

**IN THE SINGAPORE INTERNATIONAL COMMERCIAL COURT
OF THE REPUBLIC OF SINGAPORE**

[2023] SGHC(I) 3

Suit No 4 of 2017

Between

Kiri Industries Ltd

... Plaintiff

And

- (1) Senda International Capital Ltd
- (2) DyStar Global Holdings
(Singapore) Pte Ltd

... Defendants

JUDGMENT

[Companies — Shares — Valuation of shares]

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Kiri Industries Ltd
v
Senda International Capital Ltd and another

[2023] SGHC(I) 3

Singapore International Commercial Court — Suit No 4 of 2017
Kannan Ramesh JAD, Roger Giles IJ and Anselmo Reyes IJ
8, 29 August 2022

8 February 2023

Judgment reserved.

Kannan Ramesh JAD (delivering the judgment of the court):

Introduction

1 The relevant factual background to this long-running case can be found in *DyStar Global Holdings (Singapore) Pte Ltd v Kiri Industries* [2018] 5 SLR 1, where the Singapore International Commercial Court (“the SICC”) held that Senda International Capital Ltd (“Senda”) had engaged in instances of oppressive conduct against Kiri Industries Ltd (“Kiri”) in relation to DyStar Global Holdings (Singapore) Pte Ltd (“DyStar”), which was their joint venture vehicle. Senda was ordered to purchase Kiri’s 37.57% shareholding in DyStar at a price based on a valuation to be assessed as at the valuation date of 3 July 2018 (“the Buy-Out Order”). The findings in relation to oppression and the valuation date were upheld on appeal in *Senda International Capital Ltd v Kiri Industries Ltd* [2019] 2 SLR 1.

2 The most recent tranche of proceedings concerned the valuation of DyStar and Kiri’s shareholding in DyStar. The question of the appropriate valuation of Dystar and Kiri’s shareholding in Dystar turned primarily on expert evidence. In this regard, Kiri and Senda had engaged valuation experts in support of their respective positions. Having heard the parties, the SICC delivered its judgment in *Kiri Industries Ltd v Senda International Capital Ltd and another* [2021] 3 SLR 215 (“the Valuation Judgment”), where the court provided an interim valuation of DyStar, subject to adjustments to be made by the parties’ valuation experts on nine issues (“the Nine Issues”). Subsequently, in *Kiri Industries Ltd v Senda International Capital Ltd and another* [2021] 5 SLR 1, the SICC addressed the adjustments to be made to the interim valuation arising from the Nine Issues and directed the parties’ experts to tender an agreed computation of DyStar’s final valuation. Based on the agreed computation, the SICC adjudged the final valuation of Kiri’s shareholding in Dystar to be US\$481.6m for the purpose of the Buy-Out Order (see *Kiri Industries Ltd v Senda International Capital Ltd and another* [2021] 5 SLR 111).

3 One of the issues addressed in the Valuation Judgment was the quantum of the notional licence fee. That issue related to Zhejiang Longsheng Group Co, Ltd’s (“Longsheng”) unauthorised use of DyStar’s patent (“the Patent”) over “Orange 288” dyes to produce various dyes. The SICC decided that the compensation for such unauthorised use was to be assessed on the basis of a notional licence fee, *ie*, how much Longsheng would have paid DyStar to obtain its consent to use the Patent to manufacture the said dyes (see the Valuation Judgment at [183]). The notional licence fee that was assessed would then be incorporated into the valuation of Dystar to arrive at the value of Kiri’s shareholding for the purpose of the Buy-Out Order.

