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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

PACIFIC COAST BUILDING
PRODUCTS, INC.,

Plaintiff,

v.

CERTAINTEED GYPSUM, INC., et al.,

Defendants.

Case No. 18-CV-00346-LHK

**ORDER CONSTRUING DISPUTED
TERMS OF U.S. PATENT NOS.
8,181,738 AND 9,388,568**

Re: Dkt. No. 80

Plaintiff Pacific Coast Building Products, Inc. brings this action for patent infringement against Defendants Certainteed Gypsum, Inc. and Saint Gobain Performance Plastics Corp. The parties now seek construction of 6 disputed terms used in the claims of the following patents-in-suit: U.S. Patent Nos. 8,181,738 (“the ’738 Patent”) and 9,388,568 (“the ’568 Patent”).

I. BACKGROUND

A. Background and Description of the Inventions

The ’738 Patent is titled “Acoustical Sound Proofing Material with Improved Damping at Select Frequencies and Methods for Manufacturing Same.” It was filed on May 25, 2010 and issued on May 22, 2012.

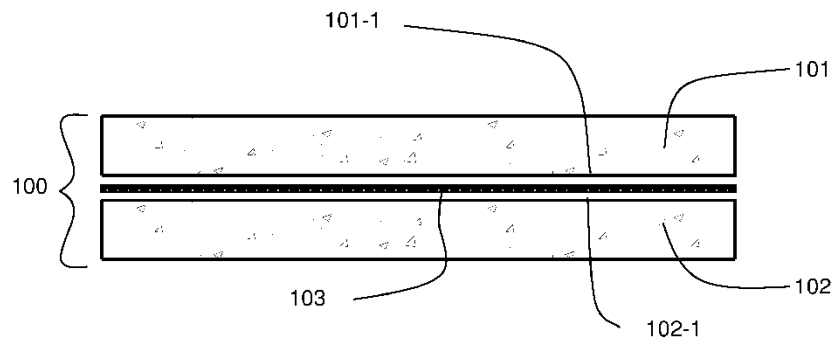
The ’568 Patent is titled “Acoustical Sound Proofing Material with Improved Fracture

1 Characteristics and Methods for Manufacturing Same.” It was filed on April 6, 2007 and issued on
2 July 12, 2016.

3 The Court will address each patent in turn.

4 **1. The '738 Patent**

5 The '738 Patent generally relates to “a panel tuned for performance at selected problem
6 frequencies to address the noise encountered in the building acoustics industry.” '738 Patent at
7 2:20-22. The Background section of the patent explains that soundproofed areas are desirable in a
8 variety of contexts, such as in apartments, schools, and hospitals. *See generally id.* at 1:27-52. The
9 Patent purports to improve upon soundproofing construction materials by disclosing, in one
10 embodiment, “a laminated substitute for drywall.” *Id.* at 2:34-35. Figure 1 exemplifies the
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17 **FIG. 1**

18 disclosed invention. Item 100 is a cross-section of the entire laminated structure, which is
19 composed of a top and bottom layer of gypsum boards, items 101 and 102, respectively. *Id.* at
20 5:49-52; 6:25. Item 103 is a layer of glue that is especially designed to dissipate energy (i.e.,
21 absorb noise), and is sandwiched in between the top and bottom boards. *Id.* at 6:35-39. The bottom
22 surface of the top board, item 101-1, and the top surface of the bottom board, item 102-1, can in
23 some embodiments be in direct contact with the layer of glue. *Id.* at 6:6-8, 24-27. “When energy in
24 sound interacts with the glue which is constrained by surrounding layers, the sound energy will be
25 significantly dissipated” *Id.* at 6:43-45.

26 **2. The '568 Patent**

1 Much like the '738 Patent, the '568 Patent is related to soundproofing. However, the
 2 problem that the '568 Patent attempts to address differs from that of the '738 Patent. The '568
 3 Patent recognizes that “laminated damped drywall panel,” which provides noise damping, can
 4 replace traditional drywall in construction. '568 Patent at 1:59-65. However, the laminated
 5 damped drywall panel cannot be easily cut to size at construction sites; oftentimes, the panels
 6 “must be scored multiple times and broken with great force over the edge of a table or
 7 workbench.” *Id.* at 1:67-2:4. The reason the prior art laminated damped drywall panel is so
 8 difficult to break is because “the component gypsum layers [of the panels] have a liner back paper
 9 (or liner fiberglass nonwoven) that has a high tensile strength.” *Id.* at 2:6-10.

10 The specification defines flexural strength to be the panel’s “ability to resist breaking when
 11 a force is applied to the center of a simply supported panel.” *Id.* at 2:46-48. When a panel is being
 12 fitted for installation, a low flexural strength is desired because once the installer scores the panel,
 13 “a low [flexural strength] value indicates that the scored panel may be easily fractured by hand
 14 without excessive force.” On the other hand, “[f]or a pristine panel, a high flexural strength is
 15 desirable since it allows for easy transportation and handling without panel breakage.” *Id.* at 2:56-
 16 68.

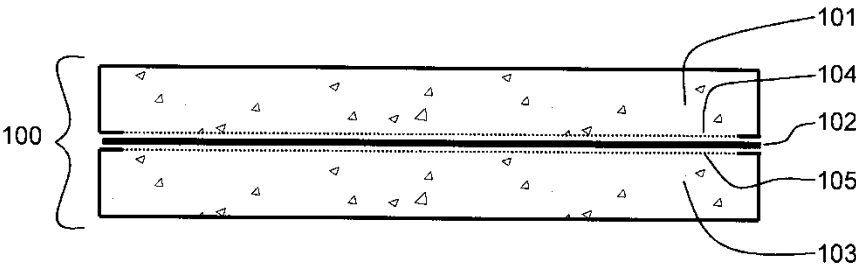


FIG. 1

22 Figure 1 illustrates an embodiment of the invention. Items 101 and 103 are the top and
 23 bottom gypsum board layers, respectively. *Id.* at 4:29, 5:35. The “bottom face of gypsum layer
 24 101 is an unfaced (without paper or fiberglass liner) interior surface 104.” *Id.* at 4:31-33.”
 25 Correspondingly, “[t]he top face of gypsum layer 103 is an unfaced (without paper or fiberglass
 26 liner) interior surface 105.” *Id.* at 5:38-40. Item 102 is a sound-dampening glue layer. *Id.* at 4:38-
 27 45. As a result of items 104 and 105 being unfaced (i.e., without paper or fiberglass liner), “[t]he
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1 flexural strength value of the finished laminate [panel] 100 significantly decreases.” *Id.* at 6:44-46.

