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Datasheet for the decision of 17 February 2016

Case Number: T 0986/13 - 3.3.05

Application Number: 01970909.6

Publication Number: 1349638

IPC: B01D46/00, H01M8/04, H01M8/06

Language of the proceedings: EN

Title of invention:
FILTER ASSEMBLY FOR FUEL CELL

Patent Proprietor:
DONALDSON COMPANY, INC.

Opponents:
None (oppositions withdrawn)

Headword:
Fuel cell filter/Donaldson

Relevant legal provisions:
EPC Art. 123(2), 123(3), 100(c)

Keyword:
Amendments - claims as granted (main request) - extention beyond application as filed (yes) - first auxiliary request - added subject-matter (no) - extention of scope of protection (no)

Decisions cited:

Catchword:

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Case Number: T 0986/13 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 17 February 2016

Appellant: (Patent Proprietor)	DONALDSON COMPANY, INC. 1400 West 94th Street Minneapolis, MN 55440-1299 (US)
Representative:	Eisenführ Speiser Patentanwälte Rechtsanwälte PartGmbB Johannes-Brahms-Platz 1 20355 Hamburg (DE)
(Opponent 1)	Opposition withdrwan
(Opponent 2)	Opposition withdrawn
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 8 February 2013 revoking European patent No. 1349638 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	A. Haderlein
Members:	J.-M. Schwaller
	P. Guntz

Summary of Facts and Submissions

I. The present appeal lies from the decision of the opposition division to revoke European patent No. 1 349 638 on the grounds that the seven sets of claims underlying the decision violated the requirements of Article 123(2) and/or (3) EPC.

II. The opponents have withdrawn their respective oppositions in the course of the proceedings before the opposition division.

III. According to the contested decision, the subject-matter of claim 1 as granted, which reads as follows:

"1. A fuel cell filter assembly (10), the filter assembly comprising:
a) a housing (11) having an inlet (12) and an outlet (14), and
b) a filter element (15) within said housing, the filter element comprising a physical filter portion, the physical filter portion is constructed and arranged to remove particulate contaminants from the dirty oxidant;
said filter assembly being characterized in that
c) the inlet of said housing is adapted to receive a dirty oxidant stream (52) into the filter assembly, and the outlet is adapted to receive the clean oxidant stream (54) from the filter assembly, the outlet being operably connected to the fuel cell to provide clean oxidant to the fuel cell;
d) the filter element comprising a chemical filter portion, the chemical filter portion is constructed and arranged to remove chemical contaminants from the dirty oxidant; the chemical filter portion including an

adsorbent material being shaped into a pleated or honeycomb structure;
the filter assembly being constructed and arranged to provide a clean oxidant stream from the filter assembly to the fuel cell.",

extended beyond the content of the application as filed, because the features "*an adsorbent material being shaped into a pleated structure*", "*dirty oxidant stream*" and "*clean oxidant stream*" had no basis in the application as filed.

Furthermore dependent claim 3 as granted, which reads as follows:

"*3. The filter assembly according to any of claim 1-2, wherein the physical filter portion is positioned upstream from the chemical filter portion.*",

infringed Article 123(2) EPC, because its subject-matter represented a non-allowable intermediate generalisation of a specific embodiment disclosed in the description.

IV. With its grounds of appeal, the proprietor ("the appellant") filed several auxiliary requests.

V. At the oral proceedings before the board, which took place on 17 February 2016, the appellant withdrew the auxiliary requests then on file and filed five new sets of claims as auxiliary requests I to V, with claim 1 of auxiliary request I (amendments with respect to claim 1 of the main request highlighted) reading as follows:

"1. A fuel cell filter assembly (10), the filter assembly comprising:

a) a housing (11) having an inlet (12) and an outlet (14), and
b) a filter element (15) within said housing, the filter element comprising a physical filter portion, the physical filter portion is constructed and arranged to remove particulate contaminants from the dirty ***~~oxidant~~ air;***
said filter assembly being characterized in that
c) the inlet of said housing is adapted to receive a dirty ***~~oxidant~~ air*** *stream (52) into the filter assembly, and the outlet is adapted to receive the clean* ***~~oxidant~~ air*** *stream (54) from the filter assembly, the outlet being operably connected to the fuel cell to provide clean* ***~~oxidant~~ air*** *to the fuel cell;*
d) the filter element comprising a chemical filter portion, the chemical filter portion is constructed and arranged to remove chemical contaminants from the dirty ***~~oxidant~~ air;*** *the chemical filter portion including an adsorbent material being shaped into a pleated or honeycomb structure;*
the filter assembly being constructed and arranged to provide a clean ***~~oxidant~~ air*** *stream from the filter assembly to the fuel cell."*

The dependent claims of auxiliary request I are identical with the granted dependent claims.

VI. The appellant requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or, alternatively, that the patent be maintained in amended form on the basis of one of the auxiliary requests I to V, as submitted during the oral proceedings before the board.

Reasons for the Decision

1. Main request - allowability under Article 100(c) EPC

1.1 For the board, the features "clean oxidant" and "dirty oxidant" as defined in the subject-matter of claim 1 as granted have no basis in the application as filed, and so claim 1 extends beyond the content of the application as filed for the following reasons.

1.2 The features "clean oxidant" and "dirty oxidant" have no literal basis in the application as filed.

1.3 The term "oxidant" is in fact disclosed only twice in the application as filed. Once under the heading "background of the disclosure", wherein it is disclosed that fuel cells typically operate with a fuel source being supplied to the anodic side of the cell and an oxidant being supplied to the cathodic side. Obviously this passage cannot be the basis for the features "clean oxidant" and "dirty oxidant" because this passage relates to the prior art and not to the invention as disclosed in the application.

