

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NORTH CAROLINA
CHARLOTTE DIVISION
3:21-cv-00171-RJC-DCK**

**ELECTROLYSIS PREVENTION SOLUTIONS)
LLC,)**

Plaintiff,)

v.)

DAIMLER TRUCKS NORTH AMERICA LLC,)

Defendant.)

Markman Order

THIS MATTER is before the Court on the Parties’ respective briefs for construction of certain claim language used in U.S. Reissue Patent No. RE47,494. (DEs 32-36). The Court held a claim construction hearing on April 12, 2022. The issues are now ripe for adjudication.

I. BACKGROUND

A. Procedural Background

Plaintiff Electrolysis Prevention Solutions LLC (“EPS” or “Plaintiff”) alleges that Defendant Daimler Trucks North America LLC (“DTNA” or “Defendant”) infringes claims 25-27, 29, 31-37, 42, and 45-47¹ (“Asserted Claims”) of U.S. Reissue Patent No. RE47,494 (“the ’494 patent”). The ’494 patent is a reissue of U.S. Patent No. 8,236,145 (“the ’145 patent”). This means the ’494 patent has been examined by the United States Patent and Trademark Office (“PTO”) twice. The ’494 patent claims priority back to December 5, 2008, the filing date of U.S. Provisional Application No. 61/120,296.

The Parties have agreed upon the construction of two terms: (1) “sacrificial anode” and (2)

¹ There are two independent Asserted Claims: claims 25 and 37.

“within 10 inches of [the/a] hot liquid inlet.” However, the Parties dispute the meaning of four terms, including: (1) “installed” / “installation,” (2) “active metal,” (3) “anode holder,” (4) and “sacrificial anode assembly.”

B. Summary of the Invention

The '494 patent is titled “Electrolysis Prevention Device and Method of Use.” (DE 33-1,'494 patent at 1). The patent is directed to a solution for preventing corrosion in the cooling systems of motor vehicles caused by electrolysis. *Id.* at Abstract, 1:35-41. Electrolysis can occur in systems with multiple metal components and moisture, such as the water or coolant in a radiator. *Id.* at 1:56-67. In such a system, one of the metals acts as an anode and corrodes and the other metal acts as a cathode and does not corrode. *Id.* at 2:1-3. Many modern vehicle radiators are composed of aluminum, a metal that is more susceptible to corrosion from electrolysis. *Id.* at 1:56-64.

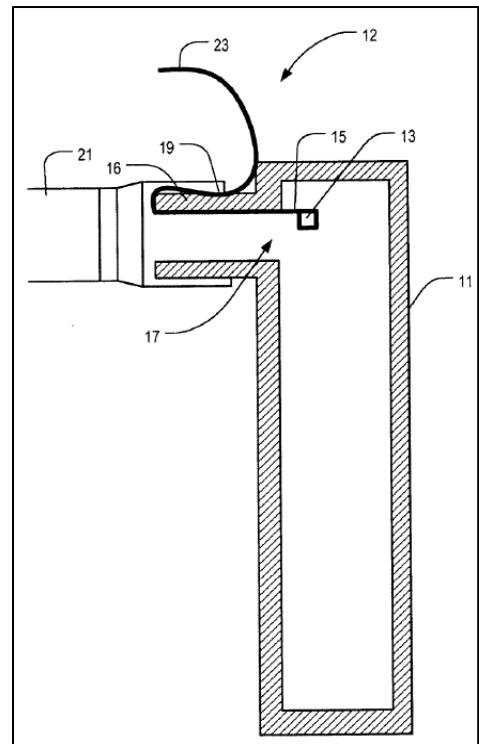
In the prior art, sacrificial anodes have previously been used to prevent corrosion caused by electrolysis for integral components. *Id.* at 2:6-12. Sacrificial anodes are “constructed of active metals, that is metals that react with oxygen, such as magnesium, aluminum, zinc or combinations thereof.” *Id.* “Sacrificial anodes do not eliminate the flow of electric current, but instead attract the electric current, acting as a ‘lightning rod’ that electricity clings to, thus relieving the anodic metal of the thermal control device from the corrosive damage of electrolysis.” *Id.* at 2:9-13. Here, the parties agree that a “sacrificial anode” is a “piece of metal used to protect another piece of metal by preferentially corroding.” (DE 32 at 1).

The '494 patent describes several well-known methods for using a sacrificial anode to prevent electrolysis that predate the patent. '494 patent at 2:6-36. For example, in one previously known method of preventing electrolysis, a sacrificial anode is “bonded to the core metal to prevent

the occurrence of pitting corrosion of core material in a heat exchanger such as a radiator or heater core.” *Id.* at 2:14-17 (discussing U.S. Patent No. 5,292,595). The ’494 patent then notes that sacrificial anodes in the prior art are “hard to access to check its condition or to replace it when it wears out” and that a “need exists for a corrosion-inhibiting sacrificial anode which is easily accessible.” *Id.* at 2:17-20. Another problem in the prior art noted by the ’494 patent is that the sacrificial anode, while being hard to access, is also not positioned “optimally to allow for maximal corrosion resistance.” *Id.* at 2:34-36.

