

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

POSCO CO. LTD.,
Petitioner,

v.

ARCELORMITTAL,
Patent Owner.

Case No. IPR2024-01376
U.S. Patent No. 10,961,602

PATENT OWNER'S PRELIMINARY RESPONSE

TABLE OF CONTENTS

	<u>Page</u>
TABLE OF ABBREVIATIONS	v
TABLE OF EXHIBITS	vi
I. INTRODUCTION	1
II. SUMMARY OF THE '602 PATENT	2
III. LEVEL OF ORDINARY SKILL IN THE ART	3
IV. THE BOARD SHOULD EXERCISE ITS DISCRETION TO DENY INSTITUTION UNDER 35 U.S.C. § 325(D)	4
A. The Same Art Was Considered (part one of <i>Advanced Bionics</i>)	4
B. The Patent Office Did Not Materially Err (part two of <i>Advanced Bionics</i>)	5
V. PETITIONER FAILS TO ADEQUATELY SUPPORT ITS PROPOSED CLAIM CONSTRUCTION	8
VI. THE CHALLENGED CLAIMS ARE PATENTABLE	10
A. Grounds 1A-1G: Petitioner Fails to Establish Engels Discloses or Renders Obvious the Challenged Claims	10
1. Overview of Engels	10
2. Engels Does Not Disclose Limitations [1g], [21], and [24]	11
3. Engels Does Not Disclose the Dependent Claims	16
B. Grounds 2A-2C: GMW14400 Is Not a Printed Publication Under 35 U.S.C. § 102(a) Because It Was Not Publicly Available Before the Critical Date	17
1. Overview of GMW14400	17

2.	GMW14400 Was Not Publicly Available Before the Critical Date	17
VII.	OTHER LIMITATIONS NOT ADDRESSED	25
VIII.	CONCLUSION.....	25

TABLE OF AUTHORITIES

	<u>Page(s)</u>
Cases	
<i>Acceleration Bay, LLC v. Activision Blizzard Inc.</i> , 908 F.3d 765 (Fed. Cir. 2018)	19
<i>Advanced Bionics LLC v. MED-EL Elektromedizinische Gerate GmbH</i> , IPR2019-01469 (PTAB Feb. 13, 2020).....	4, 5, 6, 8
<i>Blue Calypso, LLC v. Groupon, Inc.</i> , 815 F.3d 1331 (Fed. Cir. 2016)	17, 18
<i>BMW of N. Am., LLC v. Stragent, LLC</i> , IPR2021-00418 (PTAB Mar. 21, 2022)	5
<i>Cisco Sys., Inc. v. C-Cation Techs., LLC</i> , IPR2014-00454 (PTAB Aug. 29, 2014).....	9
<i>Ens Labs Ltd. v. Unstoppable Domains Inc.</i> , IPR2024-00872 (PTAB Nov. 22, 2024).....	21
<i>Enviroligix Inc. v. Ionian Techs., Inc.</i> , No. IPR2018-00405 (PTAB July 30, 2018)	24
<i>Gator Bio, Inc. v. Sartorius Bioanalytical Instruments, Inc.</i> , IPR2023-00215 (PTAB June 20, 2023).....	8
<i>In re Hall</i> , 781 F.2d 897 (Fed. Cir. 1986)	18
<i>Hulu, LLC v. Sound View Innovations, LLC</i> , IPR2018-01039 (PTAB Dec. 20, 2019)	17
<i>Int'l Bus. Machs. Corp. v. EnvisionIT LLC</i> , IPR2017-01246 (PTAB Oct. 16, 2017).....	21
<i>Ivantis, Inc. v. Sight Scis., Inc.</i> , IPR2022-01529 (PTAB Mar. 21, 2023)	7
<i>Ivantis, Inc. v. Sight Scis., Inc.</i> , IPR2022-01540 (PTAB Mar. 22, 2023)	6
<i>Microchip Tech. Inc. v. Aptiv Techs. Ag</i> , IPR2024-00494 (PTAB Oct. 7, 2024)	9
<i>Microsoft Corp. v. AlmondNet, Inc.</i> , IPR2022-01319 (Jan. 30, 2023).....	5

<i>Microsoft Corp. v. Throughputer, Inc.</i> , IPR2022-01566 (PTAB May 31, 2023).....	21
<i>Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.</i> , 868 F.3d 1013 (Fed. Cir. 2017)	8
<i>Samsung Elecs. Co. v. Infobridge Pte. Ltd.</i> , 929 F.3d 1363 (Fed. Cir. 2019)	19
<i>Topcon Medical Sys., Inc. et al v. Car Zeiss Meditec, Inc.</i> , IPR2021-00452 (PTAB July 21, 2021)	24
<i>Twinstrand Biosciences, Inc. v. Guardant Health, Inc.</i> , IPR2022-01115 (PTAB Dec. 30, 2022)	16
<i>Voter Verified, Inc. v. Premier Election Sols., Inc.</i> , 698 F.3d 1374 (Fed. Cir. 2012)	17

Statutes

35 U.S.C. § 314(a)	2
--------------------------	---

Regulations

37 C.F.R. § 42.6(a)(3)	9
37 C.F.R. § 42.100(b)	8
37 C.F.R. § 42.104(b)(4)	10

TABLE OF ABBREVIATIONS

Abbreviation	Term
'602 Patent	U.S. Patent No. 10,961,602 (Ex-1001)
'683 Patent	U.S. Patent No. 9,708,683
'683 Patent IPR	IPR2019-01275 (Ex-1031)
Challenged Claims	Claims 1-30 of U.S. Patent No. 10,961,602
Fig.	Figure
IPR	<i>inter partes</i> review
Patent Owner	ArcelorMittal
Petitioner	POSCO Co., Ltd.
POSITA	person[s] of ordinary skill in the art

TABLE OF EXHIBITS

Abbreviation	Term
2001	File History of U.S. Patent No. 10,961,602

I. INTRODUCTION

The Petition filed by POSCO Co., Ltd. requesting *inter partes* review of claims 1-30 of U.S. Patent No. 10,961,602 should be denied institution.

