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**Datasheet for the decision  
of 26 November 2008**

**Case Number:** T 0440/04 - 3.3.05

**Application Number:** 95937882.9

**Publication Number:** 0791087

**IPC:** D03D 13/00

**Language of the proceedings:** EN

**Title of invention:**

Man-made vitreous fibres

**Patentee:**

Rockwool International A/S

**Opponents:**

SAINT-GOBAIN ISOVER  
Icopal a/s  
Knauf Insulation GmbH  
Paroc Oy Ab

**Headword:**

Vitreous fibres I/ROCKWOOL

**Relevant legal provisions:**

EPC Art. 54(3), 88(3), 123(2)

**Relevant legal provisions (EPC 1973):**

EPC Art. 54(4), 89

**Keyword:**

"Disclaimer not allowable (not restoring novelty)"  
"Disclosure of the prior art document not confined to the  
example disclaimed"  
"Multiple overlapping ranges"

**Decisions cited:**

G 0001/03, T 0245/91, T 0666/89

**Catchword:**

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Case Number: T 0440/04 - 3.3.05

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.05  
of 26 November 2008

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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted  
5 February 2004 concerning maintenance of  
European patent No. 0791087 in amended form.

**Composition of the Board:**

**Chairman:** G. Raths  
**Members:** B. Czech  
S. Hoffmann

## Summary of Facts and Submissions

- I. The appeal lies from the decision of the opposition division concerning maintenance of the European patent No. 0 791 087 in amended form.
- II. In the contested decision the opposition division found that, account being taken of the amendments made by the proprietor during opposition proceedings, the patent and the invention to which it relates met the requirements of the EPC.
- III. In their statement of grounds of appeal and in their further written submissions, the appellants Isover (opponent 01) and Knauf Insulation GmbH (opponent 03) raised objections under Article 123(2) EPC. The appellants Isover, Knauf and Paroc Oy AB (opponent 04) also raised other objections, including novelty objections having regard to the following newly cited document, which belonged to the prior art pursuant to Article 54(3) EPC:
- C63: WO 95/34514 A1.
- IV. Under cover of its written reply dated 24 December 2004 the respondent (patent proprietor), filed four sets of claims as new main and first to third auxiliary requests.

Claim 1 according to the said new main request reads as follows:

" 1. A product comprising man-made vitreous fibres formed of a composition which includes, by weight of oxides,

SiO <sub>2</sub>	32 to 42%
Al <sub>2</sub> O <sub>3</sub>	18 to 28%
CaO	10 to 30%
MgO	5 to 20%
FeO	5 to below 10%
Na <sub>2</sub> O + K <sub>2</sub> O	0 to 7%
TiO <sub>2</sub>	0.5 to 4%
Other Elements	0 to below 8%
SiO <sub>2</sub> + Al <sub>2</sub> O <sub>3</sub>	below 68%

and the composition has a viscosity at 1400°C of 12 to 70 poise,

and the fibres have [sic] dissolution rate as defined herein of at least 20nm per day when measured at a pH of 4.5,

and the fibres have a sintering temperature of at least 800°C,

subject to the proviso that the fibres are not formed of a composition, by weight of oxides

SiO <sub>2</sub>	38.7%
Al <sub>2</sub> O <sub>3</sub>	22.0%
TiO <sub>2</sub>	1.9%
FeO	6.8%
CaO	16.9%
MgO	9.1%
Na <sub>2</sub> O	1.9%
MnO	0.3%
P <sub>2</sub> O <sub>3</sub>	0.3% "

Claim 1 according to the first auxiliary request differs from claim 1 according to the main request in that the features referring to the dissolution rate of

the fibres are complemented as follows (additional features emphasised by the board):

" ... and the fibres have [sic] dissolution rate as defined herein of at least 20nm per day when measured at a pH of 4.5, **and of less than 15nm per day when measured at a pH of 7.5, ...**"

Claim 1 according to the second auxiliary request differs from claim 1 according to the main request in that the range for the amount of Na<sub>2</sub>O + K<sub>2</sub>O was amended to read (amendment emphasised by the board):

" 0 to **below 5%** ".

Claim 1 according to the third auxiliary request differs from claim 1 according to the main request in that the ranges for the amounts of Al<sub>2</sub>O<sub>3</sub> and of Na<sub>2</sub>O + K<sub>2</sub>O were amended to read (amendments emphasised by the board), respectively;:

" **19 to 28%** " and respectively " 0 to **below 5%** " .

