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* **IN THE HIGH COURT OF DELHI AT NEW DELHI**

CNR No. DLHC010563962024

+ **C.A.(COMM.IPD-PAT) 69/2024**

9449710 CANADA INC

.....Appellant

Through: Mr. Nishant Rai, Ms. Neha Ruhela,
Ms. Manisha Singh, Mr. Abhai Pandey, Mr.
Manish Aryan, Ms. Yojana Sonkusare, Ms.
Shivani Singh and Ms. Akhya Anand, Advocates.

versus

DEPUTY CONTROLLER OF PATENTS AND DESIGN

.....Respondent

Through: Ms. Shiva Lakshmi, SPC with Ms.
Pankhuri Tiwari and Mr. Prashant Kumar Sharma,
Advocates.

CORAM:

HON'BLE MS. JUSTICE JYOTI SINGH

ORDER

06.08.2026

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1. This appeal is filed on behalf of the Appellant under Section 117A of the Patents Act, 1970 ('1970 Act') for setting aside impugned order dated 31.03.2024 passed by the Respondent, whereby Indian Patent Application No. 202117002258 filed on 18.01.2021 has been refused as also for a direction to the Respondent to grant the patent on the claimed invention.
2. To the extent necessary, the facts as pleaded are that Appellant filed PCT National Phase Application No. 202117002258 on 18.01.2021 in respect of invention titled "*TEREPHTHALIC ACID ESTERS FORMATION*" and the application was examined and First Examination Report ('FER') was issued on 23.06.2022, to which Appellant filed a reply



on 16.03.2023 along with amended claims. Hearing notice was issued by the Patent Office and after final hearing on 18.12.2023, Appellant filed post-hearing written submissions on 30.12.2023 with amended claims and additional documents. By impugned order dated 31.03.2024, Respondent refused the grant of patent in favour of the Appellant.

3. As per the Appellant, subject application concerns a process for depolymerization of polyethylene terephthalate (PET) to form dimethyl terephthalate (DMT) that is efficient, involves low energy, high yield and is cost effective. The process comprises various steps, wherein PET is mixed with a first solvent comprising methanol at a temperature from 50°C to 100°C to yield a first mixture. To this mixture, mono sodium glycoxide suspension is added along with PET in a ratio from 1:2 to 1:20 (mol/mol), wherein the mono sodium glycoxide suspension is made via a process comprising heating mono ethylene glycol at a temperature from 70°C to 100°C and adding sodium hydroxide to the mono ethylene glycol, thereby forming mono sodium glycoxide. Thereafter, the mono sodium glycoxide is dried and suspended in a suspending solvent, forming the mono sodium glycoxide suspension to which a second solvent is added and admixing is done, leading to formation of terephthalate.

4. Respondent has refused grant of patent on three grounds: lack of clarity under Section 10(5); lack of inventive step under Section 2(1)(ja); and non-patentability under Section 3(d) of 1970 Act. As per the impugned order the claims contain the phrase '*as claimed in any one of the claims*' which renders the scope of the claims unclear and thus the application falls foul of Section 10(5). As per the Respondent, the subject invention lacks inventive step owing to cited prior arts D1-D6 and is also non-patentable



under Section 3(d) since D1-D6 disclose a similar process for depolymerization of PET using ethylene glycol salt and methanol as solvent and additionally, since Appellant failed to provide any improved efficacy data over D1-D6, the claimed invention is a mere new use of a known process.

5. Challenging the impugned order, learned counsel for the Appellant submits that Respondent has erred in understanding the scope of claims with regard to the phrase '*as claimed in any one of the claims*' and has also failed to provide any reasoning as to how the said phrase makes the claims unclear in their scope. Respondent has overlooked that Section 10(5) only provides that the claims of a complete specification must be clear and succinct but does not provide a specific format for drafting dependent claims nor does it place limitations on multiple dependencies that can be presented in the claims.

6. It is argued that the objection of lack of inventive step is misconceived. Respondent has not followed steps 1, 3 and 5 of the five-step test laid down by the Division Bench of this Court in ***F. Hoffmann-La Roche Ltd. & Anr. v. Cipla Ltd., 2015 SCC OnLine Del 13619***. Respondent has also ignored the inventive step underlying the claims of the subject application and has come to an erroneous conclusion that the claimed invention is obvious to the person skilled in the art by applying a hindsight approach. Even the most fundamental step of identifying the person skilled in art is lacking in the instant case. This Court in ***Agriboard International LLC v. Deputy Controller of Patents and Designs, 2022 SCC OnLine Del 940***, has held that while considering an invention for lack of inventive step, Controller must consider three elements: (a) the invention disclosed in the



prior art; (b) the invention disclosed in the application under consideration; and (c) the manner in which subject invention will be obvious to a person skilled in the art. Without any discussion on these three elements, it is impermissible to arrive at a bare conclusion that the subject invention lacks inventive step. Respondent has not carried out the said analysis and has merely identified similarities and differences between the claimed invention and the cited prior arts D1-D6, by simply extracting some parts and copy-pasting them side by side in a tabular form. No reason is assigned to explain how a person skilled in the art would be motivated to arrive at the claimed invention from the teachings in the prior art documents and these legal infirmities are sufficient to set aside the impugned order.

