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Paper 26
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

REACTIVE SURFACES LTD., LLP,
Petitioner,

v.

TOYOTA MOTOR CORPORATION,
Patent Owner.

Case IPR2016-01914
Patent 8,394,618 B2

Before CHRISTOPHER M. KAISER, JEFFREY W. ABRAHAM, and MICHELLE N. ANKENBRAND, *Administrative Patent Judges.*

KAISER, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

INTRODUCTION

A. Background

Reactive Surfaces Ltd., LLP ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting *inter partes* review of claims 1–11 of U.S. Patent No. 8,394,618 B2 (Ex. 1001, "the '618 patent"). The Patent Owner did not file a Preliminary Response.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

After considering the Petition and the evidence currently of record, we determine that Petitioner has demonstrated that there is a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition. Accordingly, we institute *inter partes* review.

B. Related Matters

The parties have not identified any judicial or administrative matters that involve the '618 patent or that are otherwise related to this case.[1] Pet. 1; Paper 4, 1.

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[1] The parties note that the '618 patent was the subject of *Reactive Surfaces Ltd. LLP v. Toyota Motor Engineering & Manufacturing North America, Inc.*, Case No. 1-13-CV-1098-LY (W.D. Tex.), and *Reactive Surfaces Ltd. LLP v. Toyota Motor Corporation*, Case No. 1:14-CV-1009-LY (W.D. Tex.), both of which have been dismissed without prejudice. Pet. 1–2; Paper 4, 1.

C. The Asserted Grounds of Unpatentability

Petitioner contends that claims 1–11 of the '618 patent are unpatentable based on the following grounds (Pet. 32, 35–63):[2]

Statutory Ground	Basis	Challenged Claim(s)
§ 103	Van Antwerp[3]	1–3
§ 103	Van Antwerp and Bostek[4]	4 and 5
§ 103	Van Antwerp and Moon[5]	6–9
§ 103	Van Antwerp and Hamade[6]	10 and 11
§ 103	Schneider[7]	1–8, 10, and 11
§ 103	Schneider and McDaniel[8]	9
§ 103	Drevon[9]	1–9
§ 103	Drevon and Schneider	10 and 11

[2] Petitioner also relies on a declaration from Dr. David Rozzell. Ex. 1010.

[3] Van Antwerp, U.S. Patent No. 5,868,720, issued Feb. 9, 1999 (Ex. 1005, "Van Antwerp").

[4] C. Carl Bostek, *Effective Methods of In-Line Intravenous Fluid Warming at Low to Moderate Infusion Rates*, 60 J. AM. ASS'N NURSE ANESTHETISTS 561, 561–66 (Dec. 1992) (Ex. 1009, "Bostek").

[5] Moon et al., US 2005/0176905 A1, published Aug. 11, 2005 (Ex. 1006, "Moon").

[6] Hamade et al., U.S. Patent No. 6,150,146, issued Nov. 21, 2000 (Ex. 1007, "Hamade").

[7] Schneider et al., US 2005/0147579 A1, published July 7, 2005 (Ex. 1004, "Schneider").

[8] McDaniel, US 2004/0109853 A1, published June 10, 2004 (Ex. 1008, "McDaniel").

[9] Géraldine F. Drevon, Enzyme Immobilization into Polymers and Coatings (Ph.D. Thesis, University of Pittsburgh, Nov. 2002) (Ex. 1003, "Drevon").

D. The '618 Patent

The '618 patent is directed to a "substrate or coating . . . that includes a lipase with enzymatic activity toward a component of a fingerprint" and "a process for facilitating the removal of fingerprints . . . wherein an inventive substrate or coating including a lipase is capable of enzymatically degrading . . . one or more components of the fingerprint to facilitate fingerprint removal from the substrate or said coating." Ex. 1001, at [57]. "Fingerprint" is defined in the '618 patent as "a bioorganic stain, mark, or residue left behind after an organism touches a substrate or coating," and it "is not limited to marks or residue left behind after a substrate is touched by a finger." *Id.* at 3:1–4. "Other sources of bioorganic stains are illustratively, palms, toes, feet, face, any other skin surface area, hair, stains from fats used in cooking such as cis-fatty acids, or fatty acids from any other source." *Id.* at 3:4–8.

E. Illustrative Claims

All the claims of the '618 patent are challenged. Claim 1 is independent and illustrative; it recites:

> 1. A method of facilitating the removal of a fingerprint on a substrate or a coating comprising:
>
> providing a substrate or a coating;
>
> associating a lipase with said substrate or said coating such that said lipase is capable of enzymatically degrading a component of a fingerprint, and
>
> facilitating the removal of a fingerprint by vaporization from the lipase associated substrate or coating when contacted by a fingerprint.

Id. at 15:18–27.

ANALYSIS

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 2131, 2144 (2016) (upholding the use of the broadest reasonable interpretation standard). Claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner proposes construing "facilitating the removal of a fingerprint by vaporization," a term that appears in claim 1, as "enabling a bioorganic material deposited by an organism through touching a lipase associated substrate or coating to transition from an initial quantity of visually apparent bioorganic material being on such substrate or coating to a lesser quantity of visually apparent bioorganic material being thereon." Pet. 22 (citing Pet. 8–22). This proposed construction generally is supported by the Specification of the '618 patent. Ex. 1001, 3:1–9 (defining "fingerprint" as not limited to marks left by touching a surface with a finger, but also including other "bioorganic stains"). It does, however, expand the scope of the phrase beyond removal of fingerprints "by vaporization" to include removal by any and all means. Petitioner explains its deletion of the limitation "by vaporization" from its proposed construction by arguing that "'removal of a fingerprint by vaporization' does not find antecedent basis" earlier in claim 1. Pet. 21–22. According to Petitioner, because of this lack

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