

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RONALD PAUL GEE

Appeal No. 1996-2336
Application 08/270,345¹

ON BRIEF

Before DOWNEY, PAK, and OWENS, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's refusal to allow

¹ Application for patent filed July 5, 1994. According to the appellant, the application is a continuation of Application 07/532,471, filed June 1, 1990, now abandoned.

claims 1-3 and 6-19 as amended after final rejection. These are all of the claims remaining in the application.

THE INVENTION

Appellants claim methods for producing polysiloxane emulsions from a mixture containing cyclicsiloxanes. The emulsions are oil free, i.e., do not contain any unemulsified silicone material and do not produce unemulsified silicone oil or polymers upon aging (specification, page 9, lines 4-8).

Claim 1 is illustrative and reads as follows:

1. A method for producing stable, oil free polysiloxane emulsions comprising the steps of:

(I) preparing a mixture comprising

(a) a cyclicsiloxane, or a mixture of cyclicsiloxanes,

(b) a nonionic surfactant, or a mixture of nonionic surfactants,

(c) an ionic surfactant, or a mixture of ionic surfactants,

(d) water, and

(e) a condensation polymerization catalyst;
wherein said cyclicsiloxane or mixture of cyclic siloxanes have not been mechanically pre-emulsified prior to addition into the mixture (I)

(II) thereafter heating and agitating the mixture (I) at

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a polymerization reaction temperature until essentially all cyclicsiloxane is reacted, whereby a stable, oil-free emulsion is formed.

THE REFERENCES

Findlay et al. (Findlay) 1966	3,294,725	Dec. 27,
Graiver et al. (Graiver) 1987 (European patent application)	0 228 575	Jul. 15,

Zhang Xinghua et al. (Xinghua), "Studies on Emulsion Polymerization of Siloxanes. II. Mechanism of Cationic Emulsion Polymerization of Octamethylcyclotetrasiloxane", *Polymer Communications* 266-70 (August 1982).

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 112, first paragraph, as follows: claims 1-3 and 6-19, enablement requirement, and claims 12-19, written description requirement.² Claims 1 and 6-13 stand rejected under 35

²In the statement of the rejection, the examiner does not specify which requirement or requirements of 35 U.S.C. § 112, first paragraph, form the basis of the rejection. In view of the examiner's explanation of the reasons for objecting to the specification (answer, pages 4-5), we consider claims 1-3 and 6-19 to be rejected based on the enablement requirement and claims 12-19 to be rejected based on the written description

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U.S.C. § 102(b) as being anticipated by Graiver. The claims stand rejected under 35 U.S.C. § 103 as follows: claims 2 and 3 over Graiver, claims 2 and 12-19 over Graiver in view of Xinghua, and claims 1-3 and 6-19 over Graiver in view of Xinghua and Findlay.

OPINION

The parent of the present application previously was before the board (appeal no. 93-2722; serial no. 07/532,471). In that case, the board affirmed the rejections of claims 1-3 and 6-12 under 35 U.S.C. § 102(b) as being anticipated by Graiver, claims 2 and 3 under 35 U.S.C. § 103 as being obvious over Graiver, and claim 2 under 35 U.S.C. § 103 as being obvious over Graiver in view of Xinghua, and reversed the rejection of claims 1-3 and 6-12 under 35 U.S.C. § 112, second paragraph, as being indefinite.

The claims in the present case differ from those in the parent case in that both independent claims, i.e., claims 1

requirement.

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and 12, now require that "said cyclicsiloxane or mixture of cyclic siloxanes have not been mechanically pre-emulsified prior to addition into the mixture (I)". Also, dependent claims 13-19, which depend directly or indirectly from claim 12, have been added.

We have carefully considered all of the arguments advanced by appellant and the examiner and do not find reversible error in the examiner's rejections under 35 U.S.C. §§ 102(b) and 103. Accordingly, we affirm these rejections. However, because our

rationale differs substantially from that of the examiner, we denominate the affirmances as involving new grounds of rejection under 37 CFR § 1.196(b). We do not sustain the rejections under 35 U.S.C. § 112, first paragraph.

Appellants state that with respect to the prior art rejections, claims 2 and 3 stand or fall separately and the claims in the following groups stand or fall together:

1) claims 1 and 6-11, and 2) claims 12-19 (brief, pages 5-6). Therefore, in our discussion of the prior art rejections, we

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limit our discussion to claims 2 and 3 and one claim within each of the other groups, i.e., claims 1 and 12. See *In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1995).

*Rejection of claims 1-3 and 6-19 under
35 U.S.C. § 112, first paragraph*

A specification complies with the 35 U.S.C. § 112, first paragraph, enablement requirement if it allows those of ordinary skill in the art to make and use the claimed invention without undue experimentation. See *In re Wright*, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993); *Atlas Powder Co. v. E.I. du Pont De Nemours & Co.*, 750 F.2d 1569, 1576, 224 USPQ 409, 413 (Fed. Cir. 1984).

The examiner argues that appellant's claimed invention is not enabled because stirring, which is used in the examples in the specification, is included within the definition of mechanical pre-emulsifying which is excluded by claims 1 and 12 (answer, page 4).

