IN THE GENERAL DIVISION OF
THE HIGH COURT OF THE REPUBLIC OF SINGAPORE

[2023] SGHC 197

Originating Application No 91 of 2022

Between

ONGC Petro additions Ltd

… *Claimant*

And

DL E&C Co, Ltd (formerly known as Daelim Industrial Co Ltd)

… *Defendant*

JUDGMENT

[Arbitration — Award — Recourse against award — Setting aside — Whether Tribunal was functus officio — Whether Tribunal exceeded its jurisdiction by reversing findings made in Liability Award]
[Arbitration — Award — Recourse against award — Setting aside — Breach of natural justice — Whether Quantum Award was manifestly incoherent]

TABLE OF CONTENTS

ONGC Petro additions Ltd v DL E&C Co, Ltd (formerly known as Daelim Industrial Co Ltd)

[2023] SGHC 197

General Division of the High Court — Originating Application No 91 of 2022
S Mohan J
22 November 2022, 5 April 2023

24 July 2023 Judgment reserved.

S Mohan J:

1 The application before me arises out of an arbitration which was bifurcated into two phases on liability and quantum respectively. The claimant in the arbitration (and in this application) succeeded at the liability stage. However, at the quantum stage of the arbitration, the tribunal found that the claimant had failed to prove its pleaded loss, and awarded it only nominal damages. The claimant brings the present application to set aside the award on quantum, on the grounds that the tribunal exceeded its jurisdiction and breached the rules of natural justice by, among others, reversing itself on certain findings it had allegedly made in the award on liability. For the reasons I shall elaborate upon below, I dismiss the claimant's application.

Facts

Background to the dispute

2 The claimant, ONGC Petro additions Limited ("OPAL"), is an Indian joint venture petrochemical company.[1] OPAL is the owner of the Dahej Petrochemical Complex in the state of Gujarat, India.[2] In or around November 2009, OPAL invited bids for the construction of a High-Density Polyethylene plant ("HDPE Plant") at the complex. The contract was to be on a Licensing plus Engineering, Procurement and Construction ("L+EPC") basis, which meant that the contractor would also have to bring with it a licensor to provide the technological know-how to construct the HDPE Plant, and provide the licence to OPAL to operate the plant using the licensed technology.[3]

3 Two eligible bids were submitted. The first was by the defendant, DL E&C Co, Ltd (formerly Daelim Industrial Company Limited) ("Daelim"), using the proprietary technology of Chevron Philips Chemical Company LLC ("CP Chem"). The second was by Samsung Engineering Co Ltd ("Samsung"), using the proprietary technology of Mitsui Chemicals Inc ("Mitsui").[4] OPAL compared the two bids with the aid of its project management consultant, Engineers India Limited ("EIL"), and assessed Daelim's bid to be more advantageous. The L+EPC contract was therefore awarded to Daelim by way of a Notification of Award ("NOA") dated 6 January 2011, for a price of

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1 1st Affidavit of Mahendra Muskara dated 2 May 2022 ("Muskara's 1st Affidavit") at para 11.

2 Muskara's 1st Affidavit at para 13; Final Award dated 28.12.2018 (on the issue of liability) ("Liability Award") at para 1 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at p 55).

3 Muskara's 1st Affidavit at para 14.

4 Muskara's 1st Affidavit at para 15.

approximately US$138,038,000 plus Indian rupees ("INR") 4,593,300,500.[5] The NOA incorporated by reference OPAL's Bidding Documents, which included the General Conditions of Contract ("GCC").[6] The GCC contained the arbitration clause constituting the foundation of the arbitration proceedings that were to come. More importantly, the terms of the GCC also formed the basis of much of the dispute regarding OPAL's claims against Daelim. Daelim acknowledged the NOA and the project was set in motion – as per the NOA, the parties were to sign a formal contract within 30 days.[7]

4 Daelim's triumph in the bidding process was, however, short-lived. Various issues arose with its licensor, CP Chem, which were ultimately never resolved. Just over a month later, on 11 February 2011, Daelim informed OPAL that it could not enter into the formal contract.[8] OPAL's attempts to mediate between Daelim and CP Chem proved unsuccessful, and OPAL proceeded to terminate the NOA on 28 April 2011. With Daelim no longer an option, the L+EPC contract was awarded to the only other bidder, Samsung, on 29 April 2011.[9] This set the stage for the dispute between OPAL and Daelim.

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5 Muskara's 1st Affidavit at para 16; Liability Award at para 16 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at p 63).

6 Liability Award at paras 13, 16 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 61, 63).

7 Liability Award at paras 16–17 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 63–64).

8 Liability Award at para 22 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 66–67).

9 Liability Award at paras 25–28 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 68–69).

The arbitration proceedings

5 OPAL commenced arbitration proceedings against Daelim on 26 November 2012, claiming damages for Daelim's abandonment of the contract.[10] A three-member tribunal consisting of Mr Peter Leaver KC, Justice VN Khare (Retd) and Justice RV Raveendran (Retd) (the "Tribunal") was constituted. Justice VN Khare subsequently resigned as a member of the Tribunal and was replaced by Justice GS Singhvi (Retd).[11] The proceedings were vigorously contested, with Daelim bringing challenges to the constitution of the Tribunal and to its jurisdiction, first before the Tribunal itself, and subsequently before the Singapore High Court in HC/OS 140/2016. The subject matter of these challenges are not material to the present application – it suffices to say that the High Court decided that the Tribunal was validly constituted, and the arbitration was seated in Singapore.[12]

The liability phase

6 By agreement of the parties, the proceedings were bifurcated into two phases dealing with liability and quantum respectively.

7 OPAL's case on liability was essentially as follows: a binding and enforceable contract had come into existence by Daelim's acceptance of the NOA. However, Daelim's subsequent withdrawal amounted to a wrongful repudiation. OPAL therefore sought a declaration that it had rightfully

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10 Liability Award at para 3 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at p 55); Muskara's 1st Affidavit at para 19.

11 Liability Award at paras 5, 8–9 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 56, 57).

12 Liability Award at paras 5–6 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at p 56).

terminated the contract following Daelim's repudiation and claimed, among others, compensation under the following heads of claim:[13]

(a) US$13,803,800 plus INR459,330,050 amounting to 10% of the contract price guaranteed to be paid as security for performance of the contract (the "Guarantee Claim");

(b) INR300.80 crores (or INR3,008,000,000) or an appropriate sum as compensation for the 113-day delay between Daelim's abandonment and the award of the contract to Samsung, resulting in loss on account of delay in creating a revenue producing asset (the "Delay Claim"); and

(c) INR409.28 crores (or INR4,092,800,000) as compensation for the loss of Net Present Value ("NPV") (the "Loss of NPV Claim").

8 A brief explanation of the Loss of NPV Claim is apposite as this claim forms the core of the dispute in the application before me. NPV was the methodology adopted by EIL (OPAL's project management consultant) to evaluate the bids received, utilising three basic components derived from the data submitted by the bidders: capital expenditure, operational costs and economic value derived from bidders' quoted conversion efficiencies. Daelim's bid was evaluated to have a distinctive advantage over Samsung's bid, resulting in a higher NPV – in a nutshell, the higher the NPV, the better. With Daelim's withdrawal from the contract, OPAL had no choice but to contract with Samsung, resulting in an NPV difference. It was this difference in NPV which was claimed by OPAL under its Loss of NPV Claim.[14]

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13 Liability Award at paras 30–35 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 70–73).

14 Statement of Claim on Liability at paras 4.60–4.75 (Muskara's 1st Affidavit, Exhibit MM-4, Tab A at pp 327–331).

9 In its defence, Daelim raised several grounds such as illegality and impossibility of performance to contend that the contract was void or that Daelim was discharged from performance. Daelim further denied OPAL's entitlement to the heads of damage claimed.[15] It argued that:[16]

(a) OPAL was not entitled to make the Guarantee Claim because the final contract was never finalised and executed, such that Daelim's obligation to provide a performance guarantee never arose;

(b) OPAL was not entitled to make the Delay Claim because it did not suffer any loss or damage on account of the alleged delay and the claim was in any event excluded under cll 6.2.1 and 6.2.3 of the GCC;

(c) the Loss of NPV Claim was also barred by cll 6.2.1 and 6.2.3 of the GCC, which excluded liability for loss of profits, loss of production and interest; and

(d) OPAL had no further remedy beyond terminating the NOA and forfeiting Daelim's bid security of US$500,000.

10 For completeness, cll 6.2.1 and 6.2.3 of the GCC provided as follows:[17]

> 6.2.1 Subject to provisions of clause 6.3.2 *neither the Contractor nor his subcontractor shall be responsible for or liable to the Company or any of their affiliates for consequential damages which shall include but not be limited to loss of profits, loss of revenue*, loss or escape of product (hydrocarbons) or facilities downtime, suffered by the Company or any or [*sic*] its affiliates, and the Company shall protect, defend, indemnify and hold harmless the Contractor and his sub-contractors from

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15 Liability Award at para 37 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 75–77).

16 Liability Award at para 38 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at p 77).

17 3rd Affidavit of Md Noor E Adnaan dated 18 November 2022, Exhibit MNEA-4, Tab 2 at p 37.

> such claims even if such liability is based or claimed to be based upon:
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> i) Any breach by the Contractor or sub-contractor of his obligations under the Contract.
>
> OR
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> ii) Any negligent act or omission in whole or in part, of the Contractor or of any of his affiliates or Sub-contractor or their personnel or any of them in connection with the performance of the Works.
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> …
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> 6.2.3 Notwithstanding any other provisions, except only in cases of willful misconduct and/or criminal acts,
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> a) *Neither the Contractor nor the Company shall be liable to the other, whether in Contract, tort, or otherwise, for any consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs*, provided however that this exclusion shall not apply to any obligation of the Contractor to pay Liquidated Damages to the Company …
>
> [emphasis added]

11 The liability hearing took place in tranches between 18 December 2017 and 28 July 2018.[18] The Tribunal issued a final award dated 28 December 2018 on liability, and a correction on 28 February 2019 (collectively, the "Liability Award"). The Tribunal was split, with Justices Raveendran and Singhvi in the majority, and Mr Leaver KC dissenting. In the Liability Award, the majority held that there was a concluded contract in existence between the parties, which Daelim had wrongfully abandoned. Turning to the heads of claim for damages, the majority dismissed the Guarantee Claim and Delay Claim outright, on the grounds that the former was a duplication of the Loss of NPV Claim, whereas the latter was barred by cll 6.2.1 and 6.2.3 of the GCC.[19]

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18 Muskara's 1st Affidavit at para 19.

19 Liability Award at paras 112–115; 125–139 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 150–153, 164–173).

12 However, the majority declined to outrightly dismiss the Loss of NPV Claim. The majority characterised this as a claim made under cl 8.4.1.1 read with 8.4.1.2 of the GCC. These clauses, read together, entitled OPAL to deploy any other contractor to complete the work at the risk and cost of the defaulting contractor, Daelim, and to recover the extra cost from Daelim subject to a ceiling of 20% of the contract price:[20]

> **8.4.1 Remedies**
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> 8.4.1.1 If the Contractor:
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> …
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> v) *repudiates or abandons the Contract*,
>
> OR
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> vi) without reasonable excuse fails to commence the Works or suspends the progress of the Work for (30) thirty days after receiving from the Company's Representative, written notice to proceed,
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> OR
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> …
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> viii) despite previous notice in writing by the Company's Representative is not executing the Works in accordance with the Contract to the satisfaction of the Company's representative or is persistently or *flagrantly neglecting to carry out his obligations under the Contract*; then the Company may after giving notice of 10 days in writing, to the Contractor forthwith enter upon the Site and the Works and expel the Contractor from there without thereby making the Contract void or releasing the Contractor from any of his obligations or liabilities under the Contract or affecting the rights and powers conferred on the Company by the Contract and *may at the risk and cost of Contractor complete the Works itself or deploy any other Contractor to complete the Works* and the Company or that other Contractor may use for the completion of Works as much of the Constructional Plant and Equipment, Temporary Works and materials which have been deemed to be reserved exclusively

[20] Liability Award at para 120 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at p 159); 3rd Affidavit of Md Noor E Adnaan dated 18 November 2022, Exhibit MNEA-4, Tab 2 at pp 48–49.

