IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PERMIAN GLOBAL INC., AND
MANTICORE FUELS, LLC
Petitioners,

v.

FUEL AUTOMATION STATION, LLC,
Patent Owner.

Case IPR2023-01237

Patent No. 9,586,805

PATENT OWNER'S NOTICE OF APPEAL

Patent Owner Fuel Automation Station, LLC hereby gives notice to the Patent Trial and Appeal Board ("the Board") and the Director of the U.S. Patent and Trademark Office, pursuant to 35 U.S.C. §§ 141, 142 and 37 C.F.R. §§ 90.2, 90.3, of Patent Owner's appeal pursuant to 35 U.S.C. § 319 to the United States Court of Appeals for the Federal Circuit from the Final Written Decision entered on February 26, 2025 (Paper 40) (the "Final Written Decision") (attached hereto as **Exhibit A**).

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), Patent Owner further indicates that the issues on appeal include, but are not limited to, the Board's decision to find unpatentable claims 1-22 of U.S. Patent No. 9,586,805; the Board's consideration, or lack thereof, of the expert testimony, prior art, and other evidence of record; and the Board's factual findings, conclusions of law, or other determinations supporting or related to those issues, as well as all other issues decided adversely to Patent Owner in any orders, decisions, rulings, and opinions.

This Notice of Appeal is timely filed as it is being filed not later than 63 days after the February 26, 2025 Final Written Decision. *See* 37 C.F.R. § 90.3(a)(1).

This Notice of Appeal is being filed with the Director by electronic mail to the email address indicated on the United States Patent and Trademark Office's web page for the Office of the General Counsel, as required by 37 C.F.R. § 90.2(a).

In addition, a copy of this Notice of Appeal and a copy of the Final Written Decision, along with the required docketing fee, is being electronically filed with the

Clerk's Office for the United States Court of Appeals for the Federal Circuit as required by Fed. Cir. R. 15(a)(4) and Fed. Cir. R. 25(b)(1).

Respectfully Submitted,

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CERTIFICATE OF FILING

I certify that on April 30, 2025 this document (Patent Owner's Notice of Appeal and Exhibit A) has been filed as follows:

with the PTAB, electronically through Patent Trial and Appeal Case Tracking System (P-TACTS);

with the Director, by electronic mail to efileSO@uspto.gov, which is the email address indicated on the United States Patent and Trademark Office's web page for the Office of the General Counsel; and

with the Clerk's Office of the United States Court of Appeals for the Federal Circuit, using the Court's CM/ECF filing system, and with the filing fee being paid electronically via pay.gov.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on April 30, 2025, a true and correct copy of the foregoing document was served electronically via e-mail in its entirety on counsel identified below by Petitioner for service at DLPermianIPR@bakerbotts.com.

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EXHIBIT A

Trials@uspto.gov
571-272-7822

Paper 40
Date: February 26, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PERMIAN GLOBAL INC. and MANTICORE FUELS, LLC,
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v.

FUEL AUTOMATION STATION, LLC,
Patent Owner.

IPR2023-01237
Patent 9,586,805 B1

Before CARL M. DEFRANCO, RICHARD H. MARSCHALL, and BRENT M. DOUGAL, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

Fuel Automation Station, LLC ("FAS") is the owner of U.S. Patent No. 9,586,805 B1 (Ex. 1001, "the '805 patent"). Permian Global Inc. and Manticore Fuels, LLC ("Permian") filed a petition for *inter partes* review of claims 1–22 of the '805 patent. Paper 3 ("Pet."). We instituted *inter partes* review of all the claims as challenged in the petition. Paper 9 ("Inst. Dec."). FAS filed a patent owner response (Paper 13, "PO Resp."), Permian filed a reply (Paper 25, "Pet. Reply"), and FAS followed with a sur-reply (Paper 28, "PO Sur-Reply"). FAS also filed a motion to exclude certain evidence (Paper 31, "Mot."), which Permian opposed (Paper 33, "Pet. Opp."). We held a hearing on December 5, 2024, a transcript of which is in the record. Paper 39 ("Hrg. Tr."). For the reasons below, we determine that Permian shows by a preponderance of the evidence that challenged claims 1–22 are unpatentable under 35 U.S.C. § 103.

I. BACKGROUND

A. Related Matters

The '805 patent is the subject of a parallel infringement action in *Fuel Automation Station, LLC v. Permian Global, Inc.,* No. 1-22-cv-00801 (W.D. Tex., Aug. 10, 2022). *See* Pet. 1–2. The infringement action is currently stayed pending completion of this proceeding and two related *inter partes* reviews, IPR2023-001236 (US 10,815,118 B2) and IPR2023-001238 (US 10,974,955 B2). FAS also informs us of two related patent applications pending before the Office: U.S. Application 17/682,348, filed February 28, 2022, and U.S. Application No. 18/468,342, filed September 15, 2023. *See* Paper 7, 1.

B. The Challenged Patent

The '805 patent is directed to a "mobile distribution station" that "serve[s] in 'hot-refueling' capacity to distribute fuel to multiple pieces of equipment while the equipment is running, such as fracking equipment at a well site." Ex. 1001, 3:24–29. The distribution station includes a mobile trailer equipped with pumps, manifolds, fuel lines, control valves, hoses, and hose reels. *Id.* at 3:36–4:25, Figs. 1, 2. Annotated Figure 2 of the '805 patent, reproduced below, depicts the configuration of the equipment in the mobile trailer, with hoses 40 deployed from each side of the trailer and hose reels 42 arranged on either side of walkway 24 in the trailer.

