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Paper 15
Entered: January 12, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SK INNOVATION CO., LTD., and SK BATTERY AMERICA, INC.,
Petitioner,

v.

LG CHEM, LTD. and TORAY INDUSTRIES, INC.,
Patent Owner.

IPR2020-01240
Patent 7,662,517 B2

Before KRISTINA M. KALAN, JON B. TORNQUIST, and JEFFREY W. ABRAHAM, *Administrative Patent Judges*.

TORNQUIST, *Administrative Patent Judge*.

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

I. INTRODUCTION

SK Innovation Co., Ltd. and SK Battery America, Inc. (collectively, "Petitioner") filed a Petition (Paper 3, "Pet.") requesting an *inter partes* review of claims 1, 2, 5–15, and 18 of U.S. Patent No. 7,662,517 B2 (Ex. 1001, "the '517 patent"). LG Chem, Ltd. and Toray Industries, Inc. (collectively, "Patent Owner") filed a Preliminary Response to the Petition (Paper 9, "Prelim. Resp."). With authorization of the Board, Petitioner subsequently filed a Reply to the Preliminary Response (Paper 11, "Reply"), and Patent Owner filed a Sur-Reply (Paper 12, "Sur-Reply") addressing the issue of discretionary denial under 35 U.S.C. § 314(a).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2019). The standard for institution is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted "unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." Section 314(a) does not require the Director to institute an *inter partes* review. *See 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."). Rather, a decision whether to institute is within the Director's discretion, and that discretion has been delegated to the Board. *See* 37 C.F.R. § 42.4(a); *Cuozzo Speed Techs., LLC v. Lee*, 136 S.Ct. 2131, 2140 (2016) ("[T]he agency's decision to deny a petition is a matter committed to the Patent Office's discretion.").

After considering the parties' arguments and evidence, and for the reasons explained below, we exercise our discretion under § 314(a) and deny institution of an *inter partes* review.

A. Real Parties in Interest

Petitioner identifies SK Innovation Co., Ltd., SK Battery America, Inc., and SK IE Technology Co. as real parties in interest. Pet. 60. Patent Owner identifies LG Energy Solution, Ltd., LG Chem, Ltd., and Toray Industries, Inc. as real parties in interest. Paper 13, 2.

B. Related Matters

The parties identify *LG Chem, Ltd. v. SK Innovation Co. Ltd.*, No. 1:19-cv-01805 (D. Del.) ("district court proceeding") and *Lithium-Ion Battery Cells, Battery Modules, Battery Packs, Components Thereof, and Products Containing the Same*, No. 337-TA-1181 (Int'l Trade Comm'n) ("ITC proceeding") as related matters. Pet. 61; Paper 5, 2. The parties also identify IPR2020-01239, which is a parallel petition also challenging the '517 patent, as a related matter. Paper 5, 3; Pet. 62.[1]

[1] We also identify that the Board has denied institution of Petitioner's challenges of other LG Chem patents involved in the ITC proceeding and that Petitioner has filed requests for rehearing and requests for Precedential Opinion Panel (POP) review that remain pending. *See* IPR2020-00981, Papers 13, 16, 17; IPR2020-00982, Papers 14, 17, 18; IPR2020-00987, Papers 14, 17, 18; IPR2020-00991, Papers 14, 17, 18; IPR2020-00992, Papers 14, 17, 18; and IPR2020-01036, Papers 13, 16, 17. We have a statutory deadline to issue an institution decision in this case that necessitates that we reach issues common to all these cases in advance of a decision being made on the request for POP review.

C. The ’517 Patent

The ’517 patent discloses an “organic/inorganic composite porous separator” for use in secondary lithium ion batteries that is composed of a polyolefin-based separator substrate, an active layer formed of inorganic particles, and a binder polymer. Ex. 1001, 1:8–9, 1:42–43, 3:14–17. This composite separator “has pore structures” in both the polyolefin-based separator and the active layer, which “provides an increased volume of space, into which a liquid electrolyte infiltrates, resulting in improvements in lithium ion conductivity and degree of swelling with electrolyte.” *Id.* at 3:17–26. The pore structures of both the active layer and polyolefin-based separator substrate are “uniform,” which the ’517 patent asserts “permit[s] lithium ions to move smoothly therethrough.” *Id.* at 4:33–38.