> for the construction and completion of the Works under the provisions of the Contract as it or they think proper.
>
> 8.4.1.2 If the Company enters and expels the Contractor under this clause it shall not be liable to pay the Contractor any money on account of the Contract until the costs of completion and making good damages for delay in completion (if any) and all other expenses incurred by the Company have been ascertained *provided however that Contractor shall only be liable for the said costs and expenses that Company may sustain on this account upto [sic] a maximum amount of twenty percent (20%) of the Contract value*. The Contractor shall then be entitled to receive only the sum or sums (if any) which would have been due to him on due completion by him after deducting the sum due to the Company as aforesaid, regard being had to the sums representing the value of the work actually done by the Contractor by the time of his expulsion and to represent the price of any said unused or partially used materials, any Constructional Plant and Equipment and any Temporary Works by Company for completion of works as provided for in the note and Cl.8.4.1 above.
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> [emphasis added]

13 As such, the majority permitted the claim to proceed to the quantum phase.[21] Whether, in so doing, the majority made conclusive findings as to how quantum was to be assessed is a major point of contention between the parties which I elaborate on below. In the dispositive paragraph, the Tribunal concluded as follows:[22]

> 140. On the findings aforesaid, the following award (on liability) is made and declared:
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> (i) It is declared that DAELIM abandoned the HDPE plant contract and OPAL had rightly terminated the HDPE plant contract awarded to DAELIM. It is further declared that the termination being due to the breach committed by DAELIM, OPAL is entitled to recover damages arising out of the said breach, from DAELIM.

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21 Liability Award at paras 116–124 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 153–163).

22 Liability Award at para 140 (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at p 174).

> (ii) The claim of OPAL for award of 10% of the contract price (USD 13,803,800 and INR 459,330,050) as part of compensation for breach by DAELIM is rejected.
>
> (iii) The validity and the quantum of the claim of OPAL (for award of INR 409.28 crores, subsequently restricted to 20% of the contract price of INR 4,593,300,500 plus USD 138,038,000) towards compensation for loss of Net Present Value shall be considered (along with the claim for interest thereon) in the second tranche hearing relating to quantum.
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> (iv) The claim of OPAL for award of INR 300.80 crores as compensation for loss on account of delay is rejected.
>
> (v) Costs will be determined after the hearing relating to quantum.
>
> [emphasis in original omitted]

14 The dissenting arbitrator issued a dissenting opinion. In his view, the contract was unenforceable because at least one fundamental term had not been agreed between the parties.[23] He further raised several points of disagreement relating to damages, particularly with the majority's decision permitting the Loss of NPV Claim to proceed to the quantum phase at all.[24] As I shall explain below, OPAL also relies on the dissent to support its case for setting aside the Quantum Award.

The quantum phase

15 Neither party challenged any aspect of the Liability Award following its issuance. The arbitration then proceeded to the quantum hearing.

16 In this phase, OPAL presented a revised claim for loss of NPV (the "Revised NPV Claim") amounting to INR11,019,300,000 (or 1101.93 crores) –

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23 Dissenting Opinion at paras 5–12 (Muskara's 1st Affidavit, Exhibit MM-1, Tab B at pp 178–179).

24 Dissenting Opinion at paras 18–21 (Muskara's 1st Affidavit, Exhibit MM-1, Tab B at pp 180–181).

this represented a significant increase from the sum claimed at the liability stage. To support the Revised NPV Claim, OPAL heavily relied on a report produced by Mr Andrew Flower, its expert witness in the quantum stage ("Mr Flower's Report").[25] The Revised NPV Claim consisted of two separate heads of claim:

(a) the overall extra cost to OPAL of building and operating the plant with Samsung as the contractor instead of Daelim (the "Incremental Cost Claim"); and

(b) the value of missing production capability, *ie*, the inability to produce a product which would have been available if the plant had been built by Daelim using CP Chem's technology (the "Loss of Capability Claim").[26]

17 Daelim raised several challenges to the Revised NPV Claim which can be summarised as follows. First, it opposed the Revised NPV Claim as an impermissible departure from OPAL's pleaded claim at the liability stage of the arbitration. Second, it claimed that the Incremental Cost Claim and Loss of Capability Claim were in essence claims for loss of profit which OPAL was not entitled to raise under the GCC. Third, it challenged the Revised NPV Claim as being unsupported by evidence and argued that it was quantified using erroneous assumptions and fundamental misconceptions.[27]

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25 Expert Report of Andrew Flower dated 10 January 2020 (Muskara's 1st Affidavit, Exhibit MM-11, Tab A at pp 3292–3355).

26 Muskara's 1st Affidavit at para 47; Claimant's Statement of Claim dated 10 January 2020 ("SOC (Quantum)") at para 8 (Muskara's 1st Affidavit, Exhibit MM-8, Tab A at p 1078).

27 Daelim's Reply to Statement of Case for OPAL on Quantum dated 22 June 2020 at para 5 (Muskara's 1st Affidavit, Exhibit MM-8, Tab D at p 1137).

18 The quantum hearing took place from 4–14 January 2021[28] dealing specifically with the Loss of NPV Claim.[29] The Tribunal issued its second final award dated 20 December 2021 on the issue of quantum, along with a further correction on 3 February 2022 (collectively, the "Quantum Award"). In summary, it dismissed both the Incremental Cost Claim and Loss of Capability Claim – the former because OPAL had failed to prove what it pleaded at the liability stage, and chose to prove what it did not plead,[30] and the latter because it was essentially a claim for loss of profits which was barred by cll 6.2.1 and 6.2.3 of the GCC.[31]

19 Having dismissed those claims, the Tribunal considered whether OPAL's Revised NPV Claim as pleaded in the quantum stage (if they could be made out at all) could be re-worked to fit the claim as originally pleaded in the liability stage.[32] The Tribunal analysed Mr Flower's Report, which formed the basis of the Revised NPV Claim, and found that his calculations suffered "from serious and fundamental errors requiring rejection".[33] The Tribunal concluded in the round that OPAL had failed to prove its loss, and eventually only awarded OPAL nominal damages amounting to INR500,000.[34]

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28 Muskara's 1st Affidavit at para 20.

29 Final Award (Part II) dated 20.12.2021 (on the issue of quantum) ("Quantum Award") at para 7 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 194).

30 Quantum Award at paras 46–59 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at pp 222–237); Muskara's 1st Affidavit at para 53.

31 Quantum Award at para 42 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at pp 221–222); Muskara's 1st Affidavit at para 52.

32 Quantum Award at para 60 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 237); Muskara's 1st Affidavit at para 54.

33 Quantum Award at para 99 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 270).

34 Quantum Award at paras 103, 108 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 276).

The parties' cases

20 OPAL, dissatisfied with this turn of events, raises two main objections which it says render the Quantum Award liable to be set aside.

21 First, OPAL contends that the Tribunal exceeded its jurisdiction by revisiting or reversing three critical findings which it had made in the Liability Award, and in respect of which it was consequently *functus officio*.

22 Second, OPAL argues that the Tribunal acted in breach of the rules of natural justice in two respects:[35]

(a) The Tribunal's "U-turn" in respect of the three critical findings constituted a chain of reasoning which could not have been reasonably foreseen, rendering the award manifestly incoherent. This amounted to a breach of the rules of natural justice, in addition to being a decision made in excess of the Tribunal's jurisdiction.

(b) Some aspects of the Tribunal's reasoning and the illustrations it used were not derived from the parties' submissions or raised by the Tribunal to the parties so that OPAL did not have a reasonable opportunity to make submissions on them.

23 Daelim contends that OPAL's objections are groundless. As against OPAL's submissions on excess of jurisdiction, Daelim argues that the Tribunal did not make any conclusive determinations in respect of the three "critical findings" alleged by OPAL, and that the validity of the Loss of NPV Claim remained very much a live issue at the quantum phase.[36] Daelim contends that

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35 Claimant's Written Submissions dated 29 November 2022 ("CWS") at paras 85–87.

36 Defendant's Written Submissions dated 22 November 2022 ("DWS") at paras 47–68.

this is supported by the parties' conduct throughout the quantum phase of the arbitration.[37] On this basis, Daelim makes a separate argument that based on positions taken by OPAL during the arbitration, it is now barred under the doctrine of approbation and reprobation and/or waiver by election from contending that the Tribunal was *functus officio* in respect of the three critical findings.[38]

24 In respect of OPAL's contentions on breach of natural justice, Daelim submits that every link in the Tribunal's chain of reasoning was pleaded or submitted on by the parties and/or their expert witnesses. Accordingly, OPAL could not claim that it had no reasonable notice of the reasoning in the Quantum Award.[39]

25 Daelim further argues that in any event, the Tribunal had also ruled against OPAL on entirely separate grounds, *viz* the fact that its case at the quantum phase was not pleaded, and that there were serious and fundamental errors in Mr Flower's calculations. Daelim says that on these grounds, OPAL was not in fact prejudiced by any of the determinations it now seeks to challenge – it would have lost the arbitration anyway and thus, even if the alleged breaches by the Tribunal did not occur, it could have made no reasonable difference to the outcome for OPAL.[40]

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37 DWS at paras 69–74.

38 DWS at paras 75–81.

39 DWS at paras 82–105.

40 DWS at paras 106–109.

Did the Tribunal exceed its jurisdiction by revisiting and reversing findings on which it was *functus officio*?

OPAL's objection

26 Starting with OPAL's first objection, the three critical findings which OPAL contends were made by the Tribunal in the Liability Award are as follows:[41]

(a) OPAL was entitled to damages for extra costs under cl 8.4.1.1 read with cl 8.4.1.2 of the GCC, *and* that the NPV methodology *was* the appropriate method for calculating this extra cost (the "First Critical Finding").

(b) OPAL's Loss of NPV Claim was not barred by the exclusion clauses in cll 6.2.1 and 6.2.3 of the GCC (the "Second Critical Finding").

(c) OPAL had suffered loss and it was not necessary to prove actual expenditure in order to prove such loss (the "Third Critical Finding").

27 Counsel for OPAL, Ms Koh Swee Yen SC ("Ms Koh") stressed that if the Tribunal had not made any of these three critical findings at the liability stage, then it would simply have dismissed all of OPAL's claims (including the Loss of NPV Claim) at the threshold, without even proceeding to the quantum phase. On OPAL's case, the fact that the Loss of NPV Claim (which was based solely on the NPV methodology) was allowed to proceed to quantification at all supported OPAL's argument that the Tribunal had made all three findings.[42] It

41 CWS at para 2.

42 CWS at para 5.

therefore followed that the Tribunal was *functus officio* in relation to these findings and had no jurisdiction to revisit them in the Quantum Award.[43]

28 And yet, OPAL says, not only was there revisitation of the three critical findings by the Tribunal, but a complete reversal of them in the Quantum Award. In contravention of the First Critical Finding, the Tribunal found that the NPV methodology was unsound and unreliable, and could not be used to calculate the extra cost OPAL claimed for:[44]

> 94. The Tribunal finds, on a comparison of the inputs required in using CP Chem technology (DAELIM's bid) and Mitsui technology (Samsung's bid), that the assessment of damages by comparing the NPV of DAELIM's bid and Samsung's bid would be *unsound and unreliable*, as the two technologies use different additives and catalysts with differing quantities and different value. …
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> …
>
> 97. The Project of OPaL for which the bids of DAELIM and Samsung were received fall under the category referred to in illustration 3. The quantities of operational requirements relating to Hydrogen, Power, Steam, Nitrogen and Cooling water, which make up the Opex also vary. The quantities and nature of catalysts and additives vary. The cost of some of the catalysts are not known. In such a situation, *it will not be possible to find out with any certainty whether there is any extra cost at all and if so, what would be quantum [sic] of such extra cost*.
>
> [emphasis added]

29 In contravention of the Second Critical Finding, the Tribunal found that OPAL's claim was barred by the contract:[45]

> 98. The Tribunal has found that in cases where the two technologies use different additives/catalysts and/or where the quantities of the additives/catalysts and standard inputs are

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43 CWS at para 21.

44 CWS at paras 73–74.

45 CWS at paras 78–80.

> different, *it will not be possible to find the `extra cost' as the determination would involve assessment of revenue, expenditure and profits which is barred by the contract*, apart from the complexity and the impracticality of comparing the inputs and outputs in projects using different technologies.
>
> [emphasis added]

30 Finally, in contravention of the Third Critical Finding, the Tribunal found that OPAL had failed to prove its loss:[46]

> 103. In this case, *the Tribunal has held that OPaL has failed to prove loss*. This is not a case where the finding is that loss has been suffered but that it is difficult to prove the amount of loss. The Tribunal has found that while breach is proved, OPaL has failed to prove that it has suffered loss by reason of such breach. In the circumstances, the decisions relied upon by OPaL to contend that substantial damages can be awarded even where the exact amount of loss is not proved, will not apply.
>
> [emphasis added]

31 It is therefore OPAL's argument that the Tribunal exceeded its jurisdiction in revisiting and reversing the three critical findings in the Quantum Award, thereby rendering the Quantum Award liable to be set aside.

