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D E C I S I O N
of 26 July 1995

Case Number: T 0681/92 - 3.3.1

Application Number: 85109696.6

Publication Number: 0171039

IPC: B41M 5/12

Language of the proceedings: EN

Title of invention:

Solvent for the dye of pressure-sensitive recording paper

Applicant:

NIPPON PETROCHEMICALS COMPANY, LIMITED

Opponent:

-

Headword:

Solvent/NIPPON PETROCHEMICALS

Relevant legal provisions:

EPC Art. 54(1), 111(1)

Keyword:

"Novelty (yes, after amendment)"
"Remittal for further prosecution"

Decisions cited:

-

Catchword:

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Case Number: T 0681/92 - 3.3.1

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 26 July 1995

Appellant: NIPPON PETROCHEMICALS COMPANY, LIMITED
3-1, Uchisaiwaicho 1-chome
Chiyoda-ku
Tokyo (JP)

Representative: Strehl Schübel-Hopf Groening & Partner
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D-80538 München (DE)

Decision under appeal: Decision of the Examining Division of the European
Patent Office dated 18 February 1992 refusing
European patent application No. 85 109 696.6
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: A. J. Nuss
Members: R. K. Spangenberg
J. A. Stephens-Ofner

Summary of Facts and Submissions

I. The appeal lies against the decision of the Examining Division of the EPO dated 18 February 1992, by which European patent application No. 85 109 696.6 (published as EP-A-0 171 039) was refused.

II. The decision under appeal was based on an amended set of 10 claims received on 21 August 1991. The only ground of refusal was that the subject-matter of Claim 1 lacked novelty in respect of

D1: FR-A-2 154 207.

III. In response to a communication of the Board of Appeal the Appellant filed on 26 June 1995 a further amended set of 9 claims and amended pages 1 to 3, 3a, 4 to 7 and 9 of the description and requested that the decision under appeal be set aside and a patent be granted on the basis of these documents. Amended Claim 1 reads as follows (the essential amendment in respect of the text underlying the decision under appeal being shown in bold letters):

"The use of a hydrocarbon mixture mainly containing triaryldialkanes as a solvent for the dye of pressure sensitive recording paper, **said mixture being obtained by recovering by distillation substantially the whole fraction boiling between 350 and 450°C** from the reaction mixture obtained by the process of disproportionating, at temperatures in the range of 20 to 500°C in the presence of a disproportionation catalyst, the by-product oil fraction being obtained in the process of

preparing alkylated monocyclic aromatic hydrocarbons by alkylating **benzene or toluene** with **ethylene** in the presence of an alkylation catalyst and having boiling points in the range of 260 to 320 °C."

Claims 2 to 9 relate to specific embodiments of the above Claim 1.

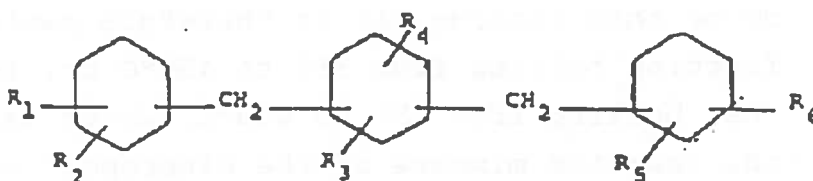
- IV. In the statement of grounds of appeal and further written submissions the Appellant argued that D1 only disclosed the use of dibenzylbenzene derivatives as solvents for the dye of a pressure sensitive recording paper, whereas the product defined according to the present patent application necessarily contained substantial amounts of higher triaryldialkylalkanes, so that the subject-matter of the present Claim 1 was novel in respect of D1.

Reasons for the Decision

1. The appeal is admissible.
2. Claim 1 of the amended set of claims is based upon Claims 1, 7 and 8 as filed and the disclosure in the description as filed, page 4, lines 11 to 17 and page 9, lines 11 to 21, in combination with Examples 1 and 2. Amended Claim 2 is directed to the temperature range disclosed in Examples 1 and 2. It follows immediately from these two examples that the boiling range is a parameter which is independent from the reaction conditions chosen for the disproportionation reaction. Therefore Claims 1 and 2 do not extend beyond the content of the application as filed. Claims 3 to 6 are based upon Claims 2 to 5 as filed, and Claims 7 to 9 correspond to Claims 9 to 11 as filed. The amendments to the description are only those necessary to bring the

description into conformity with the amended claims. On the new page 3a the closest state of the art is acknowledged. The requirements of Article 123(2) EPC are therefore met.

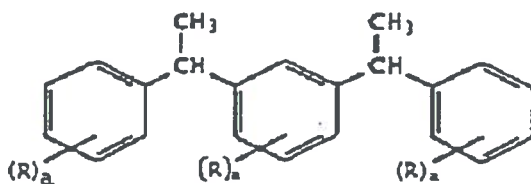
3. The only ground of refusal of the present patent application was lack of novelty in respect of D1. This document discloses the use of dibenzylbenzenes having the following formula



as solvents for the dye of pressure sensitive recording paper (see page 3, line 4 to page 4, line 3).

Such products may be formed in minor amounts also in the disproportionation reaction by which the products to be used according to the present Claim 1 are obtained. However, whereas the text of Claim 1 underlying the decision under appeal did not unambiguously define which fraction of the reaction mixture of the above disproportionation reaction was to be recovered by distillation, it is now clear that **all** compounds which are present in the said reaction mixture and are capable of being distilled off in the temperature range of 350 to 450 °C, or 351 to 400 °C, respectively, are recovered and used. In the Board's judgment, it is not possible, from a practical point of view, that within these broad temperature ranges only the dibenzylbenzene compounds contained in the above reaction mixture are recovered. The Appellant has repeatedly asserted that the main product of the disproportionation reaction is a triaryldialkylalkane having ethylidene bridges between the aryl residues, such as shown in formula I:

(I)



This assertion was found by the Examining Division to be in full agreement with the common general knowledge about this type of reaction. The Board has no reason to doubt this finding. It is therefore satisfied that the fraction boiling from 350 to 450°C or, respectively, that boiling from 351 to 400°C, which is recovered from the reaction mixture of the disproportionation reaction and is used as a solvent for the dye of a pressure-sensitive recording paper, is different from the mixture of the dibenzylbenzene derivatives obtained and used according to D1, since this fraction must necessarily mainly consist of products of the above formula I. Therefore, the ground of refusal upon which the decision under appeal was based, is not applicable to the present Claim 1, so that the decision under appeal can be set aside.

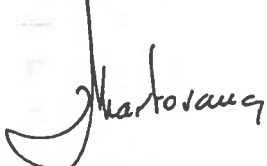
4. It follows from the decision under appeal that the Examining Division has not yet completed the examination in respect of all other requirements of the EPC, in particular that of inventive step. In the circumstances of the present case, the Board deems it appropriate not to proceed with the examination on its own motion, since this would deprive the Appellant of the opportunity to have that matter considered by two instances. The Board instead makes use of its power under Article 111(1) EPC and remits the case to the Examining Division for further prosecution.

Order

For these reasons it is decided that:

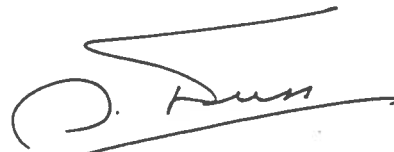
1. The decision under appeal is set aside.
2. The case is remitted to the Examining Division for further prosecution on the basis of the amended application documents submitted on 26 June 1995.

The Registrar:



P. Martorana

The Chairman:



A. Nuss