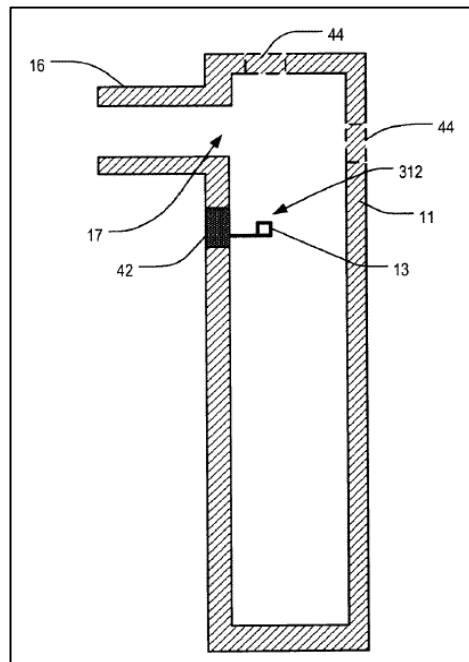
The ’494 patent proposes a solution to the shortcomings in the prior art by locating a sacrificial anode near the inlet (within 10 inches of the inlet, as claimed), which positions the sacrificial anode in a more optimal position. *See, e.g., id.* at 2:1-36, claims 25, 37. In particular, the ’494 patent describes an “electrolysis prevention device” that “includes a sacrificial anode made of an active metal and an anode holder supporting the sacrificial anode.” *Id.* at Abstract.

The device is “preferably disposed in or near the inlet hose connection of a radiator, heater core, or other such engine thermal control device.” *Id.* at 2:40-44. Figure 1A (right) shows one embodiment of the invention with an electrolysis prevention device **12** that “includes a sacrificial anode **13** supported at the end of a sleeve wire, metal slide, clip **15** or the like such that the anode is disposed adjacent the radiator inlet **17**.” *Id.* at 6:27-33. The electrolysis prevention device further includes an anode support **19** that, in this example, “extends through and out the radiator inlet” and has an exposed end **23**. *Id.*



at 6:36-41. The '494 patent further refers to this collection of components as an “assembly,” explaining that the entire “assembly **12** can be installed very quickly” and the assembly may be “appropriately adjusted in size, shape or the like.” *Id.* at 6:47-49, 56-57. This embodiment is particularly useful as an aftermarket “drop in” for radiators already produced without the sacrificial anode. *Id.* at 6:61-64.

In another embodiment of the invention (right), the electrolysis prevention device **312** is built into the radiator at the time the radiator is manufactured. *Id.* at 7:57-59, Fig. 4A. The electrolysis prevention device is attached at any of a variety of locations **44** near the inlet **17**. *Id.* at 7:59-61. “[T]his allows for an anode **13** to be attached by any way imaginable within **10** inches in any direction of the center axis of the inlet connection **16**.” *Id.* at 7:61-64. In a further embodiment, the radiator is manufactured with a removable plug in place of the



electrolysis prevention device. *Id.* at Fig. 5A, 8:5-33. This allows mechanics to remove the plug and install the electrolysis prevention device in an after-market process. *Id.* at 8:34-39.

C. Prosecution History

The inventor filed a provisional patent application on December 5, 2008, and a non-provisional application on December 7, 2009. (DE 34-3 at 1, the '145 patent). Several years later, the '145 patent issued on August 7, 2012. *Id.* However, the '145 patent contained an irregularity—it issued with a claim that was cancelled by the inventor. During prosecution, the patent examiner rejected claim 12 as not allowable over the prior art. Rather than amend the claim, the inventor

chose to cancel the claim, which should have removed it from the patent. (DE 34-4, February 29, 2012 Amendment at 7). However, the inventor failed to remove claim 12 from his claim listing, and the Patent Office failed to notice the mistake. As a result of this error, the '145 patent incorrectly included the cancelled claim 12. *Id.* at 5.

Two years later, the inventor applied for a patent reissue. (DE 34-5 at 1). In the inventor declaration supporting the reissue application, the inventor checked the box indicating that he believed a reissue was warranted because he claimed more or less than he had the right to claim but left blank the portion of the form stating: “If the reissue is a broadening reissue, a claim that the application seeks to broaden must be identified.” *Id.* at 4. The inventor added and cancelled numerous patent claims during the reissue proceeding, which took nearly five years. On May 2, 2018, six years after the original '145 patent issued, the inventor added 27 new claims to the reissue patent, which includes all the Asserted Claims in the present litigation. (DE 34-6, May 2, 2018 Response to Office Action). On July 9, 2019, Reissue Patent No. RE47,494—the patent asserted in the present litigation—issued. '494 patent at 1.

II. LEGAL STANDARDS

A. Claim Construction

The determination of infringement is a two-step process in which the Court first construes the claims to determine the scope of the claims and then compares the properly construed claims to the accused device. *Bell Atlantic Network Servs., Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The first step in this process, the construction of claims, is a question of law for the court. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc). The second step, in contrast, is typically a question of fact for the jury. *See Bell Atlantic*, 262 F.3d at 1267.

“It is a bedrock principle of patent law that the claims of the patent define the invention to

which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*). The court should give the disputed claim terms “their ordinary and accustomed meaning as understood by one of ordinary skill in the art.” *Bell Atlantic*, 262 F.3d at 1267. A person of ordinary skill in the art is deemed to read the claim terms in the context of the entire patent, including the specification and the prosecution history. *See Phillips*, 415 F.3d at 1313.

