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D E C I S I O N
of 8 November 2001

Case Number: T 0518/99 - 3.3.3

Application Number: 88304301.0

Publication Number: 0294942

IPC: C08F 4/60

Language of the proceedings: EN

Title of invention:

Solid catalyst for polymerizing an olefin

Patentee:

MITSUI CHEMICALS, INC.

Opponent:

Basell Polypropylen GmbH

Headword:

-

Relevant legal provisions:

EPC Art. 100(c), 123(2)

Keyword:

"Amendments - added subject-matter (yes)"

"Undisclosed feature - technically meaningful (yes)"

Decisions cited:

G 0001/93, G 0002/98, T 0187/91

Catchword:

-



Case Number: T 0518/99 - 3.3.3

D E C I S I O N
of the Technical Board of Appeal 3.3.3
of 8 November 2001

Appellant: MITSUI CHEMICALS, INC.
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Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office posted 8 March 1999
concerning maintenance of European patent
No. 0 294 942 in amended form.

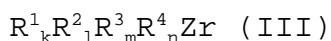
Composition of the Board:

Chairman: R. Young
Members: P. Kitzmantel
U. J. Tronser

Summary of Facts and Submissions

I. Mention of the grant of European patent No. 0 294 942 in respect of European patent application No. 88 304 301.0 in the name of Mitsui Petrochemical Industries, Ltd. (now Mitsui Chemicals, Inc.) filed on 12 May 1988 claiming a JP priority of 13 May 1987, was announced on 13 July 1994 on the basis of eleven claims, independent Claims 1 and 11 reading as follows:

"1. A solid catalyst for polymerising an olefin or copolymerising olefins prepared from an organoaluminum compound which is a trialkylaluminium comprising a branched alkyl radical, dialkylaluminium hydride comprising a branched alkyl radical or alkylaluminium alkoxide comprising a branched alkyl radical or is a tricycloalkylaluminium or triarylaluminium compound, a fine particle carrier, an aluminoxane and a transition metal compound which is a zirconium compound of the formula (III),



wherein R^1 is a cyclopentadienyl radical optionally substituted with at least one C_{1-4} hydrocarbon, R^2 , R^3 and R^4 are independently cyclopentadienyl optionally substituted with at least one C_{1-4} hydrocarbon, or are aryl, alkyl, cycloalkyl, aralkyl, halogen, hydrogen, OR^a , SR^b , NR^c_2 or PR^d_2 , wherein R^a , R^b , R^c and R^d are independently alkyl, cycloalkyl, aryl, aralkyl or silyl, with the proviso that R^c and R^d may together form a ring; k is at least 1; and the sum of k , l , m and n equals 4; and

wherein R^1 and R^2 may be bonded by an intervening

ethylene group when R² is an optionally substituted cyclopentadienyl radical;

or a titanium compound selected from
bis(cyclopentadienyl)titanium monochloride monohydride,
bis(cyclopentadienyl)methyltitanium hydride,
bis(cyclopentadienyl)phenyltitanium chloride,
bis(cyclopentadienyl)benzyltitanium chloride,
bis(cyclopentadienyl)titanium dichloride,
bis(cyclopentadienyl)titanium dibenzyl,
bis(cyclopentadienyl)ethoxytitanium chloride,
bis(cyclopentadienyl)butoxytitanium chloride,
bis(cyclopentadienyl)methyltitanium ethoxide,
bis(cyclopentadienyl)phenoxytitanium chloride,
bis(cyclopentadienyl)trimethylsiloxytitanium chloride,
bis(cyclopentadienyl)thiophenyltitanium chloride,
bis(cyclopentadienyl)bis(dimethylamide)titanium,
bis(cyclopentadienyl)diethoxytitanium,
ethylenebis(indenyl)titanium dichloride, and
ethylenebis(4,5,6,7-tetrahydro-1-indenyl)titanium
dichloride;

