

No. 2023-2285

---

**IN THE UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT**

---

MAXELL, LTD.,  
*Appellant*

v.

AMPEREX TECHNOLOGY LIMITED,  
*Appellee*

---

*Appeal from the United States Patent and Trademark Office,  
Patent Trial and Appeal Board in No. IPR2021-01442*

---

**APPELLANT MAXELL, LTD.'S COMBINED PETITION FOR  
PANEL REHEARING AND REHEARING *EN BANC***

---

Eric J. Klein  
Paige H. Wright  
VINSON & ELKINS LLP  
2001 Ross Avenue, Suite 3900  
Dallas, TX 75201  
214.220.7700 Telephone  
214.220.7716 Facsimile  
Email: [eklein@velaw.com](mailto:eklein@velaw.com)  
Email: [pwright@velaw.com](mailto:pwright@velaw.com)

Hilary L. Preston, *Lead Counsel*  
Jeffrey T. Han  
Erik Shallman  
Corbin J. Cessna  
VINSON & ELKINS LLP  
200 W. 6th Street, Suite 2500  
Austin, TX 78701  
512.542.8400 Telephone  
512.542.8612 Facsimile  
Email: [hpreston@velaw.com](mailto:hpreston@velaw.com)  
Email: [jhan@velaw.com](mailto:jhan@velaw.com)  
Email: [eshallman@velaw.com](mailto:eshallman@velaw.com)  
Email: [ccessna@velaw.com](mailto:ccessna@velaw.com)

*Counsel for Appellant Maxell, Ltd.*

February 14, 2025

**UNITED STATES COURT OF APPEALS  
FOR THE FEDERAL CIRCUIT**

**CERTIFICATE OF INTEREST**

**Case Number** 2023-2285

**Short Case Caption** Maxell, Ltd. v. Amperex Technology Limited

**Filing Party/Entity** Maxell, Ltd.

**Instructions:**

1. Complete each section of the form and select none or N/A if appropriate.
2. Please enter only one item per box; attach additional pages as needed, and check the box to indicate such pages are attached.
3. In answering Sections 2 and 3, be specific as to which represented entities the answers apply; lack of specificity may result in non-compliance.
4. Please do not duplicate entries within Section 5.
5. Counsel must file an amended Certificate of Interest within seven days after any information on this form changes. Fed. Cir. R. 47.4(c).

I certify the following information and any attached sheets are accurate and complete to the best of my knowledge.

Date: 02/14/2025

Signature: /s/ Hilary L. Preston

Name: Hilary L. Preston

<p><b>1. Represented Entities.</b> Fed. Cir. R. 47.4(a)(1).</p>	<p><b>2. Real Party in Interest.</b> Fed. Cir. R. 47.4(a)(2).</p>	<p><b>3. Parent Corporations and Stockholders.</b> Fed. Cir. R. 47.4(a)(3).</p>
<p>Provide the full names of all entities represented by undersigned counsel in this case.</p>	<p>Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities.</p> <p><input checked="" type="checkbox"/> None/Not Applicable</p>	<p>Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities.</p> <p><input checked="" type="checkbox"/> None/Not Applicable</p>
<p>Maxell, Ltd.</p>	<p>N/A</p>	<p>None</p>

Additional pages attached

**4. Legal Representatives.** List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

None/Not Applicable  Additional pages attached

Abigail Lubow	Wilmer Cutler Pickering Hale and Door LLP	50 California St., Suite 3600 San Francisco, CA 94111
Parker D. Hancock	Baker Botts	910 Louisiana St. Houston, TX 77002-4995

**5. Related Cases.** Other than the originating case(s) for this case, are there related or prior cases that meet the criteria under Fed. Cir. R. 47.5(a)?

Yes (file separate notice; see below)  No  N/A (amicus/movant)

If yes, concurrently file a separate Notice of Related Case Information that complies with Fed. Cir. R. 47.5(b). **Please do not duplicate information.** This separate Notice must only be filed with the first Certificate of Interest or, subsequently, if information changes during the pendency of the appeal. Fed. Cir. R. 47.5(b).