V. In the said written reply and in a further written submission, the respondent inter alia submitted that the claims as amended met the requirements of Article 123(2) EPC and that the claimed subject-matter was novel over the disclosure of document C63, which belonged to the prior art pursuant to Article 54(3) EPC, by virtue of the disclaimer which met the conditions set out in decision G 0001/03 (OJ EPO 2004, 413).

VI. In a communication in preparation for the oral proceedings, the board inter alia commented on the

allowability of the amendments to the claims. It questioned whether the disclaimer inserted into the claims was actually sufficient for restoring novelty over the total disclosure of C63, and hence whether it met the allowability criteria for disclaimers set out in G 0001/03. In particular, pointing out more general passages in C63 describing the preparation, composition and properties of fibres, the board questioned whether the disclosure of C63 was actually limited to fibres having the disclaimed composition as recited on page 16, lines 28 to 36, i.e. in example 1 of C63. The question was also raised whether the skilled person would seriously contemplate applying the technical teaching of C63 in the region of overlap between claim 1 and the more general disclosure of C63, and in particular in close proximity of example 1, where the fibres formed of slightly different compositions not excluded by the disclaimer would have properties almost identical to the ones according to example 1 of C63.

VII. Oral proceedings were held on 26 November 2008.

VIII. The arguments of the parties which concern the allowability of the disclaimer and are relevant for the present decision, can be summarised as follows:

The appellants argued that the claims according to all of the respondent's requests did not meet the requirement of Article 123(2) EPC, inter alia on the ground that the introduction of the disclaimer into the respective claims 1 of all requests was not sufficient to restore novelty over C63 and, therefore, constituted an amendment which was not allowable.



Concerning the prior art status of C63, the appellants noted that none of the four national applications from which the patent in suit claimed priority disclosed an SiO<sub>2</sub> content of up to 42%. Therefore, and in view of its earlier international filing date, C63 was prior art pursuant to Article 54(3) EPC for the Contracting States AT BE DE DK ES FR GB IT NL and SE. The appellants argued that for several reasons the novelty-destroying disclosure of C63 went far beyond the fibres having the specific analysis disclosed in example 1. One line of argument was based on certain description passages of C63 (page 6, lines 7 to 21 and page 14, last paragraph) which were considered to be relevant since they referred more generally to fibre compositions, properties and intended uses. The compositional ranges disclosed on page 6 of C63, in particular the preferred ones, were contained within or showed a considerable overlap with the ones according to the present claims, the latter embracing fibres having the composition specified in example 1 of C63 and also, as conceded by the respondent, the other properties required by the present claims. On page 6 (lines 20 to 21) of C63 a viscosity range of 10 to 70 Poise at 1400°C and a dissolution rate at pH 4.5 of at least 20 nm/day were also mentioned as being preferred. The process for obtaining the fibres was the same according to C63 (page 14, lines 25 to 32) and according to the present patent.

Since the skilled person would seriously contemplate applying the teaching of C63 in the region of overlap, at least in a region surrounding example 1, where the fibres would also have the other properties required by the present claims. In this context, it was noted that

the fibres of example 1 were very similar in composition and hence in properties to fibres Q exemplified in the patent in suit. C63 taken as a whole thus disclosed more novelty-destroying subject-matter than just example 1. This finding applied to all requests on file. Reference was also made to the jurisprudence of the Boards of Appeal, inter alia to decisions T 0666/89 (OJ EPO 1993, 495), points 5 and 7 of the reasons, and T 0245/91 of 21 June 1994 (not published in the OJ EPO), point 2.8 of the reasons.

The respondent argued that the disclaimer, which was unsupported by the application as filed, was intended to restore novelty over example 1 of C63, the latter being prior art under Article 54(3) EPC only. The disclaimer met the requirement of Article 123(2) EPC since the conditions set out in G 0001/03 were met.

The fibres of example 1 were the only disclosure in C63 of fibres falling within the scope of claim 1. At the oral proceedings, the respondent argued that this example was not very similar to example Q of the patent in suit, but expressly confirmed that for the fibres of example 1 of C63, the viscosity, the sintering temperature and the dissolution rates at both pH 4.5 and at pH 7.5 as defined in the present claims 1 would inherently be within the ranges specified in the said claims.

However, since there was no other novelty-destroying disclosure in C63, and in particular no generalisation from example 1, the disclaimer restored novelty. At the oral proceedings, the respondent also confirmed that the purpose of the auxiliary requests was not to

delimit the claimed subject-matter further over the more general disclosure of C63, and that in terms of novelty over the general disclosure of C63 the situation was the same for all requests.