The applicable principles

32 An award may be set aside under Art 34(2)(*a*)(iii) of the UNCITRAL Model Law on International Commercial Arbitration ("Model Law") as set out in the First Schedule to the International Arbitration Act 1994 (2020 Rev Ed) ("IAA") if the party making the application furnishes proof that "the award deals with a dispute not contemplated by or not falling within the terms of the submission to arbitration, or contains decisions on matters beyond the scope of the submission to arbitration". In other words, where a tribunal exceeds its jurisdiction in the making of its award, that award is liable to be set aside.

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46 CWS at paras 81–83.

33 A tribunal acts in excess of jurisdiction where it revisits an issue it has already dealt with in an earlier award. Once a final and binding award is made, the tribunal is *functus officio* and no longer has jurisdiction in respect of that issue. This principle is enshrined in s 19B of the IAA:

> **Effect of award**
>
> 19B.—(1) An award made by the arbitral tribunal pursuant to an arbitration agreement is ***final*** *and binding on the parties* and on any persons claiming through or under them and may be relied upon by any of the parties by way of defence, set-off or otherwise in any proceedings in any court of competent jurisdiction.
>
> (2) Except as provided in Articles 33 and 34(4) of the Model Law, upon an award being made, including an award made in accordance with section 19A, *the arbitral tribunal must not vary, amend, correct, review, add to or revoke the award.*
>
> …
>
> [emphasis added in italics and bold italics]

34 To be clear, an award can be "final" in a few ways, as summarised by the Court of Appeal in *PT Perusahaan Gas Negara (Persero) TBK v CRW Joint Operation* [2015] 4 SLR 364 ("*PT Perusahaan*") at [51]–[53]:

> (a) First, an award is "final" if it resolves a claim or matter in an arbitration with preclusive effect (*ie*, the same claim or matter in an arbitration cannot be re-litigated).
>
> (b) Second, a "final" award can refer to an award that has achieved a sufficient degree of finality in the arbitral seat. In other words, the award is no longer susceptible to being appealed against or being subject to annulment proceedings in the arbitral seat.
>
> (c) Third, a "final" award can refer to the last award made in an arbitration which disposes of all remaining claims.

For present purposes, what we are concerned with is whether the Liability Award was "final" in the first way, in respect of the three critical findings alleged by OPAL. If it is, then the Tribunal would have been *functus officio* under s 19B of the IAA in relation to those issues as resolved in the Liability Award, and those findings would have *res judicata* effect in common law (*PT Persusahaan* at [206] and *Bloomberry Resorts and Hotels Inc and another v Global Gaming Philippines LLC and another* [2021] 2 SLR 1279 at [157]).

35 How then does the court determine if an arbitral tribunal has resolved an issue finally and conclusively? As OPAL correctly points out in its submissions, the primary focus must undoubtedly be on what the tribunal said and concluded in the award.[47] However, one must not lose sight of the context in which the tribunal made its decision. In *York International Pte Ltd v Voltas Ltd* [2022] SGHC 153 (at [54]), I had occasion to summarise what I considered should be the general approach of the court in determining this question:

(a) The court will give real weight to the question of substance and not merely to form.

(b) There is a role however for form. The arbitral tribunal's own description of the decision is relevant, although it will not be conclusive in determining its status.

(c) It may also be relevant to consider how a reasonable recipient of the tribunal's decision would have viewed it.

(d) A reasonable recipient is likely to consider the objective attributes of the decision relevant. These include the description of the

47 CWS at para 21.

decision by the tribunal, the formality of the language used, and the level of detail in which the tribunal has expressed its reasoning.

(e) A reasonable recipient would also consider such matters as whether the decision complies with the formal requirements for an award under any applicable rules.

(f) The focus must be on a reasonable recipient with all the information that would have been available to the parties and to the tribunal when the decision was made. It follows that the background or context in the proceedings in which the decision was made is also likely to be relevant.

Analysis and Decision

36 Having considered both awards and the evidence with the above principles in mind, I find that the Tribunal did not in fact make any final and conclusive determinations in respect of the alleged three critical findings raised by OPAL.

The Liability Award

37 The obvious starting point to determine whether the Tribunal had made the three critical findings is the Liability Award itself (read objectively and in its proper context), and it is to that award that I now turn.

38 I start with the intended scope of the Liability Award. This was summarised by the Tribunal in para 47 where it set out the issues arising for its determination:

> 47. Therefore, the following questions arise for consideration in this arbitration:

> (i) Whether, by reason of CP Chem's withdrawal subsequent to the issue of NoA, the contract between OPAL and DAELIM was rendered void under Section 32 of the Indian Contract Act apart from frustrating the contract under Section 56 of the Indian Contract Act?
>
> (ii) Whether the contract was rendered impossible or whether its performance rendered unlawful [*sic*] having regard to a demand by one Dr. Lamba for a 'success fee'; and whether that resulted in withdrawal of CP Chem on 26.1.2011 thereby frustrating the contract under Section 56 of the Indian Contract Act?
>
> (iii) Whether DAELIM's failure to enter into the formal contract and proceed with the work amounted to abandonment/repudiation of the HDPE plant contract; and as a consequence, OPAL rightfully terminated the contract and is entitled to compensation from DAELIM?
>
> (iv) Whether forfeiture of the bid security of USD 500,000 and the right to annul the NoA were the only remedies available to OPAL when DAELIM failed to sign the final contract and furnish the performance guarantee?
>
> (v) Even if DAELIM is found to be liable to pay damages to OPAL, whether such damages cannot exceed 10% of the contract price, having regard to para 5 of NoA and Clause 6.3.2 of GCC?
>
> (vi) Whether OPAL is entitled to 10% of the contract price which was guaranteed to be paid as security for due performance of the contract as part compensation payable in respect of the losses suffered by OPAL by reason of abandonment of the contract by DAELIM?
>
> (vii) Whether OPAL is entitled to INR 409.28 crores towards compensation for loss of Net Present Value?
>
> (viii) Whether OPAL is entitled to INR 300.80 towards compensation for loss on account of 'delay of 113 days'?
>
> The Tribunal will consider these questions seriatim.

39 What is immediately apparent from a perusal of the eight issues listed above is that the Liability Award was *not* confined to issues of liability in the strict and technical sense. Issues (i) – (iii) were purely on liability for breach of contract, being issues pertaining to voidability, frustration and breach of contract. However, Issues (iv) and (v) related to contentions raised by Daelim

at the liability phase that the terms of the contract either excluded the compensation sought by OPAL altogether (*ie*, Issue (iv)) or at least substantially restricted the quantum of such compensation (*ie*, Issue (v)).[48] Daelim's contentions here could be characterised as raising threshold questions, which would significantly alter the nature of the inquiry at the quantum phase.

40 Taken together, the first five listed issues indicate that the majority of the Tribunal was not confining itself strictly to determining whether Daelim was liable for breach of contract – it also had its eye on the quantum phase. To that extent, there is some truth to the argument made by Ms Koh, that the phrase "Liability Award" was a misnomer. This however does not mean, as Ms Koh suggests, that the Tribunal must be taken to have made final and conclusive findings on every issue relating to quantum raised in the liability phase. The situation is not a binary one. An examination of the listed issues shows that the Tribunal was not using the term "liability" in the strict legal sense. The Tribunal was certainly making determinations on what one could describe as issues of liability in the strict sense (*eg*, whether there was a valid and enforceable contract and whether Daelim was in breach in abandoning/repudiating the contract), but *also* on whether OPAL could show, at least in principle, that it had suffered a (or some) recoverable loss which was not excluded by the contract (*ie*, Issue (iv)) and which should be reserved to be fully argued and determined at the quantum phase. In that sense, it is not entirely a misnomer to call the award a "Liability Award" – the Tribunal also decided whether Daelim's threshold "quantum" arguments had any merit, *ie*, those arguments which had been raised at the liability phase to persuade the Tribunal that OPAL's heads of compensation could be rejected at the threshold and that there

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[48] Respondent's Closing Submissions on Liability at paras 51–98 (Muskara's 1st Affidavit, Exhibit MM-5, Tab A at pp 407–419).

was nothing to send to the quantum stage for further consideration. In my judgment, that is the context in which the Liability Award is to be read.

41 Seen in this light, it becomes clear why the Tribunal even gave consideration to Issues (vi) – (viii) at this stage, notwithstanding that they were not issues relating to "liability" in the strict sense. Those issues pertained to the three heads of compensation claimed by OPAL, and the focus of the analysis by the Tribunal was to determine which claims should be rejected at the threshold, and which should be allowed to proceed to the quantum phase for further consideration.

42 With this in mind, the Tribunal analysed Issue (vi), relating to the Guarantee Claim, and rejected it at the threshold because (a) it would lead to double compensation, and (b) as a matter of law, OPAL could not insist upon a performance guarantee or seek an equivalent amount where the contract was no longer in existence:

> 115. The purpose of requiring a performance guarantee from a bank to be kept valid upto [*sic*] the period of scheduled completion date and warranty period is to ensure that the contractor (DAELIM) honours its commitments under the contract. Clause 3.3.3 of GCC provides: 'In case contractor fails to furnish the requisite bank guarantee as stipulated above, then the Company shall have the option to terminate the contact and forfeit the bid security amount .... ' In this case, due to the failure to furnish the bank guarantee, OPAL has already forfeited the bid security amount. … OPAL has already made claims (for INR 409.28 crores and for INR 300.80 crores) for the losses sustained by it by reason of the breach by DAELIM which are the subject matter of the present proceedings. *If in addition to claiming such damages for its losses due to breach committed by DAELIM, OPAL claims 10% of the contract price being the performance guarantee amount, it would be a duplication of the claim for damages. At all events, a performance guarantee can be insisted upon only when the contract is in existence. When the contract has been terminated and there is no contract to be performed, the employer/owner (OPAL) cannot seek any performance guarantee or amount equivalent to performance guarantee but can claim only damages*

> *for the breach/repudiation. Therefore, the first claim for 10% of the contract price being the amount for which DAELIM was required to furnish the performance guarantee, is rejected.*
>
> [emphasis in original omitted; emphasis added in italics]

The Tribunal similarly analysed Issue (viii), relating to the Delay Claim, and rejected it on the grounds that it was (a) a claim for a notional loss (rather than an actual loss) and (b) also a claim for consequential loss excluded by the contract:

> 138. … *The above factors clearly demonstrate that there was no loss* and even the assumption of notional losses was without basis and erroneous.
>
> 139. At all events, *having regard to the limitations/exclusion by reason of Clauses 6.2.1 and 6.2.3 of GCC which barred OPAL from claiming any consequential damages in the nature of loss of profits or loss of revenue* and the provisions Clause 8.4.1.1 and 8.4.1.2 of GCC which permitted OPAL to claim only the extra cost, *the three claims for loss of production (HDPE, Polypropylene and by-products of Cracker plant) and the claim for 'extra interest for 115 days' allegedly incurred on financing availed for Cracker plant (aggregating to INR 300.8 crores) are wholly baseless and deserve to be rejected.*
>
> [emphasis added]

43 Unlike the Guarantee Claim and Delay Claim however, the Tribunal did not reject the Loss of NPV Claim (which was the subject of Issue (vii)) summarily. Instead, the Tribunal expressed (at para 140(iii) of the Liability Award) that the *validity and quantum* of this claim would be considered at the quantum phase, albeit limited to 20% of the contract price as per the terms of the contract (see [13] above). Did this then mean that the Tribunal had *conclusively* accepted every facet of this claim, including by making the alleged three critical findings? In my judgment, the answer is no. Given the general approach taken by the majority in analysing the issues relating damages and quantum, it is difficult to see why it would have intended to make any conclusive findings, especially in respect of a claim for which both questions of

validity and quantum were expressly reserved to the quantum phase. Nonetheless, it is OPAL's case that such conclusive findings were made by the majority, based on the clear words of the majority at multiple points in the Liability Award. I now turn to these passages in the Liability Award.

