and it would have shifted at its aft end by 136mm, which is a considerable displacement. In such a case, the starboard aft lifting socket would have been clearly visible and someone watching the hatch cover operation would have been able to spot the misalignment regardless of whether it was lifted during daytime or at night. After all, there was a stark contrast in colours between the hatch cover surface, which was grey, the lifting sockets, which were green, and the Spreader, which was yellow.

47 The plaintiffs' sole eye-witness, AB Clemente, claimed that he heard two to three strong slams and loud bangs before the Spreader finally rested on the hatch cover and that he was worried that the hatch cover might have been damaged. As he testified that he was the vessel's duty officer's "eyes on the deck" to ensure that there was no damage to the vessel, it was rather telling that in his three statements given shortly after the accident and in his AEIC, he did not mention that the Spreader had been misaligned in any way after the loud bangs or that any of the Spreader twistlocks had not properly engaged the corresponding hatch cover lifting sockets.

48 When cross-examined, AB Clemente confirmed that from where he claimed to have been standing during the lifting operation, he would have been able to see an exposed lifting socket. He testified as follows:

> Q [D]o you agree with me that if the corner casting, if the lifting socket was exposed, you would be able to see it from where you were standing? Given that the entire deck was well lit.
>
> A Yes, your Honour, I see, I will see the Spreader.
>
> Q Mr Clemente, I wasn't talking about the Spreader, *I was talking about the corner casting. If it had been exposed the way that you see in tab 3, from where you were standing, you would be able to see the corner casting?*
>
> A Yes, your Honour, *I can ... see the corner casting.*
>
> [emphasis added]

49 In their reply submissions, the plaintiffs claimed that AB Clemente was answering a hypothetical question and as he had not seen the misalignment, his answer does not prove that he had actually seen the exposed lifting socket. However, what mattered was that AB Clemente confirmed that despite the loud bangs that he heard, the Spreader landed "properly" on the corner castings of the hatch cover. The relevant part of the proceedings is as follows:

> Q *So you noticed that the Spreader in fact landed on the corner castings of the hatch cover, correct?*
>
> A *Yes, your Honour.*
>
> Q *And it landed properly, correct?*
>
> A According to my – *yea, your Honour*.
>
> [emphasis added]

50 The implication of AB Clemente's testimony that the Spreader landed properly was that the Spreader was not misaligned after it landed. When cross-examined, Dr Sykes agreed that AB Clemente would not have regarded the Spreader as having landed properly on the hatch cover if the aft lifting sockets had been exposed.

51 Apart from confirming that the Spreader had landed properly on the hatch cover, AB Clement also testified that he did not notice anything unusual while the hatch cover was being lifted. As he claimed that he was observing the hatch cover while it was being lifted, this lent weight to his evidence that the Spreader had landed properly on the hatch cover. In this context, the PSA's expert witness, Capt Haslam testified:

> I am convinced in saying to the court that [AB Clemente] must --- if [the Spreader] was out of alignment, he must have seen that, and to raise the alarm doesn't take seconds, it's as short as shouting "Stop" to the STA was standing adjacent to it. It doesn't take seconds, it takes a split second to see it and a split second to responded, and that response can simply have been "Stop".

52 It is noteworthy that Dr Sykes readily conceded that if AB Clemente had said that the Spreader had landed properly and that he could have seen the allegedly exposed lifting socket from where he stood if it had been exposed, the latter's evidence would be inconsistent with the plaintiffs' theory that the hatch cover fell because the aft Spreader twistlocks had not properly engaged the aft lifting sockets of the hatch cover.

53 AB Clemente's testimony that the Spreader had landed properly on the hatch cover was corroborated by STA Balraj, who impressed me as a truthful witness. He testified that he walked around that Spreader after it landed to conduct checks and that he found that the Spreader was "properly fixed" and "sitting in the correct place" and that all the locking levers were properly locked. He testified that it was only after checking that everything was all right that he then gave an "all ok" hand signal to Mr Wong to proceed with the lifting of the hatch cover. Despite intense cross-examination, his evidence was consistent with what he had stated in his AEIC.

54 It must also be borne in mind that there were indicator lamps in the gantry crane cabin to ensure that a hatch cover is not lifted if the Spreader's twistlocks did not properly engage a hatch cover's lifting sockets. Mr Ang Chew Peng, the engineering manager of the PSA's Brani terminal, explained the working of the lighting system in his AEIC at paras 16-20 as follows:

> 16 When the Spreader lands on a hatch cover ... such that all the twistlocks properly engage the hatch cover or container casting sockets (ie all the twistlocks enter the openings of the corresponding casting sockets), the TOC Pins will land on the top of the casting sockets. The TOC Pins are spring-loaded. As the weight of the Spreader bears on the TOC Pins, the spring would be compressed causing sensors within to be activated, resulting in the yellow "Spreader Landed" and blue "Spreader Hold" lamps lighting up in the spreader indication box in the Gantry Crane cabin....
>
> 17 The activation of the "Spreader Landed" and "Spreader Hold" lamps in the cabin would inform the Crane Operator that the Spreader twistlocks have all properly engaged the corresponding casting sockets of the hatch cover ....
>
> 18 However, if any of the twistlocks does not engage the hatch cover or container casting sockets properly (ie if any of the twistlock(s) did not enter the opening of the casting socket), the "Spreader Landed" and "Spreader Hold" lamps in the Gantry Crane cabin would not be activated. This would indicate to the crane operator that the Spreader has not landed properly on the hatch cover... casting sockets (ie the Spreader twistlocks have not entered the casting socket openings). The crane operator would then have to re-engage the spreader twistlocks into the corresponding casting sockets. Therefore, the lamps in the spreader indication box act as an indicator to alert the crane operator if any of the twistlocks fails to properly engage the casting sockets.
>
> 19 When all spreader twistlocks have properly entered the corresponding casting socket openings and the "Spreader Landed" and "Spreader Hold" lamps in the Gantry Crane cabin are lit, the Spreader twistlocks may be locked by the crane operator by pressing the "Twistlocks Close" pushbutton on the control panel....
>
> 20 When the crane operator presses the "Twistlocks Close" pushbutton, all the Spreader twistlocks in the casting sockets rotate for an angle of 90 [degrees] and are thereby securely locked within the casting socket. Hence, when the Spreader is hoisted, it lifts the [hatch cover] by the casting sockets of the hatch cover ... [A]t all times, the Spreader twistlocks are either all in the locked position or remain in the unlocked position.

55 Mr Wong confirmed that the lighting system in the crane operator's cabin indicated that all the Spreader twistlocks had engaged the corresponding lifting sockets. He explained in his AEIC at paras 18 – 19 why he believed that the twistlocks had properly engaged the lifting sockets:

> 18 I knew that the spreader twistlocks were sitting properly within the casting sockets of the Hatch Cover because the "Spreader Landed" and "Spreader Hold" lamps in the indicator panel came on. I then pressed the "Twistlock Lock" pushbutton to "lock" the Spreader twistlocks within the opening of the casting sockets. The "Twistlock Lock" lamps then came on immediately.
>
> 19 After the spreader had landed safely on the casting sockets, the STA told me over the radio to "stand-by" while he physically checked that all the spreader twistlocks had properly engaged the casting sockets. I saw the STA walking around the Spreader and checking the four corners of the Spreader.

56 Mr Wong, who holds an Institute of Technical Education ("ITE") certificate in Quay Crane Operations, received 420 hours of structured full-time training, which involved both classroom and on-the-job training. The methods of work, guidelines and procedures for safe working practices were taught by experienced mentors. He had worked for 8 months as a crane operator without any mishap. I found him to be a truthful witness and I believe his evidence that he had followed the SOP for lifting the hatch cover and that the lighting panel in the gantry crane cabin showed that it was safe to lift the hatch cover. As such, I find that it was not established that he had negligently handled the Spreader when he lifted the hatch cover.

Whether Mr Wong followed the 3-step hoist

57 The plaintiffs asserted that Mr Wong acted negligently by not following the SOP for the lifting of the hatch cover. The so-called "3-step hoist" procedure for lifting a hatch cover requires a crane operator to do the following:-

(i) hoist the hatch cover a short distance above the deck, after which hoisting is suspended;

(ii) stabilise the hatch cover and tighten the wire ropes as part of a safety manoeuvre; and

(iii) hoist the hatch cover slowly after the ropes have been tightened until it passes over the vessel's rails.

58 The plaintiffs furnished no expert evidence to support their allegation that the 3-step hoist was not followed. They merely relied on the testimony of AB Clemente, who claimed that Mr Wong lifted the hatch cover to a height of about 10 metres in a *single* step within seconds after the Spreader landed on the hatch cover.

59 Mr Wong testified that he had followed the 3-step hoist procedure when he lifted the hatch cover. He stated:

> After the Hatch Cover had been hoisted to a short height above the deck, I paused the hoisting operation to tighten the wire ropes and to stabilize the hatch cover as part of the safety step. I observed that the Hatch Cover remained stable in its suspended position and the "Spreader Hold" and "Twistlock Lock" lamps in the cabin remained on. I also saw the STA and the Vessel's crew observing the hoisting operation from their positions at the aft of bay 10. Thereafter, I continued to hoist the Hatch Cover until it was approximately near the Vessel's railings.

60 Mr Wong's evidence that he had followed the 3-step hoist procedure was corroborated by STA Balraj.

61 AB Clemente's evidence is not believable. To begin with, he deposed that he saw STA Balraj standing next to him and that the latter was communicating with the crane operator "during the lifting process". If the hatch cover was lifted in seconds, there would be no time for STA Balraj to talk to the crane operator during the lifting process. Furthermore, the hatch cover is a large object that measures 12 metres by 10 metres and weighs around 30 tonnes. It was hoisted by wire ropes and would invariable swing when lifted from the rest position. The plaintiffs' own expert witness, Capt Lee, explained in his report, which was annexed to his AEIC as follows:

> Once lifted there is always a possibility of the hatch cover swaying slightly from side to side, the momentum of which could easily (if it contacts a person) cause him to fall.

