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BLG (GE) Borden Ladner Gervais LLP 1300-100 Queen Street Ottawa, ON K1P 1J9 CANADA			CECIL, TERRY K	
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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* DEONARINE PHAGOO, DOUGLAS JOSEPH THOMPSON,  
JEFFREY PETER PENNY, JAKE GOLDSTEIN, and  
JASON A. DIAMOND

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Appeal 2016-002211  
Application 13/350,316  
Technology Center 1700

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Before PETER F. KRATZ, AVELYN M. ROSS, and JEFFREY R. SNAY,  
*Administrative Patent Judges.*

SNAY, *Administrative Patent Judge.*

DECISION ON APPEAL<sup>1</sup>

Appellants<sup>2</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1, 3, 11, 12, 14–22, 24, and 25. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We cite to the Specification filed January 13, 2012 (“Spec.”); Final Office Action dated December 26, 2014 (“Final Act.”); Appellants’ Appeal Brief dated May 26, 2015 (“App. Br.”); Examiner’s Answer dated October 20, 2015 (“Ans.”); and Appellants’ Reply Brief dated December 8, 2015 (“Reply Br.”).

<sup>2</sup> Appellants identify Zenon Technology Partnership as the real party in interest. App. Br. 3.

## BACKGROUND

The subject matter on appeal relates to a liquid treatment plant, such as for filtration of wastewater. Spec. ¶ 2; claim 1. Claims 1 and 24 are reproduced from the Claims Appendix of the Appeal Brief as follows, with emphasis added to highlight the recitations in dispute:

1. A liquid treatment plant having,
  - (a) two or more membrane tanks, each membrane tank having an inlet and an outlet;
  - (b) a train of cassettes of membrane modules located in each membrane tank;
  - (c) *a membrane tank inlet channel in communication with the inlet of each membrane tank*; and,
  - (d) a foam sump in communication with the membrane tank inlet channel and a foam drain, wherein the foam sump and foam drain are upstream from the inlet of each membrane tank.
  
24. A liquid treatment plant comprising,
  - a) a processing tank having an inlet and an outlet;
  - b) a membrane tank having an inlet and an outlet;
  - c) a membrane module located in the membrane tank;
  - d) *at least one channel in communication between the outlet of the processing tank and the inlet of the membrane tank*, wherein the outlet of the processing tank is spaced from the inlet of the membrane tank by the at least one channel; and,
  - e) a foam gate in communication between (i) the at least one channel and (ii) a foam drain.

Each of the remaining claims on appeal depends from claim 1 or 24.

## REJECTIONS

The Examiner maintains the following grounds of rejection:<sup>3</sup>

- I. Claims 24 and 25 stand rejected under 35 U.S.C. § 102(e) as anticipated by Cadera.<sup>4</sup>
- II. Claims 1, 3, 11, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Cadera and the Bid Documents.<sup>5</sup>
- III. Claim 12 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Cadera, the Bid Documents, and Hoel.<sup>6</sup>
- IV. Claims 18–20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Cadera, the Bid Documents, and Cote.<sup>7</sup>
- V. Claims 16 and 17 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Cadera, the Bid Documents, and Growall.<sup>8</sup>

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<sup>3</sup> Final Act. 2–9; Ans. 2–8.

<sup>4</sup> US 2004/0217058 A1, published November 4, 2004 (“Cadera”).

<sup>5</sup> Zenon Environmental Inc., Excerpts from bid documents for The Traverse City WWTP, 2002 (“the Bid Documents”). Appellants identified the Bid Documents in an Information Disclosure Statement filed on May 18, 2012. Appellants do not challenge the availability of the Bid Documents as prior art.

<sup>6</sup> US 5,958,240, issued September 28, 1999 (“Hoel”). The Examiner does not expressly identify the Bid Documents in the statement of Rejection III. *See* Final Act. 6. However, claim 12 depends from claim 11, which the Examiner rejected over Cadera and the Bid Documents. We view the Examiner’s statement in Rejection III that claim 12 is “unpatentable over Cadera, as modified above, and in further view of Hoel” (*id.*) as an implicit reliance on the Bid Documents to the same extent they were relied upon in Rejection II as applied to claim 11.

<sup>7</sup> US 6,245,239 B1, issued June 12, 2001 (“Cote”).

<sup>8</sup> US 3,220,553, issued November 30, 1965 (“Growall”).