The invention of C63 was mainly about making any type of fibre using a particular method involving briquetting, and it was merely illustrated by references to specific fibres. The general disclosure on page 6 of C63 referring to fibres within some preferred ranges was not novelty-destroying because it did not disclose all the details of the composition definition which was in claim 1.

The compositional ranges now claimed were not disclosed as such and only two of the claimed properties (viscosity and dissolution rate at pH 4.5) were actually mentioned in C63. The claimed property "*sintering temperature*" was not addressed at all. In contrast to the present patent, there was no clear direction in C63 towards fibres having compositions and properties within the claimed ranges, or on how to actually get all the said properties and compositional ranges at once.

In decision T 0245/91, the claims were found to be novel because there were a number of ranges and there was no direction to choose every range in the right sub-range. Hence, the same must apply in the present case.

Since there was no novelty-destroying disclosure in C63 besides example 1, the disclaimer needed not to deal with the broader disclosure on page 6 of C63. The

ranges given on page 6 of C63 encompassed a large number of compositions and fibres which did not fall within the ranges in the present claims in terms of their composition and/or their properties. For instance, the fibres according to C63 could comprise as little as 2% FeO, which amount would not suffice to achieve the required sintering temperature of 800°C or more. The skilled person was thus not clearly and unambiguously led to make something else apart from example 1 that was within the scope of the claim. There was nothing in C63 which gave guidance for selecting other ranges apart from the ones mentioned on page 6 of C63. Hence, the skilled person would not inevitably end up with fibres having, for instance, the right sintering temperature.

IX. The three appellants requested that the decision under appeal be set aside and that the patent be revoked.

The respondent requested that the contested decision be set aside and the patent be maintained on the basis of the claims according to the main request or one of the first to third auxiliary requests all of them filed with letter of 24 December 2004.

Opponent 02 (party as of right) did not file any request.

## Reasons for the Decision

### *Allowability of the amendments (Article 123(2) EPC)*

1. The "proviso" or disclaimer comprised in the respective claims 1 according to all of the respondent's requests finds no basis in the application as filed. This was not disputed by the respondent. According to the respondent, the introduction of this disclaimer into the claims served the purpose of restoring novelty over the disclosure of document C63.
  
2. According to the order of G 0001/03, points 2., 2.1 (first alternative) and 2.2, a disclaimer which is not disclosed in the application as filed "*may be allowable in order to restore novelty by delimiting a claim against a state of the art under Article 54(3) and (4) EPC*" but it "*should not remove more than is necessary ... to restore novelty ...*". It is also stated in G 0001/03 (see point 2.6.5 of the reasons) that "*a disclaimer may serve exclusively the purpose for which it is intended and nothing more. In the case of a disclaimer concerning conflicting applications, its purpose is to establish novelty with respect to a prior application in the sense of Article 54(3) EPC.*"
  
3. Prior art status of document C63
  - 3.1 C63 is an international patent application of Rockwool International A/S which has an earlier international filing date (14 June 1995) than the patent in suit (8 November 1995). However, C63 was only published after the latter date, namely on 21 December 1995.

3.2 The respective claims 1 according to each of the appellant's requests refer to a SiO<sub>2</sub> range of 32 to 42% (emphasis added by the board). However, an upper limit of 42% for the SiO<sub>2</sub> range is not disclosed in any of the four national patent applications from which priority is claimed. Hence priority cannot be validly claimed pursuant to Article 88(3) EPC from any of these applications. This was not disputed.

3.3 Since the respective claims 1 according to the present requests are not entitled to any of the earlier priority dates, it is the international filing date of the patent in suit (8 November 1995) that has to be considered as its effective filing date when determining the prior art status of C63 (see Article 89 EPC 1973). Consequently, due to the earlier filing date of C63, the latter's disclosure belongs to the state of the art pursuant to Article 54(3) EPC for those Contracting States which were validly designated both upon entry of the application C63 into the regional phase and in the case of the patent in suit (Article 54(4) EPC 1973). This was not disputed either.

4. Disclosure of document C63

4.1 C63 is concerned with the making of man-made vitreous fibres from a melt formed by melting a mineral charge including compression-moulded briquettes of particulate inorganic material bonded by a bonding agent. C63 is also concerned with novel briquettes that may be used for the said purpose; see page 1, first paragraph, and claims 1 and 17. Having regard to the vitreous fibres produced, C63 generally mentions (see page 14, lines 25 to 36 thereof) the same fibre-forming techniques and

the same fields of application as the patent in suit (see page 4, lines 37 to 38 and page 7, lines 1 to 4).