62 AB Clemente, who testified that he did not notice anything unusual while the hatch cover was being lifted, did not mention the swaying of the hatch cover in his AEIC. In contrast, Mr Wong, who was fully aware of this swaying motion, knew that the hatch cover could not be lifted quickly in a single step to the height suggested by AB Clemente. He testified as follows when he was re-examined:

> Q You told us that for this particular hatch cover..., you lifted it --- and I'm using your own words – slowly, slowly, until it's stable already, then you hoisted it up again?
>
> A Yes.
>
> ...
>
> Q .... Can you tell us why did you have to do it slowly and allow it to stabilise before hoisting it up again?
>
> A *Because the hatch cover is very heavy and it will actually swing a bit, sway a bit, so I got to hoist it up very slowly and [stabilise] the hatch cover.*
>
> [emphasis added]

63 The PSA furnished adequate evidence that Mr Wong and STA Balraj had been well trained and that sufficient safety guidelines had been given to them for hatch cover lifting operations. I do not believe, in the absence of acceptable evidence, that Mr Wong would suddenly go on a frolic of his own and ignore the safety measures by not complying with the procedure for a 3-step hoist, and especially so when he knew that the hatch cover would sway while being lifted and could cause massive damage if dropped. I thus find that Mr Wong had followed the 3-step hoist when he lifted the hatch cover.

Whether STA Balraj walked around the Spreader

64 The plaintiffs alleged that STA Balraj was negligent as he did not walk around the Spreader to conduct the requisite checks after it rested on the hatch cover. However, STA Balraj testified that he walked around the Spreader after it landed to check that the Spreader twistlocks were properly connected to the lifting sockets. He explained in his AEIC at paras 6 and 7 as follows:

> 6 The Crane Operator began to lower the spreader and under my guidance, the Crane Operator

landed the spreader onto the portside hatch-cover lifting sockets. At this point, I instructed the Crane Operator to stand-by while I conducted my checks.

7 From my position, I saw that the aft side of the spreader was landed properly on the lifting sockets. I then walked towards the forward side to check and also saw that the forward side of the spreader was also landed properly. *As I was going round checking on all four sides of the hatch-cover and the spreader, one of the [vessel's] crew was following me and he appeared to be checking the same things that I was checking.* After ensuring that there was no exception, I gave the "all-ok" hand signal to the Crane Operator. I then again took up position on the walkway at the aft side of the vessel....

[emphasis added]

65 The crane operator, Mr Wong, testified that he saw STA Balraj walking around the Spreader to conduct checks on all the four corners of the Spreader after it rested on the hatch cover. He added that he had been taught that it was necessary for him to be satisfied that the STA had walked around the Spreader for the requisite checks to be made before he can proceed to lift a hatch cover. In his AEIC, he stated at paras 19 and 21 as follows:

19 After the spreader had landed safely on the casting sockets, the STA told me over the radio to "stand-by" while he physically checked that all the spreader twistlocks had properly engaged the casting sockets. *I saw the STA walking around the spreader and checking the four corners of the spreader....*

21 After checking *all four corners of the spreader*, the STA gave the "all okay" hand signal and confirmed the same over the radio.

[emphasis added]

66 When cross-examined, Mr Wong testified that he saw STA Balraj walk towards the Spreader from the starboard side, after which the latter walked around the Spreader before giving him an "all ok" hand signal to begin to hoist the hatch cover.

67 Lifting a hatch cover is a dangerous operation and it is quite obvious that if a STA does not do his job properly, the hatch cover, weighing around 30 tonnes, could tumble down causing damage to the vessel and the PSA's facilities and kill or maim innocent personnel from the ship and shore. STA Balraj, who holds an ITE certificate, had 420 hours of training for his work and had worked at the PSA terminals for 5 years without any mishap before the accident. To carry out his task properly, he had to walk around the Spreader to conduct the requisite checks. I accept his evidence that he did this before the hatch cover was lifted.

68 The plaintiffs asserted that STA Balraj could not have walked around the Spreader as this was prohibited by the SOP. They laid emphasis on the words "Check to see that no people are on the hatch cover" in the said SOP. However, these words concerned the period when the crane operator is about to land the Spreader onto the hatch cover. There was nothing in the SOP that expressly prohibited STA Balraj or AB Clemente from going onto the hatch cover after the Spreader had already landed on the hatch cover to conduct the requisite checks.

69 The PSA pointed out that the guidelines issued to its personnel are not exhaustive and stressed that STA Balraj had been trained to walk around the Spreader while Mr Wong had been trained to lift hatch covers only after the STA had walked around the Spreader. When cross-examined on his

training by his mentors, Mr Wong said:

Q What did your mentors teach you?

A *Make sure the STA do the round check, make sure the STA walk round check.*

[emphasis added]

70 Mr Wong testified that even if the indicator lights in his cabin showed that the Spreader twistlocks had properly engaged the lifting sockets, he would not have lifted the hatch cover unless he was satisfied that STA Balraj had walked around the Spreader and given him the requisite "all ok" hand signal to lift. When cross-examined, he stated:

Q So Mr Wong, is it your position that every time you lift a hatch cover,... the STA must walk around the Spreader?

A Yes.

Q If he does not do that, you will not lift?

A Yes.

Q Why do you place such great importance on the STA walking around the Spreader when you have a system of lights ....?

A *Double confirm*, *So this is like additional safety precaution.*

[emphasis added]

71 I believe the evidence of STA Balraj and Mr Wong that a member of the crew accompanied STA Balraj when he walked around the Spreader. Mr Wong explained that from his gantry crane cabin, which gave him an unimpeded view of the entire hatch cover, he could see a member of the crew, who was holding a clipboard, accompany STA Balraj as he walked around the Spreader.

72 AB Clemente gave contradictory evidence as to whether he had walked around the Spreader. Although he claimed that he had not done so, he also testified as follows:

Q So you must, therefore, have walked from where you were standing, around the Spreader, after the Spreader had landed onto the hatch cover, to look at all four corner castings. That's the only way you could have checked; isn't it correct?

A Yes, your Honour....

73 AB Clemente also contradicted himself on where he was positioned during the lifting operation. Initially, he said that he had checked the cleats together with STA Balraj. However, he soon changed his evidence and claimed that STA Balraj remained on the starboard side hatch cover while he checked the hatch cover cleats. Subsequently, he said that STA Balraj first approached him when he was on the hatch cover. Finally, when it was put to him by Mr Toh that he could not have stood on the starboard hatch cover at the material time because four 40-feet containers occupied all the available space there, he agreed. Another version emerged during re-examination when AB Clemente claimed that he moved to the centre hatch cover after he had removed the hatch cover cleats and that STA Balraj was also standing on that centre cover before they both moved to the starboard

hatch cover, even though he had already conceded that he could not have been on the starboard hatch cover because all the available space on that cover had been taken up by four containers.

74 I had no doubt whatsoever that Mr Wong and STA Balraj were more reliable witnesses than AB Clemente and I find that STA Balraj walked around the Spreader to conduct the requisite checks before the hatch cover was lifted by Mr Wong. I also find that neither STA Balraj nor Mr Wong were negligent in carrying out their tasks in relation to the lifting of the hatch cover.

Whether AB Clemente's role was to monitor the lifting of the hatch cover

75 Considering that AB Clemente's AEIC and testimony during cross-examination was not to the plaintiffs' advantage, it was not surprising that they decided to distance themselves from his evidence by arguing that he was neither required nor qualified to monitor the lifting of the hatch cover. AB Clemente went so far as to claim that he did not witness the whole process and that he did not pay attention or concentrate during the hatch lifting operations.

76 The plaintiffs' contention that AB Clemente was only required to watch hatch cover operations "generally" cannot be taken seriously in view of the latter's evidence and the vessel's procedures regarding hatch cover lifting operations. In his AEIC, AB Clemente outlined his duties at the time of the accident as follows:

> Observing cargo operations in general and to record any damage caused by the gantry crane or the port stevedores to the Vessel during the same and to report such damage to the Duty Officer.

77 The plaintiffs' expert witness, Capt Lee, stated in his AEIC at para 16 that the scope of duties described by AB Clemente is typical of the duties of an able-bodied seaman or duty officer on board a container vessel during cargo operations. In fact, the vessel's technical manager, who had been rather concerned about damage to hatch covers, had written as follows to the captain and chief officer of the vessel to keep a close watch on hatch cover operations before the accident:

> As we have observed that on some vessels hatchcovers and their sealings are continually damaged within short time (even after drydock repairs on all covers) due to negligence of stevedores during cargo operations we would like to advise that during opening and closing of hatchcovers *one crewmember must be on site as witness during such operations.* Needless to say this is good seamanship anyway. *In case of any damage a stevedore damage report is to be arranged and presented to stevedores/agency ....*
>
> [emphasis added]

78 Mr Heidrich, who authored the above-mentioned circular, confirmed that it was issued because he wanted the vessel's crew to keep an eye on hatch covers during cargo operations. Crucially, the vessel's Operational Procedure and Contingency Plan ("Operational Procedure") required the crew to witness and *record* the connection of "the spreader to the lifting fittings of the hatch cover" in the log book. The relevant part of the Operational Procedure provides:

> Details of the following are required to be entered:
>
> 1 Hatch Opening/closing.
>
> 1.1 Opening:

- Open all hold down devices;
- *Connect the spreader to the lifting fittings*
- Check that there is no loose gear on the panel, which could fall down during operations.
- Manoeuvre the panel carefully and [lower] to a suitable position;
- Disconnect the spreader from the panel.

[emphasis added]

79 Capt Haslam testified that for the above-mentioned operational procedure to be effective, the connection of the Spreader to the lifting fittings should be entered contemporaneously in the appropriate vessel log book after a crew member of the vessel had actually witnessed the said connection. It follows from AB Clemente's admission that he was the "eyes on deck" for the purpose of the filling up of the vessel's logbook, that he was required to watch and report the connection of the "spreader to the lifting fittings of the hatch cover". After all, he also confirmed that no entry of any such connection can be made in the vessel's log book unless an able-bodied seaman reports the connection. He testified as follows:

Q What is the purpose of filling in the entry if nobody checks whether it is the correct entry or not?

A …. *[T]hey don't put an entry without AB ... to report it* ...

Q .... What do you mean by your last answer?

A ... [T]he chief officer or duty officer, *they [do not put entries into] the logbook without our reporting*...

Q So in other words, *Mr Clemente, you were the eyes on the deck in order for the chief officer to fill in the deck log, correct?*

A *Yes*, your Honour.

[emphasis added]

80 Significantly, AB Clemente also agreed that walking around the Spreader was the *only* way he could have conducted the necessary checks. He also conceded that in the interest of safety, he would want to consider any possible damage to the ship during cargo operations. When cross-examined, he testified:

Q ... When you say "safety first", what you meant to say is safety to the crew and to the ship, correct?