or a hafnium compound selected from
bis(cyclopentadienyl)hafnium monochloride monohydride,
bis(cyclopentadienyl)ethylhafnium hydride,
bis(cyclopentadienyl)phenylhafnium chloride,
bis(cyclopentadienyl)hafnium dichloride,
bis(cyclopentadienyl)hafnium dibenzyl,
bis(cyclopentadienyl)ethoxyhafnium chloride,
bis(cyclopentadienyl)butoxyhafnium chloride,
bis(cyclopentadienyl)methylhafnium ethoxide,
bis(cyclopentadienyl)phenoxyhafnium chloride,
bis(cyclopentadienyl)thiophenylhafnium chloride,
bis(cyclopentadienyl)bis(diethylamide)hafnium,
ethylenebis(indenyl)hafnium dichloride, and

ethylenebis(4,5,6,7-tetrahydro-1-indenyl)hafnium dichloride; and

an olefin polymer produced in a preliminary polymerisation."

"11. Use of a solid catalyst as claimed in any one of claims 1 to 10 in the polymerisation of at least one olefin."

Claims 2 to 10 were dependent on Claim 1.

- II. Notice of Opposition requesting revocation of the patent in its entirety on the grounds of Article 100(a) and (c) EPC was filed by Hoechst AG (later transferred to Targor GmbH, now renamed to Basell Polypropylen GmbH) on 13 April 1995.

The opposition was i.a. based on documents

D1: EP-B-0 287 666,

D2: EP-A-0 279 863,

D3: EP-A-0 206 794, and

D4: DE-C-2 714 743.

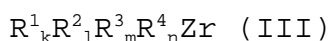
By its interlocutory decision orally announced on 11 February 1999 and issued in writing on 8 March 1999, the Opposition Division maintained the patent in the form as amended according to the then second auxiliary request comprising nine claims, Claim 1 reading as follows:

"1. A process for preparing a solid catalyst for polymerising an olefin or co-polymerising olefins, the process comprising

pretreating a fine particle carrier with an organoaluminum compound and an aluminoxane, and conducting preliminary olefin polymerisation in the presence of a transition metal compound and the pretreated fine particle carrier,

wherein the organoaluminum compound is a trialkylaluminum comprising a branched alkyl radical, a dialkylaluminum hydride comprising a branched alkyl radical or an alky[l]aluminum alkoxide comprising a branched alkyl radical, a tricycloalkylaluminum or a triarylaluminum compound, and

the transition metal compound is a zirconium compound of formula (III),



wherein R^1 is an optionally substituted cyclopentadienyl radical selected from cyclopentadienyl, methylcyclopentadienyl, ethylcyclopentadienyl, dimethylcyclopentadienyl, pentamethylcyclopentadienyl, indenyl and tetrahydroindenyl,

R^2 , R^3 and R^4 are independently optionally substituted cyclopentadienyl radical selected from cyclopentadienyl, methylcyclopentadienyl, ethylcyclopentadienyl, dimethylcyclopentadienyl, pentamethylcyclopentadienyl, indenyl and tetrahydroindenyl, aryl, alkyl, cycloalkyl, aralkyl, halogen, hydrogen, OR^a , SR^b , NR^c_2 or PR^d_2 , wherein R^a , R^b ,

R^c and R^d are independently alkyl, cycloalkyl, aryl, aralkyl or silyl, with the proviso that R^c and R^d may together form a ring; k is at least 1; and the sum of k , l , m and n equals 4; and

wherein R^1 and R^2 may be bonded by an intervening ethylene group when R^2 is an optionally substituted cyclopentadienyl radical;

or a titanium compound selected from ... [same formulae as according to granted Claim 1];

or a hafnium compound selected from ... [same formulae as according to granted Claim 1 up to and including: "ethylenebis(4,5,6,7-tetrahydro-1-indenyl)hafnium dichloride"]".