4 The notional licence fee was to be assessed based on the quantity of infringing products produced by Longsheng falling within the scope of the Patent (the “Related Products”). In the Valuation Judgment, the SICC determined that in assessing the amount of the notional licence fee, the appropriate basis was to employ the methodology proposed by Senda’s expert, Mr Chan, in determining the quantity of the Related Products and using Longsheng’s licencing agreement with another company as a proxy for the rate, subject to certain adjustments (see the Valuation Judgment at [190]). The SICC accepted Mr Chan’s evidence as Kiri had not submitted an alternative case on this issue and the court did not have direct evidence on the quantity of the Related Products that Longsheng had produced. This was a result of Senda’s failure to give adequate discovery on, *inter alia*, the quantity of the Related Products that was produced (see the Valuation Judgment at [194]).

5 On appeal from the Valuation Judgment, in *Kiri Industries Ltd v Senda International Capital Ltd and another and other appeals and other matters* [2022] SGCA(I) 5 (“*Kiri Industries (Valuation) (CA)*”), the Court of Appeal upheld the SICC’s decision on the use of a notional licence fee but disagreed with the SICC’s assessment of the notional licence fee on the basis of Mr Chan’s evidence, in particular, in arriving at the quantity of the Related Products. The Court of Appeal held that the SICC’s approach “had the effect that Senda was to be rewarded for its under-disclosure because the onus of proving the amount of products produced by Longsheng and which were covered by the relevant claims in [the Patent], fell on Kiri” (*Kiri Industries (Valuation) (CA)* at [267]). Thus, the Court of Appeal remitted the issue on the value of the notional licence fee back to the SICC to be reassessed based on the best available evidence that was before it on the quantity of the Related Products (*Kiri Industries (Valuation) (CA)* at [291]–[292]).

6 Accordingly, in the present proceedings, the key issue for us is to determine the quantity of infringing products produced by Longsheng between 31 August 2010 to 23 March 2019 using the Patent, *ie*, the Related Products. Such quantity was measured in terms of tonnage. As there was no *direct* evidence on the quantity of the Related Products, we must instead rely on the *indirect* evidence on this issue that was before us.

The court’s approach in evaluating the evidence for quantifying the tonnage of the Related Products

7 In evaluating the evidence, Kiri urges us to apply the principle in *Armory v Delamirie* (1722) 1 Stra 505 (“*Armory v Delamirie*”). If applied, Kiri argues that its expert’s (*ie*, Ms Harfouche’s) estimates of the quantity of the Related Products should be accepted wholesale in assessing the notional licence fee, with the benefit of any doubt being given to Kiri. This is because per the principle in *Armory v Delamirie*, Senda ought to be liable for the greatest value of the notional licence fee given its under-disclosure of the quantity of the Related Products (*ie*, the court should agree with Ms Harfouche’s higher estimate on the quantity of the Related Products).

8 The case of *Armory v Delamirie* is a well-known decision concerning the determination of property rights in a stolen jewel which was not produced at trial. The principle is applied to decide on the value of goods that were tortiously converted and where the alleged wrongdoer refuses to produce the goods, such that the value remains unknown. In such cases, there is a presumption against the wrongdoer that the goods converted bear the highest value of the goods of that type (see *Halsbury’s Laws of Singapore* vol 18 (LexisNexis, 2019 reissue) at para 240.564, footnote 1).

9 But the interplay between the illustration (g) of s 116 of the Evidence Act 1893 (2020 Rev Ed) (the “EA”) and the principle in *Armory v Delamirie* has yet to be explored fully. In the majority of cases, there is simply no need to resort to the principle in *Armory v Delamirie* as the court can instead rely on illustration (g) of s 116 of the EA to draw an adverse inference that the evidence which could be and was not produced would, if produced, be unfavourable to the person who withholds it (see *Sudha Natrajan v The Bank of East Asia Ltd* [2017] 1 SLR 141 (“*Sudha Natrajan*”) at [19]). The rationale for the adverse inference is the natural inference that the party fears that the evidence, if produced, would be unfavourable to himself (see *Jones v Dunkel* (1959) 101 CLR 298 at 320–321). Further, it has been observed that the “authorities do not necessarily speak with one voice” on the application of the *Armory v Delamirie* principle (*Sea-Shore Transportation Pte Ltd v Technik-Soil (Asia) Pte Ltd* [2018] SGHC 231 (“*Sea-Shore*”) at [70]). We would thus prefer to rely on the well-established principles of drawing the appropriate inference when necessary and to do so depending on the circumstances of the case as laid down in the Court of Appeal’s decision in *Sudha Natrajan* (read with illustration (g) of s 116 of the EA).