There are only two exceptions to the general rule that claim terms are given their ordinary and customary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Hill-Rom Servs. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014).

“It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history. . . . Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citation omitted).

The claims of the patent “provide substantial guidance as to the meaning of particular claim terms.” *Id.* at 1314. Specifically, the context in which a term is used within an individual claim or across several claims can be instructive in ascertaining the meaning of a particular claim term. Courts also “must look at the ordinary meaning in the context of the written description and the prosecution history.” *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) (citation omitted).

The specification of the patent “is always highly relevant to the claim construction

analysis.” *Vitronics*, 90 F.3d at 1582. In fact, the specification is usually dispositive, as “it is the single best guide to the meaning of a disputed term.” *Id.* The Federal Circuit has stated that it is “entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.” *Phillips*, 415 F.3d at 1317. The lexicography of the inventor governs in cases where the inventor provides within the specification a special definition of a claim term that differs from the term’s customary meaning. *Id.* at 1316. The inventor may also disclaim or disavow claim scope within the specification. Where “the inventor has dictated the correct claim scope, . . . the inventor’s intention, as expressed in the specification, is regarded as dispositive.” *Id.*

In addition to the specification, courts may also examine the patent’s prosecution history to determine the terms of the claims. *Markman*, 52 F.3d at 980. “Like the specification, the prosecution history provides evidence of how the [Patent and Trademark Office] and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317. The prosecution history can be instructive in determining whether the inventor disclaimed any particular interpretation during the prosecution of the patent. *See Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005). However, courts should approach the prosecution history with a measure of caution as it often “lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Phillips*, 415 F.3d at 1317.

Courts are also authorized to consider certain extrinsic evidence including testimony from the inventor or from experts, dictionaries, and learned treatises. *Id.*; *Markman*, 52 F.3d at 980. While extrinsic evidence may “shed useful light on the relevant art,” it is “less significant than the intrinsic record in determining the legally operative meaning of disputed claim language.” *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004) (internal quotation omitted).

“In sum, extrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1318-19 (the use of extrinsic evidence must be secondary and subservient to the intrinsic evidence).

B. Indefiniteness

“[I]ndefiniteness is a question of law and in effect part of claim construction.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012). Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112 ¶ 2. “A patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901, 910 (2014). Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application was filed. *Id.* at 911.

III. DISCUSSION

A. Undisputed Terms

Term	Agreed Construction
“sacrificial anode” (claims 25, 26, 29, 33, 37)	“piece of metal used to protect another piece of metal by preferentially corroding”
“within 10 inches of the hot liquid inlet” / “within 10 inches of a hot liquid inlet” (claims 25, 37)	“within 10 inches of the center axis of [the hot liquid inlet / a hot liquid inlet]”

The parties have agreed to the above constructions. Both agreed constructions are supported by the intrinsic evidence. For example, in the prosecution history, the inventor described a sacrificial anode as “a piece of metal used to protect another from corrosion by preferentially

corroding.” (DE 33-3 at 10). The agreed construction of sacrificial anode is also consistent with the claims and specification. *See, e.g.*, ’494 patent, at 2:1-13, claim 25. Similarly, the agreed upon construction of the second term is supported by the specification and consistent with other intrinsic evidence. *See id.* at 7:61-64 (“In particular, this allows for an anode 13 to be attached by any way imaginable within 10 inches in any direction of the center axis of the inlet connection 16.”). Accordingly, the court construes the undisputed terms based on the agreed constructions.

B. Disputed Terms

1. “installed” / “installation”²

Plaintiff EPS’s Position	Defendant DTNA’s Position
No construction required. Plain and ordinary meaning.	Plain and ordinary meaning, subject to the following Clarifying Statement:
DTNA’s clarifying statement should not be adopted.	Clarifying Statement ³ “installed” does not include a sacrificial anode being bonded to the core metal

The claim language describes “a sacrificial anode **installed** within 10 inches of the hot liquid inlet of the radiator;” “the sacrificial anode is **installed** onto a surface of the radiator;” and “the anode holder adapted for **installation** in an engine radiator.” ’494 patent at claims 25, 29, and 37 (emphasis added). The parties agree that “installed” / “installation” should have its plain and ordinary meaning, however Defendant DTNA seeks to add a clarifying statement that “installed,” as claimed in Asserted Claims 25 and 29, does not include “a sacrificial anode being bonded to the core metal.”

Plaintiff EPS argues that the clarifying statement is contradicted by the specification which, in at least one embodiment, states that the sacrificial anode can “be attached by any way

² This term is in Asserted Claims 25, 29, and 37.

³ “Installation” appears in claim 37 in the phrase “the anode holder adapted for installation.” DTNA’s clarifying statement is directed specifically to the sacrificial anode. DTNA agrees that “installation” in claim 37 has its plain and ordinary meaning and does not require the clarifying statement.

imaginable” including via welding the anode to the aluminum core. ’494 patent at 7:57-67. In particular, Plaintiff argues that “attached by any way imaginable” including via welding is broad enough to encompass at least some forms of bonding. EPS also argues that inserting the negative limitation (*i.e.*, excluding “bonding” as a mechanism for installation) via the clarifying statement is improper absent lexicography or disavowal of claim scope and that doing so would violate the written description requirement.