The relevant question is not whether mechanical pre-emulsification and appellant's mixing can both involve stirring but, rather, whether appellant's specification would

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have enabled one of ordinary skill in the art to carry out the claimed method without undue experimentation. In appellant's examples the components of the mixture are combined and then emulsified. There is no indication that the cyclicsiloxanes are mechanically pre-emulsified prior to being combined with any of the other components. The examiner has not explained, and it is not apparent, why these examples, together with the other disclosure in the specification, would not have enabled one of ordinary skill in the art to carry out the claimed methods without undue experimentation.

A specification complies with the 35 U.S.C. § 112, first paragraph, written description requirement if it conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the invention. See *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991); *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); *In re Edwards*, 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978); *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976).

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The examiner argues that the term "unemulsified" has no support in the original specification (answer, pages 4-5). The preamble of appellant's claim 12 requires that the emulsion is "free of unemulsified silicone oil". Support for this limitation is found in the specification at page 9, lines 4-7. Consequently, appellant's specification indicates that appellant was in possession of a method which produces an emulsion which is free of unemulsified silicone oil.

For the above reasons, we reverse the rejections under 35 U.S.C. § 112, first paragraph.

*Rejection of claims 1 and 12 under
35 U.S.C. § 102(b) over Graiver*

Graiver's examples 9 and 10 disclose methods wherein a precursor emulsion made of a cyclicsiloxane, a nonionic surfactant and water is added to a mixture of dodecylbenzenesulfonic acid and water. As indicated in appellant's specification (page 13, lines 7-10), dodecylbenzenesulfonic acid can serve as both an ionic surfactant and a catalyst.

Appellant argues that Graiver mechanically pre-emulsifies

the cyclicsiloxanes prior to their addition into the mixture (brief, page 9).

Appellant's independent claims require that the cyclicsiloxanes are not mechanically pre-emulsified prior to addition into mixture (I). This mixture includes the cyclicsiloxane, nonionic surfactant, ionic surfactant, water and catalyst components. When Graiver forms his precursor emulsion in examples 9 and 10, he combines the cyclicsiloxane with the nonionic surfactant and water, which are components of appellant's mixture (I). Because the nonionic surfactant and water with which the cyclicsiloxane is mixed are components of appellant's mixture (I), Graiver's precursor emulsion formation takes place after, rather than before, the cyclicsiloxane is added into the mixture. Consequently, the method in Graiver's examples 9 and 10 is not excluded by appellant's claims.

Appellant's claim 12 requires that a desired particle

size is produced. Such a desired particle size can be any desired size including that of the particles made in Graiver's examples 9 and 10.

For the above reasons, we affirm the rejection under 35 U.S.C. § 102(b).

*Rejection of claims 2 and 3 under
35 U.S.C. § 103 over Graiver*

In Graiver's examples 9 and 10, the cyclicsiloxane, nonionic surfactant and water are added to dodecylbenzenesulfonic acid and water while mixing at 85°C. In view of Graiver's teaching that temperature affects the rate of polymerization (page 6, lines 44-49), one of ordinary skill in the art would have been motivated to heat both the dodecylbenzenesulfonic acid catalyst-containing component and the cyclicsiloxane-containing component to the mixing temperature to provide better control over the temperature of the polymerization. In light of Graiver's disclosure that the nonionic surfactant, with which the cyclicsiloxane is mixed prior to being added to the catalyst, does not catalyze the polymerization (page 6, lines 14-15), such a person would have had a reasonable expectation of success in obtaining the

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desired polymerization control even though the cyclicsiloxane-containing component is preheated. Consequently, heating the components as recited in appellant's claims 2 and 3 would have been *prima facie* obvious to one of ordinary skill in the art over Graiver. See *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988); *In re Longi*, 759 F.2d 887, 892-93, 225 USPQ 645, 648 (Fed. Cir. 1985).

In response to the rejection of claims 2 and 3, appellant relies upon the same argument made with respect to the rejection of claim 1 from which these claims depend, i.e., that Graiver requires pre-emulsifying the cyclicsiloxane (brief, page 11). This argument is not persuasive as explained above. Appellant also argues that Graiver teaches away from the method in appellant's claim 2 because the catalyst concentration in that claim is relatively high when the catalyst is added to the cyclicsiloxanes. See *id.* We are not convinced by this argument because appellant's claim 2 does not require that the catalyst concentration is high. The claim is open to diluting the catalyst before it is added to

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the mixture.

For the above reasons, we affirm the rejection of claims 2 and 3 under 35 U.S.C. § 103 over Graiver.

Rejections under 35 U.S.C. § 103 of claims 2 and 12 over Graiver and Xinghua and of claims 1-3 and 12 over Graiver in view of Xinghua and Findlay

For the reasons given above, the methods recited in claims 1-3 and 12 are unpatentable over Graiver. A discussion of Xinghua and Findlay is not necessary to our decision.

DECISION

The rejections under 35 U.S.C. § 112, first paragraph, of claims 1-3 and 6-19 based on the enablement requirement and claims 12-19 based on the written description requirement are reversed. The rejections of claims 1 and 6-13 under 35 U.S.C. § 102(b) over Graiver and the rejections under 35 U.S.C. § 103 of claims 2 and 3 over Graiver, claims 2 and 12-19 over Graiver in view of Xinghua, and claims 1-3 and 6-19 over Graiver in view of Xinghua and Findlay, are affirmed. The affirmances are denominated as involving new grounds of rejection under 37 CFR § 1.196(b).

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED, 37 CFR § 1.196(b)

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Administrative Patent Judge)	
)	
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