

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BAKER HUGHES INCORPORATED,
Petitioner,

v.

LIQUIDPOWER SPECIALTY PRODUCTS INC.
(f/k/a LUBRIZOL SPECIALTY PRODUCTS, INC.),¹
Patent Owner.

Case IPR2016-01896
Patent 8,022,118 B2

Before KRISTINA M. KALAN, CHRISTOPHER M. KAISER, and
MICHELLE N. ANKENBRAND, *Administrative Patent Judges*.

ANKENBRAND, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a); 37 C.F.R. § 42.108

¹ Patent Owner represents that its name has changed from Lubrizol Specialty Products, Inc. to LiquidPower Specialty Products Inc., and that LiquidPower Specialty Products Inc. is the owner of U.S. Patent No. 8,022,118 by assignment, holding all rights, title, and interest to that patent. Paper 8, 2. Accordingly, we modify the original case caption to reflect that change.

I. INTRODUCTION

Baker Hughes Incorporated (“Petitioner”) requests *inter partes* review of claims 1–11 of U.S. Patent No. 8,022,118 B2 (“the ’118 patent,” Ex. 1001). Paper 2 (“Pet.”). LiquidPower Specialty Products, Inc. (f/k/a Lubrizol Specialty Products, Inc.) (“Patent Owner”) filed a Preliminary Response. Paper 9 (“Prelim. Resp.”).

Based upon the particular circumstances of this case, we exercise our discretion under 35 U.S.C. § 314(a) and do not institute an *inter partes* review of the challenged claims.

II. BACKGROUND

A. Related Proceedings

Petitioner filed an earlier Petition requesting an *inter partes* review of claims 1–11 of the ’118 patent. *Baker Hughes Inc. v. Lubrizol Specialty Prods., Inc.*, Case IPR2016-00734 (“734 IPR”), Paper 2. We instituted a review of those claims on October 4, 2016. Ex. 2004 (“734 IPR Institution Decision”). Trial currently is ongoing in the 734 IPR, with oral argument, if requested, scheduled for June 19, 2017. 734 IPR, Paper 10, 7.

Concurrently with the Petition in this proceeding, Petitioner filed petitions requesting an *inter partes* review of three patents related to the ’118 patent: U.S. Patent No. 8,426,498 (Case IPR2016-01903); U.S. Patent No. 8,450,249 (Case IPR2016-01901); and U.S. Patent No. 8,450,250 (Case IPR2016-01905). *See* Pet. 2; Paper 8, 3. Further, Patent Owner identifies several additional patents and one patent application that are related to the ’118 patent: U.S. Patent No. 8,450,251; U.S. Patent No. 8,616,236; U.S. Patent No. 8,656,950; and U.S. Patent Application No. 13/209,119 (Notice of Allowance issued, Sept. 20, 2016). Paper 8, 3.

The parties also identify the following litigation involving the '118 patent: *Lubrizol Specialty Products, Inc. v. Baker Hughes Inc.*, No. 4:15-cv-02915 (S.D. Tex.), and *Lubrizol Specialty Products, Inc. v. Flowchem LLC*, No. 4:15-cv-02917 (S.D. Tex.). Pet. 3; Paper 8, 2.

B. The '118 Patent

The '118 patent, titled “Drag Reduction of Asphaltenic Crude Oils,” issued on September 20, 2011. The '118 patent relates to “reducing pressure drop associated with the turbulent flow of asphaltenic crude oil through a conduit” by “treating the asphaltenic crude oil [i.e., crude oil having an asphaltene content of at least 3 weight percent and/or an API gravity of less than about 26°] with a high molecular weight drag reducing polymer that can have a solubility parameter within about 20 percent of the solubility parameter of the heavy crude oil.” Ex. 1001, Abstract.

According to the specification, “[w]hen fluids are transported by a pipeline, there is typically a drop in fluid pressure due to the friction between the wall of the pipeline and the fluid.” *Id.* at 1:14–16. The pressure drop increases with increasing flow rate, resulting in energy losses and inefficiencies that increase equipment and operation costs. *Id.* at 1:16–26. The problems associated with pressure drop are most acute when fluids are transported over long distances. *Id.* at 1:24–25.

Before the '118 patent, it was known to use drag reducing polymers in the fluid flowing through a pipeline to alleviate the problems resulting from pressure drop. *Id.* at 1:28–30. A drag reducing polymer “is a composition capable of substantially reducing friction loss associated with the turbulent flow of a fluid through a pipeline,” and such a composition works by “suppress[ing] the growth of turbulent eddies, which results in higher flow

rate at a constant pumping pressure.” *Id.* at 1:32–37. Drag reduction generally “depends in part upon the molecular weight of the polymer additive and its ability to dissolve in the hydrocarbon under turbulent flow.” *Id.* at 1:39–41.