The first step in manufacturing the organic/inorganic composite porous separator is dissolving a binder polymer into a suitable organic solvent to provide a polymer solution. *Id.* at 10:48–49. “Next, inorganic particles are added to and dispersed in the polymer solution” to provide “a mixture of inorganic particles with binder polymer.” *Id.* at 10:58–60. The mixture of inorganic particles with binder polymer is then coated onto the polyolefin-based separator substrate using methods known to one of ordinary skill in the art, and dried. *Id.* at 11:18–24.

The ’517 patent explains that the pore structure of the active layer may be formed by “controlling the size of inorganic particles, content of inorganic particles and the mixing ratio of inorganic particles and binder polymer,” and that pore size and porosity “mainly depend on the size of the inorganic particles.” *Id.* at 7:49–53, 10:4–9 (“For example, when inorganic particles having a particle diameter of 1 μm or less are used, pores formed

thereby also have a size of 1 μm or less."), 11:1–5. The '517 patent further explains that there is no particular limitation on the size of the inorganic particles, but the particles "preferably have a size of 0.001~10 μm for the purpose of forming a film having a uniform thickness and providing a suitable porosity." *Id.* at 7:55–58. The '517 patent further explains that there is no particular limitation on the content of the inorganic particles, but if the "content of the inorganic particles is less than 50 wt %, the binder polymer is present in such a large amount" that "pore size and porosity" are decreased, and "if the content of the inorganic particles is greater than 99 wt %, the polymer content is too low to provide sufficient adhesion among the inorganic particles, resulting in degradation in mechanical properties of a finally formed organic/inorganic composite porous separator." *Id.* at 8:1–16.

D. Illustrative Claim

Claims 1 and 5 of the '517 patent are independent. Claim 1 is illustrative of the challenged claims and is reproduced below:

1. An organic/inorganic composite porous separator, which comprises:

(a) a polyolefin-based separator substrate; and

(b) an active layer formed by coating at least one region selected from the group consisting of a surface of the substrate and a part of pores present in the substrate with a mixture of inorganic particles and a binder polymer, wherein the inorganic particles in the active layer are interconnected among themselves and are fixed by the binder polymer, and interstitial volumes among the inorganic particles form a pore structure, and

the inorganic particles have a size between 0.001 μm and 10 μm and are present in the mixture of inorganic particles with the

> binder polymer in an amount of 50-99 wt % based on 100 wt % of the mixture, and
>
> wherein the separator has *uniform pore structures* both in the active layer and the polyolefin-based separator substrate.

Ex. 1001, 18:40–57 (emphasis added).

E. Asserted Prior Art and Grounds

Petitioner contends the challenged claims of the '517 patent are unpatentable in view of the following grounds:

Claims Challenged	35 U.S.C. §	References/Basis
1, 2, 5–15, 18	103[2]	Tojo,[3] Hoshida[4]
1, 2, 5–15, 18	103	Lee,[5] Hoshida

Petitioner relies on the testimony of Dr. Ralph E. White in support of its unpatentability arguments. Ex. 1003.

II. REVIEW OF ASSERTED PRIOR ART AND OVERVIEW OF THE PARTIES' ARGUMENTS

Petitioner relies on the disclosures of Tojo, Lee, and Hoshida to support its unpatentability arguments. We briefly review the disclosures of these references and the issues disputed by the parties with respect to these references.

[2] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the application from which the '517 patent issued was filed before this date, the pre-AIA version of § 103 applies.
[3] 1999–080395, published March 26, 1999 (Ex. 1005).
[4] 2004–227972A, published August 12, 2004 (Ex. 1007).
[5] US 2004/0214089 A1, published October 28, 2004 (Ex. 1006).

A. Tojo

Tojo discloses a "separator for a nonaqueous electrolyte cell." Ex. 1005, code (57). This separator is created by forming a layer of inorganic microparticles on at least one surface of a porous substrate membrane. *Id.* ¶ 8. Tojo explains that "[w]ith such a configuration, it is possible to produce a porous membrane that has high mechanical strength (surface hardness) and that is not prone to cracking, being penetrated by microparticles, or other adverse events." *Id.*

The porous substrate may be a polyolefin, a polyamide, a polyester, a fluororesin, or the like. *Id.* The diameter of the holes of the porous substrate are between 0.1 to 200 μm, preferably 0.1 to 1.0 μm, because they "can be quickly closed up." *Id.* ¶ 15.