VI. Claims 14 and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Cadera, the Bid Documents, and Popp.<sup>9</sup>

### DISCUSSION

#### *Rejection I*

The Examiner finds that Cadera describes a liquid treatment plant, as depicted in Cadera's Figure 3, that includes all of the elements recited in claims 24 and 25. Final Act. 2–3. We reproduce Cadera's Figure 3 below.

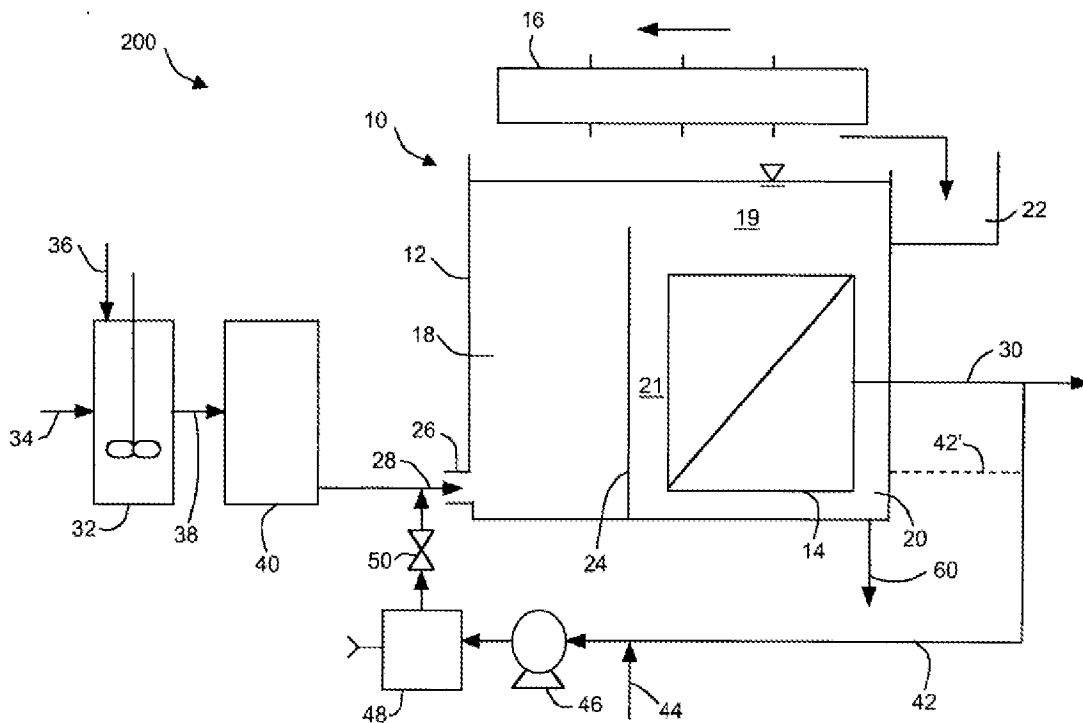


FIGURE 3

Figure 3 is a schematic diagram of a water treatment system. Cadera ¶ 11. The Examiner finds the depicted system to include a processing tank

<sup>9</sup> US 4,011,161, issued March 8, 1977 (“Popp”).

**18**, membrane tank **21** having a membrane module **14** therein, and a channel **19** “in communication between the outlet of the processing tank and the inlet of the membrane tank.” Final Act. 3. Cadera describes the depicted system as including a tank **12** divided by a divider **24** into a contact zone **18** and a separation zone **20**. Caldera ¶ 13. Separation zone **20** includes an aggregation zone **19** above a filtration zone **21**. *Id.*

Appellants argue Cadera’s zone **19** is not a channel. App. Br. 14. Particularly, Appellants contend that the term “channel” in claim 24 requires “a structure that separates a volume of water in the channel from water upstream or downstream of the channel,” and that Cadera’s zone **19** does not satisfy that definition. *Id.*

We are not persuaded of reversible error in the Examiner’s identification of Cadera’s zone **19** as a channel. Cadera’s zone **19** is bounded by an outer wall of tank **12** and divider **24**, such that water contained within zone **19** is separated from water upstream (in zone **18**) and downstream (in zone **21**). *See* Cadera Fig. 3, ¶¶ 13, 15. Thus, even under Appellants’ proposed interpretation, we are not persuaded that the Examiner erred in finding that Cadera’s zone **19** is a channel.<sup>10</sup>

Appellants further argue that if the path over Cadera’s divider **24** is viewed as the inlet of the membrane tank, then zone **19** is located downstream of the processing tank outlet and membrane tank inlet, rather than between them. App. Br. 16. This argument also is not persuasive. The

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<sup>10</sup> Appellants additionally dispute the Examiner’s alternative finding based on inherency in light of Cadera’s paragraph 22. App. Br. 16–17. We neither adopt nor rely upon the Examiner’s alternative inherency finding in reaching our Decision.