**6. Organizational Victims and Bankruptcy Cases.** Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

None/Not Applicable  Additional pages attached

None		

## TABLE OF CONTENTS

STATEMENT OF COUNSEL PURSUANT TO FEDERAL CIRCUIT RULE 40(c) .....	iv
I. INTRODUCTION.....	1
II. ARGUMENT.....	4
A. The Board’s Findings on Amagi as Analogous Art Are Not Supported by Substantial Evidence and Instead Reflect Objectively Incorrect Factual Statements. ....	4
1. The Board’s Finding that the ’251 Patent and Amagi Address How to Make a Resin Is Factually Incorrect.....	5
2. The Board’s Finding that Amagi Is Pertinent to the Particular Particle Size of the Filler in a Heat Resistant Resin Layer of a Lithium-Ion Battery Is Factually Incorrect and Ignores How the ’251 Patent Uses Resin in a Completely Different Way. ....	6
a. The Board Wrongly Concluded that There Is “Filler in the Heat Resistant Resin” of the ’251 Patent. ....	7
b. Evidence Cited by the Board Does Not Support This Finding.....	8
3. The Shinohara Reference Is Not Evidence of a POSITA’s Background Knowledge Concerning Use of the AA-03 Particle in Battery Separators. ....	12
4. This Court Must Judge the Board’s Decision Based on the Board’s Faulty Analysis Alone. ....	15
B. The Panel’s Affirmance Vitiates the Analogous Art Doctrine in Favor of an Analogous Element Test.....	16
III. CONCLUSION .....	21

## TABLE OF AUTHORITIES

### Cases

<i>Donner Tech., LLC v. Pro Stage Gear, LLC</i> , 979 F.3d 1353 (Fed. Cir. 2020) .....	18, 21
<i>DyStar Textilfarben GmbH &amp; Co. Deutschland KG v. C.H. Patrick Co.</i> , 464 F.3d 1356 (Fed. Cir. 2006) .....	15
<i>In re Clay</i> , 966 F.2d 656 (Fed. Cir. 1992) .....	passim
<i>In re Klein</i> , 647 F.3d 1343 (Fed. Cir. 2011) .....	20
<i>In re Pagliaro</i> , 657 F.2d 1219 (C.C.P.A. 1981).....	12, 18, 21
<i>In re Tzipori</i> , 316 F. App'x 975 (Fed. Cir. 2008) .....	15
<i>In re Van Wanderham</i> , 378 F.2d 981 (C.C.P.A. 1967).....	18
<i>Innovation Scis., LLC v. Amazon.com, Inc.</i> , 842 F. App'x 555 (Fed. Cir. 2021) .....	2
<i>Koninklijke Philips N.V. v. Google LLC</i> , 948 F.3d 1330 (Fed. Cir. 2020) .....	14
<i>Polygroup Ltd. MCO v. Willis Electric Co.</i> , 759 F. App'x 934 (Fed. Cir. 2019) .....	19
<i>Sanofi-Aventis Deutschland GmbH v. Mylan Pharms. Inc.</i> , 66 F.4th 1373 (Fed. Cir. 2023).....	10
<i>Sci. Plastic Prods., Inc. v. Biotage AB</i> , 766 F.3d 1355 (Fed. Cir. 2014) .....	20

*SEC v. Chenery Corp.*,  
332 U.S. 194 (1947)..... 17

*TQ Delta, LLC v. CISCO Sys., Inc.*,  
942 F.3d 1352 (Fed. Cir. 2019) ..... 16

*Universal Camera Corp. v. N.L.R.B.*,  
340 U.S. 474 (1951)..... 5

**Rules**

Fed. R. App. P. 40(b)(1)(A) ..... 4

Fed. R. App. P. 40(b)(2)(A)-(B) ..... 4

Fed. R. App. P. 40(b)(2)(D) ..... 4

**STATEMENT OF COUNSEL PURSUANT TO  
FEDERAL CIRCUIT RULE 40(c)**

Based on my professional judgment, I believe the panel decision is contrary to the following decisions of the Supreme Court of the United States and the precedents of this Court: *Dickinson v. Zurko*, 527 U.S. 150 (1999); *Corephotonics, Ltd. v. Apple Inc.*, 84 F.4th 990 (Fed. Cir. 2023); *Donner Tech., LLC v. Pro Stage Gear, LLC*, 979 F.3d 1353 (Fed. Cir. 2020); *Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330 (Fed. Cir. 2020); *Polygroup Ltd. MCO v. Willis Elec. Co.*, 759 F. App'x 934 (Fed. Cir. 2019); *In re Klein*, 647 F.3d 1343 (Fed. Cir. 2011); *In re Tzipori*, 316 F. App'x 975 (Fed. Cir. 2008); *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356 (Fed. Cir. 2006); *In re Zurko*, 258 F.3d 1379 (Fed. Cir. 2001); *In re Clay*, 966 F.2d 656 (Fed. Cir. 1992); *In re Pagliaro*, 657 F.2d 1219 (C.C.P.A. 1981).