All the Grounds presented in the Petition (Petitioner's Grounds 1A-1G and 2A-2C) consist entirely of references that were before the Patent Office, including references that were discussed and/or explicitly considered during the examination of the '602 Patent or the related '683 Patent. This Petition is exactly the sort of inefficient use of the Board's resources that *Advanced Bionics* seeks to prevent. Petitioner's feeble attempt to avoid discretionary denial under section 325(d) consists of conclusory arguments that overlook the factual record and fail to address all parts of the *Advanced Bionics* framework. Thus, as a threshold matter, the Board should exercise its discretion to deny institution.

The Petition also fails to show a reasonable likelihood that the Petitioner would prevail on at least one claim. Petitioner's Grounds 1A-1G present arguments based on Engels. In a misguided effort to show that Engels discloses the superficial layer recited in the claims, Petitioner improperly incorporates by reference its claim construction arguments from an *inter partes* review proceeding filed four years ago, and, specifically, its position that a "superficial layer" means a "surface layer." Despite doing this, Petitioner fails to identify a "superficial layer" in Engels that meets its proposed meaning of a "surface layer." As to Grounds 2A-2C, Petitioner

presents arguments based on GMW14400. But GMW14400 is a non-patent reference, and Petitioner failed to show that it was publicly available before the critical date.¹

In sum, Petitioner had the burden of showing that there is a reasonable likelihood that it would prevail with respect to at least one Challenged Claim. 35 U.S.C. § 314(a). Petitioner did not meet that burden. For at least these reasons and those set forth below, Petitioner failed to show a reasonable likelihood of success on any Challenged Claim, and the Board should deny institution of IPR.

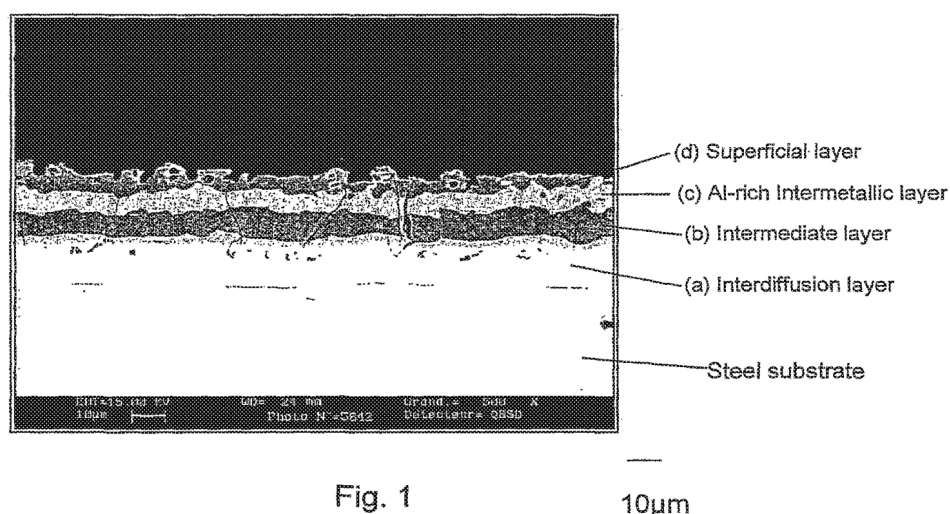
II. SUMMARY OF THE '602 PATENT

The '602 Patent relates to “[c]oated steel strips, coated stamped products and methods.” Ex-1001, Title. The '602 Patent recognizes that “the use of pre-coated steels in hot-stamping processes for the shaping of parts has become important, especially in the automotive industry.” Ex-1001, 1:37-39. However, problems could occur due to “rollers [that] may become fouled” during the hot-stamping process leading to “excessive, maintenance of the rollers” and causing productivity to decrease. Ex-1001, 1:66-2:2. The '602 Patent also recognized that there was a

¹ For purposes of this Preliminary Response only, Patent Owner does not challenge the use of October 30, 2006 as the critical date. However, as Patent Owner informed the real party-in-interest in the co-pending litigation at the International Trade Commission, the claims of the '602 Patent have an earlier critical date. Patent Owner reserves the right to argue for an earlier critical date if this Petition is instituted.

need for parts with “very high mechanical resistance,” and “a substantial resistance to shocks, fatigue, abrasion and wear, while retaining a good resistance to corrosion as well as a good capacity for welding, painting and gluing.” Ex-1001, 2:3-23, 11:33-39.

The '602 Patent innovated and enabled a way to obtain, in a repeatable, consistent, and robust manner, a beneficial coating microstructure with the above qualities; this beneficial microstructure is reflected in the claims. Ex-1001, 14:59-18:24. Figure 1 is an embodiment of the invention and displays the beneficial coating microstructure.



Ex-1001, Figure 1.

III. LEVEL OF ORDINARY SKILL IN THE ART

Solely for the purpose of this Preliminary Response, Patent Owner does not challenge Petitioner’s proposed definition of a POSITA. Patent Owner reserves the right to provide an alternative definition of a POSITA if IPR is instituted.

IV. THE BOARD SHOULD EXERCISE ITS DISCRETION TO DENY INSTITUTION UNDER 35 U.S.C. § 325(D)

In determining whether to deny institution under 35 U.S.C. § 325(d), the Board applies a two-part framework: “(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of [the] first part of the framework is satisfied, whether the Petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.” *Advanced Bionics LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (precedential).

A. The Same Art Was Considered (part one of *Advanced Bionics*)

Petitioner's Grounds involve seven references: Engels, Cornette, Laurent, Nishibata, Takagi, Hein, and GMW14400. *All* seven references were before the Patent Office, and Petitioner's two primary references (Engels and Takagi) were discussed and/or applied during the prosecution of the '602 Patent and the related '683 Patent. Ex-2001, 850 (Laurent), 852 (Takagi), 857 (Cornette), 857 (Hein), 857 (Vaissiere), 858 (Engels), 878-879 (Takagi), 912-913 (Takagi), 1137 (GMW14400); Ex-1031, 20 (Takagi), 25 (Engels), 76-80 (Engels).² *Advanced Bionics*, IPR2019-

² Petitioner's Exhibit 1002 contains only excerpts of the prosecution history of the '602 Patent. Patent Owner provides the complete prosecution history at Exhibit 2001.