Defendant DTNA argues that welding is not equivalent to bonding, that the specification does not disclose bonding as part of the present invention, and that the specification teaches away from bonding because it disparages bonding in the prior art. DTNA further argues that if bonding is included within the term installation, then at least Asserted Claim 25 is invalid as obvious over U.S. Patent No. 5,292,595 (disclosed in the background section of the patent) in view of the 1922 Ford radiator repair manual. (DE 34-7).

The clarifying statement is a negative limitation as it excludes bonding as a mechanism for installation. As the negative limitation finds no anchor in the explicit claim language (the claim language does not mention bonding), the Court turns to the next most probative evidence—the specification. The specification only mentions the word “bond” one time. This occurs in the background section when describing prior art where the inventor discusses unsolved problems in the art.

U.S. Pat. No. 5,292,595 describes a sacrificial anode of specified composition bonded to the core metal to prevent the occurrence of pitting corrosion of core material in a heat exchanger such as a radiator or heater core. Unfortunately such an anode is hard to access to check its condition or replace it when it wears out. A need exists for a corrosion-inhibiting sacrificial anode which is easily accessible. Since a sacrificial anode is designed to be consumed, easy accessibility would allow verification of its effective working status and efficient replacement when depleted.

’494 patent at 2:14-23. Later in the specification, when describing the present invention, the

inventor states that the sacrificial “anode [can] be attached by any way imaginable within 10 inches in any direction of the center axis of the inlet connection. Preferably, attachment is to the aluminum tank or the aluminum core via weld, but other attachment means and connection points may alternatively be used.” *Id.* at 7:61-67. This broad description—attaching the sacrificial anode in any way imaginable to the aluminum core—cuts against Defendant’s argument that a clarification statement against bonding to a core metal is required. Moreover, there is nothing in the specification or the prosecution history that says the sacrificial anode in the present invention cannot be installed via bonding.

Thus, while the inventor discussed a prior art “sacrificial anode . . . bonded to the core metal to prevent . . . corrosion of core material in a heat exchanger” in the background section, and even noted that this type of sacrificial anode was difficult to inspect, there is no intrinsic evidence that the inventor intended to exclude bonding as an installation method for the sacrificial anode. Nor can the Court find clear evidence that the inventor acted as a lexicographer or disavowed claim scope as to the term “installed.”

The Federal Circuit has made clear that, absent lexicography or disavowal of claim scope, claim terms are given their plain and ordinary meaning. *Hill-Rom*, 755 F.3d at 1371. Thus, Defendant must show “express disclaimer or independent lexicography in the written description [to] justify adding [a] negative limitation.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). No such disclaimer or lexicography exists as to the installation of the sacrificial anode. And nothing in the intrinsic evidence changes the plain meaning of “installed.” Thus, the term “installed” / “installation” will be given its plain and ordinary meaning.

Defendant’s contention that the Asserted Claims are invalid as obvious over the prior art if the clarifying statement is not included in the construction of “installed” is also unavailing. While

the Court acknowledges the principle that “claims should be so construed, if possible, as to sustain their validity,” *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999), the Federal Circuit has found that this is “a doctrine of limited utility [and] has no applicability [when] the claim term at issue is not ambiguous.” *Phillips*, 415 F.3d at 1328. Here, Defendant does not argue that the term is ambiguous. This is self-apparent in Defendant’s invalidity argument as the term must not be ambiguous if the Defendant is able to map the claim terms to the prior art. Moreover, later proceedings—not claim construction—will determine the merits of Defendant’s obviousness invalidity defense. *Z-Man Fishing Prod., Inc. v. Queen*, No. 519-CV-00147-KDB-DCK, 2020 WL 7264469, at *11 (W.D.N.C. Dec. 10, 2020).

2. “active metal”⁴

Plaintiff EPS’s Position	Defendant DTNA’s Position
“metal that reacts with oxygen” Alternatively, “metal that reacts with oxygen, such as magnesium, aluminum, zinc or combinations thereof”	“a metal with a more negative electrochemical potential than the metal it protects” Alternatively, indefinite

The claim language describes a “sacrificial anode consists essentially of an **active metal**,” an “**active metal** is at least one of aluminum, magnesium, and zinc,” and a “sacrificial anode made of an **active metal**.” ’494 patent at claims 26, 27, and 37 (emphasis added). The parties agree that the inventor was a lexicographer and/or disavowed claim scope as to the term “active metal,” but disagree on the proper construction.

Plaintiff’s proposed construction comes directly from the specification (as shown below) and the prosecution history.

[S]acrificial anodes, constructed of **active metals, that is metals that react with oxygen**, such as magnesium, aluminum, zinc or combinations thereof, have also been used as corrosion inhibitors.

⁴ This term is in Asserted Claims 26, 27, and 37.

'494 patent at 2:6-9, 6:33-36 (emphasis added). Moreover, during prosecution, in the Response to the February 18, 2019 Office Action, the inventor overcame prior art by arguing that the prior art did not disclose a sacrificial anode, let alone a sacrificial anode positioned within 10 inches of a hot liquid inlet. (DE 33-2 at 10-11). In this Response, the inventor explained that the sacrificial anode in his invention is "constructed of active metals, that is metals that react with oxygen, such as magnesium, aluminum, zinc or combinations thereof." *Id.*

Defendant's proposed construction comes from the prosecution history. In the February 18 Response previously mentioned, after the inventor argues that the prior art fails to disclose a sacrificial anode, the inventor includes three common definitions from dictionaries and chemistry textbooks for "sacrificial anode." *Id.* Defendant's construction for "active metal" is derived from a chemistry textbook definition for "sacrificial anode" as cited by the inventor in the Response.