10 In the present proceedings, as will be explained further below (see [30]), we do not in fact find it appropriate to draw an adverse inference against Senda that it should be liable for the greatest value of the tonnage of the Related Products. Neither do we consider it appropriate to rely on the principle in *Armory v Delamirie*. In either case, the asserted presumption by Kiri against Senda in relation to the tonnage of the Related Products, simply does not square with the factual matrix before the court as there was contrary evidence that renders the presumption and Ms Harfouche’s estimates inaccurate.

11 We also are guided by the Court of Appeal’s statement that a robust approach to the assessment of damages should be taken where loss has been suffered but the quantum is difficult to assess (*Kiri Industries (Valuation)* (CA) at [291], citing *Robertson Quay Investment Pte Ltd v Steen Consultants Pte Ltd and another* [2008] 2 SLR(R) 623 at [30] and [36]). The court must do its best based on the available evidence on whether there was damage suffered, and if so, to what extent (see James Edelman, *McGregor on Damages* (Sweet & Maxwell, 21st Ed, 2021) at para 10-002). Accordingly, having set out the appropriate approach, we turn to assess what represented the best available evidence before the court regarding the tonnage of the Related Products.

Quantifying the tonnage of the Related Products based on the best available evidence before the court

12 Before proceeding further, it is necessary to clarify the meaning of “Related Products” as the parties do not agree on the products that fall within this definition. Kiri’s position is that Related Products are those that are produced using the Patent. On the other hand, Senda argues that products produced using the Patent (which it calls “Patented Products”) are only a subset of Related Products, and that Related Products are *all* navy and black disperse dyes, with some navy and black disperse dyes produced or capable of being produced without using the Patent. Thus, on Senda’s case, Patented Products and Related Products are not synonymous. In our view, Kiri’s position is to be preferred. We explain.

13 The Chief Executive Officer of DyStar, Mr Eric Hopmann, tended to associate the term “Related Products” with the products that were produced using the Patent when he referenced that term in his evidence. For example, he had said in his affidavit of evidence-in-chief (“AEIC”) dated 29 September

2017: “In other words, the Patent was not acquired by DyStar KG in order for the DyStar Group to synthesize the Related Products – which it does not.” This statement by Mr Hopmann suggests that all of the Related Products are synthesised using the Patent. If not, this would have been a superfluous statement. Mr Hopmann had also deposed that “the acquisition of the Patent – and its main value to the DyStar Group – is to allow the DyStar Group to control the price of the Related Products (which the DyStar Group sells)”. It is clear from this statement that all of the Related Products are synthesised using the Patent as DyStar would not otherwise be able to control the price of the Related Products if they included products not produced using the Patent. To this extent, Kiri’s position is preferred by the court. Also, whilst neither side has referred to this in their submissions, the SICC did in fact accept Kiri’s position previously in the Valuation Judgment (at [192]): “Longsheng had been trading related products (which we accept fall within the scope of the Patent)”.

14 As stated above (at [4]–[5]), the SICC had previously found that the appropriate basis for determining the value of the notional licence fee was the methodology proposed by Senda’s expert, Mr Chan (see the Valuation Judgment at [190]). The Court of Appeal disagreed with this (*Kiri Industries (Valuation)* (CA) at [292]), and hence the issue has to be decided afresh.

