

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTELLIGENT WELLHEAD SYSTEMS, INC.,
Petitioner,

v.

DOWNING WELLHEAD EQUIPMENT, LLC,
Patent Owner.

IPR2024-00584
Patent 11,560,770 B2

Before BENJAMIN D. M. WOOD, CARL M. DEFRANCO, and
FREDERICK C. LANEY, *Administrative Patent Judges*.

LANEY, *Administrative Patent Judge*.

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

I. INTRODUCTION

Intelligent Wellhead Systems, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–38 (“challenged claims”) of U.S. Patent No. 11,560,770 B2 (Ex. 1001, “the ’770 patent”). Petitioner also previously filed a parallel petition in another proceeding requesting an *inter partes* review of claims 1–38 of the ’770 patent on different asserted grounds. *Intelligent Wellhead Systems, Inc. v. Downing Wellhead Equipment, LLC*, IPR2024-00300 (“the ’300 IPR”), Paper 1. Additionally, Petitioner filed Petitioner’s Reasons for Parallel Petitions and Petitioner Ranking (Paper 3, “Exp.”) requesting that we institute *inter partes* review based on the petition in the ’300 IPR as well as the Petition in this proceeding, but prioritizes the petition in the ’300 IPR ahead of the one in this proceeding. Exp. 5.

Downing Wellhead Equipment, LLC (“Patent Owner”) filed a Preliminary Response (Paper 8, “Prelim. Resp.”), which disputes the need for parallel petitions (*id.* at 2–15).

We granted the petition in the ’300 IPR and instituted an *inter partes* review of claims 1–38 of the ’770 patent in that proceeding on all eight grounds alleged. ’300 IPR, Paper 10 (PTAB June 10, 2024). For the reasons provided below, and based on the circumstances present here, we find Petitioner has not shown in this proceeding that a parallel petition challenging the same claims of the ’770 patent at issue in the ’300 IPR is warranted, and we exercise discretion under 35 U.S.C. §314(a) to deny institution of an *inter partes* review of the ’770 patent in this proceeding.

II. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies itself, IWS USA Corp., and Pason Systems Corp. as real parties-in-interest. Pet. 1. Patent Owner identifies itself and SEF Energy, LLC as real parties-in-interest. Paper 6, 2.

B. *Related Matters*

The parties identify the following lawsuit in which the '770 patent is asserted: *Downing Wellhead Equipment, LLC v. Intelligent Wellhead Systems, Inc.*, 1:23-cv-01180-RMR-SP (D. Colo.). Pet. 1; Paper 6, 2. In addition to the '300 IPR, the parties further identify IPR2024-00256 and IPR2024-00583 wherein Petitioner challenges the claims of U.S. Patent No. 11,401,779 ("the '779 patent"), which is a parent to the '770 patent. Pet. 2–3; Paper 6, 2.

C. *The '770 Patent*

The '770 patent is titled "Hydraulic Fracturing Plan and Execution of Same," and relates to "a hydraulic fracturing plan executable by a hydraulic fracturing system to hydraulically fracture a plurality of oil and gas wells." Ex. 1001, code (54), 2:12–14. Figure 1A of the '770 patent depicts a hydraulic fracturing system for performing the patent's fracturing methods, and is reproduced below:

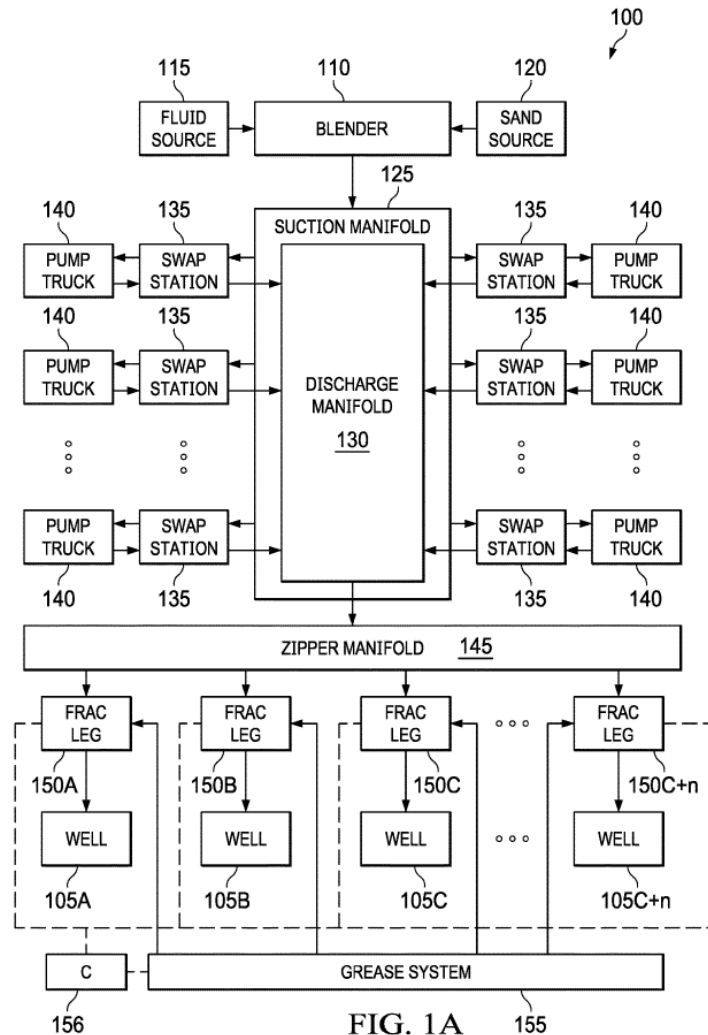


FIG. 1A

Figure 1A depicts hydraulic fracturing system 100, which is used to deliver fracturing fluid to wells 105A through 105C + n. Ex. 1001, 5:45–48. Pump trucks 140 draw the fracturing fluid from suction manifold 125 and discharge it to zipper manifold 145 via discharge manifold 130. *Id.* at 5:49–59. The zipper manifold delivers the fluid to “frac legs” 150A through 150C+n, each leg adapted to deliver the fluid to a corresponding well 105A through 105C+n. *Id.* at 5:59–65. Each frac leg is equipped with one or more zipper valves 170 capable of allowing or preventing fluid flow to the respective well. *Id.* at 7:49–8:1, Figs. 2A–2G.

According to the '770 patent, when a fracturing stage has ended at one well and fracturing another well is contemplated, a determination is made whether to perform a “regular swap” or a “continuous pumping swap” (“CP swap”) to another well. *Id.* at 7:5–9. This determination may be based on, e.g., determining that the fluid flow rate into the first well is below an upper threshold for a threshold amount of time. *Id.* at 13:30–54.

The steps of executing the CP swap from an “ n_1 well” to an “ n_1+1 well” are depicted in Figure 15, reproduced below.