The second occurrence of the term "oxidant" is in the paragraph bridging pages 2 and 3 as originally filed, which describes the invention as providing "*an air filter assembly for filtering the intake air used in low temperature catalytic reactions, such as fuel cells. The assembly provides either particulate filtration, chemical filtration, or both, to the incoming air stream to provide a purified* ***oxidant*** *to the cathodic side of a catalytic reactor, such as a fuel cell*" (emphasis added).

1.4 For the board this passage does not mean - as alleged by the appellant - that the words "air" and "oxidant" are to be considered synonymous over the entire application as filed. It merely means that air - not any oxidant - is mandatorily purified by the filter assembly according to the invention and that the purified air exiting said filter assembly serves as an oxidant for the cathodic side of a catalytic reactor. Thus the word "oxidant" indicates the function to be achieved by the purified air, not that any oxidant is to be filtered by the filter assembly, as argued by the appellant.

1.5 The board furthermore notes that the two independent claims 1 and 13 as originally filed do not use the term "oxidant" either, but relate to an "***air*** *filter assembly comprising a housing having an inlet and an outlet, the inlet receiving dirty* ***air*** *into the filter assembly, and the outlet receiving clean* ***air*** *from the filter assembly*" (emphasis added). No trace of the generic term "oxidant" could be found in dependent claims as originally filed either.

1.6 It follows from these considerations that there is no basis in the application as filed for the amendment by which the specific term "air" was systematically replaced by the generic term "oxidant" in claim 1. The subject-matter of claim 1 therefore extends beyond the content of the application as filed (Article 100(c) EPC) and the main request is thus not allowed.

2. Auxiliary request I - allowability of the amendments

2.1 In the claims of this request the term "oxidant" was systematically replaced by "air".

For the board, as indicated in point 1.5 above, the features "dirty air" and "clean air" have a basis in the application as filed, in particular in independent claims 1 and 13 which explicitly disclose an air filter assembly having an inlet receiving dirty atmospheric air and an outlet receiving clean air.

2.2 The subject-matter of claim 1 of this request thus has its basis in claim 1 as originally filed and in the passages at page 2, lines 30 and 21, page 8, lines 19 to 22 and page 9, lines 5 to 7. For the board, these passages disclose directly and unambiguously the chemical filter portion including an adsorbent which can be shaped into a pleated or honeycomb structure, as presently defined in claim 1 at issue.

The board does not in this respect adopt the view of the opposition division that the feature "adsorbent shaped into a pleated structure" was not directly and unambiguously derivable from the above-mentioned expression at page 9, lines 5 to 7, which discloses that the adsorbent could be a "*pleatable or honeycomb structure that optionally can be further shaped*". Admittedly, this expression literally means that the pleatable structure can be shaped in any kind of structure. In the context of the technical field of the patent in suit, however, pleated filter structures are commonly known to the skilled person. It would therefore be too academic to suggest that the expression "*pleatable structure that can be further shaped*" would not disclose the feature in claim 1 at issue, i.e. a "pleated structure". For the board, the skilled person would construe the above passage to imply that the pleatable structure can be further shaped into a pleated structure, because the pleated structure of filters is one of the most common filter

structures in the field of air filters and he would therefore directly and unambiguously infer from the above passage that the pleatable structure can be further shaped into a pleated structure.

2.3 The remaining claims of this request have a basis as follows in the application as filed:

- Claim 2: in claim 2 as filed;

- Claim 3: in the passage at page 12, lines 18 and 19 as filed;

- Claim 4 to 6: in claims 6 to 8 as filed, respectively;

- Claim 7: in claim 13 as filed;

- Claims 8 and 9: in claims 10 and 11 as filed, respectively;

- Claims 10 and 11: in claims 14 and 15 as filed, respectively;

- Claim 12: in claim 1 and the passages at page 8, lines 19 to 22 and page 9, lines 5 to 7 as filed.

2.4 With respect to claim 3, the board does not accept the opposition division's view that the subject-matter of this dependent claim was an unallowable intermediate generalisation of a specific embodiment disclosed in the description as filed. Indeed, the feature that "the physical portion is upstream from the chemical portion" is part of the particular embodiment in which the filter assembly is defined as having one layer of particulate media as the physical filter portion and

three layers of adsorptive media as the chemical portion. However, it is manifest for the skilled person that these specific features of the embodiment disclosed at page 12, lines 14 to 18 are independent from the position of the physical and chemical portions of the filter assembly, and so they are not inextricably linked with each other.

2.5 The scope of protection conferred by claims 1 to 12 of this request having furthermore not been extended over that of the claims of the patent in suit, the board is satisfied that the claims of this request meet the requirements of Article 123(2) and (3) EPC.

3. Remittal

The board notes that the patent was also opposed on the grounds of insufficiency of disclosure, lack of novelty and lack of inventive step and in the annex to the summons to attend oral proceedings, the opposition division expressed its preliminary opinion that the invention was sufficiently disclosed but lacked novelty. In view of this, the board exercises its discretion pursuant to Article 111(1) EPC and remits the case for further prosecution.

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 on the basis of the claims according to auxiliary request I filed during the oral proceedings before the board.

The Registrar: The Chairman:

C. Vodz A. Haderlein

Decision electronically authenticated