

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GCE GAS CONTROL EQUIPMENT INC.,

Petitioner,

v.

VBOX, Inc.,

Patent Owner.

IPR Case No. IPR2023-00326

U.S. Patent No. 11,389,614

**PETITIONER'S REPLY TO
PATENT OWNER'S PRELIMINARY RESPONSE¹**

¹ This Reply was authorized by Board's April 21, 2023 email.

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I. Patent Owner (“PO”) Mischaracterizes *Deane*

PO argues *Deane* fails to teach parts of [1d/e], [12f/g], and [13n/q] it calls “non-contact limitations.” POPR 2-3, 29-35. Specifically, PO asserts *Deane* fails to teach—via attorney argument only—fluid flowing along the 2nd/4th line “does not contact the adsorbent material.” POPR 29. PO is wrong.

Deane does not teach or otherwise show fluid flowing along 2nd/4th line in contact with the adsorbent material. In particular, Dr. Knaebel annotated FIGS. 6/7A of *Deane* to show a cartridge where: (i) a first **blue** line passes through outlet 604; (ii) a second **green** line passes through inlet 706/608; (iii) fluid flowing along the **blue line** passes through adsorbent 612; and (iv) fluid flowing along the **green line** flows through feed tube 608 that ***does not contain adsorbent 612***. EX1003, ¶¶348-351, 354. This meets all limitations’ requirements. *Id.* Moreover, Dr. Knaebel’s analysis and annotated FIGS. 6/7A are supported by, *e.g.*, ¶¶[0066], [0068], and [0070] of *Deane*. EX1003, ¶¶349-351.

Deane’s ¶¶[0066], [0068], and [0070] and FIGS. 6/7A confirm tube 608 has no adsorbent. First, *Deane* teaches (FIG. 7) “feed gas” passing downward through feed tube 608 into the bottom of housing 602, and ***then upward to pass through the adsorbent material***. EX1004, ¶[0070] (“feed gas 702 travels downwardly through the tube 608 and is diverted ... into a recess 400a ... feed gas 702 flows upwardly from the recess 400a through the lower end 606 of the housing 602 and

upwardly through the adsorbent material contained in the housing 602”). This does not teach feed tube 608 has adsorbent. The fact that the gas is a “feed gas” *after* it passes through feed tube 608 and is redirected upward confirms it has yet to pass through adsorbent. “Feed gas” in *Deane* is gas *supplied to* an adsorbent bed (“product gas” is what *exits*). *See, e.g.*, EX1004, ¶¶[0008], [0032]-[0056], [0062], [0064], [0070]; EX1003, ¶10. Second, FIG. 7A shows the portion of housing 602 with adsorbent is separate from tube 608, such that the adsorbent could not extend into tube 608. Third, in *Deane*, adsorbent 612 uses restraining disks 614a-b. EX1004, ¶[0068]. Tubes 608 have no such disks, meaning no adsorbent is present. Fourth, tube 608 is called, as it is, a “gas passageway.” EX1004, ¶[0066].

PO mis-reads *Deane*’s teachings and incorrectly annotates FIG. 6 to argue that adsorbent material 612 “is illustrated as extending into the feed tube 608, and Petitioner’s annotated green line quite clearly does contact the adsorbent material 612 (highlighted in yellow below) of adsorbent column 508a.” POPR 31-32. PO’s argument is plainly incorrect. FIG. 6 provides a “cut-out” view of the components *inside* housing 602 (*e.g.*, adsorbent 612, restraining disks 614a-b, spring 616) by showing portions of housing 602’s outer surface and tube 608 “cut-out” to allow the internal elements to be seen. FIG. 6 does not show adsorbent 612 extending into feed tube 608. PO’s attorney argument tries to create an ambiguity out of a well-known drawing style and should not be entertained. Dr. Knaebel’s **green line**

annotation, which he explains passes through tube 608 and does not contact any adsorbent, is also clear. EX1003, ¶¶349-351. Finally, even if there is a question of FIG. 6's teachings due to the limitations of representing a 3D structure in 2D (there is not), it is resolved by *Deane*'s other teachings of an adsorbent-free tube 608 discussed above. PO's incorrect interpretation of FIG. 6 should be rejected.

PO's arguments are also ***not supported by expert testimony***. Dr. Knaebel's sworn analysis carries more weight than PO's attorney argument. *Google LLC v. Parus Holdings, Inc.*, IPR2022-00805, Paper 7 at 10 (PTAB Nov. 7, 2022).

