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IN THE HIGH COURT OF JUDICATURE AT MADRAS

DATED: **04.03.2025**

CORAM

THE HONOURABLE **MR.JUSTICE SENTHILKUMAR RAMAMOORTHY**

**(T)CMA(PT)/155/2023**
**(OA/SR.103/2020/PT/CHN)**

Emerson Process Management Power & Water Solutions, Inc.
200 Beta Drive, Pittsburgh, Pennsylvania 15238, USA.

... Appellant

-vs-

Assistant Controller of Patents and Designs
Government of India, The Patent Office,
Intellectual Property Rights Building,
GST Road, Guindy, Chennai. 600032. ... Respondent

**PRAYER**: Transfer Civil Miscellaneous Appeal (Patents) filed under Section 117-A of the Patents Act, 1970, praying to set aside the order dated 18th May 2020 issued by the respondent and allow the application No.2416/CHE/2009 to proceed for grant.

For Appellant : Mr.Rahul Balaji
for M/s. De Penning and De Penning

For Respondent : Mr.J.Madanagopal Rao, SPC



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**JUDGMENT**

In this appeal, the appellant impugns order dated 18.05.2020 rejecting patent application No.2416/CHE/2009 for grant of patent for an invention titled as "TWO-STAGE MODEL PREDICTIVE CONTROL TECHNIQUE".

2. Upon request from the appellant, the respondent issued First Examination Report (FER) dated 26.03.2018. In such report, objections were raised *inter alia* on grounds of lack of novelty and inventive step by citing prior arts D1 and D2; non-patentability under Sections 3(k) and 3(m) of the Patents Act, 1970 (the Patents Act); and non-compliance with the requirement of Section 10(4) in respect of claim 45. The appellant responded to the FER on 26.09.2018. By such response, the appellant pointed out that original claims 2, 12, 27 & 45 were being deleted. The appellant set out reasons to justify the assertion of novelty and inventive step. As regards alleged non-patentability, the appellant stated that method claims 1 to 19 are not a mere scheme and, therefore, outside the scope of Section 3(m) of the Patents Act. As regards independent claims 1, 18 & 33



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and claims dependent thereon, the appellant stated that the said claims were directed at hardware and do no fall within the scope of Section 3(k) of the Patents Act. This was followed by hearing notice dated 23.01.2020 in which the objections relating to lack of inventive step and non-patentability under Section 3(k) were retained. The appellant filed written submissions after the hearing. The order impugned herein was issued in these facts and circumstances.

3. Learned counsel for the appellant invited my attention to the impugned order and contended that the appellant's reply to the FER and written submissions were completely disregarded. He points out that the application was refused under Section 15 by merely drawing reference to the CRI guidelines. He further contends that the judgments of the Delhi High Court and this Court with regard to the manner in which Section 3(k) should be interpreted were completely disregarded. In particular, reference was made to the following judgments:

(i) *Ferid Allani v. Union of India and others, 2019 SCC OnLine Del 11867,*



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(ii) *Microsoft Technology Licensing, LLC v. Assistant Controller of Patents and Designs, 2023 SCC OnLine Del 2772*, and

(iii) *Microsoft Technology Licensing LLC, One Microsoft Way v. Assistant Controller of Patents, Patent Office, 2024 SCC OnLine Mad 2785*.

4. In response to these contentions, learned counsel for the respondent submits that computer programmes per se are excluded from the patent protection as per Section 3(k) of the Patents Act. He further submits that guidelines were framed by the Patent Office with regard to computer related inventions, and that the claimed invention does not meet those requirements. Since the independent and dependent claims of the appellant are in the nature of pure computer programmes or algorithms, he states that the claimed invention is excluded from patent protection.

5. The refused independent claims of the appellant are set out below:

*"**Claim 1***

*A method of controlling a set of process variables within a process (50), the method comprising:*

*storing a set of process variable set points for the*



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*set of process variables and a process model (56) for the process (50);*

*receiving a set of measured process variable values for the set of process variables; and*

*implementing a multiple-input/multiple-output control procedure using the set of process variable set points and the set of measured process variable values to develop a control signal for use in controlling the process, characterized by:*

*simultaneously (i) using the stored process model (56) and a first model predictive control procedure incorporating a first objective function to develop a feedforward control component, the first objective function using the set of process variable set points; and (ii) using the stored process model (56) and a second model predictive control procedure incorporating a second objective function to develop a feedback control component, the second objective function using the set of measured process variable values;*

*combining the feedforward control component and the feedback control component to produce the control signal, including adding the feedforward control component to the feedback control component to produce the control signal; and*



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*using the control signal to control the set of process variables.*

***Claim 18***

*A control system for implementation on a computer processor for use in controlling at least a portion of a process (50), comprising:*

*a computer readable medium;*

*a storage routine stored on the computer readable medium and executable on a process (50) or to store a process model (56) and one or more process variable set points for a set of process variables;*

