Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 15 November 2019

Case Number: T 1270/16 - 3.3.05

Application Number: 09712701.3

Publication Number: 2247369

IPC: B01D53/86, B01J21/06, B01J23/28, B01J23/40, B01J23/42, B01J23/50, B01J23/52, B01J23/72, B01J23/755, B01J35/10, B01J37/00, B01J37/28, C01G23/047, C01G23/053

Language of the proceedings: EN

Title of invention:

TITANIUM DIOXIDE CATALYST STRUCTURE FOR PROCESSES UP TO 1000 °C AND THE MANUFACTURING THEREOF

Applicant:

Advanced Materials- JTJ S.r.o.

Headword:

Titanium dioxide/Advanced Materials

Relevant legal provisions:

EPC R. 43(2)

Keyword:
Exception according to Rule 43(2)(c) EPC (yes)

Decisions cited:

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 1270/16 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 15 November 2019

Appellant: (Applicant)	Advanced Materials- JTJ S.r.o. Kamenné Zehrovice 23 273 01 Kamenné Zehrovice (CZ)
Representative:	Diehl & Partner GbR Patentanwälte Erika-Mann-Strasse 9 80636 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 23 February 2016 refusing European patent application No. 09712701.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	E. Bendl
Members:	S. Besselmann
	O. Loizou

Summary of Facts and Submissions

I. This appeal lies from the decision of the examining division refusing European patent application No. 09712701.3.

II. In its decision, based on the claims received on 4 March 2014 by letter dated 26 February 2014, the examining division found that claims 1 and 3 had been drafted as separate independent claims in the same category, namely as a TiO_2 catalyst structure, which was considered not to comply with the requirements of Rule 43(2) EPC.

III. The independent claims concerned read as follows:

Claim 1:
"The TiO_2 catalyst structure for the catalytic processes at the temperatures up to 800°C in a form of powder consisting of TiO_2 nano-particles in the anatase crystal form doped with phosphorus, wherein the content of phosphorus is 0,05 to 5 wt% on the TiO_2 basis, and the nano-particles in the anatase crystal form are organized into the circular planar aggregates with the specific surface area from 40 to 120 m^2/g, wherein the TiO_2 catalyst structure consisting of TiO_2 nano-particles is made by drying and calcination of the intermediate product in the temperature range from 350 to 900°C for 1 to 24 hours, wherein the intermediate product is made by addition a phosphorus compound corresponding to 0,05 to 5 wt % of a phosphorus on the TiO_2 basis to the titanium hydrate paste prepared by hydrolysis of titanium oxysulphate."

Claim 3:
"The TiO_2 catalyst structure for the catalytic processes at the temperatures up to 1000°C in a form of powder consisting of TiO_2 nano-particles in the anatase crystal form doped with phosphorus, wherein the content of phosphorus is 0,05 to 5 wt% on the TiO_2 basis, and the nano-particles in the anatase crystal form with the morphology of aggregated compact particles with the specific surface area from 20 to 40 m^2/g, wherein the TiO_2 catalyst structure consisting of TiO_2 nano-particles is made by drying and calcination of the intermediate product in the temperature range from 500 to 1000°C for 1 to 24 hours, wherein the intermediate product is made by addition a phosphorus compound corresponding to 0.05 to 5 wt % of a phosphorus on the TiO_2 basis to the titanium hydrate paste prepared by hydrolysis of titanium oxysulphate."

Claims 2 and 4 to 7 describe preferred embodiments of the catalyst structures according to claims 1 and 3, claim 8 relates to a method for manufacturing these structures and claims 9 to 12 relate to uses thereof.

IV. The applicant (appellant) appealed this decision.

With its statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request as filed on 4 March 2014 or the auxiliary request filed with the statement of grounds of appeal. Further submissions were made on 8 May 2019 and the appellant filed a main request and two further auxiliary requests, to be treated as first and second auxiliary requests, the previously filed auxiliary request becoming the third auxiliary request.