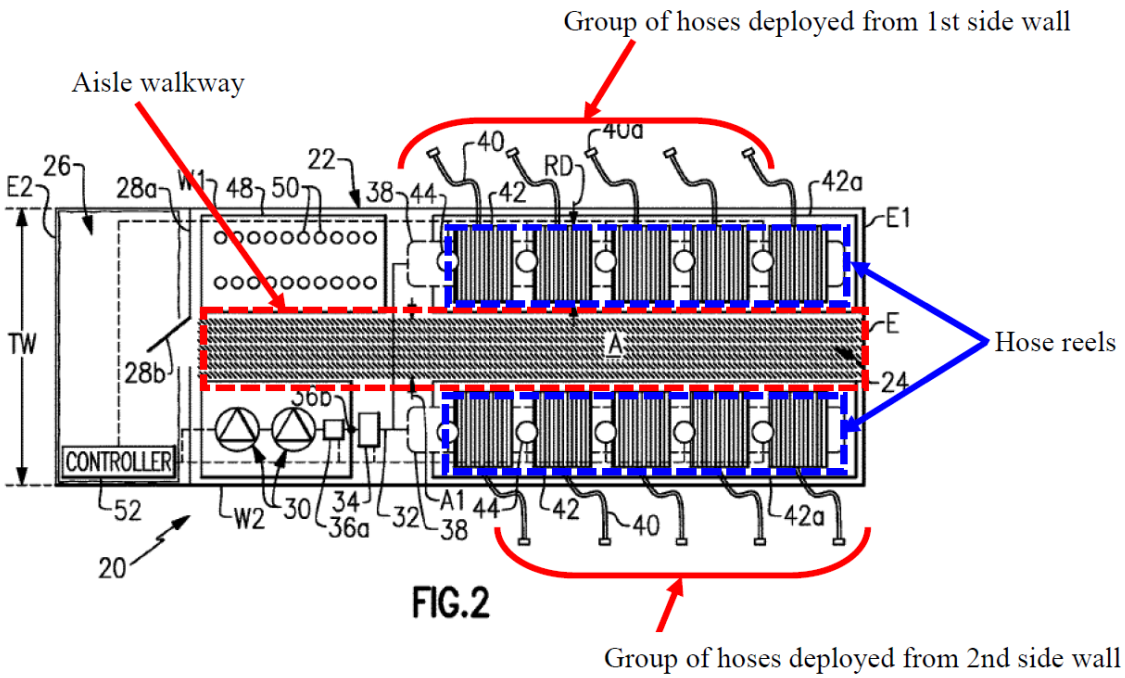

FIG.2

C. The Challenged Claims

Of the challenged claims, claims 1 and 17 are independent. Claim 1 is illustrative and reproduced below (with Permian's nomenclature added for clarity and emphasis added for limitations in dispute):

> 1. A distribution station comprising:
> [1a] a mobile trailer;
> [1b] a pump on the mobile trailer;
> [1c] first and second manifolds on the mobile trailer and fluidly connected with the pump;
> [1d] a plurality of reels on the mobile trailer;
> [1e] a plurality of hoses connected, respectively, with the reels, wherein a portion of the reels are connected with the first manifold and another portion of the reels are connected with the second manifold;
> [1f] a plurality of valves on the mobile trailer, each the valves situated between one of the first or second manifolds and a respective different one of the hoses; and
> [1g] a plurality of fluid level sensors, each the fluid level sensors being associated [with] a respective different one of the hoses,
> [1h] *wherein the reels are arranged on first and second opposed sides in the mobile trailer, with an aisle walkway down the middle of the mobile trailer*.

Ex. 1001, 16:2–22.

Independent claim 17 recites similar limitations to those of claim 1, except the claim 17's "wherein" clause recites "wherein the mobile trailer includes first and second opposed trailer side walls, *and a first group of the hoses are deployable from the first trailer side wall and a second group of the hoses are deployable from the second trailer side wall*." *Id.* at 18:1–5 (emphasis added). *See id.* at 17:9–18:5 (emphasis added).

D. The Asserted Challenges

Claims Challenged	35 U.S.C. §	Basis
1–22	103	Van Vliet,[1] Cable[2]
17, 18	102/103	Van Vliet
9, 10	103	Van Vliet, Cable, AFD[3]
4, 11, 12, 20	103	Van Vliet, Cable, Coxreels[4]
1, 7–10, 13–18, 22	103	Van Vliet, AFD
2, 3, 6, 19	103	Van Vliet, AFD, Lowrie[5]
4, 5, 20, 21	103	Van Vliet, AFD, Lowrie, Coxreels
11, 12	103	Van Vliet, AFD, Coxreels

II. ANALYSIS

A. Level of Ordinary Skill in the Art

> Permian proposes that one skilled in the art would have had either:
>
> (1) a Bachelor of Science in Mechanical Engineering, Electrical Engineering, Petroleum Engineering or an equivalent field and at least 2 years of academic or industry experience in the oil and gas industry, including well drilling, completion, or production, or (2) at least four years of industry experience in the oil and gas industry including well drilling, completion, or production.

Pet. 12–13 (citing Ex. 1003 ¶ 105). FAS responds that it "does not dispute Petitioner's definition of the level of ordinary skill in the art." PO Resp. 11.

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[1] US 2011/0197988 A1, published Aug. 18, 2011 (Ex. 1004, "Van Vliet").
[2] US 3,810,487, issued May 14, 1974 (Ex. 1005, "Cable").
[3] AFD PETROLEUM LTD., *AFD Onsite Refueling Systems*, http://web.archive.org/web/20150922012312/https://www.afdpetroleum.com/fuel/onsite_refuelling (Sept. 22, 2015), published Sep. 22, 2015 (Ex. 1007, "AFD").
[4] COXREELS, INC., *Coxreels 1125 Series "Competitor" Hand Crank and Motorized Hose Reels*, https://web.archive.org/web/20140408035634/http://www.coxreels.com/products/hand-crank/1125-series, published Apr. 08, 2014 (Ex. 1008, "Coxreels").
[5] US 2018/0057348 A1, published Mar. 1, 2018 (Ex. 1006, "Lowrie").