[H]ighly active metals that are used to prevent a less active material surface from corroding. **Sacrificial Anodes are created from a metal alloy with a more negative electrochemical potential than the other metal it will be used to protect.** The sacrificial anode will be consumed in place of the metal it is protecting, which is why it is referred to as a 'sacrificial' anode.

Id. (citing *LibreTexts Chemistry*, [http://chem.libretexts.org/Bookshelves/Analytical_Chemistry/Supplemental_Modules\(Analytical_Chemistry\)/Electrochemistry/Exemplars/Corrosion/Sacrificial_Anode](http://chem.libretexts.org/Bookshelves/Analytical_Chemistry/Supplemental_Modules(Analytical_Chemistry)/Electrochemistry/Exemplars/Corrosion/Sacrificial_Anode) (last visited Jan. 21, 2019)) (emphasis added).

Plaintiff argues that its construction, unlike Defendant's, is directly from the specification and the prosecution history, and that Defendant's construction inserts ambiguity into the term. Defendant argues that Plaintiff's construction is too broad, and that the inventor further narrowed the scope of this term during prosecution. Defendant also argues that electrolysis is only an issue in system with dissimilar metals, and Plaintiff's construction would allow for the sacrificial anode

and protected metal to both be made of the same metal.

As a preliminary matter, for the Court to construe this term as anything other than its plain and ordinary meaning, the inventor must have acted as his own lexicographer and/or disavowed the full scope of the claim term. *Hill-Rom*, 755 F.3d at 1371. The parties do not dispute that the inventor acted as a lexicographer and/or disavowed claim scope, and this Court agrees.

When “the specification [reveals] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess . . . the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. “[T]he phrase ‘that is’ is a literal translation equivalent.” *Blue Spike LLC v. Grande Communications Inc.*, No. 4:20-CV-671, 2021 WL 5094911, at *45 (E.D. Tex. Nov. 2, 2021) (citing *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009)). Here, the inventor acted as a lexicographer, defining “active metals” in the specification, stating: “active metals, that is metals that react with oxygen, such as magnesium, aluminum, zinc or combinations thereof.” This mirrors Plaintiff’s construction and is the most persuasive intrinsic evidence.

The inventor also disavowed the scope of the claim term “active metal” during prosecution. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Phillips*, 415 F.3d at 1317. “A patentee may, through a clear and unmistakable disavowal in the prosecution history, surrender certain claim scope.” *SpeedTrack, Inc. v. Amazon.com*, 998 F.3d 1373, 1377 (Fed. Cir. 2021). Here, the inventor overcame a prior art reference during prosecution by arguing that the reference did not disclose the sacrificial anode in the present invention. In describing a sacrificial anode, the inventor gave three common dictionary definitions of a sacrificial anode as

examples, before noting that the “specification of the [present invention] similarly explains that ‘sacrificial anodes, constructed of active metals, that is metals that react with oxygen, such as magnesium, aluminum, zinc or combinations thereof, have also been used as corrosion inhibitors’ and further, that a ‘sacrificial anode is designed to be consumed.’” (DE 33-3 at 10). The inventor narrowed the scope of “active metals” to at least “metals that react with oxygen.” However, it is not “clear and unmistakable” that the inventor limited “active metals” during prosecution to Defendant’s construction (“a metal with a more negative electrochemical potential than the metal it protects”).

Defendant’s construction of “active metal” is derived from one of the dictionary definitions of “sacrificial anode” that the inventor provided as examples in the February 18 Response. However, the inventor was not describing his invention or the terms in his claims when he provided the example definition from which Defendant’s construction is derived. Instead, he was generally explaining a sacrificial anode. Tellingly, in the very next sentence after the inventor provided the example definitions, the inventor explained how his specification defined “active metals.” This definition from the prosecution history is the same definition that the inventor used in the specification and mirrors Plaintiff’s construction. As such, Plaintiff’s construction was taken directly from the specification and prosecution history, whereas Defendant’s construction was derived from a dictionary that the inventor cited during prosecution for a different term. While all the aforementioned evidence is intrinsic (even the dictionary definition as it was included in the Response), Plaintiff’s evidence carries more weight. *Vitronics*, 90 F.3d at 1582 (“[T]he specification is always highly relevant Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.”); *Phillips*, 415 F.3d at 1317, 1319 (“Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final

product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes. . . . [D]ictionary definitions of claim terms [should be] assigned a less prominent role [than] the specification and the prosecution history.”).

Defendant next argues that Plaintiff’s construction is improper because it is broad enough to allow the sacrificial anode and radiator to both be made of the same metal, and “the problem of electrolysis [is] only applicable to systems with at least two different metals.” (DE 34 at 19). Defendant provides no expert testimony on this issue and relies solely on passages from the specification and the prosecution history as support. While the specification does state that electrolysis is a problem “especially [] with components of dissimilar metal construction” and that “an unfortunate side effect of using dissimilar metals is an increase in electrolytic activity,” the specification never states that electrolysis cannot occur with two similar metals. ’494 patent at 1:35-41, 61-64. In fact, the first embodiment, as depicted in Figure 1A, allows for the sacrificial anode and radiator to both be made of the same material (*e.g.*, aluminum).

