

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PUNGKUK EDM WIRE MANUFACTURING COMPANY,
Petitioner,

v.

SEONG, KI CHUL,
Patent Owner.

Case IPR2016-00764
Patent 6,492,036 B2

Before JO-ANNE M. KOKOSKI, KRISTINA M. KALAN, and
CHRISTOPHER M. KAISER, *Administrative Patent Judges*.

KOKOSKI, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Pungkuk Wire Manufacturing Company (“Petitioner”) filed a Corrected Petition (“Pet.”) to institute an *inter partes* review of claims 1–10 of U.S. Patent No. 6,492,036 B2 (“the ’036 patent,” Ex. 1001). Paper 6. On September 8, 2016, we instituted an *inter partes* review of claims 1–10 on three grounds of unpatentability. Paper 16 (“Dec. on Inst.”). Ki Chul Seong (“Patent Owner”) filed a Patent Owner Response (“PO Resp.,” Paper 34), and Petitioner filed a Reply (“Reply,” Paper 37).

Patent Owner filed a Motion to Exclude Exhibits 1014–1017, 1019, and 1020. Paper 59. Petitioner filed an Opposition (Paper 61), and Patent Owner filed a Response (Paper 62).

An oral hearing was held on June 7, 2017. A transcript of the hearing is included in the record. Paper 67 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we enter adverse judgment against claims 1, 3, 4, 6, and 9, and determine that Petitioner has not established by a preponderance of the evidence that claims 2, 5, 7, 8, and 10 of the ’036 patent are unpatentable.

A. *The ’036 Patent*

The ’036 patent, titled “Porous Electrode Wire for Use in Electrical Discharge Machining and Method of Manufacturing the Same,” is directed to an electrode wire for use in electrical discharge machining. Ex. 1001, 1:16–17. According to the ’036 patent, a brass wire having 63–67 wt % copper and 33–37 wt % zinc was developed for the general purpose of wire electrical discharge machining, and “the machining speed can be improved

due to the presence of zinc content in the alloy, which provides a stable discharge and a vaporization power during the machining.” *Id.* at 1:64–2:5. Although “it was known that the machining speed of a brass wire increases when zinc content includes more than 40 wt % in the brass,” the drawing process to form such a wire “becomes difficult because of the presence of a brittle phase in the alloy.” *Id.* at 2:12–16.

The '036 patent describes a coated wire that “includes a core made of a first metal including copper, an alloy layer formed on the core and a coating layer made of a second metal.” *Id.* at 4:10–13. The alloy layer that has “a higher hardness than the core or the coating layer is formed during the hot dipping galvanizing step by diffusion reaction between the first metal and the second metal having vaporization temperature lower than the first metal,” and “includes cracks having direction perpendicular to the longitudinal direction of the wire.” *Id.* at 4:14–20. “[T]he first metal may use copper or brass having 63–67 wt % copper and 33–37 wt % zinc,” and “the second metal may use zinc, aluminum or tin.” *Id.* at 3:58–60.

Figure 2 of the '036 patent is reproduced below:

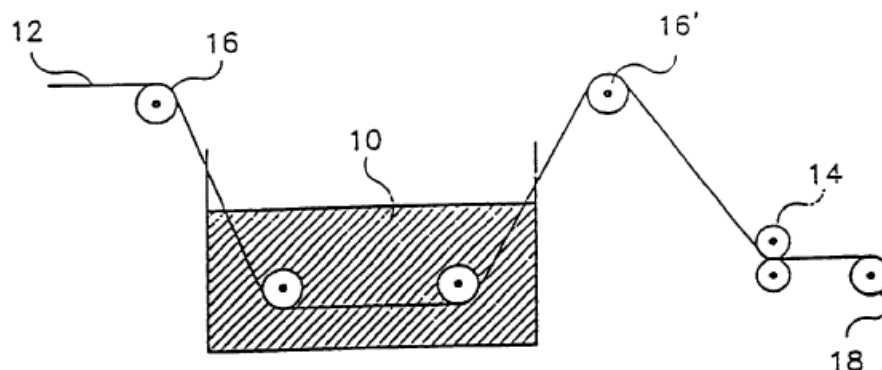


Figure 2 shows the steps of manufacturing porous electrode wires for electrical discharge machining, according to the invention described in