44 Ms Koh highlighted paras 120–124 of the Liability Award in particular, arguing that the majority had clearly made all three critical findings within these paragraphs. To give some context to these paragraphs, I first reproduce below the point which the majority was addressing its mind to:

> 119. The contention of DAELIM is that the claim based on NPV calculation is essentially a claim for loss of profit as a consequential damage and that such a claim is barred by the exclusion Clauses in the contract, namely, Clauses 6.2.1 and 6.2.3(a) of the GCC. …

45 Ms Koh argued that paras 120 and 121 of the Liability Award (set out below) support the First Critical Finding, *ie*, that NPV methodology *was* the appropriate method to assess damages for the extra cost incurred by OPAL in awarding the contract to Samsung following Daelim's repudiation:

> 120. Clause 8.4.1.1 read with 8.4.1.2 of GCC provide that where the contractor repudiates or abandons the contracts, OPAL may deploy any other contractor for completing the work at the risk and cost of the defaulting contractor and recover the extra cost from the defaulting contractor subject to a ceiling of 20% of the contract value. When the NPV calculation was the accepted criteria for price evaluation of bids, there is no reason why NPV calculation cannot be the basis for ascertaining the loss caused due to the breach by the contractor resulting in the contract work being awarded to another contractor at the risk and cost of the contractor who committed the breach. The NPV calculation is not a mere calculation of future loss of profit as contended by DAELIM, but is a calculation which enables OPAL to determine the extract [*sic*] cost that it will have to incur by reason of wrong repudiation/abandonment by DAELIM.
>
> 121. EIL's report dated 10.8.2017 regarding techno-economic evaluation of bids explains the need and scope of NPV evaluation, which, in brief, is as under: Each Bidder's licensor would have different evolved plant processes based on their

> specific technology. The methodology adopted to evaluate different technologies involving different capital cost for constructing the plant and different operating cost during operation is known as 'Life Cycle Costing' (LCC) and that was adopted by EIL for evaluation of the price bids. LCC analysis is the preferred tool for economic evaluation of a technology, design alternatives selection and optimisation studies. It involves evaluation of alternatives to satisfy a required level of minimum threshold performance which may have different initial investment costs and different operating & maintenance cost. It provides an assessment of long term cost effectiveness of a project (as contrasted from alternative economic methods which focus only on the first or initial cost of operation related costs in the short run). It takes into account every significant element of costs over life of the asset and works outs its total cost and benefits over the entire economic life of a project to a present value known as the Net Present Value (NPV). NPV represents the present value of future profits from today's investments.

46 At para 124, the majority then stated as follows:

> 124. *The claim of OPAL under Clause 8.4.1.1 read with Clause 8.4.1.2 of GCC is not for loss of profits as a consequence of the breach, but is a claim for the extra cost to OPAL in getting the work completed through another contractor.* Therefore, OPAL is entitled to recover from DAELIM, the extra cost involved as provided in Clauses 8.4.1.1 and 8.4.1.2 of GCC subject to a ceiling of 20% of the contract price. The question as to what factors should be taken note of, or what legal principles should be applied, for ascertaining the extra cost/burden, which is the legal injury suffered by OPAL as a consequence of the breach and the quantum of such extra cost/burden on OPAL in getting the work executed through another contractor by the NPV method, are matters for consideration at the quantum hearing. Nothing stated above is intended to be acceptance or recognition of the calculations or claim of OPAL for damages on the basis of loss of NPV under Clause 8.4.1.1 read with Clause 8.4.1.2 of GCC.
>
> [emphasis added]

47 Ms Koh argued that the Second Critical Finding, *ie*, that the Loss of NPV Claim is not barred by the exclusion clauses in cll 6.2.1 and 6.2.3 of the GCC, could be found in para 122:

> 122. The exclusion clauses relied upon by DAELIM make it clear that what is excluded are 'consequential damages' in the nature of loss of profits, loss of production, loss of revenue, etc. *The exclusion clauses relied upon by DAELIM do not exclude claim [sic] for damages for direct losses arising as a consequence of breach of contract. Clauses 8.4.1.1 and 8.4.1.2 of GCC describe the direct loss which OPAL is entitled to recover by way of damages, that is, the extra cost involved in awarding the contract to an alternative agency.* On the facts and circumstances where different processes and technologies are involved in regard to the two bids (of DAELIM and Samsung), *the recognised method of evaluating the extra cost involved in awarding the work to Samsung as a consequence of the breach committed by DAELIM,* ***is the NPV calculation method*** *as it is not possible to directly calculate the extra cost.*
>
> [emphasis in original omitted; emphasis added in italics and bold italics]

Ms Koh contended that the last sentence also encapsulates the First Critical Finding.

48 Lastly, Ms Koh submitted that the Third Critical Finding, *ie*, that OPAL suffered loss and did not have to show actual expenditure, was made in para 123:

> 123. Another contention urged by DAELIM is that OPAL has not actually 'expended' as extra cost or suffered loss of the amount claimed, namely, INR 409.28 crores. It is well settled that the loss 'incurred' is the basis and that it is not necessary to prove the actual expenditure. The following illustration will clarify this position:
>
> > A agrees to sell a bag of rice to B on 1.1.2018 at a price of INR 1,000 per bag to be delivered on 10.2.2018.
> >
> > A fails to deliver the bag of rice to B on 10.2.2018 and thereby commits default.
> >
> > The market rate of the said bag of rice was INR 1,100 on 10.2.2018.
> >
> > B is entitled to the difference between the market rate (INR 1,100) and the contract rate (INR 1,000), namely INR 100 as damages irrespective of whether he actually goes and buys the bag of rice by paying INR 1,100 in the market. This is because B 'incurred' the loss when A

> failed to deliver and the measure of damages is the difference between the market rate and the contract rate. The fact that B did not actually go and buy the bag of rice by paying INR 1,100 will not disentitle him to damages of INR 100.
>
> But, on the other hand, if the market price on 10.2.2018 was INR 900, B will not be entitled to any damages as he did not 'incur' or 'suffer' any loss by reason of the breach committed by A in failing to deliver the bag of rice. In fact, even if B goes and purchases a bag of rice on 10.2.2018 at a higher cost of say INR 1,050 actually incurring an extra cost of INR 50, he will not be entitled to recover INR 50 as damages if A establishes the market rate was INR 900.
>
> In this case, OPAL's claim is on the basis that the breach has resulted in a 'loss' of INR 409.28 crores by reason of DAELIM's breach and consequential award of the work to Samsung. NPV basis can therefore be an effective manner of ascertaining the extra cost to OPAL by reason of awarding the contract to Samsung when compared to the cost of the work under the contract awarded to DAELIM. It cannot therefore be contended that the claim on NPV basis is to be rejected at the threshold without going into the question of quantum. There is no straitjacket formula for assessing the extra cost. The fundamental principle on which damages are calculated in cases of breach of contract resulting in a legal injury, is that as far as possible, the injured party (person who has proved breach) should be placed in as good a situation as if the contract had been performed. The Supreme Court of India has recognised the accepted position that different formulae can be applied in different circumstances and the question as to whether damages should be computed by taking recourse to one or the other formula, having regard to the facts and circumstances of a particular case, would fall within the domain of the Arbitrator.

49 At first glance, there are statements, words and phrases in the quoted paragraphs above which, if *taken in isolation*, could support OPAL's contentions. But that is *not* how an award should be read. The reasoning of the majority of the Tribunal must be read in its entirety and understood in its proper context, as I have discussed at [35].

(1) The First Critical Finding

50 Firstly, I disagree with OPAL's contention that the Tribunal had made the First Critical Finding. Paragraphs 120 and 121 of the Liability Award must be read together with para 123 (see [48] above), where the majority makes three statements – (a) that "NPV basis can therefore be an effective manner of ascertaining the extra cost to OPAL"; (b) that it cannot be contended that OPAL's Loss of NPV Claim "is to be rejected at the threshold without going into the question of quantum"; and (c) that "there is no straitjacket formula for assessing the extra cost". Reading these statements together with paras 120–121, it is clear that all the Tribunal had done was to acknowledge that NPV *could be* considered an acceptable formula, and that this question would be determined at the quantum tranche hearing. The Tribunal did not make any conclusive finding that NPV was the accepted methodology to calculate the extra cost to OPAL, leaving only the issue of calculations or quantification to be decided at the quantum tranche.

51 This conclusion is affirmed at three further points in the Liability Award. The first is at para 124 (see [46] above), where the majority stated that the *legal principles* to be applied to ascertain the extra cost would be considered at the quantum hearing. The second is in the last sentence of para 124 where the majority stated that nothing in that section of the Liability Award was to be treated as acceptance or recognition by the majority of the *calculations or claim* of OPAL for damages on the basis of loss of NPV. The third is the dispositive section in para 140(iii) of the Liability Award, where the majority reserved both questions of both the validity and quantum of the Loss of NPV Claim to the quantum phase:

> The *validity and the quantum* of the claim of OPAL (for award of INR 409.28 crores, subsequently restricted to 20% of the contract price of INR 4,593,300,500 plus USD 138,038,000)

> towards compensation for loss of Net Present Value shall be considered (along with the claim for interest thereon) in the second tranche hearing relating to quantum.

52 OPAL has sought to qualify the majority's language in paras 124 and 140(iii) by arguing that the reference to legal principles and the validity of the claim was only directed at the fact that Daelim had made arguments on the assumptions to be applied in the calculation of loss of NPV and on remoteness, and that it was these arguments which would be considered at the quantum phase.[49] In my view, this is a strained reading of the words used by the majority, particularly where the objective meaning of these words are clearly consistent with the rest of the majority's reasoning.

53 Therefore, based on the language of the Liability Award alone, I find that the majority of the Tribunal was not determining conclusively that NPV was accepted as the method to compute extra cost and that the only issue at the quantum phase was computation of the monetary amount of damages. I would go further. Even if the majority had in some way endorsed the NPV methodology as acceptable, in the context of the issues they were considering in the Liability Award and the fact that the hearing was bifurcated, any alleged findings on the Loss of NPV Claim could at most only be provisional or preliminary as opposed to conclusive and final. This was why the majority expressly reserved its jurisdiction to consider the issue in a more fulsome and binding manner at the quantum phase of the arbitration (see [51] above). That disposes of OPAL's contentions on the First Critical Finding.

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[49] CWS at paras 45–47.

(2) The Second Critical Finding

54 Similarly, I find that the paragraphs relied upon by OPAL do not support its contentions in respect of the Second Critical Finding. Upon a close reading of para 122 (see [46] above), it is apparent that the majority's main point was that it had characterised OPAL's claim to be one for extra cost under cll 8.4.1.1 and 8.4.1.2 of the GCC, *ie*, one for direct loss suffered as a consequence of Daelim's breach. Therefore, the extra cost *claim* would not be excluded as a claim for loss of profit under cll 6.2.1 and 6.2.3. A distinction must be drawn between the *nature* of the claim which was being made and the proposed methodology to *calculate* that claim. I do not read this paragraph of the Liability Award as finding that *any* claim for loss based on loss of NPV would not be barred under the exclusion clauses. Consistent with my conclusions on the First Critical Finding, I do not think the majority intended to go any further than to say that the NPV methodology could in principle be the method to calculate extra costs – that question was something to be conclusively addressed at the quantum phase.

(3) The Third Critical Finding

55 Lastly, the contention that the majority had made the Third Critical Finding (*ie*, that OPAL had suffered loss and it was not necessary to prove actual expenditure) misconstrues what the majority had intended to say in para 123.

56 In para 123, the majority was addressing Daelim's argument that OPAL could not recover for loss if it had not actually spent any money – that was the nub of the argument. The majority's explanation, supplemented by an illustration, boiled down to a simple and fundamental principle – a party claiming damages for breach of contract is not restricted to recovering its reliance loss (*eg*, money expended as a result of the breaching party's non-

performance), but can also claim for expectation loss to be put in the position it would have been if the contract had been performed. However, even expectation loss, must (as a matter Indian law which governed the Contract) be proved – loss cannot be established by bare assertions without evidence. I do not read the majority to be declaring, in contradiction of basic legal principle, that OPAL had established loss and was entitled to recover damages in respect of the Loss of NPV Claim (to be quantified) without actually proving its entitlement. If that was truly what the majority had intended, then there would have been no need for any quantum hearing at all and OPAL could have been awarded its then claimed sum of INR409.28 crores in full. Clearly, that was not the case.

57 In summary, even based on a reading of the Liability Award alone, I find that the majority of the Tribunal did not make the three critical findings contended by OPAL.

The Dissenting Opinion

58 OPAL also relies on the dissenting opinion of Mr Leaver KC to buttress its case that the Tribunal had made the three critical findings. OPAL refers to paras 18–21 of the dissenting opinion where it says the dissenting arbitrator set out his views as to why NPV was not appropriate to calculate the extra cost which OPAL was entitled to, or to calculate loss:[50]

> 18. I simply cannot accept that NPV, which is the methodology used by EIL for **evaluating** bids is an appropriate methodology for assessing damages. It was never intended to be used for such a purpose, and it does violence to language to suggest otherwise. Damages must be proved and not based on some theoretical calculation made for some other purpose.
>
> 19. Furthermore, I do not understand what is meant when it is said in Paragraph 114(c) of the Award that the difference

[50] Dissenting Opinion at paras 18–21 (Muskara's 1st Affidavit, Exhibit MM-1, Tab B at pp 180–181).