Based on my professional judgment, I believe this appeal requires an answer to one or more precedent-setting questions of exceptional importance:

- Whether objectively incorrect statements of fact regarding the challenged patent and the prior art reference can provide



substantial evidence for findings of the Patent Trial and Appeal Board.

- Whether the test for analogous art should include the panel’s “analogous element” test—separate from the established same-field-of-endeavor and reasonable-pertinence tests—looking only for a similar element in the challenged patent and the prior art reference, regardless of how, or the purpose for which, that element is used.

Dated: February 14, 2025

Respectfully submitted,

/s/ Hilary L. Preston

Hilary L. Preston  
VINSON & ELKINS LLP  
200 W. 6th Street, Suite 2500  
Austin, TX 78701  
Phone: (512) 542-8400  
Facsimile: (512) 542-8612  
Email: hpreston@velaw.com

*Counsel for Appellant Maxell, Ltd.*

## I. INTRODUCTION

Appellant Maxell, Ltd. (“Maxell”) respectfully requests that this Court grant rehearing of this appeal from the Final Written Decision in an *inter partes* review, either by the panel or *en banc*.

First, the panel overlooked significant factual errors in the Board’s decision concerning whether a prior art reference known as Amagi was analogous art to Maxell’s U.S. Patent No. 9,166,251 (“the ’251 Patent”). The Board identified “problems” that are unconnected to the ’251 Patent. For example, the Board stated that the ’251 Patent and Amagi teach *how to make* a resin with sufficient heat resistance, but both merely identify known resins. Also, the Board stated Amagi was relevant to the particle size of the filler in a heat resistant resin, but the ’251 Patent has *no filler in a heat resistant resin*. Thus, the Board relied entirely on factual errors in concluding that Amagi is analogous art.

Second, the Board’s analysis conflicts with this Court’s prior decisions by effectively creating a new standard for analogous art—departing from the established reasonable pertinence analysis by focusing on a single element of the prior art reference, rather than the reference as a whole.

For background, the '251 Patent is directed to an improved separator for batteries, in which a “heat-resistant layer” made of “heat-resistant fine particles” is added as a distinct layer from the separator’s shutdown layer to avoid high-temperature shrinkage. Amagi, on the other hand, seeks to dissipate heat from rotating machines—such as electric motors and generators—through the use of thermally conductive inorganic filler within an epoxy resin surrounding electrical coils. The '251 Patent uses heat-**resistant** fine particles to prevent shrinkage, Appx46 at 5:3-9, while Amagi uses filler with “high thermal **conductivity**” to dissipate heat, *see* Appx2049 at [0005] (emphasis added); Appx2051 at [0017] (emphasis added). The '251 Patent does not rely on thermal conductivity; likewise, Amagi says nothing about heat resistance of its filler particles.

Despite their vast differences, the Board found that Amagi is analogous art to the '251 Patent. On appeal, the panel affirmed pursuant to Federal Circuit Rule 36. Although a Rule 36 judgment “ought to leave little doubt why the decision of the lower tribunal was affirmed,” *Innovation Scis., LLC v. Amazon.com, Inc.*, 842 F. App’x 555, 558 (Fed. Cir. 2021), the panel’s affirmance of the Board’s decision is irreconcilable with the established legal framework regarding analogous art. Maxell seeks

rehearing because the Board's decision is not supported by substantial evidence, as it is based on significant factual errors and applies an incorrect analogous art analysis.

## II. ARGUMENT

The Court should grant rehearing of this appeal because the panel overlooked significant errors in the Board’s factual findings. *See* Fed. R. App. P. 40(b)(1)(A) (authorizing panel rehearing if law or fact overlooked or misapprehended). Further, the Board’s analysis as endorsed by the panel replaces the reasonable pertinence test for analogous art with an element-focused analysis—an analogous element test—that would capture the universe of prior art having that single element while ignoring the prior art reference as a whole. *See id.* at 40(b)(2)(A)-(B), (D) (rehearing *en banc* warranted if panel decision conflicts with prior binding precedent or to address question of exceptional importance).