Tojo explains that the layer of inorganic microparticles provides a surface protection layer for the porous substrate. *Id.* ¶¶ 16–18. The mean diameter of the inorganic microparticles is 20 μm or less, with a preferred diameter of 0.1 μm to 20 μm. *Id.* ¶ 19. These microparticles are applied to the porous substrate by dissolving them in a solvent with or without a binder, coating them onto the substrate, and then drying the composition. *Id.* ¶¶ 20, 22–23, 32.

Tojo discloses that after the surface protection layer is formed, "pores matching the porous structure of the substrate can be formed in the surface protection layer by performing an ultrasonic treatment on the resin constituting the surface protection layer." *Id.* ¶ 26.

B. Hoshida

Hoshida discloses a non-aqueous electrolyte secondary battery separator that is composed of a water-soluble polymer porous film (referred

to as "film A") and a polyolefin porous film (referred to as "film B"). Ex. 1007 ¶¶ 1, 10.

Film A may contain "dispersing agents, plasticizers, fine particles and the like as components in addition to the water-soluble polymer." *Id.* ¶ 12. Hoshida explains that incorporation of "fine particles is preferable since it may provide the non-aqueous electrolyte secondary battery with superior load characteristics." *Id.* Hoshida notes that it is "possible to remove the fine particles by, for example, immersing the fine particles in a liquid in which they are soluble and in which the water-soluble polymer is insoluble." *Id.* The thickness of film A is preferably within a range of 0.5 μm to 5 μm and the pore diameter is preferably 3 μm or less. *Id.* ¶¶ 13–14.

Film B is a polyolefin porous film that preferably contains a high molecular weight component. *Id.* ¶ 15. The thickness of film B is 5–50 μm and its porosity is preferably 30–80% by volume. *Id.* ¶¶ 16–17.

To manufacture the separator of Tojo, a water-soluble polymer is dissolved or swollen in a medium containing fine particles. *Id.* ¶ 23. This liquid is then coated onto film B or a support member, such as a resin film, and dried. *Id.* ¶¶ 24–25. If applied to a support member, the coating is peeled from the support member and laminated with film B. *Id.* ¶ 26. Hoshida notes that, "although the reason is unclear," after the liquid containing a water-soluble polymer, fine particles, and a medium is coated on either a support member or film B and dried, "the film that contains the water-soluble polymer and the fine particles becomes a porous film." *Id.* ¶ 22.

C. Lee

Lee discloses "a thin film, composite polymer electrolyte for a lithium secondary battery, which has improved ionic conductivity and mechanical properties." Ex. 1006 ¶ 15. Figure 1 of Lee is reproduced below:

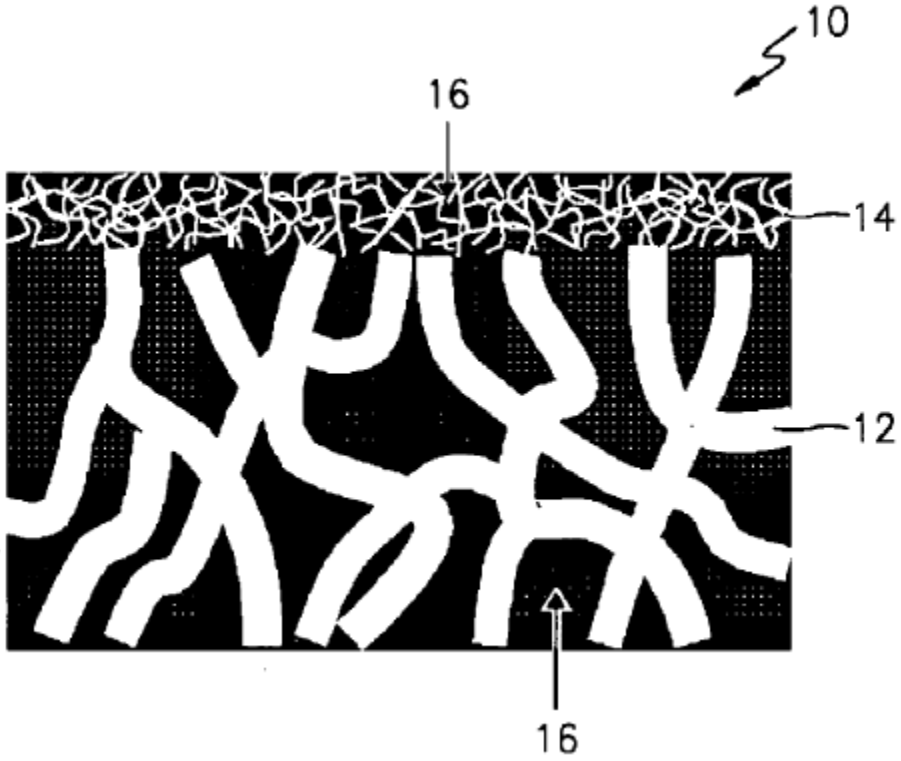

Figure 1 of Lee is "a schematic sectional view that depicts a structure of a composite polymer electrolyte" of a preferred embodiment. *Id.* ¶ 27.
As shown in Figure 1, composite polymer electrolyte 10 includes "first polymer matrix 12 made of a first porous polymer with a first pore size" and second polymer matrix 14 with a second pore size coated on a surface of first polymer matrix 12. *Id.* ¶ 28. Second polymer matrix 14 is made of a single ion conductor, an inorganic material, and a second polymer and has "submicro" pores that are smaller than the pores of polymer matrix 12. *Id.* "Preferably, the first polymer matrix 12 has a thickness of 10 to 25 μm and the second polymer matrix 14 has a thickness of 0.5 to 10 μm." *Id.*

According to Lee, the disclosed polymer electrolyte "has excellent mechanical properties" due to the use of "porous polymer matrices of different pore sizes," and excellent ionic conductivity "due to a single ion conductor-containing porous polymer matrix of a submicro-scale." *Id.* ¶ 20.

D. Disputes Presented by the Parties

1. Tojo and Hoshida

Petitioner contends that Tojo's active layer is porous and that these pores are formed from the interstitial volumes among Tojo's inorganic particles. Pet. 26–27. Petitioner further contends that the microparticles of Tojo are present in the microparticle/binder resin mixture in an amount of 50–99 wt %, and that the '517 patent confirms that in mixtures wherein the inorganic particles are present in an amount greater than 50 wt %, the particles "form interstitial volumes in the active layer" and "a pore structure." *Id.* at 27 (citing Ex. 1001, 8:7–12).

"To the extent Tojo does not disclose uniform pore structures both in the active layer and the polyolefin-based separator substrate," Petitioner contends Hoshida discloses this limitation. *Id.* at 29. Specifically, Petitioner contends that Hoshida's active layer forms a uniform pore structure that "would go into and become part of the substrate pores." *Id.* at 30–33.

With respect to the reason to use Hoshida's active layer in Tojo, Petitioner contends that because both Tojo and Hoshida are concerned with improving battery safety, one of ordinary skill in the art "would have been motivated to use Hoshida's pore structure features in Tojo's separators to improve their thermal shrinkage properties." *Id.* at 36–37.

Patent Owner contends Petitioner's grounds based on Tojo and Hoshida fail because (1) Petitioner fails to demonstrate that Tojo's

microparticles are interconnected among themselves and fixed by the binder resin (Prelim. Resp. 23–25), and (2) Petitioner fails to demonstrate that either Tojo or Hoshida teach or suggest a uniform pore structure in the active layer (*id.* at 26–29) or the polyolefin-based substrate (*id.* at 29–31).

Patent Owner asserts that Tojo is silent as to the pore structures formed by the interstitial volumes among the interconnected inorganic particles and that, contrary to Petitioner's arguments, a uniform pore structure "does not magically appear" any time particles are present in an amount greater than 50 wt %. *Id.* at 24 (citing Ex. 1001, 5:18–46). Patent Owner further asserts that it is evident that Hoshida's inorganic particles are not interconnected to form interstitial volumes, because Hoshida's inorganic particles may be optionally removed by immersing them "in a liquid in which they are soluble," and Hoshida indicates that the reason for its pores is "unclear." *Id.* at 26–28 (citing Ex. 1006 ¶ 12). According to Patent Owner, "if the pores were formed from interstitial volume, there would be nothing unclear about where the pores came from" and "[t]he fact that the microparticles can be removed shows that pores, which are critical to battery performance and safety, are not formed by the microparticles." *Id.* at 27–28.

2. Lee and Hoshida

Petitioner contends that Lee teaches or suggests the majority of the limitations of claim 1, but acknowledges that Lee does not teach or suggest "the uniform pore structures limitation" of claim 1. Pet. 51. Petitioner contends, however, that Hoshida discloses this limitation and that one of ordinary skill in the art would have applied Hoshida's uniform pore teachings in Lee "to improve the ion conductivity of, *i.e.*, passage of ions through, Lee's separator." *Id.* at 52.

