Mailed: March 13, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

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Trademark Trial and Appeal Board

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Honeywell Safety Products USA, Inc.
v.
ERB Industries, Inc.

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Cancellation No. 92070774

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James D. Weinberger and Audrey Adu-Appiah of Fross Zelnick Lehrman & Zissu, P.C., for Honeywell Safety Products USA, Inc.

Ronald A. DiCerbo of McAndrews Held & Malloy, Ltd. for ERB Industries, Inc.

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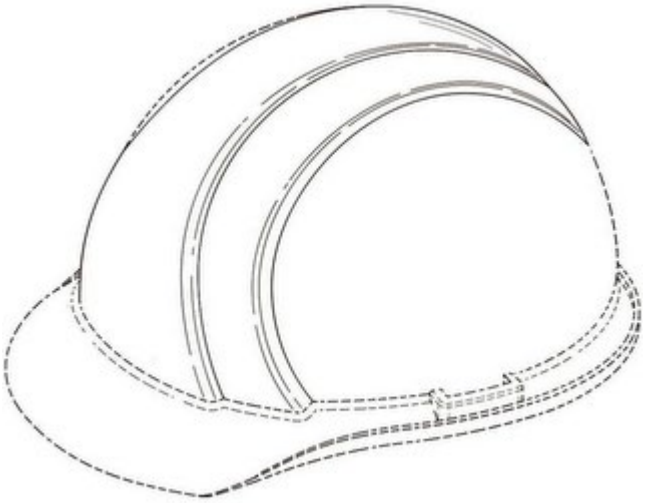
Before Lykos, Shaw and English,
Administrative Trademark Judges.

Opinion by Lykos, Administrative Trademark Judge:

ERB Industries, Inc. ("Respondent" or "Registrant") owns two registrations on the Principal Register, registered under Trademark Act Section 2(f), 15 U.S.C. § 1052(f), for the product configuration marks displayed below (referred to collectively as the "Ridge Designs") for "safety helmets" in International Class 9:

Registration No. 4493481 ("Cap-Style Hard Hat Ridge Design" or "'481 Registration")



[1]

The description of this mark is as follows:

> The mark consists of a three dimensional configuration of two ridges located along the center of a safety helmet with a short brim at the front. The two ridges are stacked and superimposed on the top of the helmet shell and run front to mid-back. The bottom ridge is wider while the top ridge is more narrow. The ridges sweep wider as they descend toward the bill of the cap, while their relative widths are maintained. The ridges are blended into the helmet shell and disappear part way down the back of the helmet. The smaller clusters of lines depicted around the surface of the helmet are intended to depict shading and are not claimed as features of the mark. The dotted lines in the drawing are not part of the mark and serve only to show the position of the mark on the goods. Color is not claimed as a feature of the mark.

[1] Registration No. 4493481, issued March 11, 2014, filed under Trademark Act Section 1(a), 15 U.S.C. § 1051(a), alleging August 30, 2004 as the date of first use anywhere and in commerce. A "Combined Declaration of Use and Incontestability under Sections 8 & 15" was filed on March 11, 2019, after institution of this proceeding. Post Registration has not yet acted on this submission.

Registration No. 4493482 ("Full-Brim Hard Hat Ridge Design" or '482 Registration")

[2]

The description of this mark is as follows:

> The mark consists of a three dimensional configuration of two ridges located along the center of a safety helmet with a surrounding brim. The two ridges are stacked and superimposed on the top of the helmet shell and run front to mid-back. The bottom ridge is wider while the top ridge is more narrow. The ridges are blended into the helmet shell and disappear part way done [sic] the front and back of the helmet. The smaller clusters of lines depicted around the surface of the helmet are intended to depict shading and are not claimed as features of the mark. The dotted lines in the drawing are not part of the mark and serve only to show the position of the mark on the goods. Color is not claimed as a feature of the mark.

On March 7, 2019, Honeywell Safety Products USA, Inc. ("Petitioner") filed a Petition to Cancel each registration[3] on the grounds that (1) the marks comprise

[2] Registration No. 4493482, issued March 11, 2014, filed under Trademark Act Section 1(a), 15 U.S.C. § 1051(a), alleging May 30, 2008 as the date of first use anywhere and in commerce. A "Combined Declaration of Use and Incontestability under Sections 8 & 15" was filed on March 11, 2019, after institution of this proceeding. Post Registration has not yet acted on this submission.

[3] A plaintiff may seek to cancel in a single petition for cancellation different registrations owned by the same defendant, provided the required fees are paid. Trademark Rule 2.112(b),

matter that is functional within the meaning of Trademark Act Section 2(e)(5), 15 U.S.C. § 1052(e)(5) insofar as the Ridge Designs are "essential to the use or purpose of the registered goods, in that they function to help absorb impact and increase stability" and put "competitors at a significant competitive disadvantage since there are only a limited number of ways to design a safety helmet to absorb impact in a cost-effective manner;"[4] (2) the marks fail to function as trademarks under Trademark Act Sections 1, 2 and 45, 15 U.S.C. §§ 1051, 1052 and 1127 because "the design elements … are physically integrated into Registrant's safety helmets, [and therefore] are not perceived by the relevant public as identifying Registrant as the source of the registered goods;"[5] and (3) the marks are ornamental under Trademark Act Sections 1, 2 and 45, 15 U.S.C. §§ 1051, 1052 and 1127, and lack acquired distinctiveness under Trademark Act Section 2(f), 15 U.S.C. § 1052(f) because "[c]ontrary to Registrant's Section 2(f) claim in its registrations, the use of the Ridge Designs embodied in Registrant's products is ornamental and has not become distinctive as an indication of the source of Registrant's products;" "Registrant does not have substantially exclusive use of the Ridge Designs in connection with safety helmets;" and "Registrant cannot establish secondary meaning in the Ridge Designs

37 C.F.R. § 2.112(b); *see also* TRADEMARK TRIAL AND APPEAL BOARD MANUAL OF PROCEDURE ("TBMP") § 305.01 (2022).

[4] Petition to Cancel ¶¶ 10-11; 1 TTABVUE 6.

[5] Petition to Cancel ¶ 7; 1 TTABVUE 5.

such that consumers perceive the primary significance thereof as identifying the source of the safety helmets rather than the product itself."[6]

In its Answer, Respondent admitted the following allegations:

> Registrant is a manufacturer of personal safety products, including, but not limited to, safety helmets.
>
> On July 19, 2017, Registrant's counsel sent a cease-and-desist letter to Petitioner objecting to Petitioner's use of ridges on certain of Petitioner's safety helmets. To date Registrant has failed to rescind such claims or provide Petitioner with any assurance that it will not bring legal action.[7]

Otherwise, Respondent denied the salient allegations set forth in the Petition to Cancel.[8]

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[6] Petition to Cancel ¶¶ 14-16; 1 TTABVUE 5-6.

The Board denied as untimely Petitioner's motion (filed October 19, 2021) under Fed. R. Civ. P. 15(a)(2) to amend the Petition to Cancel to add a fraud claim after the close of the parties' trial periods. *See* March 11, 2022 Board Order, 51 TTABVUE 9.

Citations to the record are by entry and page number to TTABVUE, the Board's online docketing information and file database. *See, e.g., Turdin v. Trilobite, Ltd.,* 109 USPQ2d 1473, 1476 n.6 (TTAB 2014). Portions of the record have been designated confidential. The citations to the record refer to the redacted, publicly available versions of each submission.

[7] Answer, ¶¶ 2-4; 6 TTABVUE 4.

[8] *See generally* Answer at 6 TTABVUE. Respondent also pleaded the affirmative defenses of laches, acquiescence, and unclean hands. *See* Answer – Affirmative Defenses ¶¶ 9-11; 6 TTABVUE 4-5. Because none of the defenses were pursued at trial, they are waived. *See, e.g., Research in Motion Ltd. v. Defining Presence Mktg. Grp. Inc.*, 102 USPQ2d 1187, 1189-90 (TTAB 2012) (affirmative defenses not pursued at trial deemed waived). In addition, Respondent asserted the affirmative defense of failure to state a claim upon which relief may be granted. *See id.* at ¶ 6; 6 TTABVUE 4. Insofar as Respondent neither filed a formal motion to dismiss pursuant to Fed R. Civ. P. 12(b)(6) during the interlocutory phase of this proceeding, nor argued this asserted affirmative defense in its brief, it is hereby deemed waived. *Alcatraz Media, Inc. v. Chesapeake Marine Tours, Inc.*, 107 USPQ2d 1750, 1753 (TTAB 2013), *aff'd*, 565 F. App'x 900 (Fed. Cir. 2014) (mem.). We deem the other putative affirmative defenses as amplifications of its denial of Petitioner's allegations.

The case is fully briefed. Petitioner, as plaintiff in this proceeding, bears the burden of establishing its statutory entitlement to a cause of action and claims by a preponderance of the evidence. *See Jansen Enters. Inc. v. Rind*, 85 USPQ2d 1104, 1107 (TTAB 2007).

I. Interlocutory Background

The discovery phase of this case was contentious. As will become evident below, Respondent's failure to comply with its discovery and disclosure obligations plays a pivotal role in our determination.

A. Discovery Sanctions Order Against Respondent

On May 28, 2020, the Board granted Petitioner's motion for discovery sanctions pursuant to Trademark Rule 2.120(h)(1), 37 C.F.R. § 2.120(h)(1) for Respondent's failure to comply with the Board's February 29, 2020 compel order.[9] The Board's sanctions include the following:[10]

> The Board made the following adverse factual inferences against Respondent with respect to its responses to Petitioner's Interrogatory Nos. 11 and 19: "Respondent has never advertised or promoted its products in a manner that specifically directs the intended recipient to the Ridge Designs or Registrant's Marks as an indication of source, and that Respondent did not cause to be conducted, nor plans to cause to be conducted, any market or trademark searches, including any search or research concerning the level of public recognition of Respondent's marks or the types of goods with which consumers associate Respondent's marks."

[9] 22 TTABVUE.

[10] 22 TTABVUE 12-14.

> Pursuant to Fed. R. Civ. P. 37(c)(1), the Board prohibited Respondent "from introducing at trial or in support of or in opposition to a motion for summary judgment, and the Board will not consider (unless introduced by Petitioner), any information or documents that Respondent failed to produce as of March 20, 2020."

B. Petitioner's Motion to Strike Pretrial Disclosure of Certain Witnesses

On December 13, 2020, Respondent timely served its pretrial disclosures and identified the following 13 persons as its trial witnesses:[11]

> Sheila Eads, Respondent's President and CEO;
>
> Chris Padgett, Respondent's Vice President of Manufacturing;
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> William J. Crosby, Respondent's Technical Director and QA Manager;
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> Jesse Garza, President, Key Safety;
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> Lorenz Leon, Vice President of Sales, Key Safety;
>
> Gary Smith, Sales Manager, State Safety & Compliance;
>
> Timothy Talley, Quality Assurance and Compliance Manager, Q3 Contracting;
>
> Ryan Vonnahme, Marketing Manager, Farrell & Supply Co., Inc.;
>
> Jeffrey C. Smith, Vice President, JC Smith, Inc.;
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> Scott Kuhl, foreman, Donald R. Frantz Concrete Masonry;
>
> Chad D. Lingerfelt, Safety Manager and Trainer, IDG/ENSCO Supply;
>
> Gary Warren, Partner, Icon Companies, LLC; and

[11] 30 TTABVUE and 31 TTABVUE 19,

> Andres Rivera Cabal, Petitioner's Senior Global Offering Manager, Eye Face & Head Solutions (Petitioner's trial witness).

Petitioner requested that the Board strike all witnesses, except for Ms. Eads and Mr. Cabal on the ground that the remaining eleven witnesses were not previously disclosed pursuant to Fed. R. Civ. P. 37(c)(1).[12]

The Board granted the motion in part and denied the motion in part, finding that Respondent's failed attempt to disclose seven of the eleven witnesses to Petitioner (Scott Kuhl, Jeffrey Smith, Ryan Vonnahme, Timothy Talley, Gary Smith, Lorenz Leon and Jesse Garza) until the penultimate day of the discovery period was neither substantially justified nor harmless under the five-factor test set forth under *Great Seats Inc. v. Great Seats Ltd.,* 100 USPQ2d 1323 (TTAB 2011).[13] As a result, Respondent was barred from taking the deposition testimony or submitting the testimony declarations of these witnesses during its assigned trial period.[14]

II. The Record

The record includes the pleadings, and pursuant to Trademark Rule 2.122(b), 37 C.F.R. § 2.122(b), Respondent's registration files.

A. Petitioner's Evidence

During its main trial period, Petitioner introduced the testimony declaration of a single witness, Andres Rivera Cabal, Petitioner's "Senior Global Offering Manager,

[12] 30 and 31 TTABVUE.

[13] July 11, 2021 Board Order, 36 TTABVUE 12.

[14] *Id.*

Eye, Face & Head Solutions" executed on November 25, 2020, with the following exhibits (25-27 TTABVUE).

> Exhibit PX1: August 7, 2017 cease and desist letter from Robert A. DiCerbo, attorney for Respondent, to David A. Cohen, attorney for Petitioner.
>
> Exhibit PX2: July 11, 2018 cease and desist letter from Robert A. DiCerbo, attorney for Respondent, to David A. Cohen, attorney for Petitioner.
>
> Exhibit PX3: Email dated October 5, 2018 from David A. Cohen, attorney for Petitioner, to Robert A. DiCerbo, attorney for Respondent.
>
> Exhibit PX4: Printouts from the Uline, Grainger, Full Source, and Schuberth websites.
>
> Exhibit PX5: Eight peer-reviewed studies, an article and a mechanical engineering master's thesis (see Section VIII.B.1-10 for list and discussion).

Petitioner also submitted under notice of reliance Respondent's Amended Responses to Petitioner's First Set of Interrogatories, dated June 17, 2020 (Exhibit PX6); and Respondent's Amended Responses to Petitioner's First Set of Requests for the Production of Documents and Things, dated June 17, 2020 (Exhibit PX7) (28 TTABVUE).[15]

Petitioner did not introduce any evidence during its rebuttal trial period.

B. Respondent's Evidence

Respondent introduced testimony declarations from four witnesses:

> Sheila Eads, Respondent's Chief Executive Officer and former President, executed on August 23, 2021, with the

[15] Petitioner also submitted under notice of reliance a copy of the Board's May 28, 2020 discovery sanctions order which is publicly available at 29 TTABVUE. The order is automatically part of the record making Petitioner's submission unnecessary.

following exhibits (44 TTABVUE – public, 39 TTABVUE – confidential):[16]

> Exhibit DX2: Excerpts from Respondent's 2004 Catalog showing the cap style Americana hard hat bearing the '481 Ridge Design.
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> Exhibit DX3: Cover of NetSafety.Biz's 2004 Catalog showing the cap style Americana hard hat bearing the '481 Ridge Design.
>
> Exhibit DX8: Cover of the October/November 2008 Construction Distribution magazine showing the full brim style Americana hard hat bearing the '482 Ridge Design.
>
> Exhibit DX12: Printouts of the Americana cap and brim style hard hats bearing the '481 and '482 Ridge Designs advertised and offered for sale on the Amazon website.
>
> Exhibit DX13: Printouts from Respondent's distributors' websites advertising and offering Respondent's Americana cap and brim style hard hats bearing the '481 and '482 Ridge Designs.
>
> Exhibit DX14: Photos of Respondent's displays at trade shows and conventions.
>
> Exhibit DX15: True and accurate copies of reports generated from Respondent's records identifying the conventions that Respondent attended each year from 2004 through 2018.
>
> Exhibit DX15: From 2008 through 2019, the number of trade shows and conventions where Respondent

[16] The Eads Testimony Declaration was originally submitted at 37 TTABVUE in unredacted form. A duplicate of the declaration with the confidential information redacted was subsequently filed at 44 TTABVUE. Because the original submission at 37 TTABVUE contains confidential information, it has now been blocked from public view. The redacted version of the declaration filed at 44 TTABVUE is the operative public filing.

Exhibits DX1, DX4-DX7, DX9-DX11, to the Eads Testimony Declaration consist of portions of the prosecution record of the involved registrations. 44 TTABVUE 58-60. Their submission at trial was superfluous. As per Trademark Rule 2.122(b), 37 C.F.R. § 2.122(b), these documents are automatically of record for trial because they form part of the registration file.

promoted the Americana cap and brim style hard hats bearing the '481 and '482 Ridge Designs and the costs (confidential).

Exhibit DX16: Excerpts from Respondent's catalogs from 2005-2008 showing the cap style Americana hard hat bearing the '481 Trademark being offered for sale.

Exhibit DX17: Copy of an advertisement mailed in April 2005 for the cap style Americana hard hat bearing the '481 Ridge Design.

Exhibit DX18: Excerpts from Respondent's catalogs from 2009-2017 showing the cap style Americana hard hat bearing the '481 Ridge Design and the full brim style Americana hard hat bearing the '482 Ridge Design.

Exhibit DX19: A true and correct copy of a report generated from Respondent's financial and accounting records stating the quantity of Respondent's cap style Americana hard hats bearing the '481 Ridge Design sold for each fiscal year from 2004-2019 and the total sales amount (confidential).

Exhibit DX20: A true and correct copy of a report generated from Respondent's financial and accounting records stating the quantity of Respondent's full brim style Americana hard hats bearing the '482 Ridge Design sold for each fiscal year from 2008-2019 and the total sales amount (confidential).

Chris Padgett, Respondent's Vice President of Manufacturing, executed on August 23, 2021[17] (38 TTABVUE);

[17] Exhibits DX4-DX9 attached to the Padgett Testimony Declaration consist of documents forming part of the prosecution and post-registration records of the involved '481 and '482 registrations. Their submission at trial was unnecessary. As per Trademark Rule 2.122(b), 37 C.F.R. § 2.122(b), these documents are automatically of record for trial because they form part of the registration file.

William J. Crosby, Respondent's Technical Director, executed on August 23, 2021 (40 TTABVUE);[18] and

Gary Warren, Managing Director at Icon Investment Partners, LLC; former President of Aearo Technologies; and former Board member for Respondent, executed on August 24, 2021[19] (41 TTABVUE).

Respondent submitted under notice of reliance Petitioner's Responses to Respondent's Interrogatories, dated September 5, 2019, as Exhibit DX25 (42 TTABVUE).[20]

III. The Parties

Petitioner, a Delaware corporation headquartered in Smithfield, Rhode Island, is a "global manufacturer" and distributor of Personal Protection Equipment (PPE).[21]

[18] Respondent filed as exhibits to the Crosby Testimony Declaration copies of the two declarations from Mr. Crosby submitted during prosecution in support of Respondent's Section 2(f) claim for each registration. *See* Exhibits DX21 and DX22, 40 TTABVUE 10-17. This was superfluous. As per Trademark Rule 2.122(b), 37 C.F.R. § 2.122(b), the previously executed declarations are automatically of record for trial because they form part of the registration file.

[19] Respondent filed as exhibits to the Warren Testimony Declaration copies of the two declarations from Mr. Warren submitted during prosecution in support of Respondent's Section 2(f) claim for each registration. *See* Exhibits DX23 and DX24, 41 TTABVUE 9-12. This was unnecessary. As per Trademark Rule 2.122(b), 37 C.F.R. § 2.122(b), the previously executed declarations are automatically of record for trial because they form part of the registration file.

[20] Respondent also submitted under notice of reliance "registrations from the electronic database of the Trademark Office … as produced during discovery" as relevant to Petitioner's functionality claim under Section 2(e)(5). To the extent that these documents were provided as all or part of an answer to an interrogatory under Fed. R. Civ. P. 33, they may be made of record by notice of reliance filed in accordance with 37 C.F.R. § 2.120(k)(3)(i) and 37 C.F.R. § 2.120(k)(5).

[21] Cabal Testimony Decl. ¶ 1; 25 TTABVUE 2.

It services a "wide range of markets" including "general safety and preparedness, first responder, electrical safety, and consumer products."[22]

Respondent, a Georgia corporation, manufactures a "full line of safety products, including hard hats, safety glasses, vests and face shields," and has been active in the hard hat market since 1972.[23] Respondent "engineers and manufactures ANSI[24] Type I and Type II head protection at its manufacturing facility in Woodstock, Georgia."[25]

Respondent has been selling a safety helmet referred to as a "cap style Americana hard hat" which "incorporates a two ridge design" since August 2004.[26] Respondent's Ridge Design mark as delineated in Registration No. 4493481 corresponds to the cap style Americana branded hard hat.[27] Sheila Eads, Respondent's current Chief Executive Officer and former President; William J. Crosby, Respondent's Technical

[22] Cabal Testimony Decl. ¶ 1; 25 TTABVUE 2.

[23] Eads Testimony Decl. ¶¶ 3-5, 7; 44 TTABVUE 2; Crosby Testimony Decl. ¶ 13, 40 TTABVUE 4; Padgett Testimony Decl. ¶¶ 6-7; 38 TTABVUE 3.

[24] American National Standards Institute (ANSI) standards for impact provide for Type I and Type II safety helmets. Type I helmets must reduce the force of impact on only the top of the head, while Type II must reduce the force of impact on the top and sides of the head. For a further discussion of the ANSI standards, see Section VII ("Purpose of the Goods").

[25] Eads Testimony Decl. ¶ 6, 44 TTABVUE 3; Crosby Testimony Decl. ¶ 15, 40 TTABVUE 4; Padgett Testimony Decl. ¶ 8; 38 TTABVUE 3.

[26] Eads Testimony Decl. ¶ 8; 44 TTABVUE 3; Crosby Testimony Decl. ¶ 16; 40 TTABVUE 4-5.

[27] Eads Testimony Decl. ¶ 15; 44 TTABVUE 4 ("The USPTO granted U.S. Trademark Registration No. 4493481 for the two ridge design used on ERB's cap style Americana hard hat, shown below, on March 11, 2014…"); Crosby Testimony Decl. ¶ 19, 40 TTABVUE 5 ("The trade dress of ERB's cap style Americana hard hat, shown below, has been registered as a trademark by the United State Patent and Trademark Office ("USPTO") in U.S. Trademark Registration No. 4493481 …").

Director; and Chris Padgett, Respondent's Vice President of Manufacturing, all describe Respondent's "cap style Americana hard hat" in the following manner:[28]

> [The] cap style Americana hard hat has two ridges located along the center of a safety helmet and a short brim at the front. The two ridges are stacked and superimposed on the top of the helmet shell and run front to mid-back. The bottom ridge is wider while the top ridge is more narrow. The ridges sweep wider as they descend toward the bill of the cap, while their relative widths are maintained. The ridges are blended into the helmet shell and disappear part way down the back of the helmet.

Respondent's Americana cap style hard hat model is depicted below:[29]

Respondent also has been selling another model under the Americana brand name, a full brim style hard hat, since May 2008.[30] The two ridge design on the full brim style corresponds to Respondent's Ridge Design Mark as delineated in

[28] Eads Testimony Decl. ¶ 10, 44 TTABVUE 3; Crosby Testimony Decl. ¶ 18; 40 TTABVUE 5; Padgett Testimony Decl. ¶ 11; 38 TTABVUE 3.

[29] Eads Testimony Decl. ¶ 8; 44 TTABVUE 3.

[30] Eads Testimony Decl. ¶ 29, 44 TTABVUE 7; Crosby Testimony Decl. ¶ 25, 40 TTABVUE 6.

Registration No. 4493482.[31] Ms. Eads, Mr. Crosby, and Mr. Padgett each describe Respondent's "full brim Americana hard hat" in the following manner:[32]

> [The] full brim style Americana hard hat has two ridges located along the center of the safety helmet and a surrounding brim. The two ridges are stacked and superimposed on the top of the helmet shell and run front to mid-back. The bottom ridge is wider while the top ridge is more narrow. The ridges are blended into the helmet shell and disappear part way down the front and back of the helmet.

Respondent's full brim Americana hard hat is depicted below:[33]

IV. Claims Tried

Respondent argues that Petitioner, in its main trial brief, waived its pleaded claims that Respondent's Ridge Designs fail to function as trademarks under Trademark Act Sections 1, 2 and 45 because, according to Petitioner, the "Ridge Designs … are not perceived by the relevant public as identifying Registrant as the

[31] Eads Testimony Decl. ¶ 36; 44 TTABVUE 8 ("The USPTO granted U.S. Trademark Registration No. 4493482 for the two ridge design used on ERB's full brim style Americana hard hat, shown below, on March 11, 2014…"); Crosby Testimony Decl. ¶ 25; 40 TTABVUE 6 ("The trade dress of ERB's full brim style Americana hard hat, shown below, has been registered as a trademark by the USPTO in U.S. Trademark Registration No. 4493482…").

[32] Eads Testimony Decl. ¶ 31; 44 TTABVUE 7; Crosby Testimony Decl. ¶ 24; 40 TTABVUE 6; Padgett Decl. ¶ 29; 38 TTABVUE 6-7.

[33] Eads Testimony Decl. ¶ 29; 44 TTABVUE 7.

source of the registered goods"[34], and are merely ornamental and have not acquired distinctiveness under Trademark Act Section 2(f).[35]

If a party fails to reference a pleaded claim or affirmative defense in its brief, the Board will deem the claim or affirmative defense to have been waived. *See, e.g., Alcatraz*, 107 USPQ2d at 1753 (petitioner's pleaded descriptiveness and geographical descriptiveness claims not argued in brief deemed waived; respondent's affirmative defense of failure to state a claim not argued in brief deemed waived).

Petitioner's brief is not a model of clarity. Nonetheless, Petitioner properly asserted in the Petition to Cancel allegations that Respondent's marks lack acquired distinctiveness,[36] and both parties addressed this issue in their briefs.[37] Moreover, as a matter of law, because Respondent's marks are product design trade dress, they cannot be inherently distinctive, and can be registered on the Principal Register only on a showing of acquired distinctiveness. *See Converse, Inc. v. Int'l Trade Comm'n,* 907 F.3d 1361, 128 USPQ2d 1538, 1546 (Fed. Cir. 2018) (a product's design is considered distinctive, and therefore protectable as "trade dress," only upon a showing of secondary meaning); *see also Wal-Mart Stores Inc. v. Samara Bros. Inc.*, 529 U.S. 205, 54 USPQ2d 1065, 1069 (2000). This is consistent with registration of Respondent's involved Ridge Design marks on the Principal Register under Section

[34] Petition to Cancel, ¶¶ 7-8, 1 TTABVUE 4-5.

[35] Respondent's Brief, p. 16; 53 TTABVUE 17.

[36] Petition to Cancel ¶¶ 14-15; 1 TTABVUE 5.

[37] *See* Petitioner's Brief, heading entitled "Registrant's Trade Dress Lacks Secondary Meaning," pp. 14-19 (52 TTABVUE 16-23) and Respondent's Brief, heading entitled "Registrant's Marks Have Acquired Distinctiveness," and pp. 33-41 (53 TTABVUE 34-43).

2(f), which constitutes a concession that its marks are not inherently distinctive. *See Cold War Museum, Inc. v. Cold War Air Museum, Inc.,* 586 F.3d 1352, 92 USPQ2d 1626, 1629 (Fed. Cir. 2009) ("[A]n applicant's reliance on Section 2(f) during prosecution presumes that the mark is descriptive."). As such, it is appropriate for us to focus on the claim that both registered marks lack acquired distinctiveness under Section 2(f), without having to reach the issues of whether the Ridge Designs constitute ornamentation or fail to function as marks under Sections 1, 2 and 45.

V. Entitlement to a Statutory Cause of Action

Respondent does not challenge Petitioner's entitlement to a statutory cause of action. Nonetheless, as plaintiff in this proceeding, Petitioner bears the burden of proving its entitlement to a statutory cause of action as to both registered marks. *See Empresa Cubana Del Tabaco v. Gen. Cigar Co.*, 753 F.3d 1270, 111 USPQ2d 1058, 1062 (Fed. Cir. 2014).

Section 14 of the Trademark Act, 15 U.S.C. § 1064, states in relevant part:

> A petition to cancel a registration of a mark, stating the grounds relied upon, may, upon payment of the prescribed fee, be filed as follows by any person who believes that he is or will be damaged, … by the registration of a mark on the principal register established by this chapter, … .

To establish entitlement to a statutory cause of action under Section 14 of the Trademark Act, Petitioner must demonstrate (1) that it has an interest within the zone of interests protected by the statute (i.e., has a "real interest" in the outcome of the proceeding) and (2) damage proximately caused by registration (i.e., a reasonable basis for its belief in damage). *Meenaxi Enter., Inc. v. Coca-Cola Co.*, 2022 USPQ2d

602, at *2 (Fed. Cir. 2022) (citing *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 572 U.S. 118, 129, 132 (2014)); *Corcamore, LLC v. SFM, LLC*, 978 F.3d 1298, 2020 USPQ2d 11277, at *4-8 (Fed. Cir. 2020); *Australian Therapeutic Supplies Pty. Ltd. v. Naked TM, LLC*, 965 F.3d 1370, 2020 USPQ2d 10837, at *3 (Fed. Cir. 2020); *Empresa,* 111 USPQ2d 1162; *see also Ritchie v. Simpson*, 170 F.3d 1092, 50 USPQ2d 1023, 1025-26 (Fed. Cir. 1999) (defining a "real interest" as a "direct and personal stake" in the outcome of the proceeding).

We first consider whether Petitioner has an interest falling within the zone of interests protected by Trademark Act Section 14. The relevant zone encompasses any legitimate commercial interest in the use of the registered marks. *See Empresa,* 111 USPQ2d at 1062 (a plaintiff must have a "legitimate commercial interest sufficient to confer standing"). Without citing any evidentiary support, Petitioner asserts that it "manufactures, offers for sale, and sells a safety helmet – its market-leading North Zone hard hat – that features two ridges running from the front of the helmet to the back," thereby making the parties direct competitors.[38]

Petitioner has introduced testimony from only a single witness, Andres Rivera Cabal, Petitioner's "Senior Global Offering Manager, Eye, Face & Head Solutions."[39] A close review of his declaration shows that he did not specifically testify that Petitioner currently manufactures the same or similar goods. Nonetheless, it is well established that "a plaintiff need only show that it is engaged in the manufacture or

[38] Petitioner's Brief, p. 11; 52 TTABVUE 13.

[39] 25 TTABVUE 2-4.

sale of the same or related goods as those listed in the defendant's involved application or registration and that the product in question is one which could be produced in the normal expansion of plaintiff's business; that is, that plaintiff has a real interest in the proceeding because it is one who has a present or prospective right to use the term descriptively in its business." *Poly-America, L.P. v. Illinois Tool Works Inc.,* 124 USPQ2d 1508, 1512 (TTAB 2017) (quoting *Binney & Smith Inc. v. Magic Marker Indus., Inc.*, 222 USPQ 1003, 1010 (TTAB 1984)). In other words, "[a] petitioner is required only to be in a position to have a right to use the mark in question." *Id.* (citing *Ritchie v. Simpson*, 50 USPQ2d at 1028). The following statements from Mr. Cabal's testimony declaration establish that Respondent's safety helmets fall within Petitioner's zone of expansion for both registered marks:[40]

> [Petitioner] is a global manufacturer of leading PPE (Personal Protection Equipment). HPS helps customers build enduring cultures of safety across a wide range of markets that include general safety and preparedness, first responder, electrical safety, and consumer products. We are committed to providing our customers and their families with the kind of PPE safety that instills confidence when they leave for work in the morning, knowing our quality equipment means one less safety risk they'll have to endure throughout the day. ¶ 1.
>
> I have worked at HSP since April 2015 and am responsible for the complete product lifecycle for eye, face and head protection products, including safety helmets. As part of my work, I am familiar with the competitive landscape of safety helmets. ¶ 2.
>
> * * *
>
> On or about August 7, 2017, HSP received a cease and desist letter from Registrant ERB Industries ("Registrant")

[40] 25 TTABVUE 2-3.

> claiming that the design of our North Zone hard hat – a safety helmet market leader with application in the construction, manufacturing, mining, oil and gas, ship building, traffic safety and utilities fields – violated Registrant's rights in U.S. Trademark Registration No. 4,493,481 and claimed trade dress rights in its Omega II and Americana helmets. ¶ 4.
>
> I understand that our legal department spoke to counsel for Registrant several times after receipt of the initial demand letter, including on August 24, 2017 and December 19, 2017 and conveyed to Registrant that HSP's position was that it did not agree with [Registrant's] claims. ¶ 5.
>
> On July 11, 2018, Registrant sent a second cease and desist letter to HSP (misdated July 19, 2017), again alleging that HSP's North Zone hard hat violated Registrant's claimed rights in its hard hat designs. ¶ 6.

Mr. Cabal submitted with his declaration "true and correct" copies of the cease and desist letters Respondent sent to Petitioner along with email exchanges between the parties between July 11, 2018 and October 5, 2018.[41] This evidence taken together satisfies the first prong for statutory entitlement, a "real interest" in the outcome of the proceeding.

Mr. Cabal's testimony and documentary evidence about the cease and desist letters Respondent sent to Petitioner also satisfy the second requirement of showing that Petitioner has a reasonable belief that continued registration of Respondent's marks would injure Petitioner. *See Apollo Med. Extrusion Techs., Inc. v. Med. Extrusion Techs., Inc.,* 123 USPQ2d 1844, 1848 (TTAB 2017) (opposer established that it is a competitor of Applicant and that it received a cease and desist letter from applicant). Mr. Cabal's testimony is also consistent with Respondent's admission in

[41] Cabal Testimony Decl. ¶¶ 4-6 and Exs. PX1, PX2 and PX3; 25 TTABVUE 3 and 6-18.

its Answer that "[o]n July 19, 2017, Registrant's counsel sent a cease-and-desist letter to Petitioner objecting to Petitioner's use of ridges on certain of Petitioner's safety helmets."[42]

Petitioner has therefore established its entitlement to bring a plausible Trademark Act Section 2(e)(5) functionality claim that falls within its zone of interests under Section 14 of the Trademark Act as to both involved registrations. Since Petitioner has demonstrated entitlement to a statutory cause of action on one of its pleaded claims, it has the right to assert its remaining claim that each mark lacks acquired distinctiveness under Section 2(f). *See Poly-America,* 124 USPQ2d at 1512 (if petitioner can show standing on the ground of functionality, it can assert any other grounds).

VI. The Marks

In order to analyze the substantive claims before us, we must first define the marks as applied to the goods. *See In re Heatcon, Inc.,* 116 USPQ2d 1366, 1371 (TTAB 2015) (before analyzing the functionality refusal, "we first must define what Applicant intends to claim as a trademark."). We consider both the special form drawings and descriptions of the marks in each registration. *See* Trademark Rule 2.52(b), 37 C.F.R. § 2.52(b) (special form drawing required for three-dimensional product design configuration mark); Trademark Rule 2.37, 37 C.F.R. § 2.37 ("A description of the mark must be included if the mark is not in standard characters."); and Trademark Rule 2.52(b)(4), 37 C.F.R. § 2.52(b)(4) (description of the mark

[42] Answer ¶ 4; 6 TTABVUE 4.

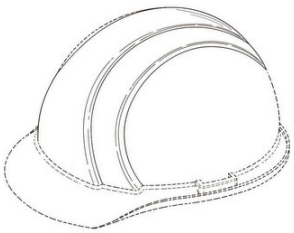
required). Special considerations apply with regard to product design configuration marks as explained in Trademark Rule 2.52(b)(4), 37 C.F.R. § 2.52(b)(4):

> If necessary to adequately depict the commercial impression of the mark, the applicant may be required to submit a drawing that shows the placement of the mark by surrounding the mark with a proportionately accurate broken-line representation of the particular goods, packaging, or advertising on which the mark appears. The applicant must also use broken lines to show any other matter not claimed as part of the mark. For any drawing using broken lines to indicate placement of the mark, or matter not claimed as part of the mark, the applicant must describe the mark and explain the purpose of the broken lines.

See also TRADEMARK MANUAL OF EXAMINING PROCEDURE ("TMEP") § 1202.02(c)(i) (July 2022) ("Drawings of three-dimensional product design and product packaging trade dress marks may not contain elements that are not part of the mark (i.e., matter that is functional or incapable of trademark significance).").

While the product configuration marks at issue here are comprised of ridges, there are notable differences in terms of their length, width and proportion. Differences in the marks also exist because of their placement on differently shaped safety helmet models. The features of each registered mark are summarized in the images and descriptions below:

Registration No. 4493481 "Cap-Style Americana Hard Hat Ridge Design"



The mark consists of a three dimensional configuration of two ridges located along the center of a safety helmet with a short brim at the front.