### A. **The Board’s Findings on Amagi as Analogous Art Are Not Supported by Substantial Evidence and Instead Reflect Objectively Incorrect Factual Statements.**

The Board relied *entirely* on factual errors in concluding that Amagi is analogous art. The Board identified problems that have *no bearing* on the ’251 Patent because the Board fundamentally misunderstood the ’251 Patent. *See* Appx16-22. It is the duty of this Court to “exact higher standards” when applying the substantial evidence standard than deferring to agency “suspicion, surmise, implications, or plainly

incredible evidence.” *Universal Camera Corp. v. N.L.R.B.*, 340 U.S. 474, 484 (1951).

**1. The Board’s Finding that the ’251 Patent and Amagi Address How to Make a Resin Is Factually Incorrect.**

The Board made a critical error when it found that Amagi is reasonably pertinent “because it addresses one of the same problems [as the ’251 Patent], namely, *how to make* a resin with sufficient heat resistance.” Appx19 (emphasis added). But neither the ’251 Patent nor Amagi teaches *how to make a resin* with sufficient heat resistance.

Nothing in the ’251 Patent addresses a problem of how to make a resin, at all. The Board states that “[t]he ’251 patent uses resins and heat resistant particles.” Appx19 (citing Appx46 at 5:31-44; Appx320 at 17 (citing same passage from ’251 Patent)). But that statement and the cited portion of the ’251 Patent have nothing to do with *how to make* a heat-resistant resin. Instead, the ’251 Patent explains that the claimed heat-resistant fine particles themselves can be made of “fine particles of ... a melamine resin [or] a phenol resin,” for example. Appx46 at 5:31-44. That is, the ’251 Patent simply reflects existing, known resins—not *how to make* a resin with heat resistance. Indeed, those resins are just one option for the heat-resistant fine particles in the ’251 Patent, with

inorganic fine particles actually preferred over organic particles such as resins. Appx46 at 5:10-44.

Likewise, Amagi does not teach *how to make* a heat resistant resin. The Board states that “Amagi teaches an epoxy resin with excellent heat resistance.” Appx19 (citing paragraph 10 of Amagi). But the cited paragraph of Amagi simply notes that epoxy resins were already “often used” because of the known quality that “epoxy resin has excellent heat resistance,” not addressing *how to make* a heat resistant resin. Appx2050 at [0010].

Simply put, the Board’s statement that the ’251 Patent and Amagi address “*how to make* a resin with sufficient heat resistance” was flatly wrong, and that cannot support the finding that Amagi is analogous art. Appx19 (emphasis added).

**2. The Board’s Finding that Amagi Is Pertinent to the Particular Particle Size of the Filler in a Heat Resistant Resin Layer of a Lithium-Ion Battery Is Factually Incorrect and Ignores How the ’251 Patent Uses Resin in a Completely Different Way.**

The Board’s statement that “Amagi is ‘reasonably pertinent to the particular problem with which the inventor is involved’ because it addresses another issue pertinent to the heat resistant resin layer in a

lithium-ion battery, namely, the particular particle size of the filler in the heat resistant resin” is simply *false*. Appx19-20. The Board’s incorrect statement lacks any evidentiary support, much less substantial evidence, because it fundamentally misunderstood the relevant parts of the ’251 Patent and ignored the context of Amagi’s filler particles.

**a. The Board Wrongly Concluded that There Is “Filler in the Heat Resistant Resin” of the ’251 Patent.**

The supposed pertinent issue identified by the Board of “the particular particle size of the *filler in the heat resistant resin*” reflects a blatant error; there is *no* “filler in the heat resistant resin” of this invention. In the ’251 Patent, organic resin is merely an option for the heat-resistant fine particle material that makes up the heat-resistant layer. Appx46 at 5:10-44. Thus, there is no filler or any other type of particle in a “heat resistant resin” in the ’251 Patent because the resin *is* the fine particle. See Appx46 at 5:3-9, 5:31-44; Appx53 at claim 1. So the Board’s supposed issue relevant to the ’251 Patent of “the particular particle size of the filler in the heat resistant resin” in fact has *nothing to do with the ’251 Patent*. That is simply not how the ’251 Patent works. The



Board made a factually incorrect finding that cannot support the conclusion of analogousness.

**b. Evidence Cited by the Board Does Not Support This Finding.**

The Board’s decision accompanies this erroneous finding with a citation that does not provide *any* support for that finding, meaning the Board’s finding lacks substantial evidence. *See* Appx19-20 (citing “Reply 18 (citing Ex. 1003 ¶¶ 337, 341-343, 397-398; Ex. 2016, 75:21-76:22); Ex. 1022 ¶¶ 10-12, 23, Fig. 1”). Indeed, none of the cited evidence provides *any* link to the ’251 Patent that is relevant to the analogous art analysis.

