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**Datasheet for the decision
of 4 March 2016**

Case Number: T 0196/13 - 3.3.06

Application Number: 03761497.1

Publication Number: 1518018

IPC: D21C9/00, C08B1/00

Language of the proceedings: EN

Title of invention:

TREATMENT OF A MIXTURE CONTAINING CELLULOSE WITH A REDUCING
AGENT

Patent Proprietor:

Borregaard AS

Opponent:

TEMBEC FRANCE SAS

Headword:

Specialty cellulose pulp/Borregaard

Relevant legal provisions:

RPBA Art. 12(4), 12(5)

EPC Art. 52(1), 54, 111(1), 114(2)

Keyword:

Novelty (no): Claims 1 and 8 - Main Request
Remittal (yes)

Decisions cited:

T 1300/06

Catchword:



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Case Number: T 0196/13 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 4 March 2016

Appellant:

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Decision under appeal:

**Interlocutory decision of the Opposition
Division of the European Patent Office posted on
28 November 2012 concerning maintenance of the
European Patent No. 1518018 in amended form.**

Composition of the Board:

Chairman

B. Czech

Members:

G. Santavicca

S. Fernández de Córdoba

Summary of Facts and Submissions

- I. The appeal by the Opponent lies from the interlocutory decision of the Opposition Division concerning maintenance of European Patent No. 1 518 018 in amended form.
- II. The patent as granted comprises twelve claims, Claims 1, 8, 9, 11 and 12 reading as follows (emphasis added by the Board):

*"1. A method for treating a mixture containing cellulose that has not been pulped or that has been pulped chemically or chemically and mechanically, wherein the treatment comprises at least one step of adding at least one agent capable of reducing carbonyl groups and wherein the mixture containing cellulose is an aqueous slurry of cellulose **leading to cellulose ethers or cellulose esters**, characterized in that the at least one agent capable of reducing carbonyl groups is added after the last stage of a multi-stage bleaching process."*

*"8. Specialty cellulose pulp **leading to cellulose ethers or cellulose esters**, obtainable by a process as described in any one of claims 1-7."*

"9. Specialty cellulose pulp according to claim 8, characterized in that the viscosity or the brightness, or both, of cellulose ethers or esters obtained from said specialty cellulose pulp are increased over the viscosity or the ISO brightness, or both, obtained from a specialty cellulose pulp that has not been treated with the at least one step of adding at least one agent capable of reducing carbonyl groups."

*"11. Specialty cellulose pulp **leading to cellulose***

ethers or esters that has been obtained from chemically and mechanically pulping wood or from chemically or mechanically pulping wood, characterized in that the specialty cellulose pulp **leading to the cellulose ethers or esters** have a viscosity of at least $1.7 \text{ m}^3/\text{kg}$ ($1700 \text{ dm}^3/\text{kg}$) as measured according to the standard "SCAN-CM 15:99".

"12. Use of cellulose ethers or esters obtained according to any one of claims 1-7 or obtainable according to any one of claims 8-10 for the production of viscose, composite materials, micro-crystalline cellulose formulations for food, cosmetics and pharmaceutical applications, technical filters, special photographic paper, as an additive during plastic molding, high-tenacity rayon yarn for tires and industrial hoses, paints, printing inks, LCD screens, high value specialty paper applications, battery separators, circuit boards and non-woven fabrics."

III. The patent was opposed in its entirety on the grounds of lack of novelty and lack of inventive step (Article 100(a) EPC) as well as of insufficiency of the disclosure (Article 100(b) EPC). The following items of evidence were *inter alia* relied upon:

D1: C. Chirat, *Effet de l'ozone sur les hydrates de carbone et la lignine des pâtes à papier chimiques. Application au blanchiment*; thesis discussed on 29 June 1994, pages 47-53 and 223;

D4: WO 01/29309 A1;

D5: US 3,017,316 A;

D9: US 3,100,732 A;

D10: US 2,494,542 A; and

D22: Kirk-Othmer, Encyclopedia of Chemical Technology, 3rd ed., vol. 5, 1979; pages 89, 100, 118-120, 129-132 and 143-145.

IV. In the decision under appeal, the Opposition Division came to the conclusion that the subject-matter of the claims according to the then pending Main Request (consisting of Claims 1-10 and 12 as granted, with Claim 12 as granted being renumbered as Claim 11) met the requirements of the EPC. More particularly, the Opposition found the following:

- a) The claimed subject-matter complied with the requirements of Article 84 and 123(2) EPC.
- b) The wording "*leading to cellulose ethers or cellulose esters*" in Claim 1 as granted implied that corresponding process steps were to be carried out, when carrying out the claimed process, to obtain cellulose ethers or cellulose esters.
- c) The invention as claimed was sufficiently disclosed.
- d) The subject-matters claimed were new over documents D1 to D5. The subject-matters of Claims 8 and 11 derived their novelty from that of Claim 1.
- e) Document D1 represented the closest prior art. The only feature not disclosed in D1 was the feature "*leading to cellulose ethers and cellulose esters*". The technical problem consisted in providing of a process leading to cellulose ethers and cellulose esters with high viscosity and improved brightness values. The solution to this problem consisted in treating the cellulose with a reducing agent, in combination with further process steps for preparing cellulose ethers/esters implied

by Claim 1 as granted. This solution was not obvious over the cited prior art.