According to the specification, because conventional drag reducing polymers do not perform well in crude oils having a low API gravity² and/or a high asphaltene content (i.e., heavy crude oils), there exists a need for improved drag reducing polymers capable of reducing the pressure drop associated with the turbulent flow of heavy crude oils through pipelines. *Id.* at 1:46–49. The subject matter of the disclosed invention, therefore, “relates generally to high molecular weight drag reducers for use in crude oils.” *Id.* at 1:7–8. More specifically, the ’118 patent discloses a method for reducing the pressure drop associated with flowing a liquid hydrocarbon through a conduit, such as a pipeline. *Id.* at 2:58–60. The method comprises introducing a drag reducing polymer into a liquid hydrocarbon having an asphaltene content of at least about 3 weight percent and an API gravity of less than about 26° (i.e., heavy crude oil) to produce a treated liquid hydrocarbon having a viscosity that is not less than the viscosity of the liquid hydrocarbon prior to treatment with the drag reducing polymer. *Id.* at 19:32–42. The ’118 patent provides several examples of suitable heavy crude oils, including Bow River crude oil. *Id.* at 4:37–40, Table 1.

The specification further explains that, “[i]n order for the drag reducing polymer to function as a drag reducer, the polymer should dissolve

² The specification defines API gravity as “the specific gravity scale developed by the American Petroleum Institute for measuring the relative density of various petroleum liquids.” *Id.* at 3:61–64.

or be substantially solvated in the liquid hydrocarbon.” *Id.* at 11:38–40. The liquid hydrocarbon and the drag reducing polymer, therefore, have solubility parameters that can be determined according to known methods, and the claims set forth certain solubility parameters and ranges of solubility parameters. *Id.* at 4:19–32 (setting forth known methods for determining the solubility parameter of the liquid hydrocarbon), 11:46–12:23 (setting forth known methods for determining the solubility parameter of the drag reducing polymer); *see, e.g., id.* at 19:43–45 (“the drag reducing polymer has a solubility parameter within $4 \text{ MPa}^{1/2}$ of the solubility parameter of the liquid hydrocarbon”).

C. Illustrative Claim

Claims 1, 10, and 11 are independent claims of the ’118 patent.

Claim 1 is illustrative of the challenged claims and recites:

1. A method comprising:
introducing a drag reducing polymer, into a pipeline, such that [sic] such that the friction loss associated with the turbulent flow through the pipeline is reduced by suppressing the growth of turbulent eddies, into a liquid hydrocarbon having an asphaltene content of at least 3 weight percent and an API gravity of less than about 26° to thereby produce a treated liquid hydrocarbon wherein the viscosity of the treated liquid hydrocarbon is not less than the viscosity of the liquid hydrocarbon prior to treatment with the drag reducing polymer;
wherein the drag reducing polymer has a solubility parameter within $4 \text{ MPa}^{1/2}$ of the solubility parameter of the liquid hydrocarbon and
the drag reducing polymer is added to the liquid hydrocarbon in the range from about 0.1 to about 500 ppmw.

Ex. 1001, 19:32–47.

D. The Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims of the '118 patent are unpatentable based upon the following grounds:

References	Statutory Basis	Claim(s) Challenged
Holtmyer Publication, ³ Holtmyer Patent, ⁴ and Strausz ⁵	§103	1–11
Inaoka ⁶ and Strausz	§103	1–11

The Petition is supported by the Declaration of Thomas H. Epps, III, Ph.D. (Ex. 1041).

III. ANALYSIS

Patent Owner asks that we deny institution of a trial in this proceeding under 35 U.S.C. § 314(a). Prelim. Resp. 11–13. Specifically, Patent Owner argues that (1) Petitioner previously filed the 734 IPR, which challenges the same claims of the '118 patent as the current Petition; (2) Petitioner knew or should have known of the references asserted in the current Petition when it filed the petition in the 734 IPR; (3) at the time it filed the current Petition, Petitioner had received Patent Owner's preliminary response in the 734 IPR and the Board's decision on institution in the 734 IPR; (4) Petitioner altered

³ Marlin D. Holtmyer & Jiten Chatterji, *Study of Oil Soluble Polymers as Drag Reducers*, 20 POLYMER ENGINEERING & SCI. 473, 473–77 (1980) ("Holtmyer Publication," Ex. 1005).

⁴ U.S. Patent No. 3,758,406, issued September 11, 1973 ("Holtmyer Patent," Ex. 1006).