**i. ATL’s Reply Brief.**

The Board cites first to ATL’s Reply, which argues that “the ’251 Patent and Yoshida are concerned with a particular particle size and a POSITA would have recognized that Amagi provides specific details regarding a particle that meets each of these requirements and solves at least one problem in those references.” Appx321. But merely stating that Amagi discloses a particle that meets the requirements of the ’251 Patent is pure hindsight analysis, which is improper—they are looking to Amagi *because* the ’251 Patent claims heat-resistant fine particles. ATL’s argument focuses on the one small piece of Amagi that ATL used for its

unpatentability grounds, without stepping back to explain why a POSITA dealing with lithium-ion batteries would logically look in the first place to a reference relating to epoxy resin compositions for rotating machines. *See In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992) (“A reference is reasonably pertinent if ... it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.”).

**ii. ATL’s Expert Declaration.**

Further, ATL’s citations to its expert’s testimony, relied upon by the Board, have nothing to do with whether Amagi is analogous to the ’251 Patent. *See* Appx321 (citing “Ex. 1003, ¶¶ 337, 341-343, 397-398; Ex. 2016, 75:21-76:22”); Appx19-20 (citing same). The paragraphs from ATL’s expert declaration are directed to other aspects of the obviousness analysis, not analogousness. Most particularly, they are focused on Amagi and Yoshida, not the ’251 Patent. Paragraphs 337 and 341-343 are addressed to a motivation to combine and reasonable expectation of success, with particular focus on combining Amagi with Yoshida. *See* Appx1683-1688 ¶¶ 337, 341-43. Paragraphs 397-398 explain how Yoshida and Amagi compare with an element of claim 1 of the ’251 Patent,

but comparison to Yoshida and not the '251 Patent is improper. *See* Appx1711-1713 ¶¶ 397-98; *see also Sanofi-Aventis Deutschland GmbH v. Mylan Pharms. Inc.*, 66 F.4th 1373, 1377 (Fed. Cir. 2023) (“In evaluating whether a reference is analogous, we have consistently held that a patent challenger must compare the reference to the challenged patent.”). Likewise, the application of Yoshida and Amagi to the elements of the '251 Patent is not relevant because that analysis is directed to whether the references disclose the limitations of the '251 Patent, not whether the references are analogous art. *See Sanofi-Aventis*, 66 F.4th at 1379 (“Mylan also compared de Gennes to elements of the challenged claims within the '614 patent. None of these passages, however, explain how de Gennes is analogous to the '614 patent.” (citation omitted)).

### **iii. ATL’s Expert Deposition.**

The Board and ATL also cite to a passage from the deposition of ATL’s expert in which he acknowledges that Amagi “is used for a rotating machine and not explicitly for a battery or a nonaqueous second[ary] electrolyte battery,” but then goes on to state:

A person of ordinary skill would have understood the properties of an inorganic filler used to solve heat-related issues in a rotating machine are the same as you would have similar related issues in a nonaqueous secondary battery.

In both contexts, the person of ordinary skill would have been looking and researching to find an insulating or heat-resistant particle. And there are limited choices, and, you know, they would have been drawn to alumina.

Appx2395 at 75:21-76:13; *see* Appx321 (citing “Ex. 2016, 75:21-76:22”); Appx19-20 (same). Similar language appears in a footnote of the expert’s declaration, Appx1684 n.30, which the Board quotes at least twice in its decision, *see* Appx20; Appx21. However, these statements by ATL’s expert do not provide substantial evidence because, as discussed above, they focus on one small piece of Amagi without stepping back to explain why a POSITA dealing with lithium-ion batteries would logically look in the first place to a reference relating to epoxy resin compositions for rotating machines. *See Clay*, 966 F.2d at 659. Before considering Amagi’s alumina particles, the Board needed to first establish that Amagi as a whole was analogous art. *See In re Pagliaro*, 657 F.2d 1219, 1225 (C.C.P.A. 1981). But Amagi focuses solely on heat **conductivity** of the filler, not heat **resistance**. *See* Appx2050-2051 at [0011], [0016]-[0017]. Thus, it was improper for the Board to skip straight to using Amagi’s particle distribution to invalidate the ’251 Patent.