15 Turning then to the key issue of the tonnage of the Related Products, Kiri has urged us to adopt Ms Harfouche’s estimate in her expert report dated 22 August 2019 of 120,000 tonnes of the Related Products, which she asserts Longsheng produced annually, for the purpose of calculating the notional licence fee. On the other hand, Senda contends that the tonnage ought to be 41,750 tonnes annually based on the updates to Mr Chan’s expert report dated 31 March 2020 (“CKT-3”). In our view, neither of these estimates is *entirely* satisfactory as each has its own flaws.

Senda’s expert opinion by Mr Chan should not be adopted

16 We start by addressing the estimate in CKT-3. Prior to CKT-3, Mr Chan did not comment on Ms Harfouche’s estimate of 120,000 tonnes of the Related Products. CKT-3 was filed the day before Ms Harfouche took the stand to be cross-examined and was a response to her estimate of the Related Products. CKT-3 calculated that the tonnage of the Related Products sold by Longsheng averaged only 41,750 tonnes annually between 2014 and 2018. In our view, this calculation should be rejected for the following reasons.

17 First, Mr Chan had arrived at this calculation using the “[h]istorical quantities of dyes sold by the DyStar Group ... summarised in the model disclosed in DyStar’s 20th Supplementary List of Documents”. The model relied on by Mr Chan is the same February 2020 model that had been rejected by the SICC previously because, *inter alia*, Senda failed to disclose the financial documents supporting the entries therein (see the Valuation Judgment at [151]). Specifically, the February 2020 model stated that the historical sales revenue was extracted from a certain database called “SAP-BW”, but Senda did not disclose that database such that the underlying data could be verified. In the circumstances, the calculation in CKT-3 is based on unsupported data and ought to be rejected.

18 Second, and perhaps more importantly, the figure of 41,750 tonnes for the Related Products in CKT-3 is inexplicably less than Longsheng’s total sales of just *three* of the Related Products. The three Related Products were: (a) Disperse Black ECT 300%, (b) Disperse Black EX-SF 300%, and (c) Disperse dark blue HGL. Mr Manish testified on Longsheng’s sales volumes for the three Related Products based on figures extracted from the reports of the China Dyestuff Industry Association (“CDIA”). The CDIA reports showed that

Longsheng's annual sales volume for the three Related Products in the years 2010 to 2014 was already over 50,000 tonnes. Therefore, Mr Chan's calculation of annual sales of only 41,750 tonnes for *all* Related Products cannot be right as it is inexplicably less than Longsheng's sales for just *three* Related Products.

19 We also note that Senda has put forward an alternative computation of 20,875 tonnes of the Related Products produced and sold annually by Longsheng by making a revision to the computation in CKT-3. Senda made the secondary argument that the revision would render the computation more accurate such that it could be accepted as the correct basis for valuing the notional licence fee. Senda points out that while the original computation in CKT-3 was premised on Ms Harfouche's assumption, stemming from a Morgan Stanley report, that the Patent was used for more than 50% of the global disperse dye production, the assumption could not be correct as the global proportion did not necessarily represent Longsheng's proportion. Instead, Mr Chan proposed, as *a proxy* for Longsheng's sale of the Related Products as a percentage of its total sale of disperse dyes generally, the dye production proportion that applied to *DyStar* based on the figures it had disclosed. DyStar's historical sales of disperse dyes and the Related Products between 2013 and 2018 showed that, on average, DyStar's sale of the Related Products was 25% of its sale of disperse dyes. Senda thus submits that utilising the figure of 25% (instead of 50% in the original computation in CKT-3) is a reliable proxy for Longsheng's sale of the Related Products as a percentage of its total sale of disperse dyes generally. Using this percentage, Mr Chan revised the computation in CKT-3 to an average annual production of the Related Products of 20,875 tonnes.

