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**Datasheet for the decision  
of 12 July 2013**

**Case Number:** T 0860/09 - 3.3.03

**Application Number:** 98123937.9

**Publication Number:** 926162

**IPC:** C08F2/10, C08F220/04,  
C08F220/06

**Language of the proceedings:** EN

**Title of invention:**

Production process of hydrophilic crosslinked polymer

**Patent Proprietor:**

NIPPON SHOKUBAI CO., LTD.

**Opponent:**

BASF SE

**Headword:**

**Relevant legal provisions:**

EPC Art. 100(c), 111(1)

**Keyword:**

Added subject-matter (no)  
Remittal for remaining issues

**Decisions cited:**

T 0792/94, T 1067/02, T 1269/06

**Catchword:**



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Case Number: T 0860/09 - 3.3.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.03**  
**of 12 July 2013**

**Appellant:** NIPPON SHOKUBAI CO., LTD.  
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**Representative:** BASF SE  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on  
20 February 2009 revoking European patent No.  
926162 pursuant to Article 101(3)(b) EPC.**

**Composition of the Board:**

**Chairman:** B. ter Laan  
**Members:** F. Rousseau  
C. Brandt

## **Summary of Facts and Submissions**

- I. The appeal by the Patent Proprietors (Appellants) lies from the decision of the opposition division posted on 20 February 2009 revoking European patent No. EP-B-0 926 162 granted on European patent application No. 98 123 937.9.
- II. The Opponents (Respondents) had requested in the notice of opposition the revocation of the patent in its entirety on the ground that its subject-matter lacked novelty and an inventive step (Article 100(a) EPC). An additional ground of opposition, that the subject-matter of the granted patent extended beyond the content of the application as filed (Article 100(c) EPC), was raised by the opponents after the opposition period had expired; it had been introduced into the proceedings by the opposition division.
- III. The impugned decision was based on the patent as granted (main request), as well as on eight sets of amended claims as auxiliary requests 1 to 8.
- IV. Claim 1 of the patent as granted read as follows:
- "1. A production process of a hydrophilic crosslinked polymer, comprising the steps of polymerizing an aqueous solution including a hydrophilic monomer and a crosslinking agent to obtain a hydrogel crosslinked polymer, and drying the hydrogel crosslinked polymer, thus obtaining the hydrophilic polymer, with the step of drying the hydrogel crosslinked polymer comprising the steps of:
- (i) carrying out a first-step drying of hydrogel crosslinked polymer obtained by the polymerization in a static state to obtain a half-dried product,

until it becomes possible to disintegrate an aggregate of the particulate hydrogel crosslinked polymer; then

- (ii) disintegrating the half-dried product obtained by the first-step drying into a particle size of 20 mm or less; and then
- (iii) carrying out a second-step drying of the half-dried product having a particle size of 20 mm or less in a stirred state and/or a fluidized state."

Dependent claims 2 to 7 of the patent as granted were directed to preferred embodiments of claim 1.

Claim 1 as originally filed read as follows:

1. A production process of a hydrophilic crosslinked polymer, comprising the steps of polymerizing an aqueous solution including a hydrophilic monomer and a crosslinking agent to obtain a hydrogel crosslinked polymer, and drying the hydrogel crosslinked polymer, thus obtaining the hydrophilic crosslinked polymer, with the process being characterized in that: the hydrogel crosslinked polymer is dried in a static state until it becomes possible to disintegrate an aggregate of the hydrogel crosslinked polymer; the dried hydrogel crosslinked polymer is disintegrated into a particle size of 20 mm or less; and the disintegrated hydrogel crosslinked polymer is dried in a stirred state and/or a fluidized state."

- V. According to the decision, the term "half-dried product" introduced into claim 1 during examination, was found to have a basis only in the examples of the application as originally filed, where it was linked with specific water contents of the polymers and a specific type of disintegration, resulting in specific

particle sizes, whereas claim 1 did not contain any restriction with respect to the water content of the polymer product or the type of disintegration. Hence, the introduction of the term "half-dried product" in the more general context of claim 1 resulted in an extension of the claimed subject-matter (Article 123(2) EPC). Also claim 7 was judged to have no basis in the application as filed. The main request was therefore not allowable. The subject-matter of the claims according to any of auxiliary requests 1 to 8, too, was found not to be disclosed in the application as filed. Hence, the auxiliary requests were not allowable either (Article 123(2) EPC).