**iv. Amagi.**

Finally, the Board cites to Amagi itself. Appx19-20 (citing “Ex. 1022 ¶¶ 10-12, 23, Fig. 1”). These cited portions of Amagi simply describe aspects of Amagi and do not provide any evidence to explain how Amagi is analogous to the ’251 Patent. The Board has not identified any evidence concerning the ’251 Patent or why a POSITA would consider this disclosure in Amagi—particularly when the ’251 Patent does not use a “filler in the heat resistant resin,” as discussed above.

Because none of the evidence cited by the Board backs its finding that “Amagi ... addresses another issue pertinent to the heat resistant resin layer in a lithium-ion battery, namely, the particular particle size of the filler in the heat resistant resin,” this finding is not supported by substantial evidence.

**3. The Shinohara Reference Is Not Evidence of a POSITA’s Background Knowledge Concerning Use of the AA-03 Particle in Battery Separators.**

The Board also improperly relied on U.S. Patent No. 6,447,958 (“Shinohara”), which ATL’s expert—Dr. van Schalkwijk—cited to allege that, as background knowledge, “a POSITA would have understood that AA-03 had been used in separators.” *See* Appx20-21; Appx1687-1688

¶ 343 & n.31; *see generally* Appx2083-2096 (Shinohara). Nothing in Shinohara demonstrates that it was within a POSITA's background knowledge that AA-03 had been used in separators. Therefore, Shinohara and Dr. van Schalkwijk's related testimony do not provide substantial evidence to support the Board's finding.

Shinohara dedicates over 700 lines across 12 columns to descriptions of 9 example separators and 1 comparative example. Appx2090-2095 at 13:35-24:12. In the final example, Shinohara describes "150 g of an alumina fine particle (manufactured by Sumitomo Chemical Co., Ltd.; Sumicoriumdum, having an average particle size of 0.3  $\mu\text{m}$  and a particle size distribution of 0.1 to 1.0  $\mu\text{m}$ )." Appx2095 at 23:17-20. Shinohara does not identify the "alumina fine particle" as AA-03, and Dr. van Schalkwijk does not explain how he identified that material as AA-03. Dr. van Schalkwijk cited Shinohara "to establish the POSITA's base knowledge," Appx1687-1688 ¶ 343 n.31; *see also* Appx2396 at 78:4-6 (stating the same during his deposition), and this 4-line description buried in a 24-column specification is all that he relied on to support that opinion.

But Shinohara does not constitute substantial evidence that such knowledge was part of the base knowledge of a POSITA. This Court's decisions have established that a POSITA's background knowledge is not coextensive with every detail in the prior art. *See Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1338 (Fed. Cir. 2020) (acknowledging evidence "that pipelining was not only in the prior art, but also within the general knowledge of a skilled artisan"). Otherwise, such an expansive scope for background knowledge would render the level of ordinary skill meaningless. *See In re Tzipori*, 316 F. App'x 975, 982 (Fed. Cir. 2008) ("[A] more skilled artisan will have more general knowledge on which to rely in combining teachings from multiple references."); *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1370 (Fed. Cir. 2006) ("Persons of varying degrees of skill ... possess varying bases of knowledge....").

Here, nothing in Shinohara suggests that the POSITA's background knowledge included information that AA-03 had been used in battery separators. Shinohara does not say that it was known to use AA-03 or the described "alumina fine particle" in separators. It also does not identify any commercially available separators using such a material.

Shinohara’s inventors’ use of an “alumina fine particle” in one test lab example—4 lines buried in 24 columns—simply does not support a finding that all POSITAs would have background knowledge that AA-03 was used in battery separators. Appx2089 at 11:10-14; Appx2095 at 23:17-20. For such a finding, there must be more in the prior art to indicate that certain knowledge was truly part of the POSITA’s background knowledge.

Because Shinohara does not support the alleged background knowledge of a POSITA, Dr. van Schalkwijk’s testimony that “a POSITA would have understood that AA-03 had been used in separators”—which relies only on Shinohara—is entirely uncorroborated, *see* Appx1687-1688 ¶ 343, and cannot constitute substantial evidence to support the Board’s finding. *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1358 (Fed. Cir. 2019) (“Conclusory expert testimony does not qualify as substantial evidence.”). Thus, it was error for the Board to rely on this in reaching its conclusion that Amagi was analogous art.

#### **4. This Court Must Judge the Board’s Decision Based on the Board’s Faulty Analysis Alone.**

Supreme Court precedent dictates that this Court “must judge the propriety of [the Board’s] action solely by the grounds invoked by the



agency. If those grounds are inadequate or improper, the court is powerless to affirm the administrative action by substituting what it considers to be a more adequate or proper basis.” *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947). Because the Board’s decision rests solely on factual errors, this Court should grant rehearing and vacate the Board’s decision.