The two ridges are stacked and superimposed on the top of the helmet shell and run front to mid-back.

The bottom ridge is wider while the top ridge is more narrow.

The ridges sweep wider as they descend toward the bill of the cap, while their relative widths are maintained.

The ridges are blended into the helmet shell and disappear part way down the back of the helmet.

Registration No. 4493482 ("Full-Brim Americana Hard Hat Ridge Design")

The mark consists of a three dimensional configuration of two ridges located along the center of a safety helmet with a surrounding brim.

The two ridges are stacked and superimposed on the top of the helmet shell and run front to mid-back.

The bottom ridge is wider while the top ridge is more narrow.

> The ridges are blended into the helmet shell and disappear part way done [sic] the front and back of the helmet.

We further note that nothing in the descriptions or drawings indicate that the ridges are vented.

Three of Respondent's witnesses and executives testified that Respondent's registered '481 and '482 marks correspond to the cap style and full brim Americana branded safety helmets.[43] This is consistent with the specimens submitted during prosecution in support of registration. Respondent also manufactures and sells other safety helmets under other brands names such as Omega, Omega II and Maverick. These other brands bear ridges superimposed on the safety helmet.[44] Respondent's CEO and Vice President each testified that "[t]he shape and proportion of the two ridges on the Omega II and Maverick hard hats is substantially similar to the two ridges in the '481 Trademark" and that "[t]he shape and proportion of the two ridges on the Omega full brim style hard hat is substantially similar to the two ridges in the '482 Trademark."[45]

Respondent's testimony that the ridges on its other safety helmet models are "substantially similar" to the registered marks at issue here is not relevant to either the Section 2(e)(5) claim or lack of acquired distinctiveness claim under Section 2(f).

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[43] See discussion in Section III ("The Parties"), *supra*. *See, e.g.,* Eads Testimony Decl. ¶ 15; 44 TTABVUE 4 ("The USPTO granted U.S. Trademark Registration No. 4493481 for the two ridge design used on ERB's cap style Americana hard hat, shown below, on March 11, 2014…").

[44] Eads Testimony Decl. ¶¶ 19, 38, 39; 44 TTABVUE 5 and 8.

[45] Eads Testimony Decl. ¶¶ 19 and 39, 44 TTABVUE 5 and 8; Padgett Testimony Decl. ¶¶ 19 and 36, 38 TTABVUE 5 and 8.

This is because "a drawing of a trade dress mark is depicted in a three-dimensional manner that gives the appearance of height, width, and depth to the mark." TMEP § 1202.02(c)(i). In addition, the drawings are "proportionately accurate broken-line representation[s]" of the goods. *See* Trademark Rule 2.52(b)(4), 37 C.F.R. § 2.52(b)(4). Any prior use of "substantially similar" ridge designs superimposed on the Omega, Omega II and Maverick safety helmet models cannot be attributed to use of the Ridge Designs depicted in either the '481 or '482 registered marks which, as Respondent concedes, are only used in connection with the Americana brand.[46] We therefore confine our analysis and review of the evidence to the depiction of the registered '481 and '482 marks on the cap style and full brim Americana branded safety helmets.

VII. Purpose of the Goods

Petitioner alleges in the Petition to Cancel that Respondent's Ridge Designs are "essential to the use or purpose of the registered goods, in that they function to help absorb impact and increase stability" and put "competitors at a significant competitive disadvantage since there are only a limited number of ways to design a safety helmet to absorb impact in a cost-effective manner."[47] In order to properly evaluate Petitioner's functionality claim under Section 2(e)(5), we also need to define the use and purpose of Respondent's identified goods which in this case consist of

[46] *See, e.g.,* Eads Testimony Decl. ¶ 39; 44 TTABVUE 8 ("The shape and proportion of the two ridges on the Omega full brim style hard hat is substantially similar to the two ridges in the '481 Trademark. Thus, ERB has been using the same or substantially the same two ridge design on its full brim hard hats for over twenty-six (26) years.").

[47] Petition to Cancel ¶¶ 10-11; 1 TTABVUE 6.

"safety helmets."[48] *See Kistner Concrete Prods., Inc. v. Contech Arch Techs., Inc.,* 97 USPQ2d 1912, 1919 (TTAB 2011) ("It is essential to grasp the use and purpose of the goods so as to determine functionality.").

Industrial incidents are one of the major causes of traumatic brain injury.[49] Safety helmets, the involved goods in this proceeding, are critical in mitigating such injuries by preventing the skull from being perforated and lessening the force of any traumatic impact.[50] The Head Injury Criterion ("HIC")[51] sets forth three levels of head injury: (1) minor head injury - a skull trauma without loss of consciousness, fracture of nose or teeth and superficial face injuries; (2) moderate head injury - a skull trauma with or without dislocated skull fracture and brief loss of consciousness; and (3) critical head injury - a cerebral contusion, loss of consciousness for more than twelve hours with intracranial hemorrhaging and other neurological signs of damage. Severe trauma to the head can lead to death or long-term disability.

Below is a diagram of the major elements of the human head showing the three main components: the skull, the skin and other soft tissue covering the skull and the contents of the skull.[52] The skull encloses the entire brain except for an opening at

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[48] Petition to Cancel ¶¶ 10-11; 1 TTABVUE 6.

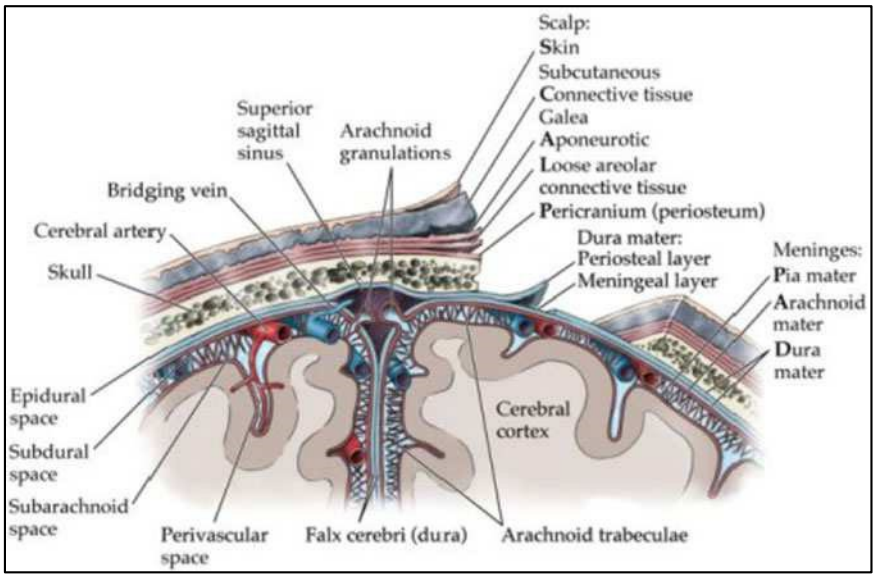
[49] James Long, James Yang, Zhipeng Lei & Daan Liang (2015), "Simulation based assessment for construction helmets," published in Computer Methods in Biomechanics and Biomedical Engineering, 18:1, 24-37, DOI: 10.1080/10255842.2013.774382. To link to this article: https://doi.org/10.1080/10255842.2013.774382; 25 TTABVUE 215.

[50] 25 TTABVUE 215.

[51] The Head Injury Criterion (HIC) is a measure of the likelihood of a head injury due to an impact. 25 TTABVUE 216.

[52] 25 TTABVUE 216.

the bottom for the spinal cord called the subarachnoid space.[53] Cerebrospinal fluid occupies the subarachnoid space where it dampens and cushions the brain during impact situations.[54]



U.S. employers are required to follow Occupational Safety and Health Administration ("OSHA") regulations and ensure that their employees wear head protection if any of the following conditions apply: falling objects, bumping their heads against object such as exposed pipes and beams, or accidental head contact with electrical hazards.[55]

As noted above in Section III ("The Parties"), hard hats are also regulated by the American National Standards Institute (ANSI).[56] The ANSI standards provide for

[53] 25 TTABVUE 215-216.

[54] 25 TTABVUE 216.

[55] 25 TTABVUE 214.

[56] 25 TTABVUE 214.

two types of helmets, Type I and Type II. Type I helmets must reduce the force of impact on the top of the head. By contrast, Type II helmets must reduce the force of impact on both the top and sides of the head.[57] ANSI only creates a minimum level of protection; not all helmets provide the same level of protection, and designs are constantly evolving to make more protective and comfortable helmets.[58]

Respondent's witness Mr. Crosby is a member of several International Safety Equipment Association committees[59] that formulate the ANSI/ISEA standards. He describes the testing procedure for safety helmets as follows:[60]

> The ANSI/ISEA Z89.1-2014 Standard (reaffirmed in 2019) requires that hot (120°F) and cold (-18°C) preconditioned impact testing be performed on two multi-helmet samples. This test involves dropping an eight pound shaped missile at a velocity of 5.5 meters per second onto the crown of each helmet and measuring the force transmitted to the headform (representing the wearer's head and neck). The primary injury that would be sustained by a wearer subjected to such a blow without the force attenuation provided by the helmet would be a fracturing of the cervical spine at C-1. Other tests include a penetration test with a 1 kg pointed missile striking the top of the helmet at 7 meters per second, and, for helmets marked as Class E, an electrical resistance test performed at 20,000 to 30,000 volts in a bath of conductive water.

Respondent manufactures both Type I and Type II ANSI safety helmets.[61]

With this background in mind, we now turn to the substantive claims before us.

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[57] 25 TTABVUE 214.

[58] 25 TTABVUE 214.

[59] Crosby Testimony Decl. ¶ 9; 40 TTABVUE 3.

[60] Crosby Testimony Decl. ¶ 10; 40 TTABVUE 4.

[61] See discussion in Section III ("The Parties"), *supra*.

VIII. Section 2(e)(5) Claim – Functionality

A mark may be cancelled under Section 2(e)(5) of the Trademark Act where it "comprises any matter that, as a whole, is functional." 15 U.S.C. § 1052(e)(5). *See, e.g., McGowen Precision Barrels, LLC v. Proof Research, Inc.*, 2021 USPQ2d 559 (TTAB 2021) (Board granted petition to cancel on the ground that the trade dress comprising the mark in the registration was functional under Section 2(e)(5) of the Trademark Act). Functional matter cannot be registered, even with a showing that consumers recognize the proposed mark as a source identifier. *See TrafFix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 58 USPQ2d 1001, 1007 (2001). The functionality doctrine is intended to preserve competition. *See Valu Eng'g Inc. v. Rexnord Corp.*, 278 F.3d 1268, 61 USPQ2d 1422, 1428 (Fed. Cir. 2002). "[F]unctionality rests on 'utility,' which is determined in light of 'superiority of design,' and rests upon the foundation of 'effective competition.'" *Id.* (quoting *Brunswick Corp. v. British Seagull Ltd.*, 35 F.3d 1527, 32 USPQ2d 1120, 1122 (Fed. Cir. 1994)).

Generally, a product design or product feature is considered to be functional "if it is essential to the use or purpose of the article or if it affects the cost or quality of the article." *TrafFix,* 58 USPQ2d at 1006 (citing *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 34 USPQ2d 1161 (1995), quoting *Inwood Labs., Inc. v. Ives Labs., Inc.,* 456 U.S. 844, 214 USPQ 1, 4 n.10 (1982)). A functional feature is one the "exclusive use of [which] would put competitors at a significant non-reputation-related disadvantage." *TrafFix,* 58 USPQ2d at 1006 (quoting *Qualitex,* 34 USPQ at 1164).

See, e.g., In re Dietrich, 91 USPQ2d 1622, 1637 (TTAB 2009) (holding particular spoke arrangement of a bicycle wheel functional because it is more stable and provides better performance than wheels with other spoke arrangements featuring the same or greater number of spokes). The U.S. Supreme Court in *Qualitex* explained that the functionality doctrine

> [P]revents trademark law, which seeks to promote competition by protecting a firm's reputation, from instead inhibiting legitimate competition by allowing a producer to control a useful product feature. It is the province of patent law, not trademark law, to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time . . . after which competitors are free to use the innovation. If a product's functional features could be used as trademarks, however, a monopoly over such features could be obtained without regard to whether they qualify as patents and could be extended forever (because trademarks may be renewed in perpetuity).

34 USPQ2d at 1163. "The functionality doctrine thus accommodates trademark law to the policies of patent law." *Valu Eng'g,* 61 USPQ2d at 1425. Functionality is a question of fact, and depends on the totality of the evidence. *Brunswick,* 32 USPQ2d at 1122.

"In determining whether [a] product configuration is functional, we focus on whether the configuration as a whole is functional." *Kistner,* 97 USPQ2d at 1919; *see also* 15 U.S.C. § 1052(e)(5) (prohibiting registration of a mark that "comprises any matter that, as a whole, is functional."). "The terminology 'as a whole' in the statute does not mean that one can avoid a finding of functionality simply because the configuration includes a nonfunctional feature." *Kistner*, 97 USPQ2d at 1920. "As a whole" refers to "'the entirety of the mark itself.'" *Id.* at 1919 (quoting *Valu Eng'g*, 61

USPQ2d at 1428 n.6). Thus, in analyzing whether the registered subject matter is functional, we determine whether the Ridge Designs are functional, not whether the safety helmet itself is functional, focusing on the design as described in each trademark registration and depicted on the drawings.[62] Accordingly, we must determine whether the Ridge Designs as depicted in the '481 and '482 registrations are essential to their use or purpose or affect the cost or quality of the product, that is, whether allowing the trademark registrations to continue to exist will hinder competition. *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 213 USPQ 9, 12-15 (CCPA 1982). In other words, the issue is whether the designs of both safety helmets work better in the configurations at issue. *In re R.M. Smith, Inc.*, 734 F.2d 1482, 222 USPQ 1, 3 (Fed. Cir. 1984).

A. Which is the Proper Test – *Inwood* or *Morton-Norwich*?

The *Inwood* test states that a product design or product feature is considered to be functional "if it is essential to the use or purpose of the article or if it affects the cost or quality of the article." *Inwood*, 214 USPQ at 4 n.10.[63] *Morton-Norwich* identifies the following four inquiries or categories of evidence as helpful in determining whether a particular design is functional:

> (1) the existence of a utility patent disclosing the utilitarian advantages of the design;

[62] See discussion in Section VI ("The Marks"), *supra*.

[63] The issue of functionality was not directly before the U.S. Supreme Court in *Inwood* making the Court's remarks *dicta*. In subsequent cases, the Court characterized this two-prong inquiry as the "traditional rule" of functionality or *Inwood* test. *TrafFix,* 121 S. Ct. at 1261-62. *Accord Valu Eng'g,* 61 USPQ2d at 1426.

> (2) advertising materials in which the originator of the design touts the design's utilitarian advantages;
>
> (3) the availability to competitors of functionally equivalent designs; and
>
> (4) facts indicating that the design results in a comparatively simple or cheap method of manufacturing the product.

Morton-Norwich, 213 USPQ at 15-16.[64]

The parties disagree as to the applicable test for determining functionality. Petitioner relies on the more general test set forth in *Inwood* to argue that the Ridge Designs are functional. Respondent maintains that the *Morton-Norwich* factors control.

The *Inwood* and *Morton-Norwich* tests are not mutually exclusive. The U.S. Supreme Court explains their interplay as follows: if functionality is properly established under *Inwood*, further inquiry under the *Morton-Norwich* factors is unnecessary. "Where the design is functional under the Inwood formulation there is no need to proceed further to consider if there is a competitive necessity for the feature." *TrafFix,* 58 USPQ2d at 1006. By way of illustration, in *In re MK Diamond Prods., Inc.*, 2020 USPQ2d 10882, at *17 (TTAB 2020), "[h]aving found the applied-

[64] There are two types of functionality: (1) utilitarian functionality, "a product feature is functional if it is essential to the use or purpose of the article or if it affects the cost or quality of the article," *Inwood,* 214 USPQ at 4 n.10; and (2) "aesthetic functionality," "that, if a design's 'aesthetic value' lies in its ability to 'confe[r] a significant benefit that cannot practically be duplicated by the use of alternative designs,' then the design is 'functional.' … The 'ultimate test of aesthetic functionality,' … [under this theory], 'is whether the recognition of trademark rights would significantly hinder competition.'" *Qualitex,* 34 USPQ2d at 1165 (internal citation omitted). Based on the trial record and briefs, it is clear that the claim before us is utilitarian functionality and not aesthetic functionality.

for mark [was] functional under *Inwood*, *TrafFix*, and their progeny without reliance upon the other factors discussed in *Morton-Norwich*, and because 'there is no requirement that all of the categories of evidence identified in *Morton-Norwich* appear in every case in order to' find functionality, . . .[the Board did] not address the evidence in those other categories." (internal citation omitted)). *See also Kohler Co. v. Honda Giken Kogyo K.K.*, 125 USPQ2d 1468, 1499-1500 (TTAB 2017) (holding the mark as a whole primarily functional because the overall appearance of applicant's engine configuration was essential to the use or purpose of the engine and affect[ed] its quality and the totality of the record showed the functional features outweighed the decorative and non-functional aspects); *In re Loggerhead Tools, LLC,* 119 USPQ2d 1429, 1434 (TTAB 2016) (finding that the first two *Morton-Norwich* factors established that applicant's applied-for mark is functional, before considering the remaining factors).

Thus, the relationship between the two tests is sequential. We will therefore first examine the evidence under *Inwood*, and then if necessary, under *Morton-Norwich*.

B. Has Petitioner Made a Prima Facie Case of Functionality under *Inwood*

The *Inwood* test can be broken down into the following two inquiries:

> Is the product design essential to the use or purpose of the good?
>
> Or does the product design affect the cost or quality of the goods?

Inwood, 214 USPQ at 4 n.10.

Respondent's Technical Director Mr. Crosby presented the following testimony in his declaration pertaining to these questions under *Inwood*:[65]

> The design of ERB's hard hats, mainly the two ridges on top, does not lower the cost to produce the hard hats. ¶ 30.
>
> In fact, the two ridges of ERB's hard hat designs create more surface area and, therefore, increase[] the cost of producing ERB's hard hats relative to other designs, such as a hard hat with no ridges or design features. ¶ 31.
>
> The two ridge designs of ERB's hard hats are not related to the use of or safety provided by the hard hat. I can confidently say that Industrial Hard Hats do not require any ribs, ridges or other types of projections in order to meet U.S. safety requirements. ¶ 32.
>
> I have tested smooth-domed helmets that offered excellent force transmission (impact) attenuation. I have also tested numerous models of safety helmets with one or more ribs or ridges in various shapes and combinations that failed to offer anywhere near the required impact resistance. Material characteristics, wall thickness, and the processing parameters used in the molding of safety helmets are the primary factors in determining hard hat performance. ¶ 33.
>
> In view of what is stated above, the hard hat design in U.S. Trademark Registration No. 4493481 is not essential to the use or purpose of ERB's cap style Americana hard hat, it is just one of many feasible, efficient, and competitive designs that can be used. ¶ 34.
>
> 35. Further, in view of what is stated above, the hard hat design in U.S. Trademark Registration No. 4493482 is not essential to the use or purpose of ERB's full brim style Americana hard hat, it is just one of many feasible, efficient, and competitive designs that can be used. ¶ 35.

[65] 40 TTABVUE 7-8.

Petitioner argues that it has met the initial burden of establishing a prima facie case of functionality under the first *Inwood* inquiry by making of record studies that show that the Ridge Designs are "essential to the use or purpose of the article" because they "impact absorption and lower the risk of structural failure, better protecting the helmet's wearer."[66] In Petitioner's view, Respondent is attempting through its registered Ridge Design marks "to monopolize a basic safety helmet design" namely "its impact-absorbing helmet ridges"[67] by inhibiting competitors from designing helmets that "use a pair of ridges to deflect falling objects, absorb impact, and avoid catastrophic structural failures."[68]

Petitioner in its main brief cursorily cites to the testimony of Andres Rivera Cabal, Petitioner's Senior Global Offering Manager, Eye, Face & Head Solutions, to argue that Respondent's Ridge Designs have been "adopted widely throughout the safety helmet industry," because "numerous studies show that including ridges in a helmet design increases impact absorption and lowers the risk of structural failure, better protecting the helmet's wearer."[69] Petitioner then parses out language from the studies to argue that "[m]ultiple studies show that the inclusion of a ridge on a helmet liner "can assist in increasing helmet performance" by decreasing the contact area of the shell with the helmet liner, which in turn can

[66] Petitioner's Brief, pp. 9-10, 13; 52 TTABVUE 11-12, 15; Petitioner's Reply Brief, p. 21, 54 TTABVUE 21.

[67] Petitioner's Brief, p. 4; 52 TTABVUE 6.

[68] Petitioner's Reply Brief, p. 19; 54 TTABVUE 21.

[69] Petitioner's Brief, pp. 12-13; 52 TTABVUE 15-16.

"improve liner performance . . . without actually changing liner density;"[70] that the inclusion of "two raised ridges that run down the length of the helmet [and are] separated in the front of the helmet" also limits frontal impact "onto those ridges only," better protecting the wearer;[71] and that "studies show that, unlike smooth helmets, ridged helmet designs rarely suffer "catastrophic failure" of the helmet shell on impact and are therefore less likely to cause significant "strain energy in the skull" and skull fracture."[72]

Respondent counters that Mr. Cabal's testimony standing alone fails to establish that the Ridge Designs are functional, and that Petitioner has failed to explain how the studies are relevant to this matter.

In response to Respondent's criticism that none of the studies "establish that the trade dress in Registrant's Marks is essential to the use or purpose of Registrant's safety helmets,"[73] Petitioner in its reply brief for the first time takes the position that the studies address the second prong of the *Inwood* test, "that the registered trade dress affects the quality of the article" because "the inclusion of two ridges on a safety helmet makes the safety helmet more structurally sound and more effective at protecting the wearer's head from serious injury, thereby affecting the helmet's quality"[74]

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[70] Petitioner's Brief, pp. 9-10; 52 TTABVUE 12-13.

[71] Petitioner's Brief, pp. 9-10; 52 TTABVUE 12-13.

[72] Petitioner's Brief, pp. 9-10; 52 TTABVUE 12-13.

[73] Respondent's Brief, p. 24; 53 TTABVUE 25.

[74] Petitioner's Reply Brief, p. 20; 54 TTABVUE 22.

Petitioner also relies on the holding in another case involving a mark comprised of the product configuration of a safety helmet, *In Mine Safety Appliances Co. v. Elec. Storage Battery Co.*, 405 F.2d 901, 160 USPQ 413, 414 (CCPA 1969). The goods at issue are the same, "protective or safety helmets, hats, and caps… the type of 'hard hat' worn by miners, construction workers, well drillers, and the like to protect the wearer's head from falling objects, bumps, and blows." *Id.* at 413. The CCPA described the proposed mark as

> [T]he configuration of the crown portion of the hat, which is dome-shaped, the alleged distinctive feature consisting of ribs or corrugations extending outwardly of the crown and arranged in a particular manner. There are two main ribs, extending from front to back and from side to side and intersecting at right angles, which divide the crown of the hat into four quadrants. In each quadrant there are two ribs forming an inverted "V" which points to but does not touch the intersection of the two main ribs. Thus there are, in effect, twelve ribs or upstanding corrugations extending from the central portion of the crown toward the brim and terminating short thereof.

Id. The CCPA affirmed the Board's determination that the "rib design" was not a trademark "in view of [its] structural functionality," advertisements touting the rib design as "structurally advantageous"; and "the sale by others of safety hats with similar if not identical rib designs, also promoted as functionally advantageous." *Id.* at 415. Petitioner maintains that *Mine Safety* compels the same result here.

We find that Petitioner's arguments are unsupported in the record. The only testimony Petitioner presented on this subject was Mr. Cabal's opinion that "[t]he ridges on safety helmets are structural components thereof which **may** help increase stability and protection of the wearer against impact. I am aware of several studies

supporting this point, including those attached hereto as [exhibits]."[75] This statement is a mere hypothesis on his part, and fails to address any of the elements under *Inwood* that the Ridge Designs are essential to the use or purpose of Respondent's safety helmets, or decrease manufacturing costs or increase quality.

Another deficiency is that in its pretrial disclosures, Petitioner did not disclose Mr. Cabal as an expert witness. *See* Fed. R. Civ. P. 26(a)(2), 37 C.F.R. § 2.120(a)(2)(iii); 37 C.F.R. § 2.120(a)(2)(iv). Mr. Cabal is therefore merely a fact witness testifying on Petitioner's behalf. We accord his testimony the appropriate probative value as a fact witness, not an expert. *See, e.g., Alcatraz,* 107 USPQ2d at 1753-54. As an employee of Petitioner as opposed to an independent expert or fact witness, Mr. Cabal's testimony has inherent limitations. For this reason, "[w]e have also weighed the probative value of [the] testimony against any potential bias," *Alcatraz*, 107 USPQ2d at 1755, including taking into account Mr. Cabal's potential bias based on his employment with Petitioner. *See, e.g., Tao Licensing, LLC v. Bender Consulting Ltd.,* 125 USPQ2d 1043, 1047 (TTAB 2017) (Board considered witness's potential bias as an employee). *Cf. In re Gray Inc.*, 3 USPQ2d 1558, 1560 (TTAB 1987) (finding affidavit of applicant's counsel expressing his belief that the mark has acquired secondary meaning of "no probative value whatsoever" because, among other reasons, the statement is subject to bias). Thus, we cannot find that Mr. Cabal's testimony, standing alone, establishes the functionality of Respondent's Ridge Designs.

[75] Cabal Testimony Decl. ¶ 11, 25 TTABVUE 4 (emphasis added).

We further note that Petitioner's reliance on *Mine Safety* is misplaced. Functionality claims are fact intensive. *Brunswick*, 32 USPQ2d at 1122 (functionality is a question of fact). We cannot extrapolate from *Mine Safety* that the different Ridge Designs in Respondent's '481 and '482 are also functional merely because the same goods are involved and the designs may be similar.[76] We must consider the functionality of the specific marks at issue, and not presume, as Petitioner urges, that *Mine Safety* "underscores that the functional advantages of helmet ridge designs have long been known and understood."[77] Without specific evidence to support such a finding, we cannot draw the same conclusion in this case. *Cf. In re Embiid*, 2021 USPQ2d 577, at *26 (TTAB 2021) (noting the "limited utility" of relying on past decisions in lieu of evidence in the likelihood of confusion context).

This leaves us with the studies, thesis and article submitted with Mr. Cabal's testimony declaration. None of the studies were conducted by Mr. Cabal; nor did Mr. Cabal testify that he participated in the studies in some capacity.[78] He merely stated that he is "familiar" with the studies without explaining or providing any details as

[76] For example, as discussed in more detail below, we have no evidence that Respondent promotes the designs as "structurally advantageous" in its advertisements, website or catalogs as the appellant in *Mine Safety*.

[77] Reply Brief, p. 21-22; 54 TTABVUE 24-25.

[78] In other words, all of the studies referenced in Mr. Cabal's testimony were performed by other unrelated persons or entities. Thus, Mr. Cabal, as a fact not expert witness, failed to lay the proper foundation for their introduction. *See* Fed. R. Evid. 602 ("A witness may testify to a matter only if evidence is introduced sufficient to support a finding that the witness has personal knowledge of the matter. Evidence to prove personal knowledge may consist of the witness's own testimony. This rule does not apply to a witness's expert testimony under Rule 703.").

to why they are relevant.[79] Simply put, Petitioner submitted this evidence with Mr. Cabal's testimony declaration, many involving finite element modeling,[80] without any explanation as to how each related to the claim that Respondent's marks are functional under *Inwood*, "apparently in the hope that in wading through it, we might find something probative. This is not productive." *RxD Media, LLC v. IP Application Dev. LLC*, 125 USPQ2d 1801, 1803 (TTAB 2018). "Judges are not like pigs, hunting for truffles buried in briefs," or for that matter in the record. *Id.* (quoting *U.S. v. Dunkel*, 927 F.2d 955, 956 (7th Cir. 1991)). "A larger record is not necessarily a better record." *Sheetz of Del. Inc. v. Doctor's Assoc's Inc.*, 108 USPQ2d 1341, 1344 n.5 (TTAB 2013).

Even if Mr. Cabal had laid the proper foundation for their introduction, we find that the studies are irrelevant to the functionality claim before us, because none involve the particular Ridge Designs as delineated in Respondent's registrations. For completeness, we address each study in turn below, pointing out the specific deficiencies. None of the studies prove either prong of the *Inwood* test.[81]

1. **"Helmet Design Based on the Optimization of Biocomposite Energy-Absorbing Liners under Multi-Impact Loading"**[82]

This peer-reviewed study analyzes from a safety perspective the potential applicability of agglomerated cork as an alternative to synthetic materials as a liner

[79] Cabal Testimony Decl. ¶ 11; 25 TTABVUE 4.

[80] Finite element modeling refers to a numerical method for conducting computer simulated experiments. 25 TTABVUE 214.

[81] Nor are they relevant to any of the *Morton-Norwich* prongs.

[82] By Fábio A. O. Fernandes, Ricardo J. Alves de Sousa, and Gonçalo Migueis of TEMA—Centre for Mechanical Technology and Automation, Department of Mechanical Engineering,

in safety helmets, using motorcycle helmets as a model. The abstract reprinted below summarizes the hypothesis, methodology and findings:[83]

> Cellular materials have been used in many applications such as insulation, packaging, and protective gear. Expanded polystyrene has been widely used as energy-absorbing liner in helmets due to its excellent cost-benefit relation. This synthetic material can absorb reasonable amounts of energy via permanent deformation. However, in real-world accidents, helmets may be subjected to multi-impact scenarios. Additionally, oil-derived plastic is presently a major source of societal concern regarding pollution and waste. **As a sustainable alternative, cork is a natural cellular material with great crashworthiness properties and it has the remarkable capacity to recover after compression, due to its viscoelastic behavior, which is a desired characteristic in multi-impact applications. Therefore, the main goal is to analyze the applicability of agglomerated cork as padding material in safety helmets**. First, a finite element model of a motorcycle helmet available on the market was developed to assess its safety performance and to establish a direct comparison between expanded polystyrene and cork agglomerates as liners. Secondly, a new helmet model with a generic geometry was developed to assess the applicability of agglomerated cork as liner for different types of helmets, based on the head injury risk predictions by the finite element head model, Yet Another Head Model (YEAHM), developed by the authors. Several versions of helmet liners were created by varying its thickness and removing sections of material. In other words, this generic helmet was optimized by carrying out a parametric study, and by comparing its performance under double impacts. The results from these tests indicate that agglomerated cork liners are an excellent alternative to the synthetic

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University of Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal; and Gonçalo Migueis of Department of Machine Design and Research, Faculty of Mechanical Engineering, Wroclaw University of Science and Technology, Lukasiewicza 7/9, 50-371 Wroclaw, Poland. Received 14 January 2019, Accepted 5 February 2019, Published 20 February 2019 in MDPI Applied Sciences; 25 TTABVUE Ex. PX 5, 25 TTABVUE 41-67.

[83] 25 TTABVUE 42 (emphasis added).

> ones. Thus, agglomerated cork can be employed in protective gear, improving its overall performance and capacity to withstand multi-impacts.

The study methodology consisted of using a commercially available expanded polystyrene (EPS) lined motorcycle helmet certified by the European standard R22.05 as a baseline for comparison in assessing cork liner performance.[84] A computer simulated model of the EPS lined motorcycle helmet was constructed. In the first stage, "a preliminary analysis [was] performed by establishing a direct comparison between EPS and agglomerated cork liners" in order to obtain "some primary insights about cork agglomerates applicability in helmet design."[85] The second and final stage involved developing "[a] new helmet model with a simple geometry and constant thick pads is developed" comprised of agglomerated cork. Multiple versions were created in a computer simulated model by varying the liner geometry and its thickness.[86] The authors of the study then assessed head injury risk predictions with their newly constructed motorcycle helmet model employing the agglomerated cork liners by comparing the maximum values for different head injury criteria "to verify if agglomerated cork liners are indeed an alternative to EPS-based devices and to optimize the agglomerated cork helmet."[87]

The illustration below depicts both the exteriors and interiors of the initial EPS certified motorcycle helmet used as a baseline with the new motorcycle helmet with

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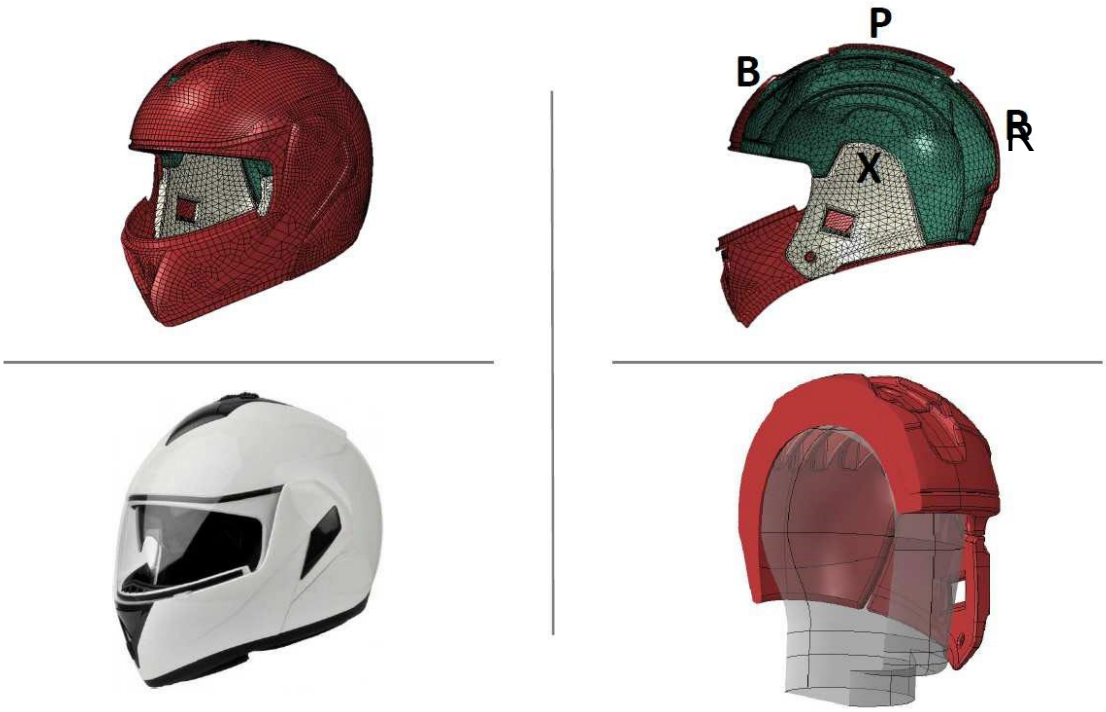
[84] 25 TTABVUE 45.

[85] 25 TTABVUE 45.

[86] 25 TTABVUE 45.

[87] 25 TTABVUE 45.

the cork liners.[88] The certified motorcycle helmet used as a baseline met U.S. regulations.[89]



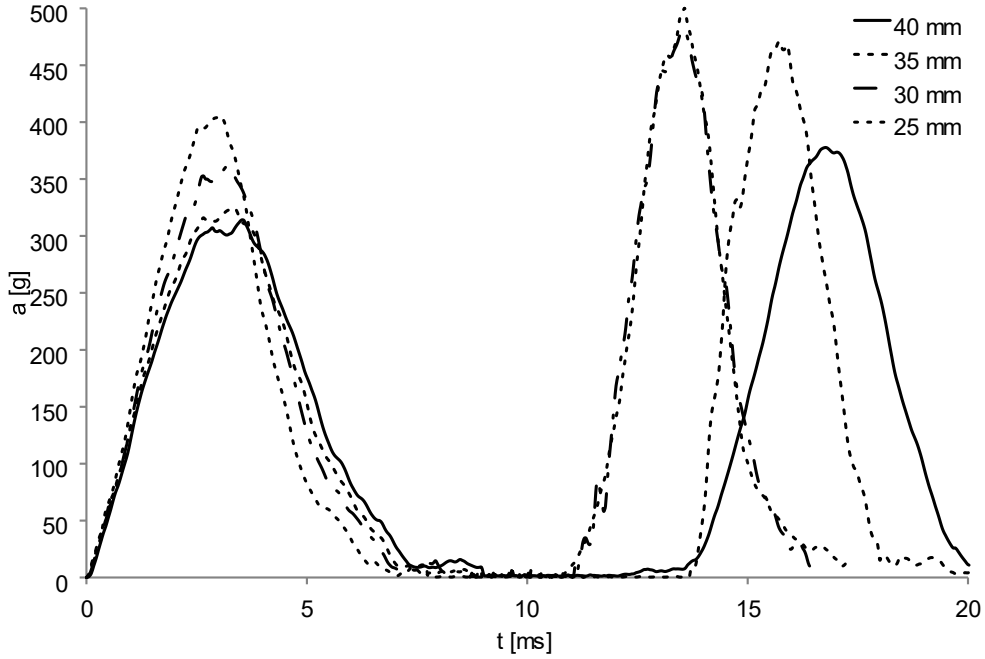
The same impacts used to validate the baseline helmet with EPS liner were then simulated with cork agglomerates, keeping the same geometry and changing only the liner material with cork agglomerates.[90] For the EPS synthetic lined helmets at varying thickness, the results from the simulations of the double impacts show a better response in terms of maximum acceleration by the helmet with a 40 mm thick liner.[91]

[88] 25 TTABVUE 45.