Patent Owner contends Petitioner's arguments fail because neither Lee nor Hoshida disclose either an active layer or polyolefin-based separator substrate with a uniform pore structure. Prelim. Resp. 31–32. Patent Owner reasons that Hoshida's inorganic particles are not interconnected to form a uniform pore structure and, even if they were, the pore structure of the active layer does not define the pore structure of the polyolefin-based substrate. *Id.* at 20–21, 32

III. DISCRETION TO INSTITUTE UNDER 35 U.S.C § 314

A. Parallel Proceedings

Patent Owner has asserted the '517 patent in both the district court proceeding and the ITC proceeding. Pet. 61. The district court proceeding is stayed pursuant to 28 U.S.C. § 1659 pending the resolution of the ITC proceeding. *Id.* at 61–62; Prelim. Resp. 4.

The Petition challenges claims 1, 2, 5–15, and 18 of the '517 patent. Pet. 16. The parties agree that of these fourteen challenged claims, claims 5, 8, 9, 10, and 11 are not at issue in the ITC proceeding. Reply 7; Sur-Reply 8–9.

Fact discovery and expert discovery in the ITC proceeding are complete, a two-day hearing was held on December 10–11, 2020, and the parties have filed initial post-hearing briefs and reply post-hearing briefs. Ex. 2008, 4–5.[6] The ITC's Initial Determination is due by March 19, 2021, and the target date for completion of the investigation is July 19, 2021. *Id.*

[6] The parties do not dispute that this hearing occurred on December 10–11, 2020. We likewise find that the post-hearing briefing occurred according to the schedule set forth in Exhibit 2008. The parties have not advised us of any changes to this schedule.

B. Analysis

Patent Owner contends we should exercise our discretion under 35 U.S.C. § 314(a) to deny institution of the Petition in view of the co-pending ITC proceeding, which Patent Owner contends involves "the same parties, the same patent, and substantially the same issues, and will outpace" the proceeding on the Petition by over six months. Prelim. Resp. 1.

Petitioner contends the facts do not support exercising discretion because, *inter alia*, "the ITC does not have the authority to cancel a patent," the ITC applies different evidentiary standards and burdens of proof, at least five claims of the '517 patent challenged in the Petition are not asserted in the ITC proceeding, and the grounds for institution are "meritorious." *See* Reply 3, 6–7, 9.

Under 35 U.S.C. § 314(a), the Director has discretion to deny institution. In determining whether to exercise discretion on behalf of the Director, we look to the guidance provided in *NHK Spring Co. v. Intri-Plex Technologies, Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential), and *Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*").

Fintiv sets forth six non-exclusive factors for determining "whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date" in a parallel proceeding. *Fintiv*, Paper 11 at 6. These factors consider:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;

2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;

3. investment in the parallel proceeding by the court and the parties;

> 4. overlap between issues raised in the petition and in the parallel proceeding;
>
> 5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
>
> 6. other circumstances that impact the Board's exercise of discretion, including the merits.

Id.

Fintiv recognizes that there is some overlap between the identified factors and that some facts may be relevant to more than one factor. *Fintiv*, Paper 11 at 6. "Therefore, in evaluating the factors, the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review." *Id.*

1. Fintiv Factor 1

Fintiv Factor 1 considers whether a court has granted a stay or indicated that a stay would be granted if a proceeding is instituted. *Fintiv*, Paper 11 at 6–7. A stay weighs against exercising discretion to deny institution because it "allays concerns about efficiency and duplication of efforts." *Id.* at 7.

"One particular situation in which stays arise frequently is during a parallel district court *and* ITC investigation involving the challenged patent." *Fintiv*, Paper 11 at 8. "In such cases, the district court litigation is often stayed under 28 U.S.C. § 1659 pending the resolution of the ITC investigation." *Id.* Although the Office and the district court would not be bound by the ITC's final determination, *Fintiv* notes that "as a practical matter, it is difficult to maintain a district court proceeding on patent claims determined to be invalid at the ITC." *Id.* at 8–9. Thus, a pending ITC proceeding may weigh against institution if the claims at issue in the petition

are asserted in the parallel ITC proceeding, or if the same or substantially similar issues to those presented in the petition will be resolved by the ITC. *Id.*

Patent Owner argues that Petitioner has not requested a stay of the ITC proceeding and a stay would likely not be granted if requested because "[t]he ITC hearing will precede the Board's Institution Decision by a month; and the Board's Final Written Decision will trail the ITC's target completion date by over ***six months***." Prelim. Resp. 5. According to Patent Owner, instituting review in this case would only "exacerbate the inefficiency problems" caused by the parallel district court and ITC proceedings. *Id.* at 5–6.