7. It is further argued that Respondent has erred in understanding the scope of the claimed invention vis-à-vis. D1-D6. The claims of the subject application provide a process of depolymerization of PET to form terephthalate, the process comprising admixing PET with methanol to yield a first mixture and then adding mono sodium glycoxide suspension to the first mixture followed by a second solvent, thereby forming the terephthalate. Use of methanol and mono sodium glycoxide demonstrates improved yields of monomers in comparison to the known processes, where sodium methoxide is added to a reaction mixture. Additionally, the process provides the benefit of ensuring very high reaction yields under more favourable reaction conditions such as low pressure, as stated in paragraphs [00154]-[00155] of the claim specification. None of the cited documents D1-D6 teach or suggest a process for depolymerization of PET to form a terephthalate, where the mixture of PET with methanol yields a first mixture and has mono sodium glycoxide therein. D1 relates to improving the



hydrophilic properties of PET fabric by using 5% NaOH aqueous solution and mono sodium ethylene glycolate/ethylene glycol. D2 follows a completely different route through ethylene glycolysis and importantly, teaches away from directly using methanol for PET depolymerization. D3 concerns washing and purification of polymers and has no concern with PET depolymerization. D5 also teaches away from methanolysis by stating that it requires high temperature and high pressure, thereby discouraging the claimed approach and D6 uses a non-polar solvent and hydroxide catalyst, which is fundamentally different from the claimed invention and therefore, none of the prior arts either alone or in combination teach or suggest the features claimed in the present invention. Respondent has merely cherry-picked individual features from different references and mosaiced them together with the benefit of hindsight, which is impermissible in law.

8. It is urged that Respondent has also erred in holding that present invention falls within the scope of Section 3(d) of 1970 Act as the cited documents disclose a similar process for depolymerization of PET using known ethylene glycol salt and methanol as a solvent and the subject application does not contain improved efficacy data over the cited prior art. The error is apparent on the face of the order inasmuch as the claims of the subject application recite a process and not a product and therefore, there was no requirement to provide the improved efficacy data over the cited prior arts as held in *Novozymes Krogshoejvej v. Assistant Controller of Patents and Designs, MANU/TN/5373/2023*. The claimed process employs new reactant and cannot be considered as a mere use of a known process under Section 3(d) of 1970 Act.

9. Ms. Shiva Lakshmi, learned SPC appearing on behalf of the



Respondent submits that there is no infirmity in the impugned order. Pursuant to the objection of lack of clarity and conciseness, Appellant had filed a revised and amended set of claims along with written submissions on 30.12.2023, however, the amended claims still contain the phrase '*as claimed in any one of the claims*', which renders the scope of the claims unclear and does not meet the requirement of Section 10(5).

10. Respondent has also rightly held that claims 1-29 lack inventive step under Section 2(1)(ja), in view of combined teachings of documents D1-D3 and D5-D6. As the order reflects, Respondent compared the claims of the subject application with each of the prior arts separately to look into the similarities and differences for deciding whether the claimed invention lacks inventive step and has given reasons to support its conclusion. D1-D6 also disclose a similar process of depolymerization of PET using ethylene glycol salt and methanol as solvent and therefore, claimed invention is a mere new use of known process. Appellant has also failed to provide any improved efficacy data over the cited prior arts and hence, the claimed invention is non-patentable under Section 3(d) and the appeal deserves to be dismissed.

11. Heard learned counsels for the parties and examined their submissions.

12. By this appeal, Appellant challenges order dated 31.03.2024 whereby its application for grant of patent in respect of invention titled "*TEREPHTHALIC ACID ESTERS FORMATION*" has been refused. Owing to the objections raised by the Respondent, Appellant revised the claims to 1-29, wherein claim 1 is the independent claim. Application has been rejected on three grounds i.e., lack of clarity and conciseness, lack of inventive step and non-patentability under Section 3(d) of 1970 Act.



13. Insofar as the objection under Section 10(5) is concerned, there is no reasoning in the order as to why the scope of claims is unclear or lacks conciseness and all that is stated is that the phrase '*as claimed in any one of the claims*' makes the claims unclear. As for the objection under Section 2(1)(ja), learned counsel for the Appellant is right in his submission that Respondent has not followed the five-step test in ***F. Hoffmann-La Roche (supra)***. Even the most fundamental step of identifying the person skilled in the art is missing. Respondent has mechanically referred to each of the prior arts D1-D6 and then tabulated the differences with the claims, by copying and pasting the relevant extracts. Having done so, without any discussion, analysis or reasoning, a conclusion is drawn that Appellant has failed to show any technical advancement over cited prior arts.

