

United States District Court
Southern District of Texas

ENTERED

July 28, 2021

Nathan Ochsner, Clerk

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

MAGĒMĀ TECHNOLOGY LLC,	§	
	§	
Plaintiff,	§	
	§	
v.	§	CIVIL ACTION NO. H-20-2444
	§	
PHILLIPS 66, PHILLIPS 66 CO.,	§	
and WRB REFINING L.P.,	§	
	§	
Defendants.	§	

MEMORANDUM OPINION AND ORDER

This action is brought by plaintiff, Magēmā Technology LLC ("Magēmā"), against defendants, Phillips 66, Phillips 66 Company, and WRB Refining L.P. (collectively, "Defendants"), under the Patent Act of the United States, 35 U.S.C. § 101, et seq., for alleged infringement of four United States Patents for refining marine fuel oil:¹ (1) U.S. Patent No. 10,308,884 ("the '884 Patent"), entitled "Heavy Marine Fuel Oil Composition," issued on June 4, 2019;² (2) U.S. Patent No. 10,533,141 ("the '141 Patent"), entitled "Process and Device for Treating High Sulfur Heavy Marine Fuel Oil For Use as Feedstock in a Subsequent Refinery Unit," issued on January 14, 2020;³ (3) U.S. Patent No. 10,604,709 ("the '709 Patent"), entitled "Multi-Stage Device and Process for

¹Complaint for Patent Infringement ("Plaintiff's Complaint"), Docket Entry No. 1.

²Exhibit 1 to Plaintiff's Complaint, Docket Entry No. 1-1.

³Exhibit 2 to Plaintiff's Complaint, Docket Entry No. 1-2.

Production of a Low Sulfur Heavy Marine Fuel Oil from Distressed Heavy Fuel Oil Materials," issued on March 31, 2020;⁴ and (4) U.S. Patent No. 10,584,287 ("the '287 Patent"), entitled "Heavy Marine Fuel Oil Composition," issued on March 10, 2020.⁵ The parties have filed a P.R. 4-3 Joint Claim Construction and Prehearing Statement ("Joint Claim Construction Statement"), Docket Entry No. 28, asking the court to construe three disputed terms: One term used in all four Patents, one term used in the '884 and '141 Patents, and one term used in the '884 Patent.⁶ See Markman v. Westview Instruments, Inc., 116 S. Ct. 1384, 1387 (1996) ("We hold that the construction of a patent, including terms of art within its claim, is exclusively within the province of the court.").

In support of its preferred constructions Plaintiff has filed Magemā Technology LLC's Opening Claim Construction Brief

⁴Exhibit 3 to Plaintiff's Complaint, Docket Entry No. 1-3.

⁵Exhibit 4 to Plaintiff's Complaint, Docket Entry No. 1-4.

⁶The parties originally disagreed about the meaning of one additional term used in slightly different forms in each of the four patents-at-issue: "compliant with ISO 8217:2017" used in all asserted claims of the '884 Patent; "complies with ISO 8217 (2017)" used in all asserted claims of the '141 Patent; "ISO 8217:2017 compliant" used in all asserted claims of the '287 Patent; and "complies with ISO 8217" used in all asserted claims of the '709 Patent. But the parties have agreed that all of these terms mean "meets the bulk physical properties of any of a RMA, RMB, RMD, RME, RMG, or RMK residual marine fuel as set forth in Table 2 of the ISO 8217:2017 standard." See Joint Claim Construction Statement, Docket Entry No. 28, pp. 1-2. Page numbers for docket entries in the record refer to the pagination inserted at the top of the page by the court's electronic filing system, CM/ECF.

("Plaintiff's Opening Brief") (Docket Entry No. 32), Defendants have filed Defendants' Responsive Claim Construction Brief ("Defendants' Responsive Brief") (Docket Entry No. 33), Plaintiff has filed Magēmā Technology LLC's Reply in Support of Its Opening Claim Construction Brief ("Plaintiff's Reply") (Docket Entry No. 37), and Defendants have submitted Defendants' Amended Exhibit to Responsive Claim Construction Brief (Docket Entry No. 44), which is the Handbook of Petroleum Refining, by James G. Speight. On July 8, 2019, the court conducted a hearing at which the parties presented argument on the three disputed claim terms.⁷ After carefully considering the parties' arguments and the applicable law, the court construes the disputed claim terms as stated below.