- f) The subject-matter of each of Claims 8 and 11 benefited from the non-obviousness of the subject-matter according to Claim 1.

V. With its statement setting out the grounds of appeal, the Appellant (Opponent) submitted the following new items of evidence:

D26: US 5,035,772 A;

D27: M. Jackson, *CTMP - its manufacture, properties and end uses*; Paper Technology, July 1989, pages VII 18-25;

D28: P.M. Sharman, *BCTMP growth, demand to continue Worldwide during future decades*; BCTMP-Special Report, Pulp & Paper Special Report, Front Page and Pages S2-S32 (undated).

It contested the construction of Claim 1 adopted by the Opposition Division, raised two objections regarding sufficiency of the disclosure, one regarding Claim 10 (i.e. granted Claim 11) and one against Claim 1 as allowed by the Opposition Division. Moreover, it maintained that the subject-matters of independent Claims 1, 8 and 11 were not new over D1, D5, D9/D10 or D26, but that, in any case, the claimed subject-matter was obvious over D1, taken as the closest prior art, in combination with either D4 or D22.

VI. By letter dated 19 August 2013, the Respondent (Patent Proprietor) requested an extension of the time limit for replying to the Appellant's statement of grounds.

This request was refused by the Board on the ground that it was insufficiently reasoned.

VII. However, in its further letter dated 22 August 2013, the Respondent *inter alia* requested that the appeal be dismissed, explained the reasons for having requested an extension of said time limit and indicated that the full response to the statement would be filed as soon as possible.

VIII. This full response was filed on 26 August 2013. It comprised counter-arguments to the objections raised by of the Appellant, as well as three sets of amended claims as, respectively, its Main Request and Auxiliary Requests I and II, stated to correspond to the claim requests that had been pending before the Opposition Division.

Independent Claims 1, 8 and 10 according to said Auxiliary Request I read as follows (amendments made to Claims 1, 8 and 12 as granted made apparent by the Board):

"1. A method for **the production of cellulose ethers or cellulose esters, comprising** treating a mixture containing cellulose that has not been pulped or that been pulped chemically or chemically and mechanically, wherein the treatment comprises at least one step of adding at least one agent capable of reducing carbonyl groups and wherein the mixture containing cellulose is an aqueous slurry of cellulose ~~leading to~~ **and providing cellulose ethers or cellulose esters from the treated mixture**, characterized in that the at least one agent capable of reducing carbonyl groups is added after the last stage of a multi-stage bleaching process."

"8. ~~Specialty cellulose pulp leading to e~~Cellulose ethers or cellulose esters, obtainable by a process as described in any one of claims 1-7."

"102. Use of cellulose ethers or esters obtained according to any one of claims 1-7 or obtainable according to any one of claims 8 or 9 for the production of viscose, composite materials, micro-crystalline cellulose formulations for food, cosmetics and pharmaceutical applications, technical filters, special photographic paper, as an additive during plastic molding, high-tenacity rayon yarn for tires and industrial hoses, paints, printing inks, LCD screens, high value specialty paper applications, battery separators, circuit boards and non-woven fabrics."

- IX. In its letter dated 25 September 2013, the Appellant submitted that the Respondent's reply to the statement setting out the grounds of appeal was filed too late and should, therefore, not be admitted into the proceedings. The Appellant also submitted further arguments regarding the admissibility of D26, D27 and D28, its insufficiency objections and on novelty and inventive step. It maintained its request for revocation of the patent.
- X. In a fax communication issued on 11 February 2016, the Board gave its provisional opinion on some of the salient issues of the case. More particularly, the opinion expressed was:
- positive regarding the admissibility of the Respondent's reply, including Auxiliary claims Requests I and II, into the proceedings;
 - negative regarding the admissibility of the newly filed documents D26 to D28;

- negative regarding the admissibility of the sufficiency objections raised in the Appellant's statement of grounds into the proceedings;
- open to a broader construction (without implicit further method steps) of the method of Claim 1,
- questioning, on the basis of such broader construction, the issue of novelty of the subject-matters of Claims 1, 8 and 11 over D1, D5, D9/D10 and D26, if admitted, and,
- inquisitive as to the compliance of the amended claims according to the auxiliary requests with the requirements of Articles 123(2) and (3) and 84 EPC, in particular regarding compliance of Claim 1 according to Auxiliary Request I with Article 123(3) EPC.

XI. By fax dated 15 February 2016, the Respondent requested a postponement of the scheduled oral proceedings, *inter alia* on the ground that the communication by the Board raised new issues.

With letter of 16 February 2016, the Appellant took the position that the date of the Oral Proceedings should be maintained.

The Board, in a further communication dated 23 February 2016, informed the parties that the date of the oral proceedings would be maintained.

XII. In a letter dated 23 February 2016, the Appellant *inter alia* raised objections, under Articles 83, 84 and 123(2) (3) EPC, against Claims 1, 8 and 10 of Auxiliary Request I.

XIII. In its letter dated 25 February 2016 the Respondent maintained its pending Main Request and Auxiliary Request I, turned its previously pending Auxiliary

Request II into Auxiliary Request IV, and submitted further fresh sets of claims as Auxiliary Requests IA, II, III, IVA, V and VI.