2 **B. Implicated Claims**

3 The parties’ claim construction disputes concern claims 1 and 23 of the ’738 Patent and
4 claim 21 of the ’568 Patent. ECF No. 75 at 1-5.

5 **C. Procedural History**

6 On March 3, 2017, Plaintiff filed *Pacific Coast Building Products, Inc. v. CertainTeed*
7 *Gypsum, Inc.*, Case No. 17-cv-1116-LHK. Case No. 17-cv-1116-LHK, ECF No. 1. This case is
8 related to the instant case because the same two patents were being asserted. *Id.* However, the
9 related case was litigated until the parties stipulated to dismissal without prejudice on October 3,
10 2017. Case No. 17-cv-1116-LHK, ECF No. 58.

11 On January 16, 2018, Plaintiff filed the instant patent infringement suit against both
12 CertainTeed Gypsum, Inc. and Saint Gobain Performance Plastics Corp. ECF No. 1. On February
13 13, 2018, Defendants answered the complaint. ECF No. 32.

14 On August 29, 2018, the parties filed a joint claim construction and prehearing statement.
15 ECF No. 75. On September 28, 2018, the Plaintiff filed its opening claim construction brief. ECF
16 No. 80 (“Opening Br.”). On October 12, 2018, Defendants filed their responsive claim
17 construction brief. ECF No. 82 (“Resp. Br.”). On October 19, 2018, Plaintiff filed its reply
18 construction brief. ECF No. 83 (“Reply”).

19 The Court held a claim construction hearing on November 29, 2018.

20 **II. LEGAL STANDARD**

21 **A. Claim Construction**

22 The Court construes patent claims as a matter of law based on the relevant intrinsic and
23 extrinsic evidence. *See Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d
24 1272 (Fed. Cir. 2014) (en banc); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).
25 “Ultimately, the interpretation to be given a term can only be determined and confirmed with a full
26 understanding of what the inventors actually invented and intended to envelop with the claim.”
27 *Phillips*, 415 F.3d at 1316 (internal quotation marks and citation omitted). Accordingly, a claim

1 should be construed in a manner that “stays true to the claim language and most naturally aligns
2 with the patent’s description of the invention.” *Id.*

3 In construing disputed terms, a court looks first to the claims themselves, for “[i]t is a
4 ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the
5 patentee is entitled the right to exclude.’” *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari*
6 *Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Generally, the words of a claim
7 should be given their “ordinary and customary meaning,” which is “the meaning that the term[s]
8 would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at
9 1312-13. In some instances, the ordinary meaning to a person of skill in the art is clear, and claim
10 construction may involve “little more than the application of the widely accepted meaning of
11 commonly understood words.” *Id.* at 1314.

12 In many cases, however, the meaning of a term to a person skilled in the art will not be
13 readily apparent, and a court must look to other sources to determine the term’s meaning. *See id.*
14 Under these circumstances, a court should consider the context in which the term is used in an
15 asserted claim or in related claims and bear in mind that “the person of ordinary skill in the art is
16 deemed to read the claim term not only in the context of the particular claim in which the disputed
17 term appears, but in the context of the entire patent, including the specification.” *Id.* at 1313. The
18 specification “‘is always highly relevant’” and “[u]sually . . . dispositive; it is the single best
19 guide to the meaning of a disputed term.” *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic,*
20 *Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Indeed, “the only meaning that matters in claim
21 construction is the meaning in the context of the patent.” *Trs. of Columbia Univ. v. Symantec*
22 *Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016). Where the specification reveals that the patentee has
23 given a special definition to a claim term that differs from the meaning it would ordinarily possess,
24 “the inventor’s lexicography governs.” *Id.* at 1316. Likewise, where the specification reveals an
25 intentional disclaimer or disavowal of claim scope by the inventor, the inventor’s intention as
26 revealed through the specification is dispositive. *Id.*

27 In addition to the specification, a court may also consider the patent’s prosecution history,

1 which consists of the complete record of proceedings before the United States Patent and
2 Trademark Office (“PTO”) and includes the cited prior art references. The prosecution history
3 “can often inform the meaning of the claim language by demonstrating how the inventor
4 understood the invention and whether the inventor limited the invention in the course of
5 prosecution, making the claim scope narrower than it would otherwise be.” *Id.* at 1317.

6 A court is also authorized to consider extrinsic evidence in construing claims, such as
7 “expert and inventor testimony, dictionaries, and learned treatises.” *Markman v. Westview*
8 *Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). Expert
9 testimony may be particularly useful in “[providing] background on the technology at issue, . . .
10 explain[ing] how an invention works, . . . ensur[ing] that the court’s understanding of the technical
11 aspects of the patent is consistent with that of a person of skill in the art, or . . . establish[ing] that
12 a particular term in the patent or the prior art has a particular meaning in the pertinent field.”
13 *Phillips*, 415 F.3d at 1318. Although a court may consider evidence extrinsic to the patent and
14 prosecution history, such evidence is considered “less significant than the intrinsic record” and
15 “less reliable than the patent and its prosecution history in determining how to read claim terms.”
16 *Id.* at 1317-18 (internal quotation marks and citations omitted). Thus, while extrinsic evidence
17 may be useful in claim construction, ultimately “it is unlikely to result in a reliable interpretation
18 of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1319. Any
19 expert testimony “that is clearly at odds with the claim construction mandated by the claims
20 themselves, the written description, and the prosecution history” will be significantly discounted.
21 *Id.* at 1318 (internal quotation marks and citation omitted). Finally, while the specification may
22 describe a preferred embodiment, the claims are not necessarily limited only to that embodiment.
23 *Id.* at 1323; *see also Prima Tek II, L.L.C. v. Polypap, S.A.R.L.*, 318 F.3d 1143, 1151 (Fed. Cir.
24 2003) (“The general rule, of course, is that claims of a patent are not limited to the preferred
25 embodiment, unless by their own language.”).