01469, Paper 6 at 7-8 (“Previously presented art includes . . . art provided to the Office by an applicant, such as on an Information Disclosure Statement (IDS), in the prosecution history of the challenged patent.”). Indeed, Petitioner does not argue that part one of *Advanced Bionics* is not satisfied. Pet., 81-83.

B. The Patent Office Did Not Materially Err (part two of *Advanced Bionics*)

Since Petitioner failed to show that part one of *Advanced Bionics* is not satisfied, it has the burden to demonstrate that the Examiner materially erred. *BMW of N. Am., LLC v. Stragent, LLC*, IPR2021-00418, Paper 19 at 6-7, 10 (PTAB Mar. 21, 2022). “If reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability.” *Advanced Bionics*, IPR2019-01469, Paper 6 at 9.

Petitioner asserts that “the Examiner’s failure to apply Engels, Takagi, Hein, and GMW14400” was erroneous because “these references were not used as the basis for any rejection and the Examiner did not discuss them.” Pet., 82 (arguing error because “[n]one of Engels, Takagi, Hein, and GMW14400, nor the obviousness of the Challenged Claims in view of these references, was otherwise addressed during prosecution”). But merely because the Examiner did not use these references in rejection does not mean the Examiner erred. *Microsoft Corp. v. AlmondNet, Inc.*, IPR2022-01319, Paper 9 at 11 (Jan. 30, 2023) (“Here, the [reference] that was before the Examiner during the examination is identical to the

art cited here[.] There is no argument or evidence before us that [the reference] was concealed from the Examiner. The Examiner ultimately made a determination that the claims were patentable . . . we are not persuaded of material Examiner error.”). Contrary to Petitioner’s argument, the requirements of 325(d) do not require the Examiner to discuss every single reference to avoid making a material error. *Advanced Bionics*, IPR2019-01469, Paper 6 at 9 (“At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.”)

In addition, Petitioner asserts that Hein and GMW14400 “teach that ‘the coating has a thickness greater than 30 micrometers.’” Pet., 82. But Petitioner does not assert that these references otherwise anticipate and disclose the remaining elements of the claims. Petitioner has not shown why it was material error for the Examiner to reasonably determine that there was not a motivation to combine Hein or GMW14400 with any other references in a sufficient manner that would render the claims obvious. Indeed, Petitioner does not argue why the Examiner’s decision not to combine these references with other references constitutes material error. *See* Pet., 82-83; *Ivantis, Inc. v. Sight Scis., Inc.*, IPR2022-01540, Paper 14 at 14 (PTAB Mar. 22, 2023) (“To the extent Petitioner equates the examiner’s silence in discussing relevant prior art to a material error, we are not persuaded.”).

Petitioner also asserts that the Examiner failed to appreciate “Engels’[s] and Takagi’s disclosure of the compositions” of each layer and that the Examiner did not consider that Engels shows “a coating with a thickness greater than 30 μm .” Pet., 82-83. But Petitioner’s argument ignores the Examiner’s substantive rejection based on Takagi during the prosecution of the ’683 Patent; indeed, during the ’683 Patent IPR, Petitioner acknowledged that the Examiner issued a rejection based on Takagi. Ex-1031, 20 (“The Examiner rejected the claims as independently anticipated by two prior art references, Laurent (Ex. 1008) and Takagi (U.S. Patent Pub. No. 2004/0009366).”); *Ivantis, Inc. v. Sight Scis., Inc.*, IPR2022-01529, Paper 16 at 20 (PTAB Mar. 21, 2023) (considering “prior art that Examiner has already considered during prosecution of the [challenged] patent and its related applications” and finding “Petitioner has not shown material error by the Office”). As noted, Takagi was even discussed during the prosecution of the ’602 Patent and the related ’683 Patent. Ex-2001, 852 (Takagi), 878-879 (Takagi), 912-913 (Takagi); Ex-1031, 20 (Takagi). As to Engels, it was also discussed during the ’683 Patent IPR. Ex-1031, 25, 76-89. Additionally, as discussed further below, Engels does not disclose the claimed compositions and layers recited by the claims. *See infra* section V.A. Notably, Petitioner does not explain how the Examiner’s “fail[ure] to appreciate” or consider these aspects of Takagi and Engels was material error or would have led the Examiner to reject the claims.

Finally, part two of *Advanced Bionics* requires the Petitioner to demonstrate “the extent to which additional evidence and facts presented in the Petition warrant reconsideration.” *Advanced Bionics*, IPR2019-01469, Paper 6 at 9 n.10. Petitioner does not even address this factor. Pet., 82-83. To the extent the Petitioner intends to reference the arguments in its Petition and expert declaration, that “does nothing to distinguish this Petition from the bulk of others that come before the Board . . . we find this argument insufficient to show ‘the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.’” *Gator Bio, Inc. v. Sartorius Bioanalytical Instruments, Inc.*, IPR2023-00215, Paper 19 at 21 (PTAB June 20, 2023). Thus, *Advanced Bionics* confirms that the Board should exercise its discretion to deny institution.