This second auxiliary request furthermore comprises eight process claims dependent on Claim 1.

III. It was held in that decision that the second auxiliary request complied with the requirements of Article 123(2) and (3) EPC and that its subject-matter was novel over documents D1 to D4 and inventive over documents D3 and D4.

The Opposition Division refused the pending main and first auxiliary requests, because, in its view, the terms "substituted with at least one C_{1-4} hydrocarbon" in their Claims 1 went beyond the content of the application as originally filed.

The Opposition Division furthermore refused to consider (i) document D5 (Römpf Chemie Lexikon, Georg Thieme Verlag, Stuttgart 1995, Volume 1.A-CI, pages 102

and 115), (ii) an "amended first auxiliary request", and (iii) an objection under Article 84 EPC.

IV. On 6 May 1999 the Patentee (Appellant) lodged an appeal against the interlocutory decision of the Opposition Division and paid the appeal fee on the same day. The Statement of Grounds of Appeal comprising copies of the previous main request and of the previous "amended first auxiliary request" was submitted on 16 July 1999.

(i) Claim 1 of said main request, which is also the main request in these appeal proceedings, differs from Claim 1 of the second auxiliary request, which had been allowed by the decision under appeal, only by the broader definition of the optional hydrocarbon substitution of the substituents R^1 , R^2 , R^3 and R^4 which reads as follows: "wherein R^1 is a cyclopentadienyl radical optionally substituted with at least one C_{1-4} hydrocarbon, R^2 , R^3 and R^4 are independently cyclopentadienyl optionally substituted with at least one C_{1-4} hydrocarbon, or ...".

(ii) Claim 1 of said "amended first auxiliary request", which is the first auxiliary request in these appeal proceedings, differs from Claim 1 of the second auxiliary request, which had been allowed by the decision under appeal, only by the broader definition of the possible hydrocarbon substitution of the substituents R^1 , R^2 , R^3 and R^4 which reads as follows: "wherein R^1 is an indenyl, tetrahydroindenyl or cyclopentadienyl radical or a methyl- or ethyl-substituted cyclopentadienyl radical, R^2 , R^3 and R^4 are independently an indenyl,

tetrahydroindenyl or cyclopentadienyl radical or a methyl- or ethyl-substituted cyclopentadienyl radical".

V. In an annex to the summons to attend oral proceedings dated 10 May 2001 the Rapporteur issued preliminary comments.

VI. Oral proceedings were held on 8 November 2001.

VII. The written and oral arguments of the Appellant may be summarized as follows:

(i) In accordance with the case law of the Boards of Appeal as set out e.g. in T 187/91 (OJ EPO 1994, 572), Claim 1 of the main request met the requirements of Article 123(2) EPC because the possibility that the substituents R¹, R², R³ and R⁴ be "a cyclopentadienyl radical optionally substituted with at least one C₁₋₄ hydrocarbon" was clearly implied and unambiguously derivable from the original application.

This opinion resulted from the disclosure therein

(i-1) on page 11, lines 20 to 23, according to which these substituents may be "substituted or unsubstituted cycloalkadienyl",

(i-2) on page 11, lines 24 to 27 of suitable hydrocarbons,

(i-3) on page 11, line 32 to page 12, line 2 of the exemplified cycloalkadienyl radicals

"cyclopentadienyl, methylcyclopentadienyl, ethylcyclopentadienyl, dimethylcyclopentadienyl, pentamethylcyclopentadienyl, indenyl, tetrahydroindenyl, etc" (in the Appellant's view, the term "etc" was meant to cover C₁₋₄ hydrocarbon substituted cyclopentadienyl radicals which are not exemplified),

(i-4) on page 12, lines 2 to 4 of the alkyl radicals "methyl, ethyl, propyl, isopropyl, butyl, hexyl, octyl, 2-ethylhexyl, decyl oleil, etc", and

(i-5) on page 10, line 1 of the reference to a C₁₋₄ hydrocarbon radical.