⁵ OTTO P. STRAUZ & ELIZABETH M. LOWN, *THE CHEMISTRY OF ALBERTA OIL SANDS, BITUMENS AND HEAVY OILS* 464–480 (2003) ("Strausz," Ex. 1009).

⁶ European Patent Application No. EP 0 882 739 A2, published December 9, 1998 ("Inaoka," Ex. 1007).

material presented in the current Petition based on Patent Owner's preliminary response in the 734 IPR and the Board's institution decision in the 734 IPR; (5) Petitioner fails to explain why the grounds of unpatentability asserted in the current Petition could not have been asserted in the petition filed in the 734 IPR; and (6) the current Petition is a waste of Board resources because it will be mooted by the result of the 734 IPR. Prelim. Resp. 19–32. Patent Owner also argues that we should deny institution under 35 U.S.C. § 325(d) because Petitioner asserts the same or substantially the same prior art and arguments in this proceeding that the Office already considered during prosecution of the '118 patent, or is considering in the 734 IPR. *Id.* at 31–32; *see id.* at 13–19.

For the reasons discussed below, we are persuaded that the circumstances of this case justify exercising our discretion under § 314(a) to deny institution of an *inter partes* review.

A. The 734 IPR

Petitioner previously filed a Petition in the 734 IPR requesting an *inter partes* review of claims 1–11 of the '118 patent—the same claims challenged in the current Petition. *Compare* Ex. 2027, 4, *with* Pet. 4. The Petition in the 734 IPR was supported by the Declaration of Thomas H. Epps, III, Ph.D. Patent Owner filed a Preliminary Response in the 734 IPR arguing that we should deny institution based, in part, on inconsistencies between Dr. Epps's testimony and Strausz. Ex. 2003, 29–30. In particular, Patent Owner argued Dr. Epps's testimony regarding the solubility parameter of Bow River crude oil “is based on the unsupported assumption that asphaltene was ‘fully solubilized’ by the Bow River crude oil sample in Eaton. . . . But . . . Strausz . . . states the opposite. Specifically, Strausz

states that ‘asphaltenes in petroleum are colloidal systems,’” meaning that “they exist as solid particles dispersed in the oil rather than being ‘fully solubilized’ in the oil as [Dr. Epps] assumes.” *Id.*

We considered Patent Owner’s argument in the 734 IPR Institution Decision, but found it unpersuasive based on the record before us at that time, including Strausz and Dr. Epps’s testimony regarding Strausz. Ex. 2004, 18–20. Ultimately, we instituted an *inter partes* review of claims 1–11 on all three grounds asserted by Petitioner: (1) claims 1, 3, 4, 6, 7, and 11 as anticipated by Eaton; (2) claims 1–7 and 11 as obvious over the combination of Eaton and Strausz; and (3) claims 8–10 as obvious over the combination of Eaton, Strausz, and Naiman. *See id.* at 31.

B. Discretionary Non-Institution

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a); 37 C.F.R. § 42.108(a); *Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“the PTO is permitted, but never compelled, to institute an IPR proceeding”); *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, Case IPR2013-00324, slip op. 4 (PTAB Nov. 21, 2013) (Paper 19) (“Congress did not mandate that an *inter partes* review must be instituted under certain conditions. Rather, by stating that the Director—and by extension, the Board—*may not* institute review *unless* certain conditions are met, Congress made institution discretionary.”). Accordingly, the Board may “deny some or all grounds for unpatentability for some or all of the challenged claims.” 37 C.F.R. § 42.108(b).

In determining whether to exercise our discretion to deny institution under 35 U.S.C. § 314(a), we balance Petitioner’s desire to be heard against Patent Owner’s interest in avoiding harassment. *See* H.R. Rep. No. 112-98,

pt.1, at 48 (2011) (post-grant proceedings conducted under the Leahy-Smith America Invents Act (“AIA”) “are not to be used as tools for harassment or a means to prevent market entry through repeated litigation and administrative attacks on the validity of a patent. Doing so would frustrate the purpose of the section as providing quick and cost effective alternatives to litigation.”). That is, our overarching concern in administering AIA proceedings is one of fairness to both parties.

We have exercised our discretion to deny institution when the facts of the case indicate that a petitioner has used an AIA proceeding to gain an unfair advantage. For example, we have denied institution based on the potential inequity of a petitioner filing serial attacks against the same claims of a patent, while adjusting litigation positions along the way based on the patent owner’s arguments or the Board’s decision—a tactic that we cannot ignore. *See, e.g., NVIDIA Corp. v. Samsung Elec. Co.*, Case IPR2016-00134, slip op. at 8 (PTAB May 4, 2016) (Paper 9); *Toyota Motor Corp. v. Cellport Sys., Inc.*, Case IPR2015-01423, slip op. at 8 (PTAB Oct. 28, 2015) (Paper 7) (“[T]he opportunity to read Patent Owner’s Preliminary Response in [the prior challenge], prior to filing the Petition here, is unjust.”). Patent Owner argues that Petitioner has engaged in such activity in the present case, and we agree.

