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**Datasheet for the decision
of 16 December 2025**

Case Number: T 0610/24 - 3.5.01

Application Number: 19710517.4

Publication Number: 3756153

IPC: G06Q10/10

Language of the proceedings: EN

Title of invention:

PUMP CHEMICAL COMPATIBILITY MANAGEMENT SYSTEM

Applicant:

Ecolab USA, Inc.

Headword:

Checking the chemical compatibility of pumps and chemicals/
ECOLAB

Relevant legal provisions:

EPC Art. 56, 111(1)
RPBA 2020 Art. 11

Keyword:

Inventive step - closest prior art (no - different purpose) -
ex post facto analysis
Remittal to the department of first instance - (yes - remittal
for a search)

Decisions cited:

G 0010/93

Catchword:

While it is not mandatory to start from the strictly closest prior art when arguing a lack of inventive step (see Case Law of the Boards of Appeal, 11th edition, I.D.3.3), it is nevertheless recommended to start from prior art having a similar purpose and overall technical effect. Starting from a more remote document often leads to an ex post facto analysis, in particular to the formulation of a "hindsight problem" - a problem that the skilled person would not have realistically conceived.

(See point 4.4 of the reasons)



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Case Number: T 0610/24 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 16 December 2025

Appellant: Ecolab USA, Inc.
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St. Paul, Minnesota 55102 (US)

Representative: Godemeyer Blum Lenze Patentanwälte
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 8 December 2023
refusing European patent application No.
19710517.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairwoman A. Wahrenberg
Members: R. Moser
L. Basterreix

Summary of Facts and Submissions

- I. This case concerns the appeal against the examining division's decision to refuse the European patent application No. 19710517.4 for lack of inventive step (Article 56 EPC) over D5 (US 2010/0024915 A1).
- II. In the statement setting out the grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main or first auxiliary request, submitted with the grounds of appeal and corresponding to those on which the decision is based.
- III. In the communication pursuant to Article 15(1) RPBA, the Board indicated that it was not persuaded by the examining division's interpretation of D5, while expressing the preliminary view that claim 1 of the main request and of the first auxiliary request lacked inventive step over this document.

The Board cited document D6 (A BRIEF GUIDE TO CHOOSE THE SUITABLE PUMP MATERIALS FOR CHEMICAL APPLICATIONS; 24 October 2013; available at: <https://www.gemmecotti.com/suitable-chemical-pump-materials>) which discussed chemical compatibility checks for pump components, and issues arising therefrom.

- IV. In response, the appellant provided further arguments in favour of inventive step.

Essentially, it argued that D5 did not address the problem underlying the invention, namely checking the compatibility of a chemical composition with each component of a chemical pump.

Furthermore, the appellant contended that D6 was not prior art as there was no evidence that this internet document had been available online before the priority date (see reply, penultimate paragraph of page 4).

- V. Oral proceedings were held as a videoconference on 16 December 2025. The appellant's final requests were the same as in the statement of grounds of appeal.

At the end of the oral proceedings, the Chairwoman announced the Board's decision.

- VI. Claim 1 of the main request reads:

"A system, comprising:

 a chemical pump comprising at least one component that is exposed to a chemical composition being pumped during operation of the chemical pump;

 a chemical reservoir containing the chemical composition, the chemical reservoir including an electronically readable medium including embedded information corresponding to the chemical composition; and

 a database comprising chemical compatibility data including a compatibility between the chemical composition and the at least one component;

 wherein an application executing on a portable computing device is operable to:

 receive, via a first input device of the portable computing device, a selection including a pump identifier of the chemical pump;

 electronically read, using a second input device of the portable computing device, the electronically readable medium to obtain, based on the embedded information, a chemical identifier corresponding to the

chemical composition in the chemical reservoir;
query the database using the chemical identifier
and the pump identifier;
receive a response to the query from the database,
the response including a chemical compatibility between
the chemical composition in the chemical reservoir and
the at least one component of the chemical pump; and
output, via an output device of the portable
computing device, an output indication corresponding to
the chemical compatibility between the chemical
composition in the chemical reservoir and the chemical
pump."

Reasons for the Decision

The invention

1. The invention in claim 1 concerns chemical pumps and their compatibility with chemical compositions.

If an operator supplies an incorrect chemical composition to a pump, the chemical may degrade or damage the pump's components (see paragraph [0003] of the published application).

To prevent this, the operator scans an RFID tag (212) attached to a reservoir containing the chemical and an RFID tag (232) attached to the selected pump (see Figure 2). Based on the scanned data – specifically, a chemical identifier and a pump identifier – a data server (260) determines whether the chemical composition is compatible with the pump. The result is then displayed to the operator.

Main request

2. The examining division considered document D5 to represent the closest prior art. In their view, D5 disclosed a system comprising a pump for delivering a chemical solution into a container, the system being configured to perform a compatibility check between the chemical solution and the container by means of RFID tags and a database (see decision, point 4.1.1).

The examining division held that claim 1 differed from D5 by two features which they considered to be non-synergistic:

A. the system determines the compatibility between the chemical composition and the pump, rather than between the chemical composition and the container; and

B. the computing device for reading the RFID tag is portable.

With regard to feature A, the examining division considered that the associated technical problem was to avoid degradation or destruction of the chemical pump by the chemical composition, and they concluded that it would have been obvious for the skilled person to apply the compatibility check disclosed in D5 - performed between the chemical composition and the container - also to the compatibility check between the chemical composition and the pump.

