

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHINOBU YAMAO and WATARU KOSAKA

Appeal No. 95-3220
Application 08/112,986¹

ON BRIEF

Before WEIFFENBACH, ELLIS and OWENS, **Administrative Patent Judges**.

ELLIS, **Administrative Patent Judge**.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 of the final rejection of claims 7, 9 and 21 through 30, all the claims pending in the application. Claims 7 and 9 are illustrative of the subject matter on appeal and read as follows:

¹ Application for patent filed August 30, 1993. According to the appellants, this application is a continuation of Application 07/821,304, filed January 13, 1992 which is a division of Application 07/603,162, filed October 25, 1990, both abandoned.

7. A resin composition comprising a polyarylene sulfide containing at least one substituent selected from the group consisting of an amino group and an amido group, a polyamide resin, and a compound selected from the group consisting of a carboxylic acid, a carboxylic acid anhydride and a carboxylic acid halide each having in its molecule not less than two functional groups reactive with said amino group or said amide groups.

9. A resin composition comprising a polyarylene sulfide containing at least one substituent selected from the group consisting of an amino group and an amido group, a polyamide resin, a compound selected from the group consisting of a carboxylic acid, a carboxylic acid anhydride and a carboxylic acid halide, each having in its molecule not less than two functional groups reactive with said amino group or said amido group, and a filler.

The references relied upon by the examiner are:

Katto et al. (Katto)	4,699,975	Oct. 13, 1987
Takekoshi et al. (Takekoshi)	5,015,704	May 14, 1991
Suzuki et al. (Suzuki) (Abstract of Japanese Kokai Patent Application 61-207462)		Unknown ²

Claims 7, 9 and 21 through 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Katto in view of Takekoshi or Suzuki.³

We have carefully considered the record before us which includes, *inter alia*, the

² The photocopy of the abstract submitted with the examiner's Answer does not indicate the date on which the abstract was published. Therefore, there is no evidence of record that the abstract is available as prior art against the present invention.

³ We note that the examiner has relied on the disclosure of the translated abstract of the Japanese Kokai patent application only. The examiner has not obtained a certified translation of the full-length document. See the REMAND on p. 7, *infra*.

specification, the appellants' Brief (Paper No. 29), the examiner's Answer (Paper No. 30), and the declaration of Mr. Kosaka (attached to Paper No. 25), and find ourselves in substantial agreement with the appellants' position. Accordingly, we **reverse**.

Background and Discussion

The claimed invention, as exemplified in claims 7 and 9, above, is directed to polyarylene sulfide resin compositions which are used as engineering plastics. Such resins are said to have "excellent physical properties, such as heat resistance, fire retardancy, high rigidity and so on." Specification, p. 1, para. 1. According to the appellants, prior attempts to improve properties such as, the impact strength of polyarylene sulfide resins, without reducing their heat-related properties, have met with limited success. *Id.*, pp. 1-4. The appellants state that they have discovered that "the impact resistance of polyarylene sulfide resin compositions, could be improved without substantially diminishing the heat related properties by blending a modified polyarylene sulfide resin with a polyamide in effective combination with a carboxylic acid moiety. The modification of the polyarylene sulfide resin which has permitted the blending of this resin with polyamide resins to achieve these results has been to include an amine or an amide substituent in the polyarylene sulfide resin. . . . It has been found that such a blend of the modified polyarylene sulfide with the polyamide resin and the carboxylic acid moiety results in a composition which, when conventionally formed into a shaped article, exhibits

substantially improved impact resistance and blending strength, while retaining the heat resistance and fire retardancy for which polyarylene sulfide resins are known, and yet not suffering from the adverse water absorption which characterizes nylons” (Brief, para. bridging pp. 4-5).

The examiner primarily bases his conclusion of obviousness on the teachings of Katto and Takekoshi. Katto discloses a polyarylene sulfide composition which comprises an organic acid or an organic acid anhydride; e.g. a polycarboxylic acid having a benzene ring, a carboxylic acid having a hydroxyl-substituted benzene ring, or an anhydride thereof. Katto, col. 6, lines 64-69. Katto further discloses that “the composition resin of the invention can be blended with compatible resin materials such as polyimides, polyamides, polyetheretherketones,” etc. Katto, col. 8, lines 12-23. Takekoshi discloses a method of preparing polyarylene sulfides with reactive functional groups such as amino groups. According to Takekoshi, the compositions prepared using the method disclosed therein are capable of reaction with anhydride-terminated polyetherimides to form block copolymers. Takekoshi, col. 7, lines 9-14.