**B. The Panel’s Affirmance Vitiates the Analogous Art Doctrine in Favor of an Analogous Element Test.**

In addition to overlooking the Board’s factual errors, the panel’s affirmance endorses what might be called an “analogous element” test in place of the established reasonable pertinence test for analogous art. Under the reasonable pertinence test, “[i]f a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection.” *Clay*, 966 F.2d at 659. But “[i]f it is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it.” *Id.* “Although the dividing line between reasonable pertinence and less-than-reasonable pertinence is context dependent, it ultimately rests on the extent to which the reference of interest and the claimed invention relate to a similar problem or purpose.” *Donner Tech., LLC v. Pro Stage Gear, LLC*, 979 F.3d 1353, 1359 (Fed. Cir. 2020).

Longstanding precedent instructs that the focus should be on “considering the subject matter as a whole.” *Pagliari*, 657 F.2d at 1225 (quoting *In re Van Wanderham*, 378 F.2d 981, 988 (C.C.P.A. 1967)). However, in this case, the Board ignored the context and subject matter of Amagi as a whole and instead improperly focused its analysis on just one component—the alumina particles—effectively applying an *analogous element* test.

The panel’s affirmance contradicted this Court’s precedent because the Board disregarded established analogous art doctrine by reducing its analysis to a search for alumina particles in any field of art. *In re Clay* parallels the facts of this case and confirms that the Board’s actions in looking to the alumina alone was improper. 966 F.2d 656 (Fed. Cir. 1992). In *Clay*, the challenged application used a gelation solution to fill a dead volume between the bottom of a tank and its outlet port, to prevent hydrocarbon products from being trapped in the tank. *Id.* at 657. The prior art Sydansk reference “disclose[d] a process for reducing the permeability of hydrocarbon-bearing formations and thus improving oil production, *using a gel similar to that in Clay’s invention.*” *Id.* at 658 (emphasis added). Despite using a similar gel, this Court held that the

BPAI's finding that "one of ordinary skill in the art would certainly glean from [Sydansk] that the rigid gel as taught therein would have a number of applications within the manipulation of the storage and processing of hydrocarbon liquids" was clearly erroneous. *Id.* at 659. The Court emphasized that the gels were used for entirely different purposes in different contexts. *Id.* Thus, in *Clay*, this Court rejected the kind of analogous element test that the Board applied to the present case. Likewise, in *Polygroup Ltd. MCO v. Willis Electric Co.*, 759 F. App'x 934 (Fed. Cir. 2019), the Court rejected consideration of electrical connectors because the reference involved lamps instead of Christmas tree assemblies, and in *In re Klein*, 647 F.3d 1343 (Fed. Cir. 2011), the Court rejected a focus on certain dividers due to differences in the overall purposes of the various prior art containers.

Here, the Board appeared to rely on the testimony from ATL's expert focused solely on alumina:

[T]he person of ordinary skill would have been looking and researching to find an insulating or heat-resistant particle. And there are limited choices, and, you know, they would have been drawn to alumina.

Appx2395 at 75:21-76:13; *see* Appx321 (citing same); Appx19-20 (same).

Questioning during oral argument before the panel in this appeal

likewise addressed similar testimony and suggested a focus on the alumina alone. *See* Oral Argument Audio at 5:43-6:37. But knowing that battery separators can use alumina and arguing that a POSITA would understand that the properties of the filler in Amagi would be the same when used in a battery does not make Amagi analogous art. *See Clay*, 966 F.2d at 659. Such reasoning would allow a patent challenger to pick any small piece of a reference from the universe of unrelated fields, using the challenged patent as a guide. *See Sci. Plastic Prods., Inc. v. Biotage AB*, 766 F.3d 1355, 1359 (Fed. Cir. 2014) (“The pertinence of the reference ... must be recognizable with the foresight of a person of ordinary skill, not with the hindsight of the inventor’s successful achievement.”). Here, directing the analysis to just the alumina has wrongly turned every piece of prior art that has some alumina, *in every field of art*, into analogous art. *See Donner*, 979 F.3d at 1359 (reasonable pertinence rests on “similar problem or purpose”). But the analogous art test is about the *art as a whole*, not about the element. *Pagliaro*, 657 F.2d at 1225 (must look to “the subject matter as a whole”). Despite being in a different field and using the alumina particles in a completely different way for a completely different purpose, the Board held that Amagi is analogous art—and the

panel affirmed. This is a drastic departure from the analogous art doctrine.