V. PETITIONER FAILS TO ADEQUATELY SUPPORT ITS PROPOSED CLAIM CONSTRUCTION

A claim subject to IPR shall be construed using the same standard as in a civil action. 37 C.F.R. § 42.100(b). The Board need only construe terms “to the extent necessary to resolve the controversy.” *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

Petitioner states that “no formal claim constructions are necessary in this proceeding.” Pet., 3. Yet, as explained in section VI.A, Petitioner refers to the meanings of “interdiffusion layer,” “intermediate layer,” “intermetallic layer,” and “superficial layer” “as proposed by Petitioner during IPR proceedings for the ’683

Patent” and incorporates by reference its claim construction arguments from the ’683 Patent IPR proceeding. Pet., 19 (citing Ex-1031, 22-24; Ex-1003, ¶46). The claim construction arguments in the ’683 Patent IPR Petition, in-turn, rely on an expert declaration from that proceeding. Ex-1031, 30-32. But aside from this incorporation by reference, the Petition does not provide any support for Petitioner’s proposed constructions. For example, Petitioner’s expert, here, also incorporates by reference Petitioner’s claim construction arguments from the ’683 Patent IPR proceeding. Ex-1003, ¶46, ¶158.

Because the Petition does not include any explanation or reasoning to support Petitioner’s proposed meanings of these terms, Petitioner’s incorporation by reference is improper. 37 C.F.R. § 42.6(a)(3) (“Arguments must not be incorporated by reference from one document into another document.”); *Microchip Tech. Inc. v. Aptiv Techs. Ag*, IPR2024-00494, Paper 12 at 10-11 (PTAB Oct. 7, 2024) (“In addition, the Petition does not include any explanation or reasoning to support the proposed construction. Instead, the Petition refers to the rationale set forth in a brief filed by Patent Owner in the district court litigation. This is an improper incorporation by reference.” (internal citations omitted)); *Cisco Sys., Inc. v. C-Cation Techs., LLC*, IPR2014-00454, Paper 12 at 10 (PTAB Aug. 29, 2014) (informative) (“[W]e will not consider arguments that are not made in the Petition[.]”). As a result, the Petition does not “specify where each element of the

claim is found in the prior art patents or printed publications relied upon,” 37 C.F.R. § 42.104(b)(4), and should be denied for this reason alone.

Finally, at this stage, Patent Owner does not submit any terms for construction. Patent Owner reserves the right to subsequently submit claim terms for construction should the Board institute IPR.

VI. THE CHALLENGED CLAIMS ARE PATENTABLE

A. Grounds 1A-1G: Petitioner Fails to Establish Engels Discloses or Renders Obvious the Challenged Claims

1. Overview of Engels

Each iteration of Petitioner's Ground 1 relies on Engels. Pet., 1. Engels is titled, “Controlling and Monitoring of the Hot-Stamping Process of Boron-Alloyed Heat-Treated Steels.” Ex-1005, 1. Engels states that “the process of hot-stamping shall be addressed in brief.” Ex-1005, 2. In section two, Engels describes the “[h]ot-[s]tamping of [b]oron-[a]lloyed [s]teels,” including using “uncoated 22MnB5” and a “surface coating.” Ex-1005, 2-6.

In section three, Engels identifies “[p]art-[s]pecific [p]rocess [p]arameters.” Ex-1005, 6. Engels, however, does *not* provide any values or ranges for these process parameters. Ex-1005, 6-9. Instead, after identifying process parameters, Engels shows “a cross-section polish of the diffusion layer of a hot-dip aluminum coated boron steel” in Figure 5. Ex-1005, 9. Engel then identifies five “phase number[s]” and provides a table with ranges for “layer thickness” and a “Volume%”

for the elements Al, Fe, Si, Cr, and Mn. Ex-1005, 9. Engles does not describe why it identified “[f]ive phases” (as opposed to more or less phases) beyond that these five phases “can easily be distinguished.” Ex-1005, 8. Engles also does not identify the process parameter values used to create what is shown in Figure 5.

2. Engles Does Not Disclose Limitations [1g], [21], and [24]

Petitioner relies on Engles for the following limitations:

- [1g]: “(d) a superficial layer having a fourth mean iron composition different from the third mean iron composition,”
- [21]: “(d) a superficial layer having a fourth mean iron composition different from the first, second and third mean iron compositions,”
- [24]: “(d) a superficial layer having a fourth mean aluminum composition different from the first, second and third mean aluminum compositions, the second mean aluminum composition being greater than the third mean aluminum composition;”

Pet., 17-21([1g]), 30 ([21]), 31-32 ([24]). Hereinafter, these limitations will be referred to collectively or separately as “superficial layer limitations.” Petitioner fails to establish Engles discloses the superficial layer limitations.

The sum total of the Petitioner’s argument related to the superficial layer limitation is “Phase 5 teaches layer (d) (the ‘superficial layer’)”; “These phases are included in the coating (‘diffusion layer’) and ‘proceed[] from the base steel outwards.’ EX-1003, [¶]45.”; “phases 1 (or 1+2), 3, 4, and 5 satisfy the meanings of each of those terms as proposed by Petitioner during IPR proceedings for the ’683

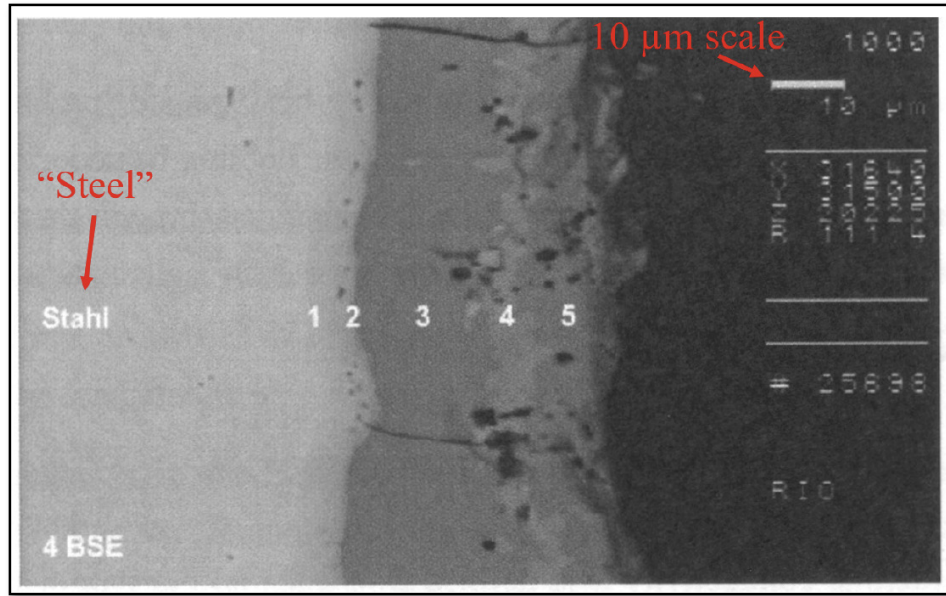
Patent. EX-1031, 22-24; EX-1003, [¶]46,” and an annotated version of Engels’s Figure 5. Pet., 18-19.³