Permian's proposed definition appears consistent with the problems and solutions described in the challenged patent and the prior art of record. As such, we adopt the level of skill in the art as defined by Permian.

B. Claim Construction

Permian applies "the ordinary and customary meanings of the claims terms," and, thus, maintains that "[e]xpress constructions are not required here." Pet. 20–21. FAS likewise submits that "no constructions are necessary in order to resolve the issues at hand and that the claim terms be given their ordinary and customary meanings." PO Resp. 8. The specification and prosecution history of the '805 patent, as well as the asserted prior art, adequately inform us as to the plain and ordinary meaning of the claim terms. Thus, we need not construe any claim terms expressly, as we can decide patentability without further construction. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (approving Board decision not to construe claim language where construction is not material to controversy).

C. The Challenge of Claims 1–22 as Obvious Over Van Vliet and Cable

Permian challenges claims 1–22 as rendered obvious by the combination of Van Vliet and Cable. Pet. 21–47. We begin with Permian's challenge of independent claims 1 and 17. Claim 1 recites elements 1[a]–1[h] (as listed above in Section I.C), and claim 17 recites correspondingly similar elements 17[a]–17[h]. Permian, for the most part, relies on the same analysis for both claims, but does expand on its analysis for claim element 17[h]. *See id.* at 46–47 (applying prior claim 1 analysis to claims element 17[a]–17[g] while addressing claim element 17[h] separately).

Like Permian, FAS addresses claims 1 and 17 together, stating that they are "representative" and that their analysis is "interdependent." PO Resp. 9. Also, like Permian, FAS addresses an aspect of claim element 17[h] separately. *See id.* at 18.

1. Independent Claims 1 and 17

FAS does not contest Permian's showing that the asserted combination of Van Vliet and Cable discloses claim elements 1[a]–1[g] and 17[a]–17[g].[6] *See* PO Resp. 9–23. Instead, FAS attacks Permian's showing for claim elements 1[h] and 17[h], as well as Permian's rationale for combining the teachings of Van Vliet and Cable. *See id.* As for the uncontested claim elements, we find that the record fully supports Permian's showing that the combination of Van Vliet and Cable discloses each of them. *See* Pet. 25–35; Ex. 1003 ¶¶ 142–170.

Turning to contested claim elements 1[h] and 17[h], they recite, respectively, "wherein the reels are arranged on first and second opposed sides in the mobile trailer, with an aisle walkway down the middle of the mobile trailer" (claim 1) and "wherein the mobile trailer includes first and second opposed trailer side walls, and a first group of the hoses are deployable from the first trailer side wall and a second group of the hoses are deployable from the second trailer side wall" (claim 17). For those disputed claim elements, Permian submits annotated figures from Van Vliet and Cable as reproduced below. *See* Pet. 29–31, 34–36, 47–48.

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[6] Notably, FAS does not dispute that the asserted combination of Van Vliet and Cable discloses claim element 1[e], which recites the interconnection between the hoses, reels, and manifolds. Nor can FAS reasonably do so. As Permian correctly notes, Cable expressly teaches just such a connection. *See* Pet. 30–31 (citing Ex. 1005, 4:22–36, Fig. 5; Ex. 1003 ¶ 158; Ex. 1028).

In particular, annotated Figure 1 of Van Vliet (reproduced below) depicts two sets of fuel delivery equipment inside a single trailer. *See* Ex. 1004 ¶ 14.

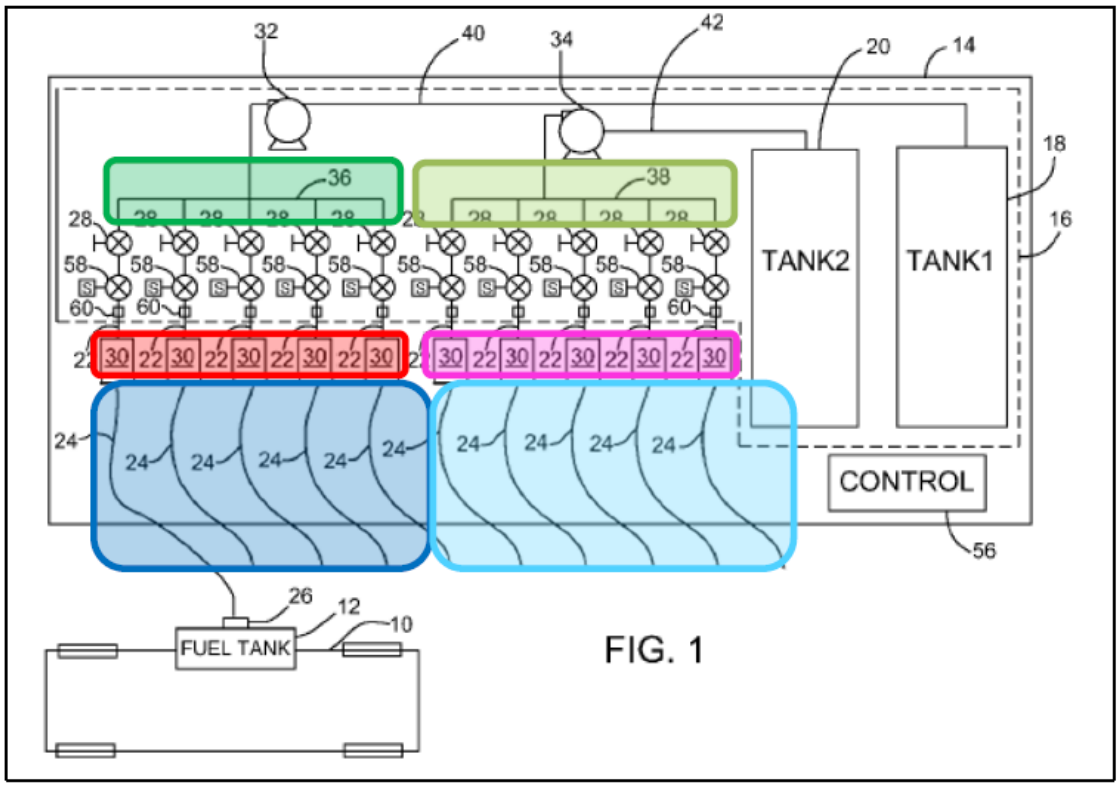

FIG. 1

As shown above, Van Vliet's equipment includes a first manifold 36 connected to a first group of hoses 24 (dark blue) and hose reels 30 (red) and a second manifold 38 connected to a second group of hoses 24 (light blue) and hose reels 30 (pink). Hose reels 30 are arranged parallel with the sidewalls of the trailer, and hoses 24 are deployed through openings in the trailer's sidewalls. *Id.* ¶¶ 15, 24.

