

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INTEX RECREATION CORP.,  
Petitioner,

v.

TEAM WORLDWIDE CORP.,  
Patent Owner.

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Case IPR2019-00243  
Patent 8,863,771 B2

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Before BEVERLY M. BUNTING, JAMES J. MAYBERRY, and  
ERIC C. JESCHKE, *Administrative Patent Judges*.

JESCHKE, *Administrative Patent Judge*.

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

## I. INTRODUCTION

### A. BACKGROUND

Intex Recreation Corporation (“Petitioner”) filed a Petition to institute an *inter partes* review of claims 1–4, 8, 12, 13, 17, 21, and 22 (the “challenged claims”) of U.S. Patent No. 8,863,771 B2 (Ex. 1001, “the ’771 patent”). Paper 1 (“Pet.”). Team Worldwide Corporation (“Patent Owner”) filed a Patent Owner’s Preliminary Response. Paper 6 (“Prelim. Resp.”).

Section 314(a) of Title 35 of the United States Code provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the evidence and arguments in the Petition (including its supporting testimonial evidence), as well as the evidence and arguments in the Preliminary Response, for the reasons below and based on the particular facts of this case, we exercise our discretion to deny institution.

### B. RELATED PROCEEDINGS

On the same day as the filing of the Petition here (November 12, 2018), Petitioner filed an additional petition for *inter partes* review of the ’771 patent in Case IPR2019-00244, in which Petitioner challenges claims 1 and 14–16. Pet. 1; Prelim Resp. 1 n.1. According to Patent Owner, the ’771 patent is not currently asserted in litigation. Prelim. Resp. 1.

On November 12, 2018, Petitioner also filed (1) a petition for *inter partes* review of U.S. Patent No. 9,989,979 B2 (“the ’979 patent”) in Case IPR2019-00245 and (2) a petition for post grant review of the ’979 patent in

Case PGR2019-00015.<sup>1</sup> Pet. 1; Paper 5 § II. The '979 patent issued from a division of the application that matured into the '771 patent.

C. REAL PARTIES IN INTEREST

The Petition indicates that, along with Petitioner, the following entities are real parties in interest: Intex Development Company Ltd.; Intex Industries (Xiamen) Co., Ltd.; Intex Marketing Ltd.; and Intex Trading Ltd. Pet. 1. Patent Owner identifies itself as the sole real party in interest. Paper 5 § I.

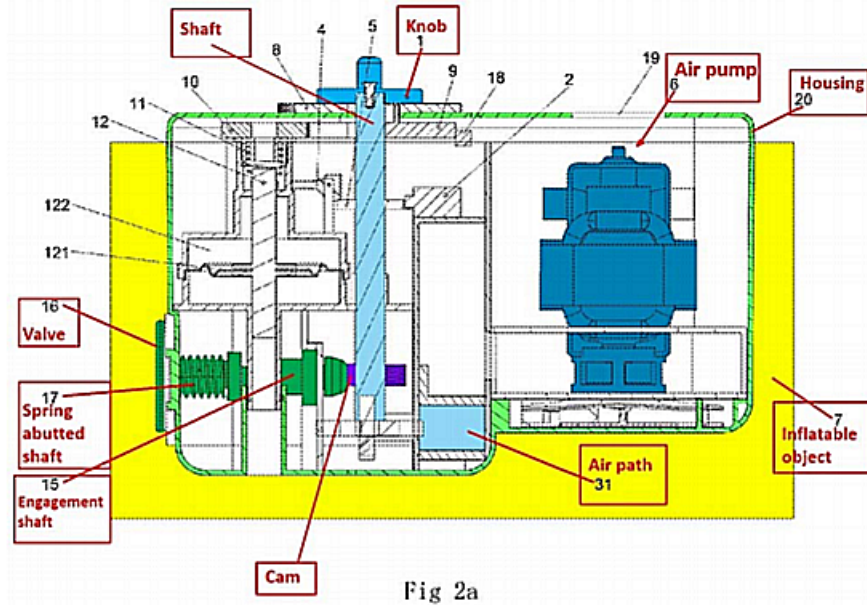
D. THE '771 PATENT

The '771 patent relates to “an inflating module used . . . to inflate [an] inflatable object and provide supplemental air pressure to the inflatable object when the air pressure of the inflatable object is under a predetermined level.” Ex. 1001, 1:10–13. According to the '771 patent, “[t]o avoid the inconvenience caused by [a] leak of the inflatable object, the best policy is that the air pressure of the inflatable object is maintained the entire time when the inflatable object is in use” and “the best option [for that purpose] is to use another air pump to provide additional air pressure to the inflatable object in time when the air pressure of the inflatable object is decreasing.” *Id.* at 1:35–41.

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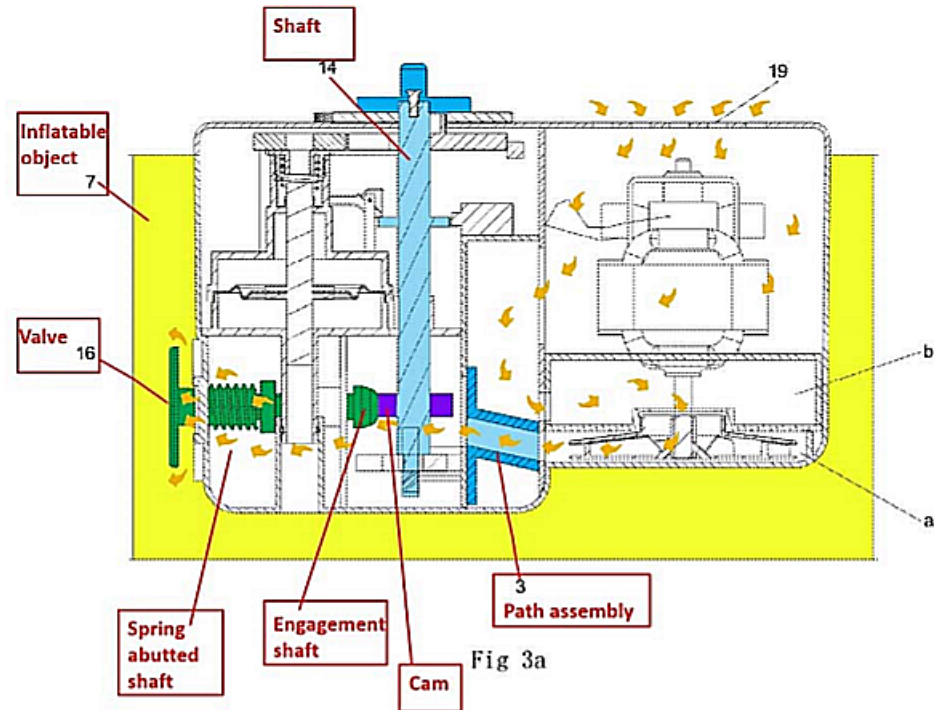
<sup>1</sup> We issue the decision on institution in Case IPR2019-00244 concurrently with this Decision.

A version of Figure 2a, with annotations added by Petitioner, is reproduced below.



Pet. 4. Figure 2a depicts a “cross sectional view showing [a] valve controlling assembly in association with [a] pressure sensing assembly.” Ex. 1001, 2:30–32. In the annotated version of Figure 2a above, Petitioner added (among other annotations) (1) light green shading to housing 20, (2) yellow shading to inflatable object 7, (3) dark blue shading to air pump 6, (4) green shading to valve 16, spring-abutted shaft 17, and engagement shaft 15, and (5) blue shading to both knob 1 and air path 31. Pet. 4.

A version of Figure 3a, with annotations added by Petitioner, is reproduced below.

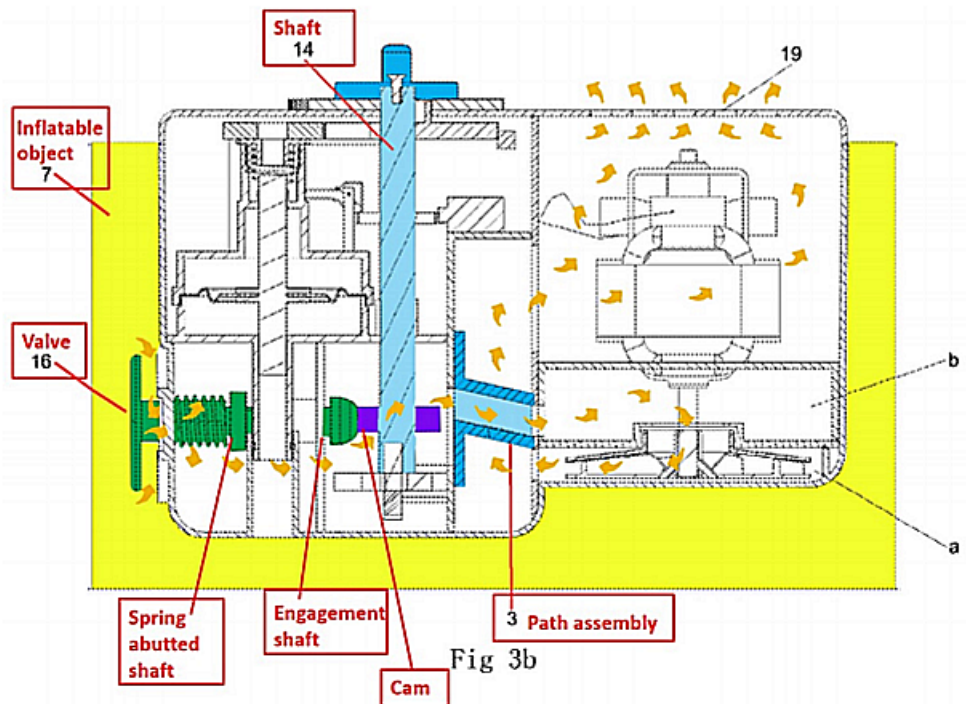


Pet. 6. Figure 3a depicts “a cross sectional view showing the operation of the valve controlling assembly,” which opens “an inflow path to allow air outside the inflatable object to flow into the inflatable object.” Ex. 1001, 2:36–39. As compared to annotated Figure 2a above, annotated Figure 3a adds, for example, orange arrows showing the flow path of air when pump 6 is used to inflate object 7. *See id.* at 4:15–17 (discussing how “air pump 6 can be activated to provide air flow into or out of the inflatable object, as can best be seen from FIGS. 3A and 3B”).<sup>2</sup> The ’771 patent discloses that, by rotating knob 1 (*see* Fig. 2a above), a user can control (1) the location of valve 16, (2) the operation of pump 6, and (3) the location of certain

<sup>2</sup> Throughout this Decision, we omit any bolding of reference numerals in quotations from the ’771 patent.

structures, including path assembly 3 (see Fig. 3a), to toggle between inflation and deflation of object 7. See *id.* at 3:46–48, 3:61–4:17.