> between Samsung's revised NPV and Daelim's NPV is '*actual loss*'. It is simply the difference in the evaluation of the bids. No actual loss is involved. I also do not agree that the parties '*were aware that … in the event of repudiation of contract, NPV would be the basis for calculation of the loss*'. There is no justification in the GCC or anywhere else for calculating loss on such a basis.
>
> 20. I have never seen NPV used in this way. NPV is the difference between the **present value** of cash inflows and the **present value** of cash outflows over a period of time. NPV is used in capital budgeting and investment planning to analyse the profitability of a projected investment or project. NPV is not a measure of the damages sustained by reason of a breach of contract. It is most frequently used in the calculation of the Discounted Cash Flow of a business.
>
> 21. There is one final and allied point. Even if an enforceable contract came into existence (which, as explained above, I do not think is the case) I do not agree, for the same reasons as are stated above, that the NPV calculation is one which enables OPaL to determine the extra cost that it will have to incur by reason of wrong(ful) repudiation/abandonment of the contract by Daelim. The extra cost, if any, will be demonstrated by the cost to Opal of the Samsung contract when compared with the proposed Daelim contract. That is the proper measure of damage, and is not theoretical. If there is no extra cost, but a saving, OPaL would have to adduce evidence that it lost production by reason of using the OPaL method. OPaL has not attempted to adduce any such evidence.
>
> [emphasis in original]

59 The fact that this dissent was made at all must mean, OPAL argues, that the issues must have been deliberated upon and that the majority must have made at least the First Critical Finding and Third Critical Finding, thereby rejecting the dissenting arbitrator's views.[51]

60 I disagree that the dissenting opinion advances OPAL's case. First, I observe that the appropriateness of the NPV methodology to assess OPAL's loss was *not* the *raison dêtre* for the issuance of the dissenting opinion. The

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51 CWS at paras 54–56.

dissenting arbitrator's primary conclusion (on which he disagreed with the majority) was that there was *no enforceable contract at all* because the terms of the contract were uncertain and it was therefore at best, an agreement to agree. So much is clear from the following paragraphs of the dissenting opinion:[52]

> 3. My first Dissenting Opinion was issued after the hearing that was concerned with whether the Tribunal had jurisdiction in this dispute ('the Jurisdiction Hearing'). At the heart of my disagreement with my colleagues at the Jurisdiction Hearing was the issue of (i) whether or not a contract was formed when the NoA was served and (ii) the terms of any contract then formed. Much of what I then wrote is relevant to my disagreement on this issue, and that Dissenting Opinion should, *mutatis mutandis*, be read as incorporated in this Dissenting Opinion.
>
> …
>
> 5. For the reasons stated below, I have concluded that the contract was not, and is not, enforceable as at least one fundamental term had not been agreed between the parties. Accordingly, I have concluded that, at best, the contract was simply an agreement to agree and, as such, unenforceable.
>
> …
>
> 12. I, therefore, disagree with the majority as to whether a contract capable of being enforced came into existence.
>
> [emphasis in original]

The dissenting arbitrator's views relating to damages, and specifically the NPV methodology, were clearly couched as secondary to his primary conclusion on the absence of an enforceable contract, and therefore *obiter* at best.

61 More fundamentally, I disagree with the premise underlying OPAL's argument – that the Liability Award and dissenting opinion are mirror images of each other, and where a statement is made in the dissent, one can assume that the majority must have made the opposite finding. This would be contrary to

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[52] Dissenting Opinion at paras 3, 5 and 12 (Muskara's 1st Affidavit, Exhibit MM-1, Tab B at pp 177–179).

the principle that dissenting opinions are not part of the award and should not be treated as such – the point is summarised in Gary Born, *International Commercial Arbitration* (Kluwer Law International, 3rd Ed, 2021) ("*International Commercial Arbitration*") at p 3305:

> Notably, *a dissenting or concurring opinion is not part of the award, nor is it another or independent award; rather, it is merely a separate statement by the dissenting arbitrator, without any of the legal consequences of an award.* Separate, dissenting and concurring opinions are common in both litigation arbitration in some legal systems, particularly in common law jurisdictions… [emphasis added]

62 Nor should a dissenting opinion be treated as evidence of a tribunal's deliberations. One cannot assume that every facet of a dissenting opinion would have been deliberated (and disagreed upon) by the majority arbitrators. Further, as stated in *International Commercial Arbitration* at p 3309, arbitrators are bound by obligations of confidentiality *inter se*, and are not generally free to disclose deliberations without restriction in their opinions:

> Moreover, not unlike the making of arbitral awards, the making of a dissenting opinion is a serious act, that implicates the arbitrator's personal duties of impartiality, confidentiality, collegiality and diligence. These duties require that any separate or dissenting opinion respect the secrecy of the arbitral deliberations (*i.e.*, not disclose or comment upon statements allegedly made during deliberations or prior drafts of awards)…

The confidentiality of arbitrators' deliberations was recently affirmed by the Singapore International Commercial Court in *CZT v CZU* [2023] SGHC(I) 11 ("*CZT*") at [43]–[44]. While in *CZT*, the court discussed exceptions to this general principle, those exceptions relate to orders for production of deliberations where serious allegations have been raised such that the interests of justice in producing the records of deliberations outweigh the policy reasons for the protection of confidentiality of deliberations (*CZT* at [53]). That is an entirely different context from the application before me.

63 Therefore, the fact that the dissenting arbitrator had expressed his disapproval of the NPV methodology does not necessarily mean, as OPAL contends, that the Tribunal was in fact making critical or conclusive findings at that stage as to whether the NPV methodology would be the method for calculating damages in the quantum phase of the arbitration. In fact, the dissent is equally consistent with the majority simply permitting OPAL to pursue its case on the NPV methodology at the quantum stage, *without deciding the point* in the Liability Award, and the dissenting arbitrator on the other hand concluding that OPAL's case simply failed *at the threshold* and that there was therefore no need to even proceed to the quantum phase.

64 A further point against OPAL's reliance on the dissenting opinion is that the dissenting arbitrator's views are mistaken at least in so far as they relate to the alleged Third Critical Finding. In para 19 of the dissenting opinion (see [58] above), the dissenting arbitrator records his disapproval with the majority's supposed view at para 114(c) of the Liability Award that the difference between Daelim's and Samsung's bids represented actual loss. In the referenced passage – which was likely to be para 116(c) (there being no para 114(c) in the Liability Award) – the majority was not actually setting out its view. Rather, it was only summarising OPAL's case and arguments at the liability stage:[53]

> 116. The second claim of OPAL is for payment of INR 409.28 crores towards compensation for the loss of Net Present Value (NPV). *The case of OPAL is*:
>
> …
>
> (c) When DAELIM abandoned the contract, OPAL was constrained to enter into negotiations with the second ranked bidder (Samsung). The revised NPV of Samsung was INR 590.79 crores as against DAELIM's NPV of INR 1000.08 crores and therefore, OPAL suffered an actual loss of NPV to the tune of

[53] Liability Award at para 116(c) (Muskara's 1st Affidavit, Exhibit MM-1, Tab A at pp 153, 155–156).

> 409.29 crores. This loss is a direct and natural result of the breach committed by DAELIM. At the time when the contract was entered, the parties were aware that NPV method was the basis for evaluation of the bids and in the event of repudiation of contract, the NPV evaluation would be the basis for calculation of the loss. As OPAL, who is the injured by reason of the breach by DAELIM, is entitled to be put in the position it would have been if the contract had been performed by DAELIM as far as money can do it, OPAL is entitled to INR 409 .29 crores which it lost by reason of the breach by DAELIM.
>
> [emphasis added]

65 Having concluded that the Liability Award, objectively read, does not contain the three critical findings contended by OPAL, I find additionally that there is nothing in the dissenting opinion which changes this conclusion. As such, in my judgment, there is no question of the Tribunal exceeding its jurisdiction by allegedly revisiting and reversing any findings on which it was *functus officio*.

The quantum phase and Quantum Award

66 Given my conclusions on an objective reading of the Liability Award, it is strictly unnecessary to go further. However, substantial submissions were made on the parties' positions and the Tribunal's conduct *after* the liability phase to support either party's case on what the Tribunal decided in the Liability Award. Accordingly, I proffer some brief views on the arguments raised. To be clear, I have not considered the parties' and Tribunal's conduct post-Liability Award in order to interpret or discern what, objectively, the Tribunal decided in the Liability Award. Rather, I have considered these arguments simply to assess how the parties conducted themselves after the Liability Award was issued and whether that conduct (particularly OPAL's) was consistent with the case advanced in this application. In short, a review of the record post-Liability Award and of the Quantum Award shows, in my judgment, that neither the

Tribunal nor OPAL were under the impression that any final determinations had been made in respect of the Loss of NPV Claim at the liability phase.

67 I start with OPAL's conduct in the quantum phase. After OPAL raised its Revised NPV Claim in its Statement of Claim for the quantum tranche (the "SOC-Q"), Daelim applied to the Tribunal on 23 September 2020 to strike out both limbs of the revised claim, *ie*, the Incremental Cost Claim and Loss of Capability Claim.[54] At this stage, it was Daelim which had argued that the Tribunal was *functus officio* in respect of the Loss of NPV Claim, and had no jurisdiction to decide the revised claims as presented by OPAL.[55] Counsel for OPAL at the arbitration tendered written submissions responding to Daelim's application, taking the position that the Loss of NPV Claim had not been adjudicated on its substantive merits at the liability phase:[56]

> 4. The Tribunal has not previously adjudicated on the substantive merits of OPAL's claim for damages suffered by OPAL because it has been forced by Daelim's breach of contract to make do with a less efficient and capable plant from another contractor in place of the plant Daelim contracted to build. *On the contrary, the Tribunal made it clear in the Award on Liability dated 28 December 2018 ('the Award') that it was not at that stage judging the substantive merits of that claim (paragraph 124)…*
>
> 5. *In reality, Daelim's application is an attempt to strike-out OPAL's claims not because they have already been adjudicated upon but without their ever being adjudicated upon.* That is both unjustified and most unjust to OPAL.
>
> …

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54 Daelim's Striking Out Application dated 23 September 2020 at para 1 (2nd Affidavit of Kim Jae Uk (Jody) dated 27 September 2022 ("Kim's 2nd Affidavit"), Exhibit KJJ-2, Tab 10 at p 558).

55 Daelim's Written Submissions for Striking Out Application dated 6 November 2020 at paras 25–30 (Kim's 2nd Affidavit, Exhibit KJJ-2, Tab 11 at pp 639–640).

56 OPAL's Written Submissions for Striking Out Application dated 6 November 2020 at paras 4–5, 51 (Kim's 2nd Affidavit, Exhibit KJJ-2, Tab 11 at pp 678–679, 697).

> 55. In view of these directions [*ie*, to bifurcate the arbitration into liability and quantum tranches], *it would be remarkable if, in the Award following the hearings in December 2017 and July 2018, the Tribunal had made any decisions as to the substance or merits of the quantification of OPAL's claims. Nor did the Tribunal make any decisions on that subject. Instead, it issued its Award dealing with liability.*
>
> …
>
> 61. In contrast to the performance guarantee claim and the delay claim, *the Tribunal did not reject OPAL's 'NPV Claim' and nor did it make any decisions as to how that claim should be quantified.* Instead, the Tribunal directed that both the 'validity and the quantum' of OPAL's NPV claim should be considered in the second tranche hearing relating to quantum (Award, paragraph 140(iii)).
>
> [emphasis in original omitted; emphasis added in italics]

68 OPAL re-affirmed the arguments it raised in the striking out application, both in its written opening statement for the quantum hearing,[57] and once again in its oral opening submissions.[58] Furthermore, in its written closing submissions, OPAL emphasised:[59]

> 32. … **The question of validity, which the Tribunal directed would be considered at the quantum hearing, was not whether extra operating costs were recoverable in principle but whether OPAL could make good a valid claim to have incurred such extra costs and the validity of the NPV method to quantify such a claim.**
>
> [emphasis in original]

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57 OPAL's Written Opening Statement dated 24 December 2020 at para 221 (Muskara's 1st Affidavit, Exhibit MM-8, Tab A at p 1275).