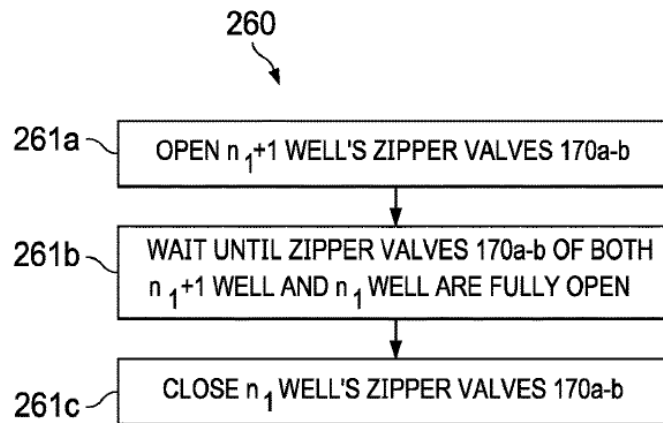


FIG. 15

Figure 15 is a flow diagram illustrating various sub-steps of a CP swap, in which hydraulic fracturing is moved from n_1 well to n_1+1 well. *Id.* at 4:39–43, 14:16–40. At sub-step 261a, the n_1+1 well’s zipper valves 170a-b are opened and hydraulic fracturing fluid is communicated from the zipper manifold 145 to the n_1+1 well. *Id.* at 14:22–25. At the sub-step 261b, both the n_1+1 well’s and the n_1 well’s zipper valves 170a-b are allowed to fully open, so that hydraulic fracturing fluid is communicated from the zipper manifold 145 to the n_1 well and the n_1+1 well. *Id.* at 14:29–35. Finally, at the sub-step 261c, the n_1 well’s zipper valves 170a-b are closed. *Id.* at 14:38–40.

The '770 patent explains that “executing the CP swap from hydraulically fracturing . . . the n_1 well . . . to hydraulically fracturing . . . the $n_1 + 1$ well . . . transitions the zipper valves from one well to the other, opening the second well and subsequently shutting-in the first well, all while pumping.” Ex. 1001, 14:43–48. “The transition is instantaneous and the total time between stages measured at treatment pressure is less than 20 seconds (as fast as 19 seconds in some instances).” *Id.* at 14:49–51.

D. The Challenged Claims and Their Construction

Of the 38 claims challenged in this Petition, claims 1, 14, and 27 are independent; claims 2–13 depend from claim 1; claims 15–26 depend from claim 14; and claims 28–38 from claim 27. Illustrative claim 1 reads:

1. [1.1] A method, comprising: communicating fluid to a first well via a manifold and a first valve, the first valve being associated with both the manifold and the first well; and
[1.2] in response to determining that the fluid communicated via the manifold has satisfied one or more conditions:
[1.3] opening a second valve; communicating fluid to a second well via the second valve; and
[1.4] closing the first valve after opening the second valve.

Ex. 1001, 22:34–43 (revised for formatting and to include brackets for the claim limitations in the manner addressed by Petitioner; Pet. x). Claims 14 and 27 recite similar limitations to claim 1, except claim 14 recites an apparatus (including, e.g., memory, processor, and software), and claim 27 recites a system (including, e.g., valves, manifold, and controllers), that perform the steps claim 1 recites. Ex. 1001, 23:25–41, 24:30–42; Pet. xii–xiii, xv.

E. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–38 are unpatentable based on the following grounds:

Grounds	Claims Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1	1, 2, 4–13	102	Ciezobka ²
2	1–38	103	Ciezobka
3	2, 3, 14–38	103	Ciezobka, McNeel ³

Petitioner additionally relies on testimony from Dr. Robert Durham in support of its challenges. Ex. 1041. Patent Owner counters with testimony from John Hughett in support of its positions. Ex. 2006.

III. DISCRETIONARY DENIAL

The Petition seeks *inter partes* review of the same claims of the ’770 patent that Petitioner requested review of in the ’300 IPR. Exp. 1. At Petitioner’s request, we prioritized the petition filed by Petitioner in the ’300 IPR. *See id.* at 5. And we instituted an *inter partes* review in the ’300 IPR for the reasons discussed in the institution decision. ’300 IPR, Paper 10 (PTAB June 10, 2024). We now turn in this proceeding to consider whether Petitioner has shown a parallel petition challenging the same claims of the ’770 patent at issue in the ’300 IPR is warranted.

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102, 103 effective March 16, 2013. We apply the AIA versions of §§ 102 and 103 because the presumed earliest possible priority date evidenced by the ’770 patent is after that effective date. *See* Ex. 1001, codes (22), (63), (60).

² Ciezobka et al., WO 2017/201526 A1, publ. Nov. 23, 2017 (Ex. 1036).

³ McNeel et al., US 2007/0125543 A1, publ. June 7, 2007 (Ex. 1037).

