

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

MIDWEST ENERGY EMISSIONS	)	
CORP. and MES INC.,	)	
	)	
Plaintiffs,	)	
	)	
v.	)	Civil Action No. 19-1334-CJB
	)	
ARTHUR J. GALLAGHER & CO., et al.,	)	
	)	
Defendants.	)	

James M. Lennon, DEVLIN LAW FIRM, Wilmington, DE; Bradley W. Caldwell, Jason D. Cassady, John Austin Curry, Justin T. Nemunaitis, Daniel R. Pearson, Adrienne R. Dellinger, CALDWELL CASSADY CURRY P.C., Dallas, TX; Attorneys for Plaintiffs.

Kenneth L. Dorsney and Cortlan S. Hitch, MORRIS JAMES LLP, Wilmington, DE; Jeff Dyess, Paul Sykes and Benn Wilson, BRADLEY ARANT BOULT CUMMINGS LLP, Birmingham, AL; Jessica Zurlo, BRADLEY ARANT BOULT CUMMINGS LLP, Washington, D.C., Attorneys for Defendants CERT Operations IV LLC, CERT Operations V LLC, CERT Operations RCB LLC, Senescence Energy Products, LLC, Rutledge Products, LLC, Springhill Resources LLC, Buffington Partners LLC, Bascobert (A) Holdings LLC, Larkwood Energy LLC, Cottbus Associates LLC, CERT Operations II LLC, and Marquis Industrial Company, LLC.

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MEMORANDUM OPINION

October 17, 2023
Wilmington, Delaware


BURKE, United States Magistrate Judge

This is a patent action filed by Plaintiffs Midwest Energy Emissions Corp. (“Midwest Energy”) and MES Inc. (“MES” and collectively with Midwest Energy, “Plaintiffs” or “ME2C”) against 34 Defendants, in which Plaintiffs assert five patents-in-suit. The Court has set out a listing of all of the parties and asserted patents in its October 16, 2023 Memorandum Opinion (“October 16, 2023 MO”), (D.I. 586 at 2); it incorporates that discussion by reference here. Presently pending before the Court are: (1) Defendants’ motion for summary judgment No. 2: non-infringement of the '147 patent (“Motion No. 2”), (D.I. 564); and (2) Defendants’ motion for summary judgment No. 3: non-infringement of the '114 patent, '147 patent, '517 patent and '430 patent (“Motion No. 3” and collectively with Motion No. 2, the “Motions”), (D.I. 565). ME2C opposes the Motions. For the reasons set forth below, the Motions are DENIED.¹

I. BACKGROUND

ME2C commenced this action on July 17, 2019. (D.I. 1) Defendants filed the instant Motions on March 23, 2023. (D.I. 527; *see also* D.I. 564; D.I. 565) The Motions were fully briefed as of April 18, 2023, (D.I. 555), and the Court held oral argument on Motion No. 2 (as well as other summary judgment motions) on May 17, 2023, (D.I. 581 (“Tr.”)).² A trial is set to begin on November 13, 2023. (D.I. 507)

¹ The parties have jointly consented to the Court’s jurisdiction to conduct all proceedings in this case, including trial, the entry of final judgment and all post-trial proceedings. (D.I. 398)

² Motion No. 3 was submitted on the papers. (*See* D.I. 560)

As the Court writes primarily for the parties here, any facts relevant to this Memorandum Opinion will be discussed in Section III below.

II. STANDARD OF REVIEW

The Court incorporates by reference the standard of review for summary judgment motions, which it set out in the October 16, 2023 MO. (D.I. 586 at 3-4)

The Motions relate to allegations of patent infringement. With regard to a patent infringement claim, the patent owner has the burden of proving infringement, and must do so by a preponderance of the evidence. *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988). When an accused infringer moves for summary judgment of non-infringement, such relief is only appropriate if, viewing the facts in the light most favorable to the patentee, no reasonable jury could find that every limitation recited in the properly construed claim is found in the accused device or process, either literally or under the doctrine of equivalents. *See Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1376 (Fed. Cir. 2005); *see also Bell Atl. Network Servs., Inc. v. Covad Commc'ns Grp., Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001) (“[S]ummary judgment is proper only if no reasonable jury could return a verdict for the nonmoving party.”) (internal quotation marks and citation omitted).