As for Cable's teachings, annotated Figures 1, 2, and 4 (reproduced below) depict fuel delivery truck 16 carrying two bays 19, 21 of equipment arranged on opposing side walls 18, 20 of the truck. Ex. 1005, 2:48–56. Also arranged along the opposing side walls are hose reels 25, 26 (pink,

red). *Id.* at 2:63–3:5. The bays of equipment, including the hose reels, "are spaced apart a distance 22 (FIG. 2) forming a walkway and storage area therebetween" (green). *Id.* at 2:57–61.

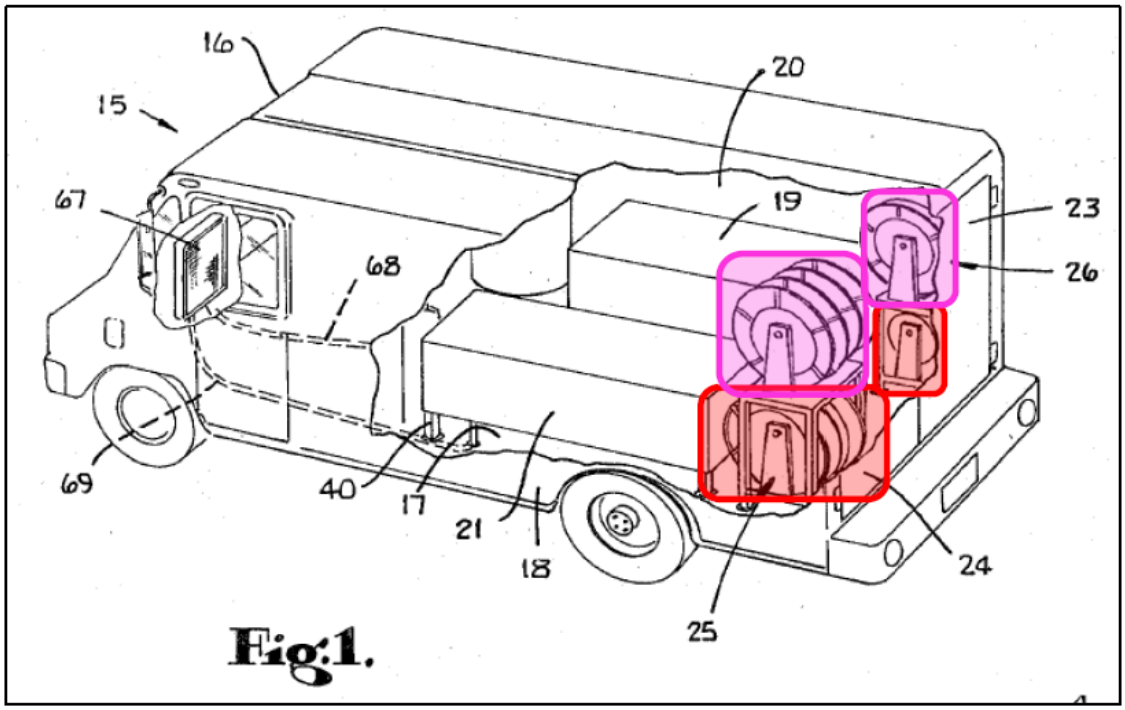

Fig.1.

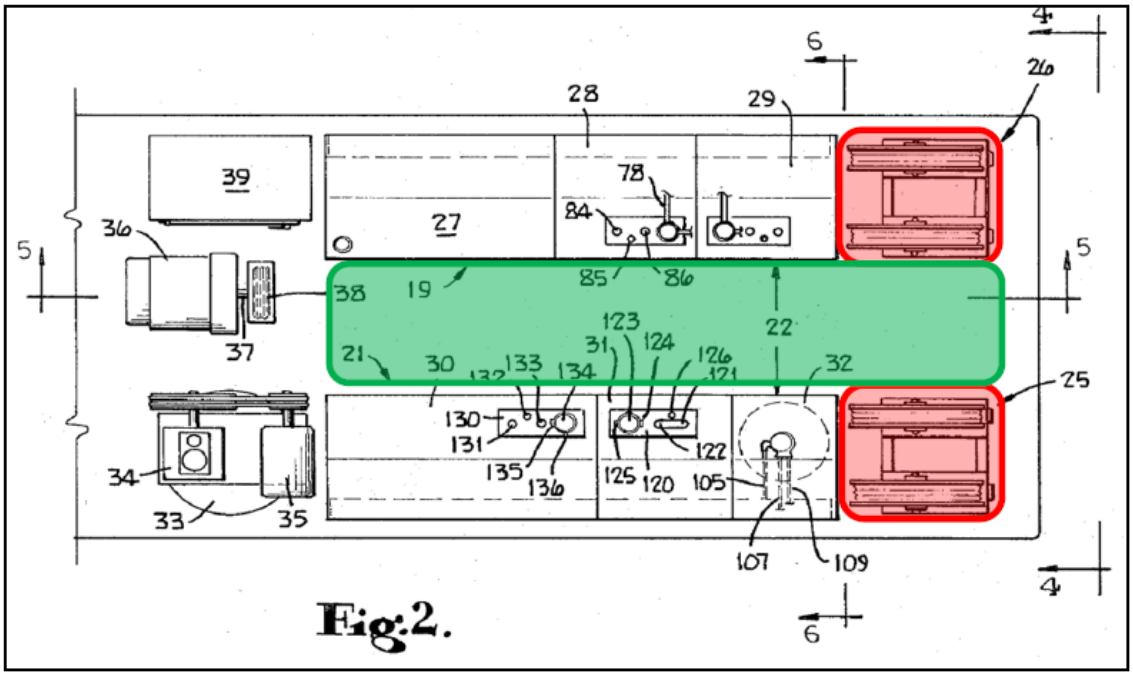

Fig.2.