In *Clay*, the fact that the gel was the same, and even used in the petroleum industry, was not enough to make Sydansk analogous to Clay's invention. *See Clay*, 966 F.2d at 659-60. Under that controlling precedent, and the others cited herein, one must first identify art that is analogous—based on consideration of the prior art reference as a whole—before plucking out the elements that may be relevant to a challenged patent. The Board and the panel in this case applied the wrong approach to the analogous art inquiry by narrowly focusing on the one particular inorganic filler particle used by Amagi. Because they relied on an analogous element test, rather than the analogous art test, the Court should grant rehearing to reject this approach, establish that the analogous art doctrine is intact, and vacate the Board's decision.

### **III. CONCLUSION**

Maxell respectfully requests that the Court grant rehearing, reverse the Board's finding that Amagi is analogous art to the '251 Patent, and vacate the Board's decision.

Dated: February 14, 2025

Respectfully submitted,

/s/ Hilary L. Preston

Hilary L. Preston  
Jeffrey T. Han  
Erik Shallman  
Corbin J. Cessna  
VINSON & ELKINS LLP  
200 W. 6th Street, Suite 2500  
Austin, TX 78701  
512.542.8400 Telephone  
512.542.8612 Facsimile  
Email: hpreston@velaw.com  
Email: jhan@velaw.com  
Email: eshallman@velaw.com  
Email: ccessna@velaw.com

Eric J. Klein  
Paige H. Wright  
VINSON & ELKINS LLP  
2001 Ross Avenue, Suite 3900  
Dallas, TX 75201  
214.220.7700 Telephone  
214.220.7716 Facsimile  
Email: eklein@velaw.com  
Email: pwright@velaw.com

*Counsel for Appellant Maxell, Ltd.*

**CERTIFICATE OF SERVICE**

I hereby certify that I electronically filed the foregoing petition with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF system on February 14, 2025. All counsel of record in this case are registered CM/ECF users and will be served by the appellate CM/ECF system.

Dated: February 14, 2025

Respectfully submitted,

*/s/ Hilary L. Preston*

Hilary L. Preston  
VINSON & ELKINS LLP  
200 W. 6th Street, Suite 2500  
Austin, TX 78701  
Phone: (512) 542-8400  
Facsimile: (512) 542-8612  
Email: hpreston@velaw.com

*Counsel for Appellant Maxell, Ltd.*



**CERTIFICATE OF COMPLIANCE**

1. This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 40(d)(3)(A) because it contains 3,883 words, excluding the parts of the document exempted by Federal Rule of Appellate Procedure 32(f) and Federal Circuit Rule 32(b)(2).

2. This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word in Century Schoolbook 14-point font.

Dated: February 14, 2025

Respectfully submitted,

/s/ Hilary L. Preston

Hilary L. Preston  
VINSON & ELKINS LLP  
200 W. 6th Street, Suite 2500  
Austin, TX 78701  
Phone: (512) 542-8400  
Facsimile: (512) 542-8612  
Email: hpreston@velaw.com

*Counsel for Appellant Maxell, Ltd.*

## **ADDENDUM**

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

---

**MAXELL, LTD.,**  
*Appellant*

v.

**AMPEREX TECHNOLOGY LIMITED,**  
*Appellee*

---

2023-2285

---

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2021-01442.

---

**JUDGMENT**

---

JEFFREY TA-HWA HAN, Vinson & Elkins LLP, Austin, TX, argued for appellant. Also represented by CORBIN CESSNA, HILARY L. PRESTON, ERIK SHALLMAN; ERIC JOSEPH KLEIN, PAIGE HOLLAND WRIGHT, Dallas, TX.

KIRK T. BRADLEY, Alston & Bird LLP, Charlotte, NC, argued for appellee. Also represented by CHRISTOPHER TIMOTHY LAWN DOUGLAS, NICHOLAS CHRISTOPHER MARAIS; BRADY COX, Dallas, TX.

---

THIS CAUSE having been heard and considered, it is

ORDERED and ADJUDGED:

PER CURIAM (PROST, TARANTO, and CHEN, *Circuit Judges*).

**AFFIRMED. See Fed. Cir. R. 36.**

ENTERED BY ORDER OF THE COURT

January 15, 2025  
Date



Jarrett B. Perlow  
Clerk of Court