

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LIBERTY ENERGY, INC. AND LIBERTY OILFIELD SERVICES LLC,
Petitioners,

v.

U.S. WELL SERVICES, LLC,
Patent Owner.

IPR2025-00139
U.S. Patent No. 11,208,878 B2

PATENT OWNER'S PRELIMINARY RESPONSE

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PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	U.S. Patent No. 9,945,365 to Hernandez et al.
2002	Grizzly EnviroFrac website, (https://grizzlyservice.com/envirofrac/) (last accessed March 11, 2025)
2003	Patent Case Scheduling Order, <i>U.S. Well Services, LLC, et al v. Liberty Energy, Inc.</i> , et al, 4:2-cv-008939-KPE (S.D. Tex.), ECF No. 30.
2004	Petitioner's Invalidity Contentions Cover Pleading, <i>U.S. Well Services, LLC, et al v. Liberty Energy, Inc.</i> , et al, 4:2-cv-008939-KPE (S.D. Tex.).
2005	USPTO Announcement Rescinding Memorandum Addressing Discretionary Denial Procedures and Accompanying Memorandum

I. INTRODUCTION

Patent Owner U.S. Well Services LLC respectfully submits this Preliminary Response in accordance with 35 U.S.C. § 313 and 37 C.F.R. § 42.107, responding to the Petition for *inter partes* review (the “Petition”) filed by Liberty Energy Inc. and Liberty Energy Services LLC (“Petitioner”) challenging Claims 1-10 (the “challenged claims”) of U.S. Patent No. 11,208,878 (the “878 Patent”).

First and *second*, the Board should use its discretion to deny the petition because of its voluminous and excessive grounds that lack particularity. The 878 Patent contains 10 claims with only one independent claim, yet the Petition asserts at least **twenty grounds**¹ of alleged invalidity. For cases like this that result in such “voluminous and excessive grounds,” the Board can exercise its discretion to deny an entire petition “in the interests of efficient administration of the Office and integrity of the patent system and as a matter of procedural fairness to Patent Owner.” *Adaptics Ltd. v. Perfect Co.*, IPR2018-01596, Paper 20 at 24. (PTAB Mar. 6, 2019) (informative). In addition, an IPR petition must identify “with particularity, each claim challenged, the grounds on which the challenge to each

¹ Petitioner labels its grounds as “1A” and “1B,” for example, rather than grounds “1” and “2,” so each numerical ground is comprised of two distinct grounds.

claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 312(a)(3); *see also* 37 C.F.R. § 42.104(b) (specifying necessary elements of a petition). No such particularity exists here—each of the at least twenty grounds advanced by Petitioner asks the Board to pick-and-choose from multiple references for multiple claim limitations.

Third, every ground possesses a common fatal flaw. The Petition fails to show how Morris (asserted in every ground) discloses or renders obvious a “variable frequency drive,” as required by all claims. Although Morris discloses a “drive” for an electric motor, Morris does not disclose that drive is a “variable frequency drive.” Petitioner also relies on Oehring IV for this feature, but only provided evidence that a POSITA merely *could have*—rather than evidence that a POSITA *would have*—combined the prior art. Accordingly, the Petition fails to show a reasonable likelihood of success that Morris discloses a “variable frequency drive” or that such a drive was obvious over Oehring IV.

The Petition should also be denied under *Fintiv* and 35 U.S.C. § 314 because any final written decision would be issued approximately three months after the currently scheduled trial date, and the parties have already invested substantial resources, including the completion of all claim construction briefing. The parties are currently awaiting the Court to reschedule the *Markman* hearing. As of this filing, no motion to stay has been filed, and Petitioner offers no *Sotera* stipulation,

which increases the likelihood that both the Board and District Court will address the same invalidity issues and possibly reach conflicting decisions.

For these reasons and as further demonstrated below, the Board should deny the Petition.

II. THE CHALLENGED U.S. PATENT NO. 11,208,878

A. Overview of the Challenged Patent

The effective filing date for the 878 Patent is October 9, 2018. Petitioner contends that the 878 Patent is not entitled to its October 9, 2018, effective date. For purposes of this response only, Patent Owner does not contest whether the 878 Patent is not entitled to its October 9, 2018, effective date. Patent Owner reserves the right to do so in future responses and in related district court proceedings. The Board need not address the effective date issue because the Petitioner relies on prior art predating October 9, 2018.

The 878 Patent is directed to a hydraulic fracturing (fracking) system for fracturing a subterranean formation within oil and gas wells by pumping fracturing fluid down a wellbore. EX-1001, Abstract, 1:38–43. Pumping operations conventionally involve diesel-powered pumps which have certain disadvantages (e.g., expensive, less environmentally friendly, less safe, heavy to transport). *Id.*, 1:46–49.

To overcome these problems, the 878 Patent teaches a novel system of pumping fluid into a wellbore using electric powered fracturing pumps (404) powered by electric motors (412) as shown in Fig. 4 and reproduced below. *Id.*, 2:31–43, Fig. 4.