III. DISCUSSION

The Court first takes up Motion No. 2, followed by Motion No. 3.

A. Motion No. 2

Asserted claims 17-20 of the '147 patent recite a method for separating mercury from a mercury containing gas that includes use of a “bromine containing promoter” (“BCP”). A look at claim 17 (and claim 1 from which it depends) demonstrates the role of the BCP in the asserted claims:

1. A method for separating mercury from a mercury containing gas comprising:

- (a) promoting at least a portion of a particulate sorbent material comprising activated carbon by *chemically reacting the sorbent material with a bromine containing promoter to form a promoted brominated sorbent*, wherein *the bromine containing promoter is in gaseous form, vapor form, or non-aqueous liquid form*, and wherein the activated carbon contains *graphene sheets having carbene species edge sites which react with the bromine containing promoter to form a carbocation paired with a bromide anion* in the promoted brominated sorbent for oxidation of the mercury;
- (b) chemically reacting elemental mercury in the mercury containing gas with the promoted brominated sorbent to form a mercury/sorbent chemical composition; and
- (c) separating particulates from the mercury containing gas, the particulates including ash and the mercury/sorbent chemical composition.

('147 patent, col. 23:34-52 (emphasis added))

17. A method according to claim 1, further comprising injecting the particulate sorbent material at a sorbent material injection rate and *injecting separately the bromine containing promoter into a gas stream* whereby in-flight reaction produces the promoted brominated sorbent, wherein *the promoter is reacted in the gas phase or as a vapor*, wherein the promoter is added at from about 1 to about 30 grams per 100 grams of the sorbent material.

(*Id.*, col. 24:34-41 (emphasis added)) Thus, with respect to the BCP, claims 17-20 require:

- (1) chemically reacting the sorbent material with a BCP to form a promoted brominated sorbent;
- (2) the BCP is in gaseous form, vapor form, or non-aqueous liquid form;
- (3) there are carbene species edge sites on the activated carbon which react with the BCP to form a carbocation paired with a bromide anion;
- (4) injecting separately the BCP into a gas stream; and

(5) the BCP is reacted in the gas phase or as a vapor.

(D.I. 528 at 14-15)

In their opening brief, Defendants argue that summary judgment of non-infringement should be granted with respect to the asserted claims of the '147 patent³ because: (1) proving direct infringement of the '147 patent requires identification of a single BCP in the accused method that meets each of the above requirements; and (2) ME2C has failed to identify a BCP that meets each requirement. (*Id.* at 18) According to Defendants, MEC2 at various times has accused four different substances as amounting to the BCP at issue: MerSorb, bromide ions, calcium bromide and bromine atoms. (*Id.* at 15) Defendants take up each substance, asserting why, in their view, each fails to meet the claim requirements for a BCP. (*Id.* at 15-18)

ME2C is asserting that bromine atoms (which it seems to sometimes refer to also as “bromine ions”) are the BCP that meet the relevant claim requirements, (D.I. 545 at 7; Tr. at 34-35, 59), and so the Court will focus there in assessing the Motion.⁴ In Defendants’ opening

³ In this case, ME2C asserts that Defendants induced and contributed to infringement of certain method claims of the asserted patents by manufacturing and selling refined coal to non-party power plants. (D.I. 406 at ¶¶ 67, 208, 217; D.I. 546, ex. A at 123, at ¶ 99) To prevail under these theories of indirect infringement, ME2C must prove that Defendants’ actions led to direct infringement of the asserted patents. *See, e.g., Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1274 (Fed. Cir. 2004). Here, the non-party power plants are alleged to add activated carbon to the process in which refined coal is combusted, in a manner that amounts to direct infringement of the patents. (D.I. 406 at ¶¶ 208, 217; D.I. 546, ex. A at 125, at ¶ 102; D.I. 546, ex. A at 127, at ¶ 108)