I. Legal Standard for Claim Construction

In Markman, 116 S. Ct. at 1387, the United States Supreme Court held that the construction of patent claims is a matter of law exclusively for the court. When the parties dispute the meaning of particular claim terms,

the judge's task is not to decide which of the adversaries is correct. Instead the judge must independently assess the claims, the specification, and if necessary the prosecution history, and relevant extrinsic evidence, and declare the meaning of the claims.

⁷See Hearing Minutes and Order, Docket Entry No. 45. See also Markman Hearing Official Reporter's Transcript of Proceedings ("Markman Hearing Transcript"), Docket Entry No. 47.

Exxon Chemical Patents, Inc. v. Lubrizol Corp., 64 F.3d 1553, 1556 (Fed. Cir. 1995), cert. denied, 116 S. Ct. 2554 (1996).

Courts begin claim construction by ascertaining the "ordinary and customary meaning" of disputed claim terms. Phillips v. AWH Corporation, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc), cert. denied, 126 S. Ct. 1332 (2006). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Id. at 1313 (citing Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004)). "[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Id.

In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words. See Brown v. 3M, 265 F.3d 1349, 1352 (Fed. Cir. 2001) (holding that the claims did "not require elaborate interpretation"). In such circumstances, general purpose dictionaries may be helpful. In many cases that give rise to litigation, however, determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art. Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to "those sources available to the public that show what a person of skill in the art would have understood disputed claim language

to mean." Innova, 381 F.3d at 1116. Those sources include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art."

Id. at 1314. See also Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371, 1373 (Fed. Cir. 2004) (as a general rule ordinary English words "whose meaning is clear and unquestionable" need no further construction).

"Generally speaking, [courts] indulge a 'heavy presumption' that a claim term carries its ordinary and customary meaning." CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed. Cir. 2002). "For example, if an apparatus claim recites a general structure (e.g., a noun) without limiting that structure to a specific subset of structures (e.g., with an adjective), [the court] will generally construe the term to cover all known types of that structure that are supported by the patent disclosure." Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998). See York Products, Inc. v. Central Tractor Farm & Family Center, 99 F.3d 1568, 1572 (Fed. Cir. 1996) ("Without an express intent to impart a novel meaning to claim terms, an inventor's claim terms take on their ordinary meaning.").

There are several exceptions to the general rule that claim terms carry their ordinary and customary meaning. A "claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the

disputed claim term in either the specification or prosecution history." CCS Fitness, 288 F.3d at 1366. See also Hormone Research Foundation, Inc. v. Genentech, Inc., 904 F.2d 1558, 1563 (Fed. Cir. 1990), cert. dismissed, 111 S. Ct. 1434 (1991) ("It is a well-established axiom in patent law that a patentee is free to be his or her own lexicographer . . . and may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings."). A claim term may also be interpreted more narrowly than it otherwise would be "if the intrinsic evidence shows that the patentee distinguished that term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention." CCS Fitness, 288 F.3d at 1366-67 (citing Spectrum International, Inc. v. Sterilite Corp., 164 F.3d 1372, 1378-80 (Fed. Cir. 1998) (narrowing a claim term's ordinary meaning based on statements that distinguished the invention from prior art)). "A claim term also will not have its ordinary meaning if the term 'chosen by the patentee so deprive[s] the claim of clarity' as to require resort to the other intrinsic evidence for a definite meaning." Id. at 1367. Courts rely on intrinsic and extrinsic evidence when considering claim construction disputes. Id. at 1366.

A. Intrinsic Evidence

The language of the claim is "of primary importance, in the effort to ascertain precisely what it is that is patented." Phillips, 415 F.3d at 1312 (quoting Merrill v. Yeomans, 94 U.S. 568, 570 (1876)). This is "[b]ecause the patentee is required to 'define precisely what his invention is.'" Id. (quoting White v. Dunbar, 7 S. Ct. 72, 75 (1886)). Courts, therefore, carefully consider the context within which a particular term is used in an asserted claim, as well as how the term is used in other claims within the same patent. Id. at 1314. Other intrinsic sources can also be helpful. For example, "the specification 'is always highly relevant to the claim construction analysis'" and can be either dispositive or "the single best guide to the meaning of a disputed term." Id. at 1315 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)). While "[i]t is therefore entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description [*i.e.*, the specification] for guidance as to the meaning of the claims," Phillips, 415 F.3d at 1317, it is important that the specification be used only to interpret the meaning of a claim, not to confine patent claims to the embodiments described therein. Id. at 1323 ("although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments").