26 **B. Indefiniteness**

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1 Under 35 U.S.C. § 112, ¶ 2 (2006 ed.),¹ a patent must “conclude with one or more claims
2 particularly pointing out and distinctly claiming the subject matter which the applicant regards as
3 [the] invention.” Section 112, ¶ 2 includes what is commonly called the “definiteness”
4 requirement. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2125 (2014). In *Nautilus*,
5 the United States Supreme Court held that “a patent is invalid for indefiniteness if its claims, read
6 in light of the specification delineating the patent, and the prosecution history, fail to inform, with
7 reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus*, 134 S. Ct.
8 at 2124. As the Court observed, § 112, ¶ 2 “entails a ‘delicate balance.’” *Id.* (quoting *Festo Corp.*
9 *v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002)). “On the one hand, the
10 definiteness requirement must take into account the inherent limitations of language.” *Id.* (citing
11 *Festo*, 535 U.S. at 731). “At the same time, a patent must be precise enough to afford clear notice
12 of what is claimed, thereby ‘appris[ing] the public of what is still open to them.’” *Id.* (quoting
13 *Markman*, 517 U.S. at 373). Thus, “the certainty which the law requires in patents is not greater
14 than is reasonable, having regard to their subject-matter.” *Id.* at 2129 (quoting *Minerals*
15 *Separation v. Hyde*, 242 U.S. 261, 270 (1916)).

16 The Federal Circuit applied the *Nautilus* standard in *Interval Licensing LLC v. AOL, Inc.*,
17 766 F.3d 1364 (Fed. Cir. 2014). The case involved two patents which covered an “attention
18 manager for occupying the peripheral attention of a person in the vicinity of a display device.” *Id.*
19 at 1366. In one embodiment, the patents involved placing advertising on websites in areas
20 surrounding the principal content of the webpage, for example in the margins of an article.
21 Several of the asserted claims included a limitation that the advertisements (“content data”) would
22 be displayed “in an unobtrusive manner that does not distract a user of the display device.” *Id.* at
23 1368. The district court found that the terms “in an unobtrusive manner” and “does not distract the
24 user” were indefinite, and the Federal Circuit affirmed. *Id.* at 1368-69. The Federal Circuit found

26 ¹ Paragraph 2 of 35 U.S.C. § 112 was replaced with newly designated § 112(b) when § 4(c) of the
27 America Invents Act (“AIA”), Pub. L. No. 112-29, took effect on September 16, 2012. Because
28 the applications resulting in ’568 Patent was filed before that date, the Court refers to the pre-AIA
version of § 112.

1 that the “‘unobtrusive manner’ phrase is highly subjective and, on its face, provides little guidance
2 to one of skill in the art” and “offers no objective indication of the manner in which content
3 images are to be displayed to the user.” *Id.* at 1371. Accordingly, the Court looked to the written
4 description for guidance. The Court concluded that the specification lacked adequate guidance to
5 give the phrase a “reasonably clear and exclusive definition, leaving the facially subjective claim
6 language without an objective boundary.” *Id.* at 1373. Accordingly, the claims containing the
7 “unobtrusive manner” phrase were indefinite.

8 In applying the *Nautilus* standard, the Federal Circuit has cautioned that “the dispositive
9 question in an indefiniteness inquiry is whether the ‘claims,’ not particular claim terms” fail the
10 *Nautilus* test. *Cox Commc’ns, Inc. v. Sprint Commc’n Co. LP*, 838 F.3d 1224, 1231 (Fed. Cir.
11 2016). For that reason, a claim term that “does not discernably alter the scope of the claims” may
12 fail to serve as a source of indefiniteness. *Id.* For example, in *Cox Communications*, the Federal
13 Circuit determined that the term “processing system” did not render the method claims at issue
14 indefinite because “the point of novelty resides with the steps of these methods, not with the
15 machine that performs them.” *Id.* at 1229. Thus, the court reasoned, “[i]f ‘processing system’ does
16 not discernably alter the scope of the claims, it is difficult to see how this term would prevent the
17 claims . . . from serving their notice function under § 112, ¶ 2.” *Id.*

18 The Court therefore reviews the claims, specification, and prosecution history to determine
19 whether the claims “inform, with reasonable certainty, those skilled in the art about the scope of
20 the invention.” *Nautilus*, 134 S. Ct. at 2124. Indefiniteness renders a claim invalid, and must be
21 shown by clear and convincing evidence. *See Halliburton Energy Servs. v. M-I LLC*, 514 F.3d
22 1244, 1249 (Fed. Cir. 2008); *cf. Nautilus*, 134 S. Ct. at 2130 n.10.

23 **III. DISCUSSION**

24 The parties request construction of 2 terms in the ’738 Patent and 4 terms in the ’568
25 Patent. The Court addresses each term in each patent in turn.

26 **A. The ’738 Patent**

27 The parties request construction of 2 terms, both present in claims 1 and 23 of the ’738
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1 Patent.

2 **1. “external surface”**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
The functional surface of the material on the outside of the laminated panel	Plain and ordinary meaning

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5 The term “external surface” appears in claims 1 and 23 of the ’738 Patent. For example,
6 claim 1 of the ’738 Patent recites:

- 7 1. A laminated panel comprising:
8 a first layer of material having an **external surface** and an internal surface;
9 a second layer of material having an **external surface** and an internal surface;
10 a layer of viscoelastic glue in contact with the internal surface of said first layer of material
11 and with the internal surface of said second layer of material, thereby to bond together the first
12 layer of material and the second layer of material, said viscoelastic glue having an acrylic polymer
13 in a selected concentration between about 10% and about 60% by weight of acrylic polymer;
14 further wherein

15 the viscoelastic glue has a glass transition temperature less than room temperature.
16 ’738 Patent at 13:2-16 (emphasis added).

17 Plaintiff argues that “external surface” should be construed as “[t]he functional surface of
18 the material on the outside of the laminated panel.” Opening Br. at 22. Defendants argue that the
19 term can be construed by its plain and ordinary meaning. Resp. Br. at 24. At the claim
20 construction hearing, Plaintiff conceded that a plain and ordinary meaning construction would be
21 acceptable to the Plaintiff. For the reasons discussed below, the Court agrees with Defendants
22 based on the clear terms of the claim language.

23 a. Claim Language

24 Claim 1 of the ’738 Patent discloses “a first layer of material having an external surface” as
25 well as a “second layer of material having an external surface.” ’738 Patent at 13:3-5. The claim
26 also discloses that there is an internal surface of the first and second layers of material that is in
27 contact with a layer of viscoelastic glue that bonds together the first and second layers of material.