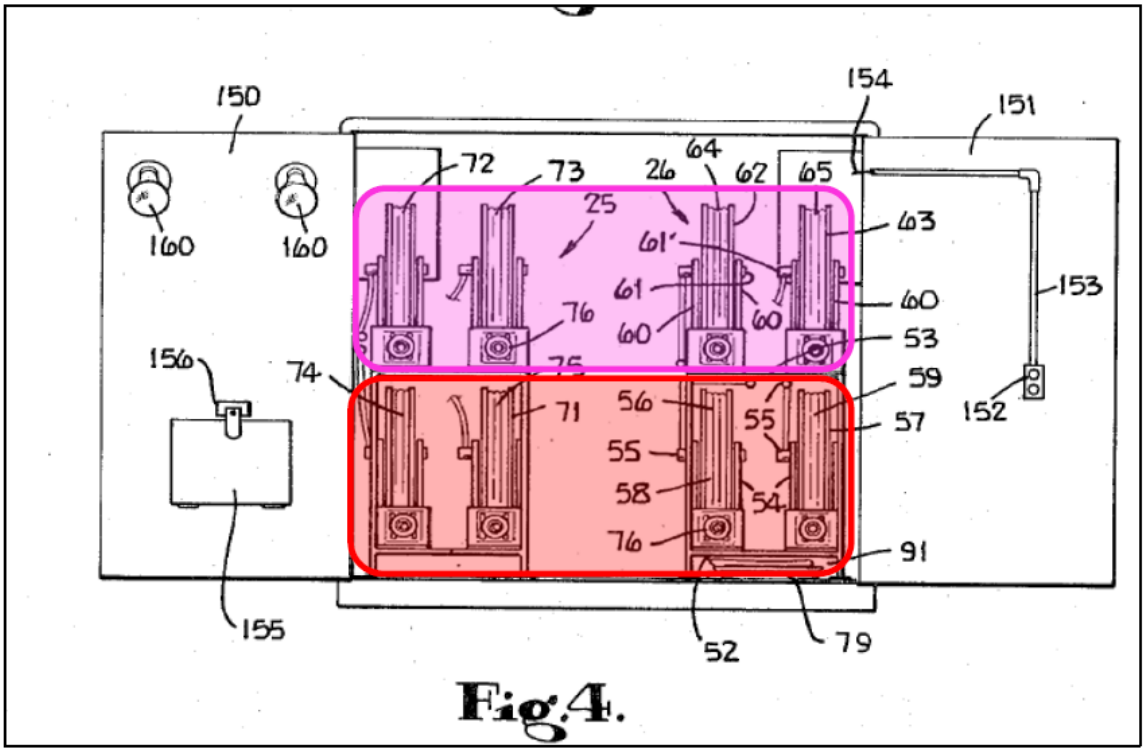

Fig.4.

According to Permian, applying the spatial arrangement taught by Cable to the fuel delivery equipment in Van Vliet's trailer would have been obvious because Van Vliet expressly contemplates that the arrangement of the equipment on its trailer is a matter of design choice—"The spatial orientation of the control station 56, reels 30, manifolds 36, 38, tanks 18, 20, and other equipment such as the generators is a matter of design choice for the manufacturer and will depend on space requirements." Pet. 23–24 (citing Ex. 1004 ¶ 27). With that in mind, Permian argues, one skilled in the art "would then look to other references, such as *Cable*, for spatial configurations that allow for easy access to various equipment, such as valves, manifolds and pumps" and "would have understood that an aisle walkway, such as the one taught by *Cable* would be an effective and simple way to allow an operator to access manual valves inside the trailer." *Id.* at 24 (citing Ex. 1003 ¶ 139). Similarly, Permian argues, "apply[ing] *Cable*'s

teaching of a walkable reel deployment compartment with a central aisle walkway, and reels deployed on opposing sides of the walkway adjacent to the sidewalls, to the trailer of *Van Vliet* [would] allow *Van Vliet*'s system to be more easily traversable by operators for the purpose of repairs, maintenance, and/or physical inspection." *Id.* at 21 (citing Ex. 1003 ¶ 137). And, "[a]lthough *Vliet* does not detail the physical arrangement of all components in its trailer, *Cable* does." *Id.* at 22 (citing Ex. 1003 ¶ 138; Ex. 1004 ¶ 14; Ex. 1005, Abstr., 1:62–65).

FAS responds that one skilled in the art "would not have looked to Cable to modify Van Vliet." PO Resp. 9 (emphasis omitted). At the outset, we note that FAS does not contest the teachings of Cable. *See id.* at 9–22. Rather, FAS argues that one skilled in the art "would have understood that the equipment in Cable's truck is configured for fast service in a roadside environment." *Id.* at 9. This is why, FAS argues, "the reels and hoses of Cable are situated at the rear of the truck." *Id.* at 10. And, according to FAS, because "the system of Van Vliet is not a drivable road vehicle . . . used to service road vehicles in a roadside environment," it "does not share the same safety concerns of a roadside environment as in Cable." *Id.* at 12 (citing Ex. 2004 ¶ 106). With that in mind, FAS surmises that Van Vliet and Cable "are sufficiently different such that a mere presence of reels and hoses in both would not have motivated their combination" and, as a result, one skilled in the art "would have been discouraged from looking to Cable for a physical arrangement in Van Vliet, which is not a drivable vehicle and is not concerned with rapid servicing in a roadside environment." *Id.* at 13 (citing Ex. 2004 ¶ 111).

