NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

COLAS SOLUTIONS, INC.,
Appellant

v.

BLACKLIDGE EMULSIONS, INC.,
Appellee

2018-1358, 2018-1359

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2016-01031, IPR2016-01032.

Decided: March 27, 2019

ALLEN MARCEL SOKAL, Potomac, MD, argued for appellant. Also represented by KEVIN W. KIRSCH, DAVID ANGELO MANCINO, Baker & Hostetler LLP, Cincinnati, OH.

JOHN FRANCIS TRIGGS, Patterson Intellectual Property Law, PC, Nashville, TN, argued for appellee. Also represented by RYAN D. LEVY.

Before PROST, *Chief Judge,* O'MALLEY and HUGHES, *Circuit Judges.*

PROST, *Chief Judge.*

Colas Solutions, Inc. ("Colas") appeals from the final written decisions of the Patent Trial and Appeal Board ("Board") in two *inter partes* reviews. The Board determined that certain claims of U.S. Patent Nos. 7,503,724 ("the '724 patent") and 7,918,624 ("the '624 patent") are not unpatentable in view of the prior art of record. After finding Colas failed to prove its primary obviousness theory based on inherency, the Board concluded that its alternative obviousness theory was untimely. We affirm.

BACKGROUND

I

Blacklidge Emulsions, Inc. ("Blacklidge") is the assignee of the '724 and '624 patents. The patents are directed to a method of applying a specific asphalt emulsion coating, known as a "tack coat," to a road surface. *See* '724 patent col. 1 ll. 13–16; '624 patent col. 1 ll. 15–18.

The claimed invention involves a method of bonding layers of asphalt using a tack coat that exhibits certain properties. Namely, the tack coat has a relatively hard surface that resists adhering to vehicle tires yet still functions as an adhesive for subsequent layers of pavement. '724 patent col. 4 ll. 53–57; '624 patent col. 4 ll. 56–60. To attain these properties, the claims require that the tack coat has a specific range of "softening points"—i.e., the "temperature at which an asphalt composition becomes soft and flowable." '724 patent col. 2 ll. 59–60; '624 patent col. 2 ll. 61–62.

For example, claim 1 requires that the asphalt composition provides a coating with "a softening point greater than about 140° F. (60° C.)" once cured. '724 patent col. 14

ll. 16–17; '624 patent col. 14 ll. 3–4. The remaining claims require similar ranges.

II

In 2016, Colas filed Petitions for *inter partes* review, challenging the validity of the '724 and '624 patents as obvious over the prior art.[1] The Board instituted review of the challenged claims.[2]

In its Petitions, Colas relied on the Bardesi reference as teaching an asphalt that meets the "softening point" element of each claim.[3] Bardesi does not expressly disclose softening points for any of its asphalts. Instead, it discloses "pen" values. A pen value, or penetration value, "measures the distance in dmm (tenths of a millimeter) that a standard needle, under a standard loading, will penetrate a sample in a given time under known temperature conditions." '724 patent col. 2 ll. 50–53. Based on these pen values, Colas advanced the theory that Bardesi inherently disclosed the softening point limitation.

In support of its inherency theory, Colas offered the opinion of its expert, Dr. King. Dr. King opined that "asphalt having a hardness of 20-pen or below, such as the ones specifically taught by Bardesi, will necessarily have a softening point greater than about 140° F (60° C)." J.A. 201 (citing King Decl. ¶ 40).

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[1] The relevant briefing and other submissions in both actions were substantially identical. For simplicity, we cite only to the materials from the '724 patent action.

[2] The challenged claims include claims 1–12, 15–20, 23–28, and 31–33 of the '724 patent and claims 1–12, 14–23, and 25 of the '624 patent.

[3] Bardesi, O.E. & D.A. Paez, *A Novel Generation of Tack Coat Emulsions to Avoid Adhesion to Tyres*, Third World Congress on Emulsions ("Bardesi").

To reach his conclusion, Dr. King relied on a formula called the Pfeiffer equation[4] to calculate a range of potential softening points for the Bardesi asphalts. J.A. 201 (citing King Decl. ¶ 40). The equation proposes a relationship between an asphalt's (i) pen value, (ii) softening point, and (iii) penetration index ("PI").[5] *Id.*

In response, Blacklidge argued that Dr. King's calculations were flawed. Blacklidge's expert, Dr. Little, applied the Pfeiffer equation and arrived at different potential softening points. *See* J.A. 368 (citing Little Decl. ¶¶ 89–93). According to Dr. Little's results, the Bardesi asphalts may have softening points *less than* 60° C depending on their PI value. *Id.*

In its Reply, Colas conceded that "Dr. King made [a] mathematical mistake with his Pfeiffer calculations." J.A. 448. Furthermore, Colas conceded that Dr. Little's calculations were accurate. *See id.*

Despite Dr. King's error, Colas argued that "the corrected Pfeiffer relationship still shows that *most* 10/20 pen asphalts, and certainly the better quality 10/20 pen asphalts, will have the claimed softening point values above 60° C." J.A. 449 (emphasis in original). In turn, Colas raised the argument that "a prima facie case of obviousness still exists when the ranges of a claimed composition overlap the ranges disclosed in prior art." J.A. 450 (citing *In re Peterson*, 315 F.3d 1325, 1329 (Fed. Cir. 2003)).

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[4] The Pfeiffer equation is as follows: $PI = (1952 - 500 \log pen - 20\,SP) / (50 \log pen - SP - 120)$. J.A. 14.

[5] According to Dr. King, PI is a measure of an asphalt's temperature susceptibility. J.A. 14 (citing King Decl. ¶ 40).

III

On November 2, 2017, the Board issued its final written decisions in both proceedings. The Board concluded Colas had not shown by a preponderance of the evidence that any of the challenged claims in either patent would have been obvious in view of the prior art.

The Board first addressed inherency. The Board emphasized that a party must "meet a high standard in order to rely on inherency to establish the existence of a claim limitation in the prior art in an obviousness analysis—the limitation at issue necessarily must be present, or the natural result of the combination of elements explicitly disclosed by the prior art."[6] *Colas Sols. Inc. v. Blacklidge Emulsions, Inc.*, No. IPR2016-01031, 2017 WL 5067597, at *9 (PTAB Nov. 2, 2017) (quoting *PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1195–96 (Fed. Cir. 2014)). The Board concluded Colas's inherency theory failed because the undisputed results from the Pfeiffer equation showed that "not all 10-pen and 20-pen asphalts have a softening point greater than 60° C." *Id.*

The Board then addressed Colas's alternative theory based on overlapping ranges. The Board noted that the only "obviousness challenge in the Petition was predicated on the inherency of the softening point limitation in the asphalt of the emulsion disclosed in Bardesi. The Petition argued, consistently and exclusively, that a softening point within the claimed range was necessarily and inherently present in Bardesi's 10/20 pen asphalt." *Id.* at *8. "At the hearing, Petitioner suggested that it was abandoning the inherency theory for the softening point limitation . . . ."

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[6] The final written decision in the '624 patent action was substantially identical. *See Colas Sols., Inc. v. Blacklidge Emulsions, Inc.*, No. IPR2016-01032, 2017 WL 5067598, at *9 (P.T.A.B. Nov. 2, 2017).

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