1 *Id.* at 13:7-11.

2 Plaintiff is concerned that the jury might be confused in understanding that “external
3 surface” means the external surfaces of the two layers as bonded together. Instead, Plaintiff argues
4 that the jury might incorrectly think that “external surface” refers to the two surfaces of each layer
5 of material that, when stuck together, comprise the laminated panel. Opening Br. at 23.

6 Plaintiff’s concerns are unjustified. Claim 1 requires the two layers of material be bonded
7 together by the viscoelastic glue. ’738 Patent at 13:9-11. Because the two layers of material are
8 bonded together by the glue, the two layers will form a laminated panel as a whole. Thus, taking
9 the claim as a whole, the claim language is unmistakable: “external surface” refers to the external
10 surfaces of the laminated panel as a whole. It does not refer to surfaces of the constituent layers of
11 the panel. The plain and ordinary meaning of “external surface” suffices to convey the relationship
12 between the “external surface” and the laminated panel to a jury.

13 Furthermore, Plaintiff’s construction is not supported by the claim or the specification.
14 Plaintiff attempts to call the external surface the “functional surface” of the panel, but the term
15 “functional surface” does not appear anywhere in the patent. “[T]he only meaning that matters in
16 claim construction is the meaning in the context of the patent.” *Symantec Corp.*, 811 F.3d at 1363.
17 Thus, in the context of the ’738 Patent, Plaintiff’s proposed construction would inject an
18 undefined limitation into the meaning of the claim terms.

19 Therefore, the Court adopts the Defendants’ position and construes “external surface” to
20 have its plain and ordinary meaning.

21 **2. “internal surface”**

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
The functional surface of the material on the inside of the laminated panel	Plain and ordinary meaning

22 The term “external surface” appears in claims 1 and 23 of the ’738 Patent. For example,
23 claim 1 of the ’738 Patent recites:

- 24 1. A laminated panel comprising:
25 a first layer of material having an external surface and an **internal surface**;

1 a second layer of material having an external surface and an **internal surface**;
2 a layer of viscoelastic glue in contact with the **internal surface** of said first layer of
3 material and with the **internal surface** of said second layer of material, thereby to bond together
4 the first layer of material and the second layer of material, said viscoelastic glue having an acrylic
5 polymer in a selected concentration between about 10% and about 60% by weight of acrylic
6 polymer; further wherein

7 the viscoelastic glue has a glass transition temperature less than room temperature.
8 '738 Patent at 13:2-16 (emphasis added).

9 Plaintiff argues that “external surface” should be construed as “[t]he functional surface of
10 the material on the inside of the laminated panel.” Opening Br. at 24. Defendants argue that the
11 term can be construed by its plain and ordinary meaning. Resp. Br. at 24. At the claim
12 construction hearing, Plaintiff conceded that a plain and ordinary meaning construction would be
13 acceptable to the Plaintiff. For the reasons discussed below, which are near-identical to the reasons
14 given in the construction of “external surface,” the Court agrees with Defendants based on the
15 clear terms of the claim language.

16 a. Claim Language

17 The Court begins and ends with the claim language. The claim language is clear that there
18 are two layers of material having both an “external surface” and an “internal surface.” '738 Patent
19 at 13:3-6. Furthermore, the patent clearly discloses that when the two internal surfaces are glued
20 together, the two layers form the laminated panel. *Id.* at 13:7-11. Thus, “internal surface” needs no
21 further explanation. The claim language makes it obvious that the internal surfaces are the surfaces
22 that are stuck together. Furthermore, the claim defines each layer of material to have an internal
23 surface. Thus, a jury would know from the claim language that “internal surface” refers to the
24 surface of each layer of material in contact with the glue.

25 Once again, Plaintiff’s attempt to introduce the limitation “functional surface” adds
26 unnecessary confusion to the claim term’s meaning. Presumably, the definition of what the
27 “functional surface” is in relation to the external surface is different from that of the internal

1 surface. However, Plaintiff proposes to use the same “functional surface” limitation in the claim
 2 constructions of “internal surface” and “external surface” even though it is clear from the claim
 3 itself that the function of the internal surface differs from that of the external surface. For instance,
 4 the internal surfaces are glued together, whereas the external surfaces are not. *Id.* at 13:7-11.
 5 Furthermore, as aforementioned, “functional surface” is left undefined in the patent, which adds to
 6 the potential confusion if Plaintiff’s construction were adopted.

7 Therefore, the Court adopts the Defendants’ position and construes “internal surface” to
 8 have its plain and ordinary meaning.

9 **B. The ’568 Patent**

10 The parties request construction of 4 terms, all present in claim 21 of the ’568 Patent.

- 11 **1. “a scored flexural strength of the laminated structure is about 22 pounds per ½**
 12 **inch thickness of the structure” and “the scored flexural strength being the**
 13 **flexural strength of the laminated structure after the outer, paper-clad surface of**
 14 **one of the first and second gypsum boards has been scored”**

Claim Term	Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
a scored flexural strength of the laminated structure is about 22 pounds per ½ inch thickness of the structure	The flexural strength of the laminated panel after the outer, paper-clad surface of one of the first and second gypsum boards has been scored is about 22 pounds per ½ inch thickness	Indefinite
the scored flexural strength being the flexural strength of the laminated structure after the outer, paper-clad surface of one of the first and second gypsum boards has been scored	Plain and ordinary meaning	Indefinite

15 The terms “a scored flexural strength of the laminated structure is about 22 pounds per ½
 16 inch thickness of the structure” and “the scored flexural strength being the flexural strength of the
 17 laminated structure after the outer, paper-clad surface of one of the first and second gypsum
 18 boards has been scored” appear in claim 21 of the ’568 Patent. For example, claim 21 of the ’568
 19 Patent recites:

20 21. A laminated, sound-attenuating structure which comprises:

1 a first gypsum board having two surfaces, the first of said two surfaces comprising an
2 outer, paper-clad surface and the second of said two surfaces comprising an inner surface, wherein
3 the entire inner surface of the first gypsum board is unclad;

4 a layer of viscoelastic glue on the second of said two surfaces; and

5 a second gypsum board over said viscoelastic glue, said second gypsum board having two
6 surfaces, the first of said two surfaces of said second gypsum board comprising an outer, paper-
7 clad surface and the second of said two surfaces of said second gypsum board comprising an inner
8 surface, wherein the entire inner surface of the second gypsum board is unclad;

9 **a scored flexural strength of the laminated structure is about 22 pounds per ½ inch**
10 **thickness of the structure;**

11 **the scored flexural strength being the flexural strength of the laminated structure**
12 **after the outer, paper-clad surface of one of the first and second gypsum boards has been**
13 **scored.**

14 '568 Patent at 10:13-30 (emphasis added).