(ii) But even if the term "a cyclopentadienyl radical optionally substituted with at least one C₁₋₄ hydrocarbon" had not been originally disclosed, the main request was nevertheless allowable in the light of G 1/93 (OJ EPO 1994, 541), because this term, which was a feature of granted Claim 1 and could not be removed without extension of the protection conferred, was without any technical significance for the claimed invention and was therefore not objectionable under Article 123(2) EPC.

(iii) In the Appellant's view, the statements of the original application cited in point (i) supra with respect to the main request provided also support for the definition of the substituents R¹, R², R³ and R⁴ in Claim 1 of the first auxiliary request.

(iv) The non-admittance into the opposition

proceedings of the present first auxiliary request (then "amended first auxiliary request") was incorrect, because the late filed amendments concerned only editorial corrections.

- (v) In the Appellant's view, the subject-matters of the main and first auxiliary request were also novel and inventive over the cited prior art.

VIII. The Respondent (Opponent) argued as follows:

- (i) The only relevant disclosure in the original application on page 11, line 32 to page 12, line 2 could not provide a basis for the definition in Claim 1 of the main request that R^1 , R^2 , R^3 and R^4 were "cyclopentadienyl optionally substituted with at least one C_{1-4} hydrocarbon".
- (ii) This conclusion applied also to the disclosure on page 11, line 31 to page 12, line 2 of the radicals methylcyclopentadienyl, indenyl and tetrahydroindenyl, because the latter two radicals provided no support for a C_4 -hydrocarbon substituted cyclopentadienyl radical.
- (iii) Similarly, the disclosure of C_{1-4} alkyl or alkenyl substituents on different chemical entities could not serve as a basis for the disputed definition of the substituents R^1 , R^2 , R^3 and R^4 .

- (iv) Nor could the main request be allowed by reference to the teaching of G 1/93, because the originally unsupported term "cyclopentadienyl optionally substituted with at least one C₁₋₄ hydrocarbon" was clearly of technical significance for the functioning of the catalyst prepared according to Claim 1.
- (v) Claim 1 of the first auxiliary request also lacked support in the original application, *inter alia* because the disclosure "ethylcyclopentadienyl radical" would not comprise a disclosure of di-, tri-, tetra- and pentaethylsubstituted cyclopentadienyl radicals.
- (vi) The Opposition Division had been mistaken in its rejection of the Opponent's objections under Article 84 EPC, because this objection related to an amended Claim 1 which must be examined for compliance with this Article *ex officio*.
- (vii) Moreover, this objection still applied, because according to page 9, lines 26 to 27 (original application page 19, lines 16 to 18) Claim 1 failed to comprise the essential feature that the preparation of the catalyst is to be carried out with the fine particle carriers suspended in an inert solvent.

IX. The Appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request or the first auxiliary request.

The Respondent requested that the appeal be dismissed,

or, auxiliarily, if the claims of the main or first auxiliary request should be held admissible under Article 123(2) EPC, that the case should be remitted to the Opposition Division for further examination of the opposition with respect to the requirements of Articles 54, 56 and 84 EPC.

Reasons for the Decision

1. The appeal is admissible.

2. *Procedural*

Whether or not the conduct of the Opposition Division, namely its non-admittance of the Patentee's "amended first auxiliary request" supra) and/or its refusal to consider a late Article 84 EPC objection of the Opponent (cf. Sections III, VII (iv) and VIII (vi)), amounts to a procedural violation, has no bearing on this appeal, because on the one hand the Appellant, who was adversely affected by the "non-admittance", is not successful in this appeal, and on the other hand the Respondent, who was disadvantaged by the "refusal", did not appeal (Article 113(1) EPC, Rule 67 EPC).

