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**Datasheet for the decision
of 20 December 2021**

Case Number: T 2496/19 - 3.3.05

Application Number: 04700639.0

Publication Number: 1587767

IPC: C04B20/00

Language of the proceedings: EN

Title of invention:

FIBER CEMENT COMPOSITE MATERIALS USING BLEACHED CELLULOSE
FIBERS AND THEIR MANUFACTURING METHOD

Patent Proprietor:

James Hardie Technology Limited

Opponent:

ETEX SERVICES NV

Headword:

Fiber Cement/James Hardie

Relevant legal provisions:

EPC Art. 108, 123(2), 56

Keyword:

Admissibility of appeal - appeal sufficiently substantiated
(yes)

Amendments - extension beyond the content of the application
as filed (yes) - main and first auxiliary requests

Inventive step - (no)

Decisions cited:

T 0939/92

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 2496/19 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 20 December 2021

Appellant:

(Opponent)

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Respondent:

(Patent Proprietor)

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 19 July 2019
rejecting the opposition filed against European
patent No. 1587767 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman E. Bendl
Members: G. Glod
 R. Winkelhofer

Summary of Facts and Submissions

I. The opponent's (appellant's) appeal lies from the opposition division's decision rejecting the opposition against European patent No. 1 587 767.

II. The following document cited in the impugned decision is of relevance here:

D8: WO 02/33164 A2

III. In the grounds of appeal, the appellant additionally cited the following documents:

D9: Technical Data Sheet for Standard Celco Unbleached Softwood Kraft Pulp produced by the company ARAUCO, August, 2000

D10: Index of TAPPI Standards updated on August 13, 2015

IV. With the reply to the appeal, the respondent (patent proprietor) maintained the main request, that the opposition be rejected, and the first auxiliary request originally filed during opposition proceedings on 19 April 2019.

V. Claim 1 of the main request (patent as granted) reads as follows:

*"1. A composite material, comprising:
a cementitious matrix; and
cellulose fibers incorporated into the cementitious matrix, wherein the cellulose fibers comprise a blend of bleached and unbleached cellulose fibers, wherein the bleached cellulose fibers comprise between 5% to 25% of the total cellulose fibers incorporated into the*

matrix and the unbleached cellulose fibers comprise between 75 to 95% of the total cellulose fibers incorporated into the matrix."

Claim 1 of the first auxiliary request reads as follows (amendments underlined):

*"1. A composite material, comprising:
a cementitious matrix comprising 35% portland cement and 57% silica; and
cellulose fibers incorporated into the cementitious matrix, wherein the cellulose fibers comprise a blend of bleached and unbleached cellulose fibers, wherein the bleached cellulose fibers comprise 20% of the total cellulose fibers incorporated into the matrix and the unbleached cellulose fibers comprise 80% of the total cellulose fibers incorporated into the matrix."*

VI. The appellant's arguments are reflected in the reasoning below.

VII. The respondent's arguments, as far as relevant to the present decision, can be summarised as follows:

It was questionable whether the appeal was admissible, as the appellant had only repeated arguments set out during opposition proceedings without providing any analysis or commentary which took into account the decision under appeal. There was no new reason to suggest that the decision was incorrect with respect to Article 100(c) EPC.

The opposition division had come to the conclusion that claims 1 and 7 of the patent involved an inventive step over D8. D8 did not disclose the use of a blend of

bleached and unbleached cellulose fibres, wherein the blend comprised 5 to 25% bleached cellulose fibres and 75 to 95% unbleached cellulose fibres. The arguments put forward by the appellant completely ignored the decision, so there were also no reasons given why the opposition division's conclusion was incorrect in this respect.

The basis for the amendment of claim 1 of the first auxiliary request was to be found on page 9, line 16 to page 10, line 7 and Table 2 of the application as filed. The requirements of Article 123(2) EPC were met.

- VIII. In the communication pursuant to Article 15(1) RPBA 2020, the board expressed its preliminary view that the patent was likely to be revoked.
- IX. By a submission of 12 November 2021, the respondent informed the Board that they would not be attending the scheduled oral proceedings.
- X. Consequently, the oral proceedings were cancelled and the decision is given in writing.
- XI. The appellant requests that the decision under appeal be set aside and that the patent be revoked.

The respondent requests that the appeal be held inadmissible or rejected. Alternatively, they request that the patent be maintained in amended form on the basis of the first auxiliary request.

Reasons for the Decision

1. *Article 108 EPC: admissibility*

The requirements of Rule 99(2) EPC relating to the substantiation of the appeal are met, for the following reasons:

The appellant has argued in point 3.2 of the grounds of appeal why, in contrast to the opposition division's view, they did not consider the invention sufficiently disclosed (Article 100(b) EPC). In addition, they have submitted further evidence D9 and D10 to support its case. The appeal is admissible at least for this reason (Case Law of the Boards of Appeal of the EPO, 9th edition, 2019 ["Case Law"], V.A.2.6.5 b). The admissibility of an appeal can only be assessed as a whole (Case Law, V.A.2.6.8).