15 Plaintiff argues that the claim language of the claim term beginning with “a scored flexural
16 strength” (the first bolded paragraph) should be construed as “the flexural strength of the
17 laminated panel after the outer, paper-clad surface of one of the first and second gypsum boards
18 has been scored is about 22 pounds per ½ inch thickness.” Opening Br. at 9. Plaintiff also argues
19 that the claim language of the claim term beginning with “the scored flexural strength” (the second
20 bolded paragraph) should be given its plain and ordinary meaning. *Id.* at 3. Defendants believe
21 both claim terms are indefinite. Resp. Br. at 8. For the reasons discussed below, the Court agrees
22 with the Defendants.

23 a. Indefiniteness

24 In support of indefiniteness, Defendants argue that the phrase “scored flexural strength” is
25 a phrase unique to the Patent, which fails to describe how to measure “scored flexural strength”
26 for three reasons. First, the Patent fails to describe how deep someone is scoring the laminated
27 panel. *Id.* at 8. Second, the Patent fails to provide guidance as to how to convert the scored flexural

1 strength of a laminated panel of one thickness to the scored flexural strength of a laminated panel
2 of a different thickness. *Id.* There are multiple methods by which flexural strength measurements
3 can be converted between panels of different thicknesses, and the Patent fails to explain how this
4 could be accomplished. *Id.* This conversion process is important because the '568 Patent's claim
5 discloses a flexural strength of a scored panel of about 22 pounds for a ½ inch panel. '586 Patent
6 at 10:30. As explained above, flexural strength is the panel's "ability to resist breaking when a
7 force is applied to the center of a simply supported panel." *Id.* at 2:46-48. Scored flexural strength
8 is defined by the claim as "the flexural strength . . . after the outer, paper-clad surface of one of the
9 first and second gypsum boards has been scored." *Id.* at 10:31-34. Scoring the panel is done to
10 make it easier to fracture a panel for fitting and installation. *Id.* at 2:58-62. Thus, a scored panel
11 has a scored flexural strength that represents the force needed to fracture the scored panel for
12 fitting and installation. So, if a hypothetical panel that is not ½ inch is scored, to assess whether
13 that hypothetical panel would infringe the '568 Patent, that hypothetical panel's flexural strength
14 after scoring must be converted *assuming that hypothetical panel were ½ inch thick*. Therefore,
15 the method by which the scored flexural strength values of panels of differing thicknesses can be
16 converted to the scored flexural strength assuming the patent were ½ inch thick is important to
17 knowing whether other panels infringe claim 21. Third, the industry standard the patent discloses
18 for measuring flexural strength reports four results for flexural strength, not one, so a person of
19 ordinary skill in the art would not know which of the four results corresponds to the single
20 measurement in the claim term of 22 pounds per ½ inch thickness. Resp. Br. at 8.

21 On the other hand, Plaintiff argues that the specification provides a definition of "flexural
22 strength," that the specification discloses that "flexural strength" is measured using an industry
23 standard, and that the specification explains how to arrive at the "22 pounds per ½ inch thickness"
24 limitation. Opening Br. at 10.

25 i. Claim Language

26 The Court begins with the claim language. Claim 21 recites "a scored flexural strength of
27 the laminated structure." The Patent then defines "scored flexural strength" to be the "flexural
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1 strength of the laminated structure after the outer, paper-clad surface of one of the first and second
2 gypsum boards has been scored.” ’568 Patent at 10:29-34. However, there is neither an
3 explanation for how a skilled artisan can measure a scored flexural strength nor an explanation of
4 how deep the outer, paper-clad surface is scored. Thus, the Court turns to the specification to see if
5 it can fill these gaps.

6 ii. Specification

7 The specification also fails to define scored flexural strength, how to measure it, or how
8 deep to score the laminated panel. Plaintiff points to how the specification defines flexural
9 strength: “[T]he panel’s ability to resist breaking when a force is applied to the center of a simply
10 supported panel.” *Id.* at 2:47-48. Furthermore, the specification defines how to measure flexural
11 strength:

12 The measurement technique used to establish the flexural strength of
13 gypsum wallboard of similar construction panels is [industry
14 standard] ASTM [American Society of Testing and Materials
standard] C 473-06a “Standard Test Methods for the Physical Testing
of Gypsum Panel Products”

15 *Id.* at 2:50-53.

16 Nonetheless, flexural strength is not the same as *scored* flexural strength. What Plaintiff
17 points to in the specification discusses flexural strength, not scored flexural strength. Furthermore,
18 as explained below, the industry standard ASTM C473-06a merely discloses how to measure
19 flexural strength, not scored flexural strength.

20 In addition, though the parties’ experts might agree that “flexural strength” and “scored” as
21 separate phrases are definite, Opening Br. at 6, that does not necessarily mean that “scored flexural
22 strength” is definite. For example, the phrases “melting point” and “elevation” might be definite as
23 separate phrases, but the Federal Circuit held that together, the term “melting point elevation” was
24 indefinite because there were many methods that could be used to prepare a sample of the material
25 in question to test its melting point elevation. *Honeywell Int’l, Inc. v. Int’l Trade Comm’n*, 341
26 F.3d 1332, 1341 (Fed. Cir. 2003).

27 Here, the same problem as in *Honeywell* exists. The specification is limited to defining

1 how to measure flexural strength, and does not disclose a method of measuring scored flexural
2 strength. As discussed below, there are many methods by which a person of ordinary skill in the
3 art could go about testing scored flexural strength, and the patent provides absolutely no guidance
4 as to which method should be used. The Court moves on to the prosecution history to see if it
5 sheds any light on the relationship between flexural strength and scored flexural strength.