the '036 patent. *Id.* at 4:64–66. Core wire 12 is a brass wire with 65 wt % copper and 35 wt % zinc and an intermediate diameter of 0.9 mm. *Id.* at 4:67–5:2. Core wire 12 passes through zinc molten bath 10, which has a vaporization temperature lower than the brass, to form a zinc coating layer on core wire 12. *Id.* at 5:2–5. At the same time, an alloy layer forms on core wire 12 by diffusion reaction of the brass in the core wire and the zinc in the coating layer. *Id.* at 5:5–8. Guide rollers 16 and 16' guide the wire to drawing means 14, coated core wire 12 is drawn through drawing means 14 to achieve the desired diameter (e.g., 0.05–0.35 mm), and take-up roll 18 collects the drawn wire. *Id.* at 5:16–20.

Because “the alloy layer has properties of a high hardness and a low elongation compared with the core wire, the fine wire, during the drawing step, produces uniform cracks in the coating layer and the alloy layer to form a porous structure on the surface.” *Id.* at 6:45–49. The “cracks are propagated through the grain boundary of the coating layer” in a direction that “is perpendicular to the longitudinal direction of the wire” because “the drawing direction is the same to the longitudinal direction of the wire.” *Id.* at 6:49–53. According to the '036 patent, the porous wire “improves the machining speed about 15% compared with a conventional zinc coated wire” because the porous structure of the wire “increases cooling ability of the wire in contact with a cooling liquid during the machining.” *Id.* at 6:61–66.

Claims 1 and 6 are independent claims. Claims 2–5 depend, directly or indirectly, from claim 1, which is reproduced below:

1. An electrical wire for use in electrical discharge machining comprising:
a core wire made of a first metal including copper;

an alloy layer formed on the core wire, wherein the alloy layer is formed by diffusion reaction between the first metal and a second metal; and

a coating layer, consisting of the second metal, formed on the alloy layer.

Ex. 1001, 7:11–18.

Claims 7–10 depend, directly or indirectly, from claim 6, which is reproduced below:

6. An electrode wire for use in electrical discharge machining comprising:

a core metallic wire;

an alloy layer formed on the core metallic wire; and

a coating layer, formed on the alloy layer consisting of one the metals used to form the alloy layer.

Id. at 8:7–12.

B. The Prior Art

The pending grounds of unpatentability in this *inter partes* review are based on the following prior art:

Reference	Description	Date	Exhibit No.
Mukherjee	US 5,808,262	Sep. 15, 1998	1002
Barthel	US 5,762,726	June 9, 1998	1005
Briffod	US 4,341,939	July 27, 1982	1003

C. Pending Grounds of Unpatentability

This *inter partes* review involves the following grounds of unpatentability:

Reference(s)	Basis	Challenged Claims
Mukherjee	§ 102(e)	1–10

Reference(s)	Basis	Challenged Claims
Briffod	§ 102(b)	1, 6
Barthel	§ 102(e)	1, 3, 4, 6, 9

Dec. on Inst. 32.

II. ANALYSIS

A. *Claim Interpretation*

We interpret claims of an unexpired patent using the “broadest reasonable construction in light of the specification of the patent in which [the claims] appear[.]” 37 C.F.R. § 42.100(b); *see also* *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (“We conclude that [37 C.F.R. § 42.100(b)] represents a reasonable exercise of the rulemaking authority that Congress delegated to the Patent Office.”). The Board, however, may not “construe claims during IPR so broadly that its constructions are *unreasonable* under general claim construction principles. . . . ‘[T]he protocol of giving claims their broadest reasonable interpretation . . . does not include giving claims a legally incorrect interpretation.’” *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (citation omitted). “Rather, ‘claims should always be read in light of the specification and teachings in the underlying patent’” and “[e]ven under the broadest reasonable interpretation, the Board’s construction ‘cannot be divorced from the specification and the record evidence.’” *Id.* (citations omitted). Only those terms in controversy need to be construed, and only to the extent necessary to resolve the controversy.

See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999).