Specifically, because Petitioner filed this second petition before Patent Owner's preliminary response in the '300 IPR and challenges the same claims of the same patent at issue in the '300 IPR, we consider whether we should exercise discretion to deny the parallel petition. *See* 35 U.S.C. § 314(a); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (explaining that section "314(a) invests the Director with discretion on the question *whether* to institute review"); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) ("[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.").

The Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019) ("CTPG")⁴ states that "one petition should be sufficient to challenge the claims of a patent in most situations" and that "multiple petitions by a petitioner are not necessary in the vast majority of cases." CTPG 59. The CTPG further states that "[t]wo or more petitions filed against the same patent at or about the same time (e.g., before the first preliminary response by the patent owner) may place a substantial and unnecessary burden on the Board and the patent owner and could raise fairness, timing, and efficiency concerns." *Id.* (citing 35 U.S.C. § 316(b)). The CTPG provides the following guidance:

To aid the Board in determining whether more than one petition is necessary, if a petitioner files two or more petitions challenging the same patent, then the petitioner should, in its petitions or in a separate paper filed with the petitions, identify: (1) a ranking of the petitions in the order in which it wishes the Board to consider the merits, if the Board uses its discretion to institute any of the petitions, and (2) a succinct explanation of the differences between the petitions, why the issues addressed by the differences are material, and why the

⁴ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

Board should exercise its discretion to institute additional petitions if it identifies one petition that satisfies petitioner's burden under 35 U.S.C. § 314(a).

Id. at 59–60 (footnote omitted).

According to Petitioner, it was forced to submit two petitions because of the number of claims challenged and Patent Owner's refusal to identify a priority date for the '770 patent in a timely manner. Exp. 1–3. Petitioner argues that, when Patent Owner was asked to identify the '770's priority date, "[Patent Owner] refused, stating it would first need to see [Petitioner's] invalidity contentions." *Id.* at 2. And as a result, Petitioner contends, the first petition necessarily includes a "detailed discussion regarding the earliest possible priority date determined from support in the '770's extensive family of applications," which took up a significant portion of the word count allowed. *Id.* at 2–3. After receiving Petitioner's invalidity contentions and after the first petition was filed, however, Petitioner asserts that Patent Owner supplemented its interrogatory answer regarding priority, which indicated a priority date that would negate the primary reference (Krupa) in two of the grounds asserted in the first petition. *Id.* at 3. Petitioner argues, "[h]ad [it] been aware of [Patent Owner's] public disclosure/derivation assertions before filing Petition 1, e.g., when [Patent Owner] was first asked about priority, Petition 1 could have included grounds from Petition 2 instead of the Krupa-based grounds." *Id.* at 4. Lastly, regarding the differences between the petitions, Petitioner states "the petitions are materially different," without any further explanation. *Id.*

In response, Patent Owner argues that "[t]his is plainly not one the 'rare' situations in which a second petition is necessary." Prelim. Resp. 3 (citing CTPG 59). As support, Patent Owner highlights that Petitioner "fails

to justify [the Petition] because it fails to acknowledge that its previous petition already guarded against the [priority issue]” by including three additional independent grounds challenging the patentability of the ’770 claims. *Id.* Patent Owner highlights that Petitioner provides no reason why it needs yet another backup ground or explains how the independent ground in this Petition is materially different than those additional grounds already alleged in the ’300 IPR, except noting in conclusory fashion that the grounds are “different.” *Id.* Patent Owner states that “[Petitioner] had a choice of many different references to form backup grounds . . .”, but “simply elected to assert references other than [those asserted in this Petition].” *Id.* at 4.

