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**Datasheet for the decision
of 29 June 2009**

Case Number: T 1784/08 - 3.4.03

Application Number: 04741868.6

Publication Number: 1711972

IPC: H01M 4/86

Language of the proceedings: EN

Title of invention:
Electrochemical Thermodynamo

Applicant:
Hysytech S.r.l., et al

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 123(2)

Relevant legal provisions (EPC 1973):
-

Keyword:
-

Decisions cited:
-

Catchword:
-



Case Number: T 1784/08 - 3.4.03

D E C I S I O N
of the Technical Board of Appeal 3.4.03
of 29 June 2009

Appellants:

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and

Henergy S.r.l.
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Representative:

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted 7 April 2008
refusing European application No. 04741868.6
pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: G. Eliasson
Members: V. L. P. Frank
T. Bokor

Summary of Facts and Submissions

I. This is an appeal from the refusal of application 04 741 868 for the reason that dependent claims 2 and 12 had been amended in such a way that they contained subject-matter extending beyond the content of the application as filed (Article 123(2) EPC).

II. The appellant applicant requests that the decision under appeal be set aside and that a patent be granted on the basis of the following documents:

Description: pages 1 to 3 and 4 to 11 filed with letter of 6 August 2008;

page 3a filed with letter of 16 June 2009;

Claims: 1 to 13 filed with letter of 16 June 2009;

Figures: 1/2 to 2/2 as originally filed.

III. The examining division argued as follows:

- Claims 2 and 12 stated that "means are provided to supply heat from an external heat source" and that "heat is supplied from an external heat source", respectively. An external heat source, however, had only been disclosed in the originally filed application in connection with a electrochemical cell for water electrolysis, this being an endothermic process. As the independent claims 1 and 11 were not limited to water electrolysis, but also included the use of the electrochemical cell as a fuel cell, en exothermic process, claims 2 and 12

contained subject-matter not disclosed in the original application documents.

- Moreover, dependent claims 9 and 10 which *inter alia* referred back to claim 2 gave rise to the combination of external heat supplying means with a fuel cell using O₂ and H₂ as feed gases, an exothermic process. Such a combination of features was not disclosed in or derivable from the originally filed application.
- IV. In reply to a communication of the board under Rule 100(2) EPC in which objections under Article 84 EPC 1973 and 123(2) EPC were raised, the appellant deleted claims 2 and 12 and amended previous claims 7, 9 and 15 (now renumbered as claims 6, 8 and 13).

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments*
 - 2.1 Claim 1 is directed to electrochemical cell modules. These modules can be used either for electrolyzers in which H₂O is dissociated into H₂ and O₂ gases under application of an electric current, an endothermic process, or as fuel cells in which H₂ and O₂ gases are combined to form H₂O to generate an electric current, an exothermic process (page 3, lines 17 to 18; page 4, line 19 to page 5, line 3).

2.2 Dependent claims 2 and 12 objected to by the examining division as not fulfilling the requirements of Article 123(2) EPC 1973 were deleted in response to the communication of the board maintaining this objection and claims 6 and 9 were amended so as to no longer specify heat or cold supplying means.

As the use of heat supplying means in an electrochemical exothermic process or cold supplying means in an electrochemical endothermic process is no longer claimed in the present claims, the requirements of Article 123(2) EPC 1973 in this respect are now fulfilled.

2.3 Claim 12 has been amended to specify that external heat is supplied to an electrolytic process in which H₂ and O₂ are formed (an endothermic process). This was originally disclosed on page 7, lines 8 to 10 and page 11, lines 3 to 7.

2.4 The description has been adapted to the claims (page 3a).

2.5 The board judges, for the above reasons, that the application fulfils the requirements of Article 123(2) EPC.

3. Independent claim 10 is directed to an electrochemical process utilizing the electrochemical cells of **claims 1 to 10**. However, there are now only **nine** claims to an electrochemical cell and claim 10 should be amended accordingly.

4. As the examination of the further requirements of the EPC has not yet been carried out, remittal of the case for further prosecution pursuant to Article 111(1) EPC is appropriate.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance for further prosecution.

Registrar

Chair

S. Sánchez Chiquero

G. Eliasson