For purposes of the Decision on Institution, we addressed the interpretation of the claim terms “formed by diffusion reaction” as set forth in claim 1, “formed . . . during the drawing of the core wire in the direction of the longitudinal direction” as set forth in claim 2, and “cracks” as set forth in claims 2, 7, and 9. Dec. on Inst. 7–11. The parties do not contest our treatment of the terms “formed by diffusion reaction” and “formed . . . during the drawing of the core wire in the direction of the longitudinal direction” (*see* PO Resp. 7–9; Reply), and we see no reason to modify that treatment in light of the record developed at trial.

Patent Owner contends that the term “cracks,” which, for purposes of the Decision on Institution, we determined did not require an explicit construction (Dec. on Inst. 11), should be construed to be mean “narrow breaks.” PO Resp. 8–9. Petitioner did not address Patent Owner’s proposed construction in its Reply, but when asked during the hearing if it disagreed with it, Petitioner indicated that Patent Owner’s construction was “fine.” Tr. 18:3–21. Based on the record developed at trial, and in the absence of controversy about the construction of the term, we construe “cracks” to mean “narrow breaks.”

B. Unpatentability of Claims 1, 3, 4, 6, and 9

Petitioner contends that claims 1 and 6 are anticipated by Briffod, that claims 1, 3, 4, 6, and 9 are anticipated by Barthel, and that claims 1, 3, 4, 6, and 9 (as a subset of claims 1–10) are anticipated by Mukherjee. *See* Pet. 24–30, 36–39. In its Patent Owner Response, Patent Owner does not contest Petitioner’s challenge to the patentability of claims 1, 3, 4, 6, and 9,

and instead only addresses the patentability of claims 2, 5, 7, 8, and 10 of the '036 patent over Mukherjee. See PO Resp. 2–3, 9–28. We asked Patent Owner during the hearing whether it was conceding the unpatentability of the claims that it did not address in the Patent Owner Response (i.e., claims 1, 3, 4, 6, and 9). Tr. 55:20–56:4 (“[W]e instituted on a number of grounds that you did not -- and on a number of claims that you did not address in your patent owner response. Are you conceding unpatentability of those claims on those grounds?”). Patent Owner’s counsel responded that Patent Owner was conceding the unpatentability of those claims. *Id.* at 55:20–56:10 (“JUDGE KOKOSKI: You're conceding that they're [claims 1, 3, 4, 6, and 9] not patentable? MR. SUTTON: That they're not patentable, that's correct.”).

The Board’s rules permit a party to “request judgment against itself at any time during a proceeding.” 37 C.F.R. § 42.73(b). The Board construes a party’s “[a]bandonment of the contest” as a request for adverse judgment. *Id.* § 42.73(b)(4). Accordingly, we construe Patent Owner’s concession that claims 1, 3, 4, 6, and 9 are unpatentable to be an “abandonment of the contest” and a request for adverse judgment as to those claims. Therefore, we enter adverse judgment against claims 1, 3, 4, 6, and 9 of the '036 patent.

C. Anticipation by Mukherjee

To prevail on its patentability challenge, Petitioner must establish facts supporting its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). Petitioner asserts that claims 2, 5, 7, 8, and 10 are unpatentable under 35 U.S.C. § 102(e) as anticipated by Mukherjee,¹ and

¹ Petitioner’s challenge based on Mukherjee encompasses claims 1–10. Pet. 24–27; Dec. on Inst. 32. In view of our entry of adverse judgement against

relies on the Declaration of Wojciech Misiolek (“First Misiolek Declaration,” Ex. 1008), the Second Declaration of Wojciech Misiolek (“Second Misiolek Declaration,” Ex. 1013), the Third Declaration of Wojciech Misiolek (“Third Misiolek Declaration,” Ex. 1017), and the Declaration of Jang-Ik Hwang (“Hwang Declaration,” Ex. 1016²). Pet. 24–27; Reply 2–22. Patent Owner disagrees with Petitioner’s assertions, and relies on the Declaration of Sya Ensha, Ph.D. (“Ensha Declaration,” Ex. 2002). PO Resp. 16–27.