Patent Owner argues that Petitioner “attempts to justify why it waited three months to file its [s]econd [p]etition, despite knowing of the prior art in the [s]econd [p]etition at the time of [f]irst [p]etition.” Prelim. Resp. 9. “To the extent [Petitioner] argues that Patent Owner somehow surprised it with the ’770 Patent’s earliest effective filing date after the [f]irst [p]etition,” Patent Owner asserts that “any such surprise is not reasonable and not a justification for [this Petition].” *Id.* at 10–11. Supporting that assertion, Patent Owner highlights that:

on November 29, 2023—before [Petitioner] filed the [f]irst [p]etition—the parties agreed that by December 15, 2023, Patent Owner would “provide its contentions regarding inventorship and priority” of the ’770 Patent. On December 15, [Petitioner] filed the [f]irst [p]etition despite knowing that effective filing date information would be served later that same day. And Patent Owner in fact did provide such filing date information later that day, which showed the parties agreed on the ’770 Patent’s earliest effective filing date.

Id. at 11 (citing Ex. 2005, 2; Ex.1039, 8). As a result, Patent Owner contends that:

the [f]irst [p]etition’s priority discussion was only “necessar[y]” because [Petitioner] *chose not to wait a matter of hours for the service it agreed to*. Moreover, the [f]irst [p]etition was filed with five months left before the one-year statutory bar. The purpose of giving defendants a full year to seek IPR is to “afford defendants a reasonable opportunity to identify and understand the patent claims that are relevant to the litigation.” 157 Cong. Rec. S5429 (daily ed. Sept. 8, 2011). [Petitioner] did the opposite—it hurried to file the First Petition ***without*** knowing the relevant issues. Willful blindness is not a reasonable basis for a second petition.

Id. at 11–12 (emphasis added).

We agree with Patent Owner that Petitioner has not shown that a parallel petition challenging claims 1–38 of the ’770 patent is warranted. The mere fact that different references were asserted in the parallel petition is not justification for a parallel petition under the circumstances presented here. We first note that Petitioner’s conclusory statement that “the petitions are materially different” (Exp. 4) falls well short of providing a succinct explanation of the differences between the petitions or establishing why the issues addressed by the differences are material. That statement alone has little, if any, persuasive value. As a result, when “one petition should be sufficient to challenge the claims of a patent in most situations,” the primary basis Petitioner gives to show this is an extraordinary case that warrants an additional petition is the failure of Patent Owner to identify a priority date for the ’770 patent before the petition in the ’300 IPR was filed (i.e., December 15, 2023).

In Petitioner’s words, this Petition would not have been necessary because “[h]ad [it] been aware of [Patent Owner’s] public disclosure/derivation assertions before filing Petition 1, e.g., when [Patent Owner] was first asked about priority, Petition 1 could have included

grounds from Petition 2 instead of the Krupa-based grounds.” Exp. 4. But as Patent Owner correctly highlights, the ’300 IPR was filed on the same day, albeit earlier that day, that Patent Owner identified the alleged priority date for the ’770 patent. And Petitioner was not required to file its first petition before Patent Owner provided the priority related information; even after the delay (justified or not), Petitioner clearly still had a reasonable amount of time to make a decision about what grounds should be included in a single petition. Although it may have been a better practice for Patent Owner to give Petitioner the priority related information sooner, we are not persuaded Patent Owner’s delay in this case justifies the need for a second petition. This is particularly true here because the quantity and subject matter of the claims at issue in the ’770 Patent are not of the kind that prevented Petitioner from being able to include at least three additional, completely separate, and independent grounds challenging all of claims, as evidenced by the ’300 IPR. In short, we are simply not persuaded that Patent Owner’s delay, justified or not, impacted sufficiently Petitioner’s ability to present all of its challenges to the claims of the ’770 patent in a single petition.

Therefore, based on these circumstances, we find that the reasons provided by Petitioner do not show that a parallel petition is warranted.

IV. CONCLUSION

For the foregoing reasons, we exercise our discretion under § 314(a) and deny the Petition seeking *inter partes* review of the ’770 patent in this proceeding.

V. ORDER

In consideration of the foregoing, it is hereby:

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ORDERED that the Petition is *denied* and no trial is instituted in this proceeding.

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