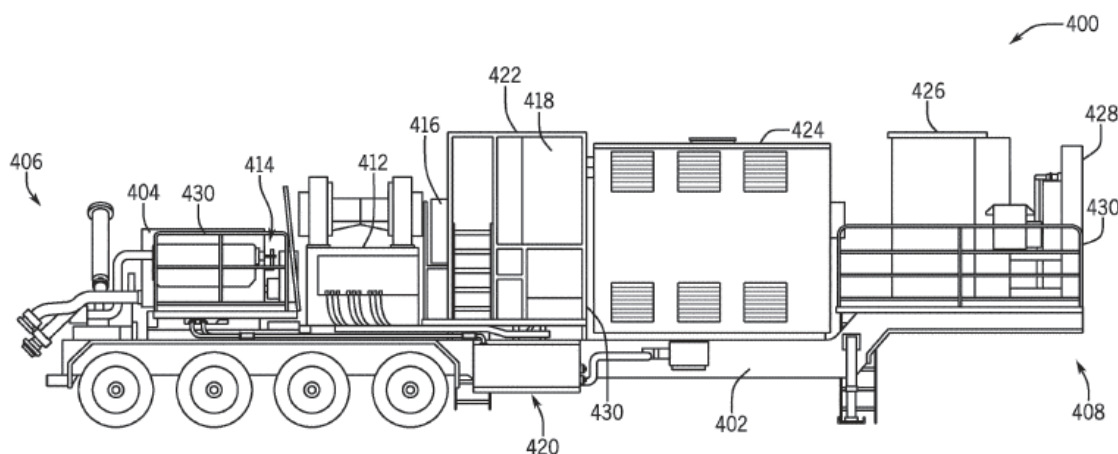


FIG. 4

878 Patent, Fig. 4 (EX-1001)

The above system in Figure 4 also includes a “liquid cooling system (428), such as a radiator,” for cooling “one or more variable frequency drives (VFDs)” (418) that are used to regulate the electric powered pumps. The 878 Patent explains that its VFD(s) are connected to the electric motor(s) and used to “control the speed of the ... electric motor[s]” during drilling operations. *Id.*, 3:8–12. The transformer 424 provides power to the VFD using a switchgear. *Id.*, 11:15–20. Figure 15, shown below, illustrates an exemplary switchgear 1500 and includes a “transformer [for]

distributing power to the electric powered pump,” a “modular switchgear system,” (1500) and “power distribution for electric oilfield equipment” as shown in Fig. 15 reproduced below. *Id.*, 2:35–45, 3:12–17.

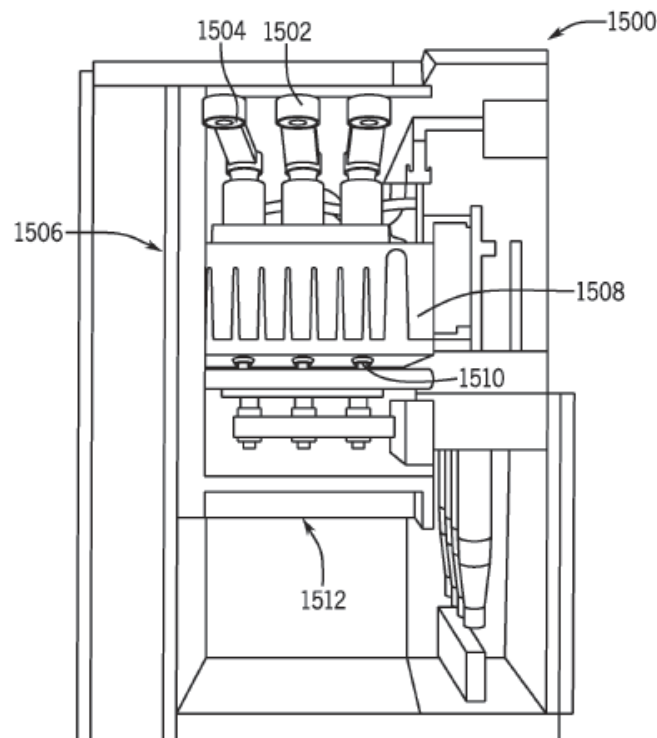


FIG. 15

878 Patent, Fig. 15 (EX-1001)

B. Challenged Claims

The 878 Patent contains a single independent claim. Independent Claim 1 recites, among other limitations, a variable frequency drive connected to at least one electric motor:

1. A hydraulic fracturing system for fracturing a subterranean formation, comprising:

an electric powered pump coupled to a well associated with the subterranean formation and powered by at least one electric motor, the electric powered pump configured to pump fluid into a wellbore associated with the well;

a variable frequency drive (VFD) connected to the at least one electric motor to control the speed of the at least one electric motor;

a transformer for conditioning power to the electric powered pump, the power being received from at least one generator at a voltage higher than an operating voltage of the electric pump; and

a switchgear, receiving power from at least one generator, configured to distribute power to a plurality of pieces of wellsite equipment, the switchgear having a common load sharing bus and front aligned, shielded cable connections, the switchgear being positioned within an enclosure;

wherein the electric powered pump, the VFD, the switchgear, and the transformer are mounted on a common support structure and a single cable couples the switchgear to the transformer.