The patent's prosecution history should also be considered when offered for purposes of claim construction. Phillips, 415 F.3d at 1317. The prosecution history "consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent." Id. "[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." Id. But "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final production of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." Id.

B. Extrinsic Evidence

The court may also look to extrinsic evidence, including dictionaries, treatises, and expert testimony, to help it reach a conclusion as to a term's meaning. Id. at 1317-18. The court must be mindful that extrinsic evidence may only supplement or clarify – not displace or contradict – intrinsic evidence. Id. at 1320-23.

II. Construction of Disputed Terms

The parties dispute the construction of three terms: (1) "Heavy marine fuel oil" used in all asserted claims of the four patents-at-issue; (2) "[having] a maximum [of kinematic viscosity/of density/carbon residue] . . . between the range of . . ." used in claim 4 of the '884 Patent and all asserted claims of the '141 Patent; and (3) "a low sulfur hydrocarbon fuel composition consisting of: a majority by volume of 100% hydroprocessed high sulfur residual marine fuel oil and a minority by volume of Diluent materials" used in claims 5, 6, and 8 of the '884 Patent.⁸

A. Technical Background

The asserted patents teach a process for making low sulfur heavy marine fuel oil that complies with two industry standards: (1) ISO 8217:2017 from the International Standards Organization ("ISO 8217"); and (2) Revised Annex VI to MARPOL (the International Convention for the Prevention of Pollution from Ships). ISO 8217:2017 contains standards for bulk properties of marine fuels, which are organized into two families: "distillate marine fuels" identified in Table 1; and "residue marine fuels" identified in Table 2. Revised Annex VI to MARPOL reduced the maximum sulfur content of marine fuels from 3.5% by weight to 0.5% effective 2020

⁸Joint Claim Construction Statement, Docket Entry No. 28, pp. 2-3.

("IMO 2020 Sulfur Cap"). The process taught by the asserted patents involves hydroprocessing ISO 8217:2017 compliant heavy marine fuel oil that has a sulfur content greater than 0.5%, i.e., the heavy marine fuel oil being sold before 2020, to reduce the sulfur to less than 0.5% to comply with the IMO 2020 Sulfur Cap.⁹

B. The Accused Products and Processes

Plaintiff accuses products and processes from two of Defendants' refineries: Bayway and Wood River.¹⁰ Plaintiff contends that the products being processed by Defendants qualify as "heavy marine fuel oils" as long as they meet the minimum physical property requirements for ISO 8217 residual fuels. Defendants disagree, arguing that "'heavy marine fuel oil' should be limited to residual fuels that contain process residues, and distillates do not contain process residues. These differences between the claims and the accused processes help place the disputed terms into context."¹¹

⁹Plaintiff's Opening Brief, Docket Entry No. 32, p. 6 (citing Declaration of Miranda Y. Jones in Support of Magēmā Technology LLC's Opening Claim Construction Brief ("Jones Declaration"), Docket Entry No. 32-1, and Exhibit 5 attached thereto, ISO 8217, Petroleum Products – Fuels (Class F) – Specifications of marine fuels, Docket Entry No. 32-6, pp. 15-16 (Table 1), and 17-18 (Table 2)). See also Plaintiff Magēmā Technology LLC's Technology Tutorial ("Plaintiff's Technology Tutorial"), Docket Entry No. 30, pp. 7-8, and 11-12; Defendants' Responsive Brief, Docket Entry No. 33, pp. 9-10.

¹⁰Defendants' Responsive Brief, Docket Entry No. 33, pp. 10-11.

¹¹Id. at 11.

C. Analysis

Plaintiff argues that the terms at issue do not require construction because “[e]ach term has a well-understood meaning in the art and some even in everyday parlance (e.g., ‘maximum,’ ‘minority,’ and ‘majority’).”¹² Plaintiff argues that “Defendants’ proposed interpretations should all be rejected,”¹³ because

Defendants’ proposed constructions . . . impermissibly seek to change the meaning and scope of the asserted claims by importing limitations from the specification or prosecution history, excluding disclosed embodiments, and wholly disregarding the express claim language and the intrinsic record, thereby violating the bedrock principles of claim constructions . . .¹⁴

Defendants ask the court to adopt their constructions of the disputed terms, arguing that Magēmā’s technology relates to old refining technology, i.e., hydroprocessing fuels to reduce sulfur content, that to obtain protection over a crowded field, Magēmā narrowed its invention to hydroprocessing residual fuels, which Defendants contend contain “process residues,” which are “residual hydrocarbons that did not boil or vaporize during a distillation process.”¹⁵ Defendants also argue that Magēmā represented to the Patent Office that its claims do not capture fuel blends, but now takes the opposite position by accusing blends of infringement.¹⁶

¹²Plaintiff’s Opening Brief, Docket Entry No. 32, p. 5.