20 We reject Mr Chan's alternative computation for three reasons. First, it is not evident why DyStar's sale of the Related Products as a proportion of its sales of disperse dyes generally provides a *reliable proxy* for Longsheng's own

proportion. This was never put forward for Ms Harfouche to deal with or tested in cross-examination, and there is therefore no reason for us to accept the figure. Second, the alternative computation also suffers from the same defect highlighted previously in relation to the original computation in CKT-3, in that it was similarly arrived at by using unsupported data from the February 2020 model (see above at [17]). Third, the figure of 20,875 tonnes annually is for *all* Related Products. This is again inexplicably lower than the figure of 50,000 tonnes sold annually for just three Related Products (see above at [18]).

21 Therefore, we reject both the original and revised computation in CKT-3. We turn next to assess Ms Harfouche's estimate.

Kiri's expert opinion by Ms Harfouche cannot be adopted wholesale

22 Ms Harfouche's estimate was that Longsheng produced 120,000 tonnes of the Related Products annually. The figure of 120,000 tonnes was arrived at after deducting the 3,200 tonnes (representing the Related Products that Longsheng produced for Dystar) from the 123,000 tonnes that Longsheng produced in total using the Patent – it being common ground that such sales should not form part of the computation for the notional licence fee. The methodology in the calculation of the 123,000 tonnes was summarised in her first table of estimates:

Estimation using data from Eric Hopmann's AEIC

'000 tonnes	Ref.	2016
Global market production of black disperse dyes (Chinese producers)	(a)	250
Global market production of black disperse dyes	(b) = (a) / 90%	278
Global production of black disperse dyes (Longsheng and Runtu)	(c) = (b) * 80%	222
Longsheng's and Runtu's market share of the disperse dye market in China (brokers)	(d)	45%
Longsheng's market share of the total disperse dye market in China (brokers)	(e)	25%
Estimate of Longsheng's annual production of Related Products	(f) = (c) * (e) / (d)	123

23 There was also an alternative estimate provided by Ms Harfouche in a second table of estimates based on information taken from several broker reports on the total dye production in China. This was done in order to cross-check the figure of 120,000 tonnes arrived at using the first table of estimates:

Alternative estimation using data from broker reports

Total dye production in China	(a)	928
Share of disperse dyes out of total production	(b) = (a) * 49%	455
Share of Related Products out of total disperse dye production	(c) = (b) * 50%	227
Longsheng's and Runtu's market share of total disperse dye market in China	(d)	45%
Longsheng's share of the total disperse dye market in China	(e)	25%
Estimate of Longsheng's annual production of Related Products	(f) = (c) * (e) / (d)	126

24 The estimate of 123,000 tonnes was based principally on Mr Hopmann's evidence in his AEIC that the total black disperse dye production in China was approximately 250,000 tonnes in 2016. He also stated that Chinese producers alone accounted for more than 90% of the global production of black disperse dyes (with only a handful being produced outside China) and that Longsheng and Zhejiang Runtu Co Ltd ("Runtu"), another Chinese producer, collectively accounted for roughly 80% of the global production of black disperse dye mixtures in 2010. Mr Manish estimated that this proportion remained relatively stable over the years. Referring to the first table of estimates above (at [22]), a breakdown of the calculations is as such:

(a) Step (a) starts with the total black disperse dye production in China at approximately 250,000 tonnes.

(b) Step (b) divides the figure of 250,000 tonnes by 90% to arrive at the global production of black disperse dyes as China accounted for 90% of the global market for black disperse dyes. This figure would give the global production of black disperse dyes at 277,777 tonnes.

(c) Step (c) concerns Longsheng and Runtu's share of the global production of black disperse dyes. As Longsheng and Runtu have a collective share of 80% of that market, the figure of 277,777 tonnes is multiplied by 80% to give Longsheng and Runtu's global production of black disperse dyes at 222,222 tonnes. Up until this point, Ms Harfouche's calculation seems reasonable if the assumptions stated above are correct.