A version of Figure 3b, with annotations added by Petitioner, is reproduced below.



Pet. 6. Figure 3b depicts “a cross sectional view showing the operation of the valve controlling assembly,” which opens “an outflow path to allow air inside the inflatable object to flow out of the inflatable object.” Ex. 1001, 2:40–43. As compared to annotated Figure 3a above, in annotated Figure 3b the orange arrows showing the flow path of air have changed to indicate that pump 6 is deflating object 7. See *id.* at 4:15–17.

A version of Figure 11, with annotations added by Petitioner, is reproduced below.

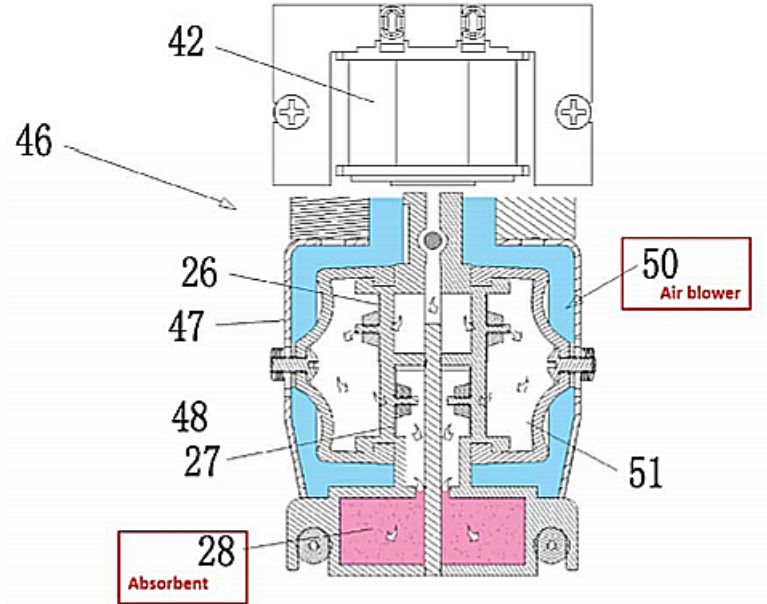


Fig 11

Pet. 7. Figure 11 depicts a “cross sectional view showing the internal structure of the supplemental air pressure providing device.” Ex. 1001, 3:1–2. In the annotated version of Figure 11 above, Petitioner added blue shading to air blower 50 and pink shading to absorbent 28. Pet. 7. The ’771 patent discloses:

After the supplemental air pressure providing device is in a standby mode, a pressure controlling assembly 121/122 as described starts monitoring air pressure in the inflatable object. Once the air pressure inside the inflatable object is below a predetermined range, the supplemental air pressure providing device will then automatically provide air pressure to the inflatable object to always maintain the air pressure of the inflatable object within a predetermined range.

Ex. 1001, 4:39–46.

E. ILLUSTRATIVE CLAIM

Petitioner challenges claims 1–4, 8, 12, 13, 17, 21, and 22, of which claims 1, 17, and 21 are independent. Claims 2–4, 8, 12, and 13 depend from claim 1, and claim 22 depends from claim 21. Claim 1 is reproduced below, with emphasis added to language relevant to the discussion below:

1. An inflating module adapted to an inflatable object, the inflating module comprising:

an air pump assembly selectively operable to inflate the inflatable object;

a *pressure controlling assembly* configured to monitor air pressure in the inflatable object after inflation of the inflatable body;

a supplemental air pressure providing device, wherein the *pressure controlling assembly* is configured to automatically activate the supplemental air pressure providing device when the air pressure inside the inflatable object decreases below a predetermined threshold after inflation, and to control the supplemental air pressure providing device to provide supplemental air pressure to the inflatable object so as to maintain the air pressure of the inflatable object within a predetermined range.

Ex. 1001, 5:35–50 (emphasis added).

F. THE ASSERTED REFERENCES

Petitioner relies on the following references in the asserted grounds of unpatentability:

US 6,721,980 B1, issued April 20, 2004 (Ex. 1006, “Price”);

US 7,789,194 B2, issued Sept. 7, 2010 (Ex. 1007, “Lathrop”); and

CN 1260478C (and certified translation), published June 21, 2006 (Ex. 1026 (Chinese version) and Ex. 1027 (certified translation), “Lin”).



G. ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner asserts the unpatentability of the challenged claims based on the following grounds:

Reference(s)	Basis	Claim(s) Challenged
Price	§ 102(b)	1
Price and Lin (Second Embodiment)	§ 103	2–4, 8, and 17
Price, Lin (Second Embodiment), and Lin (First Embodiment)	§ 103	3
Price and Lathrop	§ 103	12 and 13
Price, Lin, and Lathrop	§ 103	21 and 22

Petitioner supports its challenge with a declaration from Mr. Bernhard Kuchel (Ex. 1002).

II. DISCUSSION

A. THE LEVEL OF ORDINARY SKILL IN THE ART

The level of skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). In determining the level of ordinary skill in the art, we may consider certain factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (internal quotation marks and citation omitted).

Petitioner contends that a person having ordinary skill in the art (POSA) would have had a “bachelor’s degree in mechanical engineering, or an equivalent field, and two years of practical experience in inflatable product pump design” or, alternatively, an “associate’s degree in mechanical engineering, or an equivalent field, and four years of practical experience in inflatable product pump design.” Pet. 15–16 (citing Ex. 1002 ¶ 70).

Patent Owner agrees that the “persons Petitioner identified would qualify as a POSA,” but states that, in addition, “a person with an advanced engineering or physics degree having substantial background in research or teaching relating to pumps and fluid systems would be a POSA, even without two years of practical experience in inflatable product pump design.” Prelim Resp. 15. In other words, Patent Owner does not challenge the two alternative definitions of a POSA provided by Petitioner, and Patent Owner adds a third definition.

We agree with the parties that the scope of the level of ordinary skill in the art includes the two definitions provided by Petitioner and agreed to by Patent Owner. We base this determination on a review of the prior art of record concerning air pressure monitoring and control, valve controlling assemblies, and noise abatement. *See, e.g.*, Pet. 9–15 (discussing, for example, Exs. 1006, 1008–1025, 1027, 1030–1033); *see also* Ex. 1002 ¶¶ 38–69 (discussing the state of the art).

We do not include in the scope of the level of ordinary skill in the art the additional definition provided by Patent Owner because the scope of that definition is unclear. Specifically, Patent Owner has not adequately explained the amount of time necessary to obtain a “*substantial* background

in research or teaching relating to pumps and fluid systems.” Prelim. Resp. 15 (emphasis added).

B. CLAIM CONSTRUCTION

1. *The Applicable Standard*

Petitioner states that “[a] claim in an unexpired patent in IPR receives its broadest reasonable interpretation . . . in light of the specification.” Pet. 16 (citing 37 C.F.R. § 42.100(b); 83 Fed. Reg. 51,340). Patent Owner states that, in “this *inter partes* review proceeding, the Board gives claim terms their broadest reasonable interpretation,” but then asserts, in a footnote, that “the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) . . . has been recognized as the correct standard and should be applied to this case.” Prelim. Resp. 13, 13 n.4.

Patent Owner has not adequately explained the basis for its alternative position that the district-court-type claim construction standard should apply here. *See id.* at 13 n.4. The present Petition was accorded a filing date of November 12, 2018. Paper 3. The effective date of the recent amendment to 37 C.F.R. § 42.100(b) was the following day—November 13, 2018. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340, 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective Nov. 13, 2018).

Under the version of Rule 42.100(b) applicable based on the filing date of the Petition here, the Board interprets claim terms in an unexpired patent, such as the ’771 patent, using the broadest reasonable construction in light of the specification. 37 C.F.R. § 42.100(b) (2018); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of

the broadest reasonable interpretation standard as the claim interpretation standard to be applied in *inter partes* reviews). Under that standard, claim terms are generally given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Although the applicable version of Rule 42.100(b) permitted a party to request that the Board apply the district-court-type claim construction standard, Patent Owner here did not provide either the required certification or the required request. *See* 37 C.F.R. § 42.100(b). For these reasons, we apply the broadest reasonable construction in this proceeding.<sup>3</sup>

2. “*pressure controlling assembly*”

Independent claim 1 twice recites the term “pressure controlling assembly.”<sup>4</sup> *See* Ex. 1001, 5:39, 5:43. In relevant part, claim 1 requires “a *pressure controlling assembly* configured to monitor air pressure in the inflatable object after inflation of the inflatable body” and requires that:

the *pressure controlling assembly* is configured to automatically activate the supplemental air pressure providing device when the air pressure inside the inflatable object decreases below a predetermined threshold after inflation, and to control the supplemental air pressure providing device to provide supplemental air pressure to the inflatable object so as to

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<sup>3</sup> On the current record, the analysis below would not change if the district-court-type claim construction standard applied.