6 iii. Prosecution History

7 The prosecution history here demonstrates that the patentee admits that the prior art does
8 not disclose a “scored flexural strength.” In response to a rejection, the patentee amended the
9 claims to state that “the scored flexural strength being the flexural strength of the laminated
10 structure after the outer, paper-clad surface of one of the first and second gypsum boards has been
11 scored.” Request for Continued Examination at 3 (September 21, 2011). To distinguish the
12 amended claim over the prior art, the patentee argued that “[w]hile scoring wallboard panels is a
13 standard practice in the industry, *the prior art is silent with respect to a ‘scored flexural*
14 *strength.’” Id. at 26 (emphasis added).*

15 iv. Extrinsic Evidence

16 Extrinsic evidence confirms that there is no common understanding in the art of how to
17 measure scored flexural strength. Defendants’ expert, Dr. D. Paul Miller conducted extensive
18 testing using a sample of Plaintiff’s QuietRock EZ-Snap 5/8 inch product,² which meets all the
19 claim elements of claim 21. Because the Patent leaves score depth undefined and the industry
20 standard referenced in the Patent is only used to test flexural strength and not scored flexural
21 strength, Dr. Miller had to modify the industry standard testing protocol in order to arrive at values
22 for *scored* flexural strengths of test specimens. Plaintiff’s expert, Mr. Matthew Risinger, did not
23 conduct any independent testing.

24 First, Dr. Miller explains that the industry standard referenced in the Patent does not
25 disclose what is meant by scored flexural strength. Second, the industry standard to which the

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27 ² Plaintiff contends its own QuietRock EZ-Snap 5/8 inch product practices the claimed invention
28 of the ’568 Patent. ECF No. 82-4 at 5.

1 patent refers for measuring flexural strength reports four results for flexural strength, not one.
2 Thus, even if the industry standard could be used to measure scored flexural strength, one of skill
3 in the art would not know which of the four results corresponds to the single measurement in the
4 claim term of “22 pounds per ½ inch thickness.” Third, Dr. Miller’s testing obtained scored
5 flexural strength values for a 5/8-inch-thick panel,³ but the ’568 Patent fails to disclose how to
6 convert a scored flexural strength measurement for a 5/8-inch-thick panel to units of pounds per ½
7 inch panel thickness as specified in the claim.

8 First, the industry standard referenced in the Patent does not disclose what is meant by
9 scored flexural strength. Dr. Miller notes that the Patent discloses a standard—American Society
10 of Testing and Materials (“ASTM”) C473-06a—to test the flexural strength of gypsum panel
11 products. ECF No. 75-2 (“Miller Decl.”) at ¶¶ 3, 48-49. However, “neither the ASTM C473-06a
12 standard nor the ’568 patent provide any guidance for determining the ‘scored’ flexural strength of
13 a gypsum panel product or how deep to score the laminated structure. The flexural strength test
14 specimens in the ASTM C473-06a standard are not scored.” *Id.* at ¶ 49.

15 Plaintiff argues that the specification states that “the present invention . . . can be scored
16 and fractured in the *standard manner* used in construction” and then tested under ASTM C473-
17 06a. ’568 Patent at 6:66-7:2 (emphasis added). Plaintiff argues that the extrinsic evidence cited by
18 both sides shows that as used in construction, scoring means cutting through the outer, paper-clad
19 surface on one side of the panel. Opening Br. at 12. However, Dr. Miller’s flexural strength tests,
20 which were conducted by scoring Plaintiff’s QuietRock EZ-Snap 5/8 inch panel at different
21 depths, show that the scored flexural strength of the panel varies with the score depth. Miller Decl.
22 at ¶ 120. Consequently, the depth of the scoring matters in determining the scored flexural strength
23 of the panel.

24 Furthermore, Dr. Miller references eleven different variables that might affect score depth
25 during construction: personal preference, knife/blade used, sharpness or dullness of blade,

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27 ³ 5/8 inches is relevant here because that is the thickness of Plaintiff’s QuietRock EZ-Snap 5/8
28 inch panel, on which Dr. Miller conducted testing.

1 cleanliness of blade, time of day and level of fatigue, amount of leverage and angle of the blade,
2 horizontal or vertical position of the panel during scoring, thickness of the panel, type of panel,
3 size of the panel, and number of scores. *Id.* at ¶ 50. As a result, “[s]coring will vary from installer-
4 to-installer and even from product-to-product for an individual installer.” *Id.* Thus, the extrinsic
5 evidence shows that there is no scoring and fracturing in a “standard manner” used in construction,
6 and that ASTM C473-06a does not disclose a method of measuring scored flexural strength.

7 Second, ASTM C473-06a—the standard referenced in the Patent for measuring flexural
8 strength—reports four results for flexural strength, not one number like in the claim.⁴ ASTM
9 C473-06a specifies that to conduct a test of a gypsum panel, the panel should be cut into 12 inch
10 by 16 inch specimens. *Id.* at ¶ 51. Four test specimens should be produced, as ASTM C473-06a
11 instructs the tester to “[c]ut four specimens, each 12 in. . . . by 16 in. . . . from each gypsum panel
12 product in the sample, two having the 16-in. dimension parallel to the edge [of the gypsum panel]
13 and two having the 16-in. dimension perpendicular to the edge [of the gypsum panel].” ECF No.
14 82-6 at § 11.5.1. After cutting the test specimens, the specimens are conditioned for testing before
15 being tested in a “three-point bearing apparatus.” Miller Decl. at ¶¶ 55-56.

16 “ASTM C473-06a tests half of the specimens face-up and half face-down. For the two
17 specimens having the 16 in. dimension cut *parallel* to the ‘long edge’ (of the original gypsum
18 panel product), one specimen is arranged and tested ‘face up’ and the other is arranged and tested
19 ‘face down.’” *Id.* at ¶ 59 (emphasis added). “Face up” means that it is tested with the paper-clad
20 side facing up, and “face down” means the paper-clad side faces down when tested. *Id.*
21 Correspondingly, for the 2 specimens having the 16 in. diameter cut *perpendicular* to the “long
22 edge” of the gypsum panel, they are tested the same way: in a face-up and a face-down
23 configuration. *Id.* Therefore, four values for the flexural strength are reported after testing: “(1)
24 parallel, face up; (2) parallel, face down; (3) perpendicular, face up; (4) perpendicular, face
25 down.” *Id.* at ¶ 66. In contrast, and as aforementioned, the ’568 Patent reports only one value for
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27 ⁴ The claim language refers to a scored flexural strength of “about 22 pounds per ½ inch thickness
28 of the structure.” ’568 Patent at 10:30.