[89] 25 TTABVUE 45.

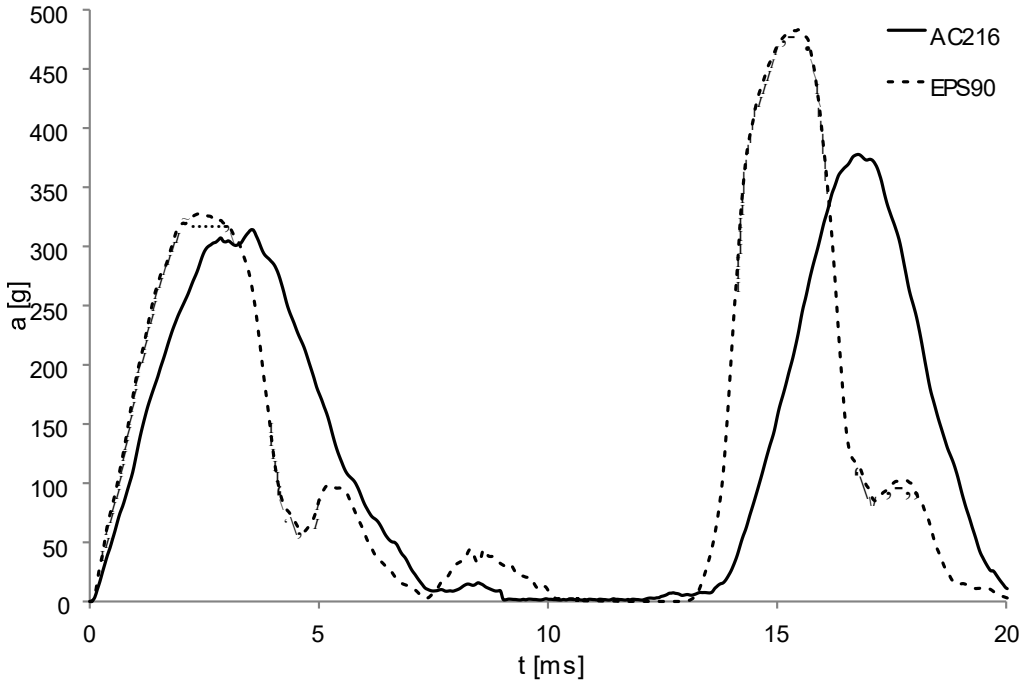
[90] 25 TTABVUE 48.

[91] 25 TTABVUE 55-56 ("Figure 8. Acceleration-time history of double impacts performed with helmets composed of agglomerated cork liners with thicknesses ranging between 25 and 40 mm.").



The study then compared the EPS synthetic liner with agglomerate cork lined model to verify if a helmet composed of agglomerate cork is a better safety alternative to the ones made of EPS liner. The results are reprinted below on a simulated first and second impact, and show an improvement of the agglomerate cork lined model upon second impact:[92]

[92] 25 TTABVUE 85 ("Figure 11. Acceleration-time history of 40 mm thick helmets subjected to double impacts.").



It then compares the strain distribution across the brain at the moment of maximum strain in the occipital lobes for each helmet liner.[93]

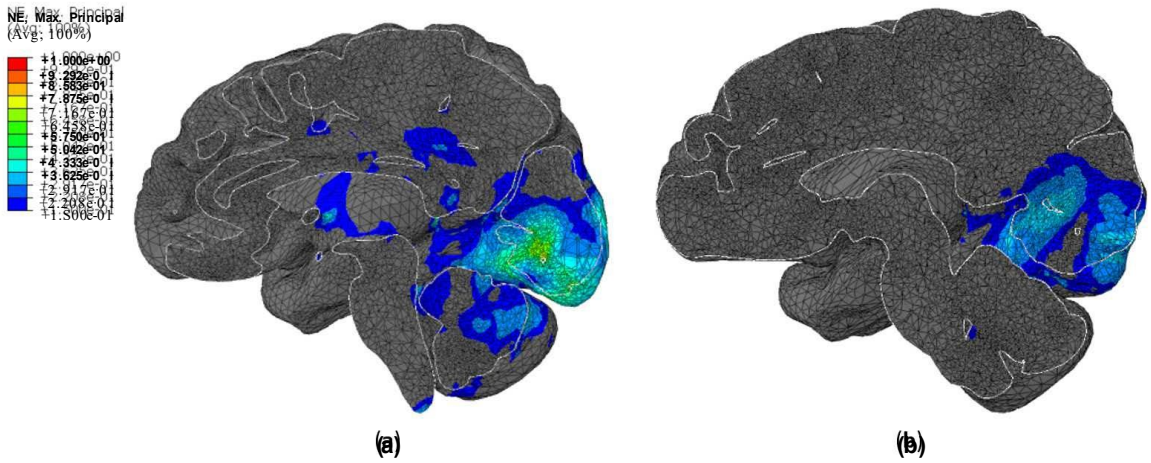


Figure 13. Brain strain distribution obtained with: (a) EPS liner. (b) AC liner.

The study concludes that "the helmet composed by a 40 mm thick liner made of the cork agglomerate performed better than its EPS [synthetic] version," meaning

[93] 25 TTABVUE 61.

that "agglomerated cork can be considered a good alternative to EPS, especially for helmets typically subjected to multi-impact scenarios."[94] In addition, the agglomerated cork helmet performed better for both impacts, although the difference was more significant in the second impact."[95] The study found that "[a]gglomerated cork liners are an excellent alternative to the synthetic ones," and "can be employed in protective gear, improving its overall performance and capacity to withstand multi-impacts."[96] The authors also stated that their findings about agglomerated cork liners were not limited to motorcycle helmets but had implications for other types of helmet such as those for military use, ice hockey and personal safety protection.[97]

This study was limited to the assessment of agglomerated cork liners as an alternative lining material to EPS synthetic liners. It did not address or simulate any modeling of ridge patterns on the outer shell to assess safety performance upon impact, either in safety helmets (e.g. hard hats) or motorcycle helmets. Respondent's safety helmets do appear to include a liner comprised of synthetic material; however, the liner is not part of either registered '481 or '482 Ridge Design Mark. Nothing in this study even remotely addresses whether ridges superimposed on a helmet are essential to its use or purpose or affects the cost or quality. Our determination is limited to whether the Ridge Designs are functional, not whether the safety helmet itself is functional, or whether the liner component is functional. As such, this study

[94] 25 TTABVUE 61.

[95] 25 TTABVUE 61.

[96] 25 TTABVUE 64.

[97] 25 TTABVUE 64.

is devoid of any relevance or probative weight in evaluating whether Petitioner has made a prima facie showing that the Ridge Designs are essential to the use or purpose of the identified safety helmets or affect their cost or quality under *Inwood*.

2. **"Computational Analysis and Design of Components of Protective Helmets"**[98]

The purpose of this peer-reviewed study was to explore design modifications of the liner in equestrian helmets to improve energy absorption and impact to the head using finite element and computer modeling methodologies. As summarized in the abstract:[99]

> The helmet shell and geometric factors, such as a gap between the liner and shell, ventilation holes and ridges on the helmet liner were studied to observe their influence on helmet performance. By studying helmet design variations in terms of different variables other than headform linear acceleration, it is possible to determine which helmet configurations perform better, why they perform the way they do and how efficiently they perform. This can assist the product design and optimization process by suggesting models which would optimize cost, weight and helmet size.

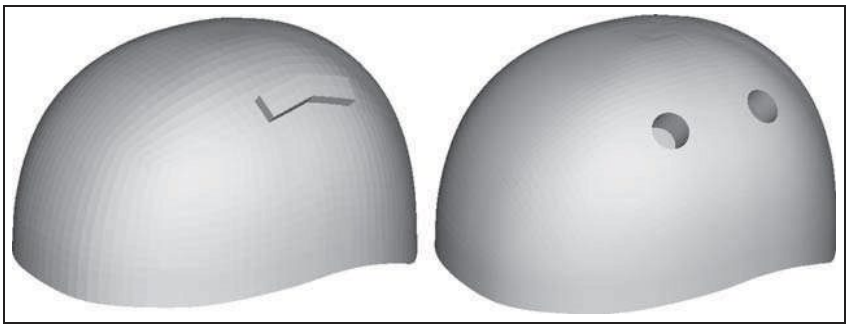
As noted above, the variables to equestrian helmet design tested were shell stiffness, the gap between the liner and shell, ventilation holes on the liner and ridges on the liner.[100] The authors of the study compared the following two helmet shell liners for safety performance: (1) two holes measuring 20mm diameter were created on the intended area of impact of the helmet liner for one liner, and (2) a single ridge

[98] By Manuel A. Forero Rueda and Michael D. Gilchrist, Journal of Sports Engineering and Technology, Date, received 12 September 2011, accepted 3 January 2012. 25 TTABVUE 68-79.

[99] 25 TTABVUE 68.

[100] 25 TTABVUE 68.

7mm thick, 15mm wide and 61mm in length was created for the second liner:[101] The single ridge model resembles a collapsed "V" shape.



Computer model simulations were done using side impacts for three impact speeds to compare safety performance.[102] The results showed that the linear acceleration was slightly reduced when the ventilation holes or the ridge were included on the helmet liner for the low and medium impact speeds.[103] This particular ridge design increased the impact dissipation capacity for lower impact energies but had no effect on performance for higher impacts.[104] For high speed impacts, the amount of bottomed-out foam was higher because the ridge completely collapses. This ridge also decreased the contact area which resulted in increasing stress on the helmet liner.[105] The tables below show the results:

[101] 25 TTABVUE 76.
[102] 25 TTABVUE 76.
[103] 25 TTABVUE 76.
[104] 25 TTABVUE 76.
[105] 25 TTABVUE 76.

Table 10. Linear acceleration results for helmets with different features.

Helmet type	4.4 m/s Peak acc. (g)	5.4 m/s Peak acc. (g)	7.7 m/s Peak acc. (g)
Baseline	166.7	199.2	316.7
Vent. Holes	159.8	190.8	327.5
Ridge	156	192.1	316.5

Table 11. Contact area (cm2) results from helmet with different geometrical features.

Helmet type	4.4 m/s Outer area	5.4 m/s Outer area	7.7 m/s Outer area
Baseline	319	370	439
Vent. Holes	309	350	431
Ridge	313	367	433

Table 12. Quantity of foam (cm^3) deformed within upper half and upper third of the plateau stress and bottomed-out foam.

	V.M. stress upper ½	V.M. stress upper 1/3	Bottomed-out foam
Helmet type	4.4 m/s	5.4 m/s	7.7 m/s
Baseline	0.44	0.61	23.4
Vent. Holes	0.77	2.02	25.8
Ridge	6.48	7.84	30.1

Table 13. Average DPED results for helmets with different features on the helmet liner.

Helmet type	Average DPED (J/m^3)		
	4.4 m/s	5.4 m/s	7.7 m/s
Baseline	20,172	38,804	142,450
Vent. Holes	18,723	33,033	133,440
Ridge	19,934	36,774	123,190

Petitioner contends that this computer simulation "plainly concludes that a ridged helmet design increases helmet performance" because "including ridges on a helmet liner increases the helmet's impact dissipation capacity at low impact energies, thereby increasing helmet performance."[106] Petitioner's interpretation of the results

[106] Petitioner's Reply Brief, p. 20; 54 TTABVUE 22.

is incorrect. It is obvious from the above description and diagrams that the ridge design created and tested through computer simulations bears no resemblance to either the '481 or '482 Ridge Design marks at issue in this proceeding. It would be improper for us to extrapolate from the study's results that any and all ridge designs, including Respondent's Ridge Designs, which are entirely different, enhance safety helmet performance. And even if this were not the case, the only benefit the single collapsed "V" shaped ridge had in the computer simulated model was that it increased the impact dissipation capacity at lower impacts. At higher impacts, the collapsed "V" shape ridge design offered no additional protective benefits, and resulted in a higher collapsed foam area.[107] It also decreased the contact area which resulted in increasing stress on the helmet liner.[108]

Another major difference is that the design modifications were tested on the helmet liner and not outer shell. The safety performance of these particular helmet liner designs in this computer simulated model does not support Petitioner's claim that Respondent's outer shell Ridge Designs enhance safety performance at low or high impacts.

3. **"How to Choose the Safest Motorcycle Helmet"**[109]

This is a non-technical article giving guidance to the general public about the different types of motorcycle helmets, helmet fit, and safety standards. It advises

[107] 25 TTABVUE 385.

[108] 25 TTABVUE 385.

[109] By Michael Padway, www.motorcyclelegalfoundation.com/thesafestymotocyclehelmets, accessed on 6/25/2020; 25 TTABVUE 80-90.

consumers to purchase the full-face helmet because it offers the most coverage surrounding the head and neck; protects the rider from inclement weather, debris, and insects hitting visor; and it provides chin and jaw protection.[110] The article also urges consumers to look for the following safety features when making motorcycle helmet purchases: shell-built design to protect the head, an impact-absorbing liner, and a chin strap.[111] The article explains that "current helmet technology involves an inner liner to absorb shock, made of EPS (expanded polystyrene) foam.[112] Notably absent is any advice to look for ridge designs on the outer shell of the motorcycle helmet as a safety feature.

The article then compares the following full-face motorcycle helmets using the criteria of safety, comfort/fit, noise, ventilation, overall value, and price. Each evaluation of the motorcycle helmets is reprinted below:[113]

[110] 25 TTABVUE 80.

[111] 25 TTABVUE 80.

[112] 25 TTABVUE 82.

[113] 25 TTABVUE 83-89.

Shoei X-Fourteen

Safety Standard: (SHARP 5/5, DOT, SNELL, ECE)

Comfort/ Fit: 4/5 Noise: 4/5

Ventilation: 4/5

Overall Value: 4/5

Price: $889

The X-Fourteen is Shoei's professional-grade full-face sport bike helmet. The highest quality of safety and aerodynamics mixed into one helmet with all sorts of shapes, **ridges, edges crafted to increase stability and stream when racing**. [Emphasis added] Rated high in comfort and noise suppression (noise suppression isn't the highest of priorities for a track helmet), just about every component inside the helmet is removable and adjustable.

The helmet also comes with Pinlock Evo anti-fog insert to prevent visor fog, which is fitting for the price you pay. While it may not be practical for the everyday rider, if you're looking for something high-end, this is definitely worth the look.

Arai Signet-X

Safety: 5/5 (SHARP 5/ 5, DOT, SNELL, ECE)

Comfort/ Fit: 4/5

Noise: 3/5

Ventilation: 4/5

Overall Value: 4/5

Price: $679

The Signet-X is composed of a multi-layered fiberglass shell reinforced with a polystyrene liner to offer a better absorption rate. The helmet is packed with a deeper comfort liner made from the antimicrobial material "Evo Pure" and foam spring-loaded cheek pads. The foam installs to push against the jaw for an even tighter, snug fit.

Arai also equipped the Signet-X with its own version of an emergency quick removal system (EQRS). The EQRS makes it easier to remove your helmet without preventing further injury to your spine if the situation calls for it. Let's hope it doesn't.

A Pinlock max vision 120 anti-fog insert included in the box as well, completing the package of a very high-quality piece of engineering from Arai.

AGV Pista GP-R

Safety: 5/5 (SHARP 5/ 5, SNELL, DOT, ECE)

Comfort/ Fit: 5/5

Noise: 2/5

Ventilation: 4/5

Overall Value: 4/5

Price: $1,000

The Pista GP is AGV's top-end sport bike helmet and the most expensive helmet on our list. It's made with a carbon fiber shell for high energy absorption with a polystyrene shock-absorbing lining. Given the carbon fiber make, the GP-R weighs in at 2.9lbs/ 1.3kg, which makes it feel as light as air.

Another neat little add-on is that the GP-R comes integrated with a hydration system. Essentially you have a tube that's wired through the helmet to the chin guard to give you a CamelBak effect.

Some complaints (if any) about the Pista GP have been in the ventilation category. Some say that the chin vent doesn't provide as much flow as it should, and the helmet could use a Pinlock insert to deal with fog.

Shoei RF-SR

Safety: 5/5 (SHARP 5/ 5, SNELL)

Comfort/ Fit: 4/5

Noise: 3/5

Ventilation: 5/5

Overall Value: 4/5

Price: $400

Shoei makes the list yet again with the RF-SR – a more affordable option compared to some of the other models we've showcased.

Of the five Shoei helmets with AIM+ technology, four have scored a 5/ 5 rating from SHARP, which speaks volumes to their initiative toward safety. The RF-SR comes in four shell sizes, which means the efficiency of the material is high. The heavier the helmet you have, the more danger implied as inertia increases during impact.

If you're looking for a high-quality, all-around helmet that's top end for safety, but, still within a reasonable budget, the Shoei RF-SR is a wonderful pick.

Shark Evo-One 2

Safety: 4/5 (SHARP 4/ 5, DOT, ECE)

Comfort/ Fit: 4/5

Noise: 3/5

Ventilation: 4/5

Overall Value: 4/5

Price: $469

Despite the potentially confusing model name, Shark's Evo-One 2 is a new and improved, compact version of their previous Evo-One, which was already touted very highly for quality and safety. Shark has made the modular-to-open-face option a very smooth transition with their engineering, and this helmet is a great example. The Evo-One 2 has a single button (on the bottom of the chin guard) to move it all the way around to the rear of the helmet where it clicks into place. Shark's "auto-up-, autodown" technology enables you to open the shield automatically as you're opening the chin guard. If you happen to be in open-

face mode, pulling the chin guard back over enables the shield to move up and let the guard close.

The Evo-One 2 has had mixed to negative reviews when it comes to how the helmet handles noise(like most feedback on noise with helmets). If you're in the market for something quiet, then this may not be the best buy for you.

HJC C70

Safety: 5/5 (SHARP 5/ 5, DOT, ECE)

Comfort/Fit: 4/5

Noise: 4/5

Ventilation: 3/5

Overall Value: 5/5

Price: $150

HJC's C70 model is our cheapest featured helmet, which should already excite you! This helmet is REPLACING a helmet that has already scored a 5-star SHARP rating — and this newer, improved version is no different, scoring five stars of its own.

Like the IS17, the C70 is a polycarbonate shell included with a drop-down sun visor, micrometric fastener, and easy-release main visor. The helmet is also Pinlock ready;

however, there's no Pinlock included, which you can expect at this price.

Aside from a re-designed shell for better aerodynamics along with some other small tweaks, the C70 is very similar to its predecessor. It's a great, affordable option for an all-around helmet that's high in safety standards.

Of course, you'd like to see more shell sizes for this model but understand that — at the price this helmet goes for — it's probably wishful thinking. As far as cost is concerned, what's not to like?

Scorpion EXO-R420

Safety: 5/5 (DOT, SNELL)

Comfort/ Fit: 4/5

Noise: 3/5

Ventilation: 3/5

Overall Value: 4/5

Price: $150

Released in the US with a drastically different look than the previous version, the Scorpion EXO-R420 looks to make an impact (no pun intended) on the more budget-friendly safety category. The helmet's made with a

polycarbonate shell, which is to be expected at this price range. One thing that may not be expected at this price range, however, is that the EXO-R420 comes with an emergency quick-release system (EQRS). An EQRS implements to help remove a helmet without damaging a rider's spine.

In terms of comfort and fit, the consensus is that the helmet fits comfortably. However, it's worth noting that some users had to order a size larger than normal.

Shark Skwal 2

Safety: 5/5 (SHARP 4/5, DOT, ECE)

Comfort/ Fit: 5/5

Noise: 4/5

Ventilation: 3/5

Overall Value: 4/5

Price: $260 +

Despite the first version of this helmet only being out for a couple of years, Shark has released a follow-up in the Skwal 2. The Skwal 2 is made with thermoplastic and has LEDs integrated in the front and rear.

One of the more commonly voiced weaknesses of the original Skwal version was the noise. Shark engineering has worked toward improving the auto seal shield system to address some of the noise complaints. Judging by the consensus of riders who own the Skwal 2, the helmet is slightly quieter — still, don't expect to ride it without the using earplugs.

The Skwal 2 is designed for the medium oval head and is well-known for being on the more comfortable side.

Shark Race-R Pro

Safety: 5/5 (SHARP 5/ 5, DOT, ECE)

Comfort/ Fit: 5/5

Noise: 5/5

Ventilation: 5/5

Overall Value: 5/5

Price: $789

Shark's Race-R Pro is one of our more expensive picks in the safety/performance category — rightfully so, the helmet was intentionally designed for pro racing. Made with a carbon fiber shell and weighing in at only 2.9lbs/

1.3kg, this helmet has some very impressive safety rating scores across the board.

The helmet's very accommodating inside packs with "bamboo fiber" which supposedly fight against moisture retention and bacteria. The fully-removable/ washable interior of the helmet also comes packed with a "whisper-strip" designed to cut out noise by forming a barrier along your neck.

Another impressive piece of technology, in addition to the anti-fog coating provided, is there's a rubber mask provided inside to help deflect your breath downward and reduce moisture. Overall, while being one of the more expensive options, the Race-R Pro doesn't lack in quality.

X-Lite X-1004

Safety: 5/ 5 (SHARP 4/5, DOT, ECE, Dual Hom elongated)
Comfort/ Fit: 5/5

Noise: 2/5

Ventilation: 4/5

Overall Value: 4/5

Price: $199 (Composite) – $625 (Carbon Fiber)

Surpassing it's highly rated previous version, the X-Lite X-1004 is an interesting helmet to examine. It comes in two different versions: composite and carbon fiber. The helmet comes with an assortment of features such as Bluetooth integration, Pinlock integration, sun visor, etc. However, one concern that we have is that — for the considerably increased price — we were surprised to learn that it doesn't come with Pinlock anti-fog insert.

We've received generally positive reviews about the helmet's accommodations for comfort and fit. X-Lite uses an inner lining called "Unitherm" which includes cheek pads made from foam that provide constant pressure and don't compress over time. The X-1004 also comes in a multitude of sizes (XXS – XXXL), which few other helmets offer. The helmet's neck roll removes to accommodate ventilation and cooling on hotter rides.

Arai Corsair X

Safety: 4/5 (SHARP 5/ 5, SNELL)

Comfort/ Fit: 5/5

Noise: 3/5

Ventilation: 5/5

Overall Value: 4/5

> Price: $849
>
> The second most expensive helmet on our list: The Corsair X by Arai. This helmet is the famed upgrade of the Corsair V. Despite these two helmets looking almost identical, though, Arai has invested quite a bit into making the Corsair X a significant upgrade.
>
> The Corsair X is made up of a composite fiber shell that's been slightly tweaked to weigh slightly less than the Corsair V while scoring higher when tested by SNELL. The helmet comes with a smoother, reinforced outer shell for glancing off surfaces even better than with the previous version.
>
> In addition to the above, Arai has also improved the ventilation duct on the top of the helmet. With a myriad of different air vents and exhausts placed across the shell, it's safe to say that ventilation is one of Arai's biggest strengths.
>
> Another area that Arai excels in is comfort and fit. With removable panels and lining along with adjustable cheek, skull, and temple areas — You can tweak the contour of this helmet in just about every way possible.

Despite the extensive discussion of each helmet's features, there is no comparison of the pros and cons of the various ridge designs depicted on the motorcycle helmets. The only discussion of ridges is in connection with the first helmet, the X-Fourteen, Shoei's professional-grade full-face sport bike helmet. The ridges on Shoei's X-Fourteen motorcycle helmet are triangular in shape and bear no resemblance to either Ridge Design at issue in this proceeding. The article points to the ridges as increasing stability and aerodynamics when racing.[114] There is no mention of safety advantages of the ridges to protect the user's head, the purpose of Respondent's

[114] 25 TTABVUE 83.

goods.[115] As such, the article fails to support Petitioner's position that Respondent's Ridge Designs as depicted in Registration Nos. '481 and '482 are essential to the use or purpose of Respondent's safety helmets.

4. **"Effects of Ventilated Safety Helmets in a Hot Environment"**[116]

The objective of this peer-reviewed study was to evaluate various modifications to safety helmets for forest workers for use in hot and humid environments in order to encourage compliance with OSHA regulations requiring all workers in logging operations to wear safety helmets.[117] The abstract states in relevant part:[118]

> To determine which factors contribute to forest workers' thermal discomfort, this study evaluated subjects' physiological and psychophysical responses during tasks approximating the workload of forest workers in a high-temperature environment similar to that found in the southeastern United States during the summer. Environmental conditions in the helmet dome space were also evaluated. Three helmets were used in this study: a standard helmet, a passively ventilated helmet, and an actively ventilated helmet. It was found that none of the tested helmets burdened the body significantly for the physiological variables that were examined. Evaluation of the dome space environmental conditions showed that both the dry-bulb temperature (DBT) and wet-bulb temperature (WBT) varied significantly among the helmets tested. Psychophysical results showed that ventilation contributes

[115] See discussion in Section VII ("Purpose of the Goods"), *supra*.

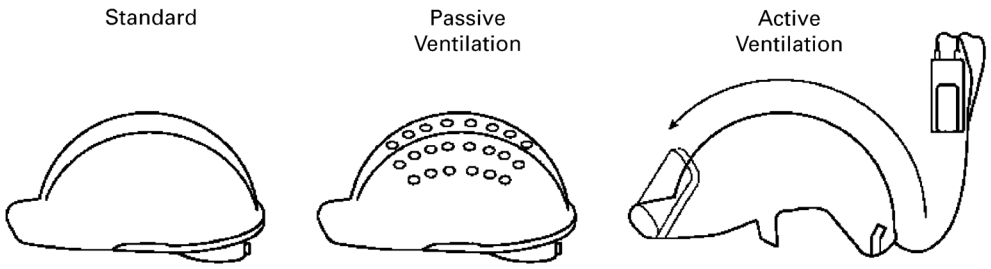
[116] G.A. Davis, E.D. Edmisten, and R.E. Thomas of the Department of Industrial and Systems Engineering, Auburn University, Auburn, AL 36849, USA; R.B. Rummer of the Andrews Forestry Science Laboratory, USDA Forest Service, DeVall Drive, Auburn, AL 36830, USA; and D.D. Pascoe of Department of Health and Human Performance, Auburn University, Auburn, AL 36849, USA; Received 11 May 2000; accepted 28 November 2000; 25 TTABVUE 91-99.

[117] 25 TTABVUE 91.

[118] 25 TTABVUE 91.

> to greater helmet comfort, and that weight and fit are important factors in helmet design.

The independent variables in the study were the following three helmet models illustrated and described below:[119]



> (1) An orange plastic standard cap style helmet that meets ANSI Z89.1–1986, weighing 368.5g.
>
> (2) A passively ventilated orange plastic standard helmet with 37 (9.5) mm holes (approximately 9% of the surface) drilled in a symmetrical circular pattern in the shell, around the centerline. The holes were added to allow heat to escape from the dome space, although they may have compromised the helmet's impact protection so that it no longer conformed to the ANSI specification. This helmet weighed 361.1g.
>
> (3) An actively ventilated white plastic RACAL airstream anti-dust helmet type AH.1 with a battery-powered, dust-filtering fan. Although not specifically designed to promote cooling, this was included in the study because of its potential cooling effects. This helmet weighed 956.5g and required a belt attached battery pack that weighed an additional 532.8g.

The dependent variables measured were each testing subject's core temperature, mean skin temperature, heart rate and their opinion of the helmets. The environment

[119] 25 TTABVUE 93.

conditions measured were the dome space dry bulb temperature (DBT) and wet bulb temperature (WBT).[120]

The results for the environmental conditions are displayed in the three graphs below showing the mean core temperature results for each participant and the mean DBT and WBT for each helmet design compared with the mean DBT and WBT in the environmental chamber for all trials.[121] In general, the mean core temperatures were lower for both the passively and actively ventilated helmets are compared to the standard unventilated helmet. Likewise, the mean DBTs for the standard unventilated helmet were consistently higher than those for the passively and actively ventilated helmets.[122]

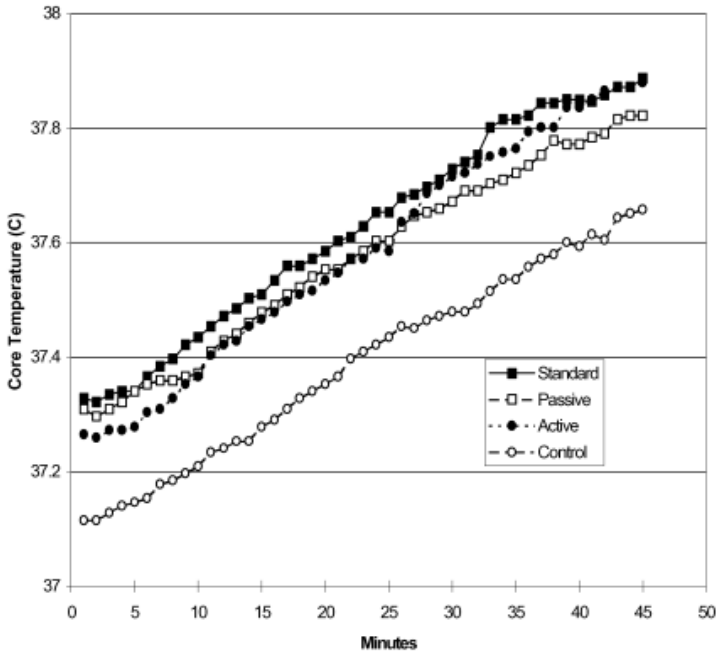


Fig. 2. Core temperature results.

[120] 25 TTABVUE 93.

[121] 25 TTABVUE 95-97.

[122] 25 TTABVUE 95.

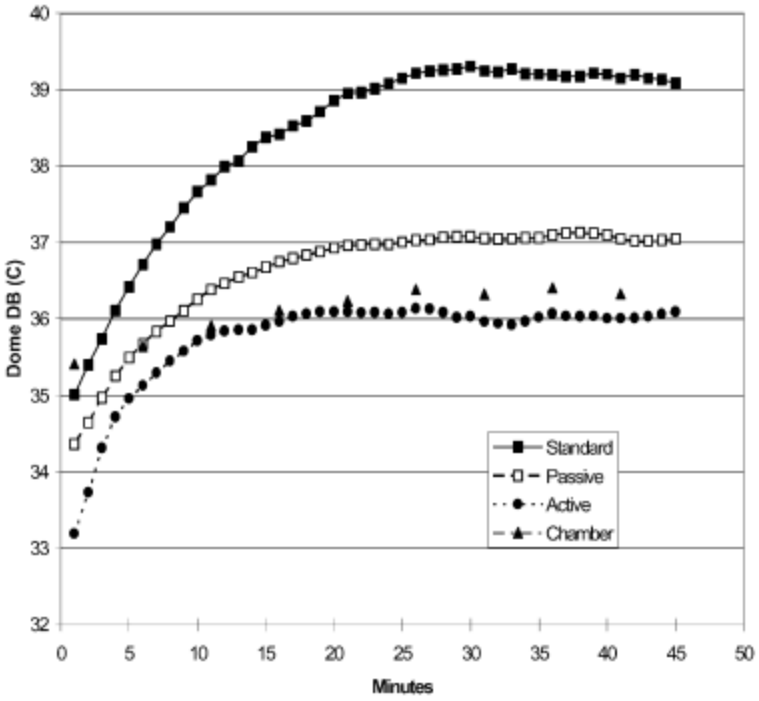


Fig. 3. Dome space dry-bulb temperature results.

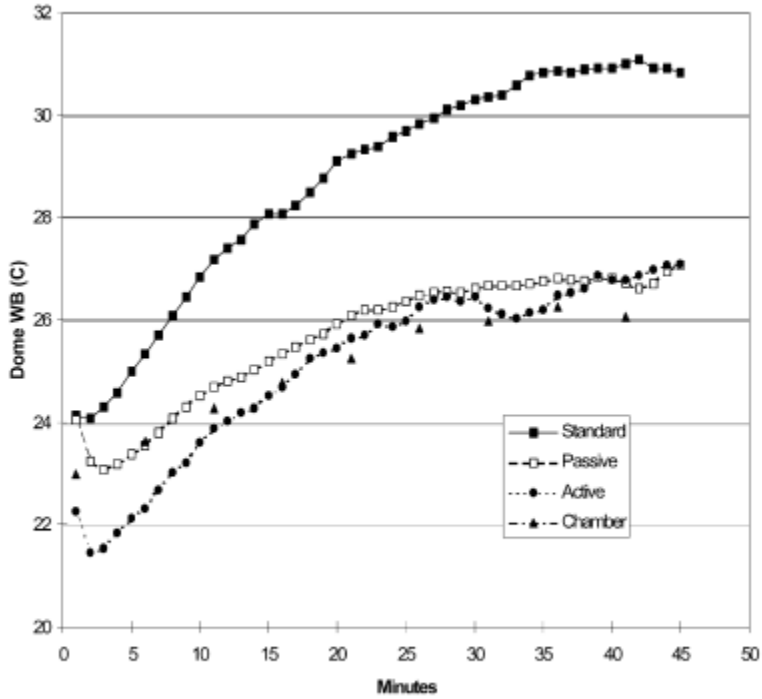


Fig. 4. Dome space wet-bulb temperature results.

Surveys of the participants included a paired comparison.[123] According to the results, none of the participants preferred the actively ventilated helmet to either of the other two helmets, and none preferred the standard helmet to the passively ventilated helmet.[124] In other words, the majority of subjects preferred the passively ventilated helmet over the standard unventilated helmet and actively ventilated helmet, reporting as more comfortable, less hot, and less heavy than the other helmets.[125]

From the illustration, the standard helmet used as a baseline is a cap-style helmet with a single unvented ridge superimposed on the top of the helmet shell, and running front to back. The standard helmet used in this study bears some resemblance to the '481 registered mark on Respondent's Americana cap style safety helmet. The dependent variables in this study however were ventilation, not ridges. If anything, this study shows that unventilated ridges, like the '481 and '482 Ridge Designs, impinge functionality by increasing the WBT, DBT and body temperature of the user. This study therefore undercuts any finding that Respondent's Ridge designs are essential to the use or purpose of the safety helmets.

[123] 25 TTABVUE 98.

[124] 25 TTABVUE 98.

[125] 25 TTABVUE 98.

5. **"The Effects of Surface Friction on Oblique Bicycle Helmet Impacts"**[126]

This masters of science thesis in mechanical engineering discusses the effect of surface friction between a bicycle helmet and the surface during impact.[127] As explained in the introduction:[128]

> The friction between the helmet and the impact surface can have a significant effect on the rotational accelerations imparted to the head. The surface roughness of the impact surface is therefore an important consideration when developing future oblique impact standards. The traditionally used 80 grit abrasive paper, used to simulate a road surface, may not accurately represent the conditions seen impacting real road surfaces.
>
> The aim of this work was to observe how surface friction affects head kinematics during an impact and if the kinematics of a helmeted headform impacting typical road surfaces can be replicated with a roughened steel anvil for the use in standardized testing. A helmeted NOCSAE headform was dropped using a twin wire guided drop tower at 6.5m/s onto a 45° impact anvil. Helmeted drops were performed onto an anvil designed to accept different surfaces such as; road surfaces, roughened steel, 80 grit abrasive paper and a Teflon coated surface. Linear acceleration, rotational acceleration, rotational velocity, impact force and head injury criteria were used to compare both frontal and side impacts.