With the support of case law and expert testimony, Permian replies that "[d]ifferences in [Cable's and Van Vliet's] exemplary applications would not have discouraged a POSITA from combining their teachings." Pet. Reply 3. That would be the case, Permian argues, because one skilled in the art "is 'a person of ordinary creativity, not an automaton,' and would consider Cable's arrangement of equipment and reel components potentially useful in Van Vliet." *Id.* at 4–5 (citing Ex. 1003 ¶¶ 137–140; *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. at 421); *see also KSR*, 550 U.S. at 421 ("error" to assume "that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem"). We agree.

Though Cable and Van Vliet may have some different concerns and focuses, the mere existence of such differences does not alone negate Permian's reason to combine Van Vliet and Cable. In fact, it is expected that different references would have different concerns and focuses. But,

> [w]hen a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability. Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill. A court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

KSR, 550 U.S. at 401.

Here, FAS does not contend that Van Vliet and Cable are in meaningfully different fields, but merely identifies several differences in

focus and application. That is not enough to defeat Permian's reason for the asserted combination. As Permian's expert credibly testifies, one skilled in the art would consider that "[i]ncorporating Cable's . . . reel configuration into Van Vliet's mobile fuel delivery system would merely involve combining prior art elements according to known methods to yield predictable results." Ex. 1003 ¶ 140.

FAS also argues that "Cable is not informative of a practical arrangement for Van Vliet." PO Resp. 13 (emphasis omitted). This, FAS argues, is because, *first*, Cable and Van Vliet include "different" equipment, and, *second*, Cable's arrangement would be "detrimental" to Van Vliet's system. *Id.* at 13–14. We address each argument in turn.

First, FAS complains that Van Vliet and Cable do not include identical sets of equipment. *Id.* at 13 (citing Ex. 2004 ¶¶ 113–115). FAS then argues that without identical equipment, Van Vliet's equipment cannot be organized in the same way as Cable and "the combination would not have yielded predictable results." *Id.* at 14 (citing Ex. 1004, Fig. 1; Ex. 1005, Fig. 2; Ex. 2004 ¶¶ 116–117). We do not find this argument persuasive. Aside from making that assertion, which its expert merely parrots, FAS never provides any further explanation for why the combination would not have yielded predictable results. *See id.*; *see also* Ex. 2004 ¶¶ 116–117 (same). And nowhere do we discern why this would be the case. Instead, more persuasive is Permian's showing that Cable's teaching of arranging reels on opposite sides of the vehicle would yield predictable results when applied to Van Vliet. *See* Pet. 21–25, 34–35. Even with the presence of other equipment, Van Vliet's reels, when arranged as taught by Cable, would be on opposite sides of the trailer. Moreover, there is no requirement

that prior art references disclose *identical* sets of equipment in order to apply the teachings of one reference to the other. *See Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (The question is whether "a skilled artisan would have been motivated to combine the *teachings* of the prior art references to achieve the claimed invention.") (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)) (emphasis added); *see also* Pet. Reply 5–6.

FAS also complains of several drawbacks to using Cable's arrangement in Van Vliet. *See* PO Resp. 14–17. Although tradeoffs may be necessary when balancing the benefits and drawbacks of various arrangements of equipment, such tradeoffs do not necessarily prevent a proposed combination or negate its obviousness. *See Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) ("a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine"). Here, FAS contrasts Permian's benefit of "reels deployed on opposing sides of an aisle walkway [to be] . . . more easily traversable for maintenance and repairs" with the supposed drawback that "only portions of the reels that face the aisle would be accessible." PO Resp. 14. But, as Van Vliet notes, the orientation of hose reels in fuel delivery systems "is a matter of design choice for the manufacturer and will depend on space requirements." Ex. 1004 ¶ 27. In any event, Cable already accounts for this type of benefit and drawback in the design of its fuel delivery system. For example, as shown in Cable, some reels are positioned for easy access from two sides, whereas other reels appear to be accessible from only one side. *See* Ex. 1005, Figs. 1–2, 4–5. This is proof that a tradeoff of this type—some partially accessible reels in

exchange for an easily traversable walkway—would have been considered acceptable in the art of fuel delivery.

FAS next argues that "arranging the reels of Van Vliet as in Cable would put undue wear and stress on the hoses and reels." PO Resp. 17. This would happen, FAS surmises, because the spindle axis of the reels would be "perpendicular" to the sidewalls of Van Vliet's trailer, thereby requiring each hose "to turn approximately 90° from its reel" in order to be deployed from the sidewalls of Van Vliet's trailer. *Id.* We do not find this argument the least bit persuasive.