4.2 However, C63 also discloses some information concerning useful fibre compositions (in weight-%). In accordance with the respondent this information is to be compared to the compositional ranges of the present claims 1:

4.2.1 Specifically, example 1 of C63 discloses fibres having the composition recited in the proviso of the present claims 1, which composition contains 38.7% SiO<sub>2</sub>, 22.0% Al<sub>2</sub>O<sub>3</sub>, 16.9% CaO, 9.1% MgO, 6.8% FeO, 1.9% Na<sub>2</sub>O and 1.9% TiO<sub>2</sub>. The calculated sum of these components is 97.3%. The remaining amount of 2.7% includes MnO (0.3%), P<sub>2</sub>O<sub>3</sub> (0.3%) and some non-specified other elements.

4.2.2 The fibres of example 1 are made using the equipment also referred to in the patent in suit (see page 16, lines 1 to 5 of C63). The properties of the specific fibres produced according to example 1 are not mentioned in C63. However, it was confirmed by the respondent that these fibres inherently have all the properties required by the present respective claims 1 according to all requests. The values of the four parameters viscosity, dissolution rate at pH 7.5, sintering temperature and dissolution rate at pH 4.5 as defined in the claims thus all lie within the specified ranges, this being the reason for the introduction of the disclaimer into claim 1.

4.2.3 However, besides the specific example 1, C63 also contains a more generic disclosure concerning the production of different types of fibres. According to one alternative type of fibres, which is the type

illustrated by the specific example 1, the fibres produced have a relatively high  $\text{Al}_2\text{O}_3$  content of up to 30%; see page 6, lines 7 to 21 of C63. According to this alternative, the fibre composition is 32-48%, preferably 34-45%  $\text{SiO}_2$ ; 10-30%, preferably 19-28%  $\text{Al}_2\text{O}_3$ ; often 60-75%, preferably 61 to 63%  $\text{SiO}_2 + \text{Al}_2\text{O}_3$ ; 10-30%, preferably 14-25%  $\text{CaO}$ ; 2-20%, preferably 5-15%  $\text{MgO}$ ; 2-15%  $\text{FeO}$ ; 0-10%  $\text{Na}_2\text{O} + \text{K}_2\text{O}$ ; 0-6%  $\text{TiO}_2$ ; 0-16%  $\text{P}_2\text{O}_5 + \text{B}_2\text{O}_3$ ; and 0-15% other elements. This fibre composition is preferably such that it has a viscosity at  $1400^\circ\text{C}$  of 10 to 70 poise and a dissolution rate of at least 20 nm per day when measured at a pH of 4.5. Reference is made to C63; page 5, lines 15 to 23; page 6, lines 7 to 21; and claim 11.

- 4.2.4 It is noted that the narrower preferred range for  $\text{SiO}_2$  (34-45%) in C63 overlaps to a large extent with the one according to the present claims 1 (32-42%). The narrower preferred ranges for  $\text{Al}_2\text{O}_3$  (19-28%),  $\text{CaO}$  (14-25%) and  $\text{MgO}$  (5-15%) in C63 lie fully within the respective ones according to present claim 1 (18 or 19 to 28% for  $\text{SiO}_2$ , 10-30% for  $\text{CaO}$ , 5-20 for  $\text{MgO}$ ). The preferred range for the sum  $\text{SiO}_2 + \text{Al}_2\text{O}_3$  (61-63%) in C63 lies entirely below the upper limit of 68% prescribed by the present claims 1. The ranges indicated in C63 for  $\text{FeO}$  (2-15%),  $\text{Na}_2\text{O} + \text{K}_2\text{O}$  (0 to 10%),  $\text{TiO}_2$  (0-6%) enclose the corresponding ranges in present claim 1 (5 to below 10% for  $\text{FeO}$ , 0 to 7 or to below 5% for  $\text{Na}_2\text{O} + \text{K}_2\text{O}$ , 0.5-4% for  $\text{TiO}_2$ ), the latter ranges however covering substantial parts of the former, respectively. The combination of the ranges for the optional components  $\text{P}_2\text{O}_5 + \text{B}_2\text{O}_3$  (0-16%) and for any other elements (0-15%) as indicated in C63 is broader than and fully encompasses the range of 0-8% recited in present



claim 1 for the optional other elements (which according to the patent in suit may include  $P_2O_5$  and  $B_2O_3$ ).

4.2.5 Having regard to each of its components, the fibre composition of example 1 of C63 lies within the regions of overlap between the ranges of present claim 1 and the ranges/preferred ranges indicated on page 6, lines 11 to 18 of C63. The sum of 60.7% for  $SiO_2 + Al_2O_3$  lies below the upper limit of 68% specified in present claim 1 and at the lower end of the preferred range (61-63%) indicated on page 6, line 18 of C63.