The objective was to investigate the role of impact surface friction on oblique or side impacts and quantify how the traditional road surface analog, 80 grit abrasive

[126] By Philip George Petersen "A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Mechanical Engineering, Washington State University School of Mechanical and Materials Engineering AY 2018; 25 TTABVUE 100-187.

[127] 25 TTABVUE 104.

[128] 25 TTABVUE 112.

paper, compared to real road surfaces.[129] The study simulated impacts on three categories of surfaces: (1) roughened steel surfaces; (2) 80 grit abrasive paper; and (3) road surface samples. The baseline for comparison was a Teflon surface. Various roughened steel surfaces were tested with incremental changes in roughness to measure how friction affected the head kinematics. Linear acceleration, rotational acceleration, rotational velocity and impact loads, coefficients of friction and head injury criteria were collected and calculated and used as the metrics to compared surfaces.[130]

The photograph below illustrates the construction of the experiment which consists of a drop tower guided by twin wires to measure velocity impact.[131]

[129] 25 TTABVUE 112.

[130] 25 TTABVUE 113.

[131] 25 TTABVUE 119.

Figure 1. Twin wire guided drop tower

The headform mimics the human head. The headform selected for the experiment and displayed above was a medium sized NOCSAE headform which was chosen because it is specifically designed for helmet testing.[132] "The NOCSAE headform boasts consideration of skull deflection properties, improved anthropometry, mass, moment of inertia including a glycerin 'brain.'"[133] The bicycle helmet used in this

[132] 25 TTABVUE 120-121.

[133] 25 TTABVUE 121.

study was a medium size 2017 model of the Scott Vivo Bicycle Helmet which is comprised of a polycarbonate shell and expanded polystyrene (EPS) foam.[134]

Then samples of asphalt and concrete were taken from roads in Pullman, Washington as well as ingots formed at Washington State University's Center for Asphalt Technology Laboratory and the Concrete Material Characterization Laboratory in order to represent the road surfaces for bicyclists.[135]

[134] 25 TTABVUE 123-124.

[135] 25 TTABVUE 127.

Figure 7. Asphalt and Concrete Sample Preparation using Coring Drill and Circular Diamond Saw [136]

The results show "that the surface roughness changed the magnitude and duration of impacts on the headform as well as overall head motion during the side impacts" and that "the current rotational absorption technology in helmets functions on the basic concept of reduced friction between the head and impact surface will reduce rotational acceleration. … for frontal impacts but in a side impact scenario low friction surfaces can develop rotational accelerations as large as rough surfaces but in the opposite direction."[137]

[136] 25 TTABVUE 127.

[137] 25 TTABVUE 157.

Petitioner asserts that this thesis demonstrates that including "two raised ridges that run down the length of the helmet," as in Respondent's Ridge Designs, "improves helmet performance by displacing frontal impact 'onto these ridges only.'"[138] Petitioner misinterprets this thesis paper. The design of the medium size 2017 model of the Scott Vivo Bicycle Helmet used in the experiment does not bear any resemblance to the marks at issue in our proceeding. The bicycle helmet constructed for the simulation is ribbed and has vents. It bears no similarity to either the '481 or '482 Ridge Design marks. There was no discussion of the features of the 2017 Scott Vivo Bicycle Helmet because this variable was held constant. The variables that changed in this experiment were the simulated road surfaces. Thus, we cannot make any conclusions with regard to the functionality of the Ridge Design marks and surface friction upon impact. This thesis therefore has no relevance as to Petitioner's functionality claim.

6. **"Aerodynamics of Ribbed Bicycle Racing Helmets"**[139]

This peer reviewed study compares the aerodynamic performance of ribbed/ "dimpled" bicycle helmets with smooth surfaced/ribbed bicycle helmets. As explained in the abstract:[140]

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[138] Petitioner's Reply Brief, p. 20; 54 TTABVUE 22.

[139] By Firoz Alam, Harun Chowdhury,, Ho Zhi Wei, and Israt Mustary of the School of Aerospace, Mechanical and Manufacturing Engineering, RMIT University, Melbourne, VIC 3083, Australia and Gary Zimmer School of Science, Information Technology and Engineering, Federation University, Ballarat, VIC 3350, Australia; presented at the 2014 conference of the International Sports Engineering Association; available at www.sciencedirect.com; 25 TTABVUE 188-193.

[140] 25 TTABVUE 188.

> In competitive cycling, aero-helmets have been used around since 1980 to reduce aerodynamic resistance. Considerable design effort has been made to improve the aerodynamic efficiency of racing bicycle helmets over the years. However, the demand for further improvement has forced helmet manufacturers and designers to introduce new designs progressively. Recently several helmet manufacturers (e.g., LG, Lazer and Giro) have introduced dimples on the outer shell of helmet mimicking the so called 'Golf-ball' dimple effects with a view to further reduce aerodynamic drag of the helmet. However, no independently verifiable research so far has been reported in the public domain about the aerodynamic performance of ribbed bicycle helmets compared to smooth surfaced helmets. Hence, the primary objective of this work was to undertake an experimental study on four smooth aero-helmets including two latest model ribbed aero-helmets to understand their aerodynamic performance and the effect of dimples on helmets. The investigation was undertaken in a wind tunnel environment over a range of wind speeds, pitch and yaw angles. The experimental data indicate no measurable advantage between the smooth and ribbed helmets under varied pitch angles and at zero yaw angle.

The study highlights as an example of the impact of aerodynamic resistance the 1989 Tour de France:[141]

> In the 1989 Tour de France, the American cyclist Greg LeMond trailed two time champion French rider Laurent Fignon by 50 seconds prior to the final stage of a 24.5 km individual time trial racing event. Although the 50 seconds gap is negligible as LeMond required riding each kilometre distance by only 2 seconds faster than his competitor Fignon. Nevertheless, LeMond used an aerodynamically efficient helmet and aerodynamically efficient normal bicycle and was able to defeat Laurent Fignon by 58 seconds and subsequently won the 1989 Tour de France title by just 8 seconds. It was later revealed that the aerodynamic drag on Fignon's ponytail alone was enough to slow him down by the critical 8 seconds by which he lost the race. Although aerodynamics played an important role

[141] 25 TTABVUE 189.

> in time trial and road racing competitions around the world since long, the LeMond saga brought the aerodynamics to the limelight again.

The authors select six bicycle helmets (four time trial, and two road racing).[142] Of the four time trial helmets, two helmets (LG Vorttice and Lazer Tardiz 2) had dimples and other two helmets (Giro Advantage and LG Rocket Air) had no dimples.[143] The Vorttice has dimples for a quarter of the frontal area of helmet whereas Lazer Tardiz 2 has dimples at the backside of the helmet.[144] The road racing helmets chosen were the Lazer O2 and Giro Air Attack.[145]

In terms of vents and weight, the Giro Advantage has six air vents and a mass of 390 grams.[146] The LG Air Rocket possesses seven air vents and a mass of 429 grams.[147] The Lazer Tardiz 2 has six air vents and a mass of 395 grams.[148] The Giro Air Attack has six air vents and weighs around 283 grams. [149] By contrast, the LG Vorttice has only two vents and mass of 426 grams,[150] while the Lazer O2 has twenty-four air vents and a mass of 310 grams.[151] The six helmets are depicted below:[152]

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[142] 25 TTABVUE 189.
[143] 25 TTABVUE 189.
[144] 25 TTABVUE 189.
[145] 25 TTABVUE 189.
[146] 25 TTABVUE 189.
[147] 25 TTABVUE 189.
[148] 25 TTABVUE 189.
[149] 25 TTABVUE 189.
[150] 25 TTABVUE 189.
[151] 25 TTABVUE 189.
[152] 25 TTABVUE 190.

Fig. 1. Road racing and time trial helmets used in this study.

A mannequin comprised of polystyrene foam and based on the body measurements of a male cyclist was used to simulate the body position and size of a representative road cyclist.[153] During testing in the RMIT Industrial Wind Tunnel, the helmets were attached onto the mannequin's head. Three forces, drag, lift and side force, and their corresponding moments were measured simultaneously using a six component force sensor. The force sensor measured the aerodynamic drag on the mannequin in the wind tunnel. The illustration below demonstrates the head position at 0, 45 and 90 degree angles in the RMIT Industrial Wind Tunnel:[154]

[153] 25 TTABVUE 190.

[154] 25 TTABVUE 191.

For the ribbed helmets, the results showed no significant aerodynamic gain,[155] and inconclusive results under crosswind conditions.[156] The dimples of Vorttice helmet may provide a marginal improvement to the aerodynamic performance, but this improvement did not offset the drag generated due to its larger frontal area.[157] The Giro Air Attack helmet performed better at high pitch angles due to its lower frontal area. There was no clear aerodynamic advantage for dimpled helmets.[158]

To state the obvious, the focus of this study was aerodynamics and competitive cycling performance, not safety. Furthermore, none of the cycling helmets have ridges bearing any resemblance to Respondent's Ridge Design marks. And to reiterate, neither of Respondent's registered '481 or'482 marks include air vents or ribs. This

[155] 25 TTABVUE 193.

[156] 25 TTABVUE 193.

[157] 25 TTABVUE 193.

[158] 25 TTABVUE 193.

study does not support Petitioner's position that the involved marks are functional under *Inwood*.

7. **"Finite Element Bicycle Helmet Models Development"**[159]

The objective of this peer-reviewed study was to ascertain the validity of a finite element analysis of simulated linear drop impacts on the human head as compared to actual physical drop linear impacts for three different bicycle helmet models. According to the abstract:[160]

> Impact attenuation performance of three different range of commercial bicycle helmet were investigated in lateral drop impact test in accordance to AS/NZS 2063:2008, Australian/ New Zealand Standard for bicycle helmet using numerical simulation and experimental impact test. The aim of this research is to develop a simulation model of drop impact test, which to be used in further investigations of user-centred design approach of bicycle helmet… A robust correlation study using peak linear acceleration score, impact duration score and Pearson correlation coefficient between the data from physical test and numerical model was conducted. Good correlation scores (>80%) were achieved between the numerical model and experimental impact test in terms of headform peak linear acceleration and impact duration score, suggesting that the simulation model is in good correlation with those from physical test.

The three bicycle helmet models selected for the drop impact test were the Netti Lightning, MET Kaos, MET Crossover.[161] As is typical of most bicycle helmets, the

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[159] 25 TTABVUE 194-200. Helmy Mustafa, Toh Yen Pang, Thierry Perret-Ellena, Aleksandar Subic of the School of Aerospace, Mechanical and Manufacturing Engineering, RMIT University, Bundoora VIC 3056, Australia; presented at The International Design Technology Conference, DesTech2015, 29th of June – 1st of July 2015, Geelong, Australia; www.sciencedirect.com

[160] 25 TTABVUE 194.

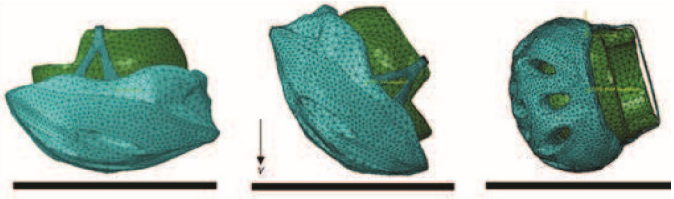
[161] 25 TTABVUE 195.

liners were made with expanded polystyrene (EPS). The authors carried out the physical impact test at a 2-wire drop test facility using an anvil in accordance with the Australian Standard for bicycle helmets.[162] The authors measured headform peak linear acceleration, impact duration and impact speed from the physical drop test for each model.[163]

In the next step, scanned models of the Netti Lightning, MET Crossover and MET Kaos bicycle helmets were created for computer simulation as shown below:[164]

Fig. 2. Digital models of bicycle helmets. From left: Netti Lightning, MET Crossover and MET Kaos

A three-dimensional model of a headform was then used to mimic the human head. As illustrated in the diagram below, numerical simulation of drop test on three impact locations: crown, front and sides were performed.[165]



[162] 25 TTABVUE 194.

[163] 25 TTABVUE 194.

[164] 25 TTABVUE 196.

[165] 25 TTABVUE 198.

The scanned geometry models were imported into a finite element computer model. A drop impact simulation was developed based on the density and impact speed data obtained from the physical test.[166] The inner EPS liner of the bicycle helmet was modeled using crushable foam properties, while the headform and anvil were modeled as rigid bodies.[167] Peak linear accelerations and impact duration of the headform on each helmet at three different impact locations of helmet were recorded.[168]

The authors then determined the correlation between the physical and finite element models using statistical method called the Pearson correlation coefficient.[169] The study concluded "that the result obtained from numerical model correlated well with those from physical drop impact test."[170]

This study has no bearing on the issue before us. It did not evaluate or conclude that ridges are essential to the use or purpose of bicycle helmets or safety helmets, or whether ridges have an impact on the cost or quality of Respondent's safety helmets. Rather, the aim of the study was to determine if there was a correlation between numerical simulations of drop impacts and physical drop impacts to the human head. As such, this study has no relevance under the *Inwood* test as applied to Respondent's registered marks.

[166] 25 TTABVUE 194.
[167] 25 TTABVUE 194.
[168] 25 TTABVUE 194.
[169] 25 TTABVUE 194.
[170] 25 TTABVUE 194.

8. **"Reassessing Bicycle Helmet Impact Protection"**[171]

This peer-reviewed study assesses bicycle helmet design and performance in accidents and addresses criticisms that bicycle helmets are unnecessary because they provide inadequate protection to the user from side impacts. As with the prior study, it also used a finite element model, but this time to assess whether current bicycle helmet design adequately protect the cyclist from side impacts. According to the abstract:[172]

> Criticisms of bicycle helmet design are reviewed, and changes in the design since the 1990s explored. Finite Element Analysis is used to model the impact of a generic helmet on flat and kerbstone anvils. The performance of current helmets was investigated using oblique impacts, in which the liner [sic] and rotational acceleration of a headform, fitted with a compliant scalp and a wig, were measured. Most of the design criticisms are shown to be invalid.

The study begins with the pointed observation that side impact tests are required for motorcycle helmets but not bicycle helmets.[173] Thus, the objective of the study was to address this criticism of bicycle helmet design using finite element analysis.

The authors carried out finite element analysis for helmet liners comprised of polystyrene, a common material used in bicycle helmets.[174] They also assumed that the bicycle helmet had no ventilation slots.[175]

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[171] 25 TTABVUE 201-212. NJ Mills and A Gilchrist Metallurgy and Materials, University of Birmingham, UK presented at the IRCOBI Conference – Lisbon, Portugal September 2003.

[172] 25 TTABVUE 201.

[173] 25 TTABVUE 203.

[174] 25 TTABVUE 203.

[175] 25 TTABVUE 203.

The study concluded that "it is impossible to predict … the performance of bicycle helmets in oblique impacts. … There should be an oblique impact test to encourage the development of designs which minimize head rotational acceleration."[176] It does conclude, however, that "without a helmet, it is highly likely that the bicyclist would suffer a skull fracture and severe brain damage."[177]

The study did not evaluate the use or purpose of ridges on bicycle helmets or safety helmets. It also did not evaluate the impact on cost or quality of ridges. Rather, as explained above, the focus of the study was to address criticisms that bicycle helmets are unnecessary because current designs do not protect the cyclist from side impacts. As such, this study has no bearing on the *Inwood* factors.

9. **"Simulation-based assessment for Construction Helmets"**[178]

This peer-reviewed study also involved finite element modeling, but this time on construction helmets. According to the abstract:[179]

> In recent years, there has been a concerted effort for greater job safety in all industries. Personnel protective equipment (PPE) has been developed to help mitigate the risk of injury to humans that might be exposed to hazardous situations. The human head is the most vulnerable to impact as a moderate magnitude can cause serious injury or death. That is why industries have required the use of an industrial hard hat or helmet. There

[176] 25 TTABVUE 211.

[177] 25 TTABVUE 211.

[178] 25 TTABVUE 213-227; By James Long, James Yang, Zhipeng Lei & Daan Liang of Department of Mechanical Engineering, Texas Tech University, Lubbock, TX 79409, USA; Department of Construction Engineering, Texas Tech University, Lubbock, TX 79409, USA (Received 21 June 2012; final version received 5 February 2013) (2015) Simulation based assessment for construction helmets, Computer Methods in Biomechanics and Biomedical Engineering, 18:1, 24-37, https://doi.org/10.1080/10255842.2013.77438.

[179] 25 TTABVUE 214.

> have only been a few articles published to date that are focused on the risk of head injury when wearing an industrial helmet. A full understanding of the effectiveness of construction helmets on reducing injury is lacking. This paper presents a simulation-based method to determine the threshold at which a human will sustain injury when wearing a construction helmet and assesses the risk of injury for wearers of construction helmets or hard hats. Advanced finite element, or FE, models were developed to study the impact on construction helmets.

The finite element model was comprised of: (1) simulated models of the human head with a brain, enclosed by a skull and an outer layer of skin;[180] and (2) two industrial hard hats,[181] with an outer shell along with two straps for the suspension system.

The finite element model of the human head used in the computer simulation is displayed below:[182]

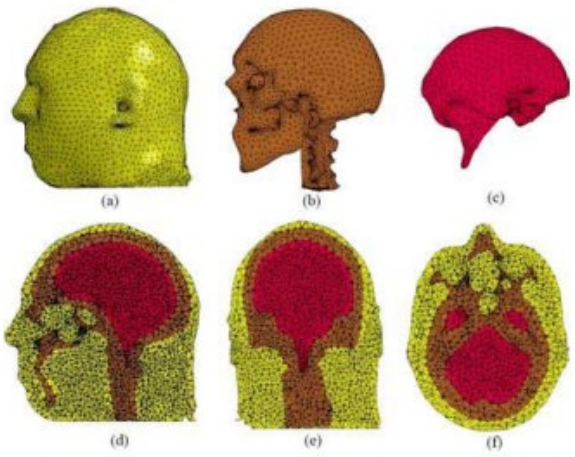

Figure 3. Different views of the human FE model: (a) the outer skin surface; (b) the middle part, the skull; (c) the brain; (d) cross-sectional side view; (e) front view; (f) top view.

[180] 25 TTABVUE 214.

[181] 25 TTABVUE 214.

[182] 25 TTABVUE 217.

Two different construction helmet designs were compared: (1) a ridged helmet, and (2) a smooth helmet. The ridged helmet had three ridges superimposed on the top.[183] Each model had the same suspension system. Below are external and internal views of the simulated construction helmet shell with three ridges on the outer shell along with the two strap suspension system:[184]

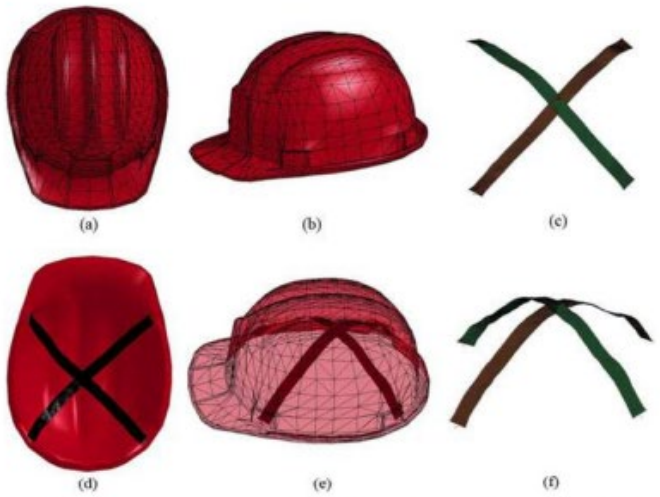

Figure 5. Different views of the helmet model: (a) top view of the helmet; (b) perspective view of the helmet; (c) top view of the straps of the suspension system; (d) bottom view of the helmet, straps are coloured black; (e) side top view of the helmet, set to transparent to display the straps; (f) side view of the straps.

The smooth top helmet depicted below is slightly wider, but identical in height to the three-ridged helmet.[185] The same straps for the ridged helmet were used and the straps were attached in the same location as the ridged helmet.[186] The smooth helmet

[183] 25 TTABVUE 224.

[184] 25 TTABVUE 218.

[185] 25 TTABVUE 224.

[186] 25 TTABVUE 224.

was comprised of the same material as the ridged helmet.[187] The helmet heights were identical.[188]

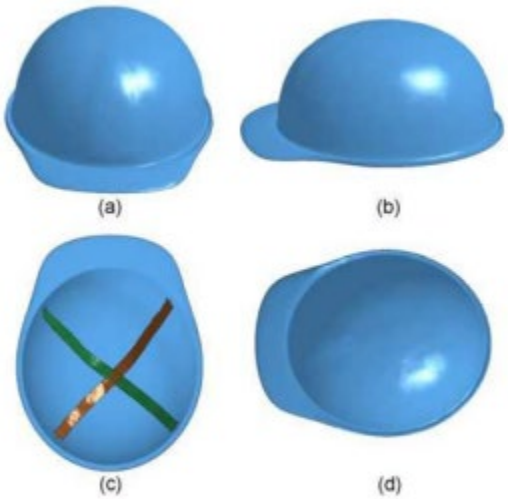

Figure 19. Different views of the smooth helmet: (a) front view; (b) side view; (c) bottom view; and (d) top view.

The authors view the suspension system as "crucial to the effectiveness of the helmet" because "[a]ccording to ANSI Z89.1-2009, the suspension is connected to the harness and acts as an energy absorbing mechanism."[189] Since industrial hard hats are usually molded from high-density polymers or thermoplastics, the authors selected Sabic's Ultem ATX 100, a common thermoplastic for impact and additive for hard hat construction, to represent the helmet shell. Both the ridged and smooth helmets were impacted vertically with a simulated 2-kg weight. The simulations were

[187] 25 TTABVUE 224.

[188] 25 TTABVUE 225.

[189] 25 TTABVUE 218.

conducted until both the tolerance limit and Head Injury Criteria ("HIC")[190] failure were reached. The results were as follows:[191]

> ● For an impact velocity up to 13 m/s, there was little difference in the response of the human head.
>
> ● Fifty percent chance of severe and mild [diffuse axonal injury] DAIs is reached at nearly the same impact velocity, see Figure 21.
>
> ● When examining the plot of skull strain energy, Figure 22, the 50% chance of skull fracture occurs at nearly the same impact velocity.
>
> ● When approaching the HIC score of 1000, the smooth helmet suddenly shows a period of rapid acceleration towards the maximum set of HIC score, shown in Figure 21. The strain energy in the skull also displays a similar rise after an impact speed of 15 m/s for the falling object shown in Figure 23. This is caused by the sudden failure of the helmet shell.
>
> ● The difference between smooth and ridged helmet, when an HIC score of 1000 is reached, is only around 2 m/s.
>
> ●The ridged helmet never experienced catastrophic failure which causes a spike in the recorded values.

The results are displayed in the charts below.[192]

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[190] As explained in the study, "[a] HIC score correlates to a probability for a level of injury. The HIC levels of injury are as follows: Minor head injury is a skull trauma without loss of consciousness, fracture of nose or teeth and superficial face injuries. Moderate head injury is a skull trauma with or without dislocated skull fracture and brief loss of consciousness. Critical head injury is a cerebral contusion, loss of consciousness for more than 12 hours with intracranial hemorrhaging and other neurological signs (Prasad and Mertz 1985). A HIC score of 1000 represents the 'safe' limit of human tolerance." 25 TTABVUE 216.

[191] 25 TTABVUE 224-25.

[192] 25 TTABVUE 225-26.

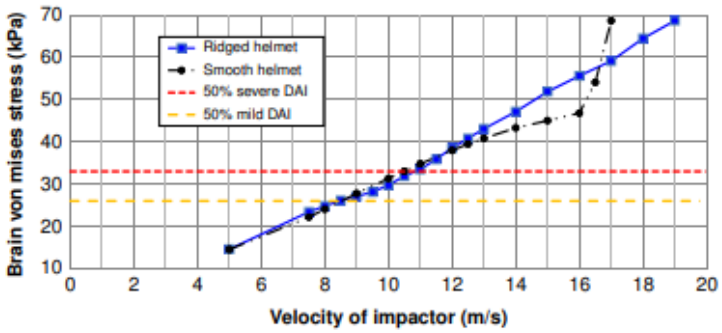

Figure 21. Brain Von Mises stress for top impact with 2-kg weight for the wearer of the smooth helmet or the ridged helmet.

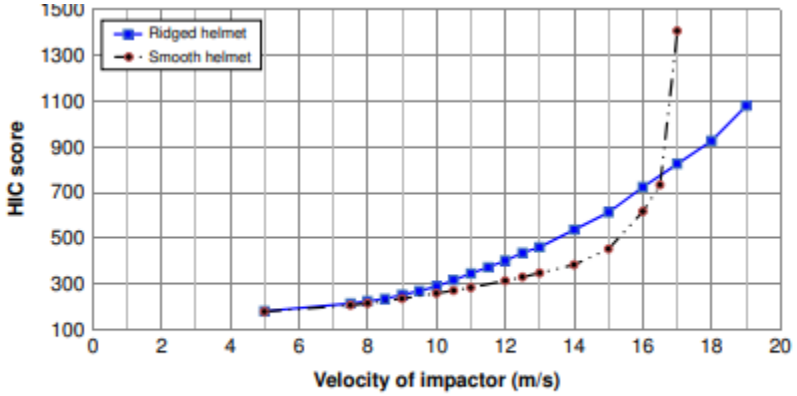

Figure 22. The HIC score for top impact with 2-kg weight for the head form with the ridged or smooth helmet.

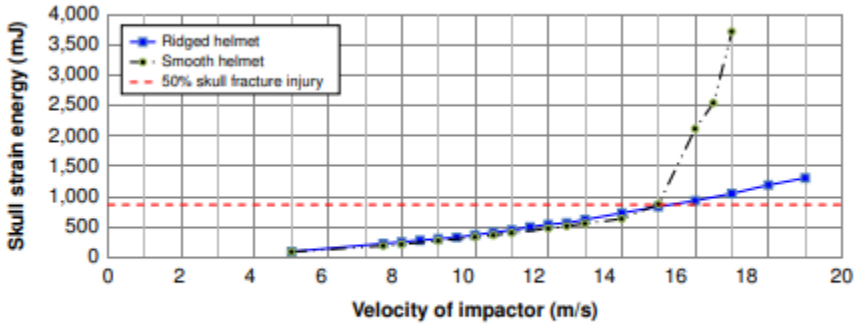

Figure 23. Strain energy for top impact with 2-kg weight in the skull with the smooth helmet or ridged helmet.

The study concluded that a finite element model can predict injury in wearers of construction hard hats to calculate brain injury threshold,[193] with a caveat regarding validation:[194]

> In this study, modelling validation was achieved by comparing with the ULP model results because the ULP model was validated through experiments. However, the proposed and the ULP models have different geometries and material properties. **These factors can bring errors**.

Another limitation of this model the authors acknowledged concerned the design of the suspension straps:[195]

> Note that the helmet suspension utilised for both helmets in this study is one of the simpler and basic designs in the market. Newer suspension systems include more straps, foam liners for the helmet shell and rear suspension ratchet that constrains the helmet to the back of the head as well. These newer systems could cause a dramatic increase in the impact velocity required to reach the different thresholds of injury.

The authors further noted that their "future work includes a comprehensive experiment study either by cadavers or by manikins (hybrid dummies) to validate the proposed simulation model to ensure that the model is accurate in the construction helmet work conditions" and "to carry out comprehensive construction helmet design examples based on available helmets in the market and evaluate the effect of different strap materials."[196]

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[193] 25 TTABVUE 226.

[194] 25 TTABVUE 225 (emphasis added).

[195] 24 TTABVUE 225.

[196] 25 TTABVUE 226.

Petitioner interprets this study as finding that "unlike the alternative smooth helmet designs that Registrant's employees insist are equally viable, construction helmets with multiple ridges suffer 'catastrophic failure' less often on impact and thereby avoid "strain energy in the skull" and skull fracture."[197] The results of this computer simulation are much more nuanced than Petitioner's reading. This study focuses on the development of a finite element model to assess the risk of a head injury when wearing a construction helmet or hard hat. There are marked differences in the designs. The ridged construction hat simulated in the study has three ridges and appears much wider than the two ridges forming the product configuration marks in either the '481 and '482 Ridge Design marks. In addition, the authors noted the use of outdated suspension systems, validation problems in the model, and that their proposed simulation model needed to be further validated for accuracy under construction helmet conditions using either cadavers or dummies. Given these limitations, this finite element model does not definitively establish that either of Respondent's registered marks enhance safety performance of either the cap style or full brim safety helmet.

10. **"Simulation-Based Assessment of Rear Effect to Ballistic Helmet Impact"**[198]

This peer reviewed study uses finite element modeling to analyze ballistic impact and traumatic brain injury. The objective of the study is to determine which impact

[197] Petitioner's Reply Brief, p. 20; 54 TTABVUE 26.

[198] By Jingzhou (James) Yang and Jichang Dai of Texas Tech University, published in Computer-Aided Design and Applications, www.cadanda.com, January 2010. 25 TTABVUE 228-243.

angle results in the highest level of injury under the Head Injury Criterion ("HIC") when a simulated helmeted headform is struck with a bullet. As summarized in the abstract below:[199]

> Ballistic impact is one of the major causes for traumatic brain injury (TBI) and ballistic helmets are designed to provide protection from TBI. In real life, it is impossible to use real human subjects for experiments. Therefore, simulation based-methods are convenient to assess the rear effect to ballistic helmet impact and can provide crucial insights to injury. Rear effect happens when the interior of helmet is deformed and contacts with the human head. This paper proposes a simulation-based method to study the rear effect by using Head Injury Criterion (HIC) when the ballistic helmeted headform is impacted by a bullet with different impact angles and at various impact positions. Commercial software package LS-DYNA is employed to simulate the impact. A high fidelity headform model including detailed skull and brain has been used for the simulation purpose. Helmet and bullet are modeled according to the real shapes. The results show that, with a larger impact angle, the HIC score is smaller and therefore there is less damage to the brain. Based on the HIC scores obtained from the impact simulations at various impact positions, the bullet from back is the most dangerous position to the wearer.

The three elements of the finite element model were the headform, bullet and helmet. The helmet used in the model was smooth and has no ridges superimposed on the outer shell. Below is a description and computer generated diagram of the helmet:[200]

> The helmet is modeled as the geometry similar to the US Personal Armor System Ground Troops' (PASGT), North Atlantic Treaty Organization (NATO) standard in Fig. 7. The total element number is 11,175. The thickness of shell

[199] 25 TTABVUE 229.

[200] 25 TTABVUE 234.

is 8mm. The total mass of helmet is 1.15Kg similar to most of the helmets in the market.

Fig. 7: The FE model of helmet.

Four different bullet impact positions were simulated.[201] Below is a diagram showing the computer simulated model: [202]

Fig. 3: The complete FE model includes headform, helmet, and bullet.

[201] 25 TTABVUE 238.

[202] 25 TTABVUE 232-233.

The study concludes that "both the impact angle and impact position have great effect on the HIC score. With a larger impact angle, the bullet will more likely skid over the surface of helmet and have less kinetic energy transferred to the helmet. When the bullet hits the back part of helmet, the largest HIC score, … has been observed compared to the situations when the bullet hits" the top, front, or the side.[203]

The only variables tested were the ballistic impact angle. The design of the helmet remained constant as smooth and not ribbed. Thus, this finite element model does not establish that Respondent's Ridge Designs are essential to the use or purpose of its safety helmets. Nor does the study prove that the Ridge Designs decrease the cost of manufacturing safety helmets or increase their quality.

C. Conclusion under *Inwood*

None of the studies submitted by Petitioner support a finding that Respondent's Ridge Designs as depicted in either the '481 or '482 Registrations are essential to the use or purpose of the safety helmets or affect the cost or quality. Of Petitioner's ten submissions with Mr. Cabal's testimony declaration, only two analyze the safety performance of ridges on helmets: (1) "Computational Analysis and Design of Components of Protective Helmets," which involved a comparison of linear vertical impacts on a computer simulated single ridged equestrian helmet versus a vented equestrian helmet, and (2) "Simulation-based Assessment for Construction Helmets,"

[203] 25 TTABVUE 240.

a finite element model comparing linear vertical impacts of a computer simulated smooth helmet versus a triple ridged cap style helmet.[204]

As explained above,[205] the scope of our inquiry is limited to whether Respondent's '481 and '482 Ridge Design Marks as defined in their drawings and descriptions are functional.[206] The collapsed "V" shaped single ridge modeled on the equestrian helmet and evaluated for impact dissipation bears no resemblance to either the '481 or '482 Ridge Designs.

The same holds true for the construction hats modeled in the finite element analysis comparing the brain Von Mises stress, Head Injury Criteria (HIC) and brain strain scores for simulated smooth versus ridged safety helmets impacted vertically with an identical weight. As explained above, the ridged construction hat simulated in the study has three ridges, and each ridge appear wider than the two ridges forming the product configuration marks in either the '481 and '482 Registrations. Our analysis of Petitioner's Section 2(e)(5) claim pertains to the actual designs depicted in the registrations, not designs that are approximate. The authors also noted that the validation methodology was subject to errors, and that the results of their proposed simulation model needed to be validated for accuracy under actual construction helmet conditions using either cadavers or manikins. Given the model's limitations, it does not establish that the specific trade dress in Respondent's '481

[204] See discussion in Sections VIII.B.2 and VIII.B.9, *supra*.

[205] See discussion in Section IV ("Claims Tried"), *supra*.

[206] See discussion in Section VI ("The Marks"), *supra*.

and '482 marks is essential to the use, purpose, quality or manufacturing cost of either Respondent's cap style or full brim safety helmets.

Accordingly, on this record, Petitioner has failed to meet its burden under the preponderance of the evidence standard and rebut the presumption that Respondent's Ridge Designs are valid and nonfunctional under *Inwood.* Perhaps on a more developed record, we would have found otherwise.

D. Has Petitioner Made a Prima Facie Case of Functionality under the Morton-Norwich Factors

Having found that Respondent's marks are not functional under *Inwood,* we now turn to the *Morton-Norwich* factors. To reiterate, *Morton-Norwich* identifies the following four inquiries or categories of evidence as helpful in determining whether a particular design is functional:

> (1) the existence of a utility patent disclosing the utilitarian advantages of the design;
>
> (2) advertising materials in which the originator of the design touts the design's utilitarian advantages;
>
> (3) the availability to competitors of functionally equivalent designs; and
>
> (4) facts indicating that the design results in a comparatively simple or cheap method of manufacturing the product.

Morton-Norwich, 213 USPQ at 15-16.[207]

[207] As explained in n.64, *supra,* there are two types of functionality: (1) utilitarian functionality; and (2) "aesthetic functionality."; it is clear that the claim before us is utilitarian functionality and not aesthetic functionality.

Not all four *Morton-Norwich* factors are necessarily relevant to a finding of functionality, nor do all four factors have to weigh in favor of functionality to support a finding of functionality. *Change Wind*, 123 USPQ2d at 1456; *Heatcon,* 116 USPQ2d at 1370; *Valu Eng'g*, 61 USPQ2d at 1424. *See, e.g., In re Pohl-Boskamp GmbH & Co.*, 106 USPQ2d 1042 (TTAB 2013) (holding the flavor peppermint functional for nitroglycerin lingual spray based on evidence that peppermint oil, which impart[ed] a flavor of peppermint, [could] improve the effectiveness of sublingual nitroglycerin spray); *In re Udor U.S.A., Inc.*, 89 USPQ2d 1978 (TTAB 2009) (affirming the functionality refusal of "a round disk head on a sprayer nozzle" where the third and fourth factors showed that applicant's competitors manufactured and marketed spray nozzles with similar features, the shape was preferred in the industry, and it appeared efficient, economical, and advantageous, even though applicant's utility patent and advertising did not weigh in favor of functionality); *In re N.V. Organon*, 79 USPQ2d 1639, 1647 (TTAB 2006) (holding orange flavor for pharmaceuticals to be functional based on applicant's touting of the utilitarian advantages of the flavor and the lack of evidence of acceptable alternatives, even though the mark was not the subject of a patent or patent application and there was no evidence that the flavor affected the cost of the product). The four *Morton-Norwich* factors are not exclusive, however, for functionality "depends upon the totality of the evidence." *Heatcon*, 116 USPQ2d at 1370 (quoting in part *Valu Eng'g*, 61 USPQ2d at 1424).