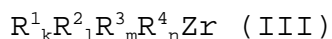
3. *Articles 100(c) and 123(2) EPC, Claim 1 of the main request*

3.1 The definition of the substituents R¹, R², R³ and R⁴ of the zirconium compound (III), namely "wherein R¹ is a cyclopentadienyl radical optionally substituted with at least one C₁₋₄ hydrocarbon, R², R³ and R⁴ are independently cyclopentadienyl optionally substituted with at least one C₁₋₄ hydrocarbon, or ..." extends

beyond the content of the application as filed, because the relevant statements therein do not support the substituents being C₁₋₄ hydrocarbon radicals.

3.2 The relevant disclosure in the application as filed is as follows:

3.2.1 Page 11, lines 15 to 20: "The zirconium compound ... represented by the formula (III):



wherein R¹ is an unsubstituted or substituted cycloalkadienyl radical".

3.2.2 Page 11, line 31 to page 12, line 2: "Examples of the cycloalkadienyl radicals include cyclopentadienyl, methylcyclopentadienyl, ethylcyclopentadienyl, dimethylcyclopentadienyl, pentamethylcyclopentadienyl, indenyl and tetrahydroindenyl, etc."

3.3 From the multitude of radicals R¹ which are comprised by the definition "C₁₋₄ hydrocarbon substituted cyclopentadienyl" this disclosure encompasses only a very limited number of specific embodiments, which do not justify the formulation of a C₁₋₄ sub-group of hydrocarbon substituents.

Nor can the term "etc" after the enumeration of some cyclopentadienyl radicals be interpreted to disclose the missing embodiments, because the skilled person has no reason to assume that this term was meant to cover C₁₋₄ hydrocarbon substituents which are not concretely exemplified.

Moreover, there is not even a generic disclosure of a C₄ hydrocarbon substituent (ie of the upper limit of the claimed range), because the only relevant disclosure is that of the (saturated or unsaturated) C₄-bridge established by the benzene or cyclohexane ring atoms which are not shared by the cyclopentadiene ring of the condensed indenyl or tetrahydroindenyl system.

- 3.4 Nor can the following further statements in the application as filed, which have been cited by the Appellant, contribute the missing information:
- 3.4.1 The statement on page 11, lines 24 to 27 that "R₂, R₃ and R₄ are independently selected from the group consisting of alkyl ..." and the corresponding list of the alkyl groups "methyl, ethyl, propyl, isopropyl, butyl, hexyl, octyl, 2-ethylhexyl, decyl oleil, etc" on page 12, lines 2 to 4 are unrelated to the nature of the possible substituents of the cyclopentadienyl radicals.
- 3.4.2 Even less relevant to the disclosure of hydrocarbon substituents of the cyclopentadienyl radicals is the reference on page 9, last paragraph to page 10 first paragraph to the nature of the substituents "R" of the aluminoxane catalyst component, which *inter alia* may be C₁₋₄ hydrocarbon radicals.
- 3.5 The recognition of the pointer in the application underlying T 187/91 (cf. Reasons) to the possible use of "more or less light sources" as support for the amendment of a feature for the use of "a plurality of pump light sources" (ie to two or more light sources) to a feature for the use of "one or more light sources" can also not support the Appellant's case, because the

present application documents do not comprise a comparable concrete pointer. Rather the relevant disclosure of the application as filed is limited to a few examples and lacks any information for their belonging to a specific sub-group of cyclopentadienyl radicals which is substituted with at least one C₁₋₄ hydrocarbon.

3.6 The Appellant's further argument that the compliance of the disputed feature with the requirements of Article 123(2) EPC should be accepted because it was not put into question originally, either by the first examiner of the Examining and Opposition Division or by the representative of the Appellant/Patentee, is clearly irrelevant because this issue is about facts not about subjective personal opinions.

3.7 Therefore, the statement in Claim 1 "R¹ is a cyclopentadienyl radical optionally substituted with at least one C₁₋₄ hydrocarbon" lacks support in the application as filed and, thus, contravenes Article 123(2) EPC.