- XIV. Oral proceedings were held on 4 March 2016. In the course of the debate, the parties were *inter alia* heard regarding the following issues:
- interpretation of the feature "*leading to cellulose ethers or cellulose esters*" comprised in Claims 1 and 8 according to the Main Request;
 - novelty of the subject-matter of Claims 1 and 8 of the Main Request over D1 and D5, D22 being considered as illustrating common general knowledge;
 - the admissibility into the proceedings of the Respondent's written submission dated 23 August 2013, including Auxiliary Requests I and II attached thereto, and, in particular, the admissibility of Auxiliary Request I;
- as well as,
- a request of the Respondent for remittal of the case to the first instance for further prosecution, submitted in the course of the debate, once the Board had informed the Parties of its view regarding novelty of Claim 1 according to the Main Request.

- XV. Final Requests at the oral proceedings

The Appellant (Opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent (Patent Proprietor) requested that the appeal be dismissed (Main Request) or, in the alternative, that the case be remitted to the department of first instance for further prosecution, or that the patent be maintained on the basis of the claims

according to one of Auxiliary Requests I, IA, II, III, IV, IVA, V or VI, taken in this order, all filed with letter dated 25 February 2016.

XVI. The arguments of the **Appellant** of relevance for the present decision can be summarised as follows:

Admissibility of the Respondent's reply to the statement of grounds of appeal

The response, including Auxiliary claim Requests I and II, was filed too late and should not, therefore, be admitted into the proceedings.

Main Request - Construction of the feature "leading to cellulose ethers or cellulose esters"

Article 84 EPC required the claims to be clear, concise and supported by the description. Said feature in Claim 1 was unclear, even taking into consideration the other claims in this respect. Claim 1 concerned a method for treating a cellulose mixture (starting material) with a reducing agent after a multistage bleaching process (method step). The feature "*leading to cellulose ethers or cellulose esters*" did not imply any additional steps of conversion to cellulose ethers or esters. This was apparent from the claims and from several instances in the description of the patent in suit as well. Claim 8 was actually directed to the product of the method of Claim 1, i.e. the specialty cellulose pulp, and showed the meaning of the feature in question. Claim 11 at issue had been drawn up during the examination proceedings and could not be used "*a posteriori*" to interpret Claim 1. According to a number of instances in the patent specification, the feature in question simply indicated in the context of Claim 1 that the cellulose

mixture treated as defined in this claim was suitable for subsequent conversion to cellulose ethers or esters. Consequently, Claim 1 was to be construed as only requiring two process steps: a multistage bleaching step and, thereafter, a treatment with a reducing agent, in order to obtain, starting from any mixture containing cellulose, a specialty cellulose pulp. The latter might subsequently be converted into cellulose ethers or esters by further steps, which, however, were not mandatory for the method according to Claim 1.

A more specific meaning, if any, to be given to the "*leading to ...*" feature in terms of properties of the cellulose should emanate from the patent in suit itself rather than from D4 or D22. The patent in suit, e.g. Paragraphs [0019] and [0022], imposed no limitation whatsoever on the starting cellulose, which could be of any kind. Hence, the objected to feature "*leading to cellulose ethers and esters*" was only a *desideratum* merely specifying that the treated cellulose pulp could subsequently be converted to cellulose ethers and esters. It did not impart any further qualifications either to the treated pulp. Hence, there was no difference derivable from "*specialty cellulose pulp*", as nothing was disclosed in the patent in suit as to why it was labelled "special". Indeed, according to D22 (page 120, "Manufacture", second paragraph), even cotton linters, i.e. any cellulose pulp, might be used for preparing cellulose acetate.

Main Request - Novelty - Claims 1 and 8

The method of Claim 1 lacked novelty, *inter alia* over each of D1 and D5.

In particular, D1 disclosed (page 48, Point II) a chemical pulp bleached according to a conventional

multistage bleaching process. Also, D1 disclosed (Table II.1 on page 52, and Point II.2.2.a on page 53) that after a reduction step with sodium borohydride following the bleaching carbonyl groups were no longer detectable. D5 (Example 1) disclosed the treatment of a commercial bleached spruce, a pulp as claimed, with chlorine dioxide, followed by washing, and a final treatment with sodium borohydride.

Thus, D1 and D5 both took away the novelty of the subject-matter of Claim 1.

Since the pulps of D1 and D5 were suitable for producing cellulose ethers/esters, as evidenced by D22, disclosing common general knowledge, the subject-matter of Claims 1 and 8 was not new either.

Auxiliary Request I - Allowability issues

Auxiliary Request I was not *prima facie* clearly allowable for various reasons. The amended claims were objectionable under Articles 123(2) and (3), 83 and 84 EPC, as pointed out in the letter of 23 February 2016. More particularly, Claim 1 of Auxiliary Request I related to a method which was different from that of Claim 1 as granted. This represented an extension of protection to subject-matter not protected by the claims as granted (Article 123(3) EPC).