If Petitioner meets the initial burden of establishing a prima facie case of functionality, the burden then shifts to Respondent to prove non-functionality. *Valu*

Eng'g, 61 USPQ2d at 1429; *see also Textron, Inc. v. U.S. Int'l Trade Comm'n*, 753 F.2d 1019, 224 USPQ 625, 629 (Fed. Cir.1985) ("[A]n applicant for trademark protection has the burden to prove that the design is nonfunctional, once a prima facie case of functionality is made by the opponent."); *Goodyear Tire & Rubber Co. v. Interco Tire Corp*., 49 USPQ2d 1705, 1717-18 (TTAB 1998) ("Opposer, of course, has the burden of establishing a prima facie case of de jure functionality for applicant's ... design in order to shift the burden to applicant of showing that its subject design is not functional.").

1. **Whether a Utility Patent Discloses Utilitarian Advantages of the Design**

A utility patent is strong evidence that the claimed features are essential to the use or purpose of the article (or affect the cost or quality of the item), and may constitute sufficient evidence of functionality standing alone. *TrafFix*, 58 USPQ2d at 1005. A utility patent need not "claim the exact configuration for which trademark protection is sought in order to undermine an applicant's assertion that an applied-for mark is not de jure functional." *In re Becton, Dickinson & Co.,* 675 F.3d 1368, 102 USPQ2d 1372, 1377 (Fed. Cir. 2012); *Change Wind*, 123 USPQ2d at 1456; *cf. In re Loggerhead Tools*, LLC, 119 USPQ2d 1429, 1432 (TTAB 2016) (comparing claimed mark to both utility patent and design shown in design patent). Expired patents and patent applications are also probative evidence under this inquiry. *See TrafFix,* 58 USPQ2d at 1005 (expired patent); *Kistner,* 97 USPQ2d at 1917 (expired patent); and *Valu Eng'g*, 61 USPQ2d at 1429 (patent application).

There is no evidence in the record that either of Respondent's Ridge Design marks are the subject of any utility patent or pending application. Nor is there any evidence that either mark was the subject of an expired utility patent.

The only evidence Petitioner submitted in this regard is a patent application titled "System And Method For Designing And Manufacturing A Protective Helmet Tailored To A Select Group Of Helmet Wearers."[208] This utility patent application claims a method for manufacturing protective sport helmets using advanced mathematical techniques based on data collected about a player's head shape and prior impacts sustained.[209] It does not address a benefit to ridges or for that matter any design features on top of a safety helmet. As such, it has no bearing on whether the Ridge Designs are functional.

This first *Morton-Norwich* therefore factor weighs against a finding of functionality.[210]

2. **Whether Advertising Touts the Design's Utilitarian Advantages**

"'If a seller advertises the utilitarian advantage of a particular feature of its product, this constitutes strong evidence of functionality.'" *MK Diamond,* 2020 USPQ2d 10882, at *17 (quoting *Kistner*, 97 USPQ2d at 1924).

Petitioner points to no evidence that Respondent touts the utilitarian advantages of the Ridge Design marks as displayed on either the '481 or '482 Registrations. This

[208] 25 TTABVUE 244-305.

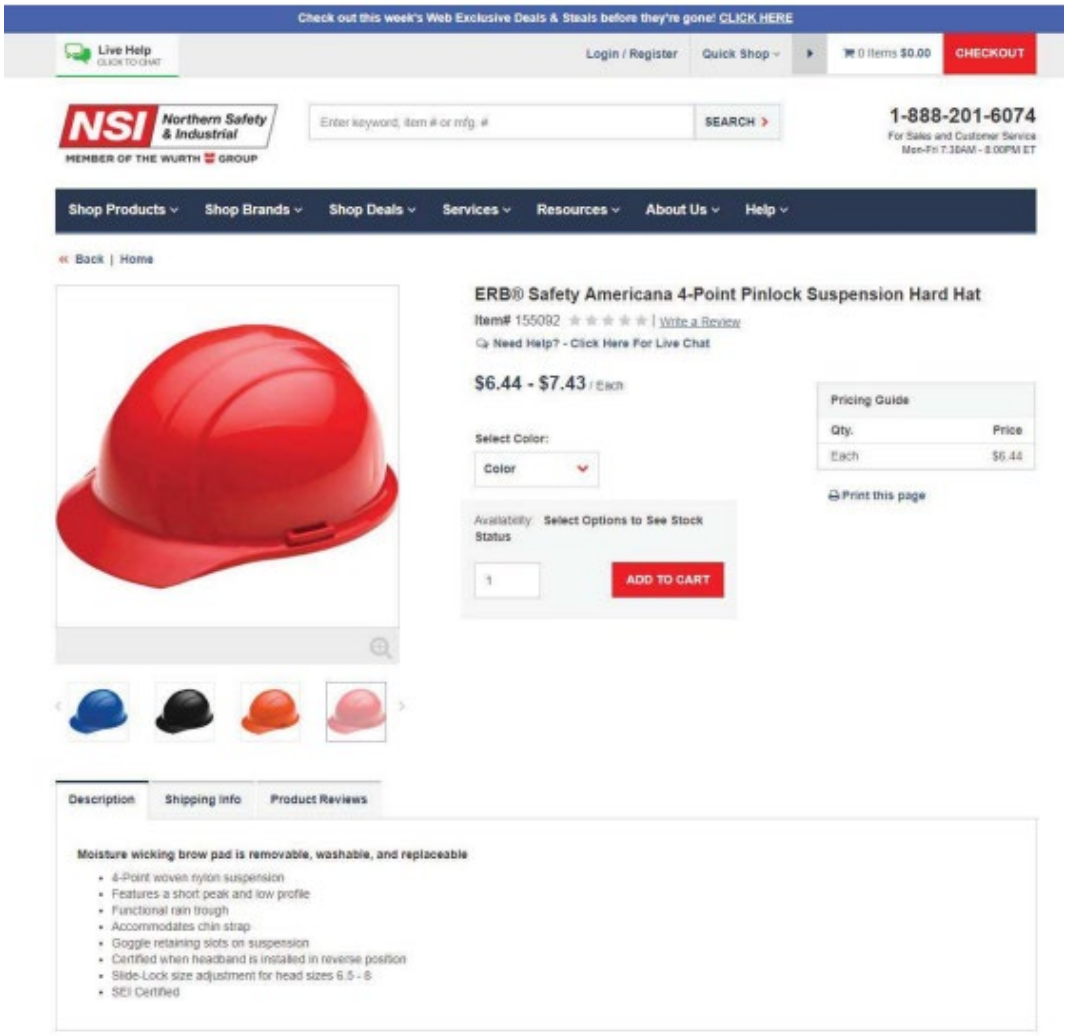
[209] 25 TTABVUE 244.

[210] Contrary to Respondent's assertions, Petitioner's failure to discuss any of the *Morton-Norwich* factors does not constitute a "waiver" of the argument. Respondent's Brief, p. 29; 53 TTABVUE 30. Rather, it is the Board's prerogative to consider each factor.

is consistent with our review of the record showing that Respondent's advertisements of its cap-style and full-brim hard hats bearing the Ridge Design marks emphasize other features, and are silent about the Ridge Designs in both the Americana cap and brim style safety helmets.

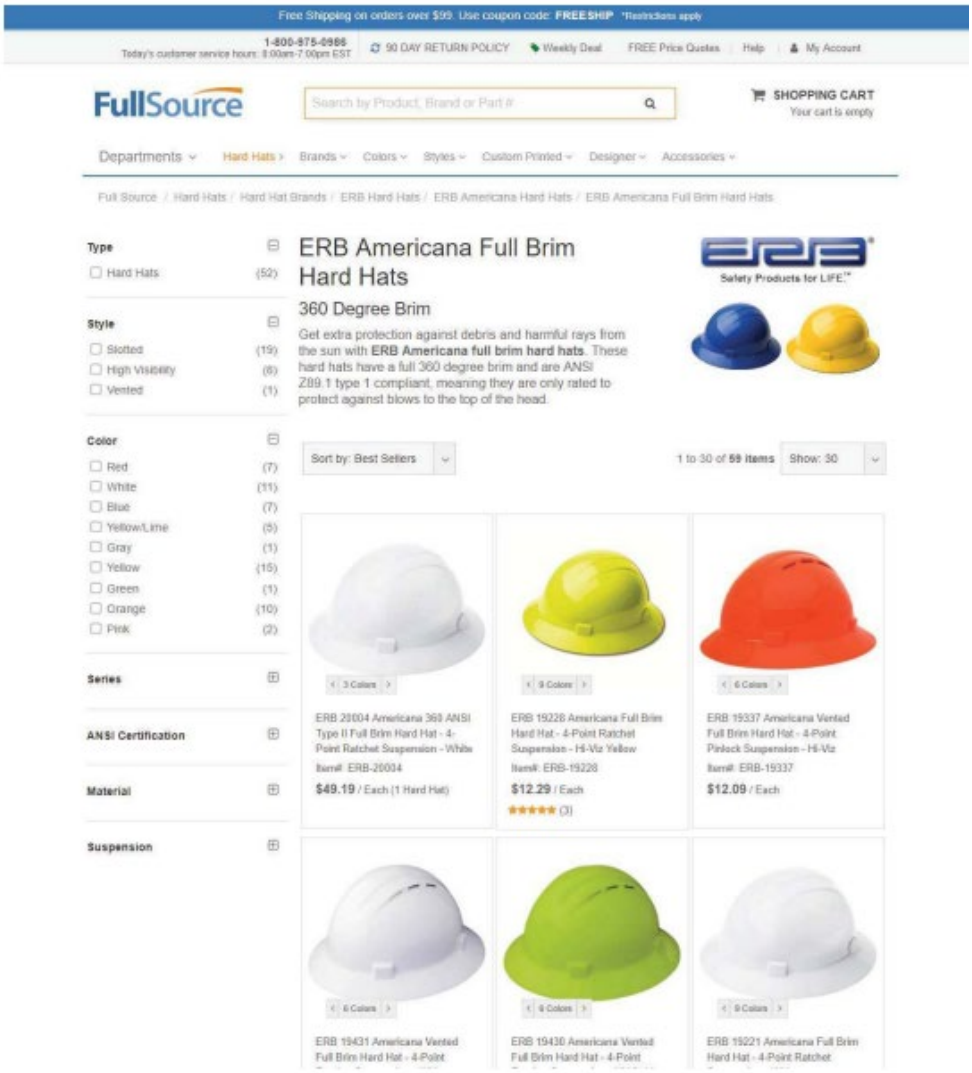
By way of illustration, we note the following online wholesale catalog advertising for the cap-style Americana brand hard hat bearing the '481 Ridge Design. The description of Respondent's safety helmet does not mention the ridge design; rather, other features are highlighted such as the "functional rain trough," "4-point woven nylon suspension," and "short peak and low profile," "goggle retaining spots on suspension," and "side-lock size adjustment" for certain head sizes."[211]

[211] Eads Testimony Decl. ¶ 55, Ex. DX13; 44 TTABVUE 13, 156.



No mention is made of the stacked, superimposed ridges on the top of the helmet shell running front to mid-back or any safety advantages to these features. Likewise, the Americana full-brim hard hat bearing the '482 mark touts other features such as the "4-point woven nylon suspension" as well as a "full 360 degree brim" providing "extra protection from debris and harmful rays from the sun."[212]

[212] 44 TTABVUE 127-28 and 131.



Again, there is no mention of two ridge, stacked and superimposed ridges on the top of the helmet shell, running front to mid-back as it appears on the '482 mark nor any utilitarian benefits of the ridges.[213]

[213] Additional examples of Respondent's advertisements are discussed in more detail below in Section IX. "Acquired Distinctiveness."

We have only noted a few examples in the record. Suffice to say, none tout the utilitarian advantages of either the Ridge Designs. As a result, we find that the second *Morton-Norwich* factor also weighs against a finding of functionality.

3. **Availability of Functionally Equivalent Designs**

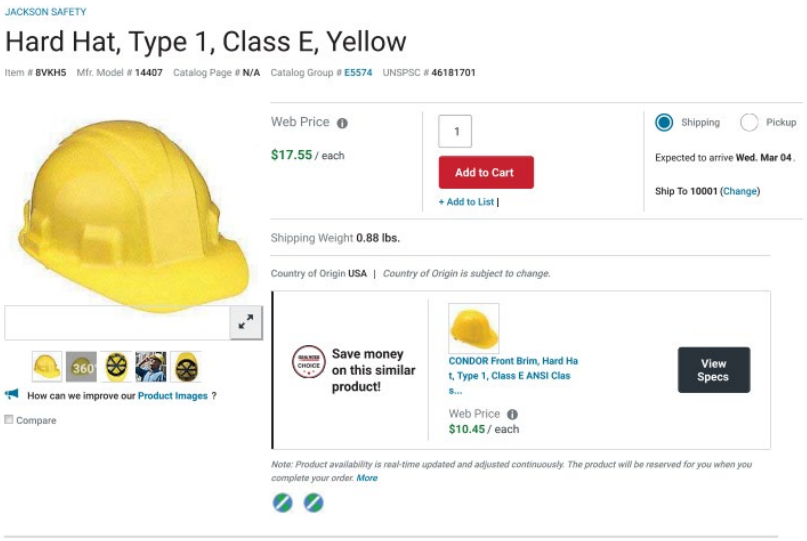
We next consider whether functionally equivalent designs are available to competitors. As the Board stated in *Change Wind,* 123 USPQ2d at 1462:

> Where relevant patents and/or advertising do not themselves establish functionality, the availability of alternate designs can "be a legitimate source of evidence to determine whether a feature is functional," *Valu Eng'g*, 61 USPQ2d at 1427, and may be relevant to show whether or not the design sought to be registered will hinder competition. *Morton-Norwich*, 213 USPQ at 16.

"If the feature asserted to give a product distinctiveness is the best, or at least one, of a few superior designs for its de facto purpose, it follows that competition is hindered." *In re Bose Corp.*, 772 F.2d 866, 227 USPQ 1, 5-6 (Fed. Cir. 1985).

Nevertheless, the mere fact that other designs may be available does not necessarily mean that a design is not functional. *See TrafFix*, 58 USPQ2d at 1007; *Bose,* 227 USPQ at 5-6; *In re Van Valkenburgh,* 97 USPQ2d 1757, 1763 (TTAB 2011). "The availability of alternative designs does not convert a functional design into a non-functional design. The question is not whether there are alternative designs that perform the same basic function but whether these designs work 'equally well.'" *Kistner*, 97 USPQ2d at 1928 (internal citations omitted). If the evidence shows the existence of a number of functionally equivalent alternative designs that work "equally well," such that competitors do not need applicant's design to compete effectively, this factor does not support functionality. *Dietrich*, 91 USPQ2d at 1637.

Petitioner's witness Mr. Cabal testified that as part of his position as "Senior Global Offering Manager, Eye, Face and Head Solutions," he is "familiar with the competitive landscape of safety helmets" and that he was personally aware of "many safety helmets" that "include ridges on the plastic helmet shell."[214] He submitted as examples of alternative designs online website advertisements or catalog offerings of hard hats with ridges manufactured by competitors such as Jackson Safety, OccuNomix, Uline, Pyramex, PipDynamic, Euroguard, and Schuberth.[215] By way of illustration, below are some examples:



[214] Cabal Testimony Decl. ¶ 10; 25 TTABVUE 4.

[215] Cabal Testimony Decl. Ex. PX4, 25 TTABVUE 19-40.

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Meets ANSI Z89.1-2014

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OccuNomix V100 Vulcan Cap Style Hard Hat - 6-Point Pinlock Suspension - Hi-Viz Lime

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$9.29 / Each

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Color: **Hi-Viz Lime**

Quantity	Price
1-39	$9.29
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100+	$8.83

Qty: 1

Add to Cart

Stock Status

In stock

Free Shipping Eligible

Item Attributes

Department: Hard Hats
Brands: OccuNomix
Type: Hard Hats
Style: Slotted
Style: Cap Style
Style: High Visibility
Color: Green
Series: Vulcan
ANSI Certification: ANSI Type I
Material: Plastic
Suspension: Pinlock

Hard Hats Product Flyer

Description | Reviews | Return Policy & Shipping Info | UPCs

Item#: OCCU-V100-HVL Description

Compliance: ANSI Z89.1, Type I, Class E & G. Outer shell is made in USA of high-density polyethylene that resists penetration, deflects blows to the head from falling objects, reduces danger from exposure to low and high voltage electrical conductors, is slow burning and water resistant. V100 construction features a rain trough, universal accessory slots, eyelets for affixing chin strap and embossed date of manufacture. Inside, the suspension is too advanced to be called "Regular," the Vulcan Hard Hat features an ultra soft yet strong, super comfortable, 6 Point woven nylon web - crown strap system that acts as a rugged shock absorber with six load-bearing points to spread impact over a larger area, and stabilize the Hard Hat. Suspension also features a no hassle "Squeeze-Lock" sizing adjustment, in 1/8" increments and is non-irritating. Included FREE with Suspension - a detachable plush cotton terry, laminated over soft foam, Front Sweatband to enhance comfort and snug sizing without leaving marks on forehead. Customize your Hard Hat selection with Regular or Reflective Logos and Graphics. We deliver amazing graphic detail, from one color to photographic quality, in short lead times, at low prices.

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OccuNomix V100 Features:

- Meets ANSI Z89.1 Type 1, class E & G
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- Front cotton terry sweatband
- 6-point deluxe nylon squeeze-lock suspension
- Rain trough and Accessory slots
- Hard hat shell made in the USA

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(4)
$9.69 / Each

MSA 815565 V-Gard Hard Hat - Fas-Trac Suspension - Bright Lime Green
(5)
$16.09 / Each

North A29 K2 Series Hard Hat - Quick-Fit Suspension - Dark Green
$5.10 / Each

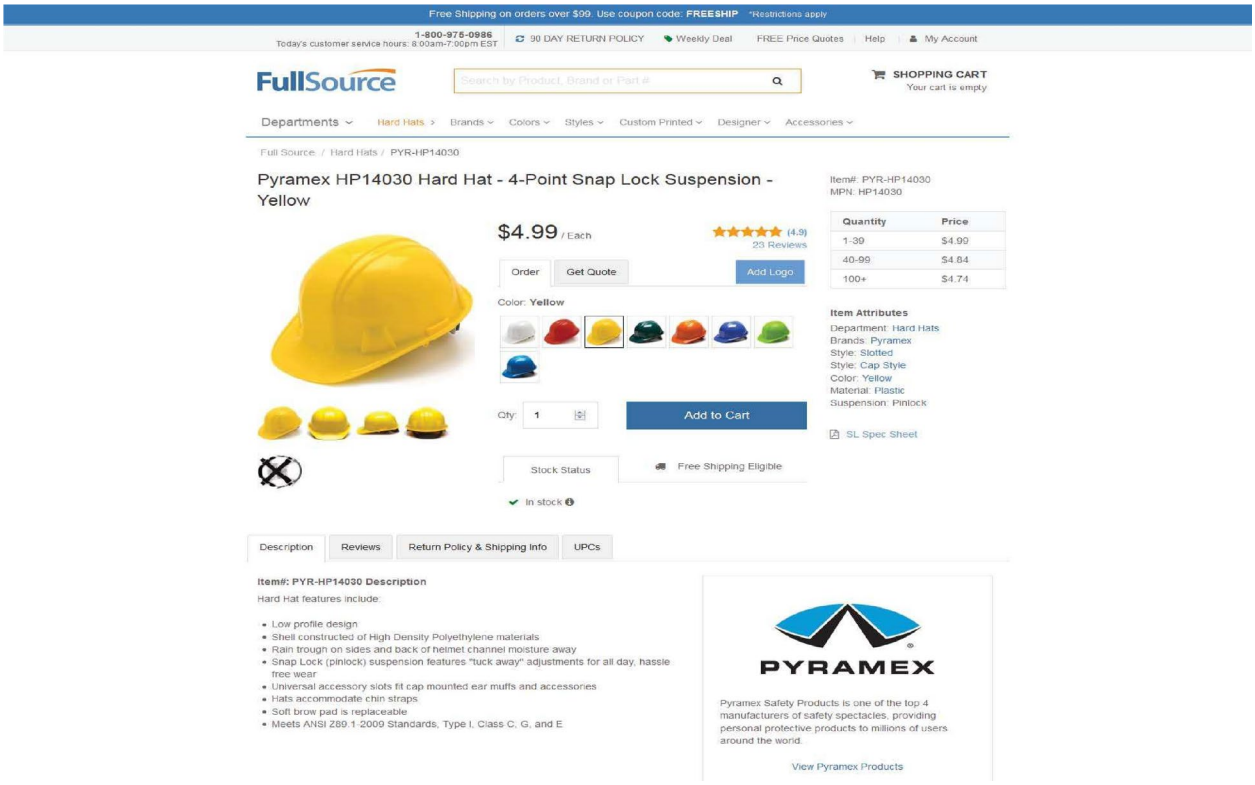
OccuNomix V200 Vulcan Cap Style Hard Hat - 6-Point Ratchet Suspension - Hi-Viz Lime
$12.59 / Each

Weekly Deal

Bullard C30HOP Classic Hard Hat - Pinlock Suspension - Hi-Viz Orange
(1)
$13.99 / Each (1 Hard Hat)

Weekly Deal

Bullard S61HOP Standard Hard Hat - Pinlock Suspension - Hi-Viz Orange
$8.89 / Each (1 Hard Hat)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Hard Hats
Brands
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Styles
Custom Printed
Designer
Accessories
Full Source / Hard Hats / PYR-HP14030
Pyramex HP14030 Hard Hat - 4-Point Snap Lock Suspension - Yellow
Item#: PYR-HP14030
MPN: HP14030
$4.99 / Each
(4.9)
23 Reviews
Order
Get Quote
Add Logo
Color: Yellow
Quantity
Price
1-39
$4.99
40-99
$4.84
100+
$4.74
Item Attributes
Department: Hard Hats
Brands: Pyramex
Style: Slotted
Style: Cap Style
Color: Yellow
Material: Plastic
Suspension: Pinlock
SL Spec Sheet
Qty: 1
Add to Cart
Stock Status
Free Shipping Eligible
In stock
Description
Reviews
Return Policy & Shipping Info
UPCs
Item#: PYR-HP14030 Description
Hard Hat features include:
Low profile design
Shell constructed of High Density Polyethylene materials
Rain trough on sides and back of helmet channel moisture away
Snap Lock (pinlock) suspension features "tuck away" adjustments for all day, hassle free wear
Universal accessory slots fit cap mounted ear muffs and accessories
Hats accommodate chin straps
Soft brow pad is replaceable
Meets ANSI Z89.1-2009 Standards, Type I, Class C, G, and E
PYRAMEX
Pyramex Safety Products is one of the top 4 manufacturers of safety spectacles, providing personal protective products to millions of users around the world.
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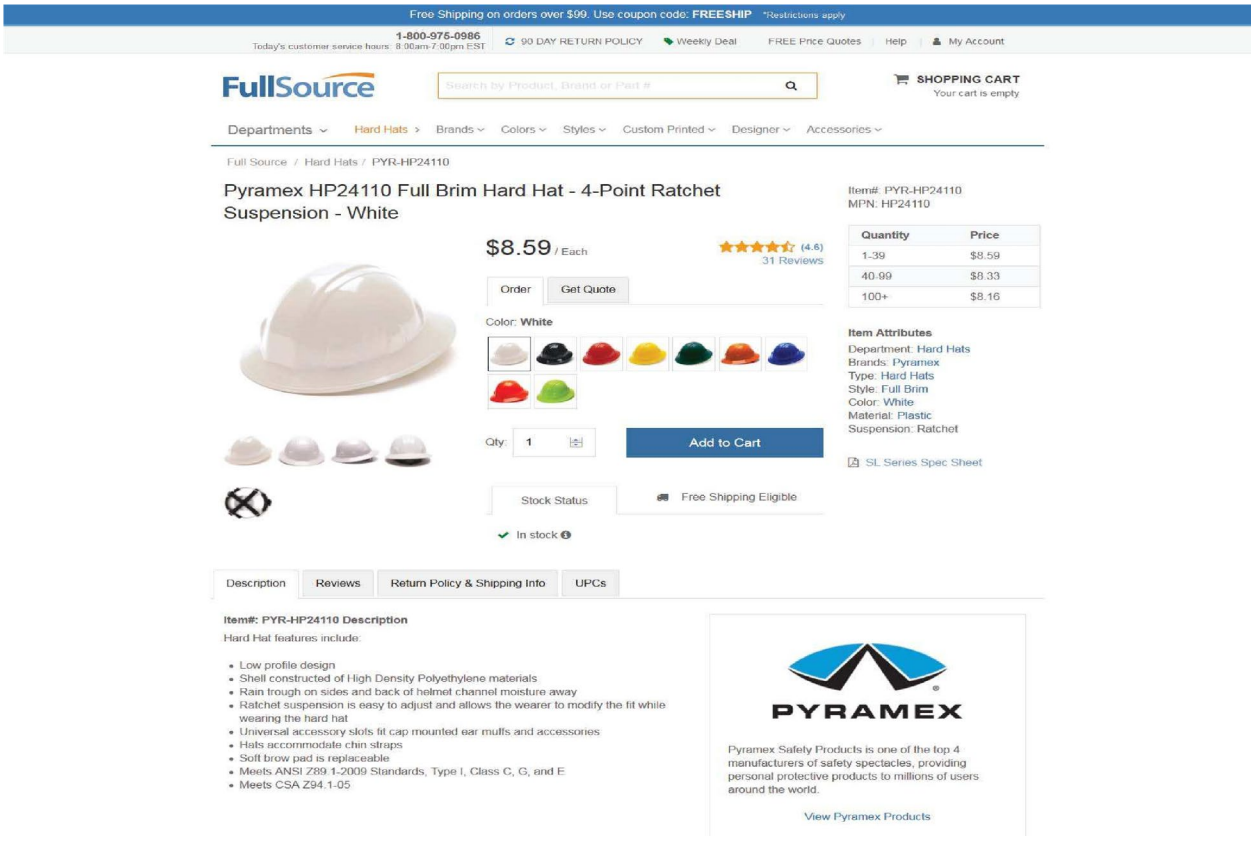
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Your cart is empty
Departments
Hard Hats
Brands
Colors
Styles
Custom Printed
Designer
Accessories
Full Source / Hard Hats / PYR-HP24110
Pyramex HP24110 Full Brim Hard Hat - 4-Point Ratchet Suspension - White
Item#: PYR-HP24110
MPN: HP24110
$8.59 / Each
(4.6)
31 Reviews
Order
Get Quote
Color: White
Quantity
Price
1-39
$8.59
40-99
$8.33
100+
$8.16
Item Attributes
Department: Hard Hats
Brands: Pyramex
Type: Hard Hats
Style: Full Brim
Color: White
Material: Plastic
Suspension: Ratchet
SL Series Spec Sheet
Qty: 1
Add to Cart
Stock Status
Free Shipping Eligible
In stock
Description
Reviews
Return Policy & Shipping Info
UPCs
Item#: PYR-HP24110 Description
Hard Hat features include:
Low profile design
Shell constructed of High Density Polyethylene materials
Rain trough on sides and back of helmet channel moisture away
Ratchet suspension is easy to adjust and allows the wearer to modify the fit while wearing the hard hat
Universal accessory slots fit cap mounted ear muffs and accessories
Hats accommodate chin straps
Soft brow pad is replaceable
Meets ANSI Z89.1-2009 Standards, Type I, Class C, G, and E
Meets CSA Z94.1-05
PYRAMEX
Pyramex Safety Products is one of the top 4 manufacturers of safety spectacles, providing personal protective products to millions of users around the world.
View Pyramex Products

One significant shortcoming is that Mr. Cabal does not address in his testimony whether any of these alternative ridge designs superimposed on safety helmets work "equally well" in absorbing impact as Respondent's Ridge Designs. Nor is this evident from the competitor product catalogs and website advertisements.

By contrast, Respondent's Technical Director Mr. Crosby testified that the "two ridge designs of [Respondent's] hard hats are not related to the use of or safety provided by the hard hat" and that "Industrial Hard Hats do not require any ribs, ridges or other types of projections in order to meet U.S. safety requirements."[216] He further testified he has personal "tested smooth-domed helmets that offered excellent force transmission (impact) attenuation."[217] In his view, "[m]aterial characteristics, wall thickness, and the processing parameters used in the molding of safety helmets are the primary factors in determining hard hat performance."[218] Mr. Crosby laid the proper foundation to testify as a fact witness on this subject by explaining his professional background in his testimony declaration:[219]

> Since 1993, I have been a member of several ISEA (International Safety Equipment Association) committees including Eye and Face Protection, Hearing Protection, Head Protection, and High Visibility Apparel. These committees write the ANSI/ISEA Standards setting the general design requirements, testing and performance requirements, and product labelling for the products that they oversee. Voting representatives on these committees are selected by the respective member companies. ¶ 7.

[216] Crosby Testimony Decl. ¶ 32; 40 TTABVUE 8.

[217] Crosby Testimony Decl. ¶ 33; 40 TTABVUE 8.

[218] Crosby Testimony Decl. ¶ 33; 40 TTABVUE 8.

[219] 40 TTABVUE 2-8.

> I have been actively involved in industrial head protection standards development for the past twenty-eight (28) years, including the published 1997, 2003, 2009 and 2014 revisions of the ANSI/ISEA Z89.1 Standard – "American National Standard for Industrial Head Protection." ¶ 8.
>
> I have served as the ISEA Head Protection Committee's Vice-Chairman. This committee consists of ten leading designers and manufacturers of industrial protective helmets, including such companies as 3M and Honeywell. The purpose of this committee is to develop industrial head protection product standards in the United States and to interact with other similar standards authoring groups around the world. The Chairmen and Vice-Chairmen of an ISEA committee are nominated by ISEA member companies but elected by majority vote of the committee members. ¶ 8.
>
> I have personally tested thousands of safety helmets to verify compliance with the ANSI/ISEA Z89.1 Standard, including those with one or more rib or ridge in various configurations and those that are perfectly smooth. ¶ 11.

Mr. Crosby also highlights the following safety helmet models in his testimony declaration as "alternative hard hat designs" that are "equally efficient and competitive with [Respondent's] hard hat designs."[220] Below are reproduced the images within his testimony declaration of cap and wide brim style safety helmets:

[220] Crosby Testimony Decl. ¶¶ 28-29; 40 TTABVUE 7. *See also* Padgett Testimony Decl. ¶ 33, 38 TTABVUE 6-7 ("I am aware of alternative cap style hard hat designs that are available in the marketplace. Representative images of competitor hard hats available in the marketplace and the manufacturers of those hard hats are shown below [from MSA, Bullard, Pyramex, and Fastenal]. …") and ¶ 41 ("I am aware of numerous alternative [full brim style] hard hat designs that are available in the marketplace. Representative competitor hard hats available in the marketplace and the manufacturers of those hard hats are shown below [from MSA, Bullard, Pyramex, and 3M]. As can be seen, these hard hats incorporate distinctively different design features. These distinctive features, or the lack thereof, distinguish these hard hats from those provided by ERB.").

MSA

Bullard

Pyramex

Fastenal

MSA

Bullard

Pyramex

3M

Respondent's witnesses Mr. Warren and Mr. Padgett confirmed Mr. Crosby's testimony that "ridges such as those on [Respondent's] cap style Americana hard hat, [Respondent's] full brim style Americana hard hat, and the other hard hat designs shown above are not required under the ANSI/ISEA Z89.1 Standard for Industrial Head Protection."[221] They each laid the proper foundation for their testimony by stating their knowledge about "the ANSI/ISEA Z89.1 Standard for Industrial Head Protection."[222]

This *Morton-Norwich* factor therefore weighs against a finding of functionality as well.

[221] Warren Testimony Decl. ¶ 28; 41 TTABVUE 6; and Padgett Testimony Decl. ¶ 49; 38 TTABVUE 10.

[222] Warren Testimony Decl. ¶ 27, 41 TTABVUE 6; and Padgett Testimony Decl. ¶ 48; 38 TTABVUE 10.

4. **The Design Results in a Comparatively Simple or Cheap Method of Manufacturing the Product**

Petitioner submitted no evidence that the design of Respondent's marks are comparatively simple or cheap to manufacture. The only evidence we have regarding this *Morton-Norwich* factor is from Respondent. Mr. Crosby, Respondent's Technical Director, and Gary Warren, a former Board member of Respondent and former president of Aero Technologies, a manufacturer of hard hats, each testified that the two ridges superimposed on the top of each safety helmet does not lower production costs, but instead raises them due to the increase in surface area.[223] Mr. Padgett, Respondent's Vice President of Manufacturing further added "the addition detail of [Respondent]'s Americana hard hats, namely the two ridges on top, increases the cost of the molds to make [Respondent]'s Americana hard hats relative to the cost of the molds to make hard hats with less or no details."[224]

Again, this *Morton-Norwich* factor weighs against a finding of functionality.

5. **Conclusion under *Morton-Norwich***

To summarize our findings under the *Morton-Norwich* factors:

> (1) no patent, expired patent or patent application specifically discloses the benefits of the Ridge Design registered marks on safety helmets or hard hats;
>
> (2) no advertising by Respondent mentions a benefit arising from the Ridge Designs;
>
> (3) there appear to be alternative designs that satisfy federal regulations and ANSI standards, and ANSI

[223] Crosby Testimony Decl. ¶¶ 30-31, 40 TTABVUE 7-8; and Warren Testimony Decl. ¶ 26; 41 TTABVUE 6.

[224] Padgett Testimony Decl. ¶ 27; 38 TTABVUE 10.

> standards do not require ridges superimposed on safety helmets; and
>
> (4) there is no benefit as to either cost or ease of manufacture attributable to the Ridge Designs.

None of the Morton-Norwich factors weigh in favor of finding functionality. Thus, based on the record before us, we find that Petitioner failed to meet the initial burden of establishing a prima facie case of functionality as to both the '481 and '482 Ridge Designs. No burden shifting to Respondent to prove non-functionality is required. *See Valu Eng'g,* 61 USPQ2d at 1429. Accordingly, we dismiss Petitioner's functionality claims under Trademark Act Section 2(e)(5).

IX. Lack of Acquired Distinctiveness under Section 2(f)

Having found that the registered marks are not functional, we now consider the claim that the Ridge Designs lack acquired distinctiveness under Trademark Act Section 2(f), 15 U.S.C. § 1052(f).

A. Acquired Distinctiveness for Product Configurations

Product designs are not inherently distinctive, and can be registered as a mark only on a showing of acquired distinctiveness. *AS Holdings, Inc. v. H & C Milcor, Inc.*, 107 USPQ2d 1829, 1837 (TTAB 2013); *see also Wal-Mart*, 54 USPQ2d at 1069 ("Consumers are aware of the reality that, almost invariably, even the most unusual of product designs — such as a cocktail shaker shaped like a penguin — is intended not to identify the source, but to render the product itself more useful or more appealing."). This is consistent with registration of Respondent's involved Ridge Designs under Section 2(f), which constitutes a concession that its '481 and '482

registered marks are not inherently distinctive. *See Cold War Museum*, 92 USPQ2d at 1629 ("[A]n applicant's reliance on Section 2(f) during prosecution presumes that the mark is descriptive.").