(d) Steps (d), (e) and (f): On the basis of a GF Securities broker report, Ms Harfouche assumed that Longsheng and Runtu had individual shares of 25% and 20% respectively of the total disperse dye market in China for 2016, and thus a collective share of 45%. This is reflected in Steps (d) and (e). At this juncture, we pause to observe that Longsheng and Runtu's collective share of 45% of *total* disperse dyes for the Chinese market appears on its face to be at odds with the assumption in Step (c) that they collectively had, based on Mr Hopmann's AEIC, 80% of the global *black* disperse dye market. If Longsheng and Runtu had 45% of the Chinese market and yet 80% of the global market, broadly speaking, this must mean that the producers who accounted for the remaining 55% of the total disperse dye market in China would be part of the remaining portion of 20% of the global production (or less). This raises reason to pause on the accuracy of the assertions in Mr Hopmann's AEIC. However, putting this to one side, Ms Harfouche completes the calculation in Step (f) by relying on the assumption that Longsheng and Runtu's respective shares of the Chinese market for black disperse dyes are the same as their shares for the Related Products, and *Longsheng only produces navy and black disperse dyes using the Patent (ie, the Related Products)*. Ms Harfouche calculates Longsheng's production of the Related Products by dividing 222,222 tonnes by 45%

and multiplying the resulting figure by 25% to arrive at approximately 123,000 tonnes. From this, she deducts 3,200 tonnes for the Related Products produced for Dystar to arrive at 120,000 tonnes.

25 In our view, however, there is a primary error in Ms Harfouche’s calculations in Steps (d), (e) and (f) that makes her first table of estimates unreliable.

26 The primary error is the assumption that Ms Harfouche makes in Steps (c), (d), (e) and (f) that *all* of the navy and black disperse dyes produced by Longsheng and Runtu involved use of the Patent, *ie*, the Related Products. On this basis, she equates Longsheng and Runtu’s global production of black disperse dyes of 222,222 tonnes to their 45% share of the Chinese market for disperse black dyes, which is used as a proxy for their share of the Chinese market for Related Products. We address the use of the proxy below (at [37]). Ms Harfouche thus assumed that the 222,222 tonnes of black disperse dyes produced by Longsheng and Runtu (Step (c)) comprises solely of *Related Products*.

27 This cannot be correct. We first consider the calculation in relation to Longsheng. Kiri explains that Ms Harfouche’s calculation is “based on Manish’s implicit assumption that all Longsheng’s black and navy disperse dyes are produced using the Patent”. However, as Senda rightly points out, the implicit assumption by Mr Manish is not soundly made as Longsheng is capable of producing more than 100 black disperse dyes without using the Patent. Apart from the Patent, Longsheng also has 42 other patents that relate to the production of black and navy disperse dyes which would not be regarded as Related Products as they do not contain the “Orange 288” molecule, a key constituent of the Patent. Ms Harfouche’s calculation is therefore incorrect as

not all navy and black disperse dyes produced by Longsheng involved use of the Patent. Indeed, Ms Harfouche herself made it clear that she did not know whether the reference to total black disperse dyes in Step (c) covers the Related Products, which is unsurprising given that she has proceeded on the basis of Mr Manish's implicit assumption, which she did not verify and, in any event, appears to be incorrect.

28 We next consider Runtu. In using 222,222 tonnes, Ms Harfouche also assumes that *all* of Runtu's production involved use of the Patent. There is no evidential basis for this assumption. In her expert report, Ms Harfouche only makes reference to Mr Manish's evidence which related only to the implicit assumption that all of Longsheng's black and navy disperse dyes are produced using the Patent. Nothing was said about Runtu in her report.