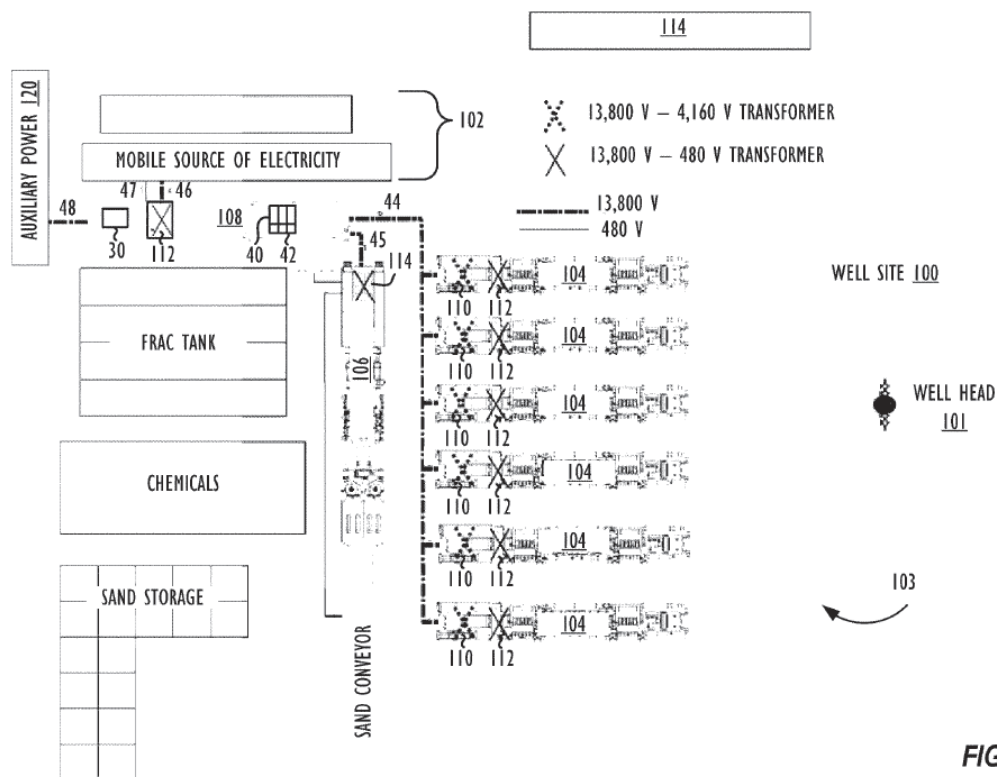
EX-1001 (878 Patent), Claim 1 (emphasis added). Dependent claims 2 through 10 all depend from Claim 1 and thus include the same limitation. As further explained below, all the Petition's Grounds fail to show that Morris discloses this feature or that Morris and Oehring IV renders that feature obvious.

III. ASSERTED PRIOR ART

Below are summaries of pertinent prior art.

A. Morris

U.S. Patent Application Publication 2020/0040705 to Morris et al. (Morris) is directed to an electric power distribution system and method for powering fracturing operations in oil and/or gas wells. EX-1004, Abstract, [0002]. Morris's distribution system for use in "fracturing fleet (103) includes a "switch gear transport" (108) with "circuit breaker connector[s]" (40) that connect an electric power source (102) to a "fracturing pump transport" (104) as shown in Fig. 1 and reproduced below. *Id.*, [0035], Fig. 1.



Morris, Fig. 1 (EX-1004)

Morris explains that its fracturing pump transport comprises one or more “transformers” (110) configured to receive electric power at a first voltage level and step down the voltage to one or more second voltage levels to power “prime movers, drivers, and/or other control instrumentation” in the oil and/or gas fracking system. *Id.*, [0030], [0031]. Though Morris mentions that its system may include “drives,” Morris does not provide any further details regarding such drives. *See id.*, [0031], [0032], [0034], Fig. 1. Without doing so, Morris does not disclose the claimed “variable frequency drive.”

B. Oehring IV

U.S. Patent Application Publication No. 2017/0222409 to Oehring et al. (“Oehring IV”) is directed to a hydraulic fracturing system for fracturing a subterranean formation. EX-1006, Abstract. Oehring IV’s hydraulic fracturing system further includes a “hydraulic fracturing well site power generation system 100” that provides electrical load sharing using one or more generators (105) for generating electricity that are electrically coupled to one or more electric motors, which power one or more electric pumps for pumping fracking fluid at high pressure down a wellbore as shown in Fig. 1 and reproduced below. *Id.*, [0015], Fig. 1. Oehring IV’s system also includes one or more switchgears located on switchgear trailer 125, for distributing an electrical load from its generators to the electric pumps. *Id.*