- VI. A notice of appeal against that decision was filed on 17 April 2009, the appeal fee being paid on the same day. With the statement setting out the grounds of appeal filed on 23 June 2009, the Appellants submitted a main request as well as thirteen auxiliary requests. Those requests were replaced by a new main request consisting of claims 1 to 6 as granted and twelve auxiliary requests, all submitted with a written submission dated 12 June 2013, in response to the Board's communication of 4 April 2013.
- VII. Oral proceedings before the Board took place on 12 July 2013.
- VIII. The Appellants' arguments can be summarised as follows:
- a) From the general context of the original application, and in particular in view of its examples, it was evident that the term "half-dried product" had no exact meaning. This was supported by the fact that the application used this term in all the examples directed to corresponding

materials having various water contents. "Half-dried product" could only be understood as to define that the material obtained after the first step was incompletely or partly dried.

- b) One could also not correlate the term half-dried with an exact physical state, such as a degree of aggregation. It followed from the wording of the claim that the half-dried material had to be disintegrable, which meant that that material had to be in the form of an aggregate.

This view was supported by the specification according to which the hydrogel crosslinked polymer "*aggregates in the midway of drying*".

- c) It had also to be borne in mind that the content of water that allowed disintegration of the polymer aggregates, the ability to disintegrate being a functional feature of the claim, depended on the type of polymer employed. Thus, the term "half-dried product" represented only a rough characterization of the corresponding product that should not be understood in its literal sense, i.e. as a product having a water content of exactly 50 %. This was also supported by paragraph [0013] of the application as filed, according to which the water content obtained after the first drying step was 25 wt% or less.
- d) Therefore, no additional technical information had been added by the insertion of the wording "half-dried product" into claim 1, a mere semantic analysis of that wording being irrelevant to the issue of whether or not the claimed subject-matter

extended beyond the content of the application as filed, in line with T 1269/06.

- e) Furthermore, even if any lack of clarity of claim 1 resulted from the term "half-dried product", since it was present in the claim as granted, it could not form a ground of opposition and therefore was of no relevance for opposition proceedings or opposition appeal proceedings.

IX. The arguments of the Respondents can be summarised as follows:

- a) Doubts arose whether or not the scope of protection had been modified by insertion of the feature "half-dried", for which no definition was given in the general part of the description as filed. This feature was unclear as it did not allow to understand which quantity of water could be present in the product subsequent to the first drying step.
- b) The term "half-dried product" was only disclosed in the examples of the application as filed, where it was used to indicate a water content lying between 8,9 and 11,5 wt%, as well as in comparative example 1, where it designated a water content of 20,9 wt%. Thus, the use of the expression "half-dried product" in claim 1 as granted resulted in claim 1 encompassing a method by which the "half-dried product" also could contain 20,9 wt% of water. This meant that the method according to comparative example 1 of the application as filed was now also encompassed by claim 1 of the patent, thereby extending the content of the application as filed.

- c) The situation was similar to that underlying decisions T 792/94 and T 1067/02, where the insertion of an unclear term in the claim allowed scope for an interpretation that extended beyond the disclosure of the application as filed.
- d) For assessing whether the method according to comparative example 1 fell within the ambit of claim 1 as amended, the fact that the half-dried product obtained in comparative example 1 could not be disintegrated roughly with usual methods was irrelevant, as claim 1 did not contain any limitation concerning the disintegration method. Such disintegration step could be for example carried out using a knife, as indicated by the opposition division in the contested decision.
- e) Should the term "half-dried product" designate the amounts of water specifically disclosed in the examples, those amounts were solely disclosed within the framework of a specific context, which was however not defined in claim 1. Thus, the insertion of the term "half-dried product" in claim 1 resulted in an unallowable generalization of the disclosure of the examples of the application as filed.
- f) Hence, the subject-matter of claim 1 of the main request extended beyond the content of the application as originally filed.

X. The Appellants requested that the decision under appeal be set aside and that the case be remitted to the department of first instance for further prosecution, should the Board find the main request or alternatively



one of the first to twelfth auxiliary requests, all filed with the letter of 12 June 2013, to comply with the requirements of Article 123(2) EPC.

XI. The Respondents requested that the appeal be dismissed, or alternatively that the case be remitted to the department of first instance for further prosecution, should the Board find the main request or one of the first to twelfth auxiliary requests, all filed with the Appellants' letter of 12 June 2013, to comply with the requirements of Article 123(2) EPC.

XII. At the end of the oral proceedings, the decision of the Board was announced.

### **Reasons for the Decision**

1. The appeal is admissible.

#### *Main Request*

2. Claim 1 of the main request corresponds to claim 1 as granted, which, apart from the insertion of the term "half-dried", resulted from a rewording of claim 1 as originally filed. It is not disputed that any difference in meaning between claim 1 as granted and claim 1 as originally filed could only result from the definition that the product resulting from drying step (i) is a "half-dried" product. It is also not disputed that the term "half-dried product" as such is only disclosed in the examples of the application as filed, the details of which are not given in claim 1 as granted. Hence, the question to be answered is whether the introduction of the term "half-dried product" into claim 1 results in technical information that could not be directly and unambiguously derived from the

application as filed. In particular whether the introduction of the term "half-dried" amounts to an undue generalization of the disclosure of the examples of the application as filed, as found by the Opposition Division and argued by the Respondents.