4.3 In the present case, the question is whether disclaiming example 1 of C63 is sufficient to restore novelty. Hence, it remains to be seen whether C63 as a whole discloses other novelty-destroying subject-matter besides the fibres of example 1 and which is not excised from the present claims by means of the disclaimer.

4.3.1 In view of the generic disclosure on page 6 of C63 (see point 4.2.3 hereinabove), the board does not accept the respondent's argument that there was no generalisation from example 1 in the description of C63. It is immediately apparent from C63 that example 1 is not an isolated example but serves to illustrate one preferred alternative wherein the fibres produced are of the high-alumina type, and have a composition within the preferred ranges indicated on page 6. In view of the said generic indications on page 6 of C63, the board considers that the teaching of this document having regard to the production of high alumina fibres falling within the ambit of the present claims 1 according to

all requests is not strictly limited to what is described in example 1.

4.3.2 More particularly, considering that an example given in a patent application usually represents a useful and preferred embodiment of the broader teaching disclosed therein, the board takes the view that in the absence of indications to the contrary the skilled person would seriously contemplate (in the sense of e.g. decisions T 0666/89 and T 0245/91) applying the teaching on page 6 of C63 to the production of fibres having compositions within the preferred ranges taught for the high-alumina alternative, according to the method disclosed in C63 in connection with the example (see page 16, lines 1 to 5). More particularly, the skilled person would contemplate applying the said teaching of C63 to the production of fibres with compositions substantially equal or close to the composition of example 1 of C63, i.e. compositions belonging to a sub-region of the overlap between said preferred ranges and the ranges of the present claims, which sub-region encloses example 1.

4.3.3 It was not disputed that the values of the four parameters referred to above depend primarily on the chemical composition of the fibres. Moreover, considering also the experimental data (variations in fibre composition versus variations in properties) presented in the table on page 6 of the patent in suit, the board has no reason to assume the existence of discontinuities in terms of properties in a region (in terms of fibre composition) intimately surrounding the composition of example 1. In this region, the fibres have an analysis (composition) deviating only slightly

from the one of example 1 of C63, for instance in terms of the relative amount of only one of the specified components. Hence, in the absence of arguments to this effect, the board has no reason to doubt that the four parameter values will also inherently lie within the ranges according to the present claims 1 for fibres having compositions belonging to said surrounding region and being prepared as described in C63.

- 4.3.4 This finding is not affected by the fact that C63 is silent about the "*sintering temperature*" property, and that it does not contain information on how to control this or any of the other properties in question. Even accepting that not all of the fibre compositions encompassed by the generic definition on page 6 of C63 necessarily have the four properties referred to above, there is an overlap between the set of fibres as defined on page 6 of C63 and the set of fibres as defined in the present claims 1 in terms of composition and properties, which overlap surrounds and contains example 1 of C63. Within this overlap, at least in the said region intimately surrounding the fibre of example 1 in terms of composition (see point 4.3.3), the fibres according to C63 will inherently have the properties as required by the present claims 1, including the required "*sintering temperature*". The findings of decision T 0245/91 (see reasons, points 2.4 to 2.9) are not applicable in the present case, since in the case underlying that decision the allegedly novelty-destroying document does not appear to disclose an example located within the region of overlap with the claim under examination.

4.3.5 Since the skilled person would seriously contemplate applying the teaching of C63 in this particular region, the board concludes that C63 makes available to the public more fibres falling within the ambit of claim 1 than just the ones of example 1.

4.4 Whereas on the one hand a disclaimer should not remove more than is necessary to restore novelty, it cannot, on the other hand, be considered to serve its intended purpose when it excises less than what is necessary to restore novelty. As set out above, the disclosure in C63 of fibres having compositions and properties as required by the present claims 1 according to all requests is not strictly limited to the fibres described in example 1 of C63. "Cutting out" the latter fibres is thus not sufficient to exclude from the said claims 1 all those fibres disclosed in C63 having a composition and the inherent properties according to said claims. In the present case, the disclaiming of example 1 is thus not sufficient to restore novelty of the claimed subject-matter over C63.

5. Since the disclaimer does not serve this intended purpose, its insertion into the respective claims 1 of all requests is an amendment which is not allowable pursuant to Article 123(2) EPC in accordance with decision G 0001/03.

6. Consequently, none of the appellant's requests is allowable.

**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

G. Raths