A Yes, your Honour.

Q And safety to your ship would mean that you would want to watch out for any possible damage to the ship during cargo operations, correct?

A Yes, your Honour.

81 It is also pertinent to note that the Chief Officer's Standing Order Nr 02/09 Watch Keeping In Port (Deck Crew) dated 25 March 2009, provided as follows:-

> HATCH COVER OPERATIONS
>
> The movements of the hatch covers must be performed in presence of the Duty Officer, or - one of his Watch Man (Ref. to Company Circular 026/2006). He is responsible to establish proper communication with stevedores/foreman and he only can give the permission to lift the hatch cover up or start loading on it ..." [emphasis added]

82 Furthermore, the Chief Officer's Standing Order Nr 03/09 (Cargo Operations) as at 19 July 2009 specifically stated as follows:

> *No Hatch-Covers movement must be left unattended* to ensure immediate detection of any damage to ship, cargo or improper handling of Hatch-Cover (ref. to OSM Circular 26/2006).
>
> [emphasis added]

83 The above-mentioned Standing Orders were applicable in July 2009, some six months after the accident. As such, the PSA asked the plaintiffs to furnish copies of the Standing Orders applicable at the time of the accident in January 2009. The plaintiffs did not furnish the requested documents and their solicitors responded as follows:-

> Our clients have instructed that their Vessel's standing orders are constantly being revised and improved. As a result, they may not have kept all their previous versions of their standing orders. This applies to the standing orders which had been issued at the time of the incident as well. In this regard, our clients only have in their records a few versions of their standing orders which were issued in 2005, 2006 and July 2009. These have been enclosed. Further, our clients have also provided their standing orders which were in force onboard their Vessel at present.

84 The PSA invited the court to make an adverse inference from the failure of the plaintiffs to furnish the court with the Standing Orders applicable at the time of the accident and assume that the same type of Standing Orders as those applicable in July 2009 must have been in force at the material time. In any case, although Capt Haslam was only given the Standing Orders applicable after the accident, he was able to infer from the other SMS documents, and particularly Company Circular OSM/26/2006, which was specifically referred to in the July 2009 Standing Orders, that the crew member on duty was required to witness the connection of the Spreader to the Hatch Cover. He explained at para 65 as follows:

> This Circular is dated 6 January 2006. The Circular was still referred to in the Chief Officer's Standing Orders as late as March 2011 It was also referred to in form F106 completed by the master of the Vessel on the day of the incident (assuming the reference to "029" in the form F106 should read "026"). *This indicates that the Circular has been in force continuously from 6 January 2006 to at least 25 March 2011. Therefore, the Circular clearly applied during the Vessel's call on 6 January 2009. Pursuant to the Circular, the Vessel's master or chief officer is required to place crew members on deck to "witness" the opening and closing of hatch covers. As such, I believe that the AB was deployed at bay 10 of the Vessel at the material time to ensure that the opening and closing of the Hatch Cover was performed safely.* I agree with the statement in the Circular that placing a crew member on deck to witness the opening and closing of hatch cover is good seamanship and this is consistent with industry practice

[emphasis added]

85 I thus accept the PSA's contention that the vessel's SMS documents, read as a whole, require her crew to closely monitor the hatch cover operations, including the proper engagement of the Spreader twistlocks into the hatch cover lifting sockets. I do not believe that AB Clemente, who has sailed for more than 3 years on container vessels, could not raise the alarm if any Spreader twistlock socket, which was coloured very differently from the Spreader and the deck, had been left outside a lifting socket before it was lifted. Capt Haslam explained the position in the following succinct words:

> I don't accept that even someone who is new to a container vessel would not see that there was something wrong. I don't care how experienced or inexperienced he is, if somebody saw something was wrong --- and that's what he is there for, to see if something was wrong or not --- would they just stand there and say nothing? I do not accept that that would ever, ever happen.
>
> We know that the AB was there to watch the operation because he says so, and in fact not only does he say so in his affidavit, he goes into some detail about the Spreader landing two or three times. From that, I can glean that he must have been watching the operation

86 AB Clemente's ability to recall so many details about the lifting of the hatch cover showed that he must have been paying attention to the movements of the Spreader at the material time. As such, it is significant that he did not mention in his three reports on the accident and in his AEIC that the Spreader was misaligned when it landed on the hatch cover. Furthermore, his evidence that the Spreader landed properly on the hatch cover, that he could have seen any misalignment from where he claimed to have stood during the hatch cover operations and that he had noticed nothing unusual when the hatch cover was lifted cannot be overlooked. While the plaintiffs claimed that AB Clemente's evidence must be viewed on the basis that he is not fluent in English and did not understand the questions posed during cross-examination on many occasions, all that needs to be said is that even if this is taken into account, his inconsistent evidence and other evidence that damaged the plaintiffs' case had nothing to do with his lack of understanding of the English language. I had the distinct impression that he had problems answering because he was trying so very hard to keep in line with the plaintiffs' case. There was nothing difficult about the questions relating to his duties during the hatch cover lifting operation, where he stood during the lifting operation, whether the Spreader landed properly and whether he noticed anything unusual while the hatch cover was being lifted. As for the deafening silence in his AEIC about any misalignment of the Spreader when it landed, the plaintiffs did not suggest that this omission was due to his lack of understanding of the English language. I thus find that AB Clemente knew why he was on duty at the material time and that he was capable of performing his duties in relation to the lifting operation. In short, his evidence damaged the plaintiffs' theory on how the accident occurred.

Conclusion on the eye-witness accounts of the accident

87 I am fully aware that it would be in the interest of both STA Balraj and Mr Wong to support each other's version of events. However, I was convinced that both of them were telling the truth when they testified that the Spreader had landed properly on the hatch cover, that STA Balraj had walked around the Spreader to check that the Spreader twistlocks had properly engaged the lifting sockets and that the 3-step hoist process had been followed. I have no reason to believe that they, realising that a hatch cover weighing around 30 tonnes was being lifted, would throw caution to the winds and fail to follow the standard procedures for the lift. For the record, I must add that it was not proven that the PSA had failed to provide guidelines to the crane operator or adequate supervision to check that the Spreader was properly and safely locked into the lifting sockets before

lifting the same. In short, the plaintiffs did not prove the particulars of negligence alleged in para 17 of the Statement of Claim.

Effect of eye-witness accounts on the theory espoused by the plaintiffs

88 The plaintiffs' entire hypothesis on the cause of the accident is only relevant if the Spreader was in fact misaligned by 150mm port-wise at an angle of 1.4 degrees. Dr Sykes stated as follows in Appendix 3 of his Report:

> For the twistlocks to be positioned outside the aft lifting sockets the aft of the spreader assembly would need to be displaced approximately 150mm to the port of the sockets, as illustrated in Figure A1. That would require the spreader to be deflected through an angle of approximately 1.4 [degrees] along its length.

89 However, none of the eye-witnesses, including the plaintiffs' AB Clemente, stated in their AEICs that the Spreader was misaligned in any way before it lifted the hatch cover and there was credible evidence that the Spreader twistlocks had properly engaged the hatch cover lifting sockets. As such, the starting point of Dr Sykes' hypothesis was totally contradicted by the eye-witnesses. At this juncture, it may also be noted that the engineering drawings of Capt Haslam, who conducted a number of experiments using Progecad software, showed that it was *impossible* for the front Spreader twistlocks to be properly engaged with the hatch cover front lifting sockets if the aft Spreader twistlocks were misaligned and locked outside the lifting socket flanges in the manner alleged by the plaintiff. More will be said about these experiments later on. What needs to be stated here is that it is trite that if a critical *factual* premise of an expert opinion is wrong, that opinion will be rejected even if it is otherwise flawlessly reasoned. In *Khoo Bee Keong v Ang Chun Hong and Another* [2005] SGHC 128, Andrew Phang JC explained (at [68]):

> It is important to ascertain what precisely constituted the *basis* for the respective expert reports .... It is both logical and commonsensical that if the basis or starting-point is either shaky or (worse still) flawed, the conclusion arrived at will be of little or no use to the court. ***Indeed, if there is in fact something untoward in the starting-point, even the most impeccable reasoning process will be of no avail in so far as the quest for a fair and just result is concerned*** ....
>
> [emphasis in original; emphasis added]

90 The position is also outlined as follows in *Halsbury's Law of Singapore* (Evidence: Vol 10 2006 Reissue):

> A court will not assume that all the evidence provided by an expert must be relevant expert opinion. Some of the evidence may be of facts observed by the expert, others may be irrelevant opinion, others may be of assumed facts, presented as facts. The identification of assumed facts is especially important. *The court will not rely on expert evidence when the assumed facts are not shown to exist by independent admissible evidence….*
>
> *In not a few cases, an expert opinion is rejected or given little weight its application of the scientific premises or theory to the particular facts of the case is unsatisfactory or inconsistent or it is purely a hypothetical opinion*, there being little attempt to apply it to the particular facts or because the basis for it is unexplained.
>
> [emphasis added]

91 Dr Sykes agreed that AB Clemente had not indicated in his AEIC that the Spreader landed on the hatch cover in a misaligned position. Crucially, he accepted that if Mr Toh had outlined AB Clemente's eye-witness account correctly, that account would be inconsistent with the plaintiffs' theory on the cause of the accident. The relevant part of the proceedings is as follows:

> Q First, [M]r Clemente said that [the Spreader] landed properly.
>
> A Okay.
>
> Q .... And *obviously, if the socket had been exposed, he would be able to see it, then he wouldn't have considered it to have landed properly, all right?*
>
> A *Yes*.
>
> Q I could add to that, Mr Clemente also said that to check for damages, he would have walked around. But let's leave that third fact out for the time being. I'm posing the question to you for the third time. Consistent or not consistent?
>
> A *It's inconsistent with what I've drawn* there. If that's what he is saying, yes.
>
> [emphasis added]

92 As Mr Toh had correctly summarised AB Clemente's evidence, Dr Sykes' theory on how the accident occurred did not rest on solid ground. As the plaintiffs' experts were fundamentally mistaken when they assumed that the Spreader was misaligned when it landed on the hatch cover, their theory on how the accident occurred did not even get off the ground.

The views of Capt Howe and Mr Sio

93 Leaving aside for the moment the eye-witness accounts of the accident, the plaintiffs' theory on the cause of the accident faced other hurdles.