1 the scored flexural strength of the panel: 22 pounds per ½ inch thickness. Thus, using the ASTM
2 C473-06a standard, it is unclear to *which* testing value this scored flexural strength of the panel
3 refers: parallel face up or face down, or perpendicular face up or face down. A person of skill in
4 the art would not be able to tell to which measurement the Patent is referring.

5 Plaintiff argues that Dr. Miller’s opinions about the particular orientation of the specimen
6 are inapplicable to scored flexural strength. Plaintiff notes that “Dr. Miller opines that whether the
7 specimen is tested in a parallel or perpendicular orientation has an effect on its scored flexural
8 strength and that this difference is caused by the direction of the fibers in the outer paper of the
9 boards. . . . But that cannot be true for scored flexural strength testing because those paper fibers
10 on the surface are cut (scored) before testing such that their orientation no longer plays a role in
11 the board’s scored flexural strength.” Opening Br. at 14. However, Plaintiff offers no evidence, let
12 alone expert evidence, to support its claim that once scored, the paper fibers on the surface no
13 longer play a role in the board’s flexural strength. Dr. Miller’s test results, discussed below,
14 demonstrate that Plaintiff’s position is wrong; whether a specimen is tested in a parallel or
15 perpendicular orientation has an effect on the measurements of scored flexural strength.

16 Third, the ’568 Patent fails to disclose how to convert a measured scored flexural strength
17 of a 5/8 inch thick panel to the units of pounds per ½ inch thickness as claimed in the Patent. Dr.
18 Miller discusses two potential methods to convert the flexural strength measurement of a 5/8 inch
19 thick panel to a ½ inch thick panel. The first is the psi method, which looks to “standards for other
20 building materials, where there are standard accepted methods for converting flexural strength of a
21 product to structures of different thickness. For example, it is possible to apply the equation used
22 to calculate material flexural strength for wood and plastic.” Miller Decl. at ¶ 73. The second
23 method is linear extrapolation, which “means dividing the measured flexural strength by the
24 measured . . . [panel] thickness, and multiplying by ½ inch (the target thickness).” *Id.* at ¶ 77.
25 Linear extrapolation is also the method the Plaintiff advocates using. Opening Br. at 15.

26 Dr. Miller then conducted actual flexural strength tests on scored 5/8 inch thick gypsum
27 panels, modifying ASTM C473-06a to test scored panels. Miller Decl. at ¶¶ 88-90. These tests

1 were conducted to determine whether either the psi method or linear extrapolation can produce the
2 claimed scored flexural strength of “about 22 pounds per ½ inch thickness.” ’568 Patent at 10:30.

3 Because the claim does not disclose how deep to score the panel, Dr. Miller adapted the
4 ASTM C473-06a standard to test Plaintiff’s QuietRock EZ-Snap 5/8 inch panel at 5 different
5 score depths: 0.5 mm, 1.5 mm, 2.5 mm, 3.5 mm, and 4.5 mm. *Id.* at ¶ 97. All the different tested
6 score depths pierced through the paper cladding. *Id.* at ¶ 98. As explained above, because the tests
7 were conducted with 5/8 inch panels, the scored flexural strength results need to be converted to
8 strength measurements for a ½ inch panel, as the claim requires.

9 Dr. Miller’s results show that the psi method and the linear extrapolation method lead to
10 different scored flexural strength results such that a panel might infringe under one conversion
11 technique but not the other. *Id.* at ¶¶ 132-37. “Importantly, not a single result satisfies the claim
12 limitation using both the psi calculation and the linear extrapolation to convert from the 5/8 inch
13 result to the ½ inch result.” *Id.* at ¶ 135. Furthermore, the results confirm that “the scored flexural
14 value of a product varies depending on whether the test specimen was cut so that its 16-in.
15 dimension was parallel or perpendicular to the long edge of the original gypsum panel product.”
16 *Id.* at ¶ 126. Additionally, “the scored flexural strength of a product varies depending on how
17 deeply the product is scored.” *Id.* at ¶ 120.

18 Plaintiff responds by claiming:

19 The average scored flexural strength value of all scored samples . . .
20 [Dr. Miller] tested—regardless of score depth, orientation of sample
21 (face up/face down; parallel/perpendicular), and even including the
22 obvious outlier—is 23.5 pounds. With the obvious outlier excluded,
the average scored flexural value is 22.9 pounds. Both of these values
are consistent with the “about 22 pounds” portion of the claim
limitation at issue.

23 Opening Br. at 13-14. However, the problem with Plaintiff’s argument is that nowhere in the
24 claim does it say to *average* the scored flexural strength value of all scored samples. Claim 21
25 claims the “scored flexural strength of *the laminated structure* is about 22 pounds per ½ inch
26 thickness,” not an average from multiple laminated structures. ’568 Patent at 10:30 (emphasis
27 added). Admittedly, Figure 3 in the Patent discloses an averaged scored flexural strength value for

1 samples the patentee tested, but the specification lacks any detail about how the patentee went
2 about determining scored flexural strength other than to say it was tested in accordance with the
3 ASTM C473-06a standard. *Id.* at 6:41-42. As explained above, ASTM C473-06a does not disclose
4 how to test scored panels, so despite what the specification discloses, a person of skill in the art
5 would still not know how to go about conducting such a test. Moreover, because the specification
6 does not disclose how the patentee obtained the results in Figure 3, it is unclear which values and
7 from what tests are being averaged: a perpendicular, face-up sample, a parallel, face-down sample,
8 and so on. Finally, and most importantly, “[w]e do not read limitations from the specification into
9 claims” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012).
10 The fact that Figure 3 presents an averaged flexural strength value cannot be read to contradict the
11 plain claim language, which presents one unaveraged scored flexural strength value for “*the*
12 laminated structure.” ’568 Patent at 10:29.

