

NOTE: This disposition is nonprecedential.

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

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**EVERSTAR MERCHANDISE CO. LTD.,**  
*Appellant*

v.

**WILLIS ELECTRIC CO., LTD.,**  
*Appellee*

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2021-1882

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Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. PGR2019-00056.

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Decided: April 12, 2022

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BRENTON R. BABCOCK, Loeb & Loeb LLP, Los Angeles, CA, argued for appellant. Also represented by PRESTON HAMILTON HEARD, Womble Bond Dickinson (US) LLP, Atlanta, GA; BARRY J. HERMAN, Baltimore, MD; TYLER TRAIN, Irvine, CA.

PATRICK M. ARENZ, Robins Kaplan LLP, Minneapolis, MN, argued for appellee. Also represented by BRENDA L. JOLY.

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Before LOURIE, DYK, and REYNA, *Circuit Judges*.

REYNA, *Circuit Judge*.

Appellant Everstar Merchandise Co. Ltd. appeals the Patent Trial and Appeal Board’s final written decision in a post grant review concluding that Everstar did not meet its burden to show the challenged claims unpatentable as obvious. In reaching its decision, the Board found Everstar failed to establish a motivation to combine the asserted prior art. We hold that the Board abused its discretion when it refused to consider whether cost reduction would have motivated a skilled artisan to combine the asserted prior art. Thus, we vacate and remand.

#### BACKGROUND

Appellee Willis Electric Company, Ltd. owns U.S. Patent No. 10,222,037 (the “’037 Patent”), titled “Decorative lighting with reinforced wiring.” The claimed novelty of the ’037 Patent is the use of internally reinforced wires in decorative net lights. As explained by the ’037 Patent, prior art decorative lighting used other methods for reinforcement like twisted pair wires, thicker wires, or externally supported wires. The ’037 Patent claims a different design that purportedly reduces material costs, bulk, and weight without sacrificing strength: a single wire reinforced with a strand of polymer material running internally along its axis.

On August 13, 2019, Everstar petitioned for post grant review of all claims of the ’037 Patent, alleging among other things that the claims are unpatentable as obvious over the combination of two prior art references, Kumada<sup>1</sup>

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<sup>1</sup> U.S. Patent No. 6,367,951 (“Kumada”), titled “Economic Net or Mesh Light Set,” discloses a prior art net light design. J.A. 1346–61.

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and Debladis '120.<sup>2</sup> Everstar argued in its petition that a person of ordinary skill in the art (“POSITA”) would be motivated to combine Kumada and Debladis '120 “if she were looking for known methods that could be used to increase the strength and durability of the decorative lighting products.” J.A. 194. Everstar asserted that Kumada “explains that the absence of any electrical wire within . . . ropes greatly reduces their cost and renders both the light set and its method of manufacture economical.” J.A. 173.

On November 27, 2019, Willis Electric filed a patent owner’s preliminary response, contending that Debladis '120 is non-analogous art as compared to Kumada and the '037 Patent. Willis Electric noted that a stated goal of Kumada is to “make it . . . cheaper to manufacture a net light” by “reducing the length of wires that need to be twisted,” J.A. 371, and that a stated benefit of Debladis '120 is to make a “lighter weight, compact automobile cable[] . . . without being expensive to manufacture,” J.A. 372.

On February 20, 2020, the Board instituted post grant review. *Everstar Merch. Co., Ltd. v. Willis Elec. Co., Ltd.*, No. PGR2019-00056, 2020 WL 862906, at \*22 (P.T.A.B. Feb. 20, 2020). In its institution decision, the Board said:

The evidence of record supports Petitioner’s argument that the combination [of Kumada and Debladis '120] involves the ‘simple substitution of one known element for another to obtain the predictable and desirable result of a more durable wire.’ Pet. 30 [J.A. 194]. For example, both Kumada and Debladis '120 discuss *the desire to reduce manufacturing costs* for wiring having good

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<sup>2</sup> U.S. Patent No. 8,692,120 B2 (“Debladis '120”), titled “Electrical control cable,” discloses a prior art design for an internally reinforced electrical wire. J.A. 1403–07.

mechanical strength and that is capable of maintaining an electrical connection, and it is undisputed that Debladis '120 teaches doing so by including an internal reinforcing strand and conductor strands in a wire.

*Id.* at \*8 (emphasis added).

On June 15, 2020, Willis Electric filed a patent owner's response and addressed the Board's discussion of reduced cost as a potential motivation to combine Kumada with Debladis '120. *See* J.A. 568–69. Willis Electric argued that “Debladis '120 only recognizes a reduction in cost if there is excess copper in the wire that can be removed for signal transmission purposes,” and that Everstar “d[id] not argue that the amount of copper in the intermediate wires of Kumada would be reduced.” J.A. 568.