⁴ While Defendants suggest that ME2C has been inconsistent in what it has been accusing as the BCP, in the Court’s view, it seems like ME2C has consistently identified bromine atoms/bromine ions as the BCP. (*See* D.I. 528 at 15 (citing D.I. 533, ex. 11 at 132, at ¶ 124 (ME2C’s expert opining that “MerSorb contains bromine ions (Br⁻), which are a bromine containing promoter); *id.* at 159 (opining that “MerSorb contains calcium bromide . . . dissolved in water. When calcium bromide is dissolved in water, the solution contains calcium ions (Ca⁺⁺) and bromine ions (Br⁻). These atoms of bromine are the promoter.”); *id.* at 161 (opining that

brief, they argue that bromine atoms cannot be the BCP for two reasons. (D.I. 528 at 17) First, Defendants assert that the plain meaning of a BCP is “a species or entity that ‘contains’ bromine” and, accordingly, “simple English” tells us that bromine atoms cannot be the BCP because bromine atoms are not a thing that *contains* bromine; they *are* bromine. (*Id.* (internal quotation marks, citation and brackets omitted, emphasis added)) Second, Defendants contend that “bromine atoms cannot be the BCP because the required reaction specifies a role for the other atoms in the BCP, in addition to the role for the bromine atom” and there is no evidence that the required reaction could occur without participation by those other atoms. (*Id.*)

Grant of Motion No. 2 is not warranted. With regard to Defendants’ first argument, as far as the Court can understand, Defendants seemed to abandon it during the motion hearing. There, Defendants acknowledged that a BCP *could* be just atoms of bromine. (Tr. at 18, 29-30, 48) With respect to Defendants’ second argument, Defendants cite in support (without any further clarifying argument) to: (1) Figure 2 of the '147 patent; and (2) 17 paragraphs of their expert Dr. Stephen Niksa’s report. (D.I. 528 at 17 (citing D.I. 530, ex. B at ¶¶ 28-40, 57-60)) As to the first of these sources, however, Defendants have not pointed to anything demonstrating that the claims are limited to Figure 2 of the patent. (Tr. at 44) And as to the second, after carefully reviewing the 17 paragraphs of Dr. Niksa’s report, the Court does not understand how they support Defendants’ argument. (*Id.* at 22, 28, 31).⁵

“the coal and [BCP] (the bromine in the MerSorb) are injected into a gas stream”); *id.*, ex. 13 at ¶ 28 (“bromine atoms” are the BCP); *id.* at ¶ 30 (“bromine atoms” are the BCP))

⁵ That is, the Court cannot see how in any of these paragraphs Dr. Niksa is saying that bromine atoms cannot be the BCP because the required reaction specifies a role for the other atoms in the BCP, in addition to the role for the bromine atom.

During the hearing, Defendants seemed to expand upon this second argument. At present, they seem to be asserting that ME2C's identification of bromine atoms as the BCP means that there are certain atoms of bromine that start as part of one compound and change to different compounds as they go through the process. (*Id.* at 14-15) And they were suggesting that this is problematic because: (1) ME2C did not identify those specific compounds, which leaves Defendants unable to determine whether or not they infringe; (2) scientifically, it does not make sense to ignore the other substances included with the bromine atoms during the process; and (3) the claim language tells us that one single substance has to be the BCP, so you cannot have a bromine atom that "jumps" from one compound to another compound be the BCP. (*Id.* at 14-15, 20-21, 23, 30-31, 51-52, 54) But this amounts simply to attorney argument (and an argument not clearly made in the briefing, at that). The Court does not have a *record* before it that would allow it to conclude that no reasonable jury could find that every BCP-related limitation recited in the asserted claims are found in the accused process. *See, e.g., Mobilemedia Ideas, LLC v. Apple Inc.*, 178 F. Supp. 3d 209, 221-22 (D. Del. 2016) ("At the summary judgment stage, viewing the facts in the light most favorable to MobileMedia, that Apple (through attorney argument only) finds insufficient Dr. Meldal's disclosures does not provide the court with a record on which to enter judgment of non-infringement."); *cf. Schumer v. Lab. Comput. Sys., Inc.*, 308 F.3d 1304, 1316 (Fed. Cir. 2002) ("It is not . . . the task of the district court[] to attempt to interpret confusing . . . testimony to determine whether a case of invalidity has been made out, particularly at the summary judgment stage.").