Respondent's request for remittal

Already during the opposition proceedings, the Patent Proprietor could and should have prepared fall-back positions, in case its interpretation of Claim 1 as granted were not followed. This had apparently not been done. In the appeal proceedings, the Patent Proprietor then provided auxiliary claim requests, and it should be able to discuss them. The possibility of a different

interpretation of Claim 1 was also apparent from the Board's communication. The proceedings should not become inefficient because of the behavior of the Patent Proprietor. According to case law, it had no right that any single claim request be examined by two instances. In particular, neither the EPC nor national law foresaw that an auxiliary request not examined by the previous instance required a remittal of the case. In the present case a remittal was indeed not justified.

XVII. The arguments of the **Respondent** of relevance for the present decision can be summarised as follows:

Admissibility of the response to the statement of grounds of appeal

The late filing of the response was due to special circumstances, not intended to slow down the proceedings. It was finalized and filed without any further delay upon receipt of the Board's communication by which the extension of the set time limit was refused. Thus, the response and the Auxiliary Requests I and II should be admitted into the proceedings. Moreover, Auxiliary Requests I and II had already been filed ahead of the oral proceedings before the Opposition Division (with letter dated 10 September 2012). They were not dealt with in the decision under appeal because the then pending Main Request had been allowed.

Main Request - Construction of the feature "leading to cellulose ethers or cellulose esters"

Considering Article 84 EPC, more weight had to be given to the claims than to the description when interpreting a feature of a claim for the purpose of determining its

subject-matter. According to case law, a claim should be construed with a mind willing to understand, hence it should not be read illogically. In the present case, the claims were linguistically clear and made technical sense. Claim 1 concerned a method, hence its category was clear. In a method claim, each feature had to be checked on its own as to whether it concerned a step, even if the feature was an "unusual definition". The claimed method was thus to be construed as comprising three steps: treating a cellulose mixture; adding at least an agent capable of reducing carbonyl groups; and, providing for the method to lead to cellulose ethers/esters. The interpretation of "*leading to ...*" in Claim 1 as "*suitable for ...*" was not something usual in the context of a method claim. It was also apparent from Claims 8 and 9, concerning a product obtainable by the method of Claim 1, as well as from Claim 11 (Claim 12 as granted), concerning the use of the cellulose ethers/esters, taken in conjunction, that the method of Claim 1 implied further steps leading to cellulose ethers or ethers as end-products. In particular, in Claim 8, the comma had not been omitted due to an obvious error. Since the method of Claim 1 led to cellulose ethers/esters, the product of Claim 8 should be a product from the method of Claim 1, i.e. cellulose ethers/esters. Questioned by the Board why, in Claim 12 (as granted), the feature "*obtainable according to any one of Claims 8 to 10*" did not read "*according to any one of Claims 8 to 10*", the Respondent argued that, in Claim 12, the expression (emphasis added by the Board) "**obtainable according to any one of Claims 8 to 10**" did not make sense, as the products of Claim 12 were also "**obtained according to any of the methods of Claims 1-7**". Thus, "**obtainable ...**", in Claim 12, implying a different kind of process, should still concern the same end-products products of the method of Claim 1, i.e. Claim 8

could only concern the ester/ether products obtained from the method of Claim 1. Thus, in view of Claims 8 and 12, Claim 1 was, without any doubt, directed to the obtention of cellulose ethers or esters as final products. The differing interpretation given by the Appellant was implausible, given that cellulose was as such suitable for the purpose of "*leading to cellulose ethers or cellulose esters*".

Thus, Claim 1 was clear, and there was no need to consult the description, which, in any case, should be that of the patent specification, not that of the PCT application. In case the description were consulted, the examples referring to the claimed cellulose ethers/esters, paragraphs [0015] and [0016], and Figure 1 were the clearest parts, leading the skilled person to the same conclusion as reached when construing the feature in question based on the claims only. Also paragraph [0013] supported the narrow construction of Claim 1, in the sense that the feature "*leading to cellulose ethers and cellulose esters*" was an intrinsic part of the method claimed. The claimed method had to lead to cellulose ethers/esters, the latter showing the technical effect of having been prepared from specialty cellulose pulp of improved viscosity and brightness. The formation of these derivatives was not an optional feature of Claim 1 .

If, for any reason, this construction were not accepted, it should then be considered that the aqueous slurry of cellulose defined in Claim 1 was further delimited by the feature "*leading to cellulose ethers and esters*", in the sense that it implied a certain quality for the starting cellulose. In fact, a distinction had to be drawn between "market cellulose", as disclosed in D4, page 5, and specialty cellulose for producing cellulose

ethers and esters. The latter required a higher content of α -cellulose, 95-98%, as disclosed in D22, page 100.

Novelty - Main Request - Claims 1 and 8

The mandatory step(s) implied by the contested feature "*leading to cellulose ethers and cellulose esters*" could not be disregarded when examining novelty. Hence, the objections against novelty raised on the basis of combinations of e.g. any of D1 and D5 with common general knowledge concerning the preparation of cellulose ethers and esters, as illustrated by D4 or D22, did not comply with the standard disclosure test applied by the EPO. The cited prior art did not take away novelty of the process according to Claim 1, as none of D1 to D5 directly and unambiguously disclosed a process resulting in cellulose ethers or esters as final products.