¹³Id. at 8.

¹⁴Id.

¹⁵Defendants’ Responsive Brief, Docket Entry No. 33, p. 7.

¹⁶Id.

1. "Heavy Marine Fuel Oil"

Disputed Term	Patent	Plaintiff's Construction	Defendants' Construction
"heavy marine fuel oil"	'884 Patent: all asserted claims; '141 Patent: all asserted claims; '287 Patent: all asserted claims; '709 Patent: all asserted claims.	Plaintiff's Initial Proposal: No construction necessary; plain and ordinary meaning applies. (Docket Entry No. 28, p. 2; Docket Entry No. 32, p. 9). Plaintiff's Alternative Proposal: A petroleum product fuel compliant with the ISO 8217:2017 standards for bulk properties of residual marine fuels except for the concentration levels of the Environmental Contaminates. (Docket Entry No. 32, p. 10; Docket Entry No. 37, p. 7).	Defendants' Initial Proposal: A fuel oil containing a majority of process residue that does not boil or vaporize even at vacuum conditions (Docket Entry No. 28, p. 2). Defendants' Alternative Proposal: A marine fuel oil containing a substantial amount of process residue that has not boiled or vaporized even at vacuum conditions (Docket Entry No. 33, pp. 11 and 27).

The term "heavy marine fuel oil" ("HMFO") is used in all asserted claims of the patents-at-issue, including claims 1, 2, 4-6 of the '884 Patent; Claims 1-4 of the '141 Patent; Claims 1, 2, 4, and 5 of the '709 Patent; and Claims 1, 4-8 of the '287 Patent.¹⁷

The term's use in Claim 1 of each patent is illustrative:¹⁸

¹⁷Plaintiff's Opening Brief, Docket Entry No. 32, p. 9.

¹⁸Id.

'884 Patent	A low sulfur heavy marine fuel oil . . . wherein the low sulfur heavy marine fuel oil is compliant with ISO 8217:2017 and is . . . [Col. 25:27-34] . . . high sulfur heavy marine fuel oil , wherein prior to hydroprocessing the high sulfur heavy marine fuel oil is compliant with ISO 8217:2017 and is . . . [Col. 25:28-30]
'141 Patent	A process for treating high sulfur Heavy Marine Fuel Oil for use as feedstock . . . wherein the Feedstock Heavy Marine Fuel Oil complies with ISO 8217 (2017) . . . [Col. 25:25-40]
'709 Patent	. . . wherein the pre-treated Feedstock Heavy Marine Fuel Oil complies with ISO 8217 . . . [Col. 41:12-13]
'287 Patent	A heavy marine fuel oil product that is 8217:2017 compliant . . . and is made from a heavy marine fuel oil that is ISO 8217:2017 compliant . . . [Col. 25:42-46]

Plaintiff argues that “[a]s shown above, the claims themselves define HMFO as a marine fuel that ‘is compliant with ISO 8217.’”¹⁹

Asserting that the ISO 8217 standard for marine fuel oils includes two categories: distillate marine fuel oils identified in Table 1 and residual marine fuels identified in Table 2, Plaintiff argues that “[t]he word ‘heavy’ in ‘heavy marine fuel oil’ indicates to a person of ordinary skill in the art that the claims are directed to the fuel grades in ISO 8217:2017 Table 2 for residual marine fuels as opposed to Table 1.”²⁰ Plaintiff argues that

¹⁹Id.

²⁰Id. at 9-10.