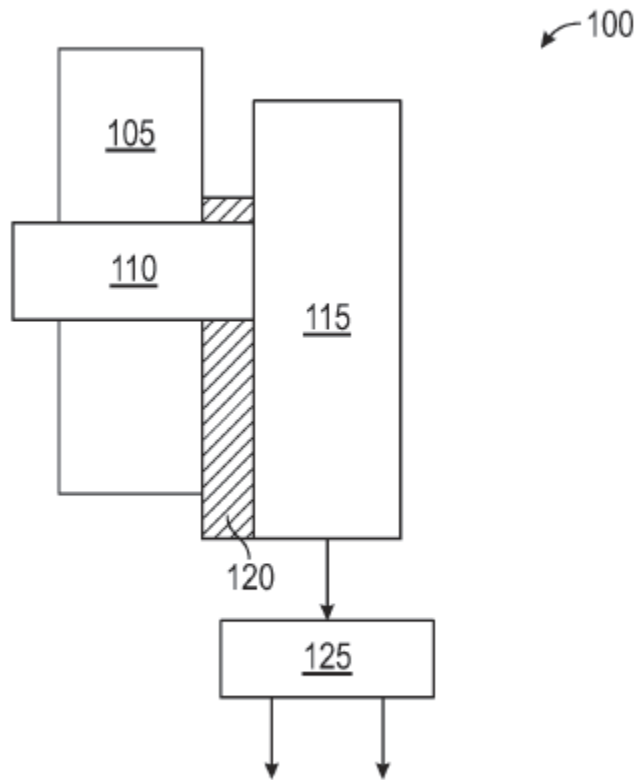


FIG. 1

Oehring IV, Fig. 1 (EX-1006)

IV. SKILL LEVEL OF A POSITA

For purposes of this preliminary response only, Patent Owner applies the same skill level proposed by Petitioner. *See* Pet., 17.

V. CLAIM CONSTRUCTION

Petitioner has not proposed any construction for the terms of the 878 Patent. Pet., 17. Patent Owner addresses claim construction positions, if any, in the body of its arguments below. Patent Owner reserves the right to propose constructions for any claim terms if the Board institutes a proceeding.

VI. ARGUMENT

A. Petitioner Improperly Advanced Voluminous and Excessive Grounds that Fail to Identify the Evidence with Particularity

The Board should use its discretion to deny the petition because of its voluminous and excessive grounds. For example, the Board's informative-designated *Adaptics* decision relating to petitions raising "voluminous and excessive grounds" is instructive. *Adaptics*, IPR2018-01596 at 18 (informative) ("*Adaptics*") ("[W]e agree with Patent Owner that the Petition suffers from a lack of particularity that results in voluminous and excessive grounds."); *see also Uber Techs., Inc. v. Surgetech LLC*, IPR2023-00738, Paper 8 (PTAB Oct. 23, 2023) ("Following *Adaptics*, the Board has consistently denied petitions that asserted inordinately large numbers of ambiguous grounds.") (collecting cases). In *Adaptics*, the Board found that "seventeen possible combinations," yielded "an unduly burdensome number of combinations." *Adaptics*, IPR2018-01596 at 19 ("Petitioner's contention encompasses nine combinations with Bendel and another eight distinct combinations with Sartorius, for a total of seventeen possible combinations. Even that conservative interpretation of Petitioner's contention yields an unduly burdensome number of combinations."); *see also Energysource Mins., LLC, v. Terralithium LLC*, IPR2019-01607, Paper 10, 13 (PTAB May 4, 2020) (similar).

Even a cursory review of the **twenty distinct grounds** on pages 16–17 of the petition is alone sufficient to demonstrate their excessiveness and justification of denial:

Ground	Claims	Basis (35 U.S.C. §)	Prior Art
1A	1–4, 6–8	103	<i>Morris, Oehring IV, Premset Catalog</i>
1B	1–4, 6–8	103	<i>Morris, Oehring IV, Premset Brochure</i>
2A	4	103	<i>Morris, Oehring IV, Premset Catalog, NEC</i>
2B	4	103	<i>Morris, Oehring IV, Premset Brochure, NEC</i>
3A	5	103	<i>Morris, Oehring IV, Premset Catalog, Orban</i>
3B	5	103	<i>Morris, Oehring IV, Premset Brochure, Orban</i>
4A	9	103	<i>Morris, Oehring IV, Premset Catalog, Pratt</i>
4B	9	103	<i>Morris, Oehring IV, Premset Brochure, Pratt</i>
5A	10	103	<i>Morris, Oehring IV, Premset Catalog, Oehring II</i>
5B	10	103	<i>Morris, Oehring IV, Premset Brochure, Oehring II</i>
6A	1–4, 6–8	103	<i>Morris, Oehring IV, Payne, Premset Catalog</i>
6B	1–4, 6–8	103	<i>Morris, Oehring IV, Payne, Premset Brochure</i>
7A	4	103	<i>Morris, Oehring IV, Payne, Premset Catalog, NEC</i>
7B	4	103	<i>Morris, Oehring IV, Payne, Premset Brochure, NEC</i>
8A	5	103	<i>Morris, Oehring IV, Payne, Premset Catalog, Orban</i>
8B	5	103	<i>Morris, Oehring IV, Payne, Premset Brochure, Orban</i>
9A	9	103	<i>Morris, Oehring IV, Payne, Premset Catalog, Pratt</i>

Ground	Claims	Basis (35 U.S.C. §)	Prior Art
9B	9	103	<i>Morris, Oehring IV, Payne, Premset Brochure, Pratt</i>
10A	10	103	<i>Morris, Oehring IV, Payne, Premset Catalog, Oehring II</i>
10B	10	103	<i>Morris, Oehring IV, Payne, Premset Brochure, Oehring II</i>

Indeed, where such voluminous and excessive grounds exist—such as here—the Board may exercise its discretion to deny an entire petition “in the interests of efficient administration of the Office and integrity of the patent system and as a matter of procedural fairness to Patent Owner.” *Adaptics*, IPR2018-01596 at 24.