<sup>4</sup> Petitioner states that “pressure controlling assembly” is recited in “All Challenged Claims” (i.e., claims 1–4, 8, 12, 13, 17, 21, and 22) but also states (correctly) that “pressure controlling assembly” is recited only in claim 1 (and is included in claims 2–4, 8, and 12–16 as dependent from claim 1). Pet 17. We view the reference to “All Challenged Claims” as a typographical error.

maintain the air pressure of the inflatable object within a predetermined range.

*Id.* at 5:39–50 (emphasis added).

Petitioner argues that “pressure controlling assembly” “is a means-plus-function term.” Pet. 18. Patent Owner does not address this issue. *See generally* Prelim. Resp. The Federal Circuit has “stated that the use of the word ‘means’ in a claim element creates a rebuttable presumption that § 112, para. 6 applies” and that “the failure to use the word ‘means’ also creates a rebuttable presumption—this time that § 112, para. 6 does not apply.”<sup>5</sup> *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc in relevant part) (internal citations omitted). Because “pressure controlling assembly” does not include the word “means,” we start from the presumption that § 112 ¶ 6 does *not* apply.

This presumption, however, is not “strong” and can be overcome “if the challenger demonstrates that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* at 1349 (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)). Petitioner, relying on the testimony of Mr. Kuchel, argues that one of ordinary skill in the art “would not have understood ‘pressure controlling assembly’ to have a sufficiently definite meaning as the name for structure” and argues that “[t]he claims simply recite that the ‘pressure controlling assembly’ is configured to

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<sup>5</sup> Section 4(c) of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), re-designated 35 U.S.C. § 112 ¶ 6 as 35 U.S.C. § 112(f). Because the ’771 patent has a filing date prior to September 16, 2012 (the effective date of § 4(c) of the AIA), we refer to the pre-AIA version of 35 U.S.C. § 112. *See* AIA § 4(e).

perform the recited functions, without reciting any structure for performing those functions.” Pet. 17–18 (citing *Williamson*, 792 F.3d at 1348–49; Ex. 1001, claim 1; Ex. 1002 ¶¶ 71–73). Patent Owner “objects to Petitioner’s interpretation” of “pressure controlling assembly” but does not specifically address the applicability of § 112 ¶ 6. Prelim. Resp. 14.

We view the term “assembly” in the context of the limitation at issue as a generic term—similar to “mechanism,” “means,” “device,” and “element”—which “typically do[es] not connote sufficiently definite structure.” *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006) (“MIT”); *see also Askeladden L.L.C. v. Dig. Verification Sys. LLC*, Case IPR2018-00745, slip op. at 8 (PTAB Aug. 24, 2018) (Paper 9) (“In this case, ‘assembly’ is used as a generic place-holder for anything that performs the recited function, much as the word ‘means’ does.”).

And we view the modifying phrase “pressure controlling,” in the limitation at issue, as merely reciting a functional description of the generic “assembly.” When addressing similar claim limitations—i.e., ones reciting a functional descriptor combined with a generic term—the Federal Circuit has consistently determined that § 112 ¶ 6 applies. For example, in *MIT*, the court determined that “colorant selection mechanism” did not connote sufficient structure to one of ordinary skill in the art and that § 112 ¶ 6 applied. *See MIT*, 462 F.3d at 1354. Specifically, the court viewed “mechanism” as not, by itself, connoting sufficient structure and determined that “colorant selection” was not defined in the specification or otherwise understood to a person of ordinary skill in the art. *Id.* at 1353–54.

As another example, in *Mas–Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1214 (Fed. Cir. 1998), the court held that the district court was

correct to apply § 112 ¶ 6 to the recited “lever moving element” because that limitation was “described in terms of its function not its mechanical structure.” *See also Williamson*, 792 F.3d at 1349–51 (holding that § 112 ¶ 6 applied to “distributed learning control module” because “[m]odule’ is a well-known nonce word that can operate as a substitute for ‘means’ in the context of § 112, para. 6” and “[t]he prefix ‘distributed learning control’ does not impart structure into the term ‘module’”).

In contrast, in *Lighting World, Inc. v. Birchwood Lighting, Inc.*, the court determined that “connector assembly” recited sufficient structure (such that § 112 ¶ 6 did not apply), but the court based the analysis on evidence that “connector”—rather than “assembly”—was understood to denote structure. 382 F.3d 1354, 1359–63 (Fed. Cir. 2004), *overruled by Williamson*, 792 F.3d at 1349 (“expressly overrul[ing] the characterization of th[e] presumption [based on the absence of ‘means’] as ‘strong’”).

Significantly, we view the “pressure controlling assembly” limitation at issue here as more similar to the language in *MIT* and *Mas-Hamilton*, and less similar to the language in *Lighting World*. In addition, because Patent Owner did not submit the testimony of any declarant, the testimony of Petitioner’s declarant, Mr. Kuchel, as to this issue is unrebutted at this stage of the proceeding. *See Ex. 1002* ¶¶ 72–73. For these reasons, we determine, based on the current record, that Petitioner has overcome the presumption that § 112 ¶ 6 does not apply to the limitation “pressure controlling assembly.”

Having determined that § 112 ¶ 6 applies, we turn to the construction of “pressure controlling assembly.” To construe a limitation subject to § 112 ¶ 6, we first identify the claimed function or functions and then identify what

structure, if any, disclosed in the specification corresponds to the claimed function or functions. *Williamson*, 792 F.3d at 1351–52.

As to the first step, Petitioner states that “the claimed functions are, in short, monitoring air pressure, automatically activating the supplemental air pressure providing device, and controlling the supplemental air pressure providing device to provide supplemental air pressure.” Pet. 18 (citing Ex. 1001, claim 1; Ex. 1002 ¶ 74). Patent Owner does not address this issue. *See generally* Prelim. Resp. We generally agree with Petitioner’s summary of the three functions required of the “pressure controlling assembly,” and we note that the claim language at the beginning of this section provides added, and necessary, detail regarding the three required functions.

Turning to the second step, Petitioner argues that “the specification of the ’771 Patent does not disclose corresponding structure to perform any of the claimed functions.” Pet. 19. Petitioner identifies passages from (1) column 1, line 57 to column 2, line 7 and (2) column 4, lines 39 to 42 as the “only references to ‘pressure controlling assembly’ in the specification.” Pet. 19–20. According to Petitioner, in these passages, “the specification does not disclose any structure for performing the claimed functions, but rather refers to ‘pressure controlling assembly’ only in relation to its functions.” *Id.* at 20 (citing Ex. 1002 ¶¶ 75–76). The identified passage at column 4, lines 39 to 42 provides:

After the supplemental air pressure providing device is in a standby mode, a pressure controlling assembly 121/122 as described starts monitoring air pressure in the inflatable object.

Ex. 1001, 4:39–42. As noted by Petitioner, the only figure in the ’771 patent that includes reference numerals 121 and 122 is Figure 2a. *See* Pet. 20.



A version of Figure 2a, with annotations added by Petitioner, is reproduced below.

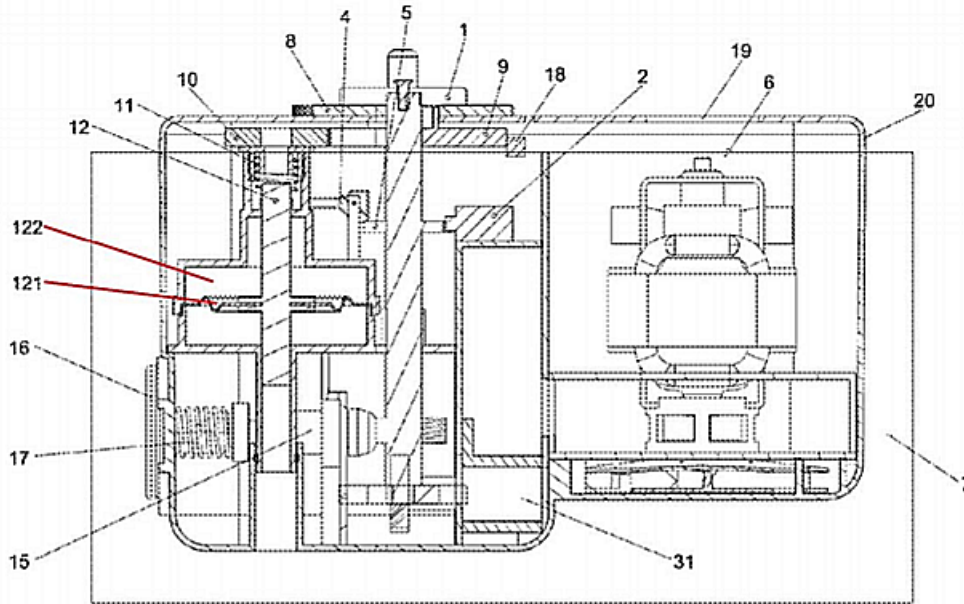


Fig 2a

Pet. 21. As noted above (§ I.D), Figure 2a depicts a “cross sectional view showing [a] valve controlling assembly in association with [a] pressure sensing assembly.” Ex. 1001, 2:30–32. In this annotated version of Figure 2a, Petitioner added two red lines over the lead lines for elements 121 and 122. Pet. 21.

Petitioner argues that the ’771 patent does not include sufficient description as to what elements 121 and 122 are. *See* Pet. 20 (“While the [passage at column 4, lines 39 to 42] refers to ‘121/122’ in the figures, there is absolutely no description or identification in the specification as to what, if anything, these structures are. The only figure that lists these numbers is Figure 2a (annotated [above]), but neither the Figure nor the specification identifies what, if anything, these numerals are pointing to.”).