14. Appellant rightly points out that while examining an application for lack of inventive step, Respondent is required to consider the invention claimed and the invention disclosed in the prior arts as also the manner in which subject invention will be obvious to the person skilled in the art. 'Inventive step' means a feature of an invention that involves technical advancement as compared to existing knowledge or having economic significance or both and that makes the invention not obvious to the person skilled in the art and therefore, as held in ***Agriboard (supra)***, Respondent was required to analyse as to what was the existing knowledge and how the person skilled in the art would move from existing knowledge to the subject invention. Respondent has not identified the person skilled in the art and resultantly, there is no analysis on how the claimed invention will be obvious to the person skilled in the art. To this extent, the impugned order is completely contrary to the settled law laid down in respect of deciding an



application claiming invention for the purpose of Section 2(1)(ja).

15. Learned counsel for the Appellant is also correct in his submission that Respondent has not even considered the points raised by the Appellant in response to the FER as also the post-hearing submissions, bringing forth that the present invention falls outside the scope of Section 3(d). Respondent has not considered the submission that the cited prior arts D1-D6 do not disclose similar process for depolymerization of PET using ethylene glycol salt and methanol as solvent as also that the process for depolymerization of PET is *per se* novel and has a technical advancement inasmuch as it shows an improved monomer yields compared to known processes where sodium methoxide is added to a reaction mixture. Impugned order reflects that Respondent has not decided the basic question whether there was any requirement of furnishing efficacy data since the claimed invention is a process and not a product claim.

16. Language of Section 3(d) is clear to the effect that for a mere use of a known process to constitute patentable subject matter, it needs to employ at least one new reactant or must result in production of a new product as held in ***Tapas Chatterjee v. Assistant Controller of Patents and Designs and Another, 2025 SCC OnLine Del 6369***. In this said decision, the Division Bench held that in terms of Section 3(d), a patent can be granted in respect of a known process only when it results in a new product or employs at least one new reactant and that there is a material difference between the terminology '*discovery of a new form of a known substance*' and '*mere use of a known process*'. In the former case, patent can be granted only if the said new form results in enhancement of the known efficacy of the substance, whereas there is no such provision for enhancement of known



efficacy in respect of known processes and therefore, the scope of patentability of processes is narrower than substances. This distinction has been completely overlooked by the Respondent while rejecting the application holding that Appellant has failed to provide improved efficacy data.

17. Learned counsel has also laboured to bring home the point that none of the prior arts D1-D6 disclose a similar process for depolymerization of PET using ethylene glycol salt and methanol and also do not disclose: (a) admixing PET with a first solvent comprising methanol at a temperature from 50°C to 100°C to yield a first mixture; (b) adding a glycoxide to the first mixture, wherein the glycoxide is mono sodium glycoxide suspension, wherein the ratio of mono sodium glycoxide to PET is from 1:2 to 1:20 (mol/mol); (c) adding a second solvent to form a second mixture; and (d) admixing, thereby forming the terephthalate, as recited in claim 1 of the subject application. Also that D1-D6 do not disclose mixing methanol in PET to form a first mixture and subsequently, adding mono sodium glycoxide for a depolymerization process. As a matter of fact, Respondent has not considered this aspect, which had a crucial bearing on the case. Appellant highlights that D1 relates to improving the hydrophilic properties of PET fabric and D2 follows a different route through ethylene glycolysis and teaches away from directly using methanol for PET depolymerization. D3 concerns washing and purification of polymers, while D5 also teaches away from methanolysis by stating that it requires high temperature and pressure, thereby discouraging the claimed approach and D6 uses a non-polar solvent and hydroxide catalyst, which is fundamentally different from the claimed invention. Respondent has seriously erred in not looking into the



issues, both factual and legal, flagged by the Appellant in respect of prior arts which were crucial for determining the objections under Section 2(1)(ja) as also Section 3(d). The impugned order is wholly unreasoned on material aspects and this has put the Appellant as also the Court to a disadvantage in knowing what factors weighed with the authority concerned to reject the patent application. It needs no reiteration that a non-speaking order cannot be sustained in law and in the instant case, some crucial points have escaped the attention of the Respondent and hence, the matter deserves to be remanded.

18. For all the aforesaid reasons and without expressing any opinion any merit on the case, this appeal is partially allowed setting aside the impugned order dated 31.03.2024 passed by the Respondent. Direction is issued to the Respondent to decide the Indian Patent Application No. 202117002258 filed on 18.01.2021 in respect of invention titled “*TEREPHTHALIC ACID ESTERS FORMATION*”, afresh. Needless to state that the decision will be taken after giving an opportunity of hearing to the Appellant and taking into consideration all relevant submissions made in the written submissions filed before the Respondent as also in the present appeal. The decision will be taken within four months from today.

19. Appeal is disposed of in the aforesaid terms.

JYOTI SINGH, J

AUGUST 6, 2026
S.Sharma