Additionally, an IPR petition must also identify “with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 312(a)(3); *see also* 37 C.F.R. § 42.104(b) (specifying necessary elements of a petition). As the Federal Circuit has explained, “[i]n an IPR, the petitioner has the burden from the onset to show **with particularity** why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (emphasis added) (citing 35 U.S.C. § 312(a)(3)); *see also Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that

supports the grounds for the challenge to each claim.” (quoting 35 U.S.C. § 312(a)(3)).

The Trial Practice Guide also advises Petitioners to “avoid submitting a repository of all the information that a judge could possibly consider, and instead focus on concise, well-organized, easy-to-follow arguments supported by readily identifiable evidence of record.” Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,763 (Aug. 14, 2012). But submitting “concise, well-organized, [and] easy-to-follow arguments” is not what the Petitioner has done here—it has instead submitted a repository of information of twenty distinct grounds and asks the Board to pick-and-choose disclosures among multiple references to cobble together a single theory of invalidity. Again, even a brief review of the Petition demonstrates how it runs afoul of the particularity requirement. In Ground 1A, for example, for claim element 1[b], Petitioner asserts the following:

Morris and *Oehring IV* **both teach a VFD** connected to and controlling an electric motor’s speed *Oehring IV* teaches “a variable frequency drive connected to the at least one electric motor to control the speed of the at least one electric motor.” EX1006, [0028]; *see also id.*, [0043]. *Morris* similarly teaches “drives and/or other control instrumentation mounted on the fracturing pump transport” with “electric prime movers.” EX1004, [0031], EX1005, 20 at [0024].

Pet., 30; *see also, e.g.*, Pet., 32 (Ground 1A) (“*Morris* and *Oehring IV* both teach switchgear receiving power from generators and distributing power to wellsite equipment.”); Pet., 36 (“*Morris*, *Oehring IV*, and *Premset Catalog* teach enclosing the switchgear.”). This type of pick-and-choose with the prior art evidence is improper, and the petition should be denied for this additional reason. *Parus Holdings, Inc. v. Google LLC*, 70 F.4th 1365, 1371-72 (Fed. Cir. 2023) (condemning strategy of “throwing mountains of evidence at the Board without explanation or identification of the relevant portions of that evidence” and stating that judges “are not like pigs, hunting for truffles buried in briefs”); *see also Microsoft Corp. v. FG SRC, LLC*, 860 F. App’x. 708, 713 (Fed. Cir. 2021) (“It is not the Board’s job to cobble together assertions from different sections of a petition or citations of various exhibits in order to infer every possible permutation of a petitioner’s arguments. Arguments in a petition must be made with particularity, not opacity”).

Accordingly, the Petition should be denied at least for the above reasons.

B. Petitioner Failed to Show How the Prior Art Discloses or Renders Obvious a “Variable Frequency Drive Connected To At Least One Motor.”

The Petition presents two different unpatentability theories for how the prior art discloses or renders obvious a limitation² recited in claim 1: “a variable frequency drive (VFD) connected to the at least one electric motor to control the speed of the at least one electric motor.” All dependent claims depend on claim 1 and thus have the same limitation. Both of Petitioner's theories are flawed, as discussed below.

1. The Petition Fails to Show How Morris Discloses a Variable Frequency Drive

The Petition first argues that Morris discloses the VFD limitation. Pet., 30; *see id.*, 48 (relying on same theory for Grounds 1B through 10B). This is incorrect because Morris does not disclose, expressly or inherently, a variable frequency drive.

The Petition relies on two disclosures from Morris to purportedly show the claimed “variable frequency drive”—neither of which mentions the terms “variable” or “frequency”:

The 4.2 kV or 2.1 kV voltage level supplies electric power to one or more electric prime movers (not shown) that drive one or more pumps

² The subsequent arguments refer to this as the VFD limitation.

(not shown) and the 480 V, 240 V and 110 V supplies electric power to the drives and/or other control instrumentation mounted on the fracturing pump transport 104. Transformers 110 and 112 are able to supply enough electric current to power the prime movers, drivers, and/or other control instrumentation. . . .

EX-1004, [0031].

By mounting the drives and transformers 110 and/or 112 onto the fracturing pump transport 104 and the transformer 114 on the hydration-blender transport 106, the transports 104, 106 become individually autonomous by removing the need for other separate support-based trailers, such as the auxiliary unit transport and drive power transports that provide power conversion and/or drive control.

Id., [0034]. Moreover, Morris nowhere uses the terms “variable,” “frequency,” or “VFD”, let alone a drive that uses a “variable frequency,” as required by the claims. Without doing so, Morris does not explicitly disclose a “variable frequency drive.”