Petitioner contends we should not exercise discretion under § 314 because the ITC does not have the authority to cancel a patent and applies different evidentiary standards and burdens of proof than the Board. Reply 3. Petitioner further contends that *Fintiv*'s assertion that "it is difficult to maintain a district court proceeding on patent claims determined to be invalid at the ITC" is "dicta" and does not address the issue of whether "Petitioner can challenge the patentability before the Board, an administrative body charged with independent jurisdiction to adjudicate patentability with different procedures and burdens of proof, and expertise to do so." *Id.* at 4.

We decline Petitioner's invitation to disregard the reasoning of *Fintiv*, which is precedential and requires that we consider the status of the parallel ITC proceeding when evaluating whether to exercise discretion under § 314. *Fintiv*, Paper 11 at 8–9. Petitioner has not requested a stay of the ITC proceeding, and we agree with Patent Owner that a stay is unlikely given the

advanced state of that proceeding. Prelim. Resp. 5. Thus, we find that *Fintiv* Factor 1 weighs in favor of exercising our discretion to deny the Petition.

2. Fintiv Factor 2

Fintiv Factor 2 looks to the "proximity of the court's trial date to the Board's projected statutory deadline." *Fintiv*, Paper 11 at 9.

Patent Owner contends this factor weighs in favor of exercising discretion because the ITC "will issue an Initial Determination by March 19, 2021 and the Commission will provide a Final Determination by July 19, 2021—over ***six months*** before the Board's projected Final Written Decision on January 23, 2022." Prelim. Resp. 7.

Petitioner contends a finding that this factor weighs in favor of denial "would effectively prevent ITC litigants from pursuing IPR" because the ITC's average 18-month pendency "is the same amount of time the Board projects for reaching a final written decision." Reply 5 ("[E]ven if an ITC litigant filed its petition on the day the ITC instituted the investigation, the ITC's [Final Determination] would always be projected to occur by the time the Board issued a final written decision.").

In its Sur-Reply, Patent Owner disputes that a finding that this factor weighs in favor of denial "would effectively prevent ITC litigants from pursuing IPR." Sur-Reply 6. Patent Owner notes that this factor is not dispositive in isolation, and that the Board's *Fintiv* analysis "takes a *holistic* view of whether efficiency and integrity of the system are best served by denying or instituting review." *Id.* (quoting *Fintiv*, Paper 11 at 6).

Fintiv requires that we consider the proximity of the ITC's target date for a final determination to the Board's projected statutory deadline for filing

a final written decision. *Fintiv*, Paper 11 at 9; *see Garmin Int'l, Inc. v. Koninklijke Philips N.V.*, IPR2020-00754, Paper 11 at 12 (PTAB Oct. 27, 2020) (exercising discretion to deny institution under § 314(a) in view of a co-pending ITC proceeding with a target date that precedes the Board's projected statutory deadline); *Comcast Cable Commc'n, LLC v. Rovi Guides, Inc.*, IPR2020-00800, Paper 10 at 12–13 (PTAB October 22, 2020) (same). Here, there is at least a six month differential between the projected target date for a Final Determination in the ITC and the Board's projected statutory deadline to issue a final written decision. Prelim. Resp. 7. Accordingly, *Fintiv* Factor 2 weighs in favor of exercising discretion to deny the Petition under § 314(a).[7]

3. Fintiv Factor 3

Fintiv Factor 3 considers the "investment in the parallel proceeding by the court and parties," and looks in particular to whether "substantive orders related to the patent at issue in the petition" have been issued in the parallel proceeding. *Fintiv*, Paper 11 at 9–10.