A mark has acquired distinctiveness "if it has developed secondary meaning, which occurs when, 'in the minds of the public, the primary significance of a [mark] is to identify the source of the product rather than the product itself.'" *Wal-Mart*, 54 USPQ2d at 1068 (quoting *Inwood*, 214 USPQ at 4 n.11). *See e.g., In re McIlhenny Co.*, 278 F.2d 953, 126 USPQ 138, 140-41 (CCPA 1960) ("Here we have a little bottle with no features particularly connecting it with the pepper sauce except the pepper sauce itself …"); *see also Stuart Spector Designs Ltd. v. Fender Musical Instruments Corp.*, 94 USPQ2d 1549, 1554 (TTAB 2009) ("An applicant must show that the primary significance of the product configuration in the minds of consumers is not the product but the source of that product in order to establish acquired distinctiveness."). "The amount and character of evidence required to establish acquired distinctiveness depends on the facts of each case and the nature of the mark sought to be registered." *In re Gen. Mills IP Holdings II, LLC,* 124 USPQ2d 1016, 1018 (TTAB 2017) (citing *Roux Labs., Inc. v. Clairol Inc.*, 427 F.2d 823, 166 USPQ 34, 39 (CCPA 1970) and *In re Hehr Mfg. Co.*, 279 F.2d 526, 126 USPQ 381, 383 (CCPA 1960)). There is no fixed rule for the amount of proof necessary to demonstrate acquired distinctiveness, but the burden is heavier for product configurations than for word marks. *Stuart Spector*, 94 USPQ2d at 1554. *See EFS Mktg. Inc. v. Russ Berrie & Co.,* 76 F.3d 487, 37 USPQ2d 1646, 1649 (2d Cir. 1996) ("[C]onsumers do not associate the design of a product with

a particular manufacturer as readily as they do a trademark or a product-packaging trade dress."). For proposed marks that are not inherently distinctive because they consist of product designs, evidence of five years' use in commerce considered alone is generally not sufficient to show acquired distinctiveness. *See R.M. Smith*, 222 USPQ at 3 (eight years of use not sufficient to establish distinctiveness in configuration of pistol grip water nozzle for water nozzles).

In *Converse, supra,* the U.S. Court of Appeals of the Federal Circuit describes the considerations to be assessed in determining whether a product design has acquired distinctiveness:

> (1) association of the trade[mark] with a particular source by actual purchasers (typically measured by consumer surveys);
>
> (2) length, degree, and exclusivity of use;
>
> (3) amount and manner of advertising;
>
> (4) amount of sales and number of customers;
>
> (5) intentional copying; and
>
> (6) unsolicited media coverage of the product embodying the mark.

128 USPQ2d at 1546 (hereinafter referred to as the *Converse* factors). All six factors are to be weighed together in determining the existence of secondary meaning. *Id.*

B. Prosecution and Post Registration History

Because we consider not only the evidence submitted at trial but also any relevant evidence submitted during prosecution of both registered marks, a review of the

prosecution and post-registration history for each registration is in order.[225] *See, e.g., Grote Indus., Inc. v. Truck-Lite Co., LLC,* 126 USPQ2d 1197, 1211 (TTAB 2018) (Board reviewed "the entire record pertaining to acquired distinctiveness of the Penta-Star Pattern," including "all evidence made of record during prosecution of the subject application and application … which matured into the subject registration) *judgment rev'd and vacated by consent decree on other grounds*, No. 1:18-cv-00599 (W.D.N.Y. June 8, 2022). *See also* TRADEMARK TRIAL AND APPEAL BOARD MANUAL OF PROCEDURE ("TBMP") § 704.03(a) (2022) ("The file of an application or registration that is the subject of a Board inter partes proceeding forms part of the record of the proceeding without any action by the parties, and reference may be made to the file by any party for any relevant and competent purpose") (citing Trademark Rule 2.122(b), 37 C.F.R. § 2.122(b))[226] and *Cold War Museum,* 92 USPQ2d at 1628-29.

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[225] Citations to the prosecution record are to the TSDR database downloadable .pdf format.

[226] Trademark Rule 2.122(b)(1) Application and registration files.

> (1) The file of each … registration … against which a petition or counterclaim for cancellation is filed forms part of the record of the proceeding without any action by the parties and reference may be made to the file for any relevant and competent purpose in accordance with paragraph (b)(2) of this section.
>
> (2) The allegation in an application for registration, or in a registration, of a date of use is not evidence on behalf of the applicant or registrant; a date of use of a mark must be established by competent evidence. Specimens in the file of an application for registration, or in the file of a registration, are not evidence on behalf of the applicant or registrant unless identified and introduced in evidence as exhibits during the period for the taking of testimony. Statements made in an affidavit or declaration in the file of an application for registration, or in the file of a registration, are not testimony on behalf of the applicant or registrant. Establishing the truth of these or any other matters asserted in the files of these applications and registrations shall be governed by the Federal Rules of Evidence, the relevant provisions of the Federal Rules of Civil Procedure, the relevant provisions of Title 28 of the United States Code, and the provisions of this part.

1. **Registration No. 4493481 – Americana Cap-Style Hard Hat**

Respondent's '481 mark was initially refused registration under Trademark Act Section 2(e)(5) on the ground that the proposed mark appeared to be a functional design for such goods, and under Trademark Act Sections 1, 2 and 45, on the ground that the mark consisted of a nondistinctive product design that was not registrable on the Principal Register without sufficient proof of acquired distinctiveness under Section 2(f).[227] In connection with these refusals, the Examining Attorney also made an information request pursuant to Trademark Rule 2.61(b), 37 C.F.R. § 2.61(b):[228]

> (1) A written statement as to whether the applied-for mark, or any feature(s) thereof, is or has been the subject of a design or utility patent or patent application, including expired patents and abandoned patent applications. Applicant must also provide copies of the patent and/or patent application documentation.
>
> (2) Advertising, promotional, and/or explanatory materials concerning the applied-for configuration mark, particularly materials specifically related to the design feature(s) embodied in the applied-for mark.
>
> (3) A written explanation and any evidence as to whether there are alternative designs available for the feature(s) embodied in the applied-for mark, and whether such alternative designs are equally efficient and/or competitive. Applicant must also provide a written explanation and any documentation concerning similar designs used by competitors.

[227] April 3, 2013 Office Action, TSDR 1. Registration was also refused under Section 2(d) of the Trademark Act based on Registration No. 2912727 for a product configuration mark consisting of "three heads, which could be described as ribs or ridges, superimposed on the crown of a hat and a flat medallion or badge superimposed on the front of a hat" for "Personal protective or safety equipment, namely, hard hats, safety helmets, and protective caps" registered on the Principal Register under Section 2(f). This refusal was subsequently withdrawn.

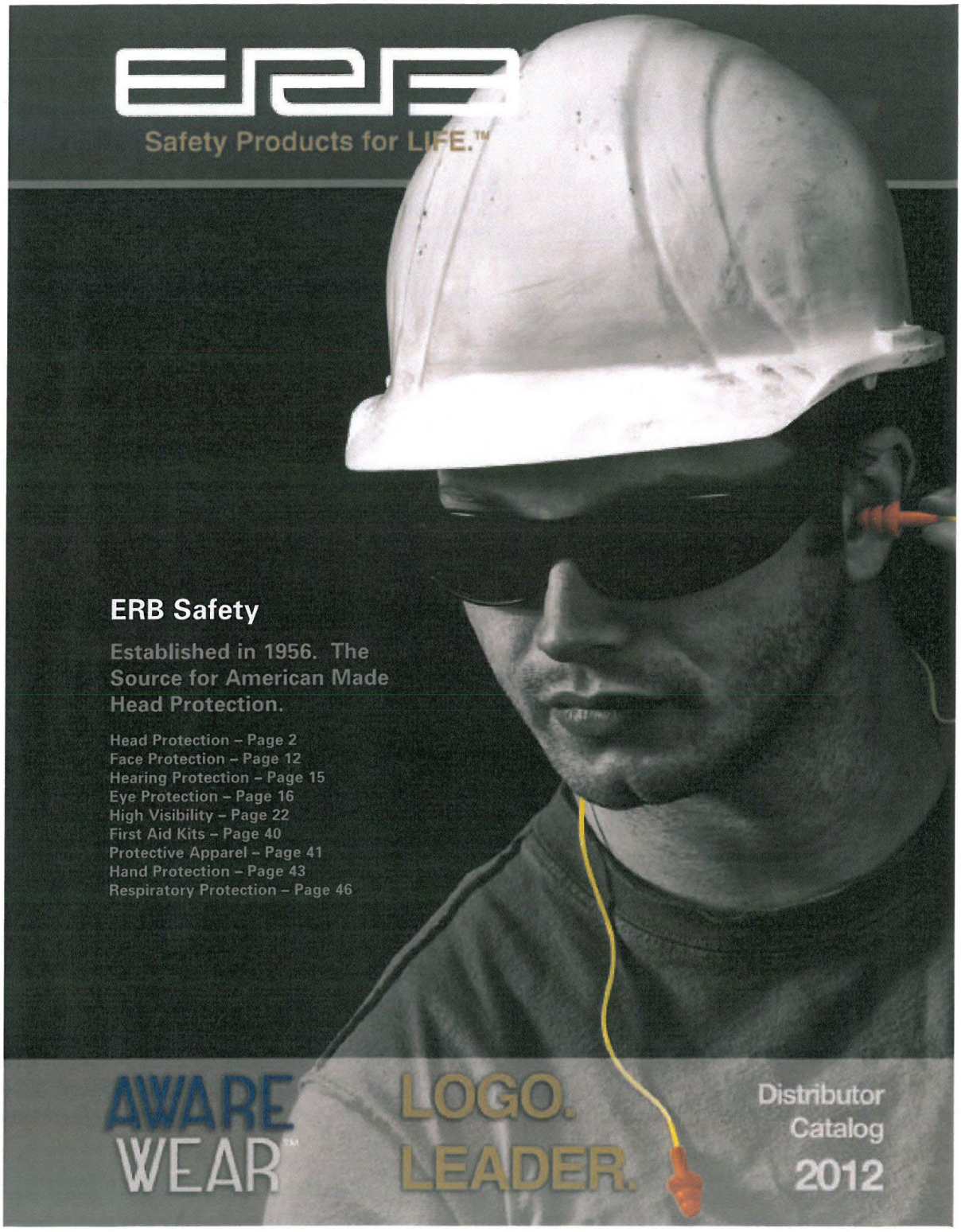
[228] April 3, 2013 Office Action, TSDR 1.

> (4) A written statement as to whether the product design or packaging design at issue results from a comparatively simple or inexpensive method of manufacture in relation to alternative designs for the product/container. Applicant must also provide information regarding the method and/or cost of manufacture relating to applicant's goods.
>
> (5) Any other evidence that applicant considers relevant to the registrability of the applied-for configuration mark.

In addition, the Examining Attorney required a more detailed description of the mark.

Registration was also refused on the ground that the web catalog specimen submitted with the application was not acceptable to show trademark use as a display associated with the goods because it failed to include the necessary ordering information or weblink for ordering the safety helmets. The original specimen is reprinted below, consisting of the cover page and an excerpt from the print edition Respondent's 2012 Distributor Catalog:[229]

[229] Application Serial No. 85794470 filed December 4, 2012, Specimen.


Safety Products for LIFE.™
ERB Safety
Established in 1956. The Source for American Made Head Protection.
Head Protection – Page 2
Face Protection – Page 12
Hearing Protection – Page 15
Eye Protection – Page 16
High Visibility – Page 22
First Aid Kits – Page 40
Protective Apparel – Page 41
Hand Protection – Page 43
Respiratory Protection – Page 46
AWARE WEAR™
LOGO. LEADER.
Distributor Catalog
2012

HEAD PROTECTION

MADE IN USA

Americana® *4 Point Suspension*

Meets ANSI/ISEA Z89.1, Type 1, Class C, E and G requirements

Hi-Viz Yellow and Hi-Viz Lime meet the chromaticity and luminance requirements for background material in ANSI/ISEA 107.

Cap Style

- 4-Point woven nylon suspension
- Features a short peak and low profile
- Functional rain trough
- Accessory slots accommodate a wide variety of eye, face and hearing products
- Accommodates chin strap
- Goggle retaining slots on suspension
- Moisture wicking brow pad is removable, washable & replaceable
- Certified when headband is installed in reverse position
- Slide-Lock or Mega Ratchet size adjustment for head sizes 6.5 - 8
- Slide-Lock Cap weight: 12.38 oz
- Mega Ratchet Cap weight: 13.26 oz
- SEI Certified
- 12 per carton

STOCKED IN 13 COLORS : Call for additional color choices.

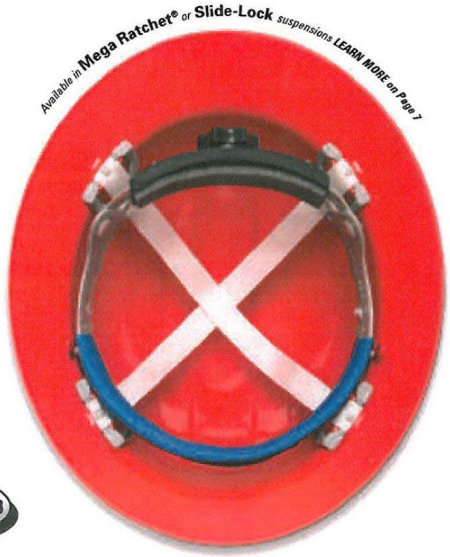
WHITE | YELLOW | BLUE | RED | ORANGE | BLACK | GREEN | GRAY | HI-VIZ ORANGE | HI-VIZ LIME | HI-VIZ YELLOW | HI-VIZ PINK | PINK

Full Brim

- 4-Point woven nylon suspension
- Accommodates chin strap
- Goggle retaining slots on suspension
- Moisture wicking brow pad is removable, washable & replaceable
- Slide-Lock or Mega Ratchet size adjustment for head sizes 6.5 - 8
- Slide-Lock Hat weight: 13.58 oz
- Mega Ratchet Hat weight: 14.4 oz
- SEI Certified
- 12 per carton

STOCKED IN 8 COLORS : Call for additional color choices.

WHITE | YELLOW | BLUE | RED | ORANGE | HI-VIZ ORANGE | HI-VIZ LIME | HI-VIZ YELLOW



ISO 9001/2008

In response to the Section 2(e)(5) refusal and information request, Respondent submitted the declaration of William J. Crosby, Respondent's Technical Director and QA Manager[230] executed on September 25, 2013 with exhibits. Mr. Crosby stated in relevant part that Respondent had not applied or intended to apply for patent protection of the Ridge Design mark;[231] that the ridges are "were primarily related to the safety provided by the hard hat … because Industrial Hard Hats do not require any ribs, ridges or other types of projections to meet all U.S. [and ANSI] requirements;"[232] that "[m]aterial characteristics, wall thickness and the processing parameters used in the molding of safety helmets along with the design of the helmet's suspension are far more important factors in determining performance than whether the shell geometry includes ridges or ribs;"[233] and that "[r]epresentative hard hats … incorporate distinctly different design features" that are equally efficient and competitive.[234] The exhibits to his declaration included sales invoices. Also submitted as exhibits to Mr. Crosby's declaration were third-party Registration Nos. 658084, 1738045, 2912727, 3762261 and 1259212 for product configuration marks consisting of ridge designs on protective safety helmets, each registered on the Principal Register under Section 2(f), as "probative of the treatment of headgear configurations

[230] Mr. Crosby also presented testimony as a witness in this cancellation proceeding.

[231] October 3, 2013 Response to Office Action, TSDR 24 (Crosby Section 2(f) Decl. ¶ 15).

[232] October 3, 2013 Response to Office Action, TSDR 24 (Crosby Section 2(f) Decl. ¶ 20).

[233] October 3, 2013 Response to Office Action, TSDR 24 (Crosby Section 2(f) Decl. ¶ 20).

[234] October 3, 2013 Response to Office Action, TSDR 24 (Crosby Section 2(f) Decl. ¶¶ 16 and 17). Paragraph No. 16 of the declaration includes an illustration of purported "representative competitor hard hats" with no reference as to third-party source.

by the Trademark Office as non-functional."[235] Respondent further complied with the information request by stating that none of its advertising materials tout any utilitarian advantages to the design.[236]

Respondent also submitted with its response another declaration from its then President and CEO, Sheila Eads, executed on September 26, 2013 along with exhibits,[237] to support its claim of acquired distinctiveness under Section 2(f). Ms. Eads stated in relevant part:[238]

> Substantially exclusive and continuous use of Respondent's mark for over five years prior to the date of filing the declaration. ¶ 12.
>
> "[Respondent's] mark was first used and is still used on ERB's Omega II hard hats … in 1984. … [and] in use on ERB's Americana hard hat since at least as early as April 2004. Since 1984 [Respondent's] mark has been in continuous use in the United States without interruption." ¶ 14).
>
> That the Ridge Design mark has "over nine (9) years of reputation." ¶ 14.
>
> Sales of over 1 million units per year at an average retail cost of $ 12 per hard hat. ¶ 15.
>
> Respondent's products are sold to "distributors of safety equipment" in the "construction, industrial, and oil and gas markets through" such as 3M, Wurth, Magid Glove and Safety, MSC Industrial, HD Supply, Feguson Waterworks, United Rentals, Cintas, and Do It Best. ¶ 16.

[235] October 3, 2013 Response to Office Action, TSDR 15, 27-32.

[236] *Id.*

[237] Ms. Eads also presented testimony as a witness in this cancellation proceeding.

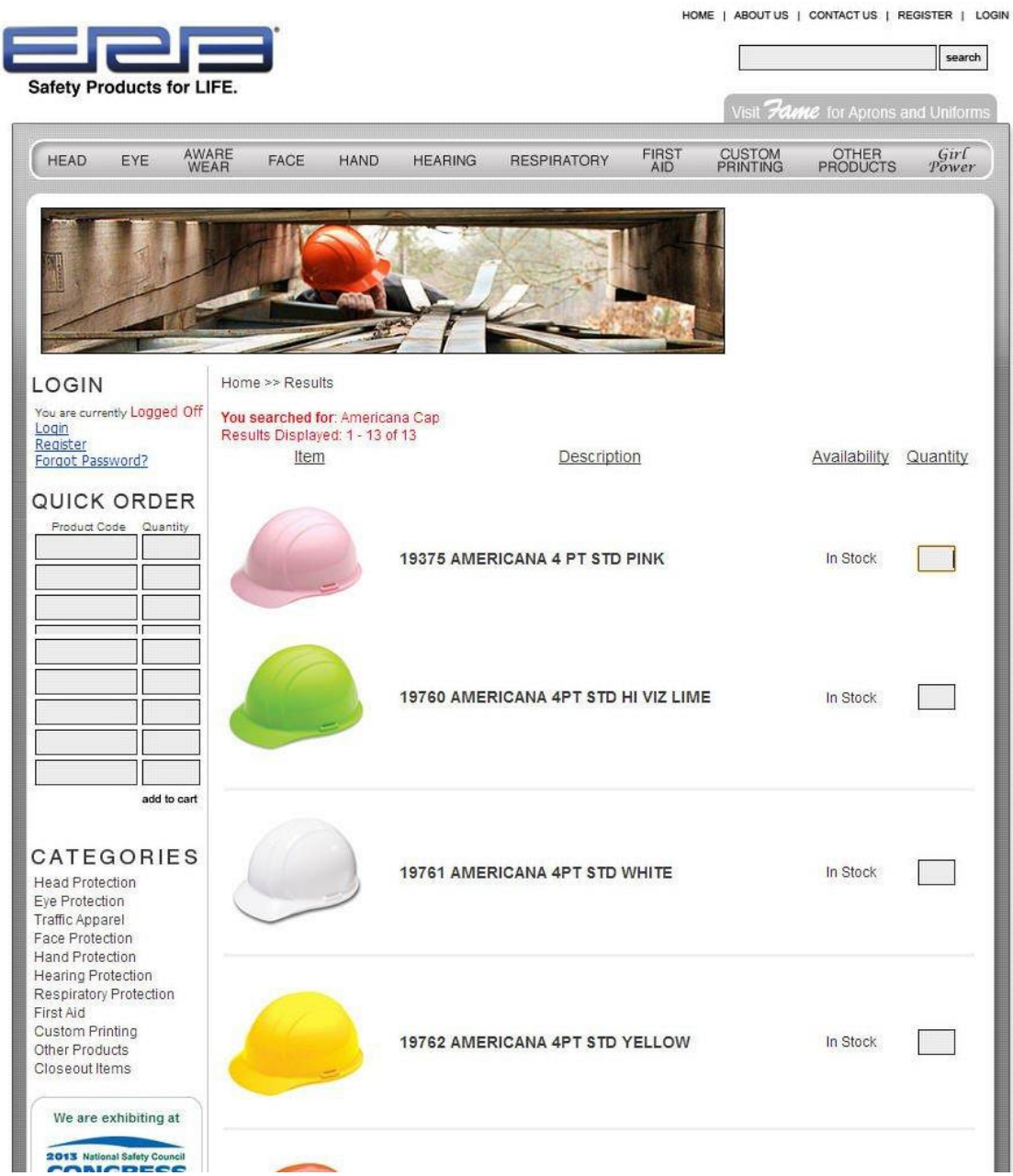
[238] Eads Section 2(f) Decl. submitted with October 3, 2013 Response to Office Action, TSDR 53-59.

> Expenditures of "a considerable amount of money promoting [Respondent's Mark] and the distinct shape of hard hats produced by [Respondent] is known by customers as that of [Respondent's] products." ¶ 17.
>
> Promotion of Respondent's "products through direct communications between [Respondent's] salespeople and customers and prospects in the hard hat market." ¶ 19.
>
> Annual expenditures "to solicit customers exceed $600,000 annually." ¶ 19.
>
> Marketing of its goods through "tradeshows and industry association newsletters, emails, product flyers … extensive product showcases and demonstrations." ¶ 20.
>
> Distribution of "over 30,000 catalogs each year to customers and potential customers." ¶ 22.
>
> Annual expenditures for trade shows and print catalogs of $225,000 in 2008; $120,000 in 2009; $127,000 in 2010; $244,000 in 2011; $196,000 in 2012. ¶ 22.
>
> Annual expenditures of between "$36,000 and $81,000 annually for print advertisement." ¶ 24.
>
> Respondent was "recognized as the Supplier of the Year for 2011 and 2012 by the Evergreen Marketing Group … a national affiliation of leading independent construction and industrial distributors." ¶ 25.

To obviate the specimen refusal, Respondent submitted a substitute specimen consisting of web pages from Respondent's online catalog. The relevant excerpts are displayed below:[239]

[239] October 3, 2013 Response to Office Action, TSDR 126-127.


HOME | ABOUT US | CONTACT US | REGISTER | LOGIN
search
Safety Products for LIFE.
Visit Fame for Aprons and Uniforms
HEAD EYE AWARE WEAR FACE HAND HEARING RESPIRATORY FIRST AID CUSTOM PRINTING OTHER PRODUCTS Girl Power
LOGIN
You are currently Logged Off
Login
Register
Forgot Password?
QUICK ORDER
Product Code Quantity
add to cart
CATEGORIES
Head Protection
Eye Protection
Traffic Apparel
Face Protection
Hand Protection
Hearing Protection
Respiratory Protection
First Aid
Custom Printing
Other Products
Closeout Items
We are exhibiting at
2013 National Safety Council CONGRESS & EXPO
CHICAGO
Booth 2215
Add to My Expo Plan
Register Now
Home >> Head Protection
Americana Cap
Americana Cap Ratchet
Americana Full Brim
Americana Full Brim Ratchet
Americana Vent
Americana Vent Full Brim
Americana Vent Full Brim Ratchet
Americana Vent Ratchet
Bump Caps
Liberty
Liberty Ratchet
Omega II Cap
Omega II Cap Ratchet
Omega II Full Brim
Omega II Full Brim Ratchet
Safety Helmet Accessories
Safety Kit - Chain Saw
Safety Kit - New Hire
Specialty
Americana HEAT™
Americana Wildlands™
new
ERB Employees Support
SHEPHERD CENTER
READ THIS AMAZING STORY FROM THE 2013 MOORE, OK TORNADO
READ NOW
'...If I hadn't grabbed my hardhat I'd be dead no doubt about it...'
DOWNLOAD THE 2013 NEW PRODUCTS SUPPLEMENT
LOCATE A DISTRIBUTOR | TERMS | NEWS | REGISTER
© All Rights Reserved ERB Industries, Incorporated 1956-2013



The substitute specimen and responses to the information request were deemed acceptable. Following two Examiner's Amendments, the Examining Attorney accepted an amended description of the mark.[240] The Examining Attorney then

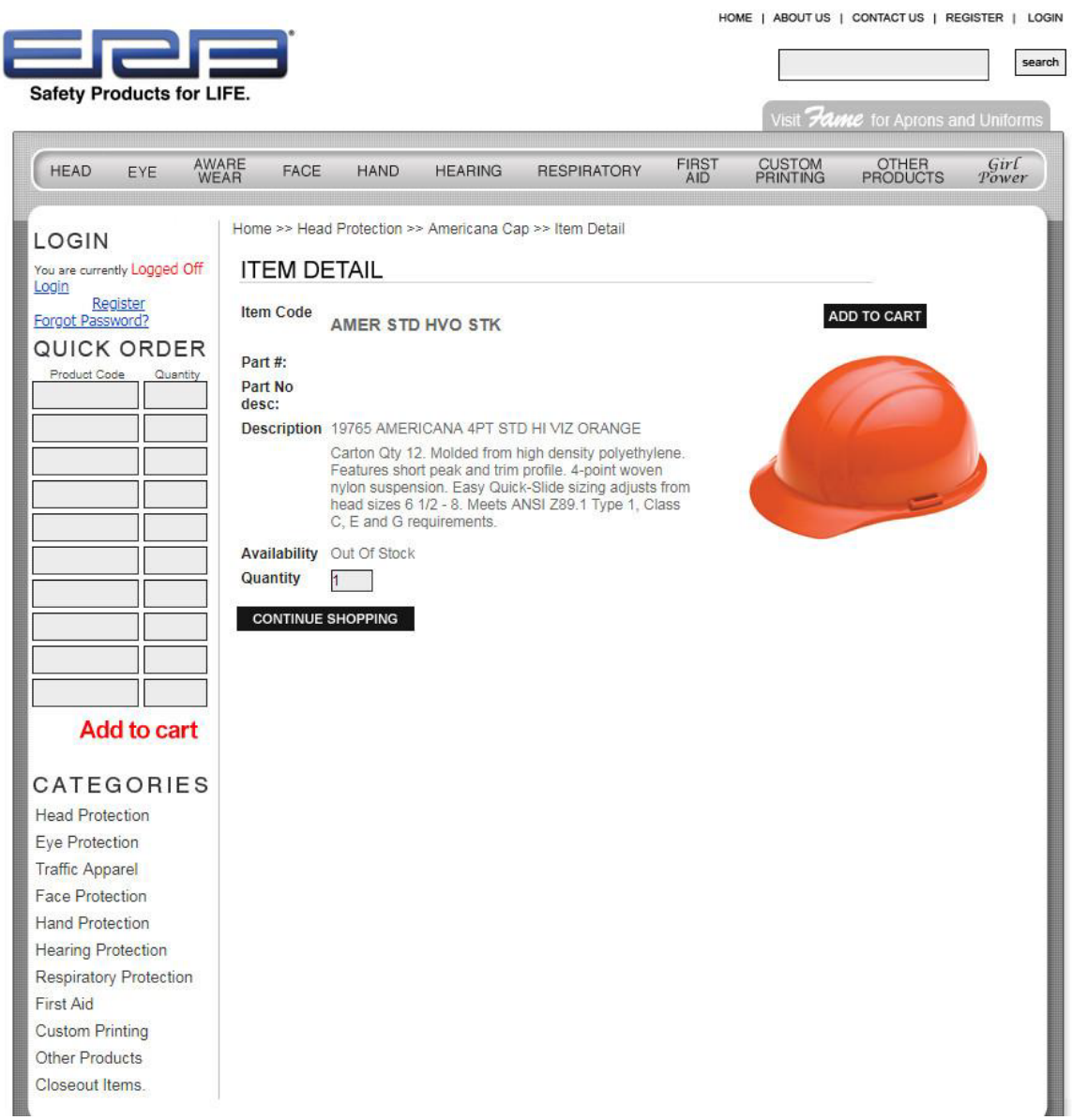
[240] October 25, 2013 and October 28, 2013 Examiner's Amendments.

approved the application for publication in the OFFICIAL GAZETTE on the Principal Register under Section 2(f) based on Respondent's declaration "of at least five years of continuous and substantially exclusive use prior to making the statement" as well as actual evidence of acquired distinctiveness. *See* Trademark Rules 2.41(a)(2) and (3), 37 C.F.R. § 2.41(a)(2) and (3).[241] The registration issued on March 11, 2014 on the Principal Register under Section 2(f).

On March 11, 2019, after institution of this proceeding, Respondent filed a "Combined Declaration of Use and Incontestability under Sections 8 & 15." Respondent describes the specimen submitted in connection with the declaration as "an image of Registrant's good and point of sale display," i.e. an excerpt from Respondent's online catalog:[242]

[241] The better practice would have been for the Examining Attorney to formally withdraw in writing the Section 2(e)(5) and Sections 1, 2 and 45 refusals.

[242] March 11, 2019 "Combined Declaration of Use and Incontestability under Sections 8 & 15," TSDR 2-3.



Post Registration has not yet acted on this submission.

2. **Registration No. 4493482 – Full-Brim Americana Hard Hat**

The prosecution history of Registration No. 4493482 is identical to that of Registration No. 4493481, with the following exceptions to the declaration of Ms.

Eads executed September 26, 2013, in support of Respondent's claim of acquired distinctiveness.[243]

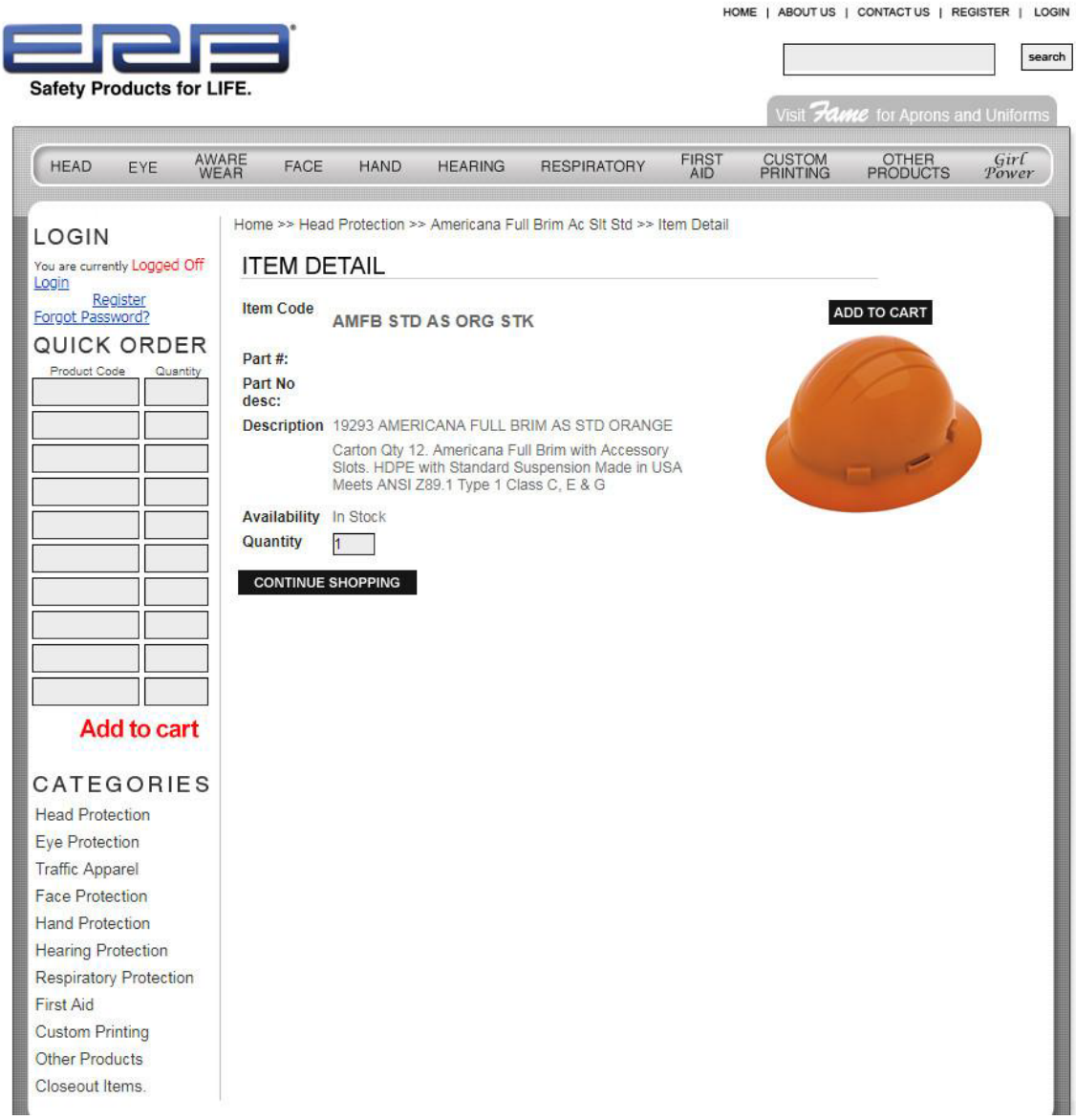
> [Respondent's] mark was has been in use on ERB's Americana full brim hard hats since at least as early as May 2008. Since May 2008 [Respondent's] mark has been in continuous use in the United States without interruption. ¶ 14.
>
> That the Ridge Design mark has "over five (5) years of reputation." ¶ 14.

Otherwise, the statements made and data in Ms. Ead's Section 2(f) declaration are identical to her Section 2(f) declaration submitted in connection with the '481 mark on the Americana cap style. The same substitute specimen was submitted and essentially same declaration from Mr. Crosby. As with the '481 registration, this registration issued on March 11, 2014 on the Principal Register under Section 2(f).

Respondent also filed on March 11, 2019, a "Combined Declaration of Use and Incontestability under Sections 8 & 15" for the '482 registration which has yet to be acted upon. The specimen submitted in connection with the declaration as "an image of Registrant's good and point of sale display," i.e. an excerpt from Respondent's online catalog:[244]

[243] October 3, 2013 Response to Office Action, TSDR 33-38.

[244] March 11, 2019 "Combined Declaration of Use and Incontestability under Sections 8 & 15," TSDR 2-3.


HOME | ABOUT US | CONTACT US | REGISTER | LOGIN
search
Safety Products for LIFE.
Visit Fame for Aprons and Uniforms
HEAD EYE AWARE WEAR FACE HAND HEARING RESPIRATORY FIRST AID CUSTOM PRINTING OTHER PRODUCTS Girl Power
LOGIN
You are currently Logged Off
Login
Register
Forgot Password?
QUICK ORDER
Product Code
Quantity
Add to cart
CATEGORIES
Head Protection
Eye Protection
Traffic Apparel
Face Protection
Hand Protection
Hearing Protection
Respiratory Protection
First Aid
Custom Printing
Other Products
Closeout Items.
Home >> Head Protection >> Americana Full Brim Ac Slt Std >> Item Detail
ITEM DETAIL
Item Code
AMFB STD AS ORG STK
ADD TO CART
Part #:
Part No desc:
Description
19293 AMERICANA FULL BRIM AS STD ORANGE
Carton Qty 12. Americana Full Brim with Accessory Slots. HDPE with Standard Suspension Made in USA Meets ANSI Z89.1 Type 1 Class C, E & G
Availability
In Stock
Quantity
1
CONTINUE SHOPPING

C. Burden of Establishing a Prima Facie Case of No Acquired Distinctiveness of the Ridge Design Marks?

In *Cold War Museum*, 92 USPQ2d at 1630, the U.S. Court of Appeals for the Federal Circuit provided the following guidance regarding the burden of proof in a cancellation proceeding on the claim that a mark is not inherently distinctive and has not acquired distinctiveness:

> In a Section 2(f) case, the party seeking cancellation bears the initial burden to "establish a prima facie case of no acquired distinctiveness." [*Yamaha Int'l Corp. v. Hoshino Gakki Co.*, 840 F.2d 1572, 6 USPQ2d 1001, 1004 (Fed. Cir. 1988)]. To satisfy this initial burden, the party seeking cancellation must "present sufficient evidence or argument on which the board could reasonably conclude" that the party has overcome the record evidence of acquired distinctiveness—which includes everything submitted by the applicant during prosecution. Id. at 1576-77. The burden of producing additional evidence or argument in defense of registration only shifts to the registrant if and when the party seeking cancellation establishes a prima facie showing of invalidity. The Board must then decide whether the party seeking cancellation has satisfied its ultimate burden of persuasion, based on all the evidence made of record during prosecution and any additional evidence introduced in the cancellation proceeding.