As discussed above, Petitioner takes the position that “the specification does not disclose corresponding structure to all of the claimed functions” of the “pressure controlling assembly” limitation. Pet. 21. For purposes of this Decision, we need not and do not assess whether Petitioner’s position is correct. Instead, we merely determine that Petitioner has not adequately identified the structure(s), if any, disclosed in the ’771 patent that correspond to the three required functions of the “pressure controlling assembly.” See 37 C.F.R. § 42.104 (b)(3). On the current record, we do not fully construe that limitation.

### 3. *Other Claim Terms*

Petitioner proposes constructions for the following additional claim terms: (1) “integrally extending”; (2) “absorbent”; and (3) “an air chamber defined inside the housing for receiving therein absorbent and a noise silencer securely attached to the housing.” Pet. 21–27.

Patent Owner responds that none of these claim terms “require construction for purposes of the Preliminary Response and the Board’s institution decision.” Prelim. Resp. 14. We agree with Patent Owner. We do not discern a need to construe explicitly any of the claim language discussed in this section because doing so would have no effect on the analysis below. See *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

### C. CLAIMS 1–4, 8, 12 AND 13

For independent claim 1, Petitioner contends that Price discloses each of the limitations. Pet. 27–36. For dependent claims 2–4, 8, 12 and 13 (which depend from claim 1), Petitioner relies on Price in combination with

additional prior art, but the additional prior art is only relied on for limitations added with the dependent claims. *See id.* at 39–55 (claims 2, 4 and 8), 57–58 (claim 3), 64–72 (claims 12 and 13).

Patent Owner argues that “Petitioner cannot prove anticipation based on the evidence it has provided” because Petitioner “fails to identify *any* structure” for the “pressure controlling assembly,” and thus, according to Patent Owner, Petitioner “cannot prove a corresponding structure of an alleged means-plus-function term is present in the prior art.” Prelim. Resp. 17. For this and other reasons, Patent Owner argues that the Board should deny institution. *Id.*

Our rules require a petitioner to identify “[h]ow the challenged claim is to be construed” and also require (more specifically) that, if a challenged claim contains a means-plus-function limitation under 35 U.S.C. 112 ¶ 6, the petitioner “must identify the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function.” 37 C.F.R. § 42.104(b)(3). Here, Petitioner unambiguously argues that “pressure controlling assembly” is a “means-plus-function term” and that “the specification of the ’771 Patent does not disclose corresponding structure to perform any of the claimed functions.” Pet. 18, 19; *see also id.* at 17–21 (arguments addressing “pressure controlling assembly”). Petitioner advances unequivocal (and uncontroverted) expert testimony supporting that position. Ex. 1002 ¶¶ 71–77.

When a petitioner has not adequately identified a construction for a means-plus-function limitation, the Board typically denies institution or, if trial has already been instituted, determines that the petitioner has failed to carry its burden as to the challenges involving the means-plus-function

limitation. *See Becton, Dickinson & Co. v. Baxter Int'l*, Case IPR2018-01741, slip op. at 13–14 (PTAB March 18, 2019) (Paper 8) (collecting cases). Institution is denied in these situations because the basis for the petitioner’s challenge (at least as to the claims including means-plus-function limitations) cannot be adequately discerned, thereby depriving the patent owner of sufficient notice as to the challenges being made. *See id.* at 14–15.

This reasoning applies equally here, where Petitioner’s failure to identify the structure(s) (if any) disclosed in the ’771 patent corresponding to the three functions of the “pressure controlling assembly” leaves unclear the challenges as to claim 1 and its dependent claims 2–4, 8, 12, and 13. Moreover, as argued by Patent Owner, because Petitioner has not adequately identified the disclosed corresponding structure(s), Petitioner cannot properly apply the prior art to the “pressure controlling assembly” recited in claim 1. *See* Prelim. Resp. 17 (arguing that “Petitioner cannot prove anticipation based on the evidence it has provided”).

Although Petitioner does (at least in the alternative) identify certain features in Price as the recited “pressure controlling assembly” (*see, e.g.*, Pet. 32–36), we do not view this discussion by Petitioner as satisfying the requirement provided above. In an anticipation analysis, the step of construing a claim limitation *precedes* the step of comparing the construed limitation to the prior art. *See, e.g., In re Crish*, 393 F.3d 1253, 1256 (Fed. Cir. 2004) (“A determination that a claim is anticipated under 35 U.S.C. § 102(b) involves two analytical steps. First, the Board must interpret the claim language, where necessary. . . . Secondly, the Board must compare the construed claim to a prior art reference . . . .” (footnote omitted)); *Trintec*

*Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1294 (Fed. Cir. 2002) (“Because novelty’s identity requirement applies to claims, not specifications, the anticipation inquiry first demands a proper claim construction.” (internal citation omitted)); *compare* 37 C.F.R. § 42.104(b)(3) (addressing “How the challenged claim is to be construed”), *with* 37 C.F.R. § 42.104(b)(4) (addressing “How the *construed claim* is unpatentable under the statutory grounds identified” (emphasis added)). By purporting to perform the second step while affirmatively taking the position that the first step needs to be performed, but cannot be performed, Petitioner has not provided an adequate anticipation analysis to support institution.

Petitioner essentially argues that the presence of the limitation “pressure controlling assembly” renders claim 1 “indefinite.” Pet. 21 (citing Ex. 1002 ¶ 77). Patent Owner disagrees but does not explain why. Prelim. Resp. 18 (“Patent Owner does not agree that claim 1 is indefinite, but is merely responding to Petitioner’s allegation *arguendo* to establish that the Petition does not state proper grounds for *inter partes* review.”). As noted by Patent Owner, “indefiniteness is not a ground for *inter partes* review.” *Id.* (citing 35 U.S.C. § 311(b) (“The scope of *inter partes* review is limited to a ground raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.”)). For purposes of this Decision, we need not and do not take a position on whether the term “pressure controlling assembly” renders claim 1 indefinite.

For the reasons above, Petitioner has not established, on the current record, a reasonable likelihood in prevailing in showing that claim 1 is anticipated by Price. For the same reasons, Petitioner has not established a reasonable likelihood in prevailing in showing that claims 2–4, 8, 12, and

13—all dependent from claim 1—would have been obvious based on the identified prior art.

D. CLAIMS 17, 21, AND 22

Independent claim 17, independent claim 21, and dependent claim 22 (which depends from claim 21) do not require a “pressure controlling assembly”—the claim term at issue in the prior section. Ex. 1001, 7:24–37, 8:7–53. For claim 17, Petitioner relies on the combination of Price and Lin (second embodiment). Pet. 55–57. For claims 21 and 22, Petitioner relies on the combination of Price, Lin, and Lathrop. *Id.* at 73–76.

As to claim 17, Patent Owner argues that Price does not disclose certain limitations (which are also recited in claim 1) and also argues that Petitioner has not presented adequate reasoning as to why one of ordinary skill in the art would have combined Price and Lin’s second embodiment. Prelim. Resp. 32–37. For claims 21 and 22, Patent Owner relies on arguments previously presented in the context of claims 1 and 17, based on allegedly similar claim language. *Id.* at 38–39.

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Even when a petitioner demonstrates a reasonable likelihood of prevailing with respect to one or more claims, however, institution remains discretionary. *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review . . . .” (emphasis omitted)); *Cuozzo Speed Techs.*, 136 S. Ct. at 2140 (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s

discretion.”); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that, under § 314(a), “the PTO is permitted, but never compelled, to institute an IPR proceeding”).

In addition, Office guidance issued after the Supreme Court’s decision in *SAS Institute* explains that, when deciding whether to institute *inter partes* review under 35 U.S.C. § 314(a), the Board may consider (1) the fact that, prior to the decision in *SAS*, some claims would have been denied institution because a petitioner does not provide a construction under 35 U.S.C. § 112 ¶ 6, and (2) the overall number of claims and grounds that meet the reasonable likelihood standard versus the number that do not. *See* U.S. Patent & Trademark Office, *SAS* Q&As, §§ D3 & D4, (June 5, 2018), available at [https://www.uspto.gov/sites/default/files/documents/sas\\_qas\\_20180605.pdf](https://www.uspto.gov/sites/default/files/documents/sas_qas_20180605.pdf) (stating, in both instances, that a panel “will evaluate the challenges and determine whether, in the interests of efficient administration of the Office and integrity of the patent system . . . , the entire petition should be denied under 35 USC § 314(a)”); *see also id.* § D (“Effect of *SAS* on future challenges that could be denied for statutory reasons”). We address these two considerations in turn below.

Of the challenged claims, *seven* of the *ten* challenged claims include the term “pressure controlling assembly,” for which Petitioner has not provided a construction under § 112 ¶ 6. For the reasons discussed above (*see* § II.C), prior to the Supreme Court’s decision in *SAS*, we would have denied institution as to at least claims 1–4, 8, 12, and 13. *See, e.g., Oticon Med. AB v. Cochlear Bone Anchored Sols. AB*, Case IPR2017-01018, slip op. at 7–11 (PTAB Sept. 5, 2017) (Paper 7) (denying institution, in a pre-*SAS* decision, as to a subset of claims that included means-plus-function

limitations for which petitioner did not provide a construction). And even after the decision in *SAS*, the Board has followed similar reasoning to deny institution overall when, like here, a majority of the challenged claims included means-plus-function limitations for which a petitioner did not provide a construction. *See, e.g., Nikon Corp. v. ASML Netherlands B.V.*, Case IPR2018-00220, slip op. at 7–19 (PTAB June 4, 2018) (Paper 8).

