NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

UNITED TECHNOLOGIES CORPORATION,
Appellant

v.

GENERAL ELECTRIC COMPANY,
Appellee

2018-1600

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2016-01289.

Decided: January 25, 2019

LAUREN ANN DEGNAN, Fish & Richardson PC, Washington, DC, argued for appellant. Also represented by CHRISTOPHER DRYER.

BRIAN E. FERGUSON, Weil, Gotshal & Manges LLP, Washington, DC, argued for appellee. Also represented by STEPHEN BOSCO, CHRISTOPHER PEPE, MEGAN WANTLAND; ANISH R. DESAI, New York, NY.

Before PROST, *Chief Judge,* LOURIE and STOLL, *Circuit Judges.*

PROST, *Chief Judge*.

Appellant United Technologies Corp. ("UTC") appeals a final written decision of the U.S. Patent and Trademark Office's Patent Trial and Appeal Board ("Board") in IPR2016-01289. The Board concluded that appellee General Electric Co. ("GE") showed that claims 1–14 of U.S. Patent No. 7,060,360 (the "'360 patent") are unpatentable. Because the Board based its conclusion on an incorrect claim construction, we vacate the Board's decision and remand for consideration under the proper construction.

I

GE petitioned for *inter partes* review ("IPR") of claims 1–14 of the '360 patent, entitled "Bond Coat for Silicon Based Substrates." The '360 patent generally relates to a coating to protect a silicon-containing substrate. Such substrates are used in high-temperature, aqueous environments (e.g., combustors and turbines in gas turbine engines). '360 patent col. 1 ll. 7–18. The patent describes a silicon substrate, a barrier layer, and a bond layer between them. J.A. 3; *see* '360 patent col. 1 ll. 19–24 & Fig. 1a (describing prior art); *id.* at claim 1.

The Board treated claim 1 as illustrative. Claim 1 states:

> 1. An article comprising a silicon based substrate, at least one environmental barrier layer selected from the group consisting essentially of an alkaline earth aluminosilicate based on barium and strontium, and yttrium silicate, and a *bond layer* between the substrate and the environmental barrier layer, the bond layer comprises an alloy com-

> prising a refractory metal disilicide/silicon eutectic.

'360 patent claim 1 (emphasis added).

The parties disputed the construction of "bond layer." GE argued that "bond layer" should be defined with reference to its location. *See* J.A. 58 (arguing that "bond layer" should mean "any layer located between at least two other layers or between the substrate and another layer"). UTC argued that "bond layer" should be interpreted as having some adherence quality. J.A. 1361 (arguing that "bond layer" should mean "a layer designed to adhere another layer to a substrate"). UTC argued that the plain and ordinary meaning of "bond" compelled such an interpretation. It also cited extrinsic evidence indicating that a bond layer was commonly understood in the pertinent art to mean a layer having an adherence quality. J.A. 1356–61.

In its final written decision, the Board rejected UTC's proposed construction and construed "bond layer" as "any layer located between at least two other layers or between the substrate and another layer and which comprises an alloy comprising a refractory metal disilicide/silicon eutectic." J.A. 9 (internal quotation marks and citation omitted). With this construction, the Board proceeded to find claims 1–14 unpatentable.

UTC appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II

We review the ultimate question of claim construction de novo, with any underlying fact findings reviewed for substantial evidence. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 838 (2015); *Praxair Distrib., Inc. v. Mallinckrodt Hosp. Prods. IP Ltd.*, 890 F.3d 1024, 1031 (Fed. Cir. 2018) (citing *HTC Corp. v. Cellular Commc'ns Equip., LLC*, 877 F.3d 1361, 1367 (Fed. Cir. 2017)).

Claim terms are generally given their ordinary and customary meaning, which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). In addition to the intrinsic evidence (i.e., the claims themselves, the specification, and the prosecution history), extrinsic evidence may be helpful in determining how an ordinary artisan would have understood a claim term at the time of the invention. *Id.* at 1317–18. These claim construction principles are important even in an IPR like this one, in which the claims are given the "broadest reasonable interpretation" consistent with the specification.[1] *See Realtime Data, LLC v. Iancu*, __ F.3d __, 2019 WL 149835, at *5 (Fed. Cir. Jan. 10, 2019).

UTC argues that the Board erred by construing "bond layer" to not require any adherence quality. UTC notes that the plain and ordinary meaning of "bond" means adherence. Appellant's. Br. 29 (citing J.A. 1082 (general-purpose dictionary defining "bond" as "an adhesive, cementing material, or fusible ingredient that combines, unites, or strengthens" and "to cause to adhere firmly")). It also cites extrinsic evidence to argue that this common understanding was prevalent in the art. *E.g.*, J.A. 405–06 ("A silicon bond layer further improved the EBC durability by providing stronger bonding of the coating."); J.A. 878 ("Whatever the coating method may be, one of the vital aspects is the surface state of substrate and the

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[1] This standard has recently changed. For IPR petitions filed on or after November 13, 2018, the Board will apply the *Phillips* claim-construction standard. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51340 (Oct. 11, 2018) (to be codified at 37 C.F.R. pt. 42).

bond coat to ensure sound adhesion."); J.A. 1733 ("The mullite coating in the . . . system is somewhat analogous to the bond coat in conventional TBC's, in the sense that it provides bonding as well as oxidation protection."); *see* Appellant's Br. 29. We agree with UTC.

GE does not argue that the claims and specification give any different meaning to the word "bond." Rather, it argues that the claims and specification "describe the 'bond layer' solely in terms of its location and material composition." Appellee's Br. 29. But describing "bond layer" in terms of its location and material composition would not be inconsistent with that same "bond layer" having an adherence quality. In other words, the claimed "bond layer" may have *additional* requirements as to its location or material composition. *See* '360 patent claim 1. But those additional requirements do not mean that the "bond layer" does not *also* have to bond. The specification's description of "bond layer" with reference to its location and material composition does not indicate an intent to depart from the term's plain and ordinary meaning with respect to bonding. We have considered GE's other claim-construction arguments but find them unpersuasive. For the foregoing reasons, we adopt UTC's proposed construction and construe "bond layer" as "a layer of material designed to adhere another layer to a substrate."

Because the Board based its unpatentability conclusion on an incorrect construction of "bond layer," we vacate the Board's final written decision and remand for consideration under the proper construction.

VACATED AND REMANDED

COSTS

Costs to Appellant.