*a feedforward control routine stored on the computer readable medium and executable on a processor to produce a feedforward control signal by using the process model (56) and a first model predictive control procedure, the feedforward control routine including a first objective function that develops the feedforward control signal based on a difference between predicted values for the set of process variables and the one or more process variable set points;*

*a feedback control routine stored on the computer readable medium and executable on the processor to produce a feedback control signal by using the process*



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*model (56) and a second model predictive control procedure, the feedback control routine including a second objective function that develops the feedback control signal based on one or more measured values of the set of process variables; and*

*a combiner stored on the computer readable medium and executable on the processor to combine at least a portion of the feedforward control signal and at least a portion of the feedback control signal to produce an output control signal to be used to control the set of process variables by summing the at least the portion of the feedforward control signal and the at least the portion of the feedback control signal to produce the output control signal,*

*wherein the feedforward control signal and the feedback control signal are developed simultaneously by the feedforward control routine and the feedback control routine, respectively. ”*

6. In response to the FER, the appellant set out reasons to justify novelty and inventive step. In relevant part, the reasons set out by the appellant are as under:

*“The Applicant respectfully states that Both D1 and*



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*D2 teach sequentially developing feedforward control component and a feedback control component. See, e.g., D1, Figure 5, in which Feedforward Controller (e.g.ZPETC) and Position Feedback Controller are shown in series, and D2, chapter 3.2.2. Further, neither D1 and D2 teaches adding the simultaneously developed feedforward control component and feedback control component to produce a control signal. Accordingly, neither D1 nor D2 teaches at least the elements simultaneously (i) using the stored process model and a first model predictive control procedure incorporating a first objective function to develop a feedforward control component, the first objective function using the set of process variable set points; and (ii) using the stored process model and a second model predictive control procedure incorporating a second objective function to develop a feedback control component, the second objective function using the set of measured process variable values; and*

*combining the feedforward control component and the feedback control component to produce the control signal, including adding the feedforward control component to the feedback control component to produce*



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*the control signal; as proposed to be recited by amended claim 1, and as is proposed to be similarly recited by amended claims 18 and 36. Furthermore, it is submitted that the dependent claims are allowable, at least by virtue of their dependence on an allowable independent claim.*

*Therefore, the subject-matter of amended claim 1-41 of the present application involves novelty and inventive step."*

7. As regards the objections under Section 3(k) and (m), in relevant part, the appellant stated as under:

*"As such, claims 1, 18, 33 and all claims depending therefrom, are clearly directed to hardware and do not fall within the scope of clause (k) of Section (3) of the Patents Act, 1970 (as amended).*

*Further, claim 1 is amended to recite the particular apparatus/structural components that perform the operations recited therein. In view of the amendments to claim 1, Applicant respectfully submits that claim 9 and all claims depending therefrom do not fall within the scope of clause (m) of section (3) of the Patents Act, 1970*



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*(as amended). ”*

8. On examining the impugned order, the operative portion thereof is as under:

> *“Further as per CRI guide lines, Claims directed at Routines and/or Sub-routines.*
>
> *Claims directed at “Storage Medium having instructions" | "Database" / “Computer Memory with instruction" stored in a computer readable medium. Such claims directed as "Computer Programme per se" Hence these claims are excluded from patentability. Hence alleged claims are not allowable u/s 3(k) of The Patents Act, 1970.*
>
> *Upon considering the documents on record. I am satisfied that the application do not meet the requirement of Section 3(k) of The Patents Act, 1970. Therefore, application no. 2416/CHE/2009 is hereby refused under section 15 of the Patents Act, 1970 (as amended). ”*

9. From the above extracts, it is abundantly clear that the contentions of the appellant were not discussed in the impugned order and no reasons are recorded for rejecting such contentions. Consequently, the impugned



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order cannot be sustained. In addition, it is pertinent to point out that several judgments were issued both by the Delhi High Court and this Court with regard to the interpretation of Section 3(k) of the Patents Act. Many of these judgments were subsequent to the order impugned herein. Nevertheless, it is appropriate that these principles be considered by the respondent.

10. For reasons set out above, impugned order dated 18.05.2020 is set aside and the matter is remanded for reconsideration on the following terms:

(i) In order to preclude the possibility of pre-determination, an officer other than the officer who issued the impugned order shall undertake reconsideration.

(ii) After providing a reasonable opportunity to the appellant, a reasoned order shall be issued within four months from the date of receipt of a copy of this order after taking into account the observations contained in this order and the principles laid down in the judgments referred to herein.

(iii) For the avoidance of doubt, it is made clear that no observations have been made herein on the merits of the patent application.



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11. Therefore, (T)CMA(PT) No.155 of 2023 stands disposed of on the above terms, without any order as to costs.

**04.03.2025**

Index : Yes / No
Internet : Yes / No
Neutral Citation: Yes / No

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To

Assistant Controller of Patents and Designs
Government of India, The Patent Office,
Intellectual Property Rights Building,
GST Road, Guindy, Chennai. 600032.



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