Turning to the second consideration listed above, even if we *assume* Petitioner has shown a reasonable likelihood of prevailing with respect to at least one of claims 17, 21, and 22, the result following the decision in *SAS* would be a trial in which Petitioner takes the position that *seven* of the *ten* challenged claims are not amenable to construction and in which Petitioner stands reasonably likely of showing, *at best*, only *three* of *ten* challenged claims unpatentable. *SAS Inst.*, 138 S. Ct. at 1359–60; *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (“Equal treatment of claims and grounds for institution purposes has pervasive support in *SAS*.”); U.S. Patent and Trademark Office, Guidance on the impact of *SAS* on AIA trial proceedings, available at <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial> (Apr. 26, 2018). Facing similar factual scenarios after the decision in *SAS*, the Board has exercised its discretion to deny institution under § 314(a). *See Deeper, UAB v. Vexilar, Inc.*, Case IPR2018-01310, slip op. at 41–43 (PTAB Jan. 24, 2019) (Paper 7) (informative); *Chevron Oronite Co. v. Infineum USA L.P.*, Case IPR2018-00923, slip op. at 8–11 (PTAB Nov. 7, 2018) (Paper 9) (informative).

As such, we determine that both of these considerations weigh in favor of exercising our discretion under § 314(a) to deny institution here.



We also consider this proceeding in light of the parallel proceeding in IPR2019-00244 (“the -244 IPR”), filed by Petitioner on the same day as the Petition in this proceeding. In the -244 IPR, Petitioner challenges claims 1 and 14–16, all of which depend from claim 1. Thus, *all* of the claims challenged in the -244 IPR include the “pressure controlling assembly” discussed above. Petitioner takes the same positions in the -244 IPR as to the term “pressure controlling assembly” as taken here, and we denied institution in that proceeding. Instituting in *this* proceeding and denying institution in the -244 IPR, however, would seem incongruous, in that claim 1 and its dependent claims would be addressed in one proceeding and not the other, despite the same arguments by both parties addressing those claims in both proceedings.

In conclusion, based on the particular facts of this proceeding, instituting a trial with respect to *all ten* challenged claims based on evidence and arguments directed to only *three* claims would not be an efficient use of the Board’s time and resources (*see Deeper, UAB*, slip op. at 43 (citing *Chevron Oronite*, slip op. at 10–11)), especially in the light of (1) the fact that seven of the challenged claims include a means-plus-function limitation for which Petitioner has not adequately identified a construction and (2) the outcome in the -244 IPR addressing the same patent.

For these reasons, we exercise our discretion to not institute *inter partes* review with respect to claims 17, 21, and 22.

### III. CONCLUSION

For the reasons above, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to at least

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Patent 8,863,771 B2

one of challenged claims 1–4, 8, 12, and 13 of the '771 patent. In addition, we exercise our discretion and deny the Petition as to claims 17, 21, and 22.

#### IV. ORDER

For the reasons above, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), the Petition is denied, and no *inter partes* review is instituted for claims 1–4, 8, 12, 13, 17, 21, and 22 of U.S. Patent No. 8,863,771 B2.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INTEX RECREATION CORP.,  
Petitioner,

v.

TEAM WORLDWIDE CORP.,  
Patent Owner.

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Case IPR2019-00244  
Patent 8,863,771 B2

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Before BEVERLY M. BUNTING, JAMES J. MAYBERRY, and  
ERIC C. JESCHKE, *Administrative Patent Judges*.

JESCHKE, *Administrative Patent Judge*.

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

## I. INTRODUCTION

### A. BACKGROUND

Intex Recreation Corporation (“Petitioner”) filed a Petition to institute an *inter partes* review of claims 1 and 14–16 (the “challenged claims”) of U.S. Patent No. 8,863,771 B2 (Ex. 1101, “the ’771 patent”). Paper 1 (“Pet.”). Team Worldwide Corporation (“Patent Owner”) filed a Patent Owner’s Preliminary Response. Paper 6 (“Prelim. Resp.”).

Section 314(a) of Title 35 of the United States Code provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Upon consideration of the evidence and arguments in the Petition (including its supporting testimonial evidence), as well as the evidence and arguments in the Preliminary Response, for the reasons below, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. We thus deny institution of *inter partes* review.

### B. RELATED PROCEEDINGS

On the same day as the filing of the Petition here (November 12, 2018), Petitioner filed an additional petition for *inter partes* review of the ’771 patent in Case IPR2019-00243, in which Petitioner challenges claims 1–4, 8, 12, 13, 17, 21, and 22. Pet. 1; Prelim Resp. 1 n.1. According to Patent Owner, the ’771 patent is not currently asserted in litigation. Prelim. Resp. 1.

On November 12, 2018, Petitioner also filed (1) a petition for *inter partes* review of U.S. Patent No. 9,989,979 B2 (“the ’979 patent”) in Case

IPR2019-00245 and (2) a petition for post grant review of the '979 patent in Case PGR2019-00015.<sup>1</sup> Pet. 1; Paper 5 § II. The '979 patent issued from a division of the application that matured into the '771 patent.

C. REAL PARTIES IN INTEREST

The Petition indicates that, along with Petitioner, the following entities are real parties in interest: Intex Development Company Ltd.; Intex Industries (Xiamen) Co., Ltd.; Intex Marketing Ltd.; and Intex Trading Ltd. Pet. 1. Patent Owner identifies itself as the sole real party in interest.

Paper 5 § I.

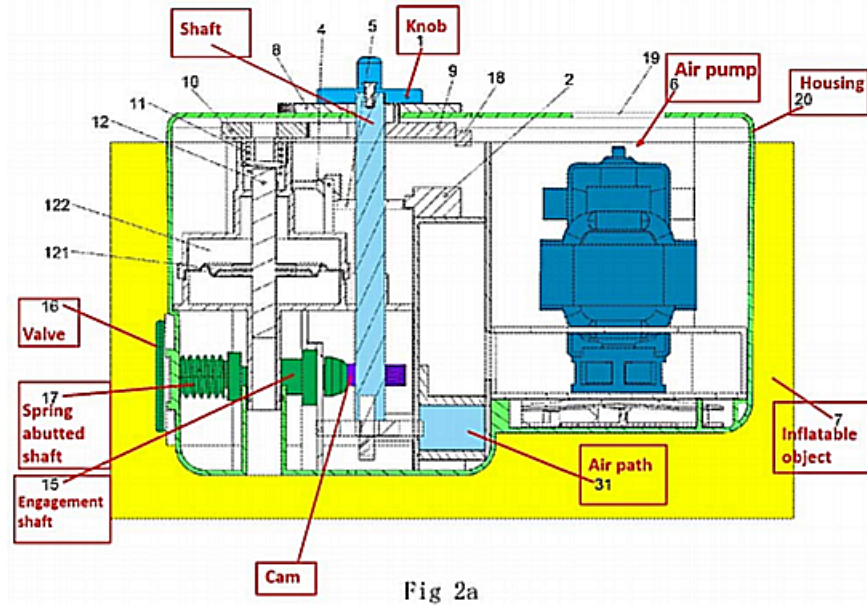
D. THE '771 PATENT

The '771 patent relates to “an inflating module used . . . to inflate [an] inflatable object and provide supplemental air pressure to the inflatable object when the air pressure of the inflatable object is under a predetermined level.” Ex. 1101, 1:10–13. According to the '771 patent, “[t]o avoid the inconvenience caused by [a] leak of the inflatable object, the best policy is that the air pressure of the inflatable object is maintained the entire time when the inflatable object is in use” and “the best option [for that purpose] is to use another air pump to provide additional air pressure to the inflatable object in time when the air pressure of the inflatable object is decreasing.” *Id.* at 1:35–41.

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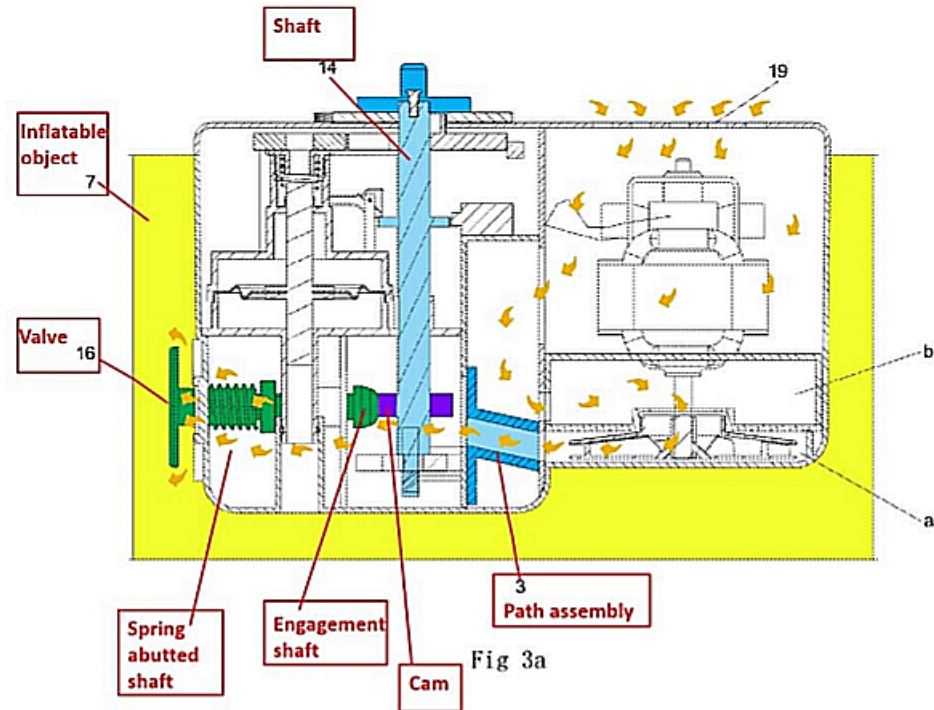
<sup>1</sup> We issue the decision on institution in Case IPR2019-00243 concurrently with this Decision.