94 The only witnesses who asserted that the Spreader was misaligned before the hatch cover was lifted were the plaintiffs' surveyors and experts, none of whom witnessed the accident. The plaintiffs called two surveyors, Mr Sio, who was appointed by the vessel's hull and machinery insurers, and Captain Richard Howe ("Capt Howe"), their own surveyor, as *factual* witnesses to present the physical evidence of their inspections on the hatch cover in general and the lifting sockets in particular. In *Sim Cheng Soon v BT Engineering Pte Ltd and another* [2007] 1 SLR(R) 148, the Court of Appeal reiterated (at [22]) that it is "an accepted principle that only expert witnesses may give opinion evidence". As such, the PSA rightly submitted that as Mr Sio and Capt Howe were not expert witnesses, their opinion on the cause of the accident were inadmissible. In any case, Mr Sio also relied on the contents in the master's letters of protest, the vessel's third officer's statements and inspection reports of the hatch cover allegedly issued by the hatch cover manufacturer's representative. He did not have personal knowledge of the contents of these documents and the makers of the statements in these documents were not called as witnesses to prove the truth of the documents.

95 As for the reliance by Mr Sio and Capt Howe on digital photographs taken by them and transferred to their computers, the PSA submitted that s 35 of the Evidence Act, which requires the party furnishing computer outputs to prove that they are reliable, was not complied with. It is clear that the witness who is called to certify the reliability and accuracy of the computer must be

someone fairly familiar with its operation: see *Ng Koo Kay Benedict v Zim Integrated Shipping Services Ltd* [2010] 2 SLR 60. Mr Sio, who did not know which camera had been used to take the photographs, could not shed any light on the camera settings. Neither could he explain how the digital photographs in his digital camera were copied onto the discs and what computer programme was used to process the images. It was also troubling that the digital camera may not have been set properly as some of the dates reflected in the photographs were dated prior to the day of the accident. The effect of s 35 of the Evidence Act need not be considered at length for the simple reason that even if the photographs in question were taken into account, their quality left much to be desired. Important photographs were either blurred or under-exposed.

96 Leaving aside the question of the inadmissibility of opinion evidence for the moment, Mr Sio's attempt to prove the plaintiffs' theory on the cause of the accident by using drawings was also not without flaws. He did not take measurements of the lifting sockets and their relative positions. As such, it was impossible for him to draw accurately scaled drawings to prove his hypothesis. Capt Haslam, who pointed out that Mr Sio's drawings were unreliable hand-drawn scaled drawings of the hatch cover, had no doubt that the latter's hypothesis failed as it hinged on these inaccurate drawings. He explained at para 92 of his Report annexed to his AEIC as follows:

> Mr Sio himself has qualified all his drawings with the words "APPROXIME POSITION" or "APPROX POSITION". As the positions given by Mr Sio ... are admittedly only *approximations* and he has not stated the dimensions of the relevant parts of the Spreader and Hatch cover, the reliability of the drawings produced by Mr Sio ... is highly questionable. Further, the drawings do not appear to be drawn to a uniform scale. A clear example of this is the lengths of the twistlock heads in the drawings which are different in their locked and unlocked positions. As a result of these inaccuracies, these drawings do not provide an accurate picture of how the Spreader landed on the Hatch Cover.
>
> [emphasis in original]

97 It should not be overlooked that in Mr Sio's drawings, the angles of the alleged misalignment from the ideal position of the Spreader *vis-a-vis* the aft lifting sockets are different from each other. In one drawing, the misalignment was 9.5 degrees while it was 12.5 degrees in another drawing. As there was no evidence to prove that the Spreader is not of a rigid construction, it was not possible for it to be misaligned by 9.5 degrees and 12.5 degrees at the same time. Apart from this, Mr Sio failed to take into account the position of the forward twistlocks *vis-a-vis* the aft twistlocks. When cross-examined, he admitted that he had assumed that the forward lifting sockets engaged the corresponding twistlocks and hence he focussed on the two aft lifting sockets in his drawings. This meant that he had not considered whether, if the aft port twistlock had been put into a position to support the plaintiffs' theory, the starboard twistlocks would fall into the position replicated by him at page 31 of his AEIC. This showed that his methodology was inherently unreliable.

The surveyors' view on the chipped paint on the aft lifting sockets

98 The opinion of Mr Sio and Capt Howe that chipped paint on the underside of the aft flange supported the hypothesis that the aft twistlocks of the Spreader closed outside was also flawed. Capt Haslam pointed out that it was presumptuous of Mr Sio and Capt Howe to assume that the said damage to the paintwork was caused by the accident at the PSA berth because the damage could just as easily have been caused by other factors. He explained that when the Spreader, a heavy mass weighing about 13 tonnes, descended onto the hatch cover several times at the PSA berth, the twistlocks would inevitably hit the casting socket with great force. This would result in paint work damage. Capt Haslam added at para 111 in his Report annexed to his AEIC as follows:

I expect the lifting sockets to be regularly exposed to slamming during cargo operations at the Vessel's various port calls. Therefore, the chipping of the paint from the flange undersides and sides could have been sustained in the Vessel's previous port calls. Once the paint is chipped off, it would be a matter of time for the paint at other parts of the lifting socket flanges to be damaged. Therefore, the chipping of the paint at the aft lifting sockets could have been due to any of the above factors or a combination of them. In the premises, the chipping of the paint on the underside and side of the flanges of the lifting sockets does not necessarily lead to the conclusion that the aft Spreader twistlocks closed outside the aft lifting sockets.

99 Capt Haslam also noted that neither Mr Sio nor Capt Howe had explained whether the damage to the paint work was recent or fresh.

100 Although the plaintiffs claimed that Capt Haslam was not qualified to deal with the characteristics of paint and materials and stated in their closing submissions that the evidence of Mr Sio and Capt Howe was supported by the "unchallenged" physical evidence adduced by Dr Sykes, this was not correct. Dr Sykes' evidence was robustly challenged and when cross-examined, he made an important concession that impact and chipping damage on lifting socket flanges is not an uncommon occurrence on vessels and could be due to a number of reasons, including contact with Spreader twistlocks. He testified as follows:

Q Now, this could have been caused by negligent handling of landing bars, contact with containers or even contract with twistlocks *at other ports*, correct?

A *Yes, it could have been*. I have no way of knowing what caused it.

Q I understand you've no way of ascertaining that but it could be?

A It could be, your Honour, yes.

Q *So there is some evidence, isn't there, of damage* to the lifting sockets from previous contacts *perhaps in other voyages*?

A *Possibly*, your Honour, yes.

….

Q …. [D]amage to paint work and material damage to the site or to the flange of a lifting socket is not an uncommon occurrence, is it.

A *Impact and chipping damage, no, it's not uncommon.*

[emphasis added]

101 I hold that the chipped paint on the aft lifting sockets does not support the plaintiffs' theory on the cause of the accident.

The views of the expert witnesses

102 The duty of an expert witness must be viewed in the context of Order 40A r 3(2) of the Rules of Court, which provides:

An expert's report must —

(a) give details of the expert's qualifications;

(b) give details of any literature or other material which the expert witness has relied on in making the report;

(c) contain a statement setting out the issues which he has been asked to consider and the basis upon which the evidence was given;

(d) if applicable, state the name and qualifications of the person who carried out any test or experiment which the expert has used for the report and whether or not such test or experiment has been carried out under the expert's supervision;

(e) where there is a range of opinion on the matters dealt with in the report —

(i) summarise the range of opinion; and

(ii) give reasons for his opinion;

(f) contain a summary of the conclusions reached;

(g) contain a statement of belief of correctness of the expert's opinion; and

(h) contain a statement that the expert understands that in giving his report, his duty is to the Court and that he complies with that duty.

Capt Jonathan Lee

103 Capt Lee was a rather unhelpful expert witness. For a start, he did not comply with O 40A r 3(2)(c) of the Rules of Court, which requires an expert to set out all the issues that he was asked to provide an expert opinion on. When asked why he failed to comply with this requirement, his answers gave a good indication of the tenor of his testimony:

Q Do you agree with me that nowhere in paragraph 1 do you set out the issues that you were asked to provide an opinion on?

A … *[S]orry, I don't understand, can you repeat the question again.*

Q Yes, I will. You don't set out the issues that you were asked to provide an expert opinion on anywhere in paragraph 1 of your report, agree? Do you understand my question, Captain?

A *I'm still trying to digest your question.*

Q Take your time.

A *I'm very sorry, can I have the question one more time?*

Q Yes. It will be the third time though. So you agree with me that you do not set out anywhere in paragraph 1 of your report the issues that you were asked to provide an expert opinion on?

A I agree ….

[emphasis added]

104 Capt Lee did not inspect the gantry crane, the Spreader, the hatch cover or the lifting sockets. There was no evidence that he was given the measurements of the relevant fittings of the Spreader or the hatch cover. Although the plaintiffs stressed in their reply submissions that it was patently clear that his conclusion that the accident had occurred as a result of the misalignment of the Spreader was based on his review of the physical evidence before him, Capt Lee readily conceded that for the preparation of his expert report, he depended on the reports of Capt Howe and Mr Sio and relied "heavily" on the photographs found in their AEICs. The relevant part of the proceedings is as follows:

Q In essence, your comments are based primarily on the reports that have been attached to Capt Howe's and Mr Sio's affidavits of evidence-in-chief, correct?

A Correct.

Q So it would be fair for me to assume that in fact you relied heavily on the photographs found in Capt Howe's and Mr Sio's affidavits in forming your comments, correct?

A I agree ...

105 While the plaintiffs contended that Capt Lee had conducted an independent and objective analysis of the primary physical evidence described by Capt Howe and Mr Sio, he could not explain the basis for his "independent and objective" views. In fact, Capt Lee made the absolutely astonishing admission of his partisanship when he answered as follows during cross-examination:

Q Capt Lee, I suggest to you that you're simply selecting part of Capt Howe's reports because that better supports the owner's case?

A Yes.

106 By selecting parts of Capt Howe's report that better support the plaintiffs' case, Capt Lee showed that he was not the impartial witness that an expert witness is supposed to be.

107 When Capt Howe and Mr Sio took different views on the nature of marks found on the aft lifting socket flanges, Capt Lee preferred Capt Howe's view that these were scouring marks to that of Mr Sio, who only found abrasions on these lifting sockets. However, he could not explain why he preferred Capt Howe's view. This was rather disturbing as s 62(1)(d) of the Evidence Act provides:

62 – (1) Oral evidence must in all cases whatever be direct –

....