[t]o the extent that the Court should be inclined to provide a construction of HMFO, consistent with the plain, ordinary, and well-understood meaning of this term – and to avoid any uncertainty – the patentees provide an explicit definition of HMFO in the Magēmā Patents' specifications, thereby acting as their own lexicographer, as shown below:

DETAILED DESCRIPTION

The inventive concepts as described herein utilize terms that should be well known to one of skill in the art, however certain terms are utilized having a specific intended meaning and these terms are defined below:

Heavy Marine Fuel Oil (HMFO) is a petroleum product fuel compliant with the ISO 8217:2017 standards for the bulk properties of residual marine fuels except for the concentration levels of the Environmental Contaminates.²¹

Asserting that Defendants' proposed construction of "heavy marine fuel oil" is unsupported by either the intrinsic or the extrinsic evidence, Plaintiff argues that the court should reject Defendants' proposed construction because it (1) defines the term in two ways: first, by reference to the agreed construction of ISO 8217:2017 compliant, and second, by reference to the type of refinery streams from which the marine fuel oil is made; (2) interjects unnecessary complexity and confusion into a term where none exists; (3) improperly limits the claims to a specific composition that is

²¹Id. at 10 (quoting '884 Patent at Col. 7:45-54, Docket Entry No. 1-1, p. 9; and citing '141 Patent at Col. 4:66-5:2, Docket Entry No. 1-2, pp. 14-15; '709 Patent at Col. 8:4-8, Docket Entry No. 1-3, p. 24; and '287 Patent at Col. 7:51-54, Docket Entry No. 1-4, p. 13).

composed of "a majority" of process residues; (4) rests on many extrinsic references; and (5) inexplicably removes the word "marine" from the term, thereby broadening the claim scope to encompass any generic fuel oil.²²

Defendants argue that Plaintiff's

proposed definition of "heavy marine fuel oil" . . . ignores the defining characteristic of a fuel – i.e., whether it was previously vaporized into a distillate or left over as the unvaporized residue – to include any fuel so long as it meets the minimum qualifications of residual fuels, which are the lowest available grade of marine fuel. This interpretation captures higher quality fuels, such as the distillates Magēmā accuses of infringing, but contradicts the description of the invention throughout the claims, specification, and prosecution history.²³

Asserting that "'heavy marine fuel oil' should be limited to residual fuels that contain[] process residues, and distillates do not contain process residues,"²⁴ Defendants initially argued that the term "heavy marine fuel oil" should be construed to mean "[a] fuel oil containing a majority of process residue that does not boil or vaporize even at vacuum conditions."²⁵ In response to Plaintiff's Opening Brief, Defendants now urge the court to construe the term "heavy marine fuel oil" to mean "[a] marine fuel

²²Id. at 11-15. See also Plaintiff's Reply, Docket Entry No. 37, pp. 7-22.

²³Defendants' Responsive Brief, Docket Entry No. 33, p. 7.

²⁴Id. at 11.

²⁵Joint Claim Construction Statement, Docket Entry No. 28, p. 2.

oil containing a substantial amount of process residue that has not boiled or vaporized even at vacuum conditions.”²⁶ Defendants explain that

[t]he dispute between the parties is whether the claimed “heavy marine fuel oil” must contain any process residues, because Magēmā accuses distillates that contain no process residues. To focus the dispute, Defendants alter their construction as follows:

A marine fuel oil containing a substantial amount majority of process residue that has ~~does~~ not boiled or vaporized even at vacuum conditions.

The addition of “marine” negates Magēmā’s complaint about its omission. The change from “does not boil or vaporize” to “has not boiled or vaporized,” places the focus on what refinery streams are used to make “heavy marine fuel oil,” as opposed to the specific boiling points of that stream. This is consistent with the patents’ and the industry’s focus . . . on the refinery stream in distinguishing between distillates, which have boiled or vaporized, and residuals, which have not boiled or vaporized. . . Finally, [c]hanging “majority of” to “substantial amount of” is consistent with Magēmā equating “heavy marine fuel oil” with “residual based fuel,” and puts aside collateral disputes over how much process residue there must be, because requiring any process residue resolves the parties’ dispute.

Accordingly, “Heavy marine fuel oil” is a residual fuel containing process residues.²⁷

Defendants argue that their proposed construction is supported by the specifications, which define “heavy marine fuel oil” as a

²⁶Defendants’ Responsive Brief, Docket Entry No. 33, pp. 11 and 27. See also Markman Hearing Transcript, Docket Entry No. 47, p. 23:18-22.