A version of Figure 2a, with annotations added by Petitioner, is reproduced below.



Pet. 4. Figure 2a depicts a “cross sectional view showing [a] valve controlling assembly in association with [a] pressure sensing assembly.” Ex. 1101, 2:30–32. In the annotated version of Figure 2a above, Petitioner added (among other annotations) (1) light green shading to housing 20, (2) yellow shading to inflatable object 7, (3) dark blue shading to air pump 6, (4) green shading to valve 16, spring-abutted shaft 17, and engagement shaft 15, and (5) blue shading to both knob 1 and air path 31. Pet. 4.

A version of Figure 3a, with annotations added by Petitioner, is reproduced below.



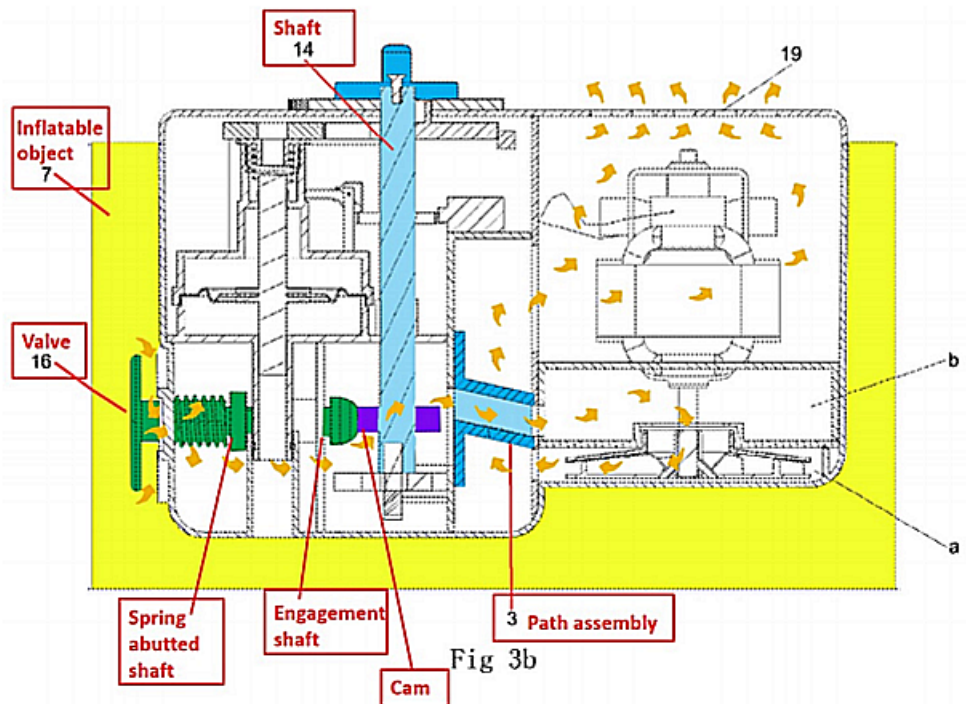
Pet. 6. Figure 3a depicts “a cross sectional view showing the operation of the valve controlling assembly,” which opens “an inflow path to allow air outside the inflatable object to flow into the inflatable object.” Ex. 1101, 2:36–39. As compared to annotated Figure 2a above, annotated Figure 3a adds, for example, orange arrows showing the flow path of air when pump 6 is used to inflate object 7. *See id.* at 4:15–17 (discussing how “air pump 6 can be activated to provide air flow into or out of the inflatable object, as can best be seen from FIGS. 3A and 3B”).<sup>2</sup> The ’771 patent discloses that, by rotating knob 1 (*see* Fig. 2a above), a user can control (1) the location of valve 16, (2) the operation of pump 6, and (3) the location of certain

<sup>2</sup> Throughout this Decision, we omit any bolding of reference numerals in quotations from the ’771 patent.



structures, including path assembly 3 (see Fig. 3a), to toggle between inflation and deflation of object 7. See *id.* at 3:46–48, 3:61–4:17.

A version of Figure 3b, with annotations added by Petitioner, is reproduced below.



Pet. 6. Figure 3b depicts “a cross sectional view showing the operation of the valve controlling assembly,” which opens “an outflow path to allow air inside the inflatable object to flow out of the inflatable object.” Ex. 1101, 2:40–43. As compared to annotated Figure 3a above, in annotated Figure 3b, the orange arrows showing the flow path of air have changed to indicate that pump 6 is deflating object 7. See *id.* at 4:15–17.

A version of Figure 11, with annotations added by Petitioner, is reproduced below.

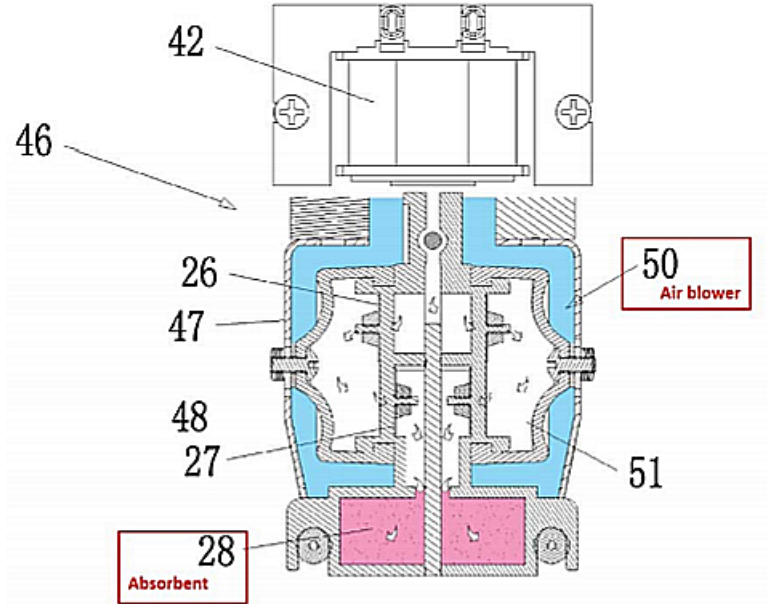


Fig 11

Pet. 7. Figure 11 depicts a “cross sectional view showing the internal structure of the supplemental air pressure providing device.” Ex. 1101, 3:1–2. In the annotated version of Figure 11 above, Petitioner added blue shading to air blower 50 and pink shading to absorbent 28. Pet. 7. The ’771 patent discloses:

After the supplemental air pressure providing device is in a standby mode, a pressure controlling assembly 121/122 as described starts monitoring air pressure in the inflatable object. Once the air pressure inside the inflatable object is below a predetermined range, the supplemental air pressure providing device will then automatically provide air pressure to the inflatable object to always maintain the air pressure of the inflatable object within a predetermined range.

Ex. 1101, 4:39–46.

E. ILLUSTRATIVE CLAIM

Petitioner challenges claims 1 and 14–16, of which only claim 1 is independent. Claim 1 is reproduced below, with emphasis added to language relevant to the discussion below:

1. An inflating module adapted to an inflatable object, the inflating module comprising:

an air pump assembly selectively operable to inflate the inflatable object;

a *pressure controlling assembly* configured to monitor air pressure in the inflatable object after inflation of the inflatable body;

a supplemental air pressure providing device, wherein the *pressure controlling assembly* is configured to automatically activate the supplemental air pressure providing device when the air pressure inside the inflatable object decreases below a predetermined threshold after inflation, and to control the supplemental air pressure providing device to provide supplemental air pressure to the inflatable object so as to maintain the air pressure of the inflatable object within a predetermined range.

Ex. 1101, 5:35–50 (emphasis added).

F. THE ASSERTED REFERENCES

Petitioner relies on the following references in the asserted grounds of unpatentability:

US 6,928,681 B1, issued August 16, 2005 (Ex. 1110, “Stacy”);

US 6,721,980 B1, issued April 20, 2004 (Ex. 1106, “Price”);

US 7,789,194 B2, issued September 7, 2010 (Ex. 1107, “Lathrop”);

US 5,716,199, issued February 10, 1998 (Ex. 1108, “Shan-Chieh”);

and

US 7,434,283 B2, issued October 14, 2008 (Ex. 1109, “Wilkinson”).

G. ASSERTED GROUNDS OF UNPATENTABILITY

Petitioner asserts the unpatentability of the Challenged Claims based on the following grounds:

Reference(s)	Basis	Claim(s) Challenged
Stacy	§ 102(b)	1
Price and Lathrop	§ 103	14 and 15
Price and Shan-Chieh	§ 103	14 and 15
Price and Wilkinson	§ 103	16 <sup>3</sup>

Petitioner supports its challenge with a declaration from Mr. Bernhard Kuchel (Ex. 1102, “the Kuchel Declaration”).

II. DISCUSSION

A. THE LEVEL OF ORDINARY SKILL IN THE ART

The level of skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). In determining the level of ordinary skill in the art, we may consider certain factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with

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<sup>3</sup> Petitioner does not list claim 1 as challenged in the context of any of the three grounds involving Price. *See* Pet. 26. Prior to addressing dependent claims 14 and 15 (for the grounds of Price in view of Lathrop and Price in view of Shan-Chieh) or addressing dependent claim 16 (for the ground of Price in view of Wilkinson), however, Petitioner states the position that Price anticipates claim 1. *See* Pet. 58–62 (discussing how Price anticipates claim 1), 67 (relying on prior discussion), 74 (same).

which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (internal quotation marks and citation omitted).

Petitioner contends that a person having ordinary skill in the art (POSA) would have had a “bachelor’s degree in mechanical engineering, or an equivalent field, and two years of practical experience in inflatable product pump design” or, alternatively, an “associate’s degree in mechanical engineering, or an equivalent field, and four years of practical experience in inflatable product pump design.” Pet. 25 (citing Ex. 1102 ¶ 59).