(d) If it refers to an opinion or to the grounds on which that opinion is held, *it must be the evidence of the person who holds that opinion on those grounds*.

[emphasis added]

108 In *Halsbury's Laws of Singapore Vol 10: Evidence (2006 Reissue)*, the role of an expert witness in the face of contradictory views was put as follows:

[A]n expert who has read several opinions will not be permitted to tell the court that he selects and adopts one of them as the best opinion. He would not be giving evidence of his own inferences. Neither will an expert be permitted to tell the court about the opinion reached by his subordinates unless he has exercised personal supervision over the preparation of the opinion .... The reason for insisting on direct oral evidence of an opinion is that oral evidence which is indirect is unhelpful, that otherwise there would be a lack of transparency, that risks of being swayed by speculation are increased.

[emphasis added]

109 When pressed to explain why he preferred the view of Capt Howe over that of Mr Sio on the scouring marks referred to earlier on, Capt Lee's replies were most unhelpful. Although the plaintiffs asserted that Capt Lee had not preferred any view but had formulated his own objective and independent views, this was not borne out by the evidence. When questioned, Capt Lee did not deny that he had preferred Capt Howe's view on the scouring marks. As mentioned, he conceded that he had selected parts of Capt Howe's report that best supported the plaintiffs' case. Admittedly, he claimed that he did not understand the question on why he preferred one view over another but this was a ridiculous answer to cover up his inability to explain his view. The relevant part of the proceedings, which showed that he understood the question, is as follows:

Q	Why did you prefer Capt Howe's observation ie that there were scoring marks on the aft lifting sockets to those of Mr Sio's, who confined himself to abrasions and rubbing?
A	Okay, because *I actually studie[d] Capt Howe's report and then based on the abrasions and based on his report, I have a better understanding of how actually things happened.*
Q	I don't think you have answered my question, Captain. My question is this: You have Capt Howe who said "I could see scoring on the underside of the lifting sockets". Mr Sio said: "I saw abrasion and rubbing"…. *My question to you is this: Why did you prefer Capt Howe's version, ie Capt Howe's observations of scoring, to those of Mr Sio's who only confines himself to rubbing and abrasion?*
Court:	Do you understand what he's asking you?
A	*I still don't understand, your Honour.*

[emphasis added]

110 After another five minutes of cross-examination, Capt Lee had still not enlightened the court on why he preferred Capt Howe's view on the marks on the aft lifting socket. The relevant part of the proceedings is as follows :

Q So tell us why did you prefer Capt Howe's observations to those of Mr Sio's?

A There's no preference of which would I actually refer to because Capt How and this Mr Sio's report, both will come to the same conclusion.

….

Q …. Let's just focus on scoring marks and abrasions or rubbing…. So you just confirmed that you preferred Capt Howe's observations. So I'm asking you why did you prefer Capt Howe's observations to those of Mr Sio's since they are obviously different.

….

A *Based on what I've seen Capt Howe's --- his view, his report actually sort of support what I actually come to the same conclusion. That's why I would take Capt Howe's scoring and then ---*

[emphasis added]

111 It was in the context of Capt Lee's inability to answer a simple question on why he preferred Capt Howe's view on the scoring marks in question that an exasperated Mr Toh asked Capt Lee whether he had selected parts of Capt Howe's report that best supported the plaintiffs' case. Capt Lee also admitted that he had not taken into account the possibility that welding defects in relation to the lifting sockets of the hatch cover could have caused or contributed to the accident. Clearly, he did not present an objective and independent analysis on the cause of the accident and this diminished his role as an expert witness.

112 The plaintiffs asserted that Capt Lee had done his best to assist the court as an independent expert witness. Regrettably, I had no doubt whatsoever that he did not advance the plaintiffs' case against the PSA.

Dr Jonathan Sykes

113 In view of Capt Lee's unhelpful evidence, Dr Sykes had the unenviable task of shouldering the responsibility of explaining why the plaintiffs' theory was workable. Regrettably for the plaintiffs, his performance in the witness box was rightly described by Mr Toh as "calamitous". Although touted by the plaintiffs as a metallurgist and materials scientist, he did not conduct any metallurgical tests on the hatch cover to exclude the possibility that hatch cover defects had caused the accident.

114 In their closing submissions, the plaintiffs asserted that Dr Sykes' findings on how the accident occurred, as described in his AEIC were unchallenged. Nothing could be further from the truth as Dr Sykes' findings were challenged at every turn. The PSA had shown that the testimony of eye-witnesses contradicted his theory, challenged the admissibility of much of his evidence and photographs, cross-examined him robustly on his theory and presented the results of Progecad experiments that showed that his hypothesis could not be replicated in real life.

115 To begin with, Mr Toh took Dr Sykes to task for failing to disclose to the court that he had already formed an opinion on the cause of the accident more than two years ago in January 2009 when he was commissioned to investigate the cause of the accident on behalf of the P & I Club to which the vessel belonged. Pursuant to that engagement, he had issued a report dated 18 February 2009. Dr Sykes also did not disclose in his report or AEIC that he had discussed his views on causation with Mr Sio and Capt Howe way back in 2009. When cross-examined, Mr Sio testified that he, Capt Howe and Dr Sykes had met in 2009 to forge a "united front" on the issue of causation.

116 Dr Sykes conceded that although he claimed to have read all the AEICs and found that only the AEICs of AB Clemente and Mr Ang Chew Peng were relevant, the truth was that in preparing his expert report for the present proceedings, he was "basically putting together an opinion in respect of

a matter on which [he] had formed a view more than two years ago", he did not carry out any new tests or consider other evidence, such as the relative positioning of four twistlocks *vis-a-vis* the lifting sockets, that might not have supported his conclusion. Neither did he take into account the fact that none of the eye-witnesses of the accident had stated in their respective AEICs that the Spreader had landed in a misaligned position on the hatch cover. When cross-examined, he stated as follows:

> Q Essentially, what you did was to dredge up your old photographs and old measurements recorded in a notebook, look at them and drew up this report?
>
> A That's correct, your Honour.

117 The opinions formed by Dr Sykes in his earlier report in 2009 must be viewed in the context of his own admission that he was not asked in 2009 to look at matters of causation. In fact, he added that he had been expressly instructed not to provide any opinion on causation. Furthermore, the old digital photographs that Dr Sykes took in 2009 and relied on for his latest report are problematic. As in the case of the digital photographs taken by Mr Sio and Capt Howe, the PSA contended that Dr Sykes did not meet the requirements of s 35 of the Evidence Act concerning the use of computer evidence. He did not know which computer was used to download the images in his digital camera or which programme had been used to download the said images. Neither did he know the settings on his camera nor the process by which the images were transferred into a CD ROM. As the images allegedly captured in his camera storage card had been overwritten, the photographs reproduced in his report could not be verified against the original images from his camera. Finally, he was in no position to confirm that the computer used to produce the photographs in his report had been working properly at all material times. Even if compliance with s 35 of the Evidence Act is left aside, the quality of the photographs relied on by Dr Sykes is an issue. Dr Sykes admitted that photograph 21 in his report, which depicts paint damage to the starboard aft lifting socket, was over-exposed and it was not possible to make out the area of the paint damage. Furthermore, when he was shown two photographs (marked "PP-1" and "PP-2"), which were taken by him at the same time as the other photographs but included in his report, he informed the court that these two photographs must be treated with "caution". This reinforces the point that it was not altogether safe for Dr Sykes to rely on his visual impressions of the photographs in his report to defend his theory on the cause of the accident.

118 Dr Sykes focused on the condition of the four lifting sockets and did not analyse the positions of all the four twistlocks *vis-a-vis* the four lifting sockets. He confirmed that apart from determining the length of the twistlock heads and the dimensions of the lifting socket orifice, he took no other measurements. As such, he did not check the relative position of the fittings at the forward end of the Spreader *vis-a-vis* the fittings of the aft of the Spreader and hatch cover to see if his hypothesis could work. The PSA submitted that as Dr Sykes' opinion was based on a preconceived notion rather than an independent, objective and fresh analysis, his opinion ought to be viewed with caution.

119 Despite the contradictory factual evidence furnished by all three eye-witnesses to the accident, Dr Sykes claimed that there was unequivocal evidence that the aft lifting socket could not have been torn off unless it was outside the corresponding Spreader twistlock. When cross-examined, he stated:

> If they had not been positioned outside of those aft sockets, it would be impossible for them to disengage from those sockets during the lift without them ripping through the socket itself or ripping the socket from the hatch cover.
>
> It therefore must be the case, based on the physical evidence, that those twistlocks were

positioned outside of the sockets. Because there was no damage whatsoever to the orifices of the sockets, the aft of the hatch cover, nor to the deck plate to which they were attached. It'd be impossible for them to be disengaged if they were not outside the aft of the socket.

120 Admittedly, even Capt Haslam was puzzled by the lack of damage to the orifices of the aft lifting sockets, However, while this is one piece of evidence favourable to the plaintiffs' hypothesis, it did not, without more, prove their hypothesis on the cause of the accident. This evidence must be viewed in the context of the overwhelming evidence against the plaintiffs' hypothesis, including the eye-witness accounts that far from being misaligned, the Spreader had properly engaged the lifting sockets of the hatch cover and the Progecad drawings that showed that the plaintiffs' hypothesis on the case of the accident was quite impossible. While the plaintiffs laid great emphasis on the fact that even Capt Haslam was baffled by this piece of evidence, it must be noted that his evidence was that while he did not know how the accident was caused, he was absolutely certain that it did not occur in the manner hypothesised by the plaintiffs.

121 The plaintiffs claimed that Dr Sykes' investigations were detailed and precise. However, Dr Sykes was less thorough than desired and he did not consider other possible scenarios. The plaintiffs must have been aware that structural or material defects in the hatch cover might have caused the accident because Mr Sio had in his preliminary report of 8 January 2009, just two days after the accident, recommended a metallurgical examination of the detached lifting socket as well as the part of the hatch cover plate from where the lifting socket was ripped off. When cross-examined, Mr Sio confirmed that he had called for the said metallurgical examination because he was concerned that the lifting socket may have been defectively welded to the hatch cover. The plaintiffs did not conduct the metallurgical test recommended by Mr Sio. Significantly, Capt Lee accepted that neither Mr Sio nor Capt Howe had ruled out the possibility that poor welding of the hatch cover was a cause of the loss. Capt Haslam pointed out that all four lifting sockets should have been checked for their tensile strength to find out if there was anything wrong with them. He explained:

> [I]t always puzzled me why nobody had ever sent off all four lifting sockets for analysis, to prove that there hadn't been a structural tensile failure or whatever. It does seem strange to me that nobody had ever looked at that. I would have thought, if I had been down there for Hull & Machinery, I would have asked for analysis on all four, to make sure that they were all the same product, all the same material, all the same structural material strength, And that was never undertaken, so far as I'm aware.

