

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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JOHNS MANVILLE CORPORATION and JOHNS MANVILLE, INC.,  
Petitioner,

v.

KNAUF INSULATION, INC. and KNAUF INSULATION SPRL,  
Patent Owner.

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Case IPR2018-00827  
Patent 9,828,287 B2

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Before JAMES T. MOORE, KRISTINA M. KALAN, and  
ELIZABETH M. ROESEL, *Administrative Patent Judges*.

KALAN, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
*35 U.S.C. § 314(a)*

Johns Manville Corporation and Johns Manville, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) seeking *inter partes* review of claims 1–9 and 16–17 of U.S. Patent No. 9,828,287 B2 (Ex. 1001, “the ’287 patent”). Knauf Insulation, Inc. and Knauf Insulation SPRL (“Patent Owner”) filed a Preliminary Response. 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). An *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Applying this standard to the information presented in the Petition, the Preliminary Response, and the supporting evidence, we determine Petitioner has not established a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition. Therefore, institution of an *inter partes* review is denied.

## I. BACKGROUND

### A. *Related Matters*

The parties identify the following civil action as involving the ’287 patent: *Knauf Insulation, Inc. v. Johns Manville Corp.*, No. 1:15-cv-00111-WTL-MJD (S.D. Ind. 2015). Pet. 1; Paper 4, 1. Petitioner asserts that the ’287 patent contains overlapping subject matter with a number of other patents that are the subject of proceedings before the Office. Pet. 1–2.

*B. Petitioner's Asserted Grounds of Unpatentability*

Petitioner asserts the following grounds of unpatentability (Pet. 16, 36, 46, 60):

References	Basis	Claims Challenged
Srinivasan <sup>1</sup> and Worthington <sup>2</sup>	§ 103(a)	1–9 and 16–17
Srinivasan and Gogek <sup>3</sup>	§ 103(a)	1, 4–8, and 16–17
Helbing, <sup>4</sup> Worthington, and Srinivasan	§ 103(a)	1–9 and 16–17
Helbing, Gogek, and Srinivasan	§ 103(a)	1, 4–8, and 16–17

Petitioner supports its challenges with a Declaration of Dr. Frederick J. Hirsekorn. Ex. 1005.

*C. The '287 Patent (Ex. 1001)*

The '287 patent, titled “Binders and Materials Made Therewith,” relates to binders to produce or promote cohesion in non-assembled or loosely assembled matter. Ex. 1001, at [54], [57]. The binders of the '287 patent may be used in a variety of fabrication applications, and may be formaldehyde free. *Id.* at 1:62–65, 2:6–7. Generally, the binders may contain ester and/or polyester compounds, sodium or potassium salts of inorganic acids, and may include the product of a Maillard reaction, which

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<sup>1</sup> U.S. Patent App. Pub. No. 2005/0059770 A1, published March 17, 2005 (Ex. 1003, “Srinivasan”).

<sup>2</sup> U.S. Patent No. 3,513,001, issued May 19, 1970 (Ex. 1004, “Worthington”).

<sup>3</sup> U.S. Patent No. 2,965,504, issued December 20, 1960 (Ex. 1009, “Gogek”).

<sup>4</sup> U.S. Patent App. Pub. No. 2005/0202224 A1, published Sept. 15, 2005 (Ex. 1008, “Helbing”).

reactants may include an amine reactant reacted with a reducing-sugar carbohydrate reactant. *Id.* at 2:12–46.

The '287 patent provides numerous examples of binders and the procedure for preparing those binders. *Id.* at 55:52–73:23. The claims of the '287 patent are directed to a thermal or acoustical fiberglass insulation material comprising a collection of glass fibers and a binder with various characteristics. *Id.* at 88:28–90:22.

#### *D. Illustrative Claim*

The '287 patent includes 17 claims; claims 1, 8, and 9 are the only independent claims. Claim 1 is illustrative of the challenged claims and is reproduced below, with additional numbering as added by Petitioner:

1. [1.1] A thermal or acoustical fiberglass insulation material comprising:
  - (a) [1.2] a collection of glass fibers; and
  - (b) [1.3] a binder disposed on the collection of glass fibers, wherein the binder comprises [1.4] i) at least one reaction product of a reducing sugar reactant and an amine reactant, [1.5] wherein the percent by dry weight of the reducing sugar reactant with respect to the total weight of reactants ranges from about 73% to about 96%, [1.6] ii) a silicon-containing coupling agent, and [1.7] iii) optionally, a corrosion inhibitor, [1.8] wherein the fiberglass material comprises less than 99% by weight and more than 75% by weight glass fibers, [1.9] and wherein the fiberglass material has a density of from about 0.4 lbs/ft<sup>3</sup> to about 6 lbs/ft<sup>3</sup>.

Ex. 1001, 88:28–43.

## II. DISCUSSION

### A. *Claim Construction*

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see Cuozzo Speed*

*Tech., LLC v. Lee*, 136 S. Ct. 2131, 2142–46 (2016) (upholding application of the broadest reasonable interpretation standard in an *inter partes* review). Under that standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner proposes express constructions for two claim terms—“amine reactant” and “the binder contains about 4 percent to about 5 percent nitrogen by mass as determined by elemental analysis.” Pet. 8–13. After considering the parties’ arguments and the evidence before us, we determine it is not necessary to construe any claim term expressly to determine whether to institute trial. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”).

#### *B. Level of Ordinary Skill in the Art*

Petitioner contends that a person of ordinary skill in the art (“POSITA”) “would have been someone with a Ph.D. in Chemistry and 3–5 years of industry experience in binder development for insulating *or analogous products*, or someone with a Bachelor of Science degree in Chemistry or Chemical Engineering and 10 or more years of experience in binder development for the manufacture of insulating *or analogous products*.” Pet. 10 (citing Ex. 1005 ¶ 38) (emphasis added). Patent Owner does not dispute Petitioner’s contention regarding the level of skill in the art.

We determine that “analogous products,” as set forth in Petitioner’s definition of a POSITA, is unclear and overly broad. Petitioner does not explain what it means by “analogous products,” and the phrase “insulating

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