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Datasheet for the decision of 10 April 2018

Case Number: T 1388/15 - 3.3.10

Application Number: 08763074.5

Publication Number: 2147076

IPC: C09K8/12, C09K8/512, C09K8/575, C09K8/60, C09K8/68

Language of the proceedings: EN

Title of invention:
WELL TREATMENT WITH COMPLEXED METAL CROSSLINKERS

Applicant:
Services Pétroliers Schlumberger
Schlumberger Holdings Limited
Schlumberger Technology B.V.
PRAD Research And Development Limited

Headword:

Relevant legal provisions:
EPC Art. 84

Keyword:
Claims - clarity (no)

Decisions cited:
T 0337/95

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1388/15 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 10 April 2018

Appellant: (Applicant 1)	Services Pétroliers Schlumberger 42, rue Saint Dominique 75007 Paris (FR)
Appellant: (Applicant 2)	Schlumberger Holdings Limited P.O. Box 71 Craigmuir Chambers Road Town, Tortola (VG)
Appellant: (Applicant 3)	Schlumberger Technology B.V. Parkstraat 83-89 2514 JG The Hague (NL)
Appellant: (Applicant 4)	PRAD Research And Development Limited P.O. Box 71 Craigmuir Chambers Road Town, Tortola (VG)
Representative:	Schlumberger Cambridge Research Limited High Cross Madingley Road Cambridge CB3 0EL (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 6 February 2015 refusing European patent application No. 08763074.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairwoman	R. Pérez Carlón
Members:	R. Pérez Carlón
	T. Bokor
	J. Schmid

Summary of Facts and Submissions

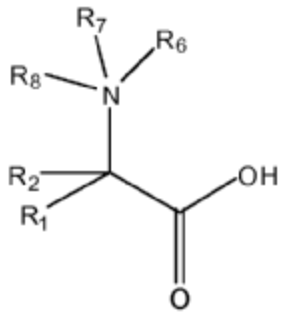
I. The appellants lodged an appeal against the decision of the examining division to refuse European patent application No. 08 763 074.5.

II. The examining division concluded that the main request before it contained added subject-matter, and that the method of claim 1 of the first auxiliary request was not inventive.

III. With the statement setting out the grounds of appeal, the appellants filed a main request, which corresponds to the first auxiliary request before the examining division, and a first auxiliary request. Claim 1 of the main request reads as follows:

"A method of treating a subterranean formation penetrated by a well bore comprising the steps of:

a. mixing into an aqueous mixture a crosslinkable, hydratable polymer in an amount which is at least 1.2g/litre but less than 7.2g/litre of the liquid phase of the aqueous mixture and a delayed crosslinking agent, to obtain an aqueous mixture that forms a persistent gel at a crosslinking condition comprising an onset temperature of at least 40°C and a pH sensitivity slope of 30°C per pH unit or less for at least one pH unit range within a pH range from 8.5 to 12.5,
wherein the crosslinking agent comprises a complex comprising zirconium and a first ligand which is an acid or a salt thereof where the acid is selected from the group consisting of beta-alanine, phosphonoacetic acid and an α-amino acid of 2 to 40 carbon atoms and of the formula:



wherein R_1 and R_2 are independently selected from hydrogen and hydrocarbyl optionally containing a heteroatom;
R_6 is hydrogen or a lone electron pair; and
R_7 and R_8 are both hydrogen;
and wherein the concentration of zirconium is between 10 and 500 ppm by weight of the liquid phase of the aqueous mixture and the molar ratio of the zirconium to the first ligand is from 1:1 to 1:6;

b. injecting the aqueous mixture into the well bore; and

c. gelling the aqueous mixture at the-crosslinking [sic] condition."

IV. Claim 1 of the auxiliary request contains all the features of claim 1 of the main request, adding that

"*the method further comprising adjusting the pH of the aqueous mixture by introducing a pH adjusting compound to give a pH which is within the pH range from 8.5 to 12.5 and so control an onset temperature at which the gelling occurs in step (c).*"

V. The board informed the appellants with a communication dated 15 September 2017 *inter alia* that claim 1 of the main and auxiliary request would appear to lack clarity.

VI. In response, the appellants merely stated that it would not be attending the oral proceedings, which took place on 10 April 2018.

VII. The final requests of the appellants were that the decision under appeal be set aside and that a patent be granted on the basis of claims 1-8 of the main request, or alternatively on the basis of claims 1-7 of the auxiliary request, both filed with the statement of the grounds of appeal dated 4 June 2015.

VIII. At the end of the oral proceedings, the decision was announced.

Reasons for the Decision

1. The appeal is admissible.

2. In a communication dated 15 September 2017 in preparation for oral proceedings, the board informed the appellants that it tended to consider the feature "forms a persistent gel at a crosslinking condition comprising an onset temperature of at least 40°C and a pH sensitivity slope of 30°C per pH unit or less for at least one pH unit range within a pH range from 8.5 to 12.5" not clear, contrary to the requirements of Article 84 EPC.

3. The appellants have not submitted any argument with respect to this objection, which the board still finds

convincing.

4. Article 84 in conjunction with Rule 43(1) EPC stipulates that the claims must be clear and must define the matter for which protection is sought in terms of the technical features of the invention. These requirements serve the purpose of ensuring that the public is not left in any doubt as to which subject-matter is covered by a particular claim and which is not (see T 337/95, OJ EPO 1996, 628, Reasons 2.2 to 2.5).

5. Paragraph [0064] of the application specifies that the sensitivity slope required after step a. of claim 1 needs to be measured "without borate or other low temperature crosslinker". The sensitivity slope required by claim 1 is thus dependent on the presence of borate.

Claim 1 does not exclude the presence of borate, which is required as crosslinker by the method of dependent claim 8. In such a case, it is not clear whether the sensitivity slope required by claim 1 relates to the value obtained in the absence or in the presence of borate. For this reason alone, claim 1 lacks clarity, contrary to the requirements of Article 84 EPC.

6. This feature can be found, in the same context, in claim 1 of the first auxiliary request. It is thus concluded that the method of claim 1 of all the requests on file is not clear, with the consequence that none of them is allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairwoman:

C. Rodríguez Rodríguez R. Pérez Carlón

Decision electronically authenticated