92 USPQ2d at 1630; *see also Alcatraz,* 107 USPQ2d at 1764.

In a cancellation proceeding, acquired distinctiveness may be determined at the time of registration or trial. *Alcatraz*, 107 USPQ2d at 1764 (assessing merits of petitioner's claim that respondent's mark "lacked acquired distinctiveness at the time of registration or, alternatively, that it now is merely descriptive, i.e., that it lacked acquired distinctiveness at the time of trial"); *Kasco Corp. v. S. Saw Serv. Inc.*, 27 USPQ2d 1501, 1506 n.7 (TTAB 1993) (stating that petitioner could prevail if record revealed claimed mark lacked acquired distinctiveness either at time of registration

"or as of the present time"). As the Board explained in *Neapco Inc. v. Dana Corp.*, 12 USPQ2d 1746, 1747 (TTAB 1989):

> In most cases, the time period of primary concern is the time when the registration issued. If a petitioner can establish that at that time, the registered mark was merely descriptive, then it is incumbent upon the registrant to establish that prior to the issuance of the registration, the registered mark had acquired a secondary meaning in the sense that its primary significance was that of a source indicator of goods emanating from registrant. (footnote and citations omitted). Thus, even if there is agreement that, at present, the registered mark possesses secondary meaning, the petitioner would nevertheless prevail if it is established that as of the time of registration, the mark was merely descriptive and was devoid of secondary meaning.

D. Application of the *Converse* Factors

Below we address each *Converse* factor in turn, evaluating the evidence submitted both during prosecution and at trial to ascertain whether Petitioner has satisfied its initial burden under *Cold War Museum* of making a prima facie case that neither registered mark has acquired distinctiveness, and if so, whether Respondent has presented sufficient arguments and/or evidence to rebut such a finding. We keep in mind that Petitioner bears the ultimate burden.

1. **Association of the Trademark with a Particular Source by Actual Purchasers**

This factor is "typically measured by customer surveys." *Converse,* 128 USPQ2d at 1546. "Consumer surveys can, when conducted properly, be a form of direct evidence of acquired distinctiveness." *Schlafly v. St. Louis Brewery, LLC*, 909 F.3d 420, 128 USPQ2d 1739, 1743 & n.2 (Fed. Cir. 2018). The same holds true for consumer market research, and consumer reaction studies. *See* TMEP § 1212.06(d)

("Acquired Distinctiveness or Secondary Meaning - Survey Evidence, Market Research and Consumer Reaction Studies"). The prosecution record for both registered marks is devoid of any consumer surveys, market research or studies demonstrating that consumers perceive Respondent's Ridge Designs as a trademark. So is the trial record. This is consistent with the discovery sanction imposed on Respondent drawing an adverse inference that "Respondent did not cause to be conducted, nor plans to cause to be conducted, any market or trademark searches, including any search or research concerning the level of public recognition of Respondent's marks or the types of goods with which consumers associate Respondent's marks."[245]

Consumer declarations and oral testimony are other forms of direct evidence of acquired distinctiveness. *See, e.g., Mag Instrument, Inc. v. Brinkmann Corp.*, 96 USPQ2d 1701, 1723 (TTAB 2010). No declarations or oral testimony from actual consumers were made of record during prosecution.[246] At trial, three witnesses working for Respondent attested to their opinion that the Ridge Designs on the Americana cap and full brim style hard hats are "distinctive in appearance" and "serve to indicate to consumers that [Respondent] is the source of those hard hats" as opposed to other manufacturers:[247] Sheila Eads, Respondent's current CEO and former President; Chris Padgett, Respondent's Vice President of Manufacturing; and

[245] May 28, 2020 Order, 22 TTABVUE 12-14. *See also* Section I.A. ("Discovery Sanctions").

[246] See discussion in Section IX.B ("Prosecution and Post Registration History"), *supra.*

[247] Crosby Testimony Decl. ¶¶ 20-21, 26-27; 40 TTABVUE 5-6; and Eads Testimony Decl. ¶¶ 16 and 37; 40 TTABVUE 5 and 9.

William J. Crosby, its Technical Director.[248] None of these witnesses are actual consumers of Respondent's safety helmets, meaning that their testimony carries little probative weight on consumer perception. *See In re Chem. Dynamics Inc.*, 839 F.2d 1569, 5 USPQ2d 1828, 1830 (Fed. Cir. 1988) (finding conclusionary declaration from applicant's vice-president insufficient without the factual basis for the declarant's belief that the design had become distinctive); *MK Diamond*, 2020 USPQ2d 10882, at *23-24 (statements by applicant's vice president on consumer recognition of the mark "have less probative value than consumer statements"). Furthermore, as employees of Respondent, their opinions are subject to bias. *See Tao Licensing,* 125 USPQ2d at 1047 (Board considered witness' potential bias as an employee). *Cf. Gray*, 3 USPQ2d at 1560 (finding affidavit of applicant's counsel expressing his belief that the mark has acquired secondary meaning of "no probative value whatsoever" because, among other reasons, the statement is subject to bias).

Respondent highlights the testimony of Gary Warren, the current Managing Director at Icon Investment Partners and former President of Aearo Technologies, a manufacturer of PPE and former member of Respondent's Board of Directors.[249] Respondent touts him as "one of many experts in the safety product market place that recognize the significance of Registrant's trade dress."[250] Based on Mr. Warren's professional experience, he opined that the Ridge Designs are distinctive and unique,

[248] *See* Eads Testimony Decl. ¶ 1; 44 TTABVUE 3; Padgett Testimony Decl. ¶ 1; 38 TTABVUE 2; and Crosby Testimony Decl. ¶ 1; 40 TTABVUE 2.

[249] Warren Testimony Decl. ¶¶ 1-5; 41 TTABVUE 2.

[250] Respondent's Brief, p. 40; 53 TTABVUE 41.

and indicates that Respondent is the source of the cap and full brim style hard hats.[251] "[D]eclarations from industry professionals attesting they recognize the product design at issue as [Respondent's Marks], though entitled to some weight, are not sufficient—particularly when a product design is at issue—to establish acquired distinctiveness. *MK Diamond*, 2020 USPQ2d 10882, at *24; *see also In re Meyer & Wenthe, Inc.*, 122 USPQ 372, 376 (CCPA 1959) ("It is incumbent upon the applicant to submit proof that its mark is distinctive, not only to 'experts' in the field, but to the purchasing public."). Testimony from a single professional in the safety helmet manufacturing field carries minimal probative weight on the issue of consumer perception.[252] As a former member of the board for Respondent,[253] he also has an affiliation with Respondent, making his testimony subject to bias. *Cf. Tao Licensing,* 125 USPQ2d at 1047 (Board considered witness' potential bias as an employee); *Gray*, 3 USPQ2d at 1560 (finding affidavit of applicant's counsel expressing his belief that the mark has acquired secondary meaning of "no probative value whatsoever" because, among other reasons, the statement is subject to bias). Thus, on the record before us, we have minimal direct evidence of whether consumers perceive Respondent's Ridge Design marks as source indicators.

[251] Warren Testimony Decl. ¶¶ 16-18, 20-24; 41 TTABVUE 4-5.

[252] Warren Testimony Decl. ¶¶ 16 and 24; 41 TTABVUE 4-5.

[253] Warren Testimony Decl. ¶ 3; 41 TTABVUE 2.

2. Length, Degree, and Exclusivity of Use

a. Length of Use

Respondent averred during prosecution that its "'491 mark has been in use in commerce in connection with its Americana branded cap style hard hat since April 2004, and that its '492 mark has been in use on its Americana branded full brim style hard hat since May 2008."[254] However, now at trial Respondent attempts to attribute use of a "substantially similar" ridge design applied to the Omega II and Maverick hard hat to the registered Ridge Design marks. Respondent's CEO Ms. Eads testified that "[a] two ridge design was first used on ERB's Omega II hard hats … in 1984 and is still being used on that product;"[255] that "[t]he shape and proportion of the two ridges on the Omega II and Maverick hard hats is substantially similar to the two ridges in the '481 Trademark" and that "[t]he shape and proportion of the two ridges on the Omega full brim style hard hat is substantially similar to the two ridges in the '482 Trademark."[256] On the basis of this testimony, Respondent takes the position that Respondent's use of the registered Ridge Designs has been continuous for at least the last thirty-eight (38) years.[257]

This is improper. As explained in Section IV ("The Marks"), our analysis is limited to the registered marks, not marks that are "substantially similar." Petitioner cannot tack on years of use of similar ridge designs on other helmet models such as the

[254] Eads Section 2(f) Decl. ¶ 14; October 3, 2013 Response to Office Action, TSDR 53-59.

[255] Eads Testimony Decl. ¶ 17; 44 TTABVUE 5.

[256] Eads Testimony Decl. ¶¶ 19 and 39; 44 TTABVUE 5 and 8.

[257] Eads Testimony Decl. ¶ 17; 44 TTABVUE 5.

Omega II and Maverick to effectively increase the number of years its registered Ridge Design marks have been in use in commerce. *Cf.* Trademark Rule 2.41(a)(1), 37 C.F.R. § 2.41(a)(1) (acquired distinctiveness may be established through "[a] claim of ownership of one or more active prior registrations on the Principal Register of **the same mark** for goods or services that are sufficiently similar to those identified in the pending application.") (emphasis added)."

Notwithstanding the above, "[w]hile long use of a mark is a relevant factor to consider in determining whether a mark has acquired distinctiveness, it is not necessarily conclusive or persuasive." *Stuart Spector*, 94 USPQ2d at 1571-72 (citing *In re Packaging Specialists, Inc.*, 221 USPQ 917, 920 (TTAB 1984) (internal citation omitted)). This is especially true of marks comprised of product configurations. *See, e.g., In re Gibson Guitar Corp.,* 61 USPQ2d 1948, 1952 (TTAB 2001) (sixty-six years of use of guitar configuration insufficient to establish acquired distinctiveness).

b. **Degree and Exclusivity of Use**

According to the statutory language of Trademark Act Section 2(f), Respondent's five years of use in commerce of a mark as of the declaration date does not have to be exclusive, but must be "substantially exclusive."[258] *Accord* Trademark Rule

[258] Section 2(f) of Trademark Act states in relevant part:

> The Director may accept as prima facie evidence that the mark has become distinctive, as used on or in connection with the applicant's goods in commerce, proof of **substantially exclusive** and continuous use thereof as a mark by the applicant in commerce for the five years before the date on which the claim of distinctiveness is made. (emphasis added).

2.41(a)(2), 37 C.F.R. § 2.41(a)(2). *See MK Diamond,* 2020 USPQ2d 10882, at *21 ("While absolute exclusivity is not required for a Section 2(f) registration, . . . the widespread use of other substantially similar [designs] . . . is inconsistent with the 'substantially exclusive' use required by the statute"). "When the record shows that purchasers are confronted with more than one (let alone numerous) independent users of a term or device, an application for registration under Section 2(f) cannot be successful, for distinctiveness on which purchasers may rely is lacking under such circumstances." *Levi Strauss & Co. v. Genesco, Inc.*, 742 F.2d 1401, 222 USPQ 939, 940-41 (Fed. Cir. 1984). *See also, e.g., Spiritline Cruises LLC v. Tour Mgmt. Servs. Inc.*, 2020 USPQ2d 48324, at *11 (TTAB 2020) (finding "the substantially non-exclusive use of CHARLESTON HARBOR TOURS . . . interfere[d] with the relevant public's perception of the designation as an indicator of a single source"); *Milwaukee Elec. Tool Corp. v. Freud Am., Inc.*, 2019 USPQ2d 460354, at *25 (TTAB 2019) (finding evidence of third-party use of the proposed mark showed that registrant's use had not been "substantially exclusive either at the time of registration or thereafter"); *Gen. Mills,* 124 USPQ2d at 1024 (finding that "the presence in the market of yellow-packaged cereals from various sources . . . would tend to detract from any public perception of the predominantly yellow background as a source-indicator pointing solely to Applicant"). "[W]hen evaluating whether [a party] has had 'substantially exclusive' use of a mark, we look to whether any use by a third party was 'significant,' or whether it was merely 'inconsequential or infringing.'" *Galperti, Inc. v. Galperti S.R.L.*, 791 Fed. Appx. 905, 2019 USPQ2d 435065, at *4 (Fed. Cir.

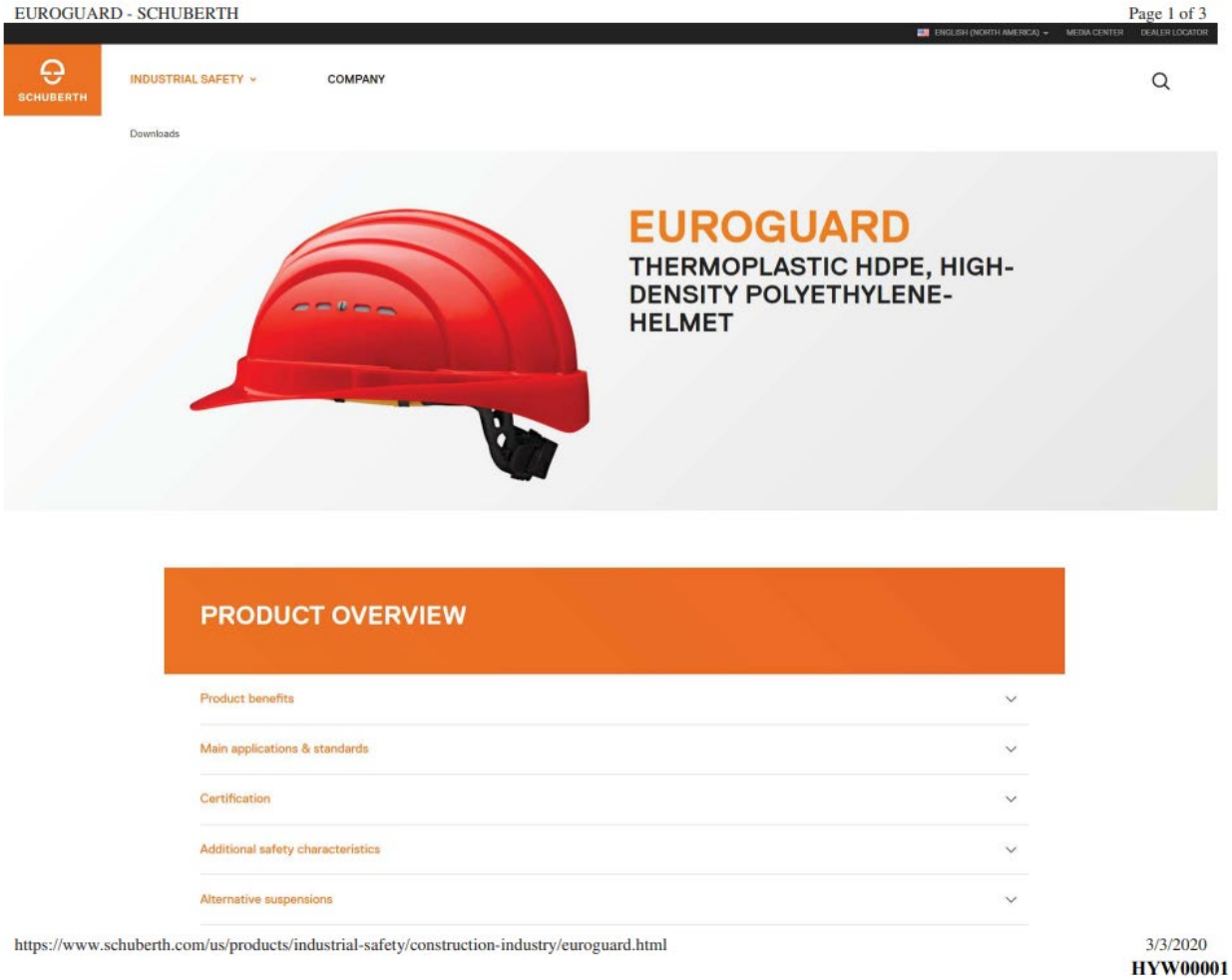
2019) (quoting *L.D. Kichler Co. v. Davoil, Inc.*, 192 F.3d 1349, 52 USPQ2d 1307, 1309 (Fed. Cir. 1999)). *See also Galperti, Inc. v. Galperti S.R.L.*, 17 F.4th 1144, 2021 USPQ2d 1115, at *2 (Fed. Cir. 2021).

Petitioner introduced into the record through witness testimony examples of other safety helmets from competitors that include ridges on the outer shell.[259] Petitioner argues that this evidence shows that Respondent's use of its Ridge Designs has not been "substantially exclusive" as required under Section 2(f) because "Pyramex, OccuNomix, and Euroguard, make and sell safety helmets bearing two ridges, the topmost ridge being narrower than the bottommost ridge, with both ridges widening toward the brim of the cap."[260] Images of these safety helmets are reprinted below:[261]

[259] Cabal Testimony Decl. ¶ 10 ("Many safety helmets of which I am aware include ridges on the plastic helmet shell."), and Ex. PX4 (website printouts); 25 TTABVUE 4, 19-40.

[260] Petitioner's Brief, p. 15; 52 TTABVUE 17.

[261] Cabal Testimony Decl. Ex. PX4, 25 TTABVUE 24-26, 32-40.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https://www.schuberth.com/us/products/industrial-safety/construction-industry/euroguard.html
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HYW00001

Other helmet equipment (ex works)

Material & shape of the helmet shell

Items supplied/as standard: ■ Partially as standard: ◩ Optionally available: □

SIZES

The standard EUROGUARD is available in the following sizes.

- Helmet size 2 (53-61)

This picture shows a colour sample.

Do you want a special paint or to brand you helmets with your company logo? We will be pleased to offer you customized helmets: just ask us about it!

† Applies to standard suspensions I/79 G, I/79 GD, I/79-4G, I/79 GY, I/91 G

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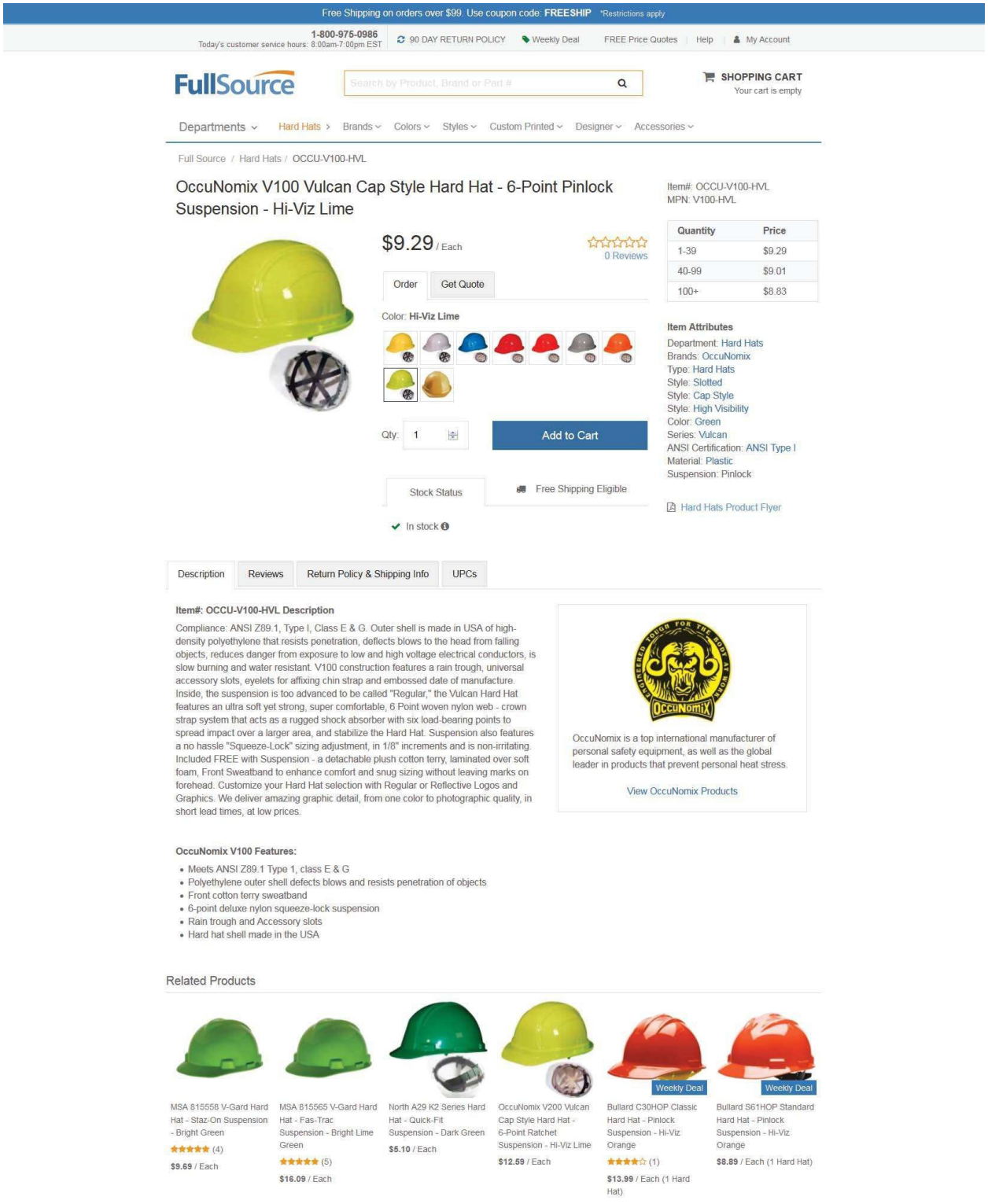

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OccuNomix V100 Vulcan Cap Style Hard Hat - 6-Point Pinlock Suspension - Hi-Viz Lime

Item#: OCCU-V100-HVL
MPN: V100-HVL

$9.29 / Each

0 Reviews

Quantity	Price
1-39	$9.29
40-99	$9.01
100+	$8.83

Order | Get Quote

Color: **Hi-Viz Lime**

Qty: 1 Add to Cart

Stock Status: In stock

Free Shipping Eligible

Item Attributes
Department: Hard Hats
Brands: OccuNomix
Type: Hard Hats
Style: Slotted
Style: Cap Style
Style: High Visibility
Color: Green
Series: Vulcan
ANSI Certification: ANSI Type I
Material: Plastic
Suspension: Pinlock

Hard Hats Product Flyer

Description | Reviews | Return Policy & Shipping Info | UPCs

Item#: OCCU-V100-HVL Description

Compliance: ANSI Z89.1, Type I, Class E & G. Outer shell is made in USA of high-density polyethylene that resists penetration, deflects blows to the head from falling objects, reduces danger from exposure to low and high voltage electrical conductors, is slow burning and water resistant. V100 construction features a rain trough, universal accessory slots, eyelets for affixing chin strap and embossed date of manufacture. Inside, the suspension is too advanced to be called "Regular," the Vulcan Hard Hat features an ultra soft yet strong, super comfortable, 6 Point woven nylon web - crown strap system that acts as a rugged shock absorber with six load-bearing points to spread impact over a larger area, and stabilize the Hard Hat. Suspension also features a no hassle "Squeeze-Lock" sizing adjustment, in 1/8" increments and is non-irritating. Included FREE with Suspension - a detachable plush cotton terry, laminated over soft foam, Front Sweatband to enhance comfort and snug sizing without leaving marks on forehead. Customize your Hard Hat selection with Regular or Reflective Logos and Graphics. We deliver amazing graphic detail, from one color to photographic quality, in short lead times, at low prices.

OccuNomix is a top international manufacturer of personal safety equipment, as well as the global leader in products that prevent personal heat stress.

View OccuNomix Products

OccuNomix V100 Features:

- Meets ANSI Z89.1 Type 1, class E & G
- Polyethylene outer shell defects blows and resists penetration of objects
- Front cotton terry sweatband
- 6-point deluxe nylon squeeze-lock suspension
- Rain trough and Accessory slots
- Hard hat shell made in the USA

Related Products

MSA 815558 V-Gard Hard Hat - Staz-On Suspension - Bright Green
(4)
$9.69 / Each

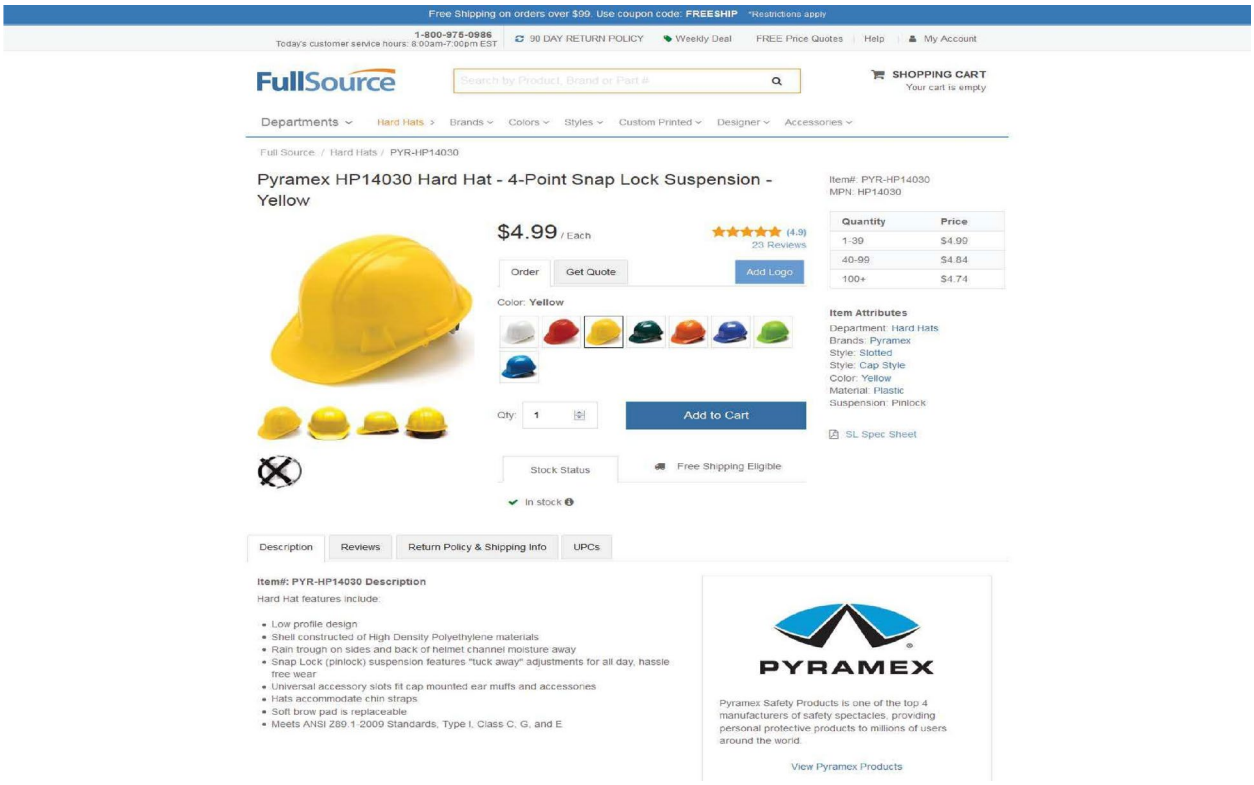
MSA 815565 V-Gard Hard Hat - Fas-Trac Suspension - Bright Lime Green
(5)
$16.09 / Each

North A29 K2 Series Hard Hat - Quick-Fit Suspension - Dark Green
$5.10 / Each

OccuNomix V200 Vulcan Cap Style Hard Hat - 6-Point Ratchet Suspension - Hi-Viz Lime
$12.59 / Each

Weekly Deal
Bullard C30HOP Classic Hard Hat - Pinlock Suspension - Hi-Viz Orange
(1)
$13.99 / Each (1 Hard Hat)

Weekly Deal
Bullard S61HOP Standard Hard Hat - Pinlock Suspension - Hi-Viz Orange
$8.89 / Each (1 Hard Hat)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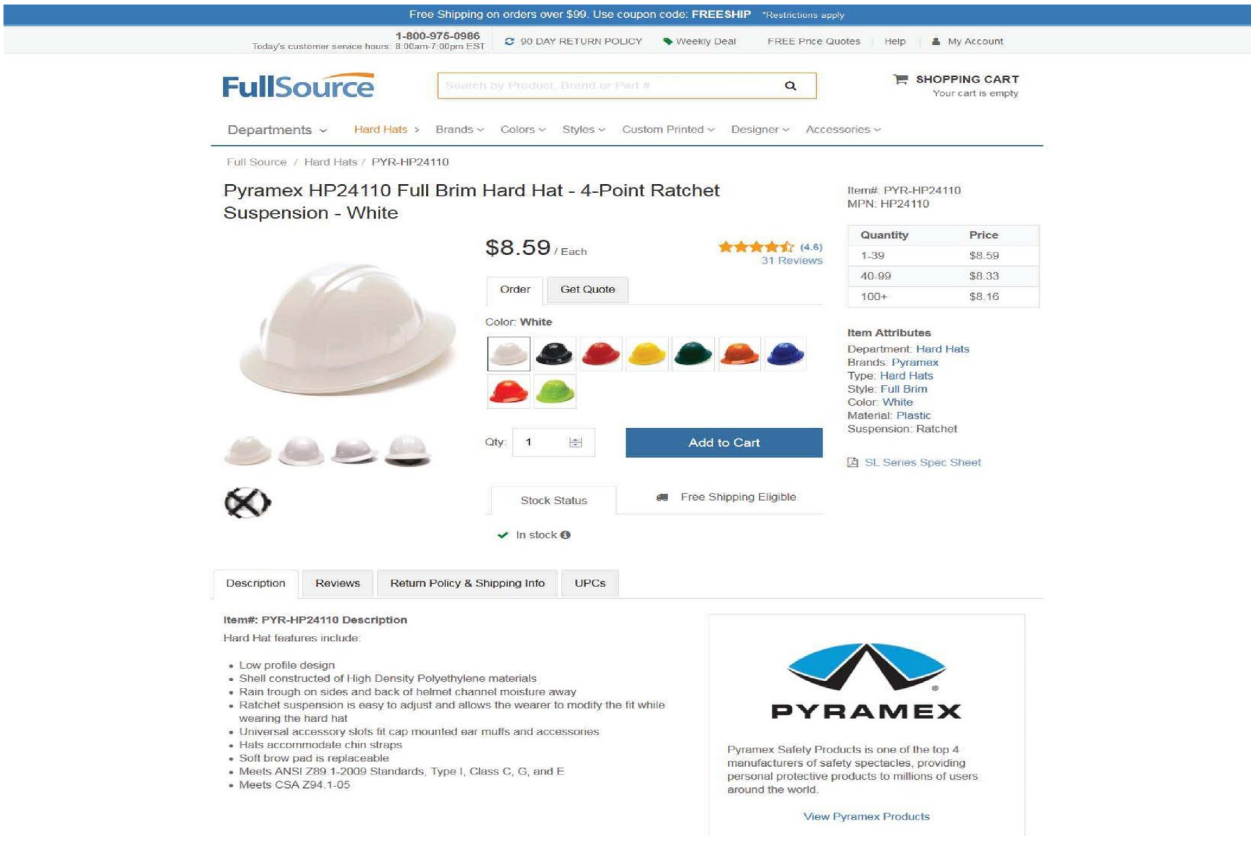
Styles
Custom Printed
Designer
Accessories
Full Source / Hard Hats / PYR-HP14030
Pyramex HP14030 Hard Hat - 4-Point Snap Lock Suspension - Yellow
Item#: PYR-HP14030
MPN: HP14030
$4.99 / Each
(4.9)
23 Reviews
Quantity
Price
1-39
$4.99
40-99
$4.84
100+
$4.74
Order
Get Quote
Add Logo
Color: Yellow
Item Attributes
Department: Hard Hats
Brands: Pyramex
Style: Slotted
Style: Cap Style
Color: Yellow
Material: Plastic
Suspension: Pinlock
SL Spec Sheet
Qty: 1
Add to Cart
Stock Status
Free Shipping Eligible
In stock
Description
Reviews
Return Policy & Shipping Info
UPCs
Item#: PYR-HP14030 Description
Hard Hat features include:
Low profile design
Shell constructed of High Density Polyethylene materials
Rain trough on sides and back of helmet channel moisture away
Snap Lock (pinlock) suspension features "tuck away" adjustments for all day, hassle free wear
Universal accessory slots fit cap mounted ear muffs and accessories
Hats accommodate chin straps
Soft brow pad is replaceable
Meets ANSI Z89.1-2009 Standards, Type I, Class C, G, and E
PYRAMEX
Pyramex Safety Products is one of the top 4 manufacturers of safety spectacles, providing personal protective products to millions of users around the world.
View Pyramex Products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Full Source / Hard Hats / PYR-HP24110
Pyramex HP24110 Full Brim Hard Hat - 4-Point Ratchet Suspension - White
Item#: PYR-HP24110
MPN: HP24110
$8.59 / Each
(4.6)
31 Reviews
Quantity
Price
1-39
$8.59
40-99
$8.33
100+
$8.16
Order
Get Quote
Color: White
Item Attributes
Department: Hard Hats
Brands: Pyramex
Type: Hard Hats
Style: Full Brim
Color: White
Material: Plastic
Suspension: Ratchet
SL Series Spec Sheet
Qty: 1
Add to Cart
Stock Status
Free Shipping Eligible
In stock
Description
Reviews
Return Policy & Shipping Info
UPCs
Item#: PYR-HP24110 Description
Hard Hat features include:
Low profile design
Shell constructed of High Density Polyethylene materials
Rain trough on sides and back of helmet channel moisture away
Ratchet suspension is easy to adjust and allows the wearer to modify the fit while wearing the hard hat
Universal accessory slots fit cap mounted ear muffs and accessories
Hats accommodate chin straps
Soft brow pad is replaceable
Meets ANSI Z89.1-2009 Standards, Type I, Class C, G, and E
Meets CSA Z94.1-05
PYRAMEX
Pyramex Safely Products is one of the top 4 manufacturers of safety spectacles, providing personal protective products to millions of users around the world.
View Pyramex Products

"[M]arketplace uses of a term lacking secondary meaning … are among the uses that legitimately play [a] role" "as undermining a claim of acquired distinctiveness of a term based on substantially exclusive use of the term as a mark for the statutory five-year period." *Galperti, Inc. v. Galperti S.R.L.*, 2021 USPQ2d 1115, at *4. *See also Levi Strauss,* 222 USPQ at 940-41 ("When the record shows that purchasers are confronted with more than one (let alone numerous) independent users of a term or device, an application for registration under Section 2(f) cannot be successful, for distinctiveness on which purchasers may rely is lacking under such circumstances."). The other safety helmets in the marketplace do indeed include ridges. However, the ridge patterns on the various Euroguard safety helmet models are dramatically different in shape than the registered marks at issue here. The ridges superimposed on the Occunomix and Pyramex appear similar; however, it is difficult to discern on the record before us whether any are identical to Respondent's '481 or '482 marks. But even if they are identical, we cannot find that two marketplace uses are significant given that we have no testimony regarding the extent of such uses.

Accordingly, the record fails to support a finding that other marketplace uses are significant enough to conclude that Respondent's marks have not been in substantially exclusive use. Perhaps on a more developed record, we would find otherwise.

3. **Amount and Manner of Advertising**

a. **Amount of Advertising**

As explained in Section IX.B., during prosecution the advertising expenditures and marketing outlets for both the '481 and '482 marks were identical. Respondent

reiterated at trial that it markets its safety helmets through direct communications between its sales representatives and customers; solicitations with the construction, industrial, and oil and gas industries, tradeshows and industry association newsletters, emails, and product flyers.[262] The number of catalogs printed and distributed to potential consumers remains the same at 30,000 per year.[263] Respondent added that it advertises and offers its safety helmets for sale on third-party retail sites such as Amazon,[264] and through its distributors' websites such as 3M, Wurth, and MSC Industrial.[265]

With regard to advertising expenditures, Respondent asserts that "from its introduction in August 2004 until today, Registrant has spent millions [of] dollars advertising Registrant's Marks in the U.S. into the construction, industrial, and oil and gas industries."[266] Our review of the record shows otherwise. Ms. Eads testified at trial that "annual expenditures to promote its products bearing the '481 registered Ridge Design exceed $600,000 annually."[267] She does not specify, however, the years to which this figure applies. Ms. Eads also testified that Respondent spends

[262] Eads Testimony Decl. ¶¶ 57-59; 44 TTABVUE 14.

[263] Eads Testimony Decl. ¶ 66; 44 TTABVUE 17.

[264] Eads Testimony Decl. ¶ 53 and Ex. DX12; 44 TTABVUE 12 (the cap style Americana hard hat bearing the '481 Trademark has been available for sale on Amazon since at least as early as October 2, 2006. … [T]he full brim style Americana hard hat bearing the '482 Trademark has been available for sale on Amazon since at least as early as June 30, 2011.").