Alternatively, the examiner urges that the claimed invention would have been ***prima facie*** obvious to one of ordinary skill in the art in view of the teachings of Katto and Suzuki, an undated abstract which merely states that a polyarylene sulfide resin composition was prepared by mixing polyphenylene sulfide with amino and amide groups and maleic

anhydride grafted ethylene-butene-1 copolymer.

The examiner argues on p. 4 of the Answer that:

it would have been prima facie obvious and sufficiently motivated to one skilled in the art to substitute the generic arylene sulfide polymers in Katto et al. with the amino/amide functionalized polyarylene sulfide in U.S. -704 [Takekoshi] and JP. 462 [Suzuki] since their enhanced compatibility and reactivity with the acid/anhydride functionalized materials are clearly taught in these references.

We disagree. We find no teaching or suggestion in Katto that the compatibility of the polyarylene sulfide resins disclosed therein could be enhanced by the addition of amino or amido substituents. Nor do we find any suggestion in Takekoshi or Suzuki (assuming, *arguendo*, that the abstract is prior art) to add amine or amide functionality to polyarylene sulfide resins having a carboxylic acid, a carboxylic acid anhydride or a carboxylic acid halide moiety. We note the examiner's statement "that *if* one skilled in the art was given the three references at the time of the invention, even though U.S. -975 [Katto] is silent in the modification of PAS but is, however, generic to both modified and unmodified PAS, it [sic, one of ordinary skill in the art ?] would be [sic, would have been] sufficiently motivated to use a modified PAS instead of an unmodified PAS since [the] secondary references are directed to teachings of enhancing the reactivity and hence compatibility between arylene sulfide polymers and other materials with reactive moieties." [Emphasis added.] Answer, p. 5. However, we point out that, on this record, the only reason one skilled in the art would have been given the three references applied in the

rejection is because the appellants' specification teaches a composition comprising the modifications described in said references. There are no teachings in the references themselves which would have suggested their combination. In fact, the only place we find such suggestion is in the appellants' specification. Thus, we find that the examiner has relied on impermissible "hindsight" to arrive at the conclusion that the present invention is obvious over the prior art. ***In re Fritch, supra; Interconnect Planning Corp. v. Feil***, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985) ("It is impermissible to engage in hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps"); ***W.L. Gore & Assocs. v. Garlock, Inc.***, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), ***cert. denied***, 469 U.S. 851 (1984)("To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher").

We note in the appellants' arguments that the claimed compositions exhibit unexpected results. ***In re Soni***, 54 F.3d 746, 749, 34 USPQ2d 1684, 1687 (Fed. Cir. 1995). However, since the examiner has failed to meet his burden of establishing a ***prima facie*** case of obviousness in the first instance, we need not consider the appellants' evidence in this regard.

REMAND

It is apparent that the prior art has not been fully considered by the examiner. In the case before us, the examiner has relied on the disclosure of a translation of the abstract of Japanese Kokai Patent application 61-207462 [Suzuki], only. As we discussed in footnote 2, above, the abstract may or may not be available as prior art against the appellants' claims. Although the referenced patent application was of record in the file, the examiner never bothered to obtain a certified translation thereof. This we have done, and a copy of the translation is attached to this decision. We note that there appears to be pertinent disclosure in the translation which does not appear in the abstract. We direct attention to the teachings on pp. 4-5 of Suzuki which indicate that the amino or amide group in the polyarylene sulfide can be introduced by the copolymer components such as "a carboxylic acid group or a metal salt of a carboxylic acid." Accordingly, we remand this application to the examiner for consideration of the patentability of the claimed invention in view of the certified translation of the full-length Suzuki document.

Appeal No. 95-3220
Application 08/112,986

This application, by virtue of its “special” status, requires an immediate action. Manual of Patent Examining Procedure (MPEP) § 708.01(d)(7th ed., July 1998). It is important that the Board be informed promptly of any action affecting the appeal in this case.

REVERSED; REMANDED

CAMERON WEIFFENBACH)	
Administrative Patent Judge)	
)	
)	
)	
JOAN ELLIS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
TERRY J. OWENS)	
Administrative Patent Judge)	

Appeal No. 95-3220
Application 08/112,986

JE/cam

Appeal No. 95-3220
Application 08/112,986

Nikaido, Marmelstein, Murray & Oram
Metropolitan Square
655 Fifteenth St., N.W.
Suite 330, G Street Lobby
Washington, DC 20005-5701