As an initial matter, Petitioner’s incorporation by reference of its claim construction arguments during the ’683 Patent IPR is improper and compels denial of the Petition. *See supra* section V. But even if this improper incorporation by reference is overlooked, Engels does not disclose the superficial layer limitations under Petitioner’s proposed meaning of the term.

In the ’683 Patent IPR, Petitioner proposed that a POSITA “would have understood ‘Superficial layer’ to mean ‘a surface layer.’” Ex-1031, 32. Engels’s phase 5 in Figure 5, which Petitioner identifies as the superficial layer, however, is *not* a surface layer. Petitioner asserts that Engels’s Figure 5 has a 10 μm scale that can be used to measure the thickness of phases. Pet., 8, 21-23. Petitioner also asserts that Engels describes its phase 5 as having a layer thickness of 5-11 μm . Pet., 7-8 (asserting that Engels’s Table corresponds to Engels’s Figure 5). But using that same scale shows that what Engels considers to be phase 5 is *not* a surface layer.

Below is Engels’s Figure 5, where Petitioner specifically annotated and emphasized Figure 5’s 10 μm scale.

³ While Petitioner makes some additional arguments related to [21] and [24], these arguments relate only to the mean compositional relationship recited in the claim; these additional arguments do not relate to whether Engels discloses a superficial layer. *See* Pet., 30 ([21]), 31-32 ([24]).

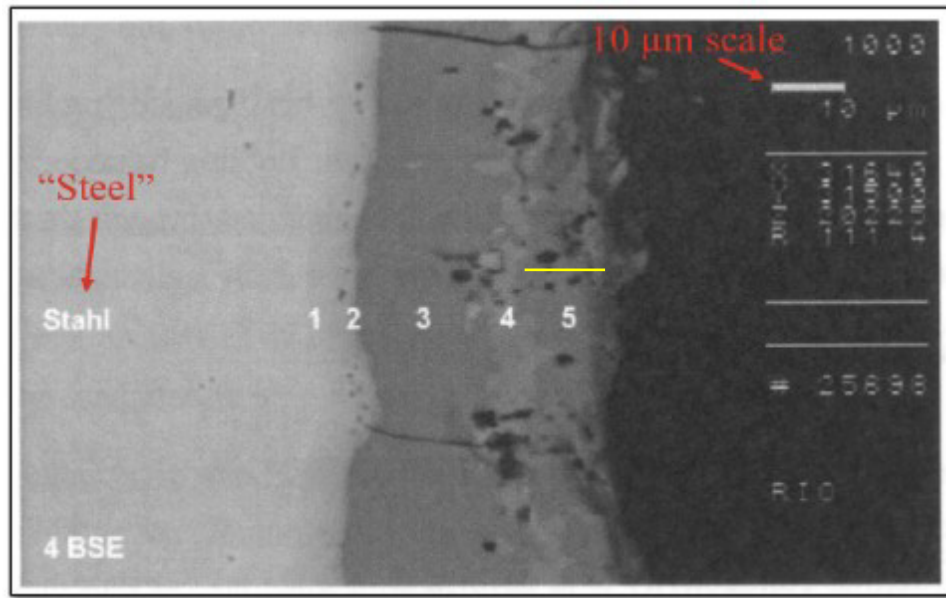


Pet., 8 (Annotated Engels's Figure 5). Below is Engels's Table, which shows the "layer thickness" in μm for each phase:

phase number	layer thickness, μm	Al	Fe	Si	Cr	Mn
		Volume-%				
1	5 – 9	7,2	89,2	1,9	0,3	1,4
2	< 1 μm	unmeasurable				
3	11 – 18	51,4	45,9	1,9	0,1	0,7
4	3 – 8	33,9	54,3	10,6	0,3	0,9
5	5 - 11	53,2	44,1	1,9	0,2	0,6

Pet., 7 (Engels's Table). Engels shows phase 5 having a layer thickness of 5-11 μm .

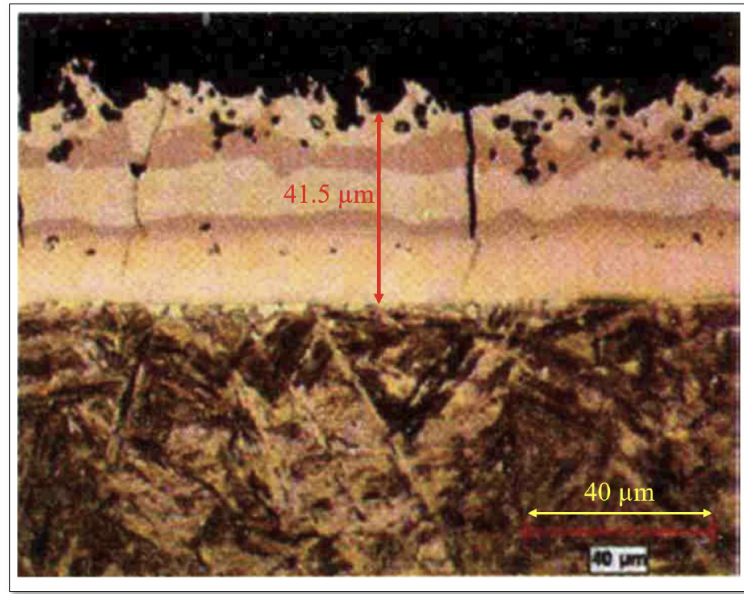
In the below-annotated version of Figure 5, a yellow line that is 11 μm long (based on the 10 μm scale) is added. As shown, Engels's phase 5 does not extend to the surface.