More particularly, D1 was made up of only some pages of a thesis, disclosing the express steps of the claimed process, but this document was neither concerned with the purity of the treated cellulose, nor with the preparation of cellulose ethers/esters. D22 evidenced that cellulose should have high purity and high content of α -cellulose. D5 did not directly and unambiguously disclose a multistage bleaching according to the patent in suit. The different process of D5 thus led to a different product. Also, D5 did not disclose any use as claimed of the product obtained by its process. Thus, the claimed process and product were new over D1 and D5.

Auxiliary Request I - Allowability issues

Auxiliary Request I was also clearly allowable. The method of Claim 1 as amended was expressly and

specifically directed to the preparation of cellulose ethers and esters as end-products. Such method was covered by the scope of protection afforded by granted Claims 8 and 12, which concerned cellulose ethers and esters produced from the specialty cellulose pulp. The claims according to Auxiliary request I could not give rise to new issues, as these requests resulted from deletions of granted claims, or in order to clarify their scope. The claims were also clear.

Request for remittal

A remittal to the department of first instance was, however, appropriate in the present case. The claims according to Auxiliary Request I were on file since September 2012, and had been (re-)filed again in 2013. Until one month before oral proceedings, no objections were ever raised against product-by-process Claim 8 as granted, let alone regarding novelty. The problem was not that the Patent Proprietor was supposed to comply with formal requirements when filing amended claim requests, but that the Board's construction of the feature "*leading to ...*" in Claim 1 as granted was different from the one adopted by the Opposition Division. This different reading of Claim 1 implied that the claimed subject-matter to be defended was different, and that the claims of Auxiliary Request I had also to be examined for a shift of the protection conferred, which was difficult to analyse. In any case, this should be carried out by two instances to safeguard the right to appeal of the Patent Proprietor. These complicated issues could not be dealt with during oral proceedings. Basically, Auxiliary Request I, never dealt with before, not attacked until shortly before the oral proceedings, now needed to be examined for compliance with Articles 123(2), (3) and 84 EPC, taking into account the

construction of the granted claims adopted by the Board. Although a first reply to these attacks was already provided in writing, an examination of the complex issues entailed should first be carried out by the Opposition Division. Thus, in line with decision T 1300/06 of 8 April 2008, the case should be remitted to the Opposition Division for further prosecution.

Reasons for the Decision

Admissibility of the Respondent's reply to the statement setting out the grounds of appeal

1. In the present case, the Board, considering the lack of a sufficient justification, took the discretionary decision not to grant the Respondent's request for an extension of the time limit set for replying to the statement of grounds of appeal (Article 12(5) RPBA).

The Respondent thereupon submitted a full response to the statement of grounds of appeal one week after the expiry of the said time limit.

- 1.1 The admission of late submissions is, in any case, subject to the discretion of the Board (Article 114(2) EPC, Article 12(4) RPBA). In the exercise of this discretion the Board took into account that:
 - there was a prompt reaction (fax sent on 22 August 2013) of the Respondent to the refusal (by fax of 21 August 2013) of the time extension request by the Board, comprising an explanation for the non-observance of the time limit and, *inter alia*, requests for the dismissal of the appeal and also, auxiliarily, for oral proceedings; and,
 - within one week, with letter of 26 August 2013, the

Respondent submitted a complete response, including arguments rebutting the objections maintained/raised by the Appellant, objections against the new evidence filed by the Appellant, and claim requests corresponding to those that had been pending before the Opposition Division.

- 1.2 Considering the explanations provided and the promptness of the Respondent reaction, the Board, on the one hand, is convinced that there was no intention by the Respondent to slow down the proceedings. The Board also considered that the Respondent's reply was submitted at a very early stage of the appeal proceedings, and that it essentially merely comprised arguments in defence of the patent against the objections raised by the Appellant, questions regarding the admissibility of the newly filed evidence and (re-filed) claim requests that had already been pending before the first instance.
- 1.3 Taking into account all of the above aspects, the Board decides to admit the full response of the Respondent into the proceedings (Article 114(2) EPC and Article 12 RPBA) despite it being filed after the expiry of the relevant time limit, as foreshadowed in its communication of 11 February 2016.

Main Request - Construction of Claim 1

2. One of the crucial questions of the present case is whether the feature of Claim 1 reading "**leading to cellulose ethers or cellulose esters**" (emphasis added) actually means
 - that the "*method for treating a cellulose mixture*" according to Claim 1 must actually lead to cellulose ethers or cellulose esters **as final products** ("**narrow construction**" hereinafter), or,

- merely that the treated "*mixture containing cellulose*" must be **intended** or **suitable for** being **used** in the production of cellulose ethers and esters ("**broad construction**" hereinafter).

- 2.1 For the Board, the wording of Claim 1 *per se*, considered as a whole, neither unambiguously expresses that the method claimed should be leading to cellulose ether/ester end-products, nor that the "*leading to ...*" is supposed to qualify the cellulose treated as being suitable for "*leading to ...*".

The Patent Proprietor considered that the narrow construction was appropriate, whereas the Appellant considered that the broad construction was appropriate.

The proper construction of Claim 1 thus needs to be decided by the Board.

- 2.2 Claim 1 is to be construed within the context of the patent in suit, primarily within the context of the claims, as according to Article 84 EPC the claims define the subject-matter for which protection is sought.