As explained above, Petitioner previously filed the 734 IPR challenging claims 1–11 of the ’118 patent—the same claims of the same patent that Petitioner again challenges in the instant proceeding. We further note that, at the time Petitioner filed the current Petition, Petitioner already had received both Patent Owner’s Preliminary Response and the 734 IPR Institution Decision. Specifically, Patent Owner filed its Preliminary

Response in the 734 IPR on July 6, 2016. Ex. 2003, 61. We issued the 734 IPR Institution Decision on October 4, 2016. Ex. 2004, 1. Petitioner filed the current Petition on October 6, 2016—nearly three months after Patent Owner filed its Preliminary Response in the 734 IPR. That delay accorded Petitioner sufficient opportunity to adjust its position in this proceeding in response to the information it received in connection with the 734 IPR. And, as Patent Owner argues, Petitioner appears to have availed itself of that opportunity by, for example, modifying Dr. Epps’s testimony in this proceeding in response to Patent Owner’s arguments in the 734 IPR Preliminary Response. *See* Prelim. Resp. 22–24.

Dr. Epps testified in the 734 IPR that “[t]he results summarized by Strausz demonstrate that asphaltene is completely soluble in solvents having [certain] solubility parameters.” Ex. 2026 ¶ 69. Dr. Epps further testified that “asphaltene is fully solubilized by Bow River crude oil.” *Id.* Patent Owner’s Preliminary Response in the 734 IPR challenged that testimony as unsupported and contrary to Strausz’s disclosure. As previously explained, we considered that argument in the 734 IPR Institution Decision, but found it unpersuasive. Ex. 2004, 18–20; *see supra* § III.A.

In this proceeding, Dr. Epps testifies not that asphaltene is “completely soluble” or “fully solubilized” but, rather, that “asphaltenes were understood to be colloiddally dispersed (present as very small suspended particles) in crude oil.” Ex. 1041 ¶ 122. Dr. Epps further testifies that “Strausz states that asphaltene forms a colloidal system in crude oil, and would therefore technically be ‘dispersed’ rather than ‘soluble’ in crude oil.” Ex. 1041 ¶ 135. Neither Petitioner nor Dr. Epps, however, offers any reason for the change in testimony between the two proceedings. The lack of such

explanation, coupled with the fact that Patent Owner raised in the 734 IPR the specific argument to which Dr. Epps's modified testimony here appears to respond, leads us to conclude that Petitioner used Patent Owner's Preliminary Response in the 734 IPR to its advantage in order to adjust its position in this proceeding. We find that tactic unfair to Patent Owner and, therefore, determine that the circumstances of this case warrant denial of review.

Patent Owner also argues that we should deny the Petition because Dr. Epps's testimony in the 734 IPR is "contradictory" to his testimony in this proceeding and, therefore, "could lead to inconsistent results" between the two proceedings. Prelim. Resp. 25. We do not reach that argument because it is the availability of Patent Owner's Preliminary Response from the 734 IPR and the resulting changes in Dr. Epps's testimony between the two cases—with no accompanying explanation for those changes—that we view as relevant to our analysis.

Because we deny institution under § 314(a), we do not reach Patent Owner's additional argument that we should deny institution under § 325(d).

IV. CONCLUSION

For the foregoing reasons, we conclude that the circumstances of this case justify exercising our discretion to deny institution of an *inter partes* review.

V. ORDER

It is hereby

ORDERED that the Petition is *denied* as to all challenged claims of the '118 patent, and no trial is instituted.

IPR2016-01896
Patent 8,022,118 B2

PETITIONER:

Herbert D. Hart III
George F. Wheeler
Aaron F. Barkoff
Peter J. Lish
MCANDREWS, HELD & MALLOY, TTD.
hhart@mcandrews-ip.com
gwheeler@mcandrews-ip.com
abarkoff@mcandrews-ip.com
plish@mcandrews-ip.com

PATENT OWNER:

Douglas W. McClellan
Elizabeth S. Weiswasser
Melissa L. Hotze
WEIL, GOTSHAL & MANGES LLP
doug.mcclellan@weil.com
elizabeth.weiswasser@weil.com
melissa.hotze@weil.com