Patent Owner Annotated Engels's Figure 5. Contrary to Petitioner's argument, what Petitioner identified in Engels does not actually meet Petitioner's proposed meaning for superficial layer.

While Petitioner's argument also cites to its expert, Pet., 18-19, Petitioner's expert further confirms the error in Petitioner's argument. Petitioner's expert states that "Phase 5 is superficial in that it is arranged at the surface of the coating. Engels FIG. 5." Ex-1003, ¶46. But as shown above, Petitioner's expert is contradicted by and not supported by Engels's Figure 5; Phase 5 is not at the surface of the coating.

As a further illustration of how Petitioner failed to show that Engels has a superficial layer, Petitioner's mapping of Engels is inconsistent and irreconcilable with how Petitioner alleges Hein (in Grounds 2A-2C) satisfies the claim. For Grounds 2A-2C, Petitioner asserts a total coating thickness (e.g., including all five layers) by measuring the thickness all the way to the surface:



Pet., 53-54 (annotated Hein Figure 4).⁴ For Hein, Petitioner considered that the superficial layer goes all the way to the surface for measuring thickness, yet for Engels, Petitioner did not identify a superficial layer that goes to the surface. Thus, Petitioner failed to show that Engels has a superficial layer consistent with Petitioner's proposed meaning for that term, and as a result, Petitioner failed to show that Engels discloses the superficial layer limitations.

In addition, each superficial layer limitation recites a specific mean composition relationship. Claim [1g] requires the superficial layer to have “a fourth mean iron composition different from the third mean iron composition.” Ex-1001, 15:11-13. Claim [21] requires the superficial layer to have “a fourth mean iron

⁴ Patent Owner does not agree with Petitioner's interpretation of Hein but uses Petitioner's interpretation of Hein as it relates to coating thickness to illustrate how Petitioner has not applied a consistent view of the claims to its mapping of Engels.

composition different from the first, second and third mean iron compositions.” Ex-1001, 16:55-59. And Claim [24] requires the superficial layer to have “a fourth mean aluminum composition different from the first, second and third mean aluminum compositions, the second mean aluminum composition being greater than the third mean aluminum composition.” Ex-1001, 17:21-25.

Petitioner, however, failed to show that any superficial layer in Engels meets the recited mean compositional relationship. Engels only provides the “Volume-%” for the phase numbers corresponding to the layer thicknesses provided in its table. Since phase 5 in Engels is only 5-11 μm , and, as shown above, phase 5 does not extend to the surface, Engels does not provide the “Volume-%” for the entire layer/phase at the surface. Thus, Petitioner failed to show and indeed, cannot show, that the mean composition of the layer at the surface discloses the recited mean compositional relationship.

In sum, the portion of Engels relied upon by Petitioner does not disclose the superficial layer limitations.

3. Engels Does Not Disclose the Dependent Claims

Because Petitioner failed to establish a reasonable likelihood of success as to any of the challenged independent claims, Petitioner cannot meet its burden for the challenged dependent claims 2-20, 22-23, 25-30. *Twinstrand Biosciences, Inc. v. Guardant Health, Inc.*, IPR2022-01115, Paper 14 at 19 (PTAB Dec. 30, 2022).

B. Grounds 2A-2C: GMW14400 Is Not a Printed Publication Under 35 U.S.C. § 102(a) Because It Was Not Publicly Available Before the Critical Date

1. Overview of GMW14400

Each iteration of Petitioner's Ground 2 relies on GMW14400. Pet., 1-2. GMW14400 is titled, "Low Carbon, Heat-Treatable Boron Steel – Uncoated or Aluminized Pre-Coated." Ex-1026, 1. It is a "specification" that "covers the requirements for low carbon, heat-treatable boron steel used in the manufacture of structural parts." Ex-1026, 1.

2. GMW14400 Was Not Publicly Available Before the Critical Date

Petitioner failed to meet its burden to show that GMW14400 was publicly available before the critical date. Before a petition for *inter partes* review can be instituted, the Petitioner "must identify, with particularity, evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent and therefore that there is a reasonable likelihood that it qualifies as a printed publication." *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 3 (PTAB Dec. 20, 2019) (precedential); *see also Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348-49 (Fed. Cir. 2016) ("[I]ndexing is no more or less important in evaluating the public accessibility of online references than for those fixed in more traditional, tangible media." (quoting *Voter Verified, Inc. v. Premier Election Sols., Inc.*, 698 F.3d 1374,

1380 (Fed. Cir. 2012))); *In re Hall*, 781 F.2d 897, 899 (Fed. Cir. 1986) (“‘[P]ublic accessibility’ has been called the touchstone in determining whether a reference constitutes a ‘printed publication.’”).

Petitioners rely on the declaration of June Ann Munford to allege GMW14400 was publicly available before the critical date. Pet., 3; Ex-1027. Ms. Munford in turn relies on the declaration of Shannon Schuster and three screenshots from the Internet Archive. Ex-1027. As an initial matter, it is not clear from Ms. Munford’s declaration exactly when she contends GMW14400 was publicly available. Ex-1027 (referencing various dates including “December 1, 2005,” “July 19, 2003,” “February 17, 2003,” and “June 11, 2003”). Ms. Schuster states that GMW14400 was published in November 2005. Ex-1027, Appendix SCHUSTER01. The Petition asserts GMW14400 “was publicly available no later than 12/1/2005.” Pet., 3. Petitioner’s position, however, is not supported by Ms. Munford’s declaration or any other evidence in this record.

