

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JEROEN FRANS JOCHEM BRONS  
and MICHIEL BAREND ELEVELD

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Appeal No. 2005-1140  
Application 10/247,069

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ON BRIEF

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Before WARREN, KRATZ and JEFFREY T. SMITH, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

*Decision on Appeal*

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner refusing to allow claims 1 through 7 as amended subsequent to the final rejection, which are all of the claims in the application..

Claim 1 illustrates appellants' invention of a process for preparing polyoxyalkylene polyether products employing a mixing reactor and a pipe reactor in sequence, and is representative of the claims on appeal:

1. A process for preparing polyoxyalkylene polyether products, which process comprises (i) reacting starter and alkylene oxide in the presence of a double metal cyanide complex catalyst while mixing, and (ii) reacting in a pipe reactor the mixture obtained in step (i) to obtain a polyoxyalkylene polyether product comprising substantially no alkylene oxide, and (iii) removing the product of step (ii) from the process, wherein no additional amount of starter, alkylene oxide and/or the double metal cyanide complex catalyst is added to the pipe reactor.

The references relied on by the examiner are:

Gupta et al. (Gupta)	5,672,768	Sep. 30, 1997
Cline et al. (Cline)	6,040,028	Mar. 21, 2000
Pazos et al. (Pazos '571) <sup>1</sup> (published World Intellectual Property Organization Application)	WO 98/03571	Jan. 29, 1998

The examiner has rejected appealed claims 1 through 7 under 35 U.S.C. § 103(a) as being unpatentable over Pazos '571 alone or in view of Gupta, with respect to appealed claim 6, and Cline, with respect to appealed claim 7 (answer, pages 3-6).

Appellants state that the appealed "claims stand or fall together" but provides some manner of argument with respect to claims 2 and 4 through 7 (brief, pages 2 and 3-4). Thus, we decide this appeal based on appealed claim 1 and the other claims to the extent argued by appellants. 37 CFR § 1.192(c)(7) (2003); *see also* 37 CFR § 41.37(c)(1)(vii) (effective September 13, 2004; 69 Fed. Reg. 49960 (August 12, 2004); 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)).

We affirm.

Rather than reiterate the respective positions advanced by the examiner and appellants, we refer to the answer and to the brief for a complete exposition thereof.

#### *Opinion*

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the supported position advanced by the examiner that, *prima facie*, the claimed process for preparing polyoxyalkylene polyether products encompassed by appealed claims 1, 2 and 4 through 7 would have been obvious over Pazos '571 alone and as combined with Gupta, with respect to appealed claim 6, and with Cline, with respect to appealed claim 7, to one of ordinary skill in this art at the time the claimed invention was made. In view of the established *prima facie* case of obviousness, we again consider the record as a whole with respect to this ground of rejection in light of appellants' rebuttal arguments in the brief. *See generally, In re*

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<sup>1</sup> Pazos '571 is in the same patent literature family as United States Patent 5,689,012, issued November 18, 1997, to Pazos et al. (Pazos '012) that appellants cite in the written description in the specification and have made of record.

*Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

As an initial matter, we find that when the claim terms are given their broadest reasonable interpretation in light of the written description in the specification as interpreted by one of ordinary skill in the art, and without reading into the claims any limitation or particular embodiment disclosed in the specification, *see, e.g., In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), the plain language of claim 1 specifies that the claimed process comprises at least reacting the starter compound and alkylene oxide in the presence of a double metal cyanide complex catalyst (DMC) in a reactor which provides stirring, such as the continuously stirred tank reactor (CSTR) of claim 5; further reacting the product from the first reactor, which can contain unreacted alkylene oxide within the range specified in claim 2, in a pipe reactor to obtain a product that comprises at least substantially no alkylene oxide; and recovering the product from the pipe reactor, with the condition that no starter, alkylene oxide and/or DMC is added to the pipe reactor. Claim 6 specifies subsequent treatment of the product and claim 7 specifies adding anti-oxidant to the treated product of claim 6.

Appellants submit that “there is no teaching or suggestion in the ‘571 reference to modify it in such a way as to arrive at the instant invention,” arguing that (1) the term “cook out” used in the disclosure “[t]he second reactor may be used to fully ‘cook out’ alkylene oxide” (Pazos ‘571, page 23, ll. 6-7) “is meant to be used interchangeably with ‘stripping’” and not “to fully react the remaining alkylene oxide without adding additional components” as claimed, and (2) the reference teaches away from the claimed invention by requiring “additional components to be added to the second reactor in order to accomplish any further reaction” (brief, page 3).

We agree with the examiner’s response to appellants’ arguments (answer, pages 6-7), adding the following for emphasis. We find that appellants’ arguments are contrary to their characterization of Pazos ‘012 at page 2, ll. 4-10, of the specification wherein they acknowledge the teachings of this reference that “[i]f unreacted alkylene oxide is present, the alkylene oxide may be cooked out in a second reactor,” and that “the final cook out to facilitate reaction of alkylene oxide may be performed without starter present.” Indeed, we find such disclosure at Pazos ‘012, e.g., col. 11, ll. 9-13, and with respect to **FIG. 2** at col. 12, ll. 25-38, which

corresponds to the examiner's findings at Pazos '571, page 20, second paragraph, and the paragraph bridging pages 22-23. Thus, on this record, the term "cook out" is not synonymous with the term "stripping" in the context of Pazos '571, and there is no disclosure in the reference which teaches away from the clear teachings of this reference because Pazos '571 does not criticize, discredit or otherwise discourage following any teachings therein. *See In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1145-46 (Fed. Cir. 2004). Accordingly, we find that one of ordinary skill in this art routinely following the clear teachings of Pazos '571 would have arrived at the claimed invention without recourse to appellants' specification and claims. *See B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996) ("When obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. [Citation omitted.] This suggestion or motivation need not be expressly stated. [Citation omitted.]").

Considering now claims 2 and 4, we agree with appellants' that Pazos '571 does not disclose the specified ranges for the amount of alkylene oxide remaining in the product from the mixing reactor introduced into the pipe reactor specified in claim 2 or for the amount of residence time in the pipe reactor specified in claim 4 (brief, page 2). However, as the examiner points out (answer, pages 4 and 7), one of ordinary skill in this art routinely following the teachings of Pazos '571 would have arrived at a working or optimum range for each of these variables by routine experimentation. *See In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. [Citations omitted.]"); *In re Aller*, 220 F.2d 454, 456-58, 105 USPQ 233, 235-37 (CCPA 1955) ("[W]here general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). Appellants' argument that Pazos '571 does not teach a CSTR as required by claim 5 (brief, page 3) overlooks the fact that the disclosure from this reference relied on by the examiner involves **FIG. 2** in which the first reactor is continuous reactor **21** that can be a CSTR (page 22, ll. 9-12).

Appellants' arguments with respect to claims 6 and 7 (brief, pages 3-4) do not point out any specific error in the examiner's reliance on the combined teachings of the respective combinations of references, and therefore are entitled to no weight.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in Pazos '571 alone and as combined with Gupta, with respect to appealed claim 6, and with Cline, with respect to appealed claim 7, with appellants' countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1 through 7 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

The examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective September 13, 2004; 69 Fed. Reg. 49960 (August 12, 2004); 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)).

*AFFIRMED*

CHARLES F. WARREN	)	
Administrative Patent Judge	)	
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	)	
	)	
PETER F. KRATZ	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
JEFFREY T. SMITH	)	
Administrative Patent Judge	)	

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