58 Transcript of Quantum Hearing for 4 January 2021 at p 73, line 22 – p 74, line 9. (Muskara's 1st Affidavit, Exhibit MM-10, Tab A at pp 1446–1447).

59 OPAL's Closing Submissions dated 19 February 2021 at para 32 (Muskara's 1st Affidavit, Exhibit MM-12, Tab A at p 3786).

69 These arguments were evidently not lost on the Tribunal, as they were included in the Tribunal's statement of OPAL's position in the Quantum Award – a statement which OPAL has not challenged as inaccurate or wrong:[60]

> 55. *OPaL contends that it is entitled to change the method and basis of calculation as the entire issue relating to quantum was left open* to be urged and decided in the quantum hearing vide the following observations in para 124 of the Liability Award… [emphasis added]

70 Based on the positions taken by OPAL in the quantum phase, it is abundantly clear that OPAL itself (as a recipient of the Liability Award) did not consider that acceptance of the NPV methodology as the formula for calculating extra cost had been finally and conclusively determined. This is consistent with an objective reading of the Liability Award.

71 Similarly, it is evident on the record that the Tribunal never regarded itself as accepting with any finality the use of NPV methodology to calculate damages. One such statement to this effect can be found in the Tribunal's ruling on 19 August 2018, which related to OPAL's application to place on record additional legal authorities pertaining, among others, to NPV. This application was made after the close of the liability tranche hearing and before the Liability Award was issued, on account of questions which the Tribunal had raised during the liability hearing.[61] The Tribunal ruled this application as premature and made clear that these were properly to be considered at the quantum tranche:[62]

> In this background, when the question of liability is yet to be decided, *the application by the claimant to place 'additional legal*

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60 Quantum Award at para 55 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 234).

61 OPAL's Application for Permission to Place Additional Legal Authorities and Treatise on Record dated 7 August 2018 at paras 1–2 (3rd Affidavit of Md Noor E Adnaan, Exhibit MNEA-4, Tab 21 at p 436).

62 Tribunal's Order on OPAL's Application dated 7 August 2018 (4th Affidavit of Samuel Soo, Exhibit SSKH-4, Tab 1 at pp 6–7).

> *authorities and treatises on the validity and appropriateness of NPV method for the purpose of calculation and award of damages' which relates to the issue of quantum, is premature.* The respondent, vide e-mail dated 10.8.2018, has *rightly objected to the filing of such an application relating to the second tranche hearing* at the stage when parties have concluded their submissions on liability and the matter is reserved for award on the question of liability. [emphasis added]

72 There are also clear indications in the Quantum Award itself that the Tribunal, in framing the issues it had to answer, did not regard the appropriateness of NPV methodology as having already been decided definitively in the Liability Award. The first indication of this can be found at para 21 of the Quantum Award, which contains OPAL's suggested list of issues, as summarised by the Tribunal:[63]

> 21. In the light of the rival contentions, the questions that arise for consideration in the quantum hearing, according to OPaL, are —
>
> (i) Whether DAELIM is liable to pay damages to OPaL on the basis of NPV calculations?
>
> (ii) If so, what is the date on which the damages ought to be assessed — that is, as on 30 November 11.2019 [*sic*] as contended by OPaL or as on 28 April 2011 as contended by DAELIM?
>
> (iii) Whether the Loss of Capability Claim is a claim for Loss of Profits and therefore barred?
>
> (iv) What would be the quantum of damages payable by DAELIM to OPaL?
>
> [emphasis in original omitted]

This, in my view, is a clear indication that NPV had not (as far as the Tribunal was concerned) been decided as the method for calculating damages. Otherwise, para 21(i) would not have been necessary at all. While Ms Koh sought to draw a distinction between "calculations" and "methodology" at various points

63 Quantum Award at para 21 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 204).

during the oral arguments before me, I do not think that distinction applies in this instance. It is clear that the Tribunal was considering whether NPV was an appropriate *basis* to compute damages – if it had only meant to address the reliability of NPV *calculations* tendered, then it would not be necessary to have both paras 21(i) and 21(iv).

73 Further, at para 28 of the Quantum Award, the Tribunal started its analysis of OPAL's claim by framing the question it had to address as follows:[64]

> Whether OPaL's claim based on NPV calculations is not maintainable as it is for loss of profits (future losses), as contended by DAELIM? OR Whether OPaL's claim is for extra costs in getting the work completed and therefore maintainable, as contended by OPaL? [emphasis in original omitted]

This issue had already been raised by Daelim in the liability phase (see [44] above). Again, if the use of NPV to calculate damages had truly been accepted definitively and finally in the Liability Award, there would have been no reason for the Tribunal to consider it again in the Quantum Award.

74 Therefore, even if I were to consider events after the issuance of the Liability Award and reading the Quantum Award itself, there is, in my view, no credible basis to say that the Tribunal had made any of the three critical findings as contended by OPAL.

Conclusion on excess of jurisdiction

75 For the reasons discussed above, I accordingly reject OPAL's contention that the Tribunal was *functus officio* and had exceeded its jurisdiction by revisiting and reversing any findings it had allegedly made in the Liability Award.

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64 Quantum Award at para 28 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 207).

Was the Tribunal's decision in breach of the rules of natural justice?

76 I turn now to address OPAL's contention that the Tribunal acted in breach of the rules of natural justice. OPAL's argument (as explained at [22] above) is two-pronged. The first prong overlaps with OPAL's argument in respect of the excess of jurisdiction by the Tribunal in reversing the three critical findings in the Liability Award. OPAL argues that in doing so, the Tribunal had embarked on a chain of reasoning which could not have been reasonably foreseen, such that the Quantum Award was manifestly incoherent.[65] The second is that some aspects of the Tribunal's reasoning were not derived from the parties' submissions or raised to them so as to afford OPAL a reasonable opportunity to make submissions on them. Specifically, OPAL seeks to impugn the Tribunal's reasoning that it would not be possible to calculate the extra cost claimed by OPAL using the NPV methodology because of the different inputs and outputs in Daelim's and Samsung's licensed technology, as well as the illustrations it used to explain that reasoning.[66]

General principles on breach of natural justice

77 The principles governing breaches of natural justice are well-established and uncontroversial. Section 24(*b*) of the IAA provides that the court may set aside an award if "a breach of the rules of natural justice occurred in connection with the making of the award by which the rights of any party have been prejudiced". A party seeking to set aside an award on this ground must establish (a) which rule of natural justice was breached; (b) how it was breached; (c) in what way the breach was connected to the making of the award; and (d) how

65 CWS at paras 85–86.

66 CWS at para 87.

the breach prejudiced its rights (*Soh Beng Tee & Co Pte Ltd v Fairmount Development Pte Ltd* [2007] 3 SLR(R) 86 ("*Soh Beng Tee*") at [29]).

78 For present purposes, the relevant rule of natural justice that OPAL relies on is the fair hearing rule, which requires each party to be given adequate notice of the case it must meet and a fair opportunity to be heard (*Soh Beng Tee* at [43]). Two slightly different facets of the fair hearing rule are, according to OPAL, engaged in this case:

(a) First, the fair hearing rule is breached where an arbitral tribunal issues a manifestly incoherent decision, as that incoherence demonstrates that the tribunal has not understood or dealt with the case at all (*BZW and another v BZV* [2022] 1 SLR 1080 ("*BZW*") at [56]).

(b) Second, the rule is also breached where the tribunal's chain of reasoning is not one which (i) the parties had reasonable notice that the tribunal would adopt, or (ii) had sufficient nexus to the parties' arguments. A party has reasonable notice of a chain of reasoning where it arose expressly, arose by reasonable implication from the parties' pleadings, was reasonably brought to the party's actual notice, flows reasonably from the parties' arguments or is related to those arguments. To set aside an award on the basis of a defect in the chain of reasoning, a party must establish that the tribunal conducted itself either irrationally or capriciously such that a reasonable litigant in the party's shoes could not have foreseen the possibility of reasoning of the type revealed in the award (*BZW* at [60(b)]).

OPAL's objection on the three critical findings

79 The first prong of OPAL's argument can be disposed of quickly. This objection is premised on there being an excess of jurisdiction by reason of the Tribunal, despite being *functus officio*, revisiting and reversing the three critical findings as alleged by OPAL. As held by the Court of Appeal in *CDM and another v CDP* [2021] 2 SLR 235 at [16], where a party's allegations of breach of natural justice and excess of jurisdiction overlap (in the sense that both arise from the same factual matrix), a failure to establish the latter ground would necessarily be fatal to the former. Since, as I have found, there was no reversal by the Tribunal of any findings made in the Liability Award (see [75] above), OPAL's excess of jurisdiction argument falls away, and with it, the first prong of OPAL's argument on breach of natural justice.

OPAL's objection on the Tribunal's reasoning and use of illustrations

80 I turn to the second prong of OPAL's argument relating to the Tribunal's reasoning and use of illustrations. I begin by setting out the paragraphs of the Quantum Award that OPAL takes issue with, in advancing this argument:[67]

> 94. The Tribunal finds, on a comparison of the inputs required in using CP Chem technology (DAELIM's bid) and Mitsui technology (Samsung's bid), that the assessment of damages by comparing the NPV of DAELIM's bid and Samsung's bid would be **unsound and unreliable**, as **the two technologies use different additives and catalysts with differing quantities and different value**. The following illustrations may explain the position.
>
> ***Illustration 1:*** *An employer wants to set up a plant with a plant life of 20 years to manufacture/produce one lakh tons of `Product P' of a prescribed specifications [sic] per year, assuring an output of ten tons of `Product A' from 50 tons of raw materials to be provided by the employer. Several bids are received in response to a notice inviting tenders guaranteeing the above performance*

[67] Quantum Award at paras 94–97 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at pp 264–269).

requirements. To find out the most advantageous and beneficial bid, the employer has to compare the bids received. For such comparison, there may not be any need for either the price of the `Product P' or the price of the raw materials supplied, as both are constants. The comparison will therefore be only of Capex plus Opex quoted by the rival bidders. Capex refers to the cost of construction of the unit. Opex refers to the cost/expenses relating to operation of the plant (that is, cost of electricity, water, steam and gases) for producing the specified quantity of Product P from a specified quantity of raw material. As a consequence, though different bidders may bid for the said project using different technologies to achieve the contracted result, in view of the input and output parameters being constant (that is, the product being of prescribed specifications, the raw materials required and the quantity of Produce P produced being the same, the production being of a specified quantity per day/per year and the plant life having been specified), for the purpose of evaluating the bids or the benefits to the employer), there is no need to consider the input costs or the revenue from the outputs nor the 'profit' (that is, revenue by sale of output less cost of input). The comparative figures of Capex plus Opex would be the basis to evaluate the bids to choose the most advantageous bid, even though the bids may relate to use of different technologies for putting up and operating the plant. Even if some of the technologies offered may be of a higher capacity or of a longer life than what is required, that would not be relevant as what is relevant is the fulfilment of the three guaranteed requirements, that is, (i) the product being in accordance with the specifications, (ii) the capacity to produce the specified quantity per day/year and (iii) the life of the plant to produce the required quantities for the specified number of years. In such a case, if the contractor fails to complete the project and thereby commits breach and the work is awarded to another contractor using a different technology meeting the three guaranteed requirements, the extra cost incurred by the employer would be the difference in the aggregate of Capex and Opex. The input costs and the output revenue would not be relevant in such a case.

Illustration 2: *An employer wants to set up a plant with a plant life of 20 years to manufacture/produce one lakh tons of `Product P' of a prescribed specifications [sic] per year, with the employer providing the required raw materials. Two bids are received in response to a notice inviting tenders guaranteeing the above performance requirements. One bidder specifies that 60 tons of raw materials (input) would be required to obtain ten tons of the specified product (output). Another bidder specifies 55 tons of raw materials (inputs) would be required to obtain the same quantity of the specified product (output). In that event, it may not be sufficient merely to take the aggregate of the Capex and Opex for ascertaining the comparative merit. It would also be*

necessary to consider the conversion efficiency (economic value) in addition to the Capex and Opex, as the difference in the quantity of raw material required would alter the input cost of the employer. Even where the economic value of the quoted conversion efficiencies has to be taken note of for deciding which is of higher benefit to the employer, it would still be a case of ascertaining the cost and expense between the two processes and would not involve assessing the 'profit' that would be derived by one or the other process.