They considered feature B to be an obvious design option.

3. The appellant argued that D5 was concerned with a different purpose than the claimed invention, namely

that of ensuring that the correct chemical was dispensed in the right container, which was a labelling issue rather than a compatibility issue.

Nothing in D5 suggested analysing the chemical compatibility between the material of a pump or container and the chemical composition being in contact with such a material. Thus, the examining division erred in its conclusion that D5 disclosed a chemical compatibility check between the chemical solution and the container.

The appellant furthermore argued that, starting from D5, the skilled person would not have recognised the problem of chemical damage to the pump, and would therefore not have sought a solution to such a problem. The appellant contested that this problem was well known and argued that it had not been established that D6 was made available to the public before the priority date.

Although the pump and the receiving container in D5 would eventually show signs of wear, this would not necessarily be recognised as being caused by the diluted chemical. In such a case the skilled person would simply replace the damaged item and there would be no need to check chemical compatibility between the components and the chemical compositions coming into contact with them.

4. The Board agrees with the appellant that D5 does not disclose a compatibility check between a pump or container and the chemical composition that comes into contact with this component.

- 4.1 In D5, the check ensures that the correct chemical is dispensed into the correct container so as to avoid a mislabelling.

Furthermore, the Board goes further and considers that D5 does not disclose a pump at all. The chemical dispenser in D5 comprises an "eductor for drawing chemical from that source into a diluent, such as water, for dilution and discharge into a receiving container" (paragraph [0038]). Although an eductor moves fluids in a manner similar to a pump, it operates according to a different principle. In particular, unlike a pump, it has no mechanical components driven by an electric motor or the like, but is instead fluid-driven.

- 4.2 Accordingly, in order to arrive at the claimed subject-matter starting from D5, the skilled person would first have to add a chemical pump, then address the issue of chemical compatibility, and finally apply the automated compatibility check proposed in D5 for this purpose.

- 4.3 In the Board's view, even if each of these steps were known or individually trivial, a motivation would still be required for the skilled person to modify the prior art in the claimed manner. The Board cannot identify such a motivation when starting from D5 as the closest prior art.

- 4.4 This raises the question whether D5 is an appropriate starting point for the assessment of inventive step. According to established case law on the problem-solution approach, the "closest prior art" should normally be a document that is directed to the same purpose or aims at the same objective as the claimed invention and that has the most relevant technical

features in common, i.e. requiring the minimum of structural modifications (see Case Law of the Boards of Appeal, 11th edition, I.D.3.1).

While it is not mandatory to start from the strictly closest prior art when arguing a lack of inventive step (*Ibid.*, I.D.3.3), it is nevertheless recommended to start from prior art having a similar purpose and overall technical effect. Starting from a more remote document often leads to an *ex post facto* analysis, in particular to the formulation of a "hindsight problem" - a problem that the skilled person would not have realistically conceived.

In the present case, D5 neither pursues the same purpose nor discloses the structurally most significant component - the pump - which is a prerequisite for the technical problem addressed by the invention to arise at all.

In the Board's view, a more suitable starting point would be a system comprising a chemical pump and addressing issues of chemical compatibility with the components of that pump. Such a starting point would require fewer structural modifications and would allow for the formulation of a more realistic technical problem, such as the automation of the compatibility check.

- 4.5 D6 deals with chemical compatibility checks for pump components. However, as pointed out by the appellant, its publication date is uncertain.
- 4.6 The Board cannot rule out that a more suitable document addressing the problem of chemical compatibility of pump components exists. It appears that this aspect was

not covered by the search.

The search report indicates the field of search as "G06Q". This IPC class relates to information and communication technology (ICT) specially adapted for administrative, commercial, financial, managerial, or supervisory purposes, i.e. systems designed to support the operation and management of an organisation or business. This field does not encompass liquid pumps, let alone issues of chemical compatibility of pumps.

Remittal to the examining division

5. In deciding on the appeal, the Board may either exercise any power within the competence of the department which was responsible for the decision under appeal or remit the case to that department for further prosecution (Article 111(1) EPC).
6. According to Article 11 RPBA, the Board shall not remit a case unless special reasons present themselves for doing so.

In the present case, on the one hand, due to a misinterpretation of document D5 by the examining division, this document does not constitute a suitable starting point for the assessment of inventive step. On the other hand, the Board does not consider itself to be in a position to decide the case for the following reasons.

- 6.1 Before granting a patent, the Board of Appeal, like the examining division, must ensure that the requirements for patentability are met (see G 10/93, Reasons, point 3). To that end, the relevant state of the art must be

properly established.

6.2 Since the search was incomplete in that it did not cover all the relevant aspects of the invention, the relevant state of the art has not been properly established. For the avoidance of doubt, a complete search should include prior art related to pumps for liquids (for example the IPC class F04 - "Pumps for liquids or elastic fluids"), and should take into account the aspect of chemical compatibility.

6.3 As a consequence, the Board is not in a position to take a decision on inventive step without a search covering these aspects. Therefore, it exceptionally remits the case to the examining division under Article 111(1) EPC and Article 11 RPBA.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division for further prosecution, including a search.

The Registrar:

The Chairwoman:



T. Buschek

A. Wahrenberg

Decision electronically authenticated