- 2.2.1 In this respect, the Respondent argued in particular that since Claims 8 and 11 were directed to cellulose ethers and esters obtainable or obtained by the process of Claim 1, and their uses, Claim 1 had to be construed as being directed to a method "*leading to*" such "*cellulose ethers or cellulose esters*" as end-products.

- 2.2.2 More particularly, as regards Claim 8, the Respondent essentially relied on the features reading (emphasis added by the Board) "*.. cellulose ethers or cellulose esters, obtainable by a process as described in any one of claims 1-7*". It argued that the presence of the comma

between the terms "esters" and "obtainable" was an obvious error. Hence, the method of Claim 1 led to cellulose ethers/esters, and the product of Claim 8 was a product from the method of Claim 1, cellulose ether/ester. This was clear when also considering Claim 12 as granted (now claim 11), which related expressly to the **"use of cellulose ethers or esters obtained according to one of claims 1-7 or obtainable according to any one of claims 8-10"**.

- 2.2.3 The Board does not accept, however, that some isolated parts of the wording of Claims 8 and 12 may be considered to necessarily make the narrow construction of Claim 1 the appropriate one.

In particular, the Board instead takes the view that according to the first part of Claim 8 reading "*Specialty cellulose pulp ...* ", this claim is unequivocally directed to a particular ("specialty") cellulose **pulp**. According to the wording "*obtainable by ...*" following the comma, this pulp might be the product of a method will all the treating steps expressly mentioned in method of Claim 1, i.e. an underivatized pulp. This pulp is further described by the indication "*leading to cellulose ethers or cellulose esters*" preceding the comma, i.e. the expression also used in Claim 1 and which needs to be construed. It is far from apparent that the presence of the comma is the the result of an obvious error that occurred when drafting the claim. The Board holds that in the context of Claim 8, which, unlike Claim 1, is directed to a **product**, the "*leading to ...*" feature is even less suitable to unambiguously express that the **pulp** claimed is supposed to be derivatized to cellulose ether/ester.

- 2.2.4 Moreover, claim 9, dependent on Claim 8 and directed to

a "*specialty cellulose pulp*" (according to Claim 8), expressly refers to properties of cellulose ethers or esters "*obtained from*" the specialty pulps of claim 8. For the Board, this wording reinforces the understanding that the "*leading to ...*" feature in both Claim 1 and Claim 8 does not imply that the claimed subject-matter is limited to a method leading to cellulose ethers or esters as final product or to these cellulose ether or ester products as such, respectively.

2.2.5 Similarly Claim 12 as granted (now Claim 11) refers only to the specialty cellulose pulp. Moreover, it is contradictory in itself: Its first part reading "*use of cellulose ethers or esters obtained according to any one of claims 1-7*" appears to refer to cellulose ethers or esters obtained by the method of Claim 1. However, the subsequent wording reading "*or **obtainable** according to any one of claims 8-10*" not only casts doubts on the true category of Claim 8 (product or process) but also rather appears to imply, like Claim 9, that Claim 8, if directed to a product, does **not** concern a cellulose ether or ester, but an intermediate product (i.e. a "*specialty cellulose pulp*") from which the cellulose ethers or esters can be obtained.

2.2.6 Therefore, even taking into account Claims 8, 9, and 12 (now 11) of the patent in suit, the Board does not consider it appropriate to construe Claim 1 narrowly. Instead, the Board holds that the broader construction of Claim 1 makes perfect sense technically and should not be disregarded as inappropriate.

2.3 The Board thus holds that relying on the content of the description of the patent in suit is neither necessary nor appropriate in the present case. However, for the sake of completeness, the Board observes that the

content of the description does not support the Respondent's view either, according to which the "leading to .." feature in Claims 1 and 8 had necessarily to be understood in the narrow sense, i.e. as implying that the final products of the method of Claim 1 and the products according to Claim 8 had to be cellulose ethers or esters. The Board considered in particular the following passages of the description (emphasis added by the Board):

- 2.3.1 *"A mixture containing cellulose ...is any mixture that contains glucose polymer of cellulose"* (paragraph [0019], first sentence). This statement concerns the starting material of the process according to Claim 1 and does not appear to pose any limit whatsoever.
- 2.3.2 *"As a result of the treatment of the mixture containing cellulose described above, in particular after treating said mixture after a multistage bleaching process by adding a reducing agent, a treated mixture containing cellulose is obtained. **In the context of the present invention, this mixture is referred to as (treated) "specialty cellulose pulp"**, i.e. as a pulp that has been treated and can now be further processed to obtain specialty cellulose products. One class of products obtainable from specialty cellulose pulp in accordance with the present invention are cellulose ethers."* (paragraph [0047]; similarly paragraph [0052]).
- 2.3.3 *"The specialty cellulose pulp obtained as described above **can be subjected to any step of further processing and/or derivatization**. Of particular interest in the context of the present invention is any process of forming cellulose derivatives. Cellulose ethers and/or cellulose esters are of particular importance in this context. Following bleaching and post-treatment*

*(including a possible stage of drying), the specialty cellulose sheets are packed in a roll or sheets of a given configuration determined by the cellulose derivative producer **and transported to the cellulose derivative producer. There,** the sheets are typically cut up or ground to a powder. In the case of cellulose ethers, the pulp pieces or powder is typically pretreated with sodium hydroxide at below room temperature and reacted with the desired etherifying agents in an oxygen-free environment at temperatures between 60 and 100°C. The cellulose ether product is washed free of salts, dried and often ground to become the final product."* (paragraph [0054]).