1. *Overview of Mukherjee*

Mukherjee is directed to “a process of manufacturing spark erosion electrodes and more particularly to electrode[s] in the wire form.” Ex. 1002, 1:15–17. The described process includes (1) plating a core brass wire with zinc by galvanizing, (2) placing the zinc-plated wire in a bath pot that is gradually heated from a temperature below the melting point of zinc to a final temperature that depends on the amount of zinc to be absorbed within the brass wire, (3) reducing the diameter almost up to the desired final diameter by drawing the wire, gradually heating the wire for a prolonged period, and (4) finally drawing the wire to its desired diameter. *Id.* at 4:18–36. The final drawing step can optionally be followed by resistance annealing of the wire. *Id.* at 4:36–38. According to Mukherjee, the prolonged heating of the zinc-plated wire below the melting point of zinc results in “the absorption of zinc inside the brass to a great extent forming

Patent Owner with respect to claims 1, 3, 4, 6, and 9, we address Petitioner’s challenge only as to claims 2, 5, 7, 8, and 10.

² The Hwang Declaration was written in Korean, and Petitioner provided an English translation with an affidavit attesting to the accuracy of the translation. Ex. 1016, 9–10; see 37 C.F.R. 42.63(b).

highly enriched zinc composition brass known as Kirkendal[l] effect.” *Id.* at 4:56–60.

2. *Analysis*

The parties focus their arguments on the “wherein cracks are formed in the alloy layer and the coating layer” limitation of claims 2 and 7.

Petitioner contends that cracks are inherently formed in the beta and gamma brass layer and the top layer of zinc when the wire is drawn as disclosed in Mukherjee. Pet. 24–27; Reply 2–22. Patent Owner responds that Petitioner does not establish sufficiently that the Mukherjee process necessarily forms cracks in the alloy and coating layers. PO Resp. 16–27.

Inherency requires that the claim limitation in question is necessarily present in the reference. *See, e.g., Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003) (“[A] prior art reference may anticipate without disclosing a feature of the claimed invention if that missing characteristic is necessarily present, or inherent, in the single anticipating reference.”); *see also SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1343–44 (Fed. Cir. 2005) (patent challenger must demonstrate “that ‘the disclosure [of the prior art] is sufficient to show that the natural result flowing from the operation as taught [in the prior art] would result in’ the claimed product.”) (citations omitted). “Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (quotation omitted). “If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught *would result* in the performance of the questioned function, it seems to be well settled that the disclosure

should be regarded as sufficient.” *Cont’l Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991). Petitioner, therefore, must show that cracks in the alloy layer and the coating layer are necessarily present in Mukherjee.

To support its contention that Mukherjee inherently discloses cracks in the alloy layer and the coating layer, Petitioner first directs us to Mukherjee’s description of “Preferred Embodiment 1,” which Petitioner characterizes as disclosing “a wire with a metal core (alpha brass), an alloy layer (beta and gamma brass) formed on the metal core, and a coating (top layer of zinc) on the alloy layer.” Pet. 24 (citing Ex. 1002, 6:36–65). Petitioner also points to the following testimony from the First Misiolek Declaration:

The wire drawing process disclosed by Mukherjee would crack the outside of the beta and gamma brass alloy layer and the outer zinc layer of the coated wire, because beta brass, gamma brass, and zinc each have a lower ductility compared to alpha brass and these layers are exposed to the highest strain and therefore to higher work hardening resulting in significantly limited material ductility.

Ex. 1008 ¶ 8. In its Reply, Petitioner identifies additional evidence to further support its contentions. Reply *passim* (citing Ex. 1013 ¶¶ 8, 9, 12, 13, 16–18; Ex. 1014, 1; Ex. 1015; Ex. 1016; Ex. 1017 ¶¶ 9, 12–16, 21; Ex. 1018, 28:4–6, 31:4–6, 48:8–9, 83–84; Ex. 1019, 3; Ex. 1020, 6:21–24, 6:50–53, 6:60–63).