122 The plaintiffs' counsel, Mr Mohamed Goush Marikan ("Mr Goush"), who reminded Capt Haslam that the latter was not a metallurgist, pointed out that Dr Sykes was a materials engineer and a metallurgist. When he claimed that Dr Sykes had conducted a thorough *visual* inspection, Capt Haslam retorted that Dr Sykes had not analysed the four lifting sockets and he could not compare the tensile strength of the failed structure with the others without proper metallurgical tests. There was thus no basis for his view that the accident could not have occurred if the PSA had not been negligent.

123 Dr Sykes should also be faulted for not considering in his report yet another possibility in relation to contact between the TOC pin and the flat bar. When cross-examined, he stated:

> Q So based on my premise which you may not agree with, if in fact the centre line of the twistlock had moved up by 10.7 mm, there would be no contact made between the TOC pin and the flat bar, correct?
>
> A That's correct, your Honour, yes.

Q And if there is no contact between the TOC pin and the flat bar, there would be no activation which would lead to a lifting of the hatch cover?

A That's correct, your Honour.

....

Q You see, Dr Sykes, you may not agree with this particular line of reasoning that I've just taken you through but ... you would have to accept that this is a possible way of looking at the photographs .. and drawing certain deductions from them, correct? ....

A [Yes], it is, your Honour, it's a potential ....

….

Q And if it is, Dr Sykes, may I suggest to you this should have been included in your discussion, in your report, because under Order 40A rule 3,... if there is a range of opinion on the matters that dealt with in the report, you have to summarise the range of opinion, correct?

A Yes, your Honour.

Q Do you agree with me that this is a matter that you should have raised in your opinion then, even if you don't agree with it?

A Yes. ... I could have included that in my report.

124 Even if the eye-witness accounts of the accident, which put paid to his theory on causation, are left aside for the moment, there was no evidential basis for Dr Sykes' contention that the Spreader had landed misaligned at the aft by a deflection of 155mm. If he is right, a question arises as to what had caused the aft end of the Spreader to be deflected by an angle of 1.4 degrees from the forward end. Dr Sykes attempted to deal with this when he testified as follows:

> [A] structure is said to be rigid if ...it will not undergo any deflection or displacement under the influence of a force. There is no structure that will not deform or deflect under the influence of a force. Any engineering textbook will tell you that. Steel has elasticity and it will deflect and also the Spreader is a telescopic structure, so the arms move inside each other and therefore there must be some play between the arms that retract and extend inside each other, as that will also allow some deflection.

125 When cross-examined, Dr Sykes confirmed that "a load of force" was required in the port direction for the Spreader to deflect port-wise. However, he had said nothing in his report about how this force acted on the Spreader at the material time or what amount of force was required for it to deflect according to his hypothesis. As there was no evidence of the said load of force acting on the starboard side of the Spreader, there was no basis for Dr Sykes to postulate that the aft of the Spreader had been distorted port-wise by 150mm.

126 Apart from not saying anything about the load of force in his report, Dr Sykes had also said nothing on rigidity in his report even though the rigidity of the Spreader appeared to be the cornerstone of his hypothesis. He admitted that this was an assumption that he had made. In this context, it is trite that he should have stated this assumption in his report. In *Makita (Australia) Pty Ld v Vicki Jane Sprowles* [2001] NSWCA 305, Heydon JA stated (at [85]):

" … the opinion proffered must be "wholly or substantially based on the witness's expert knowledge"; so far as the opinion is based on facts "observed" by the expert, they must be identified and admissibly proved by the expert, *and so far as the opinion is based on "assumed" or "accepted" facts, they must be identified and proved in some other way; it must be established that the facts on which the opinion is based form a proper foundation for it; and the opinion of an expert requires demonstration or examination of the scientific or other intellectual basis of the conclusions reached:* that is, the expert's evidence must explain how the field of "specialised knowledge" in which the witness is expert by reason of "training, study or experience", and on which the opinion is "wholly or substantially based", applies to the facts assumed or observed so as to produce the opinion propounded. *If all these matters are not made explicit, it is not possible to be sure whether the opinion is based wholly or substantially on the expert's specialised knowledge. If the court cannot be sure of that, the evidence is strictly speaking not admissible, and, so far as it is admissible, of diminished weight.* And an attempt to make the basis of the opinion explicit may reveal that it is not based on specialised expert knowledge, but, to use Gleeson CJ's characterisation of the evidence in *HG v R* (1999) 197 CLR 414, on "a combination of speculation, inference, personal and second-hand views as to the credibility of the complainant, and a process of reasoning which went well beyond the field of expertise".

[emphasis added]

127 Finally, Dr Sykes attempted to lend some support to the views expressed by Capt Howe and Mr Sio that the paint loss and indentations on the flange of the aft lifting sockets were caused by contact between the aft twistlocks and the lifting socket flange sides and by the locking of the twistlocks *under* the flanges. However, apart from the fact that this theory was contradicted by the evidence of the eye-witnesses that the Spreader twisting sockets had properly engaged the lifting sockets, Dr Sykes conceded that he was aware that the chipping and damage to the flanges of the lifting sockets may not necessarily have been caused by the aft Spreader twistlocks locking under the flanges. As he did not acknowledge this in his report, he failed to comply with O 40 r 3(2)(e) of the Rules of Court, which requires all relevant material facts, including those that may detract from the expert's hypothesis, to be stated.

128 I find that Dr Sykes' evidence was not convincing enough to prove the plaintiffs' case on the cause of the accident.

Capt Nicholas Edward Haslam

129 The PSA's expert witness, Capt Haslam, was a helpful and unbiased expert witness. He gave a balanced view and was forthright enough to say that he was not sure what had caused the hatch cover to fall down although he was absolutely certain that the accident did not happen in the way envisaged by the plaintiffs.

130 The plaintiffs questioned Capt Haslam's competence to give evidence on, among other things, the working of the Spreader, the paint loss observed underneath the aft lifting socket flanges and the ship management system of cellular container vessels. They were quick to point out that he has no material science or engineering qualifications. In this context, it is pertinent to note that in *Commercial Union Assurance Co plc v Lee Siew Khuan* [1990] 2 SLR(R) 549, where one of the issues was whether a lawyer, Mr Donald Yeo, could be an expert witness for the purpose of valuing a diamond ring, Chan Sek Keong J accepted the plaintiff's counsel's argument that the lawyer's answers during cross-examination showed that he knew enough about diamonds to assess their value. He explained (at [19]) as follows what competence of an expert entails:

Knowledge on any particular subject matter need not be acquired professionally. It is not the jeweller only who knows the value of a diamond ring. *It is for the judge to decide whether a witness has sufficient knowledge or expertise to qualify as an expert.* In the light of the answers given by Donald Yeo under cross-examination, I cannot fault the district judge for accepting him, Donald Yeo, as a person who was sufficiently *au fait* with diamonds to be able to give an assessment of the value of a diamond ring which he had seen, touched and admired. I do not think counsel can now complain about the admissibility of this evidence or its weight since he cut short his own cross-examination on the assumption that Donald Yeo was not an expert for the purpose of the law. He should have insisted that the district judge make a ruling as to the credentials of Donald Yeo as an expert.

[emphasis added]

131 A similar approach was adopted in a Malaysian decision, *Public Prosecutor v Muhamed bin Sulaiman* [1982] 2 MLJ 320, where a question arose as to whether a chemist who had no academic training in forensic ballistics may be regarded as an expert for opining on whether a bullet had been fired from the rifle of the accused, a lance-corporal who was charged with murdering his sergeant. Suffian LP pointed out (at [322]-[323]):

> [W]hile an expert must be skilled, he need not be so by special study, he may be so by experience, and the fact that he has no acquired his knowledge professionally goes merely to weight and not to admissibility.

132 I was satisfied that Capt Haslam had sufficient experience to comment on the characteristics of the Spreader. He had gained experience on the operation of manual spreader assemblies of the shape and size of the Spreader in question for the purpose of discharging containers below and above deck when he worked on board general cargo vessels and he is now regularly involved in the transportation of special cargo, which requires him to closely monitor the opening and closing of hatch covers with the use of spreaders. He has been on distressed vessels on many occasions to direct the crane operator to land the spreader assembly on hatch covers and lift them from the stricken vessels.

133 As for his experience on cellular container vessels, he had been a third officer on a cellular container vessel that had called regularly at Singapore. He explained that he had stood on hatch covers and personally supervised the lifting of hatch covers when the said vessel called at Singapore.

134 With regard to engineering qualifications, the plaintiffs' main grouse with Capt Haslam's evidence was that he had opined that the Spreader was a rigid structure. Capt Haslam, who is a Master Mariner, pointed out that as part of his vocational training he was trained to a high level in physics, mathematics, engineering and construction. In any case, his definition of rigidity was consistent with the engineering literature tendered by the plaintiffs to the court. As the main issue was whether the Spreader would deflect during lifting operations, I agree with the PSA that "an experienced seafarer who has had extensive first-hand experience in spreader operations and is knowledgeable in engineering, construction and mathematic is amply qualified to opine on whether the Spreader can deflect by as much as 150 mm at the aft during normal cargo operations".

135 With respect to Capt Haslam's evidence on the paint damage underneath the aft lifting socket flanges, the plaintiffs asserted that he is not qualified to comment on the characteristics of paint. Capt Haslam's comment on the paint chipping pattern of the lifting socket and his view that the paint damage could have occurred in earlier ports of call were based on his two decades of seagoing experience as a deck apprentice and officer. He had been intimately involved in the maintenance of deck fittings.

136 Finally, Capt Haslam was certainly qualified to comment on the vessel's Ship Management Systems and the International Safety Management Code ("ISM Code"), which provides an international standard for the safe management and operation of ships. He is an accredited ISM/ISO Lead Assessor and is fully conversant with the requirements of the ISM Code. In fact, he was jointly in charge of ensuring that the vessels in the Maersk fleet complied with the ISM Code. As such, he formulated shipboard management systems for the entire Maersk fleet, which includes cellular container vessels. Far from being unqualified, he may be said to be a pioneer in this field.

