APATENT AND TRADA UNIT	TED STATES PATENT	AND TRADEMARK OFFICE			
		UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov			
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
15/170,338	06/01/2016	Ramesh SHARMA	42302US02	9993	
85937 7590 07/06/2021 Boulware & Valoir			EXAM	EXAMINER	
Tamsen Valoir		KEYWORTH, PETER			
2603 Augusta I Suite 1350	Drive	ART UNIT	PAPER NUMBER		
Houston, TX 77	7057		1777		
			NOTIFICATION DATE	DELIVERY MODE	
			07/06/2021	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mwhite@boulwarevaloir.com nseigel@boulwarevaloir.com patent@boulwarevaloir.com UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RAMESH SHARMA, TRAVIS DINSDALE, AMBER J. TAYLOR, BABAJIDE KOLADE, and JAY LOCKLEAR

> Appeal 2020-004468 Application 15/170,338 Technology Center 1700

Before GEORGE C. BEST, DONNA M. PRAISS, and DEBRA L. DENNETT., *Administrative Patent Judges*.

DENNETT, Administrative Patent Judge.

DECISION ON APPEAL¹

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the

Examiner's decision to reject claims 1–12 and 16 of Application 15/170,338.

See Final Act. 1; Appeal Br. 1. We have jurisdiction under 35 U.S.C. § 6.

¹ In our Decision, we refer to the Specification filed June 1, 2016 ("Spec.") of Application 15/170,338 ("the '338 Application"); the Non-Final Office Action dated July 5, 2019 ("Final Act."); the Appeal Brief filed Feb. 7, 2020 ("Appeal Br."); the Examiner's Answer dated Apr. 16, 2020 ("Ans."); and the Reply Brief filed May 29, 2020 ("Reply Br.").

² "Appellant" refers to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies ConocoPhillips Company as the real party in interest. Appeal Br. 3.

For the reasons set forth below, we REVERSE.

BACKGROUND

According to Applicant, Steam Assisted Gravity Drainage (SAGD) is an enhanced oil recovery technology for producing heavy crude oil and bitumen. Spec. ¶ 3. High pressure steam is injected into an upper wellbore to heat the oil and reduce its viscosity, causing the heated oil to gravity drain into a lower well bore, where it can be pumped to the surface. Spec. ¶ 3. A once-through steam generator (OTSG) is commonly used to provide steam for SAGD. Spec. ¶ 7. The steam goes through a series of liquid-steam separators to increase the steam quality. Spec. ¶ 8. Water that is separated from the steam is called "blowdown" water in the petroleum industry. Spec. ¶ 9. Applicant indicates that recycling of blowdown water is an absolute necessity, thus there is a need for an improved cost effective treatment of blowdown water prior to recycling. Spec. ¶¶ 9, 12.

The '338 Application relates to a method of eliminating or minimizing the fouling-causing contaminants of OTSG blowdown that is recycled after treatment as boiler feedwater. Spec.¶13.

Claim 1 is representative of the '338 Application's claims and is reproduced below from the Claims Appendix.

1. A method of treating once through steam generator (OTSG) blowdown water for reuse, said method comprising:

a) providing OTSG blowdown water having acid insoluble organics therein;

b) acidifying said OTSG blowdown water to pH 8 or lower;

c) cooling said OTSG blowdown water to 30-40°C;

Appeal 2020-004468 Application 15/170,338

> d) settling precipitants out of said OTSG blowdown water for at least 12 hours to produce an acid clarified blowdown water having more than 50% of the acid insoluble organics removed; and

> > e) reusing said acid clarified blowdown water.

Appeal Br. 13 (Claims App.).

REFERENCES

The Examiner relies on the following prior art in rejecting the claims on appeal:

Name	Reference	Date
McLeod	US 2009/0308745 A1	Dec. 17, 2009
Astlely et al.	US 2011/0127223 A1	June 2, 2011
("Astley")		
Bansal et al.	US 2013/0292115 A1	Nov. 7, 2013
("Bansal")		
Cote et al. ("Cote")	US 2014/0231359 A1	Aug. 21, 2014
Frohlich et al.	US 2016/0159668 A1	June 9, 2016
("Frohlich")		

REJECTIONS

The Examiner maintains the following rejections under 35 U.S.C.