II. PO Mischaracterizes Petitioner's Identification of Error Under *Advanced Bionics* and Misapplies 35 U.S.C. § 325(d) Precedent

Under § 325(d), the Board *may* deny institution using the two-part *Advanced Bionics* framework. The POPR focuses its analysis on the first part (whether the same art/arguments were previously before the Office) and glosses over the second (whether Petitioner has demonstrated material error). Specifically, PO fails to offer an argument why Petitioner's analysis of material error is incorrect. *Compare* Pet. 10-13 *with* POPR. Accordingly, the Board should not exercise its discretion.

The fact that PO has not identified ***even one difference*** between *Deane* and the challenged claims upon which a "reasonable mind" could disagree regarding patentability confirms Petitioner's material error contention. PO's "non-contact limitation" argument is unreasonable (*see* above) and obviously manufactured. Thus, even if the Examiner fully considered *Deane* as PO implies (he did not),

denial here would be inappropriate. *See, e.g., Exactech, Inc. v. Zimmer, Inc.*, IPR2022-00836, Paper 7 at 13-14 (PTAB Nov. 8, 2022) (instituting where Petitioner showed error even where ground reference was used in a rejection).

PO tries to support its § 325(d) argument by asserting, under the first part of *Advanced Bionics*: (i) *Deane* was of record in the '614 Patent's prosecution via IDS (POPR 39); (ii) *Berntson* is cumulative to *Cole* (POPR 39-40); and (iii) *Deane* was applied in the '614 Patent's parents' prosecution in a manner similar to that advanced by Petitioner (POPR 40-41). Regarding (i), PO fails to mention that it submitted *Deane* among ~**350 other references** (EX1002, 104-518); the Examiner's substantive review of *Deane* cannot be assumed. Regarding (ii), PO offers no **evidence** that this is so. Regarding (iii), Petitioner does not disagree that it is reading *Deane* similarly to the '669 Patent's Examiner. That is the point—the '614 Patent's Examiner should have applied *Deane* in the same way the Examiner did for the '669 Patent. Indeed, the Board has found similar showings as material error and granted institution. *Amphenol Corp. v. PPC Broadband, Inc.*, IPR2022-00721, Paper No. 11 (PTAB Oct. 26, 2022) (instituting where the examiner failed to explain why the rejections of a parent were not reapplied in a child application).

Regarding the second part of *Advanced Bionics*, PO argues: (i) the Examiner must have substantively considered *Deane* because it was submitted in an IDS (POPR 41); (ii) *Deane* was substantively considered in the '669 Patent (and other

ancestors) (POPR 41-42); (iii) that “reasonable minds” can differ as to challenged claims’ patentability over *Deane* (POPR 43); and (iv) Dr. Knaebel did not provide additional evidence as to the challenged claims’ patentability (POPR 44-45).

Regarding (i), again, substantive review cannot be assumed when *Deane* was buried among **~350 other references**. Regarding (ii), PO’s argument is backwards. Per the Petition: (i) the ’669 Examiner required limitations be added to allow the claims over *Deane*, which limitations were not included in the ’614 patent; and (ii) the ’669 Examiner did not consider the “non-contact limitations.” Pet. 7-13. Thus, the ’669 Patent’s allowance over *Deane* is not instructive for §325(d). What is instructive is that the ’669 Examiner considered *Deane* to teach all elements of the ’614 claims, and the ’614 Patent’s Examiner erred by not applying *Deane*. Regarding (iii), again, the POPR does not identify any “reasonable” basis for disagreement. Regarding (iv), PO’s position is nonsense. Dr. Knaebel provided substantial additional evidence. EX1003, *passim*.

Finally, PO cites various cases as allegedly supporting its § 325(d) argument. They do not. None of *Johnson & Johnson* (key feature considered during prosecution), *Microsoft* (no material error showing), *Biocon* (same), *Becton Dickinson* (same), or *Cultec* (unique facts involving Petitioner’s prior third party submission) stand for the proposition that a Petition should be discretionarily denied when, as here, Petitioner has demonstrated material error.

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Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Petitioner certify that this Reply complies with the five-page limit set forth in Board's email, dated April 21, 2023 authorizing the filing of this Reply.

Additionally, this petition complies with 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word 2016 in 14-point Times New Roman.

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on April 28, 2023 a complete and entire copy of the foregoing document was filed with the PTAB through P-TACTS and served via email on attorneys of record at the following addresses:

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