Now, look, the Court also acknowledges that ME2C's responsive brief could have been clearer on this point. That brief could have squarely stated something like: "Here is what we are identifying as the BCP and here is how that substance meets all of the requirements for BCP in

the asserted claims of the '147 patent.” It would have been helpful if it had done that. But at a minimum, ME2C did at least cite in its briefing to some portions of its expert’s opening report; those portions do seem to indicate that “atoms of bromine” are the asserted BCP, and they point out how the atoms of bromine meet the BCP-related claim limitations. (D.I. 545 at 7 (citing D.I. 546, ex. A at 159-60); Tr. at 12) And while the “atoms of bromine” that ME2C points to “can attach and reattach to all kinds of different things in the process[,]” the Court cannot say that the plain language of the claims excludes such a theory—particularly where ME2C is pointing to the same atoms of bromine as constituting the BCP throughout the process. (*See* Tr. at 43; *see also id.* at 42, 58-59; D.I. 545 at 7-8)

For these reasons, summary judgment of non-infringement of the '147 patent is not warranted on these grounds.

B. Motion No. 3

Claims 4 and 29 of the '114 patent, claims 17-20 of the '147 patent, claims 5, 19 and 21 of the '517 patent and claims 13 and 17 of the '430 patent require that the sorbent or mercury-containing gas comprises 1-30 g of bromine, or a Br-containing compound, for every 100 g of activated carbon sorbent. (*See* D.I. 528 at 18 & n.10) Defendants assert that summary judgment of non-infringement is warranted with respect to these claims because Plaintiff has put forward “no evidence on the relative amounts of bromine-containing compounds and activated carbon sorbent used in the actual operation of any accused power plant.” (*Id.* at 18; *see also* D.I. 555 at 3 (“[T]here is no evidence of any actual injection ratio in any accused power plant.”))

Defendants are also not entitled to summary judgment on this ground. Plaintiffs’ expert Mr. Philip O’Keefe explains why this limitation is met based on what is known in the art regarding the saturation limit for bromine on activated carbon, and what a person of ordinary

skill in the art would accordingly expect to happen in “an actual industrial application[.]” (D.I. 546, ex. A at 153) Indeed, Defendants’ own expert Dr. Niksa offers an opinion (in the invalidity context) regarding the saturation limit that appears to be in line with Mr. O’Keefe’s opinion in this regard. (D.I. 530, ex. A at ¶ 522)⁶ Defendants cite to no caselaw standing for the proposition that Plaintiffs can only show infringement of this limitation with direct evidence of what a specific power plant *in fact* did—as opposed to testimony from an expert about what any power plant (including those at issue here) would *necessarily* do. And it is well-settled that “[a] patentee need not always have direct evidence of infringement, as infringement may be established by circumstantial evidence.” *Mirror Worlds, LLC v. Apple Inc.*, 692 F.3d 1351, 1359 (Fed. Cir. 2012).

IV. CONCLUSION

For the foregoing reasons, the Court finds that Defendants’ Motions should be DENIED. An appropriate Order will issue.

Because this Memorandum Opinion may contain confidential information, it has been released under seal, pending review by the parties to allow them to submit a single, jointly proposed, redacted version (if necessary) of the Memorandum Opinion. Any such redacted version shall be submitted no later than **October 20, 2023** for review by the Court. It should be accompanied by a motion for redaction that shows that the presumption of public access to judicial records has been rebutted with respect to the proposed redacted material, by including a factually-detailed explanation as to how that material is the “kind of information that courts will protect and that disclosure will work a clearly defined and serious injury to the party seeking

⁶ In his non-infringement opinion, Dr. Niksa did not dispute that the power plants meet the limitation at issue in Motion No. 3. (*See* D.I. 545 at 8-9)

closure.” *In re Avandia Mktg., Sales Pracs. & Prods. Liab. Litig.*, 924 F.3d 662, 672 (3d Cir. 2019) (internal quotation marks and citation omitted). The Court will subsequently issue a publicly-available version of its Memorandum Opinion.