137 Much of what Capt Haslam testified has already been referred to in the earlier part of this judgment. What must be emphasized here is that unlike the plaintiffs' experts, who focussed solely on the aft lifting sockets, he considered the position of *all* four Spreader twistlocks and TOC pins in connection with all four lifting sockets of the hatch cover. He took into account the actual physical measurements of the Spreader and its fittings as well as the hatch cover and its fittings. To ensure accuracy, he had the measurements taken by a qualified naval architect, Mr Guy Dewdney, and these measurements were verified against the manufacturer's engineering drawings that were furnished by the plaintiffs. Capt Haslam used these measurements, which were subsequently personally verified by him, and conducted experiments that revealed that it was impossible to achieve the scenario postulated by the plaintiffs, which was that the Spreader TOC Pins were activated when only the forward Spreader twistlocks had properly engaged the lifting sockets. These experiments were done with Progecad software, which is commonly used for the preparation of engineering drawings. This software is able to produce drawings of exact dimension and scale and it allows the user to control the shape and orientation of the drawing. It also allows the user to copy, move and rotate individual elements of a drawing while maintaining their size and dimensions. After creating accurate drawings of the Spreader and hatch cover, Capt Haslam found that the Spreader twistlocks fitted snugly within the openings of the lifting sockets. Both Capt Haslam and Mr Dewdney then attempted to simulate the hypothesis advanced by the plaintiffs by having the Spreader twistlocks engage the forward lifting sockets while the aft lifting sockets were not engaged. Despite numerous attempts, the result of their tests was that if the Spreader had been misaligned to the extent alleged by the plaintiffs, at least 3 of the twistlocks would be out of alignment *vis-a-vis* the lifting sockets, in which case, the hatch cover could not have been lifted with two sockets properly engaged and the two aft lifting sockets improperly engaged. When cross-examined, Capt Haslam explained that he had spent hours on dozens of different scenarios and had manipulated the drawings with different angles in 0.1 degree steps. He testified as follows:

> I attempted to rotate it from a number of different points and I attempted to rotate it from the centre of the spreader, but that clearly wasn't going to work at all. And it wasn't going to work because as soon as you rotate that half a degree, all four corners rotate half a degree, and it instantly doesn't work. I mean, it doesn't work much less than that.
>
> What I then did was fix one corner and did it in steps of 0.1 degree, so I rotated it 0.1 degree and checked it and looked at where the twistlocks were, whether they fell inside or outside, and where the TOC pins were. Then I rotated it 0.2 degrees and went through the same process; then I rotated it 0.3 degrees and went through the same process, and I continued that.

138 Mr Dewdney, who also conducted experiments to simulate the scenario postulated by the plaintiffs, stated in his AEIC at para 27 as follows:

> However, although I tried many times, I simply could not achieve a scenario where the following criteria could be achieved simultaneously: (i) the forward twistlocks of the Spreader properly engaged the forward hatch cover lifting sockets (ii) the aft Spreader twistlocks fell outside the aft Hatch Cover lifting sockets (iii) 3 of the TOC Pins of the Spreader rested on the flanges of the

lifting sockets and (iv) the aft starboard TOC Pin rested on the flat bar next to the TOC Pin.

139 The plaintiffs sought to discredit Capt Haslam's Progecad findings by saying that they are merely two-dimensional drawings but the PSA contended that his engineering drawings have been proven to be an accurate two-dimensional simulation of the positions of *all* the four twistlocks *vis-à-vis* the four lifting sockets. The plaintiffs also lambasted Mr Dewdney for taking measurements with instruments bought from a hardware store and not with instruments calibrated according to recognised national standards. Considering that the plaintiffs had urged the court to accept Mr Sio's inaccurate drawings with only approximate measurements, it is rather strange that they should now seek to discredit Capt Haslam's Progecad drawings, which withstood the test of cross-examination, and especially so when none of their surveyors or experts had considered in depth the positions of *all* the four twistlocks *vis-à-vis* the four lifting sockets. In any case, Mr Dewdney's measurements were matched with those furnished by the hatch cover manufacturer and were found to be consistent to the nearest 1mm.

140 Faced with Capt Haslam's unassailable testimony, the plaintiffs' counsel sought to discredit his Progecad experiments by saying that Capt Haslam had merely rotated the Spreader drawing about the axis of one lifting socket of the hatch cover drawing. However, neither Capt Haslam nor Mr Dewdney said that they had merely anchored one of the twistlocks to the corresponding lifting socket and rotated it about an axis. Indeed, they made it quite plain that they had overlaid the Spreader drawing on the hatch cover drawing on the computer screen and tried unsuccessfully on numerous occasions to move the Spreader drawing on the screen to achieve the scenario painted by the plaintiffs.

141 The plaintiffs next asserted that Capt Haslam had failed to take into account the "trim" of the vessel. This cannot be countenanced as there was no evidence that the vessel was in trim at the material time. If the plaintiffs suspected that the vessel was in trim when the accident occurred, they could have called the chief officer of the vessel to testify but they did not do so. None of the eye witnesses mentioned in their AEIC that the vessel was in trim and the crane operator, Mr Wong, and STA Balraj were not cross-examined on this point. Furthermore, none of the surveyors raised this issue, and neither did Capt Lee or Dr Sykes. As Mr Goush eventually conceded that the plaintiffs were not alleging that the vessel was in trim, this issue need not be considered any further even though it was referred to in the plaintiffs' closing submissions.

142 The plaintiffs also asserted that the Progecad results were inaccurate because engineering components such as "load" and "stress" were not taken into account. However, their counsel conceded that none of the plaintiffs' experts had raised these points and stated that his clients were not putting forward any theories in relation to load and stress for the court's consideration. It is also pertinent to note that while the plaintiffs criticised Capt Haslam's Progecad tests, none of their experts or surveyors had utilised accurately scaled drawings of the Spreader and hatch cover to show that it was in fact physically possible for the Spreader to have simultaneously engaged the forward lifting sockets properly while the aft of the Spreader twistlocks were locked outside the aft lifting sockets. Instead, the plaintiffs' experts had based their hypothesis on the cause of the accident on the basis of their visual observation of the alleged damage to the lifting sockets. I thus accept Capt Haslam's opinion that the plaintiffs' theory on the cause of the accident could not be replicated in the Progecad tests.

143 To sum up, although I have already held that the plaintiffs' theory on the cause of the accident was not proven as it had no factual basis since it was totally contradicted by eye-witness accounts of the accident, I also find that they did not prove that their theory on the cause of the accident was workable.

Conclusion on the plaintiffs' claim

Conclusion on the plaintiffs' claim

144 In the final analysis, the plaintiffs had to prove their allegation of negligence. I believed that the SOP and other instructions were followed. I also accepted that STA Balraj had walked around the Spreader to check that the twistlocks had been properly connected to the hatch cover lifting sockets, that Mr Wong had followed safety guidelines and the 3-step hoist when he lifted the hatch cover and that the crane was working properly and properly maintained. All these, together with Capt Haslam's useful testimony and Progecad drawings, persuaded me that it was not established that the PSA had dropped the hatch cover as a result of its negligence.

Plaintiffs' reliance on bailment and *res ipsa loquitur*

145 The plaintiffs' assertion that they were entitled to rely on bailment and *res ipsa loquitur* to demand that the defendant prove that the accident was not caused by their negligence will now be considered.

Bailment

146 The plaintiffs, who pleaded that there was a bailment relationship between the PSA and them, have the onus of proving such a relationship. If they succeed, then the PSA has to prove, on a balance of probabilities, that it had taken reasonable care of the goods: see *Sun Technosystems Pte Ltd v Federal Express Services (M) Sdn Bhd* [2007] 1 SLR(R) 411 ("*Sun Technosystems*") and *Techking Enterprise Ltd and another v JFE Consolidators Pte Ltd and another* [2005] 2 SLR(R) 744.

147 For a bailment relationship to arise, the chattel in question must have been in the possession of the bailee, who has a high degree of control over the chattel to the exclusion of at least the bailor. According to the plaintiffs, the PSA became the bailees of the hatch cover as well as "the entire segment wherein the cargo operations were being carried out and more specifically, at Bay 10 where the Lifting Operation was being carried out". However, the PSA asserted that there was no bailment because the plaintiffs were not excluded from the unloading operations and as such, it did not have exclusive possession of the hatch cover.

148 Why the plaintiffs chose to rely on bailment in this case cannot be readily understood. The unloading of cargo is, without more, a joint operation conducted by the shipowner and the PSA (see, for instance *Transoceanica Societa Italiana di Navigazione v HS Shipton & Sons* [1923] 1 KB 31). This may also be gleaned from the plaintiffs' own shipboard Safety Management System ("SMS"), which provided detailed and specific instructions to the vessel's crew on the safety precautions to be taken during hatch cover lifting operations, even though the actual lifting of the hatch cover was undertaken by stevedores. In fact, the Operational Procedure for the vessel expressly required the connection of "*the Spreader to the lifting fittings*" to be recorded in an appropriate log book and for this to be done, the vessel's crew must witness the said connection. Various other SMS documents provide that hatch cover movements must be performed *"in the presence of"* the vessel crew. As the PSA did not work independently of the vessel's crew during lifting operations, the question of bailment did not arise. The PSA's expert witness, Capt Haslam, explained:

> [O]n a container vessel …, there are two parties to … a cargo operation, and those two parties are the vessel and the ship's crew and a contracted or subcontracted stevedoring company. So there has to be two parties to that operation, because if the ship just arrives in port without any cranes, there is no loading or discharging operation; likewise the cranes without a ship, there is nothing for them to do. So it is a joint venture.…
>
> The ship's crew, the master, the company cannot abrogate their responsibility under the ISM to a

subcontracted third party. How can they do so? They would be negligent. They simply cannot do that. So they must maintain a level of control.

149 Consistent with the fact that unloading at the PSA berth was a joint operation, the oral testimony furnished during the trial confirmed that the plaintiffs' personnel could have stopped the lifting operations and demanded lifting operations be stopped if the Spreader had landed on the hatch cover in a misaligned position. Even the plaintiffs' expert witness, Capt Lee, testified that if AB Clemente had noticed that the Spreader was misaligned after it landed on the hatch cover, he could have informed STA Balraj about this. Although the plaintiffs pointed out that the vessel's crew was unable to communicate with the PSA's personnel because they, unlike STA Balraj, had no walkie-talkie to communicate with the crane operator, AB Clemente admitted that if he had informed the vessel's officer of the need to stop the hatch cover lifting operation, the latter would have been able to stop the lifting operation. He testified as follows:

Q Yes, if there was any possible breach of safety regulations in your cargo operation, whether it is the lifting of a container or lifting of a hatch cover, would the duty officer be able to stop the lifting there and then?