Illustration 3: *An employer wants to set up a plant with a plant life of 20 years to manufacture/produce one lakh tons of `Product P' of a prescribed specifications [sic] per year with the employer providing the required raw material. Two bids are received in response to a notice inviting tenders guaranteeing the above performance requirements. However, the processes offered by the two bidders, while assuring the required performance/output, contain several variable factors both in regard to inputs and outputs as under (purely illustrative):*

Sl No.	**Description**	**Offer of first bidder**	**Offer of second bidder**
	Inputs required per Ton of the product		
1	*Raw materials to be supplied by the employer*	5 Tons	6 Tons
2	*Chemicals (of known chemical compositions) to be supplied by the employer*	A – 50 Kgs B – 70Kgs C – 100Kgs	A – 30Kgs B – 80Kgs D – 60Kgs
3	*Additives (known products) to be supplied by the employer*	F – 5Kgs G – 8Kgs	F – 4Kgs H – 6Kgs
4	*Catalysts to be supplied by the bidder at the specified price (**of undisclosed compositions and whose market value is not known**)*	Catalyst - 3Kgs	Catalyst – 2 Kgs
	Output		
5	*The product (Product P for production of which bids are invited)*	1 Ton	1 Ton
6	*Bye-product (which is also a saleable item of lesser value than the main product)*	100 Kgs of bye-product M	110 Kgs of bye-product N
7	*Waste bye-product (of nil value) removal of which involves additional maintenance and time*	10Kgs	Nil

In this illustration, the Capex and Opex can be ascertained or calculated, but calculation of the economic value of the quoted conversion efficiencies/inputs and outputs becomes very difficult having regard to the several variables with different values. As the above table shows, to calculate the economic value of the quoted conversion efficiencies, the employer will have to assess the cost/expense (that is, cost of inputs – items 1 to 4, and the expense relating to removal of waste output – item 7 in the case of first bidder; and cost of only inputs – items 1 to 4 in the case of the second bidder) and the revenue from the bye-product – item 6. For the purpose of calculating the NPV for selection of the more beneficial bid, it may be possible to take the value of items 2, 3 and 4 as constants and that there is no difference in regard to output items 6 and 7. But if the NPV method of calculation is to be adopted to find out the `extra cost' involved in allotting the work to the second bidder in the event of breach by the first bidder, it will not be possible to treat the cost of input items 2, 3 and 4 as constants, nor will it be possible to treat output items 6 and 7 to be equal or constant. As the prices of these items would keep on varying over the course of 20 years, it will be next to impossible to calculate which would be more beneficial to the employer.

95. The above illustrations demonstrate that it may be possible and feasible to calculate the `extra cost' to the employer on awarding the work to the second bidder by NPV method in projects of the kind described in illustrations 1 and 2 but will not be possible in projects of the kind described in illustration 3. The numerous variables with fluctuating prices make it impractical and inaccurate to calculate the conversion efficiency factor in illustration 3. **Comparison becomes very difficult where two different technologies require use of different additives/catalysts of varying quantities to the main raw materials**. Difficulty would arise when the products are different - where one technology gives one ton of the 'product' and one ton of 'waste' (such waste being of nil value); and the second technology gives one tone [*sic*] of the 'product' and half a ton of a different 'product' (off-specification) having a value and half a ton of waste which has no value. In such a case, evaluation of the cost and evaluation of revenue becomes necessary and becomes complex. Difficulties would also arise where inputs required are of different quantities and value and the outputs are also of different quantities and value. More difficulties would arise where inputs have any additives/catalysts which are of different compositions and value. **Much more complex would be the position where inputs consist of 'raw materials' plus 'catalysts' (whose composition/ingredients are made secret) *plus* chemicals *plus* additives of different numbers, which would mean that**

> **even the smallest variation in the quantity may result in a huge difference in the economic value.**
>
> 96. What EIL did was to keep the cost of raw materials as 'constant' and the revenue from the product also as 'constant' while comparing the two technologies to arrive at the conversion efficiency.
>
> 97. The Project of OpaL for which the bids of DAELIM and Samsung were received fall under the category referred to in illustration 3. The quantities of operational requirements relating to Hydrogen, Power, Steam, Nitrogen and Cooling water, which make up the Opex also vary. The quantities and nature of catalysts and additives vary. The cost of some of the catalysts are not known. **In such a situation, it will not be possible to find out with any certainty whether there is any extra cost at all and if so, what would be quantum of such extra cost**.
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> [emphasis in original in bold and italics; emphasis added in bold underline]

81 To summarise the paragraphs quoted above, the Tribunal's finding was that the use of NPV methodology to calculate OPAL's extra cost (claimable under cl 8.4.1.1 read with 8.4.1.2 of the GCC) in assigning the contract to Samsung was unsound and unreliable. The Tribunal's chain of reasoning (supplemented by its illustrations) was essentially as follows:

(a) The technologies used in Samsung's and Daelim's respective bids utilised different additives and catalysts, in differing quantities and with different values or prices.

(b) Where there were differences in the inputs and outputs of two processes, both in terms of type and volume, it would be very difficult to use the NPV methodology to determine the conversion efficiencies and consequently, calculate the extra cost of using one process over the other, not least because the prices of inputs and outputs would vary over the life cycle of the plant.

(c) OPAL's case was such a case (*ie*, Illustration 3 at para 94), in that Samsung's and Daelim's bids involved varying inputs, and different types and quantities of additives and catalysts. Furthermore, the cost of some of the catalysts/additives to be used in Daelim's bid were not known due to their compositions being made secret. These uncertainties also meant that even a small variation in the quantities of the inputs could result in a "huge difference" in the economic value (at para 95).

(d) Thus, it was not possible to quantify, with any certainty, whether there was any extra cost to OPAL and if so, the quantum of such cost (at para 97).

82 OPAL says that the Tribunal's reasoning and illustrations were surprising and unexpected as they were not derived from any of OPAL's pleadings or arguments. Nor, OPAL argues, did Daelim ever contend that it was not possible to calculate OPAL's extra cost using the NPV methodology because of the different inputs and outputs in Daelim's and Samsung's licensed technology. Daelim had only challenged the calculations tendered in support of OPAL's Loss of NPV Claim, as opposed to the methodology.[68] At the hearing, Ms Koh emphasised that the differences in Daelim's and Samsung's technologies had always been known to the Tribunal as it was apparent from the report of OPAL's consultants, EIL. OPAL highlights the illustrations used by the Tribunal in para 94 of the Quantum Award, arguing that they were never put to the parties or their experts by the Tribunal, and were therefore "the brainchild of the Tribunal, which it did on its own accord without any assistance or input from the parties, experts, textbooks, or cases".[69]

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68 CWS at para 88.

69 CWS at para 87.

83 I reject OPAL's contentions. Firstly, the arbitration record shows that the validity of NPV methodology was always at issue in the quantum phase. It was clear from paras 124 and 140(iii) of the Liability Award (see [51] above) that it was only in the quantum phase that the Tribunal would decide conclusively both the validity of the claim for extra cost based on the NPV methodology *and* the quantum of the claim based on this methodology. This was consistent with the Tribunal's views in para 123 of the Liability Award (see [48] above) that there was no "straitjacket formula" to assess the extra cost to OPAL and that NPV could be an appropriate method. It bears reiteration that this was a preliminary and not a final or binding conclusion. Based on this, the Tribunal was prepared to allow the Loss of NPV Claim to proceed to the quantum phase to determine both the validity (*ie*, the soundness) of the NPV methodology *and* the quantification of the claim. Thus, at para 7 of the Quantum Award, the Tribunal set out precisely these two questions for its consideration:[70]

> 7. Thus, *what remains for consideration in the quantum hearing is the validity and quantum* of the claim of OPAL (for award of INR 409.28 crores subsequently restricted to 20% of the Contract price of INR 4,593,300,500 plus USD 138,038,000) towards compensation for loss of Net Present Value and interest thereon.
>
> [emphasis in original omitted; emphasis added in italics]

84 As I discussed above (see [67]–[69]), OPAL itself had also taken the position in the quantum proceedings that the NPV methodology had not been accepted with any finality in the Liability Award, and that the validity of the claim (including the NPV methodology) would be considered at the quantum phase.

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70 Quantum Award at para 7 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 194).

85 At the hearing of this application, counsel for Daelim, Mr Mahesh Rai ("Mr Rai"), pointed to not less than five sources from which the Tribunal's reasoning and illustrations were drawn to demonstrate that the building blocks upon which the Tribunal's reasoning was constructed were present, in the pleadings and in the evidence before the Tribunal:

(a) Starting with the arbitration pleadings, in Daelim's Reply to the SOC-Q, Daelim highlighted several errors and erroneous assumptions in Mr Flower's Report and criticised his calculations as being "unreliable and unsound".[71] Mr Rai contended that this was the source for the Tribunal's criticism (at para 94 of the Quantum Award) of the NPV methodology being unsound and unreliable.

(b) During the quantum hearing, Daelim's expert, Dr Malcolm J Kaus, listed several poor assumptions made by Mr Flower in his calculations based on NPV. These included assumptions that the revenue stream and fixed costs would remain the same over the entire plant life.[72] Mr Rai pointed out that this was the source for Illustration 3 in para 94 of the Quantum Award, where the Tribunal said that it was not possible to treat certain input and output items as constant.

(c) During the presentation of Mr Flower's evidence at the quantum hearing, Mr Flower said that (i) the technologies used by Samsung and Daelim would have involved very different additives mixes, such that it would be difficult to draw links from one to the other; and (ii) that he

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71 Daelim's Reply to Statement of Case for OPAL on Quantum dated 22 June 2020 at paras 95–97, 105 (Muskara's 1st Affidavit, Exhibit MM-8, Tab D at p 1176).

72 Transcripts of Quantum Hearing for 8 January 2021 at p 135, line 7 – p 136, line 10 (Muskara's 1st Affidavit, Exhibit MM-10, Tab E at pp 2267–2268).

had made certain assumptions about prices of catalysts and additives based on information in the bids because there was no market evidence.[73] Mr Rai said that this was another source for the Tribunal's reasoning that "[c]omparison becomes very difficult where two different technologies require use of different additives/catalysts of varying quantities to the main raw materials".

(d) During the experts' "hot-tubbing" involving Mr Flower and Daelim's expert, Mr Chaitanya Arora ("Mr Arora"), Mr Flower accepted that in comparing the increases in prices of additives between Samsung's and Daelim's processes, he was comparing Samsung's actual prices against Daelim's bid prices.[74] Mr Rai contended that this was another reason why the Tribunal found OPAL's claim based on NPV methodology unsound and unreliable.

(e) At a later point in the expert's evidence, Mr Arora pointed out that there was a high level of unreliability in Mr Flower's methodology, in that even very small corrections would result in very large changes to the final calculations when extrapolated over a long period of time and over high quantities of production.[75] Mr Rai highlighted that this evidence found its way directly into para 95 of the Quantum Award, where the Tribunal stated its concern over small variations in quantity resulting in a huge difference in economic value.

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73 Transcript of Quantum Hearing for 11 January 2021 at p 13, lines 1 – 23 (Muskara's 1st Affidavit, Exhibit MM-10, Tab F at p 2329).

74 Transcript of Quantum Hearing for 12 January 2021 at p 96, lines 19 – 23 (Muskara's 1st Affidavit, Exhibit MM-10, Tab G at p 2669).

75 Transcript of Quantum Hearing for 13 January 2021 at p 78, line 17 – p 79, line 20 (Muskara's 1st Affidavit, Exhibit MM-10, Tab H at pp 2880–2881).

86 Given the sources listed above, I agree that it cannot be said that the Tribunal's reasoning and illustrations were pulled out of thin air or that it came up with its own ideas without affording the parties the opportunity to address them. In essence, the Tribunal agreed with Daelim's arguments (contrary to OPAL's submissions) that the NPV methodology was unsound and unreliable. That was a decision on the merits of the claim, and the building blocks for the illustrations used were also found in the evidence adduced and submissions made during the quantum phase of the arbitration. It is thus not open to OPAL to challenge the Tribunal's decision on the merits by attempting to argue that there was a process failure. In my judgment, OPAL's objection is in effect a disguised attempt to attack the decision on its merits, which is impermissible. I accordingly reject the second prong of OPAL's argument on breach of natural justice.

Was OPAL prejudiced by the Tribunal's findings?

87 It is not enough for a party to show that there was a breach of natural justice occasioned by the tribunal's conduct.

88 An award may only be set aside on grounds of a breach of natural justice if that breach caused actual or real prejudice. Prejudice here means that if there was no such breach, that could reasonably have made a difference to the outcome of the arbitration (*L W Infrastructure Pte Ltd v Lim Chin San Contractors Pte Ltd and another appeal* [2013] 1 SLR 125 ("*L W Infrastructure*") at [81]). Taking a step back and looking at the Quantum Award as a whole, there was, in my view, no prospect of the Tribunal coming to a different conclusion. As such, OPAL could not have suffered any prejudiced even if there was any breach of natural justice on the part of the Tribunal. I elaborate below.