4. *Admissibility of Claim 1 of the main request in spite of its comprising a feature which was not disclosed in the application as filed (G 1/93)*

4.1 This issue was brought up by the Appellant not earlier than at the oral proceedings. Since the late submission was not contested by the Respondent, the Board admitted its discussion.

- 4.2 G 1/93 decided (cf. order, point 1) that a European patent that contains subject-matter which extends beyond the content of the application as filed and which also limits the scope of its protection cannot be maintained in opposition proceedings unamended and that such a patent cannot be amended by deleting such limiting subject-matter from the claims, because such amendment, contrary to Article 123(3) EPC, would extend the protection conferred.
- 4.3 However, according to point 2 of the order of G 1/93, the ground of opposition under Article 100(c) EPC (which corresponds to Article 123(2) EPC) does not prejudice the maintenance of such a patent if such an added feature does not provide a technical contribution to the subject-matter of the claimed invention and merely limits the protection conferred by the patent as granted by excluding protection for part of the subject-matter as covered by the application as filed.
- 4.4 The Appellant argued that the main request would meet the requirements set out in the previous paragraph, because the definition of the substituents of the cyclopentadienyl radicals which is reflected in the statement in Claim 1 "wherein R¹ is a cyclopentadienyl radical optionally substituted with at least one C₁₋₄ hydrocarbon, R², R³ and R⁴ are independently cyclopentadienyl optionally substituted with at least one C₁₋₄ hydrocarbon, or ..." was without technical significance for the claimed invention. Therefore, in the Appellant's view, the main request was admissible, irrespective of whether or not the afore-mentioned statement went beyond the content of the application as filed.

4.5 This opinion of the Appellant cannot be accepted for the following reasons:

4.5.1 Firstly, G 1/93 does not cover the present situation, where the disputed feature is part of an **amended** claim.

4.5.2 Even if the scope of G 1/93 would be considered to cover the present situation, because the disputed feature was not concerned by the amendment, the Board cannot agree with the Appellant's conclusion:

(i) The technical significance of a feature in a claim is not governed by its relevance for the assessment of novelty and inventive step vis-à-vis the available prior art, as was argued by the Appellant, but by its contribution, to be assessed by the skilled person in the light of the original disclosure, to the technical definition of the claimed subject-matter. Otherwise, the decision about the technical significance of a feature would be subject to different interpretations dependent on the respectively available prior art.

(ii) Similarly unsuitable for the determination of the technical significance of a feature is its relevance for the function and effect of the "invention". The Appellant argued that the disputed feature was technically meaningless, because the chain length of the hydrocarbon substituents of the cyclopentadienyl radicals was unrelated to the essence of the claimed invention, which was about the preparation of the catalyst carrier.

- (ii-1) This argument cannot be accepted, because the function and effect of an invention may be very complex, especially in chemistry, and particularly in the field of catalysts, and so are the interdependencies between features and effects; it is not a rare case that during the prosecution of a patent application and in any subsequent proceedings the technical focus of an invention shifts. This criterion is therefore not appropriate to distinguish between technically meaningful and technically meaningless features of a claim.

- (ii-2) Additionally, it has to be borne in mind that an assessment of this kind could not be made without adequate evidence, which is anyway missing in the present case, the burden of proof being on the Appellant.

- (iii) The inappropriateness of the afore-mentioned arguments of the Appellant are emphasized in G 2/98 which dealt with the requirements for claiming priority of the "same invention" as referred to in Article 87(1) EPC.

It was held in Section 8.3 of G 2/98 that it was problematic to try to distinguish between technical features which are related to the function and effect of an invention and technical features which are not, because there were no clear and objective criteria for making such a distinction, which could thus give rise to arbitrariness.