3. Normally, terms used in a claim should be given their ordinary meaning in the context of that claim; in case of unclarity, the disclosure of the patent may be taken into account, ruling out interpretations that are illogical or do not make technical sense. The wording "half-dried" by its nature does not provide an exact quantitative definition of the proportion of water removed after the first drying step, in particular it does not indicate that exactly 50 % of the water has been removed. It rather expresses the general idea that the first drying step leads to a product which is semi-, partly, not fully dried.
4. From the context of claim 1, according to which the boundary between the first drying step (i) and the disintegration step (ii) is defined as the point at which it is possible to disintegrate the aggregate of the hydrogel crosslinked polymer resulting from drying step (i), it is also clear that the above indicated meaning of "half-dried" does not provide any precise restriction on the claimed subject-matter with regard to the proportion of water removed during the first drying step. This view is supported by the disclosure of the invention in the paragraph bridging pages 4 and 5, on page 5, lines 25-27 and in the first paragraph of page 7 of the application as filed.
5. It can be accepted that the amount of water removed until aggregates have formed and can be disintegrated may depend on many factors, in particular on the

chemical nature of the polymer and its structure, and therefore will not necessarily be exactly 50% of the water originally present. This is consistent with the information provided in the first full paragraph of page 5 of the original application, according to which the water content of the hydrogel crosslinked polymer subjected to the first drying step usually has a water content in the range of 50-80 wt%. It can also be deduced from the information given in the paragraph bridging pages 5 and 6 of the application as filed, where it is indicated that hydrogel crosslinked polymers obtained in the course of the first drying step should not have a water content higher than 25 wt.%, as it would result in a difficult disintegration of the polymer particles.

6. The above indicated interpretation of the term "half-dried" is also consistent with the use, on page 5, line 10 of the application as filed, of the expression "in the midway of drying" which describes the point in time in the process of drying when aggregates are formed. It is also in line with the use of that term in the various examples and comparative examples of the application as filed for describing different situations, corresponding to various proportions of water removed after the first drying step, which are all much higher than 50%.
  
7. It follows from the above that the term "half-dried product" as used in the examples of the application as filed merely expresses the general idea that the first drying step leads to a product that is semi-, partly, or not fully dried, or, in other words, still contains some noteworthy amount of water, and that it is not associated with any specific water content of the polymer.

8. The Respondents' argument that comparative example 1 of the patent in suit would now fall within the ambit of claim 1, as the term half-dried also allows content of water after the first drying step as high as 20,9 wt%, fails to convince. In view of the use of the same expression "half-dried product" in the examples and comparative example 1 of the application as filed, and the indication in the various passages on pages 5 and 6 cited above of the amounts of water usually present in the hydrogel crosslinked polymer before and after the first drying step, it is already apparent that the very use of the expression "half-dried" in the application as filed is not decisive in determining whether an embodiment falls within the ambit of original claim 1 or not. The decisive point is the formation of aggregates that may be disintegrated, which information was present both in the original claims as well as in the claims as granted, and which is therefore not open to clarity objections as raised by the Respondents. The method described in comparative example 1 does not qualify as an embodiment of either claim 1 as filed or claim 1 as granted by virtue of the fact that the "half-dried" polymer was not disintegrated and dried according to steps ii) and iii) of present claim 1.
  
9. It follows from the above that the result of the introduction of the term "half-dried" in claim 1 as originally filed is not a claim 1 as granted that comprises technical information not directly and unambiguously derivable from the application as filed. It does not change the meaning of the claim and it does not allow scope for any interpretation extending beyond the teaching of the application as filed. Decisions T 792/94 and T 1067/02 cited by the Respondents, which concern a situation where the meaning of the claim

could be held to have been changed by insertion of an ambiguous feature, are therefore of no relevance for the present case.

10. Hence, the Board comes to the conclusion that the subject-matter of claim 1 as granted, i.e. claim 1 of the present main request, does not extend beyond the content of the application as filed.
11. Claims 2 to 6 have not been objected to under Article 100(c) EPC and the Board sees no reason to raise any such objection.
12. Under these circumstances, the ground of opposition under Article 100(c) EPC does not prejudice the maintenance of the patent in the form according to the main request (claims 1 to 6 filed with letter dated 12 June 2013).

*Remittal*

13. Since the opposition division has not ruled on novelty and inventive step, the Board considers it appropriate to exercise its power under Article 111(1) EPC and to remit the case to the opposition division for deciding on the remaining issues.

## 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 main request (claims 1 to 6) filed with letter of 12 June 2013.

The Registrar:

The Chairman:



E. Goergmaier

B. ter Laan

Decision electronically authenticated