Patent Owner agrees that the “persons Petitioner identified would qualify as a POSA,” but states that, in addition, “a person with an advanced engineering or physics degree having substantial background in research or teaching relating to pumps and fluid systems would be a POSA, even without two years of practical experience in inflatable product pump design.” Prelim Resp. 16. In other words, Patent Owner does not challenge the two alternative definitions of a POSA provided by Petitioner, and Patent Owner adds a third definition.

We agree with the parties that the scope of the level of ordinary skill in the art includes the two definitions provided by Petitioner and agreed to by Patent Owner. We base this determination on a review of the prior art of record concerning air pressure monitoring and control, and noise abatement. *See, e.g.*, Pet. 9–25 (discussing, for example, Exs. 1106, 1108–1125); *see also* Ex. 1102 ¶¶ 38–58 (discussing the state of the art).

We do not include in the scope of the level of ordinary skill in the art the additional definition provided by Patent Owner because the scope of that definition is unclear. Specifically, Patent Owner has not adequately

explained the amount of time necessary to obtain a “*substantial* background in research or teaching relating to pumps and fluid systems.” Prelim. Resp. 16 (emphasis added).

B. CLAIM CONSTRUCTION

1. *The Applicable Standard*

Petitioner states that “[a] claim in an unexpired patent in IPR receives its broadest reasonable interpretation . . . in light of the specification.” Pet. 26 (citing 37 C.F.R. § 42.100(b); 83 Fed. Reg. 51,340). Patent Owner states that, in “this *inter partes* review proceeding, the Board gives claim terms their broadest reasonable interpretation,” but then asserts, in a footnote, that “the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) . . . has been recognized as the correct standard and should be applied to this case.” Prelim. Resp. 14, 14 n.3.

Patent Owner has not adequately explained the basis for its alternative position that the district-court-type claim construction standard should apply here. *See id.* at 14 n.3. The present Petition was accorded a filing date of November 12, 2018. Paper 3. The effective date of the recent amendment to 37 C.F.R. § 42.100(b) was the following day—November 13, 2018. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340, 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective Nov. 13, 2018).

Under the version of Rule 42.100(b) applicable based on the filing date of the Petition here, the Board interprets claim terms in an unexpired patent, such as the ’771 patent, using the broadest reasonable construction in light of the specification. 37 C.F.R. § 42.100(b) (2018); *Cuozzo Speed*

*Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard as the claim interpretation standard to be applied in *inter partes* reviews). Under that standard, claim terms are generally given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Although the applicable version of Rule 42.100(b) permitted a party to request that the Board apply the district-court-type claim construction standard, Patent Owner here did not provide either the required certification or the required request. *See* 37 C.F.R. § 42.100(b). For these reasons, we apply the broadest reasonable construction in this proceeding.<sup>4</sup>

2. “*pressure controlling assembly*”

Independent claim 1 twice recites the term “pressure controlling assembly.”<sup>5</sup> *See* Ex. 1101, 5:39, 5:43. In relevant part, claim 1 requires “a *pressure controlling assembly* configured to monitor air pressure in the inflatable object after inflation of the inflatable body” and requires that:

the *pressure controlling assembly* is configured to automatically activate the supplemental air pressure providing device when the air pressure inside the inflatable object decreases below a predetermined threshold after inflation, and to control the supplemental air pressure providing device to provide supplemental air pressure to the inflatable object so as to

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<sup>4</sup> On the current record, the analysis below would not change if the district-court-type claim construction standard applied.

<sup>5</sup> Petitioner correctly states that “pressure controlling assembly” is recited in “All Challenged Claims” (i.e., claim 1 and claims 14–16 as dependent from claim 1). Pet 26.

maintain the air pressure of the inflatable object within a predetermined range.

*Id.* at 5:39–50 (emphasis added).

Petitioner argues that “pressure controlling assembly” “is a means-plus-function term under 35 U.S.C. § 112, ¶ 6 (pre-AIA).”<sup>6</sup> Pet. 27. Patent Owner does not address this issue. *See generally* Prelim. Resp. The Federal Circuit has “stated that the use of the word ‘means’ in a claim element creates a rebuttable presumption that § 112, para. 6 applies” and that “the failure to use the word ‘means’ also creates a rebuttable presumption—this time that § 112, para. 6 does not apply.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (en banc in relevant part) (internal citations omitted). Because “pressure controlling assembly” does not include the word “means,” we start from the presumption that § 112 ¶ 6 does *not* apply.

This presumption, however, is not “strong” and can be overcome “if the challenger demonstrates that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.* at 1349 (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)). Petitioner, relying on the testimony of Mr. Kuchel, argues that one of ordinary skill in the art “would not have understood ‘pressure controlling assembly’ to have a sufficiently definite meaning as the name for structure” and argues that “[t]he claims

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<sup>6</sup> Section 4(c) of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), re-designated 35 U.S.C. § 112 ¶ 6 as 35 U.S.C. § 112(f). Because the ’771 patent has a filing date prior to September 16, 2012 (the effective date of § 4(c) of the AIA), we agree with Petitioner that the pre-AIA version of 35 U.S.C. § 112 applies. *See* AIA § 4(e).



simply recite that the ‘pressure controlling assembly’ is configured to perform the [recited] functions, without reciting any structure for performing those functions.” Pet. 27–28 (citing Ex. 1101, claim 1; Ex. 1102 ¶¶ 60–63). Patent Owner “objects to Petitioner’s interpretation” of “pressure controlling assembly” but does not specifically address the applicability of § 112 ¶ 6. Prelim. Resp. 15.

We view the term “assembly” in the context of the limitation at issue as a generic term—similar to “mechanism,” “means,” “device,” and “element”—which “typically do[es] not connote sufficiently definite structure.” *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006) (“MIT”); *see also Askeladden L.L.C. v. Dig. Verification Sys. LLC*, Case IPR2018-00745, slip op. at 8 (PTAB Aug. 24, 2018) (Paper 9) (“In this case, ‘assembly’ is used as a generic place-holder for anything that performs the recited function, much as the word ‘means’ does.”).

And we view the modifying phrase “pressure controlling,” in the limitation at issue, as merely reciting a functional description of the generic “assembly.” When addressing similar claim limitations—i.e., ones reciting a functional descriptor combined with a generic term—the Federal Circuit has consistently determined that § 112 ¶ 6 applies. For example, in *MIT*, the court determined that “colorant selection mechanism” did not connote sufficient structure to one of ordinary skill in the art and that § 112 ¶ 6 applied. *See MIT*, 462 F.3d at 1354. Specifically, the court viewed “mechanism” as not, by itself, connoting sufficient structure and determined that “colorant selection” was not defined in the specification or otherwise understood to a person of ordinary skill in the art. *Id.* at 1353–54.

As another example, in *Mas–Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1214 (Fed. Cir. 1998), the court held that the district court was correct to apply § 112 ¶ 6 to the recited “lever moving element” because that limitation was “described in terms of its function not its mechanical structure.” *See also Williamson*, 792 F.3d at 1349–51 (holding that § 112 ¶ 6 applied to “distributed learning control module” because “[m]odule’ is a well-known nonce word that can operate as a substitute for ‘means’ in the context of § 112, para. 6” and “[t]he prefix ‘distributed learning control’ does not impart structure into the term ‘module’”).

In contrast, in *Lighting World, Inc. v. Birchwood Lighting, Inc.*, the court determined that “connector assembly” recited sufficient structure (such that § 112 ¶ 6 did not apply), but the court based the analysis on evidence that “connector”—rather than “assembly”—was understood to denote structure. 382 F.3d 1354, 1359–63 (Fed. Cir. 2004), *overruled by Williamson*, 792 F.3d at 1349 (“expressly overul[ing] the characterization of th[e] presumption [based on the absence of ‘means’] as ‘strong’”).

Significantly, we view the “pressure controlling assembly” limitation at issue here as more similar to the language in *MIT* and *Mas-Hamilton*, and less similar to the language in *Lighting World*. In addition, because Patent Owner did not submit the testimony of any declarant, the testimony of Petitioner’s declarant, Mr. Kuchel, as to this issue is unrebutted at this stage of the proceeding. *See Ex. 1102 ¶¶ 61–62*. For these reasons, we determine, based on the current record, that Petitioner has overcome the presumption that § 112 ¶ 6 does not apply to the limitation “pressure controlling assembly.”

Having determined that § 112 ¶ 6 applies, we turn to the construction of “pressure controlling assembly.” To construe a limitation subject to § 112 ¶ 6, we first identify the claimed function or functions and then identify what structure, if any, disclosed in the specification corresponds to the claimed function or functions. *Williamson*, 792 F.3d at 1351–52.

As to the first step, Petitioner recites three portions of claim 1 (*see* Pet. 28) and then states that “the claimed functions are those recited above; in short, monitoring air pressure, automatically activating the supplemental air pressure providing device, and controlling the supplemental air pressure providing device to provide supplemental air pressure” (*id.* at 29 (citing Ex. 1101, claim 1; Ex. 1102 ¶ 63)). Patent Owner does not address this issue. *See generally* Prelim. Resp. We agree that the claim language provided by Petitioner (*see* Pet. 28)—essentially the same as that provided at the beginning of this section—identifies the three required functions.