Contradictions between the sets of claims and the corresponding text of these further submissions of 8 May 2019 raised doubts in the board as to which version of the main request was pending. The appellant, asked by the board to clarify this, then on 31 July 2019 filed a further amended version of the main request. Finally, the appellant with its letter dated 16 October 2019 repealed the amendments made previously to the main request and declared that its main request was the same set of claims on which the impugned decision was based.

V. The appellant's arguments may be summarised as follows:

Exception (c) of Rule 43(2) EPC applies, because the products of claims 1 and 3 solve the same technical problem of forming a thermally stable catalyst structure. The claims define alternatives as is apparent from the non-overlapping surface area ranges and different morphologies.

The TiO_2 catalyst structures of claims 1 and 3 are produced by essentially the same process, only differing in the calcining step. The TiO_2 catalyst structure of claim 1 may be transformed into the TiO_2 catalyst structure of claim 3.

It is not appropriate to cover these alternatives in a single claim. When a single independent claim was filed during examination proceedings, an objection under Article 123(2) EPC was raised.

VI. The appellant requested that the decision under appeal be set aside and that the case be remitted to the examining division to continue the examination

proceedings on the basis of the main request (claims 1-12 of 4 March 2014, filed with letter dated 26 February 2014), or alternatively on the basis of the first or second auxiliary request (both filed on 8 May 2019), or the third auxiliary request (filed with the statement of grounds of appeal as "auxiliary request").

Reasons for the Decision

Main request

1. Independent claims in the same category

1.1 Pursuant to Rule 43(2) EPC, and without prejudice to Article 82 EPC, a European patent application may contain more than one independent claim in the same category only if it falls within one of the exceptions (a)-(c) of said Rule.

1.2 In the present case it is undisputed that claims 1 and 3 constitute independent claims within the same category. They both relate to a "TiO_2 catalyst structure", and thus a product.

1.3 According to the appellant, the exception of Rule 43(2)(c) EPC applies, and the claims define alternative solutions to the technical problem of providing a thermally stable catalyst structure.

1.4 The board agrees with the reasoning put forward by the appellant for the following reasons.

1.4.1 The present application is in the general field of providing TiO_2 catalyst structures for high temperature processes (page 1, first sentence). Prior art TiO_2 anatase crystal structures are said to have the drawback of poor heat resistance accompanied by fast loss of specific surface area during heat exposure and finally crystal phase transformation into rutile (page 2, first paragraph). The application aims at eliminating these disadvantages (page 2, second paragraph).

1.4.2 The application more specifically attempts to improve heat resistance and to stabilise the crystalline phase of anatase by adding phosphorus to the paste of titanium hydrate made from the titanium oxysulphate precursor (page 5, first three paragraphs). It is readily seen that claims 1 and 3 both contain features which are intended to reflect this.

At the same time, as indicated by the appellant, claims 1 and 3 relate to TiO_2 catalyst structures differing at least in the surface area ranges, which in consequence necessitate different calcination conditions. They consequently define alternatives in the sense of different subject-matter.

1.5 In summary, the application leads to the understanding that claims 1 and 3 are indeed intended to define alternative solutions to a particular problem.

1.6 The board also agrees that in the present case it would not be appropriate to cover these alternatives by a single claim, because in the present case this might be objectionable under Article 123(2) EPC or affect clarity and conciseness of the claims.

Auxiliary requests

In view of the board's conclusion regarding the main request, there is no need to address the auxiliary requests.

Remittal of the case

The appealed decision was based solely on an objection under Rule 43(2) EPC in view of claims 1 and 3. In order to give the party the opportunity to present its case to the departments of first and second instance, the board exercises its discretion according to Article 111(1) EPC and remits the case to the examining division for continuation of the examination proceedings, as requested by the appellant.

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.

The Registrar: The Chairman:

C. Vodz E. Bendl

Decision electronically authenticated