UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BASF SE, Petitioner,

v.

FRESENIUS MEDICAL CARE HOLDINGS, INC., Patent Owner.

> Case IPR2018-00283 Patent 9,353,220 B2

Before JO-ANNE M. KOKOSKI, CHRISTOPHER M. KAISER, and JEFFREY W. ABRAHAM, *Administrative Patent Judges*.

ABRAHAM, Administrative Patent Judge.

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

I. INTRODUCTION

BASF SE ("Petitioner") filed a Petition seeking *inter partes* review of claims 1–19 of U.S. Patent No. 9,353,220 B2 (Ex. 1001, "the '220 patent"). Paper 2 ("Pet."). Fresenius Medical Care Holdings, Inc. ("Patent Owner") filed a Patent Owner Preliminary Response to the Petition. Paper 6 ("Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314. Under the circumstances of this case, for the reasons explained below, we exercise our discretion under 35 U.S.C. § 314(a) to not institute *inter partes* review of the challenged claims.

II. BACKGROUND

A. Related Proceedings

Petitioner previously challenged claims 1–19 of the '220 Patent in IPR2017-001948 ("the 1948 IPR"). Pet. 1; Paper 5, 1. On March 12, 2018, we instituted an *inter partes* review of claims 1–15 and 19, but not claims 16–18. IPR2017-01948, Paper 13. On April 30, 2018, after the Supreme Court's decision in *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018), we modified our institution decision in the 1948 IPR to include review of all challenged claims and all grounds raised in the Petition. Paper 17, 2.

B. The '220 Patent

The '220 patent, titled "Process for Making Polyarylethers and Use in Membrane Preparation," issued on May 31, 2016. Ex. 1001, at [54], [45]. The '220 patent is directed to methods for making polyarylethers without the use of azeotropic cosolvents. *Id.* at [57], 1:6–8.

The '220 patent explains that commercially used polyarylethers prepared in dipolar aprotic solvents form water as a reaction byproduct. *Id.*

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at 1:11–16. Because water is a poison to these reactions, azeotropic cosolvents have been used to remove the water azeotropically during polymerization. *Id.* at 1:14–18. The '220 patent states that "[i]n general, these polyarylethers have to be isolated from the solvents, and are marketed either as pellets or powders. An end-user, such as a membrane manufacturer, redissolves these polymers in an appropriate solvent to make membranes out of solution of the redissolved polymers." *Id.* at 1:18–23.

The '220 patent teaches that "[t]he absence of azeotropic cosolvents in the polyarylether reactor solution eases solvent recovery requirements" and "permits the direct use of such reactor solutions in the preparation of membranes and coatings without the need to isolate the polymer product from the azeotrope solvent or other solvent before product preparation." *Id.* at 4:22–29. The '220 patent discloses a process for preparing a polyarylether comprising (1) reacting polyarylether-forming reactants in a reactor solution comprising polar aprotic solvent(s) and the polyarylether forming reactants, (2) maintaining the desired reaction temperature of the polar aprotic solvent(s), (3) removing water in the absence of azeotrope forming cosolvent(s), and (4) optionally adding fresh polar aprotic solvent to the reactor solution in a substantially equal amount to the polar aprotic solvent to the reactor solution during the reaction. *Id.* at 4:48–57.

C. Challenged Claims

Petitioner challenges claims 1–19 of the '220 patent. Independent claim 1 is illustrative, and is reproduced below:

1. A process for preparation of at least one polyarylether comprising reacting polyarylether forming reactants in a reactor solution, said reaction solution comprising at least one polar aprotic solvent and the polyarylether forming IPR2018-00283 Patent 9,353,220 B2

> reactants with removing of water in the absence of azeotrope forming cosolvent and adding fresh polar aprotic solvent to the reactor solution in substantially equal amount to any polar aprotic solvent removed from the reactor solution during the reacting, wherein the polar aprotic solvent is dimethylacetamide, N-methylpyrrolidone, dimethylsulfoxide, diphenylsulfone, or any combinations thereof.

Id. at 27:26–36. Claim 19, the only other independent claim challenged, is substantially similar to claim 1 and further requires that the claimed process "is conducted with a stoichiometric excess of one of the two polyarylether forming reactants such that the final product contains substantially less of the stoichiometrically deficient reactant and the reaction is self-terminating." *Id.* at 28:39–54.

D. The Asserted Grounds

References	Statutory Basis	Claim(s) Challenged
Li ¹ and Weber II ²	§ 103	1–15 and 19
Li, Weber II, Weber III, ³ and Chen ⁴	§ 103	16 and 17
Li, Weber II, and Chen	§ 103	18

Petitioner asserts the following grounds of unpatentability:

¹ Li et al., *Poly(arylene ether sulfone) Statistical Copolymers Bearing Perfluoroalkylsulfonic Acid Moieties*, MACROMOLECULES 44, 694–702 (2011) ("Li," Ex. 1004). We referred to this as Li I in the 1948 IPR. ² Weber et al., U.S. Pub. No. 2013/0324648 A1, published Dec. 5, 2013 (Weber II," Ex. 1005).

³ Weber et al., U.S. Pub. No. 2010/0197859 A1, published Aug. 5, 2010 ("Weber III," Ex. 1006).

⁴ Chen et al., Chinese Patent Application Pub. No. CN 1631941A, published June 29, 2005 ("Chen," Ex. 1007).

Petitioner also relies on the declaration of Robson F. Storey, Ph.D. ("the Storey Declaration," Ex. 1003).

III. ANALYSIS

A. Procedural History

On August 30, 2017, Petitioner filed a petition in the 1948 IPR requesting an *inter partes* review of claims 1–19 of the '220 patent based on several grounds involving multiple references, including five different grounds involving Li and two different grounds involving Chen. IPR2017-01948, Paper 1, 5–6. As noted above, on March 12, 2018, we instituted an *inter partes* review of claims 1–15 and 19 of the '220 patent. Paper 13, 29. We were not persuaded, however, by Petitioner's arguments regarding claims 16–18. *Id.* We, therefore, did not institute an *inter partes* review of claims 16–18. *Id.*

On April 30, 2018, after the Supreme Court's decision in *SAS Inst.*, we issued an order modifying our institution decision to institute on all of the challenged claims and all of the grounds presented in the 1948 IPR petition. Paper 17.

B. Application of our Discretion Under 35 U.S.C. § 314

Institution of *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a) (authorizing institution of an *inter partes* review under particular circumstances, but not requiring institution under any circumstances); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), "the PTO is permitted, but never compelled, to institute an IPR proceeding"). When determining whether to exercise our discretion under § 314(a), we consider the following non-exhaustive factors:

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