[A]n electrolysis prevention device 12 includes a sacrificial anode 13 The anode 13 should be composed of a metal that reacts strongly with oxygen, also known as an active metal, such as magnesium, aluminum, zinc or combinations thereof. . . . Such an assembly 12 can be installed very quickly and can be used in radiators having plastic tanks as well as in radiators having aluminum tanks. . . . A typical radiator includes an aluminum core 31 and either plastic or all-aluminum tanks 33.

Id. at 6:30-36, 6:47-49, 7:2-2. The Asserted Claims also allow for the sacrificial anode and radiator to both be made of aluminum. For example, dependent claims 26-27 disclose a sacrificial anode made of an active metal consisting of aluminum and dependent claim 31 discloses a radiator made of aluminum. All of claims 26-27 and 31 depend from independent claim 25. Thus, the Asserted Claims allow for a sacrificial anode and radiator to both be made of the same metal. Defendant appears to admit this fact, noting that “electrolysis was less of a problem when all of the relevant

components of the car were made of similar metals.” (DE 36 at 12). While it may be “less of a problem,” it does not mean that it is not a problem at all. Moreover, the prosecution history does not limit electrolysis to only dissimilar metals. As such, Defendant’s construction, which would abrogate similar metals from the construction of “active metal,” is inapposite with the intrinsic evidence.

The Court thus adopts Plaintiff’s proposed construction and construes “active metal” as a “metal that reacts with oxygen.” This is consistent with the intrinsic evidence including the claims, specification, and prosecution history. The Court declines to include the further limitation that the active metal can be “magnesium, aluminum, zinc or combinations thereof” as it could render at least Asserted Claim 27 superfluous. ⁴⁹⁴ patent at claim 27 (“the active metal is at least one of aluminum, magnesium, and zinc”); *Wi-LAN USA, Inc. v. Apple Inc.*, 830 F.3d 1374, 1391 (Fed. Cir. 2016) (“A construction that would cause two differently worded claims to cover exactly the same claim scope would render one of the claims superfluous, so we apply a presumption against such constructions.”).

The Court finds no indefiniteness issue with its construction of “active metal.” “A patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901, 910 (2014). “Indefiniteness must be established with clear and convincing evidence.” *See Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1377 (Fed. Cir. 2015). Here, Defendant has failed to meet this burden. The inventor defined “active metal” as a “metal that reacts with oxygen” and used this definition to overcome prior art during prosecution. The inventor even provided specific example of active metals, like aluminum, magnesium, and zinc in the specification. The

examiner did not disclose a problem understanding the scope of the term “active metal” when allowing the claims, nor can this Court find one.

3. “an anode holder” / “the anode holder”⁵

Plaintiff EPS’s Position	Defendant DTNA’s Position
No construction required. Plain and ordinary meaning. Alternatively, “a structure that holds or supports an anode” / “the structure that holds or supports an anode”	“a structure designed to hold an anode” / “the structure designed to hold an anode”

The claim language describes “**an anode holder** supporting the sacrificial anode, **the anode holder** adapted for installation in an engine radiator within 10 inches of a hot liquid inlet to the engine radiator.” ’494 patent at claim 37 (emphasis added). Plaintiff believes no construction is necessary or that, should the Court construe the term, it should be a “structure that holds or supports an anode.” Defendant disagrees, believing the Court should construe the term as a “structure designed to hold an anode.”

Plaintiff argues that Defendant’s construction creates ambiguity by improperly injecting subjective intent into a term that is readily understandable. Plaintiff further argues that the plain and ordinary meaning controls as there is nothing in the intrinsic evidence that shows the inventor acted as a lexicographer or disavowed claim scope. Defendant argues that the inventor relied on the “anode holder” to distinguish his invention over prior art and that the “designed to hold” language is not subjective.

As an initial matter, the term “anode holder” as used in Asserted Claim 37 does not appear ambiguous and seems readily understandable. The pertinent portion of claim 37 is “an anode holder supporting the sacrificial anode” and “the anode holder adapted for installation in an engine

⁵ This term is in Asserted Claim 37.

radiator.” It is unclear why Defendant’s construction (“a structure designed to hold an anode”), with the additional design limitation, is necessary as there is no intrinsic evidence supporting this. Instead, the intrinsic evidence, including the claim language and specification, inform a person of skill in the art regarding the ordinary meaning of “anode holder.” *Id.* at claims 1, 12, 37 (“an anode holder supporting the sacrificial anode”); *Id.* at abstract (same); *Id.* at 2:57-58 (same); *Id.* at 8:40-43 (describing the sacrificial anode as affixed to a portion of the anode holder so that the anode is supported).

Moreover, the plain and ordinary meaning controls as the inventor did not act as a lexicographer or disavow claim scope for this term. *Hill-Rom*, 755 F.3d at 1371. Neither party argued that the inventor acted as a lexicographer, nor has this Court found any such evidence. Thus, this turns on the disavowal element in the prosecution history. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Phillips*, 415 F.3d at 1317. “A patentee may, through a clear and unmistakable disavowal in the prosecution history, surrender certain claim scope.” *SpeedTrack*, 998 F.3d at 1377.