29 Therefore, Ms Harfouche was not entitled to assume that all of the tonnage of 222,222 tonnes comprised Related Products and to use it as the basis of her computation. It is this assumption that is the primary error, and which renders her first table of estimates unreliable. It is pertinent to point out that the factual assumption made by Ms Harfouche in the first table of estimates based on Mr Manish's implicit assumption (*ie*, all of Longsheng's production comprises Related Products) is not consistent with her assumption in the second table of estimates. In the second table of estimates (see above at [23]), she utilised the figure of 50% in Step (c) as the proportion of Related Products out of the total disperse dye production based on credible broker reports (instead of assuming that it was 100% based on Mr Manish's implicit assumption (as canvassed above at [27])). This inconsistency in the assumptions made shows up the inaccuracy of Mr Manish's implicit assumption and the error in the first table of estimates. It also demonstrates why the second table of estimates cannot be used to cross-check the final figure in the first table of estimates. It is difficult

to see how the second table serves to cross-check the first when the key assumptions are palpably different.

30 In this connection, we observe that Kiri's reliance on the principle in *Armory v Delamirie* to argue that the court should assume that the entire figure of 222,222 tonnes comprised of the Related Products, is flawed. The court is not entitled to assume the worst against Senda (as the wrongdoer) if the assumption is established to be incorrect. The principle in *Armory v Delamirie* is not a licence for the court to engage in pure guesswork (*Sea-Shore* at [70]), or worse, *come to conclusions which are contrary to the established facts*. There is cogent contrary evidence showing that not all of Longsheng's production of black and navy disperse dyes may be Related Products (as explained above at [27]). At the same time, there is simply no basis for concluding or for drawing the inference that all of Runtu's production involved use of the Patent. It follows that it is impermissible to draw the inference that Kiri seeks on the basis of the principle in *Armory v Delamirie* or indeed an adverse inference on the basis of the EA, *ie*, that the entire tonnage of 222,222 tonnes was Related Products. It is evident that Longsheng is capable of producing black disperse dyes without using the Patent, and also, there is no basis to suggest that all of Runtu's production involved use of the Patent. Thus, the worst cannot be assumed against Senda, as any inference drawn must be consistent with the rest of the factual matrix.

31 For these reasons, Ms Harfouche's calculation of 123,000 tonnes in the first table of estimates (based on information from Mr Hopmann's AEIC) cannot be accepted as yielding an accurate annual tonnage of the Related Products.

Another basis for calculating the tonnage of the Related Products

32 In our view, the court can alternatively determine the tonnage of the Related Products premised on the broker reports utilised by Ms Harfouche in her second table of estimates (see above at [23]). These publicly available broker reports provide reliable evidence of the production figures, rather than unbacked assumptions by Mr Manish.

33 The second table of estimates starts with the total dye production in China which, according to the broker reports, is 928,000 tonnes (Step (a) of the second table of estimates). Out of this, Ms Harfouche worked out the share of disperse dyes by relying on data from the broker reports. She multiplied the figure of 928,000 by 49% to arrive at 455,000 tonnes rounded up (Step (b)). The share of the Related Products out of the total disperse dye production in China is then calculated by taking 455,000 tonnes and multiplying that by 50% as half of the disperse dyes consisted of the Related Products (Step (c)). This gives us the figure of 227,000 tonnes. It is pertinent to note that in his computation of CKT-3, Mr Chan has retained the two assumptions made by Ms Harfouche, namely, that disperse dyes accounted for 49% of the total domestic dye production in China and the Patent is used for 50% of the global disperse dye production. These assumptions are based on the GF Securities and Morgan Stanley broker reports respectively, which Ms Harfouche used to support her assumptions.

34 That leaves the court with the figure of 227,000 tonnes which represented the share of the Related Products out of the total disperse dye production in China (Step (c) of the second table of estimates). At this stage, the primary error that was made in the first table of estimates (see above at [26]) does not arise as there is a credible evidential basis from the broker reports (as

opposed to Mr Manish’s implicit assumption) to conclude that 50% of the total disperse dye production in China consists of the Related Products. The 50% figure applies to all producers, including both Longsheng and Runtu, and therefore addresses both facets of the error outlined above (at [26]–[28]).