Petitioner's expert Dr. Durham does not contest that Morris does not expressly disclose a variable frequency drive, and instead appears to advance an incorrect, unsupported argument that Morris implicitly or inherently discloses a VFD. Specifically, Petitioner's expert states that “Morris at least suggests the use of VFDs.” EX-1003, ¶ 169. Dr. Durham tries to explain away the fact that Morris doesn't mention the terms “variable” or “frequency” in stating—without any

evidentiary support—that “the use of the general term ‘drives’ to refer to VFDs has been common in the electric industry since at least the 1990s.” EX-1003, ¶ 169. But this statement cannot support that Morris either implicitly or inherently³ discloses a VFD. Rather, Dr. Durham’s statement is *ipse dixit* testimony because he fails to cite any evidentiary support. *TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1359 (Fed. Cir. 2019). Because Dr. Durham’s unsupported testimony is the only evidence that Morris implicitly or inherently discloses a VFD, that evidence is insufficient to show Petitioner has a reasonable likelihood of prevailing based on Morris’ disclosures.

Dr. Durham’s statement is also incorrect. Morris did not specify the type of drive because the industry used various drives for electric motors that are *not* variable frequency. In one example, U.S. Patent No. 9,945,365 to Hernandez discloses a *fixed* frequency—in contrast to a variable frequency—drive for an electric motor used in hydraulic fracturing operations. EX-2001, Abstract (“A motor control center is configured to apply an alternating electrical voltage having

³ Dr. Durham’s testimony also fails to show that a VFD was necessarily present in Morris’ system, as required for Morris to inherently disclose VFDs. *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993) (reversing rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art).

a fixed - frequency to the stator in order to power the electric motor, wherein the apparatus and motor control center do not have a variable frequency drive.”). As another example, the EnviroFrac electric motor by Grizzly similarly does not use a variable frequency drive. EX-2002, 2, Grizzley EnviroFrac website (available at <https://grizzlyservice.com/envirofrac/>) (“No complicated/ fragile VFD control unit required.”); *id.*, 3, (“Simpler and easier to use than VFD-based electrical drive trains with automation to overcome startup issues.”). These references are objective evidence that Morris’s generic reference to a “drive” fails to disclose explicitly or inherently a VFD and contradict Dr. Durham’s unsupported testimony that “drive” means VFD.

At bottom, Morris does not mention the terms “variable” or “frequency.” Petitioner’s expert does not contest this and instead provides unsupported testimony that Morris implicitly or inherently discloses a VFD. EX-1003, ¶ 169. His attempt to fix this lack of disclosure of VFDs in Morris is contradicted by contemporaneous evidence. Morris therefore does not disclose—expressly, implicitly, or inherently—a “variable frequency drive.” To overcome this problem, Petitioner needs to rely on an obviousness combination, but the only purported combination that the Petition presents is flawed, as described below.

2. The Petition Fails to Provide Any Motivation to Combine Oehring IV's VFDs with Morris's System and Suffers from Hindsight Bias

The Petition advances an alternative obviousness theory for the VFD limitation: “a POSITA would have been motivated to combine Oehring IV’s express teaching of variable frequency drives (‘VFD’) into Morris’s fracturing system, and specifically onto Morris’s pump transport.” Pet., 21–24; *see id.*, 48 (relying on same theory for Grounds 1B through 10B). While Oehring IV discloses a VFD, Petitioner fails to provide a sufficient motivation to combine the references—that is, the Petition provides evidence that a POSITA *could* combine Oehring IV and Morris, not evidence that a POSITA *would* have been motivated to do so.

Specifically, the Petition’s hindsight bias⁴ unpatentability theory is driven based on evidence showing only that a POSITA *could* combine Oehring’s VFDs with Morris’s system—shown below—not any reason or explanation as to how or why a POSITA *would* have been motivated to combine the prior art:

⁴ “Without any explanation as to *how or why* the references would be combined to arrive at the claimed invention, we are left with only hindsight bias that KSR warns against.” *Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) (emphasis added).

As taught in Oehring IV, “a variable frequency drive (VFD)” *can* “control the speed of an electric motor.” EX1006, [0043]. Fracturing systems have varying flow rates and the “electrical load constantly changes,” requiring “more or less torque from a variable frequency drive.” EX1006, [0009]. A POSITA would have known to use VFDs, as taught in Oehring IV, to control motor speeds in Morris for varying loads.

Pet., 22 (emphasis added); *see id.*, 30. Dr. Durham's declaration⁵ contains the same conclusory analysis:

Oehring IV teaches that discloses [sic] “a variable frequency drive (VFD) [] *can be utilized* to control the speed of an electric motor associated with a pump powered by the turbine(s) [generators].” Accordingly, a POSITA would have been motivated to combine the teachings of Morris and Oehring IV to further explain that the use of the “drives” of Morris would have been used to control the speed of the electrical motors and further, the fracturing pumps.

EX-1003, ¶ 153 (emphasis added).

