

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(2) is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HENRY J. MOLLOY
AND JOHN JONES

Appeal No. 95-1360
Application 08/134,002¹

ON BRIEF

Before WINTERS, HANLON, and WEIMAR, Administrative Patent
Judges.

HANLON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the

¹ Application for patent filed October 12, 1993.

Appeal No. 95-1360
Application No. 08/134,002

final rejection of claims 1-15, all of the claims pending in the application. The claims are directed to a controlled set cement product comprising rapid hardening hydraulic cement and an additive package. Claim 1 is representative of the subject matter on appeal and reads as follows:

1. A controlled set cement product comprising rapid hardening hydraulic cement and an additive package of three materials wherein the additive package consists essentially of, based on the weight of cement:

<u>Material</u>	<u>Weight Percent</u>
pozzolan	up to 20%
set retarder	up to 4%
plasticizer	up to 3%

wherein all three materials are present in the additive package.

The prior art relied upon by the examiner is:

Watanabe et al. (Watanabe)	4,861,378	Aug. 29, 1989
Mimura et al. (JP '127) (Japanese Kokai)	51-65127	June 5, 1976

The following rejections are at issue in this appeal:

(1) Claims 1-6 are rejected under 35 U.S.C. § 103 as being unpatentable over Watanabe.

(2) Claims 7-15 are rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Watanabe and JP

Appeal No. 95-1360
Application No. 08/134,002

'127.

The claimed invention

The claims relate to a controlled set cement product comprising rapid hardening hydraulic cement and an additive package. The additive package "consists essentially of" a specific amount of each of a pozzolan, set retarder, and plasticizer. Pozzolans include silica fume, set retarders include citric acid, and plasticizers include "a modified lignosulphonate or other material" (Specification, p. 3, lines 25-28). Appellants' claimed controlled set cement products may further comprise alkali-resistant glass fiber reinforcements (claim 7).

Discussion

Watanabe discloses a cement additive comprising a superplasticizer, bentonite, and an inorganic strength improving agent (col. 2, lines 46-48). Inorganic strength improving agents include calcium sulfates, silica fume and mixtures thereof (col. 3, lines 43-46). The cement additive may further comprise organic acids and salts, including citric acid (col. 4, line 62-col. 5, line 33).

Appellants argue that Watanabe does not suggest adding

Appeal No. 95-1360
Application No. 08/134,002

the disclosed additive to rapid hardening hydraulic cement (Brief, p. 4). However, the examiner points out that Watanabe discloses that the additive may be added to various Portland cements and hydraulic cements (Answer, p. 3; col. 5, lines 48-51). According to the examiner (Answer, pp. 6-7):

The appellants argue that Watanabe et al. do not teach a "rapid hardening" hydraulic cement and directs the examiner to the appropriate passages within their specification showing cements containing calcium sulphoaluminate compounds which are different than Portland cement. However, the appellants err because they are arguing limitations not present within their own claims. Nowhere do appellants' claims require that their rapid hardening hydraulic cement contain a "calcium sulphoaluminate compound". While it is true that the claims are "interpreted" in light of the specification, it is improper to read the limitations of the specification into the claims. The appellants' RHHC (rapid hardening hydraulic cement) thus still reads on any hydraulic cement including Portland cement.

We agree with the examiner that it is improper to read limitations from the specification into the claims. Nevertheless, a claim cannot be read in a vacuum but rather must be read in light of the specification to thereby interpret limitations explicitly recited in the claim. In re Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969). The Court in Prater, 415 F.2d at 1404, 162 USPQ at

Appeal No. 95-1360
Application No. 08/134,002

550, makes a distinction between these two concepts:

"[R]eading a claim in the light of the specification," to thereby interpret limitations explicitly recited in the claim, is a quite different thing from "reading limitations of the specification into a claim," to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim. This distinction is difficult to draw . . .

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Appeal No. 95-1360
Application No. 08/134,002

See also In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow. When the applicant states the meaning that the claim terms are intended to have, the claims are examined with that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art.").

Appellants take the position that "rapid hardening hydraulic cement" is a term of art. Appellants argue that they "have pointed out the differences between RHHC [rapid hardening hydraulic cement] and ordinary Portland cement. Page 2, lines 15-17 and lines 32 to 36 of the specification defines RHHC" (Brief, p. 5). Appellants' specification discloses that rapid hardening cement, by definition, "is based on Calcium sulphoaluminate compound" (Specification, p. 2, lines 32-33). Moreover, according to appellants (Brief, p. 5):

Appellants' Information Disclosure Statement filed October 27, 1993, discloses two patents which disclose examples of cements containing calcium sulphoaluminate compounds. They are U.S. Patent

Appeal No. 95-1360
Application No. 08/134,002

Nos. 4,419,136² and 4,798,628.³ RHHC is recent terminology for cements such as those in the cited patents.

On these facts, we hold that "rapid hardening hydraulic cement" is a term of art and defines cement "based on Calcium sulphoaluminate compound" (Specification, p. 2, lines 32-33).

Having determined the meaning of "rapid hardening hydraulic cement," it is necessary to determine whether Watanabe suggests using the claimed additive package in a rapid hardening hydraulic cement. According to Watanabe (col. 5, lines 48-60):

The cements to which the cement additive of the present invention may be added include various Portland cements, mixed cements and hydraulic materials containing slag particles as essential components. The rapid hardening Portland cement is not effective in view of high strength since it contains alumina cement, $12\text{CaO} \cdot 7\text{Al}_2\text{O}_3$, $11\text{CaO} \cdot 7\text{Al}_2\text{O}_3 \cdot \text{CaF}_2$ or amorphous calcium aluminate including $\text{CaO} \cdot \text{Al}_2\text{O}_3$, $12\text{CaO} \cdot 7\text{Al}_2\text{O}_3$, etc. as well as

² U.S. Patent No. 4,419,136 to Rice discloses an expansive cement containing a calcium alumino sulfate compound.

³ U.S. Patent No. 4,798,628 to Mills et al. discloses a settable cementitious composition produced by mixing a ground mineral composition containing the phase $4\text{CaO} \cdot 3\text{Al}_2\text{O}_3 \cdot \text{SO}_3$, in the presence of water, with a source of alkali metal or alkaline earth metal under alkaline conditions.

Appeal No. 95-1360
Application No. 08/134,002

Type II anhydrous calcium sulfate. The rapid hardening is accompanied by rapid heat evolution so that the effect of the organic acids and salts thereof in decreasing the amount of water necessary for cement hydration and in improving the strength is lost.

In view of the teachings in Watanabe, one having ordinary skill in the art would have recognized that the disclosed additive would not have been effective in cements containing calcium sulphoaluminate compounds such as the rapid hardening hydraulic cement of the claimed invention (Brief, p. 7).

Therefore, we agree with appellants that Watanabe teaches away from using the claimed additive package in a rapid hardening hydraulic cement (Brief, p. 5). Compare Gillette Co. v. S.C. Johnson & Son, Inc., 919 F.2d 720, 724, 16 USPQ2d 1923, 1927 (Fed. Cir. 1990) (the closest prior art reference "would likely discourage the art worker from attempting the substitution suggested").

For the reasons set forth above, the decision of the examiner is REVERSED.

REVERSED

Appeal No. 95-1360
Application No. 08/134,002

SHERMAN D. WINTERS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
ADRIENE LEPIANE HANLON)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
)	
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ELIZABETH C. WEIMAR)	
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Appeal No. 95-1360
Application No. 08/134,002

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