[265] Eads Testimony Decl. ¶¶ 54-55 and Ex. DX13 (representative sample of Respondent's distributors' websites advertising and offering the Americana hard hats bearing the '481 and the '482 marks for sale); 44 TTABVUE 13.

[266] Respondent's Brief, p. 34, 53 TTABVUE 35.

[267] Eads Testimony Decl. ¶ 58; 44 TTABVUE 14.

approximately 15% of its annual sales and marketing budget for print advertising, i.e. between $36,000 and $81,000 annually.[268] This is the same level of expenditure when it originally obtained its '481 registration. Ms. Eads made no statements on annual advertising expenditures and marketing in her testimony declaration regarding the '482 registration.

Respondent's annual tradeshow and print catalog expenditures in U.S. dollars for the years 2008-2012 for the '481 and '482 marks are shown in the table below. This was the data submitted at prosecution. Ms. Eads confirmed in her testimony "Respondent has incurred similar costs for the period of 2013-2019."[269]

Year	Expenditures
2008	$225,000
2009	$120,000
2010	$127,000
2011	$244,000
2012	$196,000

The Board is having difficulty ascertaining how these figures add up to $600,000 annually for the '481 registration alone.

[268] Eads Testimony Decl. ¶ 58; 44 TTABVUE 14.

[269] Eads Testimony Decl. ¶ 70; 44 TTABVUE 14. Respondent designated as confidential the data for 2008-2019 regarding number of trade shows and conventions where Respondent promoted the Americana cap and full brim style hard hats bearing the '481 and '482 registered marks and the costs associated with those trade shows. Eads Testimony Decl. ¶ 70 and Ex. DX15. Suffice to say, as Ms. Eads testified, those figures are quite similar to the publicly available figures provided during prosecution.

Equally problematic, without context, it is difficult to evaluate the significance of these figures in the safety helmet industry. *Compare In re Country Music Ass'n*, 100 USPQ2d 1824, 1834 (TTAB 2011) (acquired distinctiveness found where "from 2000-2007, applicant engaged in targeted advertising campaigns, spending approximately $1-3 million annually on print and television ads, trade shows, promotional events, and email campaigns…").

b. **Manner of Advertising**

A critical inquiry is whether Respondent's Ridge Designs are being used and advertised in the marketplace in such a manner that consumers associate the product design with a particular applicant, and therefore view the product as emanating from a single source. *See Stuart Spector,* 94 USPQ2d at 1572 ("To determine whether a configuration has acquired distinctiveness, advertisements must show promotion of the configuration as a trademark."). "Sample advertisements showing 'look-for' types of promotional efforts from an applicant may be particularly probative on the issue of whether a product design functions as a source identifier." *In re Koninklijke Philips Electronics N.V.,* 112 USPQ2d 1177, 1188 (TTAB 2014). The concept of "look for" advertising is explained below:

> "Look for" advertising refers to advertising that directs the potential consumer in no uncertain terms to look for a certain feature to know that it is from that source. It does not refer to advertising that simply includes a picture of the product or touts a feature in a non-source-identifying manner.

Stuart Spector, 94 USPQ2d at 1572. *Compare Hehr Mfg.,* 126 USPQ at 382-83 (reversing refusal to register red rectangular sticker on which applicant's other

marks were placed based on advertisements urging consumers to look for the red sticker) and *Change Wind*, 123 USPQ2d at 1468 (finding that an advertisement stating that "You can distinguish Change Wind's VAWT from its competitors by the unique configuration of wings over a conical tower" was an example of "look-for" advertising) *with In re ic! Berlin brillen GmbH,* 85 USPQ2d 2021, 2023-24 (TTAB 2008) (absence of look-for advertising was the "chief reason" for finding no acquired distinctiveness for claimed eyewear earpiece mark bearing applicant's word mark because "word and logo marks are different in nature from applicant's earpiece design" and the Board was "unable to conclude that the ultimate consumer would view the earpiece design as applicant's trademark simply because it is the earpiece portion of the eyewear frame").

As discussed above in discussed in Section I.A, we are required to draw an adverse inference against Respondent with regard to "look-for" advertising, namely that "Respondent has never advertised or promoted its products in a manner that specifically directs the intended recipient to the Ridge Designs or Registrant's Marks as an indication of source."[270] This has a direct negative impact on findings regarding consumer perception of Respondent's marks as source indicators.

Consistent therewith, neither the prosecution nor trial record include any evidence of "look for" advertising. None of the specimens submitted during prosecution or post-registration underscore for consumers the ridge designs superimposed on the American cap style or full brim helmets as an indicator of source.

[270] May 28, 2020 Order, 22 TTABVUE 12-14. *See also* Section I.A. ("Discovery Sanctions").

In fact, no mention of the Ridge Designs is made at all. Instead, other features are emphasized. The features noted on the original specimen filed in support of the '481 Registration, Respondent's 2012 Distributor Catalog in print format for the Americana Cap Style are summarized below:[271]

- 4 point woven nylon suspension
- Short peak and low profile
- Functional rain trough
- Accommodates a chin strap, and a "wide range of eye, face and hearing products"
- Goggle retaining slots
- Removable and washable moisture wicking brow pad
- Slide-Lock and Mega Ratchet size adjustment

These same features are highlighted in the original specimen from Respondent's 2012 Distributor Catalog for the Americana Full Brim style '482 Registration as well, with the exceptions of the short peak and low profile, functional rain trough, and removable and washable moisture wicking brow pad.[272] The substitute specimen for both the Americana cap and full brim styles for the '481 and '482 registrations from Respondent's online catalog do not describe any product features.[273] The specimen submitted in connection with the Section 8 and 15 Combined Affidavit for the '481

[271] See Original Specimen reprinted in Section IX.B.1.

[272] See Original Specimen reprinted in Section IX.B.1.

[273] See Substitute Specimen reprinted in Section IX.B.1.

Registration does not draw any attention to the ridge design; rather it draws the consumer's attention to the following features:[274]

- Molded from high density polyethylene
- Short peak and trim profile
- 4 point nylon suspension
- Easy Quick-Slide sizing
- Meets ANSI Z89

For the '482 Registration, the only features highlighted in the Section 8 and 15 Combined Affidavit are "HDPE Standard Suspension Made in USA" and that it meets ANSI requirements.[275] "Advertising that touts a product feature for its desirable qualities and not primarily as a way to distinguish the producer's brand is not only not evidence that the feature has acquired secondary meaning, it directly undermines such a finding." *Thomas & Betts Corp. v. Panduit Corp.*, 65 F.3d 654, 36 USPQ2d 1065, 1071 (7th Cir. 1995); *In re Edwards Ski Prods. Inc.*, 49 USPQ2d 2001 (TTAB 1999); *In re Pingel Enter., Inc.*, 46 USPQ2d 1811 (TTAB 1998).

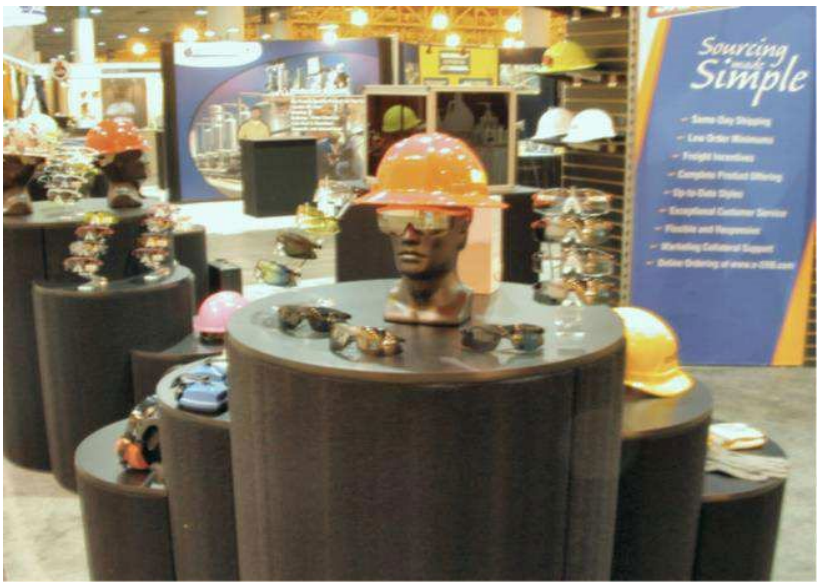
Respondent's tradeshow promotions also fall short. Ms. Eads presented testimony that between 2008 and 2019, Respondent promoted its hard hats bearing the Ridge Design '481 and '482 Marks at over 300 tradeshows and conventions,[276] including the National Safety Council show, the STAFDA (Specialty Tools and Fasteners

[274] See Section 8 and 15 Combined Declaration Specimen reprinted in Section IX.B.1.

[275] See Section 8 and 15 Combined Declaration Specimen reprinted in Section IX.B.1.

[276] Eads Testimony Decl. ¶¶ 64-65 (portions designated confidential) and Ex. DX15 (confidential); 44 TTABVUE 15-16.

Distributors Association), PPAI (Promotional Products Association International), ASSE (American Society of Safety Engineers), and VPPPA (Voluntary Protection Program's Participant Association).[277] Respondent argues in its brief that "[a]t each of the trade shows above, [Respondent's] trade show booth prominently featured the trade dress of Registrant's hard hats."[278] The record shows otherwise. None of the photos from Respondent's trade show displays draw the industry attendees' attention to the Ridge Designs. Below are the photos submitted during prosecution from Respondent's trade show booths at the National Safety Council Show in September 2004 and the National Safety Council Show in 2011.[279]



[277] Eads Testimony Decl. ¶ 60, Ex. DX15 (confidential); 44 TTABVUE 14.

[278] Respondent's Brief, p. 36; 53 TTABVUE 36.

[279] Eads Testimony Decl. ¶¶ 60-63 Ex. DX14; 44 TTABVUE 14-16, 158-169.

While the safety helmets themselves are prominently displayed, nothing calls attention to the ridges as uniquely pointing to Respondent.

The same deficiencies exist with Respondent's more recent tradeshow activities. Representative photos from Respondent's trade shows are reprinted below, none of which display "look for" advertising directing attendees to the registered Ridge Designs:[280]

[280] Eads Testimony Decl. ¶ 63 and Ex. DX14; 44 TTABVUE 15, 158-169 ("Attached as Exhibit DX14 are true and accurate images of ERB displays used at other trade shows and conventions. These documents are Bates numbered ERB 000499-ERB 00500 and ERB 503 - 512. Due to my position as President and CEO of ERB, I am familiar with the type of displays ERB has used at trade shows and conventions. These images show how ERB typically promotes the Americana hard hats bearing the '481 Trademark and the '482 Trademark in ERB's at trade shows and conventions and how the unique design of the '481 Trademark and the '482 Trademark are prominently displayed.").


ERB
Safety Products for LIFE
3300


Fame
ERB
Safety Products for LIFE.


ERB
MARRIOTT


COOLERZ
Honeywell
THE POWER OF CONNECTED
SALISBURY
PYRAMEX

All of Respondent's tradeshow exhibitions prominently feature safety helmets bearing the Ridge Design marks, but "simply show[ing] the product like any advertising would," *Stuart Spector*, 94 USPQ2d at 1572, does not suffice. Rather, consumers need to be drawn directly, in some manner, to the product configuration marks as uniquely associated with Respondent.

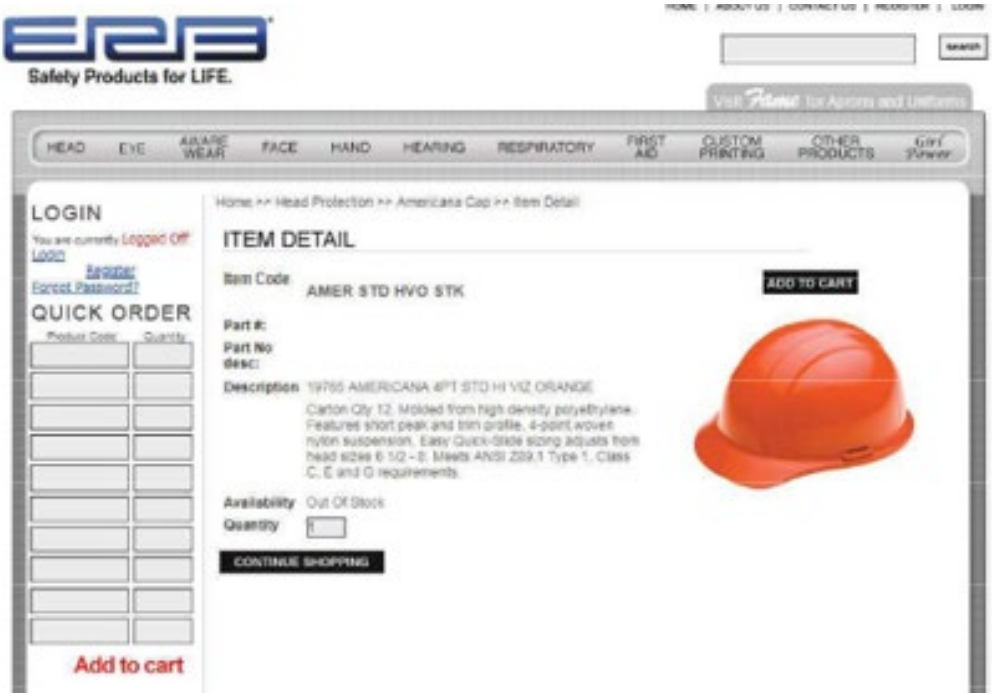
Another form of advertising Respondent engages in is catalog distribution. As noted above, Respondent prints and distributes over 30,000 catalogs each year to customers and potential customers of safety products including hard hats.[281] Respondent contends that "[t]hese catalogs prominently display Registrant Mark as it is used on Registrant's hard hats as shown in the representative image below."[282] We have carefully reviewed the representative image Respondent highlights below as well as all catalog excerpts of record featuring the Americana cap and full brim style safety helmets. Again, none of the catalogs show efforts by Respondent to educate consumers that the Ridge Designs depicted in the '481 and '482 registrations function as source indicators. By way of example, we note the following for the Americana cap style safety helmet:

[281] Eads Testimony Decl. ¶ 66; 44 TTABVUE 15.

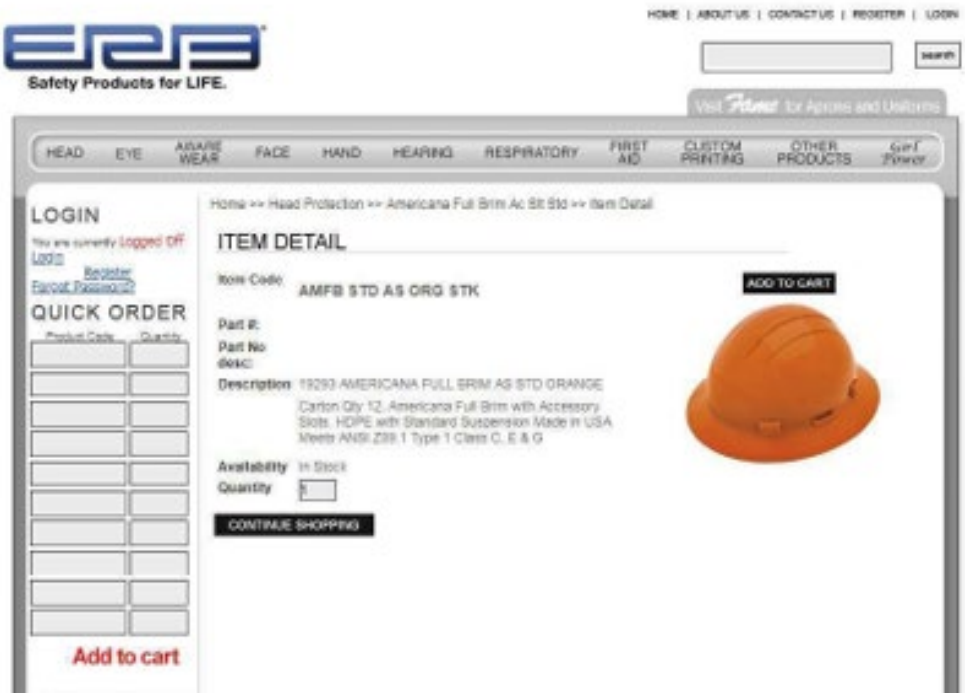
[282] Respondent's Brief, p. 36; 53 TTABVUE 37.


02
HEAD PROTECTION
ERB SAFETY
AMERICANA®
The lightweight Americana® Safety Helmet is designed for all day comfort.
• Molded from lightweight, high density polyethylene
• Features a short peak and trim profile
• Functional rain trough
• Accessory slots accommodate a wide variety of eye, face and hearing products
• Accommodates chin strap
• Brow pad is removable, washable and replaceable
• Cushioned brow pad absorbs moisture
• Comfortable, impact-absorbing, 4-point woven nylon suspension
• "Easy Quick-Slide" sizing adjusts suspension from head sizes 6½ – 8
• Band conforms to wearer's head for a comfortable fit and allows for easier size adjustment
• Stocked in 12 colors
• Made in America and meets ANSI Z89.1-2003, Type 1, Class C, E and G requirements
• LOW CARTON QUANTITY, packed 12 per carton
• Hat Weight: 12.38 oz
ISO 9001
MADE IN USA CERTIFIED QUALITY SYSTEM
CE
SEI Certified Model ANSI Z89.1-2003
AMERICANA® MEGA RATCHET®
In addition to the features below, the Americana® Mega Ratchet® has the same great benefits as the Americana® Safety Helmet.
• The "Secure-Fit" ratchet features an easy turn knob that allows adjusting for a perfect fit without removing the helmet
• Each turn of the ratchet knob automatically locks the adjustment with 50 meshing teeth
• The no-slip hold maintains the desired fit even in the most physically active jobs or extreme weather conditions
• Provides a secure and comfortable fit
• The hinged ratchet fits low on nape of neck and adjusts for a perfect fit
• The ratchet is cushioned with a thick sponge padding for long-lasting comfort
• Adjusts to over 40 different head sizes, 6½ - 8
• Stocked in 12 colors
• Made in America and meets ANSI Z89.1-2003, Type 1, Class C, E and G requirements
• LOW CARTON QUANTITY, packed 12 per carton
• Hat Weight: 13.26 oz
ISO 9001
MADE IN USA CERTIFIED QUALITY SYSTEM
CE
SEI Certified Model ANSI Z89.1-2003
YELLOW
WHITE
BLUE
RED
BLACK
ORANGE
GREEN
GRAY
HI-VIZ ORANGE
HI-VIZ LIME
HI-VIZ PINK
HI-VIZ YELLOW
Custom colors available, 150 piece minimum. Call for quote. Replacement suspensions available.
"Easy Quick-Slide" sizing adjusts suspension from head sizes 6½ - 8
Comfortable impact-absorbing 4-point woven nylon suspension
Band conforms to wearer's head for a comfortable fit
Cushioned brow pad absorbs moisture; brow pad is removable, washable, and replaceable
Logos may be imprinted on the front, back and sides in single or multi-colors
Thick sponge padding cushions ratchet
Hinged ratchet fits low in the nape of the neck
Mega Ratchet® suspension features easy turn knob; adjusts from head sizes 6½ - 8
The Americana® has a comfortable, impact-absorbing, 4-point woven nylon suspension
Accessory slots accommodate a variety of eye, face and hearing products

Respondent also advertises and offers for sale its safety helmets on its business-to-consumer ("B2C") website at www.e-erb.com.[283] In Ms. Eads' testimony declaration, Respondent attached representative images from the website which in Respondent's view, "prominently display" its registered '481 and '482 marks. These printouts from Respondent's website, however, appear to be the same specimens Respondent submitted with its combined Section 8 and 15 affidavits for each registration. Notably, we have no other or more recent printouts from Respondent's own BC2 website in the record.



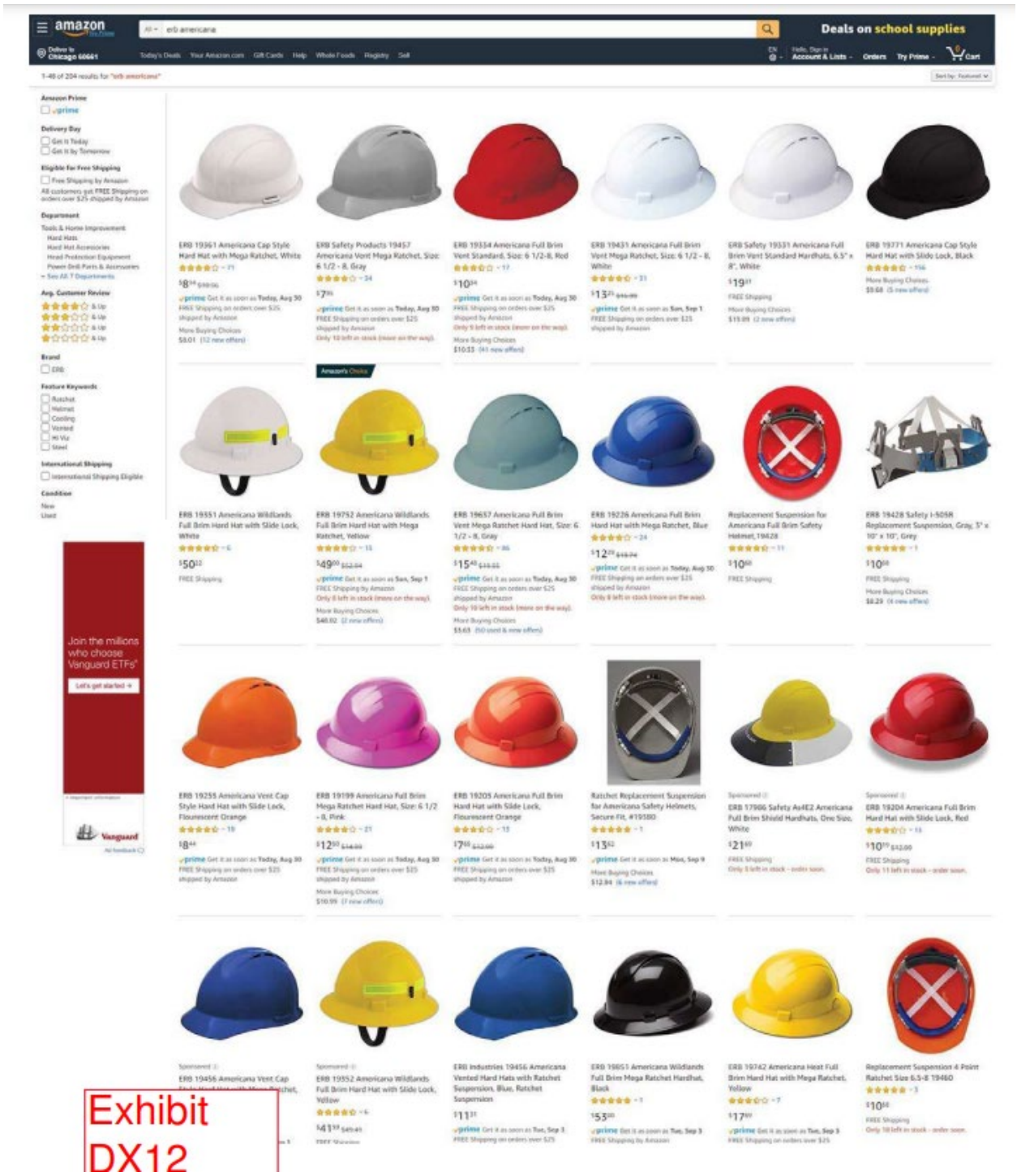
[283] Eads Testimony Decl. ¶¶ 49-50 and Exs. DX10-DX11, 44 TTABVUE 11.

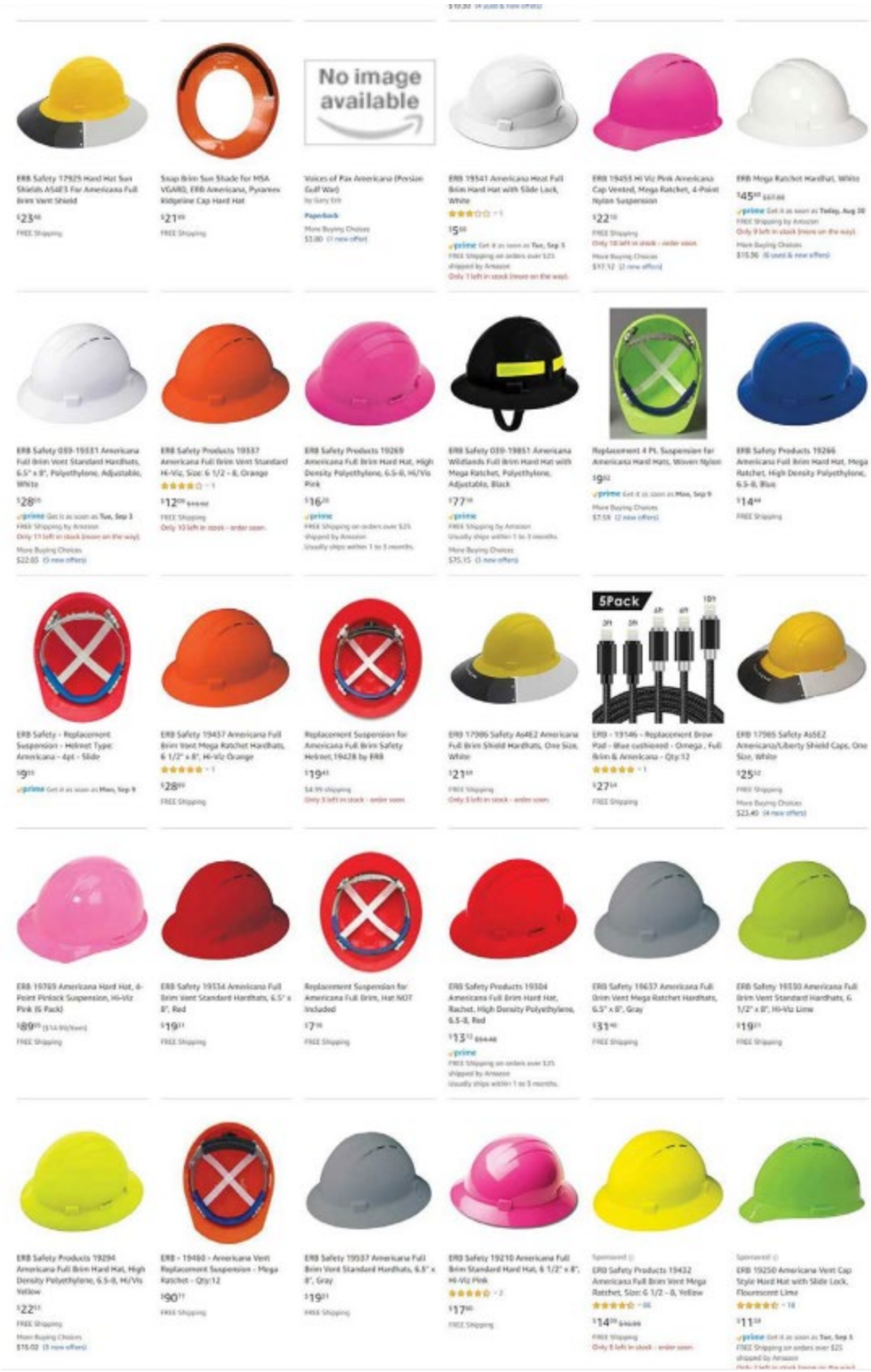


Again, nothing on Respondent's website pages suggests "look for" advertising of the Ridge Designs. Instead, the website calls attention to other features such as the color, type of molding, suspension, and the fact that it meets ANSI Type 1 Class C, E and G standards.

Respondent offers its safety helmets for sale on Amazon.[284] Absent is any "look for" advertising.

[284] Eads Testimony Decl. ¶¶ 49-50 and Exs. DX10-DX11, 44 TTABVUE 105-06.


amazon
erb americana
Deals on school supplies
Chicago 60661
Today's Deals
Your Amazon.com
Gift Cards
Help
Whole Foods
Registry
Sell
Account & Lists
Orders
Try Prime
Cart
Join the millions who choose Vanguard ETFs
Let's get started
Vanguard
Exhibit
DX12


No image available
5Pack

None of the above promotional activities or advertisements establish the consuming public's association between the Ridge Design marks and Respondent as the source of the goods.

4. **Amount of Sales and Number of Customers**

During the prosecution of each registration, Respondent indicated that annual sales of safety helmets bearing the Ridge Design marks were over "1 million units per year" at approximately an average retail cost of $12 per hard hat.[285] At trial, Respondent, through the declaration of Ms. Eads, essentially indicated that this data remained unchanged, stating that it "sells well over [1 million] cap style Americana hard hats with the '481 Trademark and '482 Trademark per year" at an average retail cost $12.00 per unit.[286] Respondent also provided at trial the quantity of cap style Americana hard hats bearing the '481 Ridge Design sold for fiscal years 2004-2019 and the total sales revenues from the '481 mark.[287] For the '482 registered Ridge Design, the same data was made of record but for different fiscal years, 2008-2019, reflecting its later date of first use.[288] In discussing these figures in its brief, Respondent asserts that it "has achieved tens of millions of dollars in total sales in the United States," and that Respondent's "continuous sales growth and massive sales figures objectively demonstrate that a significant portion of the relevant

[285] October 3, 2013 Response to Office Action, Eads Section 2(f) Decl., executed on September 26, 2013, ¶ 15.

[286] Eads Testimony Decl. ¶ 72; 44 TTABVUE 18.

[287] Eads Testimony Decl. ¶¶ 73-74 and Ex. DX19 (confidential); 44 TTABVUE 18.

[288] Eads Testimony Decl. ¶¶ 75-76 and Ex. DX20 (confidential); 44 TTABVUE 18.

consumers repeatedly made informed decisions to select and purchase [Respondent's] hard hats featuring [Respondent's Ridge Design Marks.]"[289] Respondent contends that the "sales figures exceeded those relied upon by the TTAB in previous decisions" finding acquired distinctiveness, citing as examples *In re Thomas Nelson, Inc.*, 97 USPQ2d 1712, 1717-18 (TTAB 2011) (finding total sales of nearly $500 million since 1986 to be "substantial" and support finding of acquired distinctiveness) and *In re Black & Decker Corp.*, 81 USPQ2d 1841, 1844 (TTAB 2006) (total sales exceeding $500 million between 2000 and 2004 found "substantial" and supporting finding that applied-for key head 40 design has acquired distinctiveness).[290]

Insofar as the sales data is designated confidential, we will not discuss any specific figures or dollar amounts in this opinion. However, we can say that the numbers are nowhere near the dollar figures noted in *In re Thomas Nelson* and *In re Black & Decker Corp.*, *supra*. Another drawback is that because we have no context in the industry for this data, it is difficult to evaluate the level of success. *See Target Brands, Inc. v. Hughes*, 85 USPQ2d 1676, 1681 (TTAB 2007) (declining to "elevate applicant's highly descriptive designation to the status of a distinctive mark" based on sales figures unaccompanied by evidence of an applicant's total market share or ranking among its competitors). And even if we were able to find that the sales under both marks was substantial, "[a] high volume of sales does not always amount to a finding of acquired distinctiveness, especially in applications involving marks comprised of

[289] Respondent's Brief, p. 39; 53 TTABVUE 40.

[290] Respondent's Brief, p. 39; 53 TTABVUE 40.

product designs" and where there is no "look for" advertising. *Koninklijke Philips Elecs. N.V.,* 112 USPQ2d at 1186-87. In any event, even assuming that Respondent's level of advertising expenditures is relatively high for both marks, "while sales volume figures may demonstrate the growing popularity of the products, mere figures demonstrating successful product sales are not probative of purchaser recognition of a configuration as an indication of source." *Stuart Spector*, 94 USPQ2d at 1572 (internal citations omitted). *See also In re Bongrain Int'l (Am.) Corp.*, 894 F.2d 1316, 13 USPQ2d 1727, 1729 (Fed. Cir. 1990) (growth in sales may be indicative of popularity of product itself rather than recognition of the asserted mark as denoting origin). A high volume of sales does not always amount to a finding of acquired distinctiveness, especially in cases involving marks comprised of product designs. *See, e.g., Goodyear Tire & Rubber Co. v. Interco Tire Corp.*, 49 USPQ2d 1705 (TTAB 1998) ($56,000,000 sales revenues and 740,000 tires sold insufficient to show acquired distinctiveness of tire tread design).

5. **Intentional Copying of the Mark by Others**

"Copying is only evidence of secondary meaning if the [copier's] intent in copying is to confuse consumers and pass off his product as the plaintiff's." *Stuart Spector*, 94 USPQ2d at 1575 (quoting *Thomas & Betts*, 36 USPQ2d at 1072). Neither the prosecution nor trial record contain any evidence of intentional copying.

6. **Unsolicited Media Coverage**

There is no evidence of unsolicited media coverage in either the prosecution or trial record.

E. Conclusion on Lack of Acquired Distinctiveness Claims

Based on our consideration of the *Converse* factors, we find that Petitioner has made a prima facie case that both of the '481 and '482 registered Ridge Design marks lack acquired distinctiveness. The prosecution and trial records for each mark are devoid of any "look for" advertising as well as evidence of direct consumer perception, such as consumer surveys, market research or studies demonstrating that consumers perceive Respondent's Ridge Designs as source indicators. Likewise, we have no evidence of actual consumer recognition of either mark as a source indicator. Nor do we have evidence of unsolicited media recognition or intentional copying of the '481 or '482 mark. While on this record we have found that Respondent's use of its Ridge Designs has been substantially exclusive, long use of a product configuration mark is not particularly probative of consumer perception. The evidence of sales and advertising expenditures submitted during prosecution and at trial lack industry context. This is especially troubling given the lack of "look for" advertising.

In accordance with *Cold War Museum*, the burden shifts to Respondent to prove acquired distinctiveness based on any "additional evidence or argument" produced in this cancellation proceeding, keeping in mind that Petitioner bears the ultimate burden of proof by a preponderance of the evidence. The record shows that advertising expenditures for both marks has remained approximately the same since registration. While we have no context for evaluating the level of sales and revenues, we can say that the amounts do not come close to figures in other cases where acquired distinctiveness was found. Respondent has not come forward with any evidence of intentional copying or unsolicited media recognition of its Ridge Designs

as source indicators. Nor did Respondent introduce any evidence of direct consumer recognition of the '481 and '481 marks in the form of declarations or oral testimony from actual, typical consumers.

The only evidence Respondent produced was from its former member of the Board, Mr. Warren, whose testimony as an industry professional and former board member of Respondent merits only minimal weight. Consistent with the discovery sanction entered against Respondent, the trial record is devoid of any consumer surveys, market research or studies demonstrating that consumers perceive Respondent's Ridge Designs as a trademark.[291] Also critical to establishing acquired distinctiveness for product configurations is "look for" advertising. Respondent has failed to come forward with any evidence showing efforts or success by Respondent to educate consumers that its Ridge Designs serve as source indicators. This finding aligns with the discovery sanction imposed on Respondent drawing an adverse inference that it "has never advertised or promoted its products in a manner that specifically directs the intended recipient to the Ridge Designs or Registrant's Marks as an indication of source."[292] Taken together, Respondent has failed to produce any additional evidence or argument to rebut Petitioner's prima facie showing.

We therefore find that Petitioner has satisfied its ultimate burden of persuasion under the preponderance of the evidence standard, based on all the evidence made of record during prosecution and any additional evidence introduced in the cancellation

[291] See discussion in Section I.A ("Interlocutory Background – Discovery Sanctions"), *supra.*

[292] See discussion in Section I.A ("Interlocutory Background – Discovery Sanctions"), *supra.*

proceeding. In making this determination, we have weighed each of the *Converse* factors together. Accordingly, we sustain Petitioner's claims that Respondent's '481 and '482 registered marks lack acquired distinctiveness under Section 2(f).

Decision: Petitioner's Section 2(e)(5) claims against Registration Nos. 4493481 and 4493482 on the ground that the registered marks are functional are denied. Petitioner's lack of acquired distinctiveness claims under Section 2(f) against both registrations are sustained, and the petition to cancel both registrations is granted on that ground. Respondent's registrations will be canceled in due course.