Here, during prosecution, the examiner rejected claim 1 of the present invention as anticipated by a prior art patent to Loyd. (DE 34-4 at 2, February 29, 2012 Response). The examiner rejected the present invention, in part, because Loyd had an “anode [] supported within the plastic covers at an inlet connection of an engine heat exchange component.” *Id.* The inventor overcame the rejection, arguing that “the Examiner makes no mention of what element of the Loyd device, if anything, he considers to be an anode holder” and that “even assuming *arguendo* that some element of Loyd could properly be characterized as an anode holder, the Examiner has failed

to identify how any such element is “adapted to fit around the inlet connection” so “as to allow for a hose to be attached overtop the device.” *Id.* at 3 (emphasis in original). The inventor thus overcame the rejection of unasserted claim 1, not by narrowing the scope of the “anode holder,” but by describing the fit and/or attachment of the anode holder relative to other structures. This does not show “clear and unmistakable disavowal in the prosecution history” of the scope of the term “anode holder.” *SpeedTrack*, 998 F.3d at 1377.

Moreover, Defendant’s construction arguably introduces subjectivism into the construction via the “designed to hold” limitation as this requires understanding the design purpose of the anode holder—bringing into the analysis the state of mind of the alleged infringer. The Federal Circuit has previously declined to adopt constructions with subjective state of mind limitations. *See, e.g., Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1352-53 (Fed. Cir. 2001) (rejecting proposed construction that depended “on the state of mind of the accused infringer”); *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005) (finding claim indefinite and holding that “[t]he scope of claim language cannot depend solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention”). A district court in Michigan aptly summarized the reasoning behind the Federal Circuit’s reluctance to adopt claim constructions with subjective design limitations, stating:

The Federal Circuit’s reason for avoiding constructions that turn on subjective intent is obvious: only rarely will it be possible to ascertain a manufacturer’s subjective intent in designing a product. If subjective intent were dispositive, a manufacturer could avoid liability simply by saying it did not subjectively intend to design a product in an infringing way. By its nature, that defense would often be impossible to disprove, regardless of its actual truth.

Stryker Corp. v. Zimmer Inc., No. 1:10-CV-1223, 2012 WL 12883650, at *3 (W.D. Mich. Nov. 29, 2012). The Court thus declines to construe “anode holder” in a way that may bring subjective intent into consideration. And, as the term “anode holder” is not ambiguous, nor did the inventor

act as a lexicographer or disavowal claim scope, the term will be given its plain and ordinary meaning.

4. “sacrificial anode assembly”⁶

Plaintiff EPS’s Position	Defendant DTNA’s Position
No construction required. Plain and ordinary meaning.	“at least a sacrificial anode and an anode holder”

The term “sacrificial anode assembly” appears in unasserted claim 12, reproduced below:

12. A method of preventing corrosion of a radiator, the method comprising: installing a **sacrificial anode assembly** including a sacrificial anode within the radiator, wherein the sacrificial anode is placed within 10 inches of a hot liquid inlet to the radiator.

’494 patent at claim 12 (emphasis added). This means it is not a term in a claim that is asserted in this case. Plaintiff argues this fact alone precludes the Court from construing the term. Plaintiff further argues that Defendant’s construction adds ambiguity and confusion, improperly narrows the scope of the term absent lexicography or disavowal, and is an improper attempt to manufacture an invalidity argument (*i.e.*, Defendant is trying to narrow the scope of unasserted claim 12 to setup a later invalidity argument that Asserted Claim 25 is too broad and should not have been allowed during reissue). Defendant agrees this is not a typical case, as the Asserted Claims are all new claims added during reissue. However, Defendant argues that the Court is not precluded from construing a non-asserted claim term as it will streamline resolution of a potentially case-dispositive issue—whether the ’494 patent is invalid for improperly broadening the scope of the patent claims during the reissue process.⁷ The crux of Defendant’s argument is that a “sacrificial anode assembly” must include something more than just a sacrificial anode. Plaintiff contends

⁶ This term is in non-asserted claim 12.

⁷ “[A]n alleged infringer may be protected from liability for infringement of substantively and substantially altered claims in a reissued patent.” *John Bean Techs. Corp. v. Morris & Assocs., Inc.*, 988 F.3d 1334, 1337 (Fed. Cir. 2021). “35 U.S.C. § 252 ensures that if the patentee succeeds in obtaining a broader reissue patent, the public interest is protected through intervening rights.” *In re Youman*, 679 F.3d 1335, 1342 (Fed. Cir. 2012)

otherwise, arguing that the “sacrificial anode assembly” in claim 12 only requires at least a sacrificial anode (*i.e.*, it could include only the sacrificial anode and nothing else).

Neither party cites caselaw that requires or prevents district courts, during the claim construction phase, from construing a non-asserted claim term in a reissue patent that is relevant to a defendant’s recapture defense. Nor is the Court aware of any such precedent. *See, e.g., MobileMedia Ideas, LLC v. Apple Inc.*, 907 F. Supp. 2d 570, 608 (D. Del. 2012), *rev’d on other grounds*, 780 F.3d 1159 (Fed. Cir. 2015) (allowing an agreed upon construction for a non-asserted claim term). While the Court is aware that the recapture defense is a question of law often resolved on summary judgment⁸, underlying this defense is a claim construction issue. As the Parties have already fully briefed and argued this claim construction issue, and in the interest of judicial economy, the Court will address the claim construction issue now.