At the outset, we note that claim element 1[h] merely recites that "the reels are arranged on first and second opposed sides in the mobile trailer," while claim element 17[h] merely recites that the hoses on the reels "are deployable from the first trailer side wall and . . . from the second trailer side wall." Notably, neither of those claim elements mentions the reels' spindle axis, let alone its orientation relative to the sidewalls of the trailer. As such, Permian never contends that the axis of the hose reels in Van Vliet's modified system would be oriented perpendicular to the sidewalls. *See* Pet. 21–25, 34–35, 46, 47–48. Instead, Permian relies on Van Vliet's teaching of arranging groups of hose reels *parallel with the sidewalls* of a trailer and deploying the reels' hoses through openings *in the trailer's sidewalls*, and, with that premise in mind, incorporates Cable's teaching of positioning hose reels on *opposing sidewalls* of a fuel delivery station with a walkway running therebetween. *See id.* at 47–48 (citing Ex. 1004 ¶ 24; Ex. 1003 ¶ 231). In that combination, and as shown in Van Vliet's Figure 1, there would be no sharp twists or turns in the deployment of the hoses that might subject them to undue wear and stress. Thus, FAS's argument in this regard

is meritless and blatantly ignores the combination of Van Vliet and Cable as proposed by Permian.[7] For that same reason, we reject FAS's arguments specific to claim element 17[h], which focus on the teachings of Van Vliet alone to the exclusion of what the *combination* of both Van Vliet and Cable actually teaches. *See* PO Resp. 18–21 (arguing that "Van Vliet simply does not disclose or suggest first and second groups of hoses that are deployable, respectively, through two opposed side walls."); *see also* Pet. Reply 7 n.3 (noting FAS's misapprehension of Permian's position).

Finally, FAS faults Permian's showing for failing to address "Cable's teaching that the walkway is also a storage area." PO Resp. 21. According to FAS, a walkway that "doubles as a storage area" is a safety hazard that "would discourage" one skilled in the art from looking to Cable to modify Van Vliet's fuel delivery system." *Id.* at 21–22 (citing Ex. 2004 ¶¶ 136–137, 141–142). Indisputably, Cable discloses that equipment bays 19 and 21 "are spaced apart a distance 22 (FIG. 2) forming a walkway *and* storage area therebetween." Ex. 1005, 2:56–67. As such, it is equally plausible that distance 22 is wide enough to accommodate both a walkway and a storage area. In fact, Cable states that distance 22 "allow[s] a person to walk . . . from the driver compartment toward the back doors" of the truck. *Id.*

[7] Indeed, during cross-examination, FAS's expert conceded that Cable teaches "orienting the spindle [of the reel] perpendicular *to the axis or the direction in which those hoses are going to be deployed*." Ex. 1049, 203:4–7 (emphasis added). So, in that case, because Van Vliet's hoses are deployed through sidewall of the trailer, the spindle of Van Vliet's reel would be parallel to the sidewall, not perpendicular to the sidewall, as FAS would have us believe.

Also, while we agree with FAS that using a walkway in a fuel delivery truck or trailer as a storage area may present a safety hazard, that reason alone would not dissuade one skilled in the art from employing Cable's walkway in Van Vliet's system. More aptly, it is a reason why one skilled in the art would avoid using the walkway in Van Vliet's modified system for storage, or at least certain types of storage. To that end, we agree with Permian that one skilled in the art reasonably would have understood Cable as disclosing that the walkway may be used for storage during transport, but cleared out during use. *See* Pet. Reply 8. Thus, we find that one skilled in the art, reading Cable as a whole, would not be discouraged from modifying the arrangement of Van Vliet's fuel delivery system to incorporate a walkway as taught by Cable, as there is no requirement that the walkway be used for storage.

Aside from disputing Permian's showing for claim elements 1[h] and 17[h] and its reason for combining the teachings of Van Vliet and Cable, FAS does not further contest Permian's showing as to the remaining elements of independent claims 1 and 17 or dependent claims 2–16 and 18–22. *See* PO Resp. 9–27. There being no further dispute, and for the reasons discussed above, we find that Permian proves, by a preponderance of the evidence, that the asserted combination of Van Vliet and Cable discloses each element of challenged claims 1–22 and that one skilled in the art would have had sufficient reason to combine their respective teachings. Before deciding the patentability of claims 1–22, however, we must first evaluate FAS's evidence of non-obviousness.

2. FAS's Evidence of Non-Obviousness

FAS argues that non-obviousness of the challenged claims is "strongly supported" by secondary considerations, including commercial success, industry praise, copying, and licensing. PO Resp. 39–40. We address each in turn.

Regarding commercial success, FAS contends that the claimed invention has achieved "significant" commercial success because "more than 60 FAS units[8] have been used to deliver over 800,000,000 gallons of fuel on well sites" in various states and countries. *Id.* at 44–45 (citing Ex. 2023 ¶ 6). But, aside from the declaration testimony of its general counsel,[9] FAS provides no further discussion, let alone evidence, of these commercial activities to corroborate the numbers that its general counsel espouses, such as sales invoices. Moreover, FAS provides no information about the relevant market or its major competitors in which to compare these alleged sales. In the absence of such evidence, we cannot determine the size of the market or FAS's share of that market. As such, we give no significant weight to FAS's evidence of commercial success. *See In re Applied Materials, Inc.*, 692 F.3d 1289, 1300 (Fed. Cir. 2012) ("An important component of the commercial success inquiry in the present case is determining whether [patent owner] had a significant market share relative to *all* competing [products] based on the merits of the claimed invention."); *In re Huang*, 100 F.3d 135, 140 (Fed. Cir. 1996) (noting that "evidence

[8] FAS contends that "each FAS unit embodies the claim elements of the . . . '805 [patent]." PO Resp. 45.

[9] Exhibit 2023 is a declaration from the "Assistant General Counsel" overseeing the legal affairs of FAS. *See* Ex. 2023 ¶ 1.

related solely to the number of units sold provides a very weak showing of commercial success, if any").

Regarding industry praise, FAS submits a press release reporting that the inventor of the '805 patent "was named an Industry Leader at the Texas Oil & Gas Awards for the FAS Unit's *improvements in safety*." PO Resp. 40 (citing Ex. 2023 ¶ 5) (emphasis added). Indeed, the press release explains that "[t]hese FAS units drastically *improve the safety* of frac site workers by taking them out of the 'hot zone.'" Ex. 2023, at 4–5 (emphasis added). But, at most, the press release indicates that the award was given for safety improvements. No further reasons are given for the award, and FAS makes no effort to tie the award to the claimed features of the '805 patent, which say nothing about safety. So, while the honor of the award is to be commended, we are constrained by FAS's lack of information and evidence tying the award to the claimed invention. As such, we give FAS's evidence of industry praise little, if, any weight.