Dr. Durham's remaining testimony does not fix this deficiency. *See id.*, ¶¶ 151-152. At most, the above argument and fatally flawed theory only show

⁵ Most of Dr. Durham's obviousness analysis in paragraph 153 is also *ipse dixit* testimony by failing to cite any evidence. *TQ Delta*, 942 F.3d at 1359. Thus, such evidence is insufficient to show Petitioner has a reasonable likelihood of prevailing.

evidence of what *could* be done by a POSITA and not evidence of obviousness. As the Federal Circuit has explained, “obviousness concerns whether a skilled artisan not only could have made” any particular modification, “but would have been motivated to make the combinations or modifications of prior art to arrive at the claimed invention.” *Belden v. Berk-Tek*, 805 F.3d 1064, 1073 (Fed. Cir. 2015); *see also AT&T Servs. v. Innovative Sonic*, IPR2024-01143, Paper 15 at 37-38 (PTAB Feb. 11, 2025) (Petitioner had not shown a reasonable likelihood that the proposed combination teaches the claim because Petitioner “at best, merely posits that a skilled artisan could have modified” the prior art without explaining why); *see also InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014) (concluding that a party’s expert “succumbed to hindsight bias in her obviousness analysis” where such analysis “primarily consisted of conclusory references to her belief that one of ordinary skill in the art could combine these references, not that they would have been motivated to do so”). Further, and as shown above, at least two examples of other non-VFD type drives existed that can be used to control an electric motor during fracturing operation. *See supra* Section

VI.B.1; *see also* EX-2001, Abstract, *and* EX-2002. The Petition thus advances a legally incorrect and insufficient rationale⁶ for combining Morris and Oehring IV.

In sum, the Petition presents no argument or evidence as to *why* a POSITA would have combined Morris and Oehring IV. Without doing so, the Petition's obviousness analysis is inadequate and therefore Petitioner has not demonstrated a reasonable likelihood of success. *See TQ Delta*, 942 F.3d at 1357 (“We focus on the Board’s obviousness determinations, and in particular, its fact-finding regarding motivation to combine. We hold that the Board’s fact-finding is based on conclusory testimony and is therefore unsupported by substantial evidence.”). Indeed, just as in *TQ Delta*, Dr. Durham’s “*ipse dixit* declaration ‘fail[s] to provide any meaningful explanation for why one of ordinary skill in the art would be motivated to combine these references at the time of this invention.’” *Id.* at 1362 (citation omitted).

⁶ To the extent that the Board considers the Petition’s statement that VFDs “can prevent damage,” *see* Pet., 22, to be a purported motivation to combine Morris and Oehring IV, this motivation is unsupported by any expert testimony and Oehring IV’s disclosures. Paragraph [0009] of Oehring does not mention preventing damage and Paragraph [0028] refers to the electric motor diagnostics—not the VFD itself—that are used to prevent damage. EX-1006.

C. Petitioner Improperly Incorporates by Reference Entire Sections or Large Numbers of Paragraphs of Dr. Durham's Declaration

The Petition impermissibly incorporates by reference arguments not made in the Petition by incorporating whole sections of Dr. Durham's expert declaration to circumvent IPR petition word limits. The Board should decline to consider the incorporated-by-reference arguments. *Cisco Sys., Inc. v. C-Citation Techs, LLC*, IPR2014-00454, Paper 12 (PTAB Aug. 29, 2014). In *Cisco Systems*, the Board declined to consider arguments not made in the petition that were instead incorporated by citing a large number of paragraphs and claim charts from the expert's declaration. The petition used conclusory statements, claiming support by citing numerous pages of the expert's declaration without sufficient explanation of those pages. The Board determined the practice to be an impermissible circumvention of IPR page limits and declined to consider arguments not made in the petition but instead incorporated by reference to the expert report. *Id.* 10.

Like the petition in *Cisco*, Petitioner here incorporates whole ***sections*** from Dr. Durham's declaration—not merely conventional paragraphs—into the Petition. For example, Petitioner states that “*Morris* discloses switchgear having a common bus, and *Oehring IV*'s teachings regarding functionality of the common bus (or tie breaker) would have informed a POSITA to implement those functions (or recognize the teaching of those functions) in *Morris*'s switchgear having a

common bus.” Pet., 24. Petitioner then cites the following sections of Dr.

Durham's declaration as support for that argument:

Citation	Number of Pages
§IX	4
§XI.A	11
§XI.B.f	6

See also, e.g., Pet., 25 (citing §§ IX.I, XI.A, XI.B.f).

As another example, Petitioner states that “*Morris and Oehring IV* both teach a VFD connected to and controlling an electric motor's speed, and a POSITA would have known electric motors were commonly controlled with VFDs,” and cites the following sections of Dr. Durham's declaration as support:

Citation	Number of Pages
§§IX.K-L	5
§ XI.B.c	4

Pet., 30. This practice of improper incorporation by reference continues through the Petition. *See, e.g.,* Pet., 33 (citing §§ IX.F and I), 37 (citing ¶¶ 101-08, 199-200), 38 (citing ¶¶ 179, 198, and § IX.A-F), 43 (citing §§ IX.I and XI.D), and 56 (citing ¶¶ 251-60), 58 (citing §§ IX.M and XV.A). For these reasons, the Board

should decline to consider these arguments not made in the Petition but impermissibly incorporated by reference from Dr. Durham's expert report.

VII. FINTIV FACTORS SUPPORT A DISCRETIONARY DENIAL OF INSTITUTION UNDER 35 U.S.C. § 314

All *Fintiv* factors favor denial of institution or are neutral, as explained below. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper No. 11 at 6 (PTAB Mar. 20, 2020) (listing *Fintiv* factors) Accordingly, Patent Owner requests that the Board deny institution under 35 U.S.C. § 314.