On September 15, 2020, Everstar filed a reply to Willis Electric's patent owner response. J.A. 636–69. Everstar argued that “a POSITA would be motivated to incorporate the polymer reinforced wire of Debladis '120 [with Kumada] in order to improve durability *and reduce cost.*” J.A. 656 (emphasis added). Everstar contended that “a POSITA would have been motivated to reduce costs by incorporating the internally reinforced wire of Debladis '120 into the net light system of Kumada,” as “[s]uch a combination would reduce the amount of total copper used in the system of Kumada, which would reduce the cost of the system and be compliant with the UL standards.” J.A. 657 (emphasis omitted).

On November 2, 2020, Willis Electric filed a patent owner's sur-reply, addressing the cost reduction argument on the merits. J.A. 702. Willis Electric also provided a list of reply arguments that it claimed were presented for the first time in Everstar's reply brief. J.A. 712–16. In particular, Willis Electric identified Everstar's motivation to combine theory based on a reduction in cost as an improperly raised, new argument. J.A. 713. Willis Electric

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argued that the new arguments and evidence should be rejected and not considered by the Board.

On February 18, 2021, the Board issued a final written decision and noted that the parties agreed on claim constructions and the fact that the asserted prior art, as a whole, discloses every claim element. *Everstar Merch. Co., Ltd. v. Willis Elec. Co., Ltd.*, No. PGR2019-00056, 2021 WL 653034, at \*5–6 (P.T.A.B. Feb. 18, 2021). The only points of disagreement were (1) whether Debladis ’120 is analogous art, and (2) whether a POSITA would have been motivated to combine Kumada with Debladis ’120. *Id.* at \*6.

With respect to motivation to combine, the only issue relevant on appeal, Everstar argued that a POSITA would have been motivated to combine Kumada with Debladis ’120 to improve wire durability and to reduce material costs. However, the Board declined to consider cost reduction as a motivation to combine because it determined that Everstar failed to assert the theory in its petition. *Id.* at \*12–13. Consequently, the Board focused its attention solely on whether a POSITA would have been motivated by a desire to improve wire durability. Viewed as such, the Board found that Everstar did not meet its burden to show a motivation to combine Kumada with Debladis ’120. *Id.* at \*9–12. The Board also explained that its determination was dispositive for all challenged claims. *Id.* at \*13–17. Thus, the Board concluded that Everstar failed to show that any of the challenged claims are unpatentable as obvious. *Id.* at \*17. Everstar appeals. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

#### STANDARD OF REVIEW

We review the Board’s legal conclusions de novo and its factual findings for substantial evidence. *ACCO Brands Corp. v. Fellowes, Inc.*, 813 F.3d 1361, 1365 (Fed. Cir. 2016). Substantial evidence means “such relevant evidence as a reasonable mind might accept as adequate to

support a conclusion.” *In re Gartside*, 203 F.3d 1305, 1312 (Fed. Cir. 2000).

Obviousness is a question of law with underlying factual issues relating to the “scope and content of the prior art, differences between the prior art and the claims at issue, the level of ordinary skill in the pertinent art, and any objective indicia of non-obviousness.” *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) (citing *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007); *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966)). “The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact.” *Par Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014).

We review the Board’s application of procedural rules under an abuse of discretion standard. *Chamberlain Grp., Inc. v. One World Techs., Inc.*, 944 F.3d 919, 924 (Fed. Cir. 2019). We affirm Board determinations unless the determination “(1) is clearly unreasonable, arbitrary, or fanciful; (2) is based on an erroneous conclusion of law; (3) rests on clearly erroneous fact findings; or (4) involves a record that contains no evidence on which the Board could rationally base its decision.” *Id.* (quoting *Ultratec, Inc. v. Caption-Call, LLC*, 872 F.3d 1267, 1272 (Fed. Cir. 2017)).

#### DISCUSSION

On appeal, Everstar argues that the Board abused its discretion when it refused to consider cost reduction as a potential motivation to combine. We agree.

The petitioner in a post grant review must, in its petition, “identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’” *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2006) (quoting 35 U.S.C. § 312(a)(3)); *see also* 35 U.S.C. § 322(a)(3) (establishing requirements for a petition for post grant review). A

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petitioner may not assert an “entirely new rationale” in a post-institution reply. *Intelligent Bio-Systems, Inc.*, 821 F.3d at 1370. The Board in its discretion may reject any reply brief that “crosses the line from the responsive to the new.” *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1368 (Fed. Cir. 2015). These rules help ensure that the owner of a challenged patent receives notice of and a fair opportunity to meet alleged grounds of invalidity. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015).