35 At this juncture, it is apposite to point out that there is a slight gloss on Ms Harfouche’s use of the 50% figure in Step (c) of the second table of estimates. That figure, derived from a Morgan Stanley broker report, relates to the *global* proportion as opposed to the proportion in the *Chinese* market. In other words, Ms Harfouche applied the *global* share of 50% to the total domestic dye production figure in *China* of 455,000 tonnes to arrive at the tonnage of 227,000 tonnes of the Related Products produced in the Chinese market. But we think that this is a fair assumption to make in the circumstances (which was also accepted by Mr Chan in CKT-3) given the state of the evidence, and a better basis than Mr Manish’s unsubstantiated and inaccurate assumption.

36 There is, however, an issue with Steps (d), (e) and (f) of the second table of estimates; namely, a mathematical error. Having arrived at the tonnage of 227,000 tonnes of the Related Products produced in the Chinese market, it should have been a simple case of applying Longsheng’s 25% share of the total disperse dye market (which, as explained below, is the proxy for its share of the market for the Related Products) to that figure. If this had been done, Ms Harfouche would have arrived at a figure of 56,750 tonnes (*ie*, it was redundant for Ms Harfouche to consider Step (d)). Instead, she applies Longsheng and Runtu’s collective market share of 45% to the figure of 227,000 tonnes in order to arrive at Longsheng’s 25% share. This is a clear error as the figure of 227,000 tonnes represents 100% of the Chinese market for the Related Products, of which Longsheng and Runtu have 45% collectively and the former only 25%. It is unclear why Ms Harfouche felt it necessary to first obtain Longsheng and

Runtu's market share of the total disperse dye market in China of 45% (Step (d)), before applying Longsheng's 25% share of the total disperse dye market in China (Step (e)) when she had the total market size for the Related Products in China and Longsheng's share of that market. The correct calculation would be to take the figure of 227,000 tonnes and multiply it directly by 25% (in Step (e)). This would yield a figure of 56,750 tonnes of the Related Products produced by Longsheng. In our view, this would be a reliable figure based on the evidence before us.

37 To be clear, while the figure of 25% (in Step (e)) represented Longsheng's share of the *total disperse dye market* in China and not its share of the *Related Products* in China *per se*, in the absence of better information due to the inadequate disclosure by Senda, the court is entitled to take this percentage as an appropriate proxy figure. The final figure of 56,750 tonnes of the Related Products is also reliable as it is greater than the annual tonnage of 50,000 tonnes for the three Related Products as discussed earlier (see above at [18]). After the deduction of the 3,200 tonnes (representing the Related Products that Longsheng produced for Dystar, see above at [22]), a figure of 53,550 tonnes annually is derived from the second table of estimates for the purposes of calculating the notional licence fee.

38 Accordingly, on a robust approach, and taking into account Senda's failure in giving adequate discovery, we determine the annual tonnage of the Related Products produced by Longsheng between 31 August 2010 to 23 March

2019 to be 56,750 tonnes. The annual tonnage for calculating the notional licence fee is 53,550 tonnes (after deducting 3,200 tonnes).

39 The parties are thus invited to submit their revised agreed calculations on the following within 21 days:

- (a) the notional licence fee based on 53,550 tonnes for the Related Products; and
- (b) the valuation of Kiri's shareholding in Dystar based on the notional licence fee, after adjusting for the fact that discount for lack of marketability is not a relevant adjustment as found by the Court of Appeal in *Kiri Industries (Valuation)* (CA) (at [245]).

Kannan Ramesh
Judge of the Appellate Division

Roger Giles
International Judge

Anselmo Reyes
International Judge

Dinesh Dhillon Singh, Lim Dao Kai, Margaret Joan Ling Wei Wei,
Dhivya Rajendra Naidu and Serene Chee Yi Wen (Allen & Gledhill
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Xian Priscilla, Tan Tian Hui and Lim Wee Teck Darren (Rajah &
Tann Singapore LLP) for the first defendant;
Audie Wong Cheng Siew (Drew & Napier LLC) for the second
defendant.