§ 103:

A. Claims 1–4 over Bansal in view of Cote;

B. Claims 5–11 over Bansal in view of Cote, further in view of
Frohlich;

C. Claim 12 over Bansal in view of Cote, further in view of Astley; and

D. Claim 16 over Bansal in view of Frohlich, Cote, and McLeod. Final Act. 2–7.

DISCUSSION

We review the appealed rejections for error based upon the issues identified by Appellant and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011)) ("[I]t has long been the Board's practice to require an applicant to identify the alleged error in the [E]xaminer's rejections."). After considering the evidence presented in this Appeal, we are persuaded that Appellant identifies reversible error in the Examiner's rejections of claims 1–12 and 16. Thus, we reverse the Examiner's rejections.

Claims 1–12 require settling precipitants out of the OTSG blowdown water for at least 12 hours. Appeal Br. 13–14 (Claims App.). Claim 16 requires passively clarifying the blowdown water by settling. *Id.* at 14. Our opinion focuses on these limitations.

The Examiner finds that Bansal teaches a method of treating OTSG blowdown water comprising, *inter alia*, separating the solids from the liquid via a centrifuge. Non-Final Act. 2. The Examiner acknowledges that Bansal does not teach that solids and precipitants are settled out for at least 12 hours. *Id.* at 3. However, the Examiner finds that "Cote teaches that in separation of a [sic] solids from a liquid, various devices are considered to be equivalents. Such various devices would include clarifiers, settling ponds, and centrifuges." *Id.* (citing Cote ¶ 23); *see also* Ans. 4 (stating that Cote "explicitly considers centrifuges and settling ponds to be equivalents"). The Examiner finds that centrifuges and settling apparatuses both use settling as the means to separate solids from liquids. Ans. 3.

4

Appeal 2020-004468 Application 15/170,338

According to Appellant, Bansal is directed to removing silica from blowdown water. Appeal Br. 1. In addition, Appellant argues that Cote does not teach that pond settling is "equivalent" to Bansal's high speed centrifuging. Reply Br. 1; *see also* Appeal Br. 9. Appellant argues that Bansal teaches use of high pressure centrifuges that exert 3000-3500 times the force exerted in a settling pond. Appeal Br. 7–9.

Cote discloses that solids generated during wastewater processing of a phosphogypsum pond processes "may be removed by *one or more* suitable solids separation devices such as a clarifier, settling pond, lamella clarifier, upflow sludge blanket clarifier, disk filter, centrifuge, vacuum filter, dissolved air floatation device or the like." Cote ¶ 23 (emphasis added). Cote's statement that "one or more" of these separation devices may be used indicates that settling and centrifuges are both solids separation devices, but not that they are equivalent. Instead, the suggestion is that settling and centrifugation are complementary approaches that may be used in combination.

Bansal teaches centrifuging the acidified suspension at a pressure of at least 138 kilopascals. Bansal \P 8. Bansal teaches that soluble organics in the blowdown that are precipitated by acidification define oily, organic laden and deformable masses. *Id.* \P 21. The smaller size and relative softness of the solids in Bansal limit the ability to separate liquid and solid phases by conventional centrifuging or hydrocycles. *Id.* Moreover, the organics further limit ability to utilize filtering since the particles tend to stick together agglomerating and clogging filter media. *Id.*

"That two things are actually equivalents, in the sense that they will both perform the same function, is not enough to bring into play the rule that

5

Appeal 2020-004468 Application 15/170,338

when one of them is in the prior art the use of the other is obvious and cannot give rise to patentable invention." *In re Ruff*, 256 F.2d 590, 596–97 (CCPA 1958). To rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on an applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. *Id*.

The Examiner erred by finding that the prior art recognizes settling and centrifugation as equivalents. Indeed, Bansal indicates that settling would not work in its process. *See* Bansal¶21. Contrary to the Examiner's finding, therefore, one of ordinary skill in the art would not be expected to substitute settling for Banal's high pressure centrifugation. When the references cited by the examiner fail to establish a prima facie case of obviousness, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988).

For the reasons stated above, we reverse the rejections of claims 1-12 and 16.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–4	103	Bansal, Cote		1–4
5–11	103	Bansal, Cote, Frohlich		5–11
12	103	Bansal, Cote, Astley		12
16	103	Bansal, Frohlich, Cote, McLeod		16
Overall Outcome				1–12, 16

REVERSED