Turning to the second step, Petitioner argues that “the specification of the ’771 Patent does not disclose corresponding structure to perform any of the claimed functions.” Pet. 30. Petitioner identifies passages from (1) column 1, line 57 to column 2, line 7 and (2) column 4, lines 39 to 42 as the “only references to ‘pressure controlling assembly’ in the specification.” Pet. 30–31. According to Petitioner, in these passages, “the specification does not disclose any structure for performing the claimed functions, but rather refers to ‘pressure controlling assembly’ only in relation to its functions.” *Id.* at 31 (citing Ex. 1102 ¶¶ 64–65). The identified passage at column 4, lines 39 to 42 provides:

After the supplemental air pressure providing device is in a standby mode, a pressure controlling assembly 121/122 as described starts monitoring air pressure in the inflatable object.

Ex. 1101, 4:39–42. As noted by Petitioner, the only figure in the '771 patent that includes reference numerals 121 and 122 is Figure 2a. *See* Pet. 31.

A version of Figure 2a, with annotations added by Petitioner, is reproduced below.

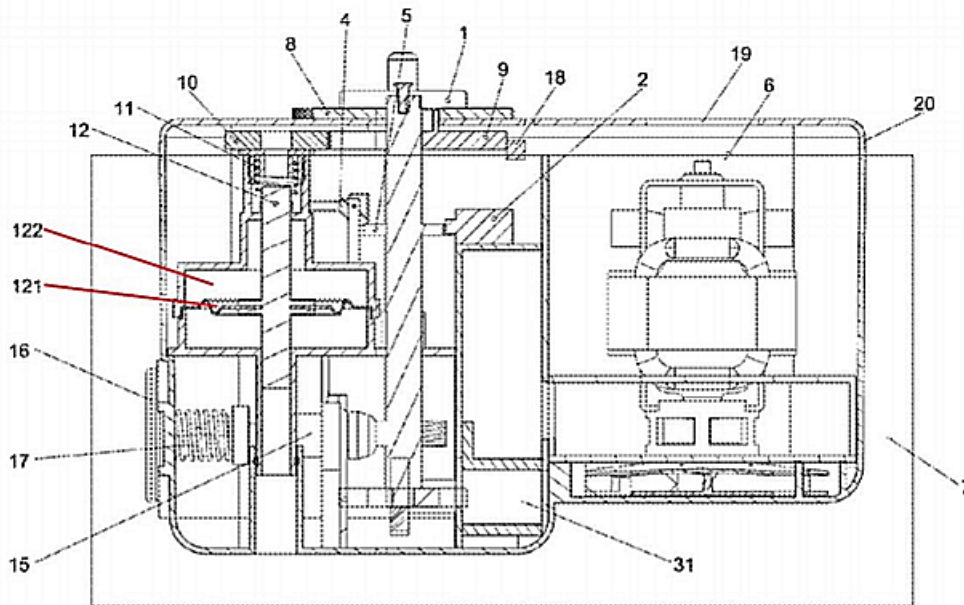


Fig 2a

Pet. 32. As noted above (§ I.D), Figure 2a depicts a “cross sectional view showing [a] valve controlling assembly in association with [a] pressure sensing assembly.” Ex. 1101, 2:30–32. In this annotated version of Figure 2a, Petitioner added two red lines over the lead lines for elements 121 and 122. Pet. 32.

Petitioner argues that the '771 patent does not include sufficient description as to what elements 121 and 122 are. *See* Pet. 31 (“While the [passage at column 4, lines 39 to 42] refers to ‘121/122’ in the figures, there is absolutely no description or identification in the specification as to what, if anything, these structures are. The only figure that lists these numbers is

Figure 2a, but as shown [above], the Figure does not identify what, if anything, these numerals are pointing to.”).

As discussed above, Petitioner takes the position that “the specification does not disclose corresponding structure to all of the claimed functions” of the “pressure controlling assembly” limitation. Pet. 32. For purposes of this Decision, we need not and do not assess whether Petitioner’s position is correct. Instead, we merely determine that Petitioner has not adequately identified the structure(s), if any, disclosed in the ’771 patent that correspond to the three required functions of the “pressure controlling assembly.” On the current record, we do not fully construe that limitation.

### 3. *Other Claim Term*

Petitioner proposes constructions for the following additional claim term: “noise silencing means for reducing noise inside the nozzle.” Pet. 33–35. Patent Owner responds that this claim term does not “require construction for purposes of the Preliminary Response and the Board’s institution decision.” Prelim. Resp. 15. We agree with Patent Owner. We do not discern a need to construe explicitly any of the claim language discussed in this section because doing so would have no effect on the analysis below. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

#### C. CLAIMS 1 AND 14–16

For independent claim 1, Petitioner contends that Stacy discloses each of the limitations (*see* Pet. 35–45) and also contends, in the context of the three grounds involving Price, that Price discloses each of the limitations of

claim 1 (*see* Pet. 58–62; *supra* n.3). For dependent claims 14–16 (which depend from claim 1), Petitioner relies on Price in combination with additional prior art, but the additional prior art is only relied on for limitations added with the dependent claims. *See* Pet. 58–66; *id.* at 39–55, 67–71, 74–77.

Patent Owner argues that “Petitioner cannot prove anticipation based on the evidence it has provided” because Petitioner “fails to identify *any* structure” for the “pressure controlling assembly,” and thus, according to Patent Owner, Petitioner “cannot prove a corresponding structure of an alleged means-plus-function term is present in the prior art.” Prelim. Resp. 18. For this and other reasons, Patent Owner argues that the Board should deny institution. *Id.*

Our rules require a petitioner to identify “[h]ow the challenged claim is to be construed” and also require (more specifically) that, if a challenged claim contains a means-plus-function limitation under 35 U.S.C. 112 ¶ 6, the petitioner “must identify the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function.” 37 C.F.R. § 42.104(b)(3). Here, Petitioner unambiguously argues that “pressure controlling assembly” is a “means-plus-function term” and that “the specification of the ’771 Patent does not disclose corresponding structure to perform any of the claimed functions.” Pet. 27, 30; *see also id.* at 26–32 (arguments addressing “pressure controlling assembly”). Petitioner advances unequivocal (and uncontroverted) expert testimony supporting that position. Ex. 1002 ¶¶ 60–66.

When a petitioner has not adequately identified a construction for a means-plus-function limitation, the Board typically denies institution or, if

trial has already been instituted, determines that the petitioner has failed to carry its burden as to the challenges involving the means-plus-function limitation. *See Becton, Dickinson & Co. v. Baxter Int'l*, Case IPR2018-01741, slip op. at 13–14 (PTAB March 18, 2019) (Paper 8) (collecting cases). Institution is denied in these situations because the basis for the petitioner’s challenge (at least as to the claims including means-plus-function limitations) cannot be adequately discerned, thereby depriving the patent owner of sufficient notice as to the challenges being made. *See id.* at 14–15.

This reasoning applies equally here, where Petitioner’s failure to identify the structure(s) (if any) disclosed in the ’771 patent corresponding to the three functions of the “pressure controlling assembly” leaves unclear the challenges as to claim 1 and its dependent claims 14–16. Moreover, as argued by Patent Owner, because Petitioner has not adequately identified the disclosed corresponding structure(s), Petitioner cannot properly apply the prior art to the “pressure controlling assembly” recited in claim 1. *See* Prelim. Resp. 18 (arguing that “Petitioner cannot prove anticipation based on the evidence it has provided”).

Although Petitioner does (at least in the alternative) identify certain features in Stacy (*see, e.g.*, Pet. 41–45) and Price (*see, e.g., id.* at 59–62) as the recited “pressure controlling assembly,” we do not view this discussion by Petitioner as satisfying the requirement provided above. In an anticipation analysis, the step of construing a claim limitation *precedes* the step of comparing the construed limitation to the prior art. *See, e.g., In re Crish*, 393 F.3d 1253, 1256 (Fed. Cir. 2004) (“A determination that a claim is anticipated under 35 U.S.C. § 102(b) involves two analytical steps. First,

the Board must interpret the claim language, where necessary. . . . Secondly, the Board must compare the construed claim to a prior art reference . . . .” (footnote omitted)); *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1294 (Fed. Cir. 2002) (“Because novelty’s identity requirement applies to claims, not specifications, the anticipation inquiry first demands a proper claim construction.” (internal citation omitted)); *compare* 37 C.F.R. § 42.104(b)(3) (addressing “How the challenged claim is to be construed”), *with* 37 C.F.R. § 42.104(b)(4) (addressing “How the *construed claim* is unpatentable under the statutory grounds identified” (emphasis added)). By purporting to perform the second step while affirmatively taking the position that the first step needs to be performed, but cannot be performed, Petitioner has not provided an adequate anticipation analysis to support institution.

Petitioner essentially argues that the presence of the limitation “pressure controlling assembly” renders claim 1 “indefinite.” Pet. 32 (citing Ex. 1102 ¶ 66). Patent Owner disagrees but does not explain why. Prelim. Resp. 19 (“Patent Owner does not agree that claim 1 is indefinite, but is merely responding to Petitioner’s allegation *arguendo* to establish that the Petition does not state proper grounds for *inter partes* review.”). As noted by Patent Owner, “indefiniteness is not a ground for *inter partes* review.” *Id.* (citing 35 U.S.C. § 311(b) (“The scope of *inter partes* review is limited to a ground raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.”)). For purposes of this Decision, we need not and do not take a position on whether the term “pressure controlling assembly” renders claim 1 indefinite.

For the reasons above, Petitioner has not established, on the current record, a reasonable likelihood in prevailing in showing that claim 1 is



anticipated by either Stacy or Price. For the same reasons, Petitioner has not established a reasonable likelihood in prevailing in showing that claims 14–16—all dependent from claim 1—would have been obvious based on the identified prior art.

### III. CONCLUSION

For the reasons above, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to at least one of challenged claims 1 and 14–16 of the '771 patent.

### IV. ORDER

For the reasons above, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), the Petition is denied, and no *inter partes* review is instituted for claims 1 and 14–16 of U.S. Patent No. 8,863,771 B2.

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Patent 8,863,771 B2

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