Ms. Munford first relies on the declaration of Ms. Schuster to assert that GMW14400 has been available for purchase from Accuris since December 1, 2005. Ex-1027, 5 (citing Appendix SCHUSTER01). Ms. Schuster’s declaration only states that GMW14400 was “listed in our database and available to the public for purchase online since December 1, 2005.” Merely stating something is “available to the public” is insufficient to show public availability. *See Blue Calypso.*, 815 F.3d

at 1349 (“In the present case, the Board found that Groupon had failed to carry its burden of establishing that an interested party exercising reasonable diligence would have located [the reference]. We agree. Groupon has provided no evidence that [the reference] was disseminated to the interested public before the critical date other than testimony from Dr. Joshi that it was ‘publicly available around November 2003.’”). Instead, Petitioner must show that an *interested* POSITA would have been able to locate GMW14400. *Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1372 (Fed. Cir. 2019) (a work is not publicly accessible if the only people who know how to find it are the ones who created it); *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 772 (Fed. Cir. 2018) (“A reference is considered publicly accessible if it was disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.”). Ms. Munford did not assert that a POSITA would have known to look at the Accuris database or present any other evidence to establish that a POSITA would have located the document there by December 1, 2005. The Petition presents no evidence that establishes that a POSITA would have located GMW14400 through Accuris by December 1, 2005, with reasonable diligence.

In an apparent effort to show that a POSITA could have located GMW14400 with reasonable diligence, Ms. Munford relies on three screenshots of webpages

from the Internet Archive. Each screenshot purports to show the various portions of the IHS website. Ms. Munford does not explain why she shows screenshots of the IHS website, but presumably does so because Ms. Schuster's declaration stated that Accuris is a successor company of Information Handling Services (IHS). Ex-1027, Appendix SCHUSTER01. Not only does Ms. Munford fail to explain her reliance on the IHS website, but Ms. Munford relies on screenshots of the IHS website from 2003. Ex-1027, 5-8 (Appendix IHS01, IHS02, and IH03). There are two independent and separate flaws with Ms. Munford's reliance on these screenshots: (1) there is no evidence that an interested person (e.g., a POSITA) would have known of or located the specific webpages relied on by Ms. Munford and (2) the Internet Archive screenshots are from the wrong time frame.

Interested Person Would Not Know: Ms. Munford's declaration relies on three URLs:

- <http://www.global.ihs.com/>
- [http://global.ihs.com/contact_us.cfm?currency_code=USD&customer_id=!%BU%5c%0a&shopping_cart_id=%27%8+\(K@HAZ@+&%0a&rid=NS&input_doc_number=ASME+Y14.24&lang_code=ENGL](http://global.ihs.com/contact_us.cfm?currency_code=USD&customer_id=!%BU%5c%0a&shopping_cart_id=%27%8+(K@HAZ@+&%0a&rid=NS&input_doc_number=ASME+Y14.24&lang_code=ENGL)
- http://global.ihs.com/images/ENGL/ps_catalog.pdf

Ex-1027, 5-8. Ms. Munford apparently relies on these URLs to show that GMW14400 could be located. There is, however, no evidence that an interested person who did not already know of these URLs would have been able to locate

GMW14400. The question of whether a reference is or is not findable from these URLs overlooks the predicate question of whether an interested person would have even known of these URLs in the first place. Here, Petitioner provided no evidence that a POSITA would have been aware of any of these URLs or otherwise discovered them with ordinary diligence. *See, e.g., Ens Labs Ltd. v. Unstoppable Domains Inc.*, IPR2024-00872, Paper 8 at 19-20 (PTAB Nov. 22, 2024) (“[T]his does not suffice to support that one of ordinary skill in the art would have sought out the Read the Docs website and, once there, located [the reference] without prior knowledge of [the reference] and the URL at which [the reference] was available.”); *Int’l Bus. Machs. Corp. v. EnvisionIT LLC*, IPR2017-01246, Paper 7 at 15 (PTAB Oct. 16, 2017) (noting that a factor towards determining whether a document was publicly available was whether an interested person “would have been independently aware of the prominence of the forum”).

Indeed, this is not the first time Ms. Munford has failed to meet the legal standard for showing a reference is publicly available because she failed to show a POSITA would have been able to locate the reference with reasonable diligence. *Microsoft Corp. v. Throughputer, Inc.*, IPR2022-01566, Paper 13 at 11-12 (PTAB May 31, 2023) (“Petitioner also relies upon Ms. Munford’s declaration, but her testimony does not indicate that an ordinary artisan could have located Tuan with reasonable diligence . . . In other words, even assuming that Ms. Munford establishes

Tuan was technically available to the public in October 2009, her testimony fails to support a finding that an ordinary artisan could have located Tuan with reasonable diligence.”).

Wrong Time Frame: Ms. Munford’s declaration also relies on screenshots of webpages from the wrong time frame. Ms. Schuster’s declaration states that GMW14400 lists a publication date of “November 2005.” Ex-1027, Appendix SCHUSTER01. This is consistent with the GMW14400, which lists a date of “November 2005” in the footer. Ex-1026 (listing “November 2005”). Petitioner has not provided any evidence that GMW14400 was published or available in 2003, such that websites from 2003 would be relevant to assessing the public availability of GMW14400. Indeed, the only evidence of record shows that GMW14400 was not published until November 2005. As a result, Ms. Munford’s reliance on screenshots of webpages from 2003 does not provide any information about what was on those webpages at the time GMW14400 was supposedly published in November 2005.

More specifically, Ms. Munford first relies on Appendix IHS01, a screenshot from July 19, 2003 of <http://www.global.ihs.com/>. Ex-1027, 4-5 (Appendix IHS01). However, what the IHS website looked like on July 19, 2003 provides no information about what the IHS website looked like *after* GMW14400 was published. Thus, whether the 2003 version of the website had search bars says nothing about whether the version of the website after GMW14400 was published

had search bars. Not only that, but Ms. Munford then speculates about how the search bars would have functioned and what hyperlinks on this website might have contained. For example, she says a link titled “Automotive” would lead users to automotive standards “likely to include documents authored by GM.” Ex-1027, 6. This, however, is pure speculation and there is no evidence about what may or may not have been contained on these pages.