Examiner finds that Cadera's zone **19** is "in communication between" processing zone **18** and membrane zone **21**. Final Act. 3. As such, we understand the Examiner's reading of Cadera to involve the inlet to membrane zone **21** being formed at an interface between zone **19** and zone **21**. Cadera's Figure 3 depicts zone **21** downstream of zone **19** and, therefore, supports the Examiner's reading. Appellants' different characterization—where the path over Cadera's divider **24** also is a membrane tank inlet—fails to identify error in the Examiner's finding that Cadera's zone **19** serves as a channel communicating between an outlet from processing tank **18** and an inlet to membrane tank **21**.

In their Reply Brief, Appellants argue that Cadera's "zones" are not tanks because, according to Appellants, "the term 'tank' should at least be a physical structure with an enclosed space or cavity." Reply Br. 5. However, Appellants fail to present persuasive evidence or reasoning that Cadera's zones are not physical structures with an enclosed space or cavity. Moreover, the Examiner's interpretation of Cadera's various zones as tanks is consistent with Appellants' use of those terms in the Specification. *See* Spec. ¶ 28 ("The zones 22, 24 are separated from each other by partitions and may be referred to as tanks.").

For the foregoing reasons, Appellants do not identify reversible error in the Examiner's rejection of claims 24 and 25. Accordingly, we sustain Rejection I.

### *Rejection II*

Appellants argue the rejected claims as a group, focusing on recitations found in claim 1. App. Br. 17–19. In accordance with 37 C.F.R.

§ 41.37(c)(1)(iv), we select claim 1 as representative and decide the appeal based on the representative claim alone.

With regard to Rejection II, Appellants' additionally argue that Cadera's collection zone **22**, which the Examiner views as the foam sump and drain recited in claim 1, is positioned downstream of the membrane tank inlet rather than upstream as claimed. App. Br. 18; Reply Br. 6–7. This argument is based on the same characterization of Cadera as Appellants' proffered in connection with Rejection I—that the membrane tank inlet in Cadera should be viewed as the opening over divider **24**. Reply Br. 6. Accordingly, we find Appellants' argument unpersuasive for the reasons given above in connection with Rejection I.

Appellants' further argue that Cadera does not teach any advantage that would arise from providing a channel in communication with the inlet of each of two or more membrane tanks. App. Br. 18. Because the Examiner relies on the combined teachings of Cadera and the Bid Documents for this feature, Final Act. 4–5, we are not persuaded by Appellants' argument concerning Cadera alone.

Appellants also contend that one of ordinary skill would not have sought to combine the disclosures of Cadera and the Bid Documents because the Bid Documents do not involve dissolved air flotation and, therefore, would not require Cadera's aggregation zone **19**. App. Br. 18. The Examiner finds that the Bid Documents relate to water filtration, and provide a reason to arrange plural membrane tanks each fed by a common inlet channel—namely, “for the benefits of increased filtration capacity and continuing filtration when one of the tanks are shut down for maintenance.” Final Act. 5. Appellants do not dispute these findings. Neither do



Appellants' explain why an absence of air flotation in the Bid Documents would negate that reference's teaching of benefits related to plural parallel membrane tanks. *See also In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference . . . . Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”).

For the foregoing reasons, Appellants do not identify reversible error in the Examiner's rejection of claims 1, 3, 11, 21, and 22. Accordingly, we sustain Rejection II.

*Rejections III–VI*

Appellants do not present any argument against Rejections III–VI apart from an implicit reliance on the arguments presented in connection with Rejection II. *See App. Br. 19*. Accordingly, each of Rejections III–VI also is sustained.

DECISION

The Examiner's decision rejecting claims 1, 3, 11, 12, 14–22, 24, and 25 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136.

AFFIRMED