This Section of G 2/98 goes on to state that such an approach "depends very much on the actual assessment of

the facts and circumstances of the case by each individual deciding body" and that "[d]ifferent deciding bodies may thus arrive at different results when assessing these facts and circumstances".

Moreover, "it has to be borne in mind" according to the cited Section "that the assessment by these different deciding bodies of whether or not certain technical features are related to the function and effect of the claimed invention may completely change in the course of the proceedings", as is "the case, in particular, if new prior art is to be considered ...".

The final conclusion in the cited Section that "[s]uch dependence [of the acknowledgement of the right of priority] would, however, be at variance with the requirement of legal certainty" applies *mutatis mutandis* also to the issue of Article 123(2) EPC which is at stake here.

- 4.6 In the Board's judgment, the statement in Claim 1 "wherein R¹ is a cyclopentadienyl radical optionally substituted with at least one C₁₋₄ hydrocarbon, R², R³ and R⁴ are independently cyclopentadienyl optionally substituted with at least one C₁₋₄ hydrocarbon, or ..." is clearly of technical significance for the claimed subject-matter, because this feature contributes to the definition of the steric and electronic configuration of the zirconium catalyst (III) which, together with the other components of the entire "solid catalyst", *inter alia* influences its activity for the polymerisation of olefins. A high polymerisation activity is one of the main objects of the claimed invention (cf. page 1, first paragraph of the application as filed; page 4, lines 53 to 58 of the

patent specification).

- 4.7 Therefore, the feature in Claim 1 of the main request "wherein R¹ is a cyclopentadienyl radical optionally substituted with at least one C₁₋₄ hydrocarbon, R², R³ and R⁴ are independently cyclopentadienyl optionally substituted with at least one C₁₋₄ hydrocarbon, or ..." has technical significance.
- 4.8 The Appellant's argument that the main request should be admissible under Article 123(2) EPC in spite of the fact that its Claim 1 contains a feature which was not comprised by the application as filed must therefore be rejected.
5. *Articles 100(c) and 123(2) EPC, Claim 1 of the first auxiliary request*
- 5.1 The definition of the substituents R¹, R², R³ and R⁴ of the zirconium compound (III), namely "wherein R¹ is an indenyl, tetrahydroindenyl or cyclopentadienyl radical or a methyl- or ethyl-substituted cyclopentadienyl radical, R², R³ and R⁴ are independently an indenyl, tetrahydroindenyl or cyclopentadienyl radical or a methyl- or ethyl-substituted cyclopentadienyl radical", extends beyond the content of the application as filed, because the relevant statements therein do not wholly support this definition.
- 5.2 While the radicals "cyclopentadienyl", "indenyl" and "tetrahydroindenyl" are supported by the statement on page 11, line 31 to page 12, line 2 of the original disclosure (cf. Section 3.2.2 supra), the terms "methyl- or ethyl-substituted cyclopentadienyl" are generalizations of the there exemplified radicals

"methylcyclopentadienyl, ethylcyclopentadienyl, dimethylcyclopentadienyl, pentamethylcyclopentadienyl".

It is evident that the disclosure of these few concrete radicals does not justify the formulation of the subgroup "methyl- or ethyl-substituted cyclopentadienyl", which comprises undisclosed cyclopentadienyl substitution patterns. This is especially conspicuous with respect to the term "ethyl-substituted cyclopentadienyl", the only basis for which is the disclosure of the radical (**mono**)ethylcyclopentadienyl.

This fact is further aggravated by the possibility, according to formula (III), of having more than one, possibly differently substituted, cyclopentadienyl radical.

- 5.3 Thus, Claim 1 of the first auxiliary request also contravenes the requirements of Article 123(2) EPC.
6. In view of the fact that the Claims 1 of the main and the auxiliary request contravene the requirements of Article 123(2) EPC, there is no need to discuss any of their possible further deficiencies under the EPC.
7. It follows that neither of the requests of the Appellant can be allowed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

E. Görgmaier

R. Young