Patent Owner contends this factor weighs in favor of denial because the ITC has already issued a claim construction order and, by the time of the institution decision, "the parties will have finalized contentions and expert reports on validity, filed summary determination motions and pre-hearing briefs, presented direct witness testimony through witness statements, and

[7] We disagree with Petitioner that finding this factor favors denial will "effectively preclude ITC litigants from pursuing IPR." Reply 5. As Patent Owner points out, this one factor is not dispositive. Sur-Reply 6. Rather, we consider all the *Fintiv* factors as a whole when determining whether to exercise our discretion under § 314(a).

prepared witnesses for cross-examination at the remote hearing." Prelim. Resp. 9 (citing Ex. 2008, 4–5).

Petitioner contends that, because the ITC does not have the authority to invalidate a patent, the ITC's decision in the co-pending investigation may be informative, but "does not render our proceeding duplicative or amount to a waste of the Board's resources." Reply 6 (quoting *Wirtgen Am., Inc. v. Caterpillar Paving Prods. Inc.*, IPR2018-01201, Paper 13 at 4–5 (PTAB Jan 8, 2019)). Thus, Petitioner contends that "instituting the IPR would be an efficient alternative to the stayed district court litigation that results in little to no duplication of efforts." *Id.* (citing *Samsung Elecs. Co., Ltd. v. Dynamics, Inc.*, IPR2020-00499, Paper 41 at 13 (PTAB Aug. 12, 2020)).

The ITC conducted its hearing on December 10–11, 2020, and to date the parties have already expended considerable resources leading up to this hearing, presenting evidence and arguments at the hearing, and submitting post-hearing briefing to resolve the issues presented in the ITC proceeding. Prelim. Resp. 9; Ex. 2008, 4–5. Moreover, as discussed below with respect to *Fintiv* Factor 4, the ITC proceeding is scheduled to address many, if not all, of the issues currently presented by the parties in this case. Accordingly, on the specific facts of this case, we find *Fintiv* Factor 3 weighs in favor of exercising our discretion to deny the Petition under § 314.

4. Fintiv Factor 4

Fintiv Factor 4 considers whether "the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding." *Fintiv*, Paper 11 at 12. Even when the same claims are not presented in the petition and the parallel proceeding,

Fintiv explains that this factor may still weigh in favor of exercising discretion to deny institution if the claims challenged in the parallel proceeding are sufficiently similar to the claims challenged in the petition. *Id.* at 13; *see also id.* at 8 ("[A]n earlier ITC trial date may favor exercising authority to deny institution . . . if the ITC is going to decide the same or substantially similar issues to those presented in the petition.").

Patent Owner argues that *Fintiv* Factor 4 supports exercising discretion to deny the Petition because "[t]here is extensive overlap between the validity issues raised in the Petition and in the parallel ITC investigation," with "the petition includ[ing] the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding." Prelim. Resp. 10–11 (quoting *Fintiv*, Paper 11 at 12). To "remove any doubt and spare duplicative efforts," however, Patent Owner stipulates, "contingent upon the Board's denial of institution in this proceeding under *Fintiv*," that it will narrow the stayed district court litigation "in the following respect: any Challenged Claim presented for the district court trial will not extend beyond those addressed in the ITC's Final Determination." *Id.* at 11.

Petitioner argues that the facts do not support discretionary denial because the ITC's invalidity determination is not binding in any other forum and the Board and ITC apply different evidentiary standards. Reply 6–7. Petitioner further argues that Petitioner's motion for summary determination that the complainants failed to establish a domestic industry related to the '517 patent is currently pending before the ITC. *Id.* at 7. According to Petitioner, if it prevails on this motion, "the ITC will not address invalidity" and there will be no overlap with the patentability issues before the Board.

Id. Finally, Petitioner notes that claims 5 and 8–11 are no longer at issue in the ITC proceeding, and asserts that these claims include limitations that are not recited in any of the claims asserted before the ITC. *Id.* In particular, Petitioner asserts that "claim 9 requires that the substrate comprise certain polymers," and claim 11 recites that the claimed separator has certain pore sizes and porosities, and Petitioner contends these claim limitations are not included in any of the asserted claims before the ITC. *Id.*

Petitioner contends Patent Owner's contingent, unilateral stipulation does not change the analysis because it is not binding between the parties and "would not prevent Patent Owners from asserting the five unasserted claims in another district court action against future Petitioner products." *Id.* at 8.