2.3.4 For the Board, these paragraphs disclose that the treatment of the cellulose pulp to produce a specialty cellulose pulp on the one hand, and processes for its derivatization to ether/ester on the other hand, are not necessarily linked. Thus, a method with all the steps expressly mentioned in Claim 1 does **not necessarily** lead to cellulose ethers or to cellulose esters, supposed to be improved in both viscosity and brightness, compared to those obtained from cellulose pulps not subjected to the process steps of Claim 1.

2.4 As support for its narrower construction of Claims 1 and 8, the Respondent invoked in particular the following parts of the description (emphasis added by the Board):

2.4.1 "[0013] *The object of the present invention was to provide a method of treating a mixture containing cellulose **leading to specialty cellulose pulp,** so that the degree of brightness or the viscosity of cellulose derivatives **obtained therefrom** (in particular cellulose ethers or cellulose esters), or both, is/are increased over the prior art"*. This paragraph allegedly implied by

analogy, in view of the use of the expression "leading to specialty cellulose pulp", that the method of Claim 1 was indeed directed to the obtention of cellulose ethers and esters.

2.4.2 "[0015] The solution according to the invention is particularly surprising since the prior art does not teach that **treating a mixture containing cellulose, i.e. treating a pulp, leads to cellulose derivatives** obtainable from the treated pulp with improved viscosity and/or brightness in comparison to a similar cellulose derivative obtained by the same process but excluding the inventive step of adding at least on agent capable of reducing carbonyl groups". This passage also allegedly implied, in view of the wording "leads to cellulose derivatives", that the **treatment** according to Claim 1 had to be understood as resulting necessarily in cellulose ethers or esters.

2.4.3 "[0016] In FIG 1, the viscosity of the (derivative) end product obtained via etherification from the inventive specialty cellulose". This passage, in view of the expression "the (derivative) end product obtained via etherification", allegedly also indicated that cellulose ether was the final product of the method of Claim 1.

2.4.4 Moreover, Example 4 allegedly showed which further steps were implied by the feature "leading to cellulose ethers or cellulose esters".

2.5 However, for the Board, these passages do also not support the Respondent's view that Claim 1 is to be construed narrowly, i.e. as implicitly comprising derivatisation steps:

2.5.1 The indications in paragraph [0013] of the patent (see

2.4.1, *supra*) make it even more doubtful whether the expression in Claim 1 reading "*leading to cellulose ethers or cellulose esters*" can actually be considered to express that the final product of the method of Claim 1 should be a cellulose ester or ether, rather than a "specialty cellulose" as also mentioned in paragraph [0013]. The content of invoked paragraph [0013] in fact appears to correspond to the subject-matter of Claim 9, dealt with in Point 2.2.4 (*supra*).

2.5.2 Paragraphs [0015] and [0016] disclose properties of cellulose derivatives obtained from the cellulose pulp treated by a method comprising the steps mentioned in Claim 1. They do not, however, mention any further steps of derivatization of the cellulose pulp so treated. Hence, their disclosure is clearly not implicitly linked to process steps required for actually making the derivatives (ether/ester). The skilled person reading these passages understands that the invention is also concerned with providing a treated cellulose pulp as such, which may be then be used as the starting material in the derivatization process.

2.5.3 Example 4 merely illustrates a very particular carboxymethylation procedure advantageously used for preparing etherified derivatives from a pulp obtained by the treatment method with the steps explicitly mentioned in Claim 1, illustrated in Examples 1 and 3. The derivatives are compared to those obtained from a pulp which was not subjected to the treatment step required by the characterising features of Claim 1. As pointed out in paragraph [0094] of the description (emphasis added by the Board), "*[t]he purpose of this example is to illustrate the process leading **from the specialty cellulose pulp according to the invention to the derivative end product**, in this case an etherified*

derivative. However, any other derivatization would be conceivable in this context, in particular any process of esterification".

For the Board, this indication makes it clear that derivatizing the cellulose pulp is not a mandatory feature of the invention as described or, in other words, that the description does not disclose that the invention would require carrying out an integral process comprising first treating a mixture containing cellulose by a method with the step expressly indicated in Claim 1, and then derivatizing the pulp obtained by steps not mentioned in Claim 1.

- 2.6 Therefore, the Board adopts the broad construction in its assessment of novelty, *infra*.

Main Request - Novelty

3. At the oral proceedings, novelty of the subject-matters of Claims 1 and 8 over *inter alia* documents D1 and D5 was controversially debated, D22 being considered as representing common general knowledge.

3.1 Document D1

- 3.1.1 D1 discloses a method of treatment, in which chemically pulped cellulose mixture (page 47, lines 2-3) is subjected to a multi-stage bleaching process (page 48, Point II, first paragraph), whereby sodium borohydride is added after the multi-stage bleaching process (page 52, Table II.1, see *B), in order to reduce the carbonyl groups formed in the pulp (Page 53, Point I.2.2a).