Main request (patent as granted)

2. *Claim construction*

Claim 1 is formulated as an open claim in view of the wording "comprising". The amounts of cementitious matrix and cellulose fibers in the composite are not defined. Nor is the amount of cellulose fibers in the cementitious matrix defined. The wording "the cellulose fibers comprise a blend" does not exclude the presence of other blends of cellulose materials as part of the cellulose fibers.

3. *Article 100(c) EPC*

The board does not agree with the opposition division's conclusion (Reasons 1.1 of the decision under appeal) with respect to the feature "and the unbleached cellulose fibers comprise between 75 to 95% of the total cellulose fibers incorporated into the matrix", for the following reasons:

The range of 75 to 95% is not disclosed in the application as filed. It is also not directly and unambiguously derivable from claim 3 as filed, since said claim and claims 1 and 2 of the application as filed all relate to open claims in view of the wording "comprise".

According to claim 1 as filed, the cellulose fibers **comprise** a blend of bleached and unbleached cellulose fibers. In addition, they could comprise a different blend of premium grade cellulose fibers or other cellulose fibers. The wording "comprise" does not make it possible to conclude **unambiguously** that if "the bleached cellulose fibers comprise between about 5%-25% of the total cellulose fibers incorporated into the matrix" (claim 3 as filed), then implicitly the unbleached cellulose fibers have to comprise between 75 and 95% of the total cellulose fibers incorporated into the matrix. It is at least possible that other fibers are present as part of a different blend, so the amount of unbleached cellulose fibers is not unambiguously known.

This understanding of the claim is also in line with the description as filed, since it is explicitly disclosed that the blend of bleached and unbleached standard grade cellulose fibers could completely or

partially substitute for premium grade cellulose fibers (page 2, lines 18 to 22 of the application as filed).

Therefore the requirements of Article 123(2) EPC are not met and the ground for opposition under Article 100(c) EPC prejudices maintenance of the patent as granted.

In addition to the failure to comply with the requirements of Article 123(2) EPC, the proposed wording of the claims does not meet the requirements of Article 56 EPC either.

4. *Article 100(a) in combination with Article 56 EPC*

4.1 The invention relates to a fiber-reinforced composite material.

4.2 D8 is considered to be the closest prior art. It discloses fiber-reinforced cement composite materials. Composite low-impurity cellulose fibers are used in the cement. These fibers correspond to fibers that have a reduced COD (chemical oxygen demand). The COD is caused by lignin, among others (page 1, last paragraph and page 2, lines 1 to 2). Reducing the COD means reducing the amount of oxidisable compounds. This is done by bleaching (page 3, second and third paragraph). These so-called low-COD and high-purity cellulose fibers are possibly mixed with other fibers such as regular cellulose fibers and added to cementitious binder and silica to form a building product (page 11, first full paragraph).

4.3 The problem to be solved according to the patent under appeal is to provide a cheaper composite material (paragraph [0006]).

- 4.4 The problem is solved by a composite material according to claim 1, characterised in that the bleached cellulose fibers comprise between 5% to 25% of the total cellulose fibers incorporated into the matrix and the unbleached cellulose fibers comprise between 75 to 95% of the total cellulose fibers incorporated into the matrix.
- 4.5 However, it is not shown that said problem is solved over the whole range claimed. It is not credible that the amount of bleached cellulose fibers compared with the amount of unbleached cellulose fibers has an impact on costs independently of the total amounts of fibers present in the composite, the type of fibres used, and other ingredients of the composite.
- 4.6 The problem thus has to be redefined in a less ambitious way and can be seen as providing an alternative composite material.
- 4.7 The solution to this problem is obvious. D8 already teaches the combination of low-COD cellulose fibers (bleached fibers) and regular cellulose fibers (claim 37). The claimed proportion of each is arbitrary and is one of many different possibilities. A mere arbitrary choice from among the possible solutions cannot involve an inventive step (T 939/92, Reasons 2.5.3).
- 4.8 The subject-matter of claim 1 lacks inventive step in view of D8 alone.

First auxiliary request

5. *Article 123(2) EPC*

5.1 The requirements of Article 123(2) EPC are not met, for the following reasons:

5.2 According to the respondent, the amendments made in claim 1 are based on example 2/formulation C of Table 2. However, said formulation C **consists** of 35% portland cement, 67% silica, 1.6% bleached fiber as specified in lines 2 to 4 on page 10 of the application as filed, and 6.4% of unbleached fiber as specified in lines 4 to 7 on page 10 of the application as filed. This disclosure is far more specific than what is claimed. The skilled person would understand that all indications present in example 2 are of relevance for obtaining the results shown in Table 3. Therefore the broad wording of claim 1 is not directly and unambiguously derivable from the application as filed, but is an unacceptable intermediate generalisation.

6. This request is not allowable either.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



C. Vodz

E. Bendl

Decision electronically authenticated