89 The Tribunal's *primary* conclusion was *not* its decision on the unreliability and unsoundness in using NPV as the methodology to calculate the extra cost to OPAL; it was that *OPAL had failed to prove what it pleaded*. This is apparent from paras 56 and 57 of the Quantum Award:[76]

> 56. But what requires to be noted is that **whatever rights are reserved and whatever questions are left open are for the purpose of proving the quantum claim as pleaded in the SoC dated 2.1.2016** and not to make a different claim using the same description: *'claim for compensation for loss of NPV'*.
>
> 57. OPaL's claim for INR 409.28 crores towards compensation for loss of NPV in its pleadings, evidence and arguments in the first stage of (liability) hearing was based on the following premises: (i) The operating costs would be calculated in respect of a plant life of 20 years from the date of NoA (including the construction period). (ii) The NPV will be calculated by considering three factors (economic value derived from bidders' quoted conversion efficiencies, CAPEX and OPEX) and this would be done by applying a discount factor of 10% on the net cash flow per year and the net cash flow would be arrived at by deducting the OPEX and CAPEX from the sales revenue. This was the basis of the claim, and the Tribunal directed a quantum hearing with reference to the claim so made in the SoC on the basis of EIL' s NPV calculations. **The question that can be considered during the quantum hearing, therefore, is whether OPaL has made out a case for awarding damages on the basis of NPV claim as pleaded in its Statement of Claim based on the EIL calculations.** In other words, OPaL had to establish the claim by justifying the capital costs, the fixed operating costs, the variable operation costs and the sales revenue adopted/assumed by EIL to arrive at the net cash flow which was subjected to an annual discounting of 10% for 20 years, to arrive at the NPV. **This was made clear in paragraphs 116 to 124 of the Liability Award dated 28.12.2018 and the said finding is binding upon the parties during the quantum hearing**. **OPaL has adopted a different method of calculating loss of NPV** which involved (a) changing the plant life period for purpose of calculations of loss of NPV as 25 years from commencement of operation (March 2017 to March 2042) instead of 20 years from the date of NOA (28.4.2011 to 28.4.2031); and (b) changing the calculation of NPV adopting a calculation of NPV by applying a different discounting factor to the difference between the total

[76] Quantum Award at paras 56–57 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at pp 234–235).

> of capital costs and operating costs of DAELIM bid and the actual costs and operating costs of Samsung (instead of the method adopted by EIL by applying a discounting factor of 10% to the annual net cash flow (which is arrived at by deducting the capital costs and operating costs from the sales revenue). The goalpost cannot obviously be shifted after the play has commenced.
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> [emphasis in original in italics; emphasis added in bold underline]

In para 57 of the Quantum Award, the Tribunal referred to its finding in the Liability Award as being "binding" on the parties. Reading this in context (as set out in para 56), it is apparent that this was not a reference to the Tribunal accepting conclusively the appropriateness of NPV methodology in the Liability Award (as alleged by OPAL). This was the Tribunal emphasising that what OPAL had been permitted to do in the quantum phase was to prove its entitlement to and quantum of loss of NPV *as pleaded in its statement of claim in the liability phase*. As discussed at [16], OPAL did not do this.

90 Instead, OPAL made a tactical decision to amend its claim, which in its submission was merely an updated claim with no change to the NPV methodology.[77] This decision ultimately backfired on OPAL, as the Tribunal found that OPAL's amended claim was not merely an update, but one which contained fundamental (and unpleaded) changes in assumptions and parameters for calculations.[78] This led to the Tribunal's conclusion at para 59 of the Quantum Award:[79]

> 59. *It thus becomes clear from the above that OPaL has not chosen to prove what it has pleaded in the SoC; and what it has chosen to prove is not pleaded and is contrary to the pleadings*

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77 CWS at para 64.

78 Quantum Award at para 57 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 235).

79 Quantum Award at para 59 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at pp 236–237).

> *in the SoC dated 2.1.2016 [ie, OPAL's Statement of Claim for Liability].* The contention of OPaL that it has merely updated its claim made in the original SoC with reference to what transpired between the filing of the SoC and the trial during quantum hearing cannot be accepted. Therefore, the claim of OPaL for compensation for loss of NPV as pleaded in the SoC-Q is liable to be rejected.
>
> [emphasis added]

91 These findings *struck at the heart of the merits* in this case. Again, they are not subject to appeal, be it through the front door, or via the back door in the guise of a setting aside application. Even if the Tribunal had accepted NPV as the methodology to calculate OPAL's extra costs (whether in the Liability Award or at the quantum phase), it is more than likely that the Tribunal would have rejected OPAL's amended claim nonetheless because OPAL failed to prove its loss as originally pleaded. Given how OPAL decided to run its case at the quantum phase, the prospect of any difference being made to the outcome of the arbitration was, in my view, fanciful (*L W Infrastructure* at [54]).

92 This, however, was not the end of the line for OPAL's case. In the next paragraph (and throughout the remainder of the Quantum Award), the Tribunal went on to consider whether there was enough material on the record for it to decide OPAL's *original pleaded claim*. This was done by assessing whether OPAL could prove its new unpleaded claim, and if so, whether that could then be re-worked to fit within the mould of its original pleaded case:[80]

> 60. The next question for consideration is whether the Tribunal should, on the basis of material on record, find out whether any part of the NPV claim as pleaded by OPaL in the quantum hearing, is made out? DAELIM does not dispute the fact that subsequent events can be taken note of to mitigate/reduce the claim for damages calculated with reference to the date of breach and consequently, DAELIM does not dispute that the Tribunal can take into account the up-to-

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80 Quantum Award at para 60 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at p 237).

> date evidence while assessing compensation. This involves consideration of the questions (a) whether OPaL has made out the case as put forth in the SoC-Q (quantum hearing)? and (b) If the claim as pleaded in the SoC-Q is made out, then whether it can be re-worked on the basis of what was pleaded in the original SoC, for making any award towards the NPV claim?

Thus, it is clear that the Tribunal was very much alive to the issues in play, and was proactively seeking to "connect the proverbial dots" (to use the Court of Appeal's words in *BZW* at [58]) between OPAL's new and unpleaded claim and its original pleaded case.

93 Having set out the context for its analysis to follow, the Tribunal sought to determine the first question, *ie*, whether OPAL could make out its new and unpleaded claim. This required a close examination of Mr Flower's Report, which formed the foundation for OPAL's new claim. The Tribunal agreed with Daelim that Mr Flower's Report contained several errors which made it unreliable. Three major errors were discussed in the Quantum Award under the headers "Re. Error in the rate of Zinc Stearate", "Re. Calculation of 'loss' period" and "Date of assessment of damages". It was only after analysing these major errors in detail that the Tribunal proceeded to make its *separate* comments on the unsoundness of the calculation of damages (at paras 93–97 of the Quantum Award) which have formed the basis of OPAL's present objections in this application.

94 In the Tribunal's concluding paragraphs under the header "Whether OPaL has established the quantum of loss for award of damages", the Tribunal summarised, in two distinct paragraphs, its reasons for finding that OPAL had failed to establish its claim:

> 98. The Tribunal has found that in cases where the two technologies use different additives/catalysts and/or where the quantities of the additives/catalysts and standard inputs are different, it will not be possible to find the `extra cost' as the

> determination would involve assessment of revenue, expenditure and profits which is barred by the contract, apart from the complexity and the impracticality of comparing the inputs and outputs in projects using different technologies.
>
> 99. *The Tribunal **also** finds that OPaL has not chosen to prove what it pleaded in support of its claim for damages of INR 409.28 crores towards compensation for loss of NPV; and that the method adopted by Mr. Flower for calculating the damages as INR 5,317 million by way of compensation of loss on account of NPV suffers from serious and fundamental errors requiring rejection.* The Tribunal has considered three major errors out of the eight errors listed by Mr. Arora, DAELIM' s expert, in the calculations of by Mr. Flower which are sufficient to hold that Mr. Flower's methodology was both contrary to the contract and proceeded on erroneous assumptions. In this view, it is not necessary to consider the other errors listed by Mr. Arora (in the table in para 67). It is held that OPaL has failed to prove the NPV loss in respect of the claim for INR 409.28 crores subsequently restricted to 20% of contract value.
>
> [emphasis added in italics and bold italics]

95 It is clear that the Tribunal's conclusions at para 99, *ie*, that OPAL chose not to prove what it pleaded in the liability phase and that Mr Flower's Report suffered from "serious and fundamental errors requiring rejection", were *separate* conclusions to that reached by the Tribunal on the unsoundness of the calculation of damages by OPAL. Thus, these formed separate and independent grounds for the Tribunal's ultimate finding that OPAL had failed to prove its pleaded claim for INR409.28 crores. As such, even if the Tribunal had accepted that NPV methodology was acceptable to calculate OPAL's damages, OPAL's claim would, in my view, still have failed on these separate grounds. Consequently, no prejudice arises in this case.

Mr Arora's Sixth Expert Report

96 OPAL raised a final objection with regard to an expert report provided by Mr Arora (which the Tribunal referenced at para 67 of the Quantum Award) (the "Sixth Expert Report"). Essentially, OPAL points to the fact that Mr Arora

had, in the course of pointing out errors to Mr Flower's calculations, offered his own alternative figure of INR355 million after making certain adjustments to the calculations.[81] OPAL complains that it was deprived of an opportunity to respond to the Sixth Expert Report because it was tendered on the last day of the quantum hearing.[82] This did not, however, stop OPAL from relying on this report to argue that it should at the very least have been awarded INR355 million in damages rather than nominal damages of INR500,000.[83] I address these contentions in turn.

97 First, I do not think that OPAL was prejudiced on account of not being able to respond to the Sixth Expert Report. That report could not reasonably have made a difference when the Tribunal's *primary* conclusion was that *OPAL* had not proven its pleaded loss.

98 I also disagree with OPAL's further contention that it should have at least been awarded INR355 million instead of nominal damages on the basis of the Sixth Expert Report. In the first place, the point of this report (and Mr Arora's evidence more generally) was to show the fundamental errors in Mr Flower's calculations, rather than to offer an alternative sum of damages. Nor was it Daelim's case that OPAL should at best be awarded INR355 million in damages. At a more fundamental level, the Tribunal had concluded (as it was entitled to) that the NPV methodology could *not* be used to calculate OPAL's extra costs. It could not then, in the same breath, adopt the Sixth Expert Report to award OPAL a sum of INR355 million based on the very methodology it had rejected. As I have found, the Tribunal's conclusions on the NPV methodology

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81 Quantum Award at para 67 (Muskara's 1st Affidavit, Exhibit MM-2, Tab A at pp 241–242).

82 Muskara's 1st Affidavit at paras 55, 85.

83 CWS at para 84.

cannot be interfered with. There cannot therefore be any prejudice arising in respect of the Sixth Expert Report. It would have had no impact on (or made any difference to) the Tribunal's primary conclusion that OPAL had simply failed to prove what it pleaded.

99 Having chosen to adopt a particular strategy at the quantum phase of the arbitration, OPAL must lay in the bed it made, no matter that the outcome of the arbitration is unpalatable to it. It is not for the court to rescue OPAL from strategic decisions which, with the benefit of hindsight, may have proven to be disastrous.

Conclusion on breach of natural justice

100 I reject OPAL's arguments that there was any breach of natural justice in this case or that it had been prejudiced by any such breach on the part of the Tribunal. This disposes of the second string to OPAL's bow in this application.

Waiver by election / approbation and reprobation

101 Given that I have rejected all of OPAL's grounds of objection, it is unnecessary for me to consider Daelim's arguments that OPAL is in any event precluded from raising these objections either because the doctrine of approbation and reprobation applies, or by reason of waiver by election on OPAL's part. It suffices to say that based on the material before me, it appears that there has been some inconsistency in the positions taken by *both* OPAL and Daelim over the course of the arbitration and in these proceedings.

Conclusion

102 For the reasons detailed in this judgment, the claimant's application is dismissed. I will hear the parties separately on the issue of costs.

S Mohan
Judge of the High Court

Koh Swee Yen SC, Leo Zhen Wei Lionel, Md Noor E Adnaan, T Abirami and Hudson Wong (WongPartnership LLP) for the claimant;
Jimmy Yim Wing Kuen SC, Mahesh Rai s/o Vedprakash Rai, Loo Chuan Shen Don, Yap Keong Wee Brandon and Samuel Soo Kuok Heng (Drew & Napier LLC) for the defendant.