- 3.1.2 As to the question whether the feature "*leading to cellulose ethers or cellulose esters*" in Claims 1 and 8

implies that the cellulose undergoing the treatment according to Claim 1 must meet some further criteria in order to be suitable for being subsequently used in the production of cellulose ethers or esters, i.e. implies some further limitation, the Board notes the following:

That cellulose pulp industrially used for producing cellulose ethers and esters usually meets certain criteria appears to be common general knowledge (see e.g. D22, page 89, second full paragraph, second sentence; page 100, first and second full paragraph; page 145, second and third full paragraphs). However, the patent specification does not (not even in paragraphs [0019] and [0020]) directly and unambiguously mention any generally applicable quality requirements for the "*mixture containing cellulose*".

Hence, even if this feature were to be understood as meaning "*suitable for leading to ...*", it does not distinguish the treating method and pulp claimed (Claims 1 and 8) from those disclosed in D1.

3.1.3 Based on the broad construction of Claims 1 and 8 (*supra*), the Board thus concludes that D1 discloses both a method for treating a mixture containing cellulose according to Claim 1 at issue and a pulp as defined in Claim 8. The subject-matter of these claims thus lacks novelty over D1 (Articles 52(1) and 54 EPC).

3.2 Document D5

3.2.1 D5 (Example 1) discloses a method for treating a mixture (6% consistency) of commercial already bleached spruce sulphite **pulp**, wherein the treatment comprises a step of adding sodium borohydride for reducing carbonyl groups (see e.g. Column 2, lines 39 to 40, as well as Table I

and Column 4, lines 36 to 40), after another (last) bleaching treatment with chlorine dioxide.

The Respondent contended that D5 did not disclose a multi-stage bleaching process according to the patent in suit, and hence that D5 did not disclose a process with all the features of Claim 1.

3.2.2 However, considering that the commercial bleached (wood) cellulose pulp referred to in Example 1 of D5 was bleached once more with chlorine dioxide and then contacted with sodium borohydride as reducing agent, i.e. treated according to steps as defined in Claim 1, the Board, based on the broad construction of Claim 1 (*supra*), concludes that D5 discloses directly and unambiguously (at least) a cellulose pulp falling under the terms of Claim 8.

3.2.3 The subject-matter of (at least Claim 8) thus lacks novelty over D5 (Articles 52(1) and 54 EPC).

3.3 The Respondent's Main Request is thus not allowable.

Auxiliary Request I - Admissibility

4. The claim set at issue was filed (already as Auxiliary Request I) for the first time during the first instance proceedings. It was filed with letter of 10 September 2012, in response to the preliminary opinion expressed by the Opposition Division in its communication (dated 10.11.2011) annexed to the (first version of the) summons to attend oral proceedings, within the time limit set in the (second version of the) summons (dated 25.11.2011).

4.1 This request had not been commented upon by the Opponent

in writing. Since the Opposition Division allowed the Main Request, the set of claims in question was not addressed at the first instance oral proceedings, and is also not dealt with in the decision under appeal.

- 4.2 The same set of claims was (re-)filed, again as Auxiliary Request I, as part of the full reply of the Respondent which was admitted into the proceedings by the Board (see point 1.3, *supra*).

Remittal

5. The Patent Proprietor requested the remittal of the case to the Opposition Division. The Appellant objected to a remittal.

- 5.1 As pointed out by the Appellant, the Respondent knew from the Board's communication of 11 February 2016 that a different construction of the claims might have to be adopted.

- 5.2 However, in the present case, the broader interpretation of the feature "*leading to ...*", diametrically opposed to the one adopted by the Opposition Division, is causal for the overturning of the first instance decision on novelty.

- 5.3 This different construction of the claims as granted substantially changes the way in which the entire case is to be assessed as regards both the formal and substantive requirements of the EPC.

In fact, the claims according to Auxiliary Request I comprise substantial amendments, compared to the respective claims of the patent as granted.

In this connection the Board observes that none of the

claims as granted appears to be directed to a method of the type of Claim 1 according to Auxiliary Request I, let alone to a product claim of the type of Claim 8 of Auxiliary Request I. The broader construction of Claims 1 and 8 as granted (Points 2, *supra*) may thus turn out to have a substantial bearing on the assessment of, *inter alia*, compliance of the amended claims according to Auxiliary Request I with Article 123(3) EPC.

- 5.4 The Appellant only raised its objections under Articles 123(2), (3), 84 and 83 EPC against the claims according to Auxiliary Request I, for the first time, after the issuance of the summons to oral proceedings and the communication by the Board dated 11 February 2016.
- 5.5 In the present case, as already mentioned, the amended claims according to Auxiliary Request I have not been considered by the Opposition Division. Hence, not even the formal allowability of the claims now at issue has been examined in first instance proceedings (similarly to the procedural situation in T 1300/06, Reasons, 7, invoked by the Respondent).
- 5.6 As regards Auxiliary Request I, there is thus no first instance decision to review.
- 5.7 Under the specific circumstances of the present case, the Board, in the exercise of its discretion under Article 111(1) EPC, finds the Respondent's request for the remittal of the case to be allowable.

Order

For these reasons it is decided that:

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

The Registrar:

The Chairman:



D. Magliano

B. Czech

Decision electronically authenticated