UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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General Electric Company,
Petitioner,

v.

United Technologies Corporation,
Patent Owner

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Case IPR2016-01289
Patent 7,060,360 B2

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PATENT OWNER'S RESPONSIVE SUPPLEMENTAL BRIEFING

I. *Idemitsu* Is About Teaching Away, Which Is Inapposite Here

In *Idemitsu,* the Patent Owner (PO) argued that the prior art reference taught away from the claimed combination. *See Idemitsu Kosan Co. v. SFC Co.*, 2017 WL 4078964, *12 (Fed. Cir. Sept. 15, 2017). In finding no teaching away, the Board and the Federal Circuit both found that the single prior art reference taught each claimed limitation, and their combination. *Idemitsu*, 2017 WL 4078964, *5, *13-14. There, because the disclosure upon which the PO exclusively relied for its arguments was found to be "separate from" the teaching of the claimed combination, the court found no teaching away. *Id.* at *13-14. In this manner, *Idemitsu* is simply another case in the line of jurisprudence in which preferred teachings or embodiments do not "teach away" from broader or non-preferred embodiments. *See, e.g., In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

Unlike in *Idemitsu*, here, UTC's arguments do not rely upon the finding of a teaching away in that sense.[1] Rather, as GE correctly recognizes in its supplemental

[1] Even within the peripheral "teaching away" precedent, *Idemitsu* cannot be read as broadly as GE proposes. *See, e.g.*, *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F. 3d 1314 (Fed. Cir. 2009). In *DePuy Spine*, the court affirmed a finding of non-obviousness where the primary prior art "warns that rigidity increases the likelihood that the screw will fail within the human body." *Id.* at

briefing, this is a case of lost benefits (e.g., Terentieva's "guarantee" of continuous healing). *See* Paper 21 at 1. Although the tradeoff of one benefit for another does not *per se* nullify a basis for combination, "the benefits, both lost and gained, should be weighed against one another." *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (quoting *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000)). "Trade-offs often concern what is feasible, not what is, on balance, desirable. Motivation to combine requires the latter." *Winner*, 202 F.3d at 1349 (emphasis added). Here, a POSITA would have weighed a single benefit against several unrebutted costs, and GE—bearing the ultimate burden—fails to provide the factual predicate to appraise this "weighing," or to demonstrate how the resulting imbalance would have been "desirable."

II. Unlike in *Idemitsu*, This Case Lacks a Single Prior Art Reference That Teaches the Combination, Leaving GE to Prove, "On Balance," the Desirability of Its Combination

The prior art here does not have the same kind of explicit teaching to combine as in *Idemitsu*. Specifically, neither reference discloses depositing an EBC/TBC (like the one taught in Eaton '456) on top of a healing layer (like the one taught in

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1326. Although the claims at issue did not recite specific failure rates or rigidity, *id.* at 1325, this cost was highly probative to how a POSITA would not have been motivated to make the combination, *id.* at 1327.

Terentieva). *See* Paper 21 at 3 (summarizing that the prior art teaches the claimed elements in isolation). Even under GE's attempted characterization of the combination as a deposition of an EBC/TBC on any generic "molybdenum-silicon alloy," the combination is not taught. *See* GE-1003, ¶ 56. Dr. Glaeser and GE conveniently used an ellipsis to omit that Eaton '456 explicitly requires the EBC/TBC to be deposited on alloys "having a coefficient of thermal expansion compatible with the barrier layer of the present invention." GE-1006, 3:2-7. Yet, the record contains simply no objective evidence that the healing layer of Terentieva has "a coefficient of thermal expansion compatible with the [Eaton '456] barrier layer" GE seeks to deposit thereon, nor would this have been obvious. *See* UTC-2001, ¶¶ 111-112; UTC-2013, ¶¶ 13-18, *see also* Response at 34-37.

Without the required teaching to combine, GE bears the burden to prove that, "on balance," a POSITA would have found the tradeoffs of its proposed combination "desirable." *See Winner*, F.3d 1340 at 1349. In its Petition, GE identified a single potential benefit of its proposed combination: protection from attack in a water vapor environment. *See* Paper 21 at 3. In response, UTC offered uncontroverted evidence that Terentieva fails in its primary objective ("guarantee[ing]" continuous healing) if combined in the manner GE proposes. *See* UTC-2013, ¶¶ 37-48. This evidence is another sharp distinction from *Idemitsu*, where PO provided no expert testimony or corroborative evidence for its arguments. *Idemitsu*, 2017 WL 4078964, *12.

Specifically, in contrast to *Idemitsu*, Dr. Clarke offers an example of how GE's combination hinders or destroys healing within Terentieva's coating at 1300ºC, a temperature within the relevant operating range identified by Terentieva. *See* UTC-2013, ¶¶ 32, 48; *see also* GE-1005, 4:35-37. Relying upon this example and his experience, Dr. Clarke concluded it unreasonable for a POSITA to expect that the coating could achieve its primary benefit of guaranteeing continuous healing. *See* UTC-2013, ¶ 48. Adding to this benefit loss, Dr. Clarke identified a number of other costs weighing against the combination (e.g., increased stress and unknown compatibility). *See* UTC-2001, ¶¶ 100-102 (stress), 111-114 (compatibility).

In reply, GE offers no new evidence. Indeed, GE does not even contest Dr. Clarke's calculations as inaccurate at this relevant temperature. As such, GE tacitly admits the uncertainty of its proposed combination within the temperature range of interest that was noted by Terentieva (i.e., at/around 1300ºC, at the least). Instead, GE merely suggests (exclusively through attorney argument) that some level of healing might still exist at other temperatures. And GE's attorneys contend that temperatures could otherwise simply be raised within an engine that is already operating above the melting point of many of its components. Not only are these arguments divorced from Terentieva's "guarantee" of continuous healing, but GE never actually analyzes—at any temperature—the effect of its combination on Terentieva's "guarantee," much less a POSITA's ability to successfully raise

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