

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NEW NGC, INC. dba NATIONAL GYPSUM COMPANY,
Petitioner,

v.

UNITED STATES GYPSUM COMPANY,
Patent Owner.

Case IPR2017-01088
Patent 7,425,236 B2

Before RAE LYNN P. GUEST, JON B. TORNQUIST, and
JEFFREY W. ABRAHAM, *Administrative Patent Judges*.

ABRAHAM, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

New NGC, Inc. dba National Gypsum Company (“Petitioner”) filed a corrected Petition (Paper 7, “Pet.”) requesting *inter partes* review of claim 2 of U.S. Patent No. 7,425,236 B2 (Ex. 1030, “the ’236 patent”). United States Gypsum Company (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 8, “Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

After considering the Petition and Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to the challenged claim. Accordingly, we do not institute *inter partes* review.

A. *Related Proceedings*

The parties inform us that the ’236 patent is currently at issue in *U.S. Gypsum Co. v. New NGC, Inc.*, Case No. 1:17-cv-00130 (D. Del. Feb. 6, 2017). Pet. 1; Paper 4, 2. In addition, related U.S. Patent Nos. 7,964,034 B2, 6,632,550 B1, 6,342,284 B1, 7,758,980 B2, 8,142,914 B2, and 8,500,904 B2 are at issue in IPR2017–01011, IPR2017–01086, IPR2017–01350, IPR2017–01351, IPR2017-01352, and IPR2017–01353 respectively.

B. *The ’236 Patent*

The ’236 patent discloses a method and composition for preparing “set gypsum-containing products that have increased resistance to permanent

deformation (e.g., sag resistance) by employing one or more enhancing materials.” Ex. 1030, 1:23–26.

The ’236 patent explains that most gypsum-containing products are prepared by forming a mixture of calcined gypsum (calcium sulfate hemihydrate and/or calcium sulfate anhydrite) and water, casting the mixture into a desired shape, and allowing the mixture to harden to form set gypsum. *Id.* at 2:1–6. During this process, the calcined gypsum is rehydrated with water, forming an interlocking matrix of set gypsum crystals (calcium sulfate dihydrate), and imparting strength to the gypsum structure of the gypsum-containing product. *Id.* at 2:6–14. Although the matrix of gypsum crystals increases the strength of the gypsum-containing product, the ’236 patent posits that existing gypsum-containing products could still benefit if the strength of their component set gypsum crystal structures were increased. *Id.* at 2:15–19.

To increase the strength, dimensional stability, and resistance to permanent deformation of set gypsum-containing products, the ’236 patent discloses mixing calcium sulfate material, water, and an appropriate amount of one or more enhancing materials. *Id.* at 1:23–44. In a preferred embodiment, the enhancing material is in the form of trimetaphosphate ions, derived from the addition of sodium trimetaphosphate (STMP). *Id.* at 4:9–34. According to the ’236 patent, set gypsum-containing products incorporating this compound were “unexpectedly found to have increased strength, resistance to permanent deformation (e.g., sag resistance), and dimensional stability, compared with set gypsum formed from a mixture containing no trimetaphosphate ion.” *Id.* at 4:29–34. It was also “unexpectedly found that trimetaphosphate ion . . . does not retard the rate of

the formation of set gypsum from calcined gypsum,” and, in fact, actually accelerates the rate of rehydration. *Id.* at 4:35–41. According to the ’236 patent, this is “especially surprising” because most “phosphoric or phosphate materials retard the rate of formation of set gypsum and decrease the strength of the gypsum formed.” *Id.* at 4:41–46.

C. Claim 2

Claim 2 is the only claim challenged, and is reproduced below:

2. A method for producing set gypsum product comprising dissolving one or more enhancing materials in water, forming a mixture of calcined gypsum, water, and accelerator, inserting the aqueous solution of enhancing materials into the mixture, and maintaining the mixture under conditions sufficient for the calcined gypsum to form an interlocking matrix of set gypsum.

Ex. 1030, 31:16–32:3.

D. The Asserted Grounds of Unpatentability

Petitioner contends claim 2 of the ’236 patent is unpatentable based on the following grounds (Pet. 2):¹

References	Basis	Claim Challenged
Graux ² and Kerr ³	§ 103	2
Satterthwaite ⁴ and Kerr	§ 103	2
Conroy ⁵ and Johnstone ⁶	§ 103	2

¹ Petitioner also relies on a declaration from Mr. Gerry Harlos (Ex. 1001).

² U.S. Patent No. 5,932,001, issued Aug. 3, 1999 (Ex. 1006).

³ U.S. Patent No. 2,884,413, issued Apr. 28, 1959 (Ex. 1010).

⁴ U.S. Patent No. 3,234,037, issued Feb. 8, 1966 (Ex. 1007).

⁵ U.S. Patent No. 4,965,031, issued Oct. 23, 1990 (Ex. 1033).

⁶ U.S. Patent No. 4,372,814, issued Feb. 8, 1983 (Ex. 1034).

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, “[a] claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Claims of a patent that will expire within 18 months from the Notice of Filing Date, however, are construed using “a district court-type claim construction approach,” provided a motion under 37 C.F.R. § 42.20 is filed within 30 days from the filing of the petition. 37 C.F.R. § 42.100(b). Patent Owner timely filed such a motion, and Petitioner does not dispute that the ’236 patent expired shortly after the Petition was filed. Paper 6, 2; Pet. 10. Thus, to the extent necessary, we will construe the claims of the ’236 patent using “a district court-type claim construction approach.” 37 C.F.R. § 42.100(b); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).

Petitioner provides proposed constructions for the terms “enhancing material(s),” “accelerator,” and “set gypsum product.” Pet. 11–16. Patent Owner responds to Petitioner’s proposed constructions with its own proposed constructions of these terms. Prelim. Resp. 26–38. Upon review of Petitioner’s and Patent Owner’s arguments and supporting evidence, we determine that it is necessary to address only the construction of “enhancing material(s)” for purposes of this Decision. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

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