The first part of the term “sacrificial anode assembly” includes the agreed term “sacrificial anode.” Thus, at issue here is the word “assembly” and whether a “sacrificial anode assembly” must include something more than just a sacrificial anode. The Parties thus dispute whether “assembly” requires multiple parts or if it can include only a single part. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.”). As explained below, the Court finds that an assembly requires multiple parts.

First, the plain language of claim 12 requires a “sacrificial anode assembly” to include more than just a sacrificial anode. Otherwise, the word “assembly” would be superfluous and add no meaning. *Wi-LAN USA*, 830 F.3d at 1391 (“A construction that would cause two differently

⁸ Whether the claims of a reissue patent are invalid for violation of the recapture rule is a question of law. *In re Mostafazadeh*, 643 F.3d 1353, 1358 (Fed. Cir. 2011). Accordingly, reissue recapture is an issue often resolved on summary judgment. *See, e.g., MBO Labs., Inc. v. Becton, Dickinson & Co.*, 602 F.2d 1306, 1312–19 (Fed. Cir. 2010); *N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1349–50 (Fed. Cir. 2005).

worded claims to cover exactly the same claim scope would render one of the claims superfluous, so we apply a presumption against such constructions.”). Finding otherwise would mean that the term “sacrificial anode assembly” and “sacrificial anode,” which are each properly introduced according to antecedent basis rules as separate limitations, cover the same scope. *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410 (Fed. Cir. 2004) (“[T]here is a difference in meaning and scope when different words or phrases are used in separate claims interpretations that render some portion of the claim language superfluous are disfavored.”). As the inventor chose to use “sacrificial anode” as a stand-alone limitation from “sacrificial anode assembly,” these terms must have different scopes. Plaintiff’s argument that the scope of “sacrificial anode assembly” is different than “sacrificial anode” because, while either could include just a sacrificial anode, only the sacrificial anode assembly could include more than just a sacrificial anode, is unavailing based on the word “assembly.”

As other courts have found, an “assembly” includes multiple connected parts that form one unit. *Provisur Techs., Inc. v. Weber, Inc.*, No. 20-CV-6069-SRB, 2021 WL 3374983, at *n.6 (W.D. Mo. Aug. 3, 2021) (“[T]he parties do not dispute, and the Court finds, that an ordinary person skilled in the art would understand the term ‘assembly’ to mean a single, functional unit containing multiple component parts.”); *Nichia Corp. et al. v. Lighting Science Grp. Corp.*, IPR2019-01259, Paper 45 at 18-19 (“[W]e construe ‘assembly’ in accordance with its plain and ordinary meaning as a group of parts that are connected and form one unit.”). This is consistent with the specification, which describes the sacrificial anode as a component of the sacrificial anode assembly:

In a feature of this aspect, the engine heat exchange component has an inlet connection, and the method further includes: installing a fitting hole into the tank of the engine heat exchange component adjacent the inlet connection; and filling said fitting hole with a sacrificial anode of the sacrificial anode assembly.

'494 patent at 3:15-21. The specification further notes that the “electrolysis prevention device 12 includes a sacrificial anode 13 supported at the end of a sleeve wire, metal slide, clip 15 or the like” and that “[s]uch an assembly 12 can be installed very quickly . . . in radiators.” *Id.* at 6:30-50. The specification thus equates the electrolysis prevention device, which includes multiple components, with an assembly.

While the “sacrificial anode assembly” must include something more than a sacrificial anode, Defendant’s position that this term should mean “at least a sacrificial anode and an anode holder” improperly reads the anode holder limitation from the specification into the claims. The Federal Circuit has long warned of “the danger of reading limitations from the specification into the claim,” which is distinct from “using the specification to interpret the meaning of a claim.” *Phillips*, 415 F.3d at 1323. Here, the “anode holder” limitation is not present in claim 12 and including this as part of the construction of “sacrificial anode assembly” would improperly read a limitation from the specification into the claim.

Instead, the Court follows previous cases which have found a person of skill in the art would understand an “assembly” to be multiple connected parts that form one unit. And, as the parties have already agreed on the construction of “sacrificial anode” the Court need not separately proffer a meaning for that portion of the term. Accordingly, a “sacrificial anode assembly” is a “sacrificial anode and at least one other connected part that forms one unit.”

IV. CONCLUSION

IT IS, THEREFORE, ORDERED that:


1. The disputed terms are construed as expressed above and in the chart below; and

Disputed Terms	Court's Construction
"installed" / "installation"	plain and ordinary meaning with no clarifying statement
"active metal"	"metal that reacts with oxygen"
"an anode holder" / "the anode holder"	plain and ordinary meaning
"sacrificial anode assembly"	"sacrificial anode and at least one other connected part that forms one unit"

2. The Court sets the trial date for July 5, 2023. Within 30 days of this Order, the Court requests that the Parties submit a joint proposed schedule for the other post-claim construction deadlines leading up to trial. In the absence of a joint proposed schedule, the Court will set its own deadlines in the post-claim construction scheduling order.

SO ORDERED.

Signed: May 4, 2022


 Robert J. Conrad, Jr.
 United States District Judge