The issues for institution discussed in Section II include (1) whether Hoshida's active layer would form a uniform pore structure—formed by the interstitial volumes among the interconnected inorganic particles—both on the surface of the polyolefin substrate of Tojo and Lee and in the pores of these substrates; and (2) if such an active layer is formed, whether this is sufficient to read upon the "uniform pore structure" limitation of claim 1. There is no apparent dispute that these issues will be resolved by the ITC when analyzing the validity of independent claim 1. *Fintiv*, Paper 11 at 8 ("[A]n earlier ITC trial date may favor exercising authority to deny institution . . . if the ITC is going to decide the same or substantially similar issues to those presented in the petition.").

With respect to unasserted claims 5, 8, 9, 10, and 11, Petitioner identifies no limitations in claims 5, 8, and 10 that would not be effectively addressed by the ITC when analyzing the claims that are challenged in that

proceeding. With respect to claims 9 and 11, which require certain polymers for the substrate layer (claim 9) or a separator with particular pore sizes and porosities (claim 11), we note that there is no apparent dispute, before either the ITC or the Board, that Tojo and Lee, in combination with Hoshida, teach or suggest these limitations. Ex. 1001, 19:40–45, 19:47–49; Pet. 40–42, 56–58. In any event, Patent Owner's stipulation ensures that it will not assert any claim in the district court action that is not addressed in the ITC's Final Determination.[8]

In view of the foregoing facts and circumstances, we find that *Fintiv* Factor 4 weighs in favor of exercising our discretion to deny the Petition under § 314(a).

5. Fintiv Factor 5

Fintiv Factor 5 looks to "whether the petitioner and the defendant in the parallel proceeding are the same party." *Fintiv*, Paper 11 at 14. "If a petitioner is unrelated to a defendant, the Board has weighed this fact against exercising discretion to deny institution under *NHK*." *Id.* at 13.

The parties in the above-captioned proceeding are the same as the parties in the ITC proceeding. Prelim. Resp. 12. Accordingly, *Fintiv* Factor 5 weighs in favor of exercising discretion to deny institution.

[8] This stipulation appears to resolve Petitioner's concerns regarding its pending motion for summary determination. If the claims of the '517 patent are removed from the ITC proceeding, it appears, on this record, that they will not be "addressed in the ITC's Final Determination for Investigation No. 337-TA-1181." Prelim. Resp. 11.

6. Fintiv Factor 6

Fintiv Factor 6 looks to whether "other circumstances" exist that might "impact the Board's exercise of discretion, including the merits." *Fintiv*, Paper 11 at 14.

Patent Owner contends the Petition is "deeply flawed on the merits," and instituting review would provide a "continuing opportunity for Petitioners to utilize Patent Owner's arguments in the ITC investigation as a roadmap for navigating this proceeding." Prelim. Resp. 12.

Petitioner contends the "Petition presents a strong case of unpatentability" and that Patent Owner's "roadmap" theory is not applicable to the facts of this case because it is based on concerns related to follow-on petitions, not parallel proceedings. Reply 9 (discussing *General Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 15–16 (PTAB Sept. 6, 2017) (precedential)).

We agree with Petitioner that the "roadmap" concerns expressed by Patent Owner relate to follow-on petitions, not parallel proceedings. Reply 9. As to the merits of the combinations of Tojo with Hoshida and Lee with Hoshida, Patent Owner raises significant fact questions as to whether Tojo teaches or suggests a "uniform pore structure" in both the active layer and polyolefin-based substrate, and whether Hoshida's inorganic particles, which may be optionally removed from the matrix using a solvent, form an active layer with a uniform pore structure on the polyolefin substrate and in its pores. Pet. 29–31; Prelim. Resp. 26–28, 31–32.

Because of the several fact questions raised with respect to the combinations of either Tojo or Lee with Hoshida, we find that *Fintiv* Factor 6 is neutral.

7. Holistic Analysis of the Fintiv Factors

Taking a holistic view of the *Fintiv* factors, especially the fact that the ITC will address most, if not all, of the issues presented by the parties six months before our projected date to issue a final written decision, the significant investment already made in the ITC proceeding, including a two-day hearing, and the fact that Patent Owner stipulates not to assert any claims in the district court that are not addressed in the ITC proceeding, we find the *Fintiv* factors weigh in favor of exercising our discretion to deny the Petition under 35 U.S.C. § 314.

IV. CONCLUSION

For the reasons set forth above, we determine that the factors and circumstances, on balance, weigh in favor of discretionary denial. Accordingly, we exercise our discretion to deny institution under 35 U.S.C. § 314(a).

V. ORDER

It is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), the Petition in IPR2020-01240 is *denied.*

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