Petitioner’s cited evidence establishes several facts. First, it establishes that Mukherjee discloses a process in which a core wire with a diameter of 3 millimeters is plated with zinc, heated for 24 to 26 hours at temperatures up to 380° C, cooled, then drawn “at a reduction of more than

94.3% in area to get the diameter of the wire [down to] an intermediate shape between 1 [and] 1.25 [millimeters].” Ex. 1002, 6:36–65. Second, it establishes that the Mukherjee process creates an alloy layer of beta brass and gamma brass and an outer zinc layer, each of which has “a lower ductility compared to [the] alpha brass [core of the wire].” Ex. 1008 ¶¶ 7–8. Third, it establishes that the beta brass and gamma brass alloy layer and the outer zinc layer are “exposed to the highest strain” in the wire-drawing process. *Id.* ¶ 8. Fourth, Petitioner’s testing report and supporting testimony establish that a process similar to Mukherjee’s process³ created a wire with “cracks on the surface of the wire.” Ex. 1015; Ex. 1016; Ex. 1017 ¶¶ 9, 13. Fifth, it establishes that the annealing steps in Mukherjee “cannot transform low ductility gamma brass and eta zinc phases into high ductility phases.” Ex. 1013 ¶¶ 16–18. Sixth, it establishes that gamma brass is “more brittle than zinc.” Ex. 1018, 48:7–9. Finally, it establishes that “it is nearly impossible to cold draw [gamma] phase alloy material because it is very brittle.” Ex. 1020, 6:21–22.

This evidence, however, does not establish that a wire with cracks formed in its alloy layer and in its coating layer necessarily results from Mukherjee’s drawing process. Although the beta and gamma brass alloy is a brittle material (Ex. 1008 ¶¶ 7, 8; Ex. 1013 ¶¶ 16–18; Ex. 1018, 48:7–9), and the strain of drawing is concentrated in that alloy layer (Ex. 1008 ¶ 8), Petitioner does not provide evidence sufficient to establish that drawing the alloy layer necessarily creates cracks in the beta and gamma brass. At best,

³ Petitioner states that the testing process is “similar to the processes disclosed in Columns 6 and 7 of *Mukherjee*,” not identical to those processes. Reply 10; *see also* Ex. 1017 ¶¶ 17–20 (describing differences between the testing process and the Mukherjee process).

the evidence establishes that “it is *nearly* impossible to cold draw [gamma] phase alloy material.” Ex. 1020, 6:21–22 (emphasis added). That it is “nearly impossible” to cold draw gamma phase brass does not necessarily mean that such drawing cannot be accomplished without the formation of cracks in the alloy layer. Moreover, this evidence relates to gamma phase alloy only, not the mixture of beta and gamma phase alloys present in Mukherjee.

Dr. Misiolek’s testimony is likewise insufficient to support a finding that the Mukherjee process necessarily creates cracks in the alloy layer or in the coating layer. In the First Misiolek Declaration, Dr. Misiolek states that “[t]he wire drawing process disclosed by Mukherjee *would crack* the outside beta and gamma brass alloy layer and the outer zinc layer of the coated wire” because “beta brass, gamma brass, and zinc each have a lower ductility compared to alpha brass and these layers are exposed to the highest strain.” Ex. 1008 ¶ 8 (emphasis added). Dr. Misiolek, however, does not provide sufficient objective evidence or analysis demonstrating why that would be the case. *See id.* Although the presence of a relatively brittle alloy layer and zinc layer, and the application of a relatively large amount of strain to those layers, seems to make the formation of cracks more likely, it is not clear from Dr. Misiolek’s testimony why the presence of such circumstances makes the formation of cracks completely certain. The testimony in the Second Misiolek Declaration does not make the reasoning any more clear. Ex. 1013 ¶ 9 (testifying that “the drawing process in column 6 of Mukherjee would cause cracks to form on the surface of the wire” without explaining why). Based upon the evidence presented, we find that Dr. Misiolek’s opinions are not persuasive as they are not supported by the evidence of

record. See 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985) (stating a lack of objective support for an expert opinion “may render the testimony of little probative value in [a patentability] determination”).

Additionally, there is evidence in the record that, in any given wire drawing process, “whether cracks actually occur depends on multiple factors, including . . . the temperature used during the [drawing] process, and . . . the speed of the drawing.” Ex. 2002 ¶ 14. Dr. Misiolek does not dispute this testimony, and Petitioner does not direct us to any evidence to the contrary. Ex. 1013 ¶¶ 14–18; Reply 12–22. Mukherjee does not disclose either the speed of its wire drawing process or the temperature at which that process takes place. Ex. 1002, 6:58–65. Accordingly, there is insufficient evidence of record to find that the Mukherjee process necessarily and invariably results in wires that have cracks in the alloy layer and in the coating layer.