A He's able to stop your Honour, if I call him, if I report him, your Honour.

150 AB Clemente also testified that he was standing next to STA Balraj at the material time and that the latter was communicating with the crane operator. As such, regardless of whether he had been given a walkie-talkie to talk to the crane operator, AB Clemente could have alerted STA Balraj if the lifting operation had to be stopped.

151 The crane operator, Mr Wong, testified that if the crew of the vessel demanded that cargo operations be stopped, he would have complied with the demand. He stated as follows:

Q Will you comply if the vessel's crew insist that you can only lift the hatch cover if they and they alone give you permission, will you listen to them?

A Yes.

Q So if they ask you to stop you will stop?

A Yes.

Q Has this happened before?

A Yes.

….

Q Who gave you the instruction?

A They will inform the STA, STA will inform the control centre. Then the control centre will ask we all to stand by.

152 As the hatch cover was lifted in the presence of the vessel's crew during joint unloading operations by the vessel crew and the PSA, and the vessel's officer could halt the lifting operation if there was a need to do so, it cannot be said that the PSA was the bailee of the hatch cover.

153 The plaintiffs sought to rely on *The Ruapehu* (1925) 21 Ll LR 310, which was cited in *The Wilson Ruby* [1998] 1 SLR(R) 932 to support their contention that there was a bailment of the hatch cover. However, those cases involved claims against the repairers of a vessel while they were in the repairers' own drydock. In *The Ruapehu*, Atkin LJ pointed out (at 314-315) that it was clear that the defendants had possession of the vessel as she was in their enclosed yard and they were entitled to maintain a possessory lien in respect of payment for the repairs executed by them. As such, *The Ruapehu* and *The Wilson Ruby* are not relevant to the present case.

PSA proved that it was not negligent

154 For the sake of completeness, I might add that even if the PSA was a bailee of the hatch cover, it was not the insurer of the hatch cover. In *Coggs v Bernard* (1703) 2 Raym Ld 909, 918, Holt CJ explained:

> [H]e is only to do the best he can. And if he is robbed it is a good account. If he receives money and keeps it locked up with reasonable care he shall not be answerable for it though it be stolen.

155 More recently, in *Sun Technosystems*, the Court of Appeal outlined (at [16]) in the following helpful terms what a bailee must show to avoid liability for negligence:

> More importantly, we should not lose sight of the main issue - which is ***whether or not the bailee can prove that it was not negligent and had, instead, taken reasonable care of the goods in question.*** Looked at in this light, proof of circumstances under which the loss or damage occurred is ***only one factor, albeit an important one.*** Indeed, if the bailee can prove what ***precisely*** took place in order to demonstrate that it had not been negligent, that would obviously serve to advance its case. ***But the converse does not necessarily follow.*** This is because the inquiry is a holistic one; it is also (potentially, at least) a multidimensional one. In other words, the bailee has, at its disposal, a myriad of ***other*** reasons to demonstrate that it had not been negligent. For example, … the bailee could also demonstrate that it had adopted ***an appropriate standing operating procedure*** to prevent loss or damage in place, and had adhered to it scrupulously.
>
> [emphasis in original]

156 I have found that Mr Wong had not been negligent in any way and had followed the 3-step hoist when lifting the hatch cover. I have also found that STA Balraj had walked around the Spreader and done the requisite checks and that the eye-witness accounts of the accident did not support the plaintiffs' theory of the accident. Furthermore, the PSA had properly maintained the gantry crane and the Spreader. The crane operator, Mr Wong, had conducted a detailed routine functional test on the crane before lifting operations and found that all was in order. In any case, it may be recalled that the plaintiffs deleted their allegation that the equipment had not been properly maintained from the Statement of Claim after the PSA had filed AEICs to counter this allegation. After taking all circumstances into account, I was satisfied that the PSA had proven that it had not been negligent and had taken reasonable care of the hatch cover. As such, even if it had been a bailee of the hatch cover, the PSA was not liable to the plaintiffs for the accident.

Res ipsa loquitur

157 After having attempted to prove through experts and factual witnesses that the PSA was negligent, the plaintiffs attempted to rely on the doctrine of *res ipsa loquitur*. They contended that the fact that the hatch cover was damaged was evidence of the PSA's negligence and the PSA had a

burden of refuting the negligence.

158 In *Teng Ah Kow and another v Ho Sek Chiu and others* [1993] 3 SLR(R) 43, the Court of Appeal referred to this doctrine and stated (at [22]) as follows:

> It seems to us settled law that the principle of *res ipsa loquitur* is no more than a rule of evidence of which the essence is, as Lord Radcliffe pointed out in *Barkway v South Wales Transport Co Ltd* [1950] 1 All ER 392, that an event which in the ordinary course of things is more likely than not to have been caused by negligence is by itself evidence of negligence. It would then be for the defendant to rebut the *prima facie* case.

159 There are a number of pre-conditions for the application of *res ipsa loquitur.* The editors of ***Clerk & Lindsell*** *on Torts* 20th Ed, relying on the judgment of Erle CJ in ***Scott v The London and St Katherine Docks Company*** (1865) 3 H & C 596; 159 ER 665, explained (at 8-172) that the *res ipsa loquitur* applies where -

> (1) the occurrence is such that it would not have happened without negligence and (2) the thing that inflicted the damage was under the sole management and control of the defendant, or of someone for whom he is responsible or whom he has a right to control. If these two conditions are satisfied it follows, on a balance of probability, that the defendant, or the person for whom he is responsible, must have been negligent. There is, however, a further negative condition: (3) there must be no evidence as to why or how the occurrence took place. If there is, then appeal to *res ipsa loquitur* is inappropriate for the question of the defendant's negligence must be determined on that evidence.

160 The plaintiffs erroneously claimed that all the requirements for the application of *res ipsa loquitur* had been fulfilled. To begin with, the first pre-condition, namely that it is more likely than not that the accident would not have happened without the PSA's negligence, was not met. In *Cheong Ghim Fah v Murugian s/o Rangasamy* [2004] 1 SLR(R) 628 ("*Cheong Ghim Fah*"), VK Rajah JC explained (at [32]):

> [*Res ipsa loquitur*] does not apply in situations where the accident could conceivably have happened within any one of a number of different permutations: some consistent with the defendant's negligence, *some with the plaintiff's negligence or even a combination of negligence on the part of both parties.*
>
> [emphasis added]

161 The plaintiffs deliberately shut their eyes to the fact that there could be a number of reasons for the dropping of the hatch cover, not all of which are traceable to the PSA's negligence. It cannot be overlooked that in his preliminary report dated 8 January 2009, which was just two days after the accident, the plaintiffs' own witness, Mr Sio, the surveyor appointed by the vessel's hull and machinery insurers, had recommended a metallurgical examination of the detached lifting socket as well as the part of the hatch cover plate from where the lifting socket was ripped off. When cross-examined, Mr Sio confirmed that he had made this recommendation because he was concerned that the lifting socket may have been defectively welded to the hatch cover. As the plaintiffs did not conduct the recommended metallurgical test, they were in no position to claim that the accident could only have occurred if the PSA had been negligent.

162 The second requirement for the application of *res ipsa loquitur*, namely that the hatch cover was under the defendant's sole management and control, was also not met. As mentioned, cargo

operations are a joint responsibility of the plaintiffs and the PSA, and the plaintiffs' own Safety Management System and Chief Officer's Standing Orders required the vessel's crew to observe and ensure that the hatch cover was lifted safely.

163 The third requirement for the application of *res ipsa loquitur*, namely that there must be no evidence as to why or how the occurrence took place, was also not met by the plaintiffs, who forwarded a precise theory as to how the accident occurred, which was that the Spreader's aft twistlocks did not properly connect to the hatch cover. *Res ipsa loquitur* is not a plaster to cover up cracks in the plaintiffs' case on the cause of the accident and in *Cheong Ghim Fah*, VK Rajah JC aptly noted (at [31]) that there was an erroneous belief that *res ipsa loquitur*, an evidential principle of common sense, "can supplement or fill voids in the evidence".

164 In their closing submissions, the plaintiffs relied on *Tesa Tape Asia Pacific Pte Ltd v Wing Seng Logistics Pte Ltd* [2006] 3 SLR(R) 116 ("*Tesa Tape*") but failed to point out to the court that the judge concluded that *res ipsa loquitur* was inapplicable in that case because there was ample evidence on causation, and his discussion on the evidence formed the bulk of his judgment. In the present case, the plaintiffs had also submitted ample evidence of the alleged negligence of the PSA and the discussion of the said evidence forms a major part of this judgment. As such, the decision in *Tesa Tape* undermines the plaintiffs' argument that they are entitled to rely on *res ipsa loquitur.*

165 The plaintiffs also relied on a Malaysian decision, *Sarawak Shell Bhd v The Owners or other persons interested in The Ship or Vessel The 'Red Gold' and another action* [2011] 1 MLJ 239 to support their assertion that a specific plea of negligence does not prevent them from making an alternative plea of *res ipsa loquitur.* The facts in that case are rather different as a vessel owned by the defendant in that case hit the plaintiff's *stationary* platform after the pitch control of her bow thruster unit jammed. As such, no question of any negligence on the plaintiff's part arose and the judge held that "whether by application of the presumption of *res ipsa loquitur* or applying the standard test for establishing negligence, the facts of the instant case arrive at the same point or *prima facie* conclusion, namely that the onus shifts to the owners to establish, as they have comprehensively pleaded, inevitable accident". The plaintiffs' position in the present proceedings is quite different as it cannot be said that if the standard test of negligence is applied, the facts point to the conclusion that the PSA was necessarily negligent.

166 For the reasons stated, the plaintiffs cannot rely on *res ipsa loquitur.* In any case, even if this doctrine was applied, the PSA had rebutted any inference of negligence for reasons already stated.

The Counterclaim

167 In its closing submissions, the PSA indicated that it would withdraw its counterclaim if the plaintiffs failed to prove their title to sue or their theory on the cause of the accident. In view of my findings, the counterclaim need not be considered.

Conclusion

168 For the reasons stated, the plaintiffs' claim is dismissed with costs.