Ms. Munford also relies on Appendix IHS02, a screenshot from February 17, 2003 of [http://global.ihs.com/contact_us.cfm?currency_code=USD&customer_id=!%BU%5c%0a&shopping_cart_id=%27%8+\(K@HAZ@+&%0a&rid=NS&input_doc_number=ASME+Y14.24&lang_code=ENGL](http://global.ihs.com/contact_us.cfm?currency_code=USD&customer_id=!%BU%5c%0a&shopping_cart_id=%27%8+(K@HAZ@+&%0a&rid=NS&input_doc_number=ASME+Y14.24&lang_code=ENGL). Ex-1027, 6-7 (Appendix IHS02). She says this document indicates that IHS was offering GM documents for sale to members of the public. But again, this is from the wrong time frame. Whether this website was offering GM documents for sale in 2003 does not indicate whether this website was offering GM documents, and specifically GMW14400, for sale after GMW14400 was published in November 2005.

Finally, Ms. Munford relies on Appendix IHS03, a screenshot from June 11, 2003 of http://global.ihs.com/images/ENGL/ps_catalog.pdf. Like the earlier two screenshots, this is also from the wrong time frame and says nothing about whether IHS was making GM standards, and specifically GMW14400, available for purchase after GMW14400 was published in November 2005.

In sum, Ms. Munford does not provide any evidence that in November 2005, (the relevant time frame), GMW14400 was available to interested researchers or persons of ordinary skill. *Envirologix Inc. v. Ionian Techs., Inc.*, No. IPR2018-00405 (PTAB July 30, 2018) (“Absent in the Petition is evidence related to whether the Ehses Dissertation was publicly accessible in the *relevant time frame*, how one might have obtained a copy of the dissertation, or whether the dissertation was reasonably accessible through generally available means, or by a showing of a general library procedure as to indexing, cataloging, and shelving of doctoral thesis.” (emphasis added)); *Topcon Medical Sys., Inc. et al v. Car Zeiss Meditec, Inc.*, IPR2021-00452, Paper 14 at 13 (PTAB July 21, 2021) (“Petitioner has the burden to show that they were publicly accessible before the critical date . . . a person of ordinary skill in the art would have been able to view the [reference].”). The Schuster declaration states only that GMW14400 was available for purchase by December 1, 2005, but provides no information about whether an interested POSITA could locate GMW14400. The Munford declaration does not supply this missing information either because it relies on screenshots of cherry-picked web URLs with no information regarding how an interested POSITA would locate or know of these URLs in the first place. And even if a POSITA would have known of these URLs, the Munford declaration relies on screenshots of webpages from 2003, which is the wrong time frame because there is no evidence GMW14400 was available in 2003,

and the only evidence shows GMW14400 was not available until November 2005. Ms. Munford does not present any evidence of whether the webpages she relies on, existed and what they would have looked like when GMW14400 was published in November 2005. Thus, Petitioner has not shown that GMW14400 was publicly available before the critical date and has not shown that GMW14400 is a printed publication.

VII. OTHER LIMITATIONS NOT ADDRESSED

Patent Owner addresses only the deficiencies in the prior art necessary to clearly show a lack of reasonable likelihood of the Petition's success. Patent Owner's decision not to address certain limitations or secondary prior art references at this preliminary stage in no way reflects Patent Owner's agreement with any unaddressed contention in the petition or lack of dispute as to additional limitations or prior art.

VIII. CONCLUSION

For the foregoing reasons, Petitioner failed to meet its burden of showing a reasonable likelihood that at least one of the Challenged Claims is unpatentable, and institution of *inter partes* review should be denied.

DATED: December 24, 2024

Respectfully Submitted,

/ Brian M. Buroker /

Brian M. Buroker (Reg. No. 39,125)
GIBSON, DUNN & CRUTCHER LLP
1700 M St. NW

Patent Owner's Preliminary Response
U.S. Patent No. 10,961,602

Washington, D.C. 20036
Phone: (202) 955-8500
Fax: (202) 467-0539
Email: bburoker@gibsondunn.com

Benjamin Hershkowitz (Reg. No. 41,833)
Gibson, Dunn & Crutcher LLP
200 Park Avenue
New York, NY 10166
Phone: (212) 351-4000
Email: bhershkowitz@gibsondunn.com

Mark Reiter (Reg No. 35,785)
Gibson, Dunn & Crutcher LLP
2001 Ross Avenue Suite 2100
Dallas, TX 75201
Phone: (214) 698-3400
Email: mreiter@gibsondunn.com

Allen Kathir
(pro hac vice forthcoming)
Gibson, Dunn & Crutcher LLP
200 Park Avenue
New York, NY 10166
Phone: (212) 351-4000
Email: akathir@gibsondunn.com

Counsel for Patent Owner

CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned attorney hereby certifies that this document complies with the type-volume limitations of 37 C.F.R. § 42.24(b). The word count of the foregoing Patent Owner's Preliminary Response is 5,325, according to the word count tool in Microsoft Word.

DATED: December 24, 2024

By: / Brian M. Buroker /

Brian M. Buroker (Reg. No. 39,125)
GIBSON, DUNN & CRUTCHER LLP
1700 M St. NW
Washington, D.C. 20036
Phone: (202) 955-8500
Fax: (202) 467-0539
Email: bburoker@gibsondunn.com

Counsel for Patent Owner

CERTIFICATE OF SERVICE

The undersigned certifies service pursuant to 37 C.F.R. § 42.120 of a copy of this Patent Owner's Preliminary Response and supporting materials upon Petitioner by email on December 24, 2024, to the following email addresses of record:

IPR58281-0002IP1@fr.com

DATED: December 24, 2024

By: /Brian M. Buroker/

Brian M. Buroker (Reg. No. 39,125)
GIBSON, DUNN & CRUTCHER LLP
1700 M St. NW
Washington, D.C. 20036
Phone: (202) 955-8500
Fax: (202) 467-0539
Email: bburoker@gibsondunn.com

Counsel for Patent Owner