Finally, the testing reported in Exhibit 1015⁴ (“the Testing Report”), and discussed in the Hwang Declaration and the Third Misiolek Declaration, does not establish that the Mukherjee drawing process necessarily results in the formation of cracks in the alloy layer and the coating layer. Most importantly, the testing was performed under conditions different than those described in Mukherjee, rendering it unhelpful in determining whether any

⁴ The Testing Report was written in Korean, and Petitioner provided an English translation with an affidavit attesting to the accuracy of the translation. Ex. 1015, 104; see 37 C.F.R. 42.63(b).

particular result would be achieved when using Mukherjee's process. Additionally, the cracks reported in the test were located only on the surface of the wire. Ex. 1015, 99–103; Ex. 1017 ¶ 14. As indicated in the '036 patent, not all zinc-coated brass wires transform their entire zinc coating to brass upon undergoing heat treatment; rather, some have an outer layer of zinc remaining. Ex. 1001, 5:13–15 (observing “that the alloy layer (22) and the coating layer (23) are formed sequentially on the brass core wire (21)”), Fig. 3b (depicting relative location of these layers). Petitioner does not explain whether the wire produced by the Mukherjee process or by Petitioner's testing process detailed in the Testing Report lacks a remaining zinc coating (in which case it would fail to satisfy all the limitations of the challenged claims), or retains a zinc coating (in which case the results of the testing, which depict only cracks in the outer layer of the wire, would fail to demonstrate that the alloy layer has cracks, as required by the challenged claims). Dr. Misiolek suggests that a zinc coating remains present in the Mukherjee process. Ex. 1008 ¶ 8 (referring to “the outer zinc layer of the coated wire” and “the outside beta and gamma brass alloy layer” separately and in the plural as “these layers”). To the extent that Petitioner's testing shows that drawing a wire according to Mukherjee's process necessarily would create cracks in the surface of the wire, it is unclear whether those cracks would be in the alloy layer, or in an overlying outer zinc layer. Because Petitioner's testing only shows that cracks are located on the surface of the wire, the testing does not establish that “cracks are formed in the alloy layer and the coating layer” as required by claims 2 and 7 of the '036 patent.

On the record before us, we find that Petitioner has not shown that claims 2 and 7 are anticipated by Mukherjee. Claim 5 depends from claim 2, and claims 8 and 10 depend from claim 7. Ex. 1001, 8:4–6, 8:16–18, 8:21–22. For the same reasons, we find that Petitioner has not shown that claims 5, 8, and 10 are anticipated by Mukherjee. Accordingly, we conclude that Petitioner has not demonstrated by a preponderance of the evidence that claims 2, 5, 7, 8, and 10 of the '036 patent are unpatentable as anticipated by Mukherjee.

III. PATENT OWNER'S MOTION TO EXCLUDE

Patent Owner moves to exclude Exhibits 1014–1017, 1019, and 1020. Paper 59. We do not consider the merits of Patent Owner's Motion to Exclude because, as explained above, even if the disputed evidence is considered, Petitioner has not shown by a preponderance of the evidence that claims 2, 5, 7, 8, and 10 of the '036 patent are unpatentable as anticipated by Mukherjee. Accordingly, we dismiss Patent Owner's Motion to Exclude as moot.

IV. CONCLUSION

For the reasons given, we enter adverse judgment against Patent Owner with respect to claims 1, 3, 4, 6, and 9, and determine that Petitioner has not established by a preponderance of the evidence that claims 2, 5, 7, 8, and 10 of the '036 patent are unpatentable

V. ORDER

In consideration of the foregoing, it is hereby

ORDERED that adverse judgment is entered against Patent Owner with respect to claims 1, 3, 4, 6, and 9 of the '036 patent;

FURTHER ORDERED that Petitioner has not shown by a preponderance of the evidence that claims 2, 5, 7, 8, and 10 of the '036 patent are unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Exclude (Paper 59) is *dismissed*; and

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

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