13 v. Conclusion

14 Both the intrinsic evidence and the extrinsic evidence support the view that the claim is
15 indefinite because one of skill in the art would not know how to measure “scored flexural
16 strength.” The instant case is similar to a case where the claim term “molecular weight” was found
17 indefinite. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1344-45 (Fed. Cir. 2015). The
18 “molecular weight” of something could be determined any one of three possible ways. *Id.* at 1344.
19 The *Teva* patent specification never defined molecular weight or mentioned the three ways in
20 which it could be measured. *Id.* at 1344-45. As such, the court found that “the patentee has failed
21 to inform with *reasonable certainty* those skilled in the art about the scope of the invention.” *Id.* at
22 1345.

23 Similarly here, the patentee failed to inform a skilled artisan with reasonable certainty
24 about the scope of “scored flexural strength.” Like the term “molecular weight” in *Teva*, there are
25 multiple ways to measure scored flexural strength, which Dr. Miller proved by scoring the panels
26 he tested at different depths. As Dr. Miller’s test results showed, scoring at different depths
27 resulted in different scored flexural strength values. Miller Decl. at ¶ 120. Furthermore, as Dr.

1 Miller explained, following the Patent’s own directions to use ASTM C473-06a to test for scored
2 flexural strength would result in four values for flexural strength—perpendicular face up and face
3 down, and parallel face up and face down—not one value as in the Patent claim.

4 However, Plaintiff cites to case law for the proposition that just because certain testing
5 parameters are not disclosed, that does not render a claim term invalid. *See Koninklijke Philips*
6 *N.V. v. Zoll Med. Corp.*, 656 Fed. App’x 504 (Fed. Cir. 2016). In *Zoll*, the claim at issue was
7 directed to defibrillator electrodes. *Id.* at 525. The electrodes were used in combination with a
8 layer of electrolytic gel to measure the electrical resistance across two electrodes. *Id.* The Federal
9 Circuit noted that the age of the electrodes, the temperature at which the measurement should be
10 taken, and how many shocks have been previously applied across the electrodes might affect the
11 resistance measurement. *Id.* at 526. Nonetheless, the Federal Circuit held that it did not “find this
12 evidence to be so clearly in favor of finding the claims indefinite that we think it appropriate to
13 overturn the jury’s verdict.” *Id.*

14 However, *Zoll* is distinguishable from the instant case. The *Zoll* court thought that “[t]he
15 jury could have viewed the evidence on [the] number of sequential shocks and age of the
16 electrodes as a relatively minor source of imprecision in the claims.” *Id.* Here, we do not have a
17 “minor source” of imprecision in the claim language. As discussed above, Dr. Miller’s testing
18 demonstrates that there are major sources of imprecision resulting from the lack of clarity about
19 the score depth and the applicable testing methodology. Furthermore, the very methodology
20 disclosed by the ’568 Patent to quantify flexural strength, ASTM C473-06a, does not disclose a
21 way to measure scored flexural strength.

22 Plaintiffs also cite *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, which disclosed a patent
23 related to surgical shears for sealing blood vessels. 796 F.3d 1312, 1315 (Fed. Cir. 2015). The
24 *Ethicon* specification failed to specify a method to measure the clamping pressure of the shears,
25 but the Federal Circuit did not find the claim indefinite. *Id.* at 1318-19. The Federal Circuit found
26 that “skilled artisans would understand that the average clamping . . . pressures recited in the . . .
27 patent’s claims can be measured by measuring clamping force at the midpoint of the clamping

1 surface area.” Plaintiff interprets *Ethicon* to stand for the proposition that it is acceptable to take
2 the average scored flexural strength measurements in Dr. Miller’s testing and compare it to the
3 average claimed in the patent. Reply Br. at 7. However, *Ethicon* is distinguishable because “the
4 scope of the claims” were “concerned with average clamping . . . pressures.” *Id.* at 1320. Here,
5 there is no support in the claims or the specification for averaging different values of testing
6 results in order to arrive at one value for scored flexural strength. For instance, the patent does not
7 teach that in order to arrive at the claimed “around 22 pounds per ½ inch” strength value, a skilled
8 artisan averages the results from a perpendicular, face-up sample, a parallel, face-down sample,
9 and so on.

10 In sum, although the ’568 Patent specification mentions an industry standard for
11 determining flexural strength, the specification never discloses how to measure scored flexural
12 strength. As Dr. Miller’s expert evidence indicated, there are many ways of going about
13 determining the scored flexural strength of a panel. Furthermore, converting a scored flexural
14 strength of a 5/8 inch panel to a ½ inch panel introduces even more ambiguity into the claim.
15 Thus, the claim term “scored flexural strength” is indefinite. Therefore, the Court adopts
16 Defendants’ position and holds “a scored flexural strength of the laminated structure is about 22
17 pounds per ½ inch thickness of the structure” to be indefinite.

18 Furthermore, the Court finds the ’568 Patent’s second claim term “the scored flexural
19 strength being the flexural strength of the laminated structure after the outer, paper-clad surface of
20 one of the first and second gypsum boards has been scored” to be indefinite as well. This claim
21 term also uses the phrase “scored flexural strength” which, as the Court has discussed, is indefinite
22 because the way to measure scored flexural strength is undefined. Furthermore, the depth at which
23 to score the panel is left unspecified.

24 The parties agree that if the Court finds these two terms to be indefinite, then those terms
25 would be claim dispositive for claim 21 in the ’568 Patent. ECF No. 75 at 5 (“The parties believe
26 that if the Court finds that the two ‘flexural strength’ terms from the ’568 Patent are indefinite,
27 then those terms would be claim dispositive for the ’568 Patent.”). Therefore, the Court need not

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construe the two remaining terms in claim 21: “inner surface” and “outer, paperclad surface.”

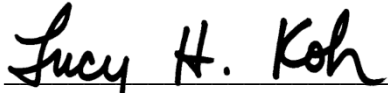
IV. CONCLUSION

For the foregoing reasons, the Court construes the disputed claim terms as follows:

1. “external surface” in the ’783 Patent as its plain and ordinary meaning;
2. “internal surface” ’783 Patent as its plain and ordinary meaning;
3. “a scored flexural strength of the laminated structure is about 22 pounds per ½ inch thickness of the structure” in the ’568 Patent as indefinite; and
4. “the scored flexural strength being the flexural strength of the laminated structure after the outer, paper-clad surface of one of the first and second gypsum boards has been scored” in the ’568 Patent as indefinite.

IT IS SO ORDERED.

Dated: November 29, 2018



LUCY H. KOH
United States District Judge