On the other hand, “[p]arties are not barred from elaborating on their arguments on issues previously raised.” *Chamberlain Grp., Inc.*, 944 F.3d at 925 (citing *Interactive Gift Express, Inc. v. CompuServe Inc.*, 256 F.3d 1323, 1347 (Fed. Cir. 2001)). Where a petitioner on reply “cites no new evidence and merely expands on a previously argued rationale,” it is an abuse of discretion for the Board to reject the reply as improper under 37 C.F.R. § 42.23(b). *Ericsson Inc. v. Intellectual Ventures I LLC*, 901 F.3d 1374 (Fed. Cir. 2018) (“The Board’s error was parsing Ericsson’s arguments on reply with too fine of a filter.”).

Here, the Board should have considered cost reduction in its motivation to combine analysis because the record shows that increased wire strength and reduced material cost are intertwined benefits of the claimed invention. The ’037 Patent explains that a “drawback” in “prior art methods of reinforcing and strengthening decorative lighting” is that using more wire “tends to drive up material cost.” ’037 Patent col. 5 l. 65–col. 6 l. 2. Everstar also noted in its petition that Kumada teaches this inverse relationship between cost and the amount of material used. J.A. 173. Willis Electric acknowledged this relationship in its preliminary response and accompanying expert testimony when discussing both Kumada, J.A. 345–46, 2580–81, and Debladis ’120, J.A. 371–72, 2606–07. In its institution decision, the Board reasoned that “both Kumada and Debladis ’120 discuss the desire to reduce manufacturing

costs for wiring having good mechanical strength and that is capable of maintaining an electrical connection.” J.A. 433. The parties then garnered expert testimony on and briefed the merits of cost reduction as a potential motivation to combine. J.A. 568, 646, 650, 657, 659, 703, 2203, 2979, 2991, 2301, 2311, 2331–32, 2356–57, 3174, 3178, 3184. Given the developed record on the correlation between wire strength and material cost, we find that Everstar’s cost reduction argument is a fair extension of its previously asserted arguments, and the Board abused its discretion in refusing to consider it. *See Ericsson*, 901 F.3d at 1380–81.

We note that a petitioner is entitled in its reply to “respond to arguments raised in the corresponding opposition, patent owner preliminary response, patent owner response, or decision on institution.” 37 C.F.R. § 42.23(b) (2020).<sup>3</sup> Any ambiguity as to whether a reply constitutes a new argument is eliminated when the reply is a legitimate reply to arguments introduced in a patent owner’s response or the Board’s institution determination. *Apple Inc. v. Andrea Elecs. Corp.*, 949 F.3d 697, 706–07 (Fed. Cir. 2020) (citing *Anacor Pharms., Inc. v. Iancu*, 889 F.3d 1372, 1380–

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<sup>3</sup> The 2020 version of § 42.23(b) permits the petitioner to address in its reply issues discussed in the institution decision, which reflects a change made “in response to issues arising from [*SAS Institute Inc. v. Iancu*, 138 S. Ct. 1348 (2018)].” *See* PTAB Rules of Practice for Instituting on All Challenged Patent Claims and All Grounds and Eliminating the Presumption at Institution Favoring Petitioner as to Testimonial Evidence 85 Fed. Reg. 31,728-01, 31,729 (May 27, 2020); Office Patent Trial Practice Guide, August 2018 Update, 83 Fed. Reg. 39,989-01, 39,989 (Aug. 13, 2018) (citing update available at [https://www.uspto.gov/sites/default/files/documents/2018\\_Revised\\_Trial\\_Practice\\_Guide.pdf](https://www.uspto.gov/sites/default/files/documents/2018_Revised_Trial_Practice_Guide.pdf)).

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81 (Fed. Cir. 2018)). In this case, Everstar's cost reduction argument on reply directly addresses issues raised in Willis Electric's preliminary response and post-institution response, as well as in the Board's institution decision. We see no lingering uncertainty as to whether the argument is new in view of the petition. The record before us shows that clearly it is a legitimate reply to arguments introduced by Willis Electric and the Board.

#### CONCLUSION

The Board should have considered whether cost, in addition to increased strength and durability, would have presented a sufficient motivation to combine the asserted references. The Board's refusal to do so under these circumstances amounts to an abuse of discretion. We therefore vacate the Board's decision and remand for further proceedings consistent with the above.

#### **VACATED AND REMANDED**

#### COSTS

Costs to Appellant.