Factor 1: Petitioner has not filed a motion for a stay in the related district court litigation. Petitioner also admits that it merely “may” file a motion to stay “in the event of IPR institution.” Pet., 18. Given Petitioner's admission that it might not even file a stay, Factor 1 weighs in favor of denying institution or, alternatively, is at best neutral.

Factor 2: Trial in the related district court proceeding has been scheduled for February 2, 2026. EX-2003, 4. Patent Owner amended⁷ its complaint in the related district court proceeding but noted that it will “not affect the discovery in

⁷ In amending the complaint, plaintiff added causes of action for breach of contract, trade secret misappropriation, and violation of the Defend Trade Secrets Act, 18 U.S.C. § 1832, which Patent Owner learned about during its investigation into Liberty's answer and counterclaims. See EX-1018, 3.

the case (which has only begun) or any other scheduling deadlines.” EX-1018, 6. If the Board issues its institution decision in June 2025, the statutory deadline for the final written decision will be June 2026—four months after the scheduled trial date. Although district court deadlines might be delayed from the Markman hearing being rescheduled, the schedule allows for these deadlines to move without affecting the close of fact discovery or service of opening expert reports. *See* EX-2003, 3. Petitioner would need the entire case schedule to slip by nearly four months just to have a chance for the Board’s final decision to occur before the trial date. *Fintiv*, Paper No. 11 at 9 (“If the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this factor in favor of authority to deny institution under *NHK*.”). Finally, Petitioner’s evidence (EX-1020) about current time-to-trial statistics is predicated on rescinded guidance. EX-2005, 4 (rescinding guidance stating “the PTAB will consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides.”). Given that the currently scheduled trial date will likely occur before the Board issues its final written decision, this factor weighs in favor of denial of institution.

Factor 3: The parties have completed claim construction briefing and are awaiting the district court to reschedule the *Markman* hearing, which was originally scheduled for February 20, 2025. *See* EX-2003, 3. By the time the

Board issues an institution decision, the parties will have already invested sufficient time in the parallel proceedings to favor denial. Similarly, the Court will have invested resources in receiving briefing as well as possibly hearing oral argument at *Markman* and preparing a claim construction order. *Fintiv*, at 10 (describing sufficient time invested in parallel proceedings favors denial when district court issues a claim construction order.). Petitioner's delay in filing its Petition after waiting for Plaintiff's infringement contentions is not an excuse, given that Petitioner challenged every claim of the '878 Patent. Pet., 18 ("Here, Petitioners promptly filed this Petition against all '878 Patent claims within four months of receiving infringement contentions."). But if Petitioner had prior art that it believed would find all patent claims unpatentable, there was no need to wait for Petitioner's infringement contentions, particularly given that Petitioner offers no claim construction and had not identified any claim construction issues that were raised in the contentions. Given the above, this factor is either neutral or weighs in favor of denial.

Factor 4: Petitioner has neither filed nor offered a *Sotera* Stipulation. See *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper No. 12 at 13–14 (PTAB Dec. 1, 2020). Petitioner does not guarantee that it will file a motion to stay. Pet., 18 (admitting that it "**may**" file a motion to stay "in the event of IPR institution"). Absent a stay or *Sotera* stipulation, both the district court and Board

will engage in duplicative efforts addressing the same invalidity challenges. For example, the same prior art and proposed combinations set forth in the Petition are also raised in Petitioner's invalidity contentions. *See* EX-2004, 22. These duplicative efforts by the Board and district court raise the possibility of conflicting decisions from them because the Patent Owner will face the same invalidity issues in both proceedings. Factor 4 thus weighs in favor of denying institution.

Factor 5: Both the Petitioner and Patent Owners are the same parties involved in the related district court litigation. Thus, Factor 5 also weighs in favor of denying institution.

Factor 6: As explained in the sections above, the Petition's Grounds are deficient and already considered by the Patent Office during examination. Consequently, the merits of those Grounds are not "compelling," but instead are (at best for Petitioner) "a closer call." *Fintiv*, at 15 ("By contrast, if the merits of the grounds raised in the petition are a closer call, then the fact has favored denying institution when other factors favoring denial are present."). Factor 6 thus weighs in favor of denying institution.

VIII. CONCLUSION

For the above reasons, the Board should decline to institute *inter partes* review.

Dated: March 17, 2025

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CERTIFICATE OF COMPLIANCE

The undersigned certifies that this response complies with the word-count limitations of 37 C.F.R. § 42.24(b)(1). This response contains 5,490 words as calculated by the word-count feature of Microsoft Word, the word-processing program used to create it.

The undersigned further certifies that this Petition complies with the typeface requirements of 37 C.F.R. § 42.6(a)(2)(ii) and typestyle requirements of 37 C.F.R. § 42.6(a)(2)(iii). This petition has been prepared in a proportionally spaced typeface using Microsoft Word in Times New Roman 14-point font.

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CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of March, 2025, I caused to be served a true and correct copy of the foregoing "Patent Owner's Preliminary Response" and accompanying exhibits by electronic mail on the following:

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