Next, FAS alleges that Permian and another entity "copied the claimed configuration" of the '805 patent. PO Resp. 41. In support, FAS submits pictures of products it accuses of infringement in two parallel district court cases, as well as pleadings from those cases. *See id.* at 41–44 (citing Exs. 2021, 2022). FAS also notes that Permian had "knowledge" of the '805 patent via prosecution of one of its own patents. *Id.* at 41 (citing Ex. 2029). We find this evidence insufficient to establish copying. As correctly noted by Permian, even if its products were found to infringe the '805 patent, infringement is not the same as copying. *See* Pet. Reply 24 (citing *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) ("Not every competing product that arguably fails within

the scope of a patent is evidence of copying. Otherwise, every infringement suit would automatically confirm the nonobviousness of the patent. Rather, copying requires the replication of a specific product.")). And though FAS asserts that Permian was aware of the '805 patent, FAS never explains how Permian copied a product covered by the '805 patent's claims. In the end, we give no weight to FAS's alleged evidence of copying.

Relying again on the declaration of its general counsel, FAS states it has "granted licenses under the . . . '805 . . . patent" to another entity that "pays [FAS] a royalty for the use of automated fracking fuel delivery systems." PO Resp. 44 (citing Ex. 2023 ¶ 4). In particular, FAS's general counsel testifies that he "was personally involved with the negotiation of that [entity's] settlement agreement" and that the entity "took a license of [the '805 patent]." Ex. 2023 ¶ 3. FAS, however, fails to introduce a copy of the settlement agreement into the record, thereby preventing us from verifying its terms and assessing if it resulted from the merits of the claimed invention. This failure by FAS constrains the amount of weight we can give to its evidence of licensing. *See In re Cree, Inc.,* 818 F.3d 694, 703 (Fed. Cir. 2016) (mere affidavit is insufficient to show "if the licensing program was successful either because of the merits of the claimed invention or because they were entered into as business decisions to avoid litigation, because of prior business relationships, or for other economic reasons").

Finally, FAS fails to submit sufficient evidence of nexus. Instead, FAS simply asserts that "[t]he FAS Unit is covered by the challenged claims, creating a presumption that [its] secondary consideration[s] of nonobviousness should apply." PO Resp. 40 (citing Ex. 2004 ¶ 214). But, rather than map the challenged claims to the FAS unit, FAS's expert simply

submits three screenshots from a video purporting to show that "the FAS Unit includes each and every limitation of at least the independent claims (1 and 17) of the '805 patent." Ex. 2004 ¶ 214. From our review, nowhere do we discern, nor does FAS's expert sufficiently point out, where exactly those screenshots depict the key limitation in the independent claims that "a portion of the reels are connected with the first manifold and another portion of the reels are connected with the second manifold." Thus, we find FAS's expert testimony and screenshots insufficient to confirm whether a nexus exists.

3. Conclusion

In the end, FAS's limited evidence of secondary considerations—one award, a single license, and commercial sales with no context of market share—lacks much of the underlying documentary evidence needed to support the secondary considerations FAS is seeking. Thus, we find that FAS's evidence of secondary considerations is insufficient to outweigh the strong evidence of obviousness shown by the asserted combination of Van Vliet and Cable. As such, we determine that Permian shows by a preponderance of the evidence that claims 1–22 are unpatentable as obvious over the combined teachings of Van Vliet and Cable. With that determination, we have addressed all the challenged claims as required by the statute. *See* 35 U.S.C. § 318(a).

D. Permian's Additional Challenges

Permian also challenges various subsets of claims 1–22 as obvious over Van Vliet alone or in various combinations that include Cable, AFD, Coxreels, and/or Lowrie. *See* Pet. 5, 47–79. Because we have determined above that claims 1–22 are unpatentable as obvious over the combined

teachings of Van Vliet and Cable, these additional challenges are moot and we decline to address them as unnecessary to our ultimate determination of unpatentability. *See Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App'x 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that the "Board need not address issues that are not necessary to the resolution of the proceeding" and has "discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims").

III. MOTION TO EXCLUDE

FAS moves to exclude portions of the redirect testimony of Permian's expert as found in Exhibits 2012 and 2030. *See* Mot. 1 n.1 (citing Ex. 2012, 128:13–134:20; Ex. 2030, 90:25–96:20). We do not rely on either of those exhibits, nor do we rely on the noted portions of the redirect testimony that FAS seeks to exclude. Thus, we deny FAS's motion to exclude as moot.

IV. CONCLUSION[10]

We determine that Permian has proven by a preponderance of the evidence that the challenged claims are unpatentable, as summarized below:

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–22	103	Van Vliet, Cable	1–22	
17, 18	102/103	Van Vliet[11]		
9, 10	103	Van Vliet, Cable, AFD		
4, 11, 12, 20	103	Van Vliet, Cable, Coxreels		
1, 7–10, 13–18, 22	103	Van Vliet, AFD		
2, 3, 6, 19	103	Van Vliet, AFD, Lowrie		
4, 5, 20, 21	103	Van Vliet, AFD, Lowrie, Coxreels		
11, 12	103	Van Vliet, AFD, Coxreels		
Overall Outcome			1–22	

[10] Should FAS wish to pursue amendment of the claims in a reissue or reexamination, we note the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding. See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If a reissue or reexamination is pursued, we remind FAS of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

[11] As explained above (Section II.D), we do not reach this or subsequent grounds because all the challenged claims are addressed by the first ground of unpatentability.

V. ORDER

Accordingly, it is:

ORDERED that claims 1–22 of U.S. Patent 9,586,805 B1 have been shown to be *unpatentable*;

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2; and

FURTHER ORDERED that FAS's motion to exclude is denied.

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