²⁷Defendants’ Responsive Brief, Docket Entry No. 33, pp. 27-28. See also Markman Hearing Transcript, Docket Entry No. 47, pp. 23:14-24:14.

residual-based fuel that contains process residues; the claim language, which limits "heavy marine fuel oil" to residual-based fuel that contains process residues; the prosecution history, which emphasizes "heavy marine fuel oil" as a residual-based fuel; extrinsic evidence, which supports construing "heavy marine fuel" as containing a substantial amount of process residues; and Magēmā's technology tutorial, which supports construing "heavy marine fuel oil" as containing process residues.²⁸

After carefully considering all of the parties' arguments and the applicable law, the court concludes that the term "heavy marine fuel oil" is clearly defined in the patents-at-issue as "a petroleum product fuel compliant with the ISO 8217:2017 standards for the bulk properties of residual marine fuels except for the concentration levels of the Environmental Contaminates."²⁹ Phillips, 415 F.3d at 1316 ("[O]ur cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs."). Defendants' arguments to the contrary are not persuasive because

²⁸Defendants' Responsive Brief, Docket Entry No. 33, pp. 12-28.

²⁹Plaintiff's Opening Brief, Docket Entry No. 32, p. 10 (quoting '884 Patent at Col. 7:45-54, Docket Entry No. 1-1, p. 9; and citing '141 Patent at Col. 4:66-5:2, Docket Entry No. 1-2, pp. 14-15; '709 Patent at Col. 8:4-8, Docket Entry No. 1-3, p. 24; and '287 Patent at Col. 7:51-54, Docket Entry No. 1-4, p. 13). See also Plaintiff's Reply, Docket Entry No. 37, p. 7.

Plaintiff consistently defines "heavy marine fuel oil" as ISO 8217 residual marine fuels, i.e., fuels that are defined in ISO 8217 Table 2, titled "Residual marine fuels," as opposed to Table 1, titled "Distillate marine fuels," and because ISO Table 2 does not require "Residual marine fuels" to contain either a "majority" or a "substantial" amount of process residues. To the contrary, Table 2 does not define residual marine fuels by their components but, instead, by objective physical characteristics that will be easy for a jury to apply.³⁰

Defendants acknowledge that "[t]he distinction between residuals and distillates is well-recognized in the industry,"³¹ and that

[i]n two tables, ISO 8217 sets forth specifications for categories of marine fuels organized into two families: "distillate marine fuels" and "residual marine fuels." . . . The two tables prescribe certain maximum or minimum physical properties, such as density, that a fuel must be in compliance with to be sold as an ISO 8217 compliant fuel.³²

No language in either the specifications, the claims, or the prosecution histories of the patents-in-suit support the

³⁰See Markman Hearing Transcript, Docket Entry No. 47, p. 58:1-21.

³¹Defendants' Responsive Brief, Docket Entry No. 33, p. 7. See also id. at 9 ("The patents and accused products/processes in this case concern marine fuels. As explained in Magēmā's patents, there are two basic marine fuel types: distillate-based marine fuel and residual-based marine fuel, otherwise known as 'heavy marine fuel oil.' '844 Pat., Col. 1:5-37[,]" Docket Entry No. 1-1, p. 6).

³²Id.

Defendants' contention that the patents use the term "heavy marine fuel oil" in the manner that Defendants advocate, i.e., as "[a] fuel oil containing a majority of process residue that does not boil or vaporize even at vacuum conditions,"³³ or as "[a] marine fuel oil containing a substantial amount of process residue that has not boiled or vaporized even at vacuum conditions."³⁴ Nevertheless, asserting that the specifications use the term "heavy marine fuel oil" interchangeably with residual-based fuel, Defendants argue that

[i]n the patents, Magēmā defines "heavy marine fuel oil" as "residual based fuel[]" that contains a "mixture of process residues" that do not boil or vaporize from a distillation column:

Residual based fuel oils or Heavy Marine Fuel Oil (HMFO) comprises a mixture of process residues – the fractions that don't boil or vaporize even under vacuum conditions, and have an asphaltene content between 3 and 20 percent by weight (% weight).³⁵

Defendants argue that "Magēmā reiterates these definitions, explaining that 'HMFO is a blend of aromatics, distillates, and residues generated in the crude oil refinery process,'"³⁶ and that

³³Joint Claim Construction Statement, Docket Entry No. 28, p. 2.

³⁴Defendants' Responsive Brief, Docket Entry No. 33, p. 11.

³⁵Id. at 12 (quoting '884 Patent at Col. 1:28-32, Docket Entry No. 1-1, p. 6, and '287 Patent at Col. 1:28-32, Docket Entry No. 1-4, p. 10).

³⁶Id. (quoting '884 Patent at Col. 1:40-41, Docket Entry (continued...))

"HMFO is a blend of the residues generated throughout the crude oil refinery process."³⁷

While the specifications do use "heavy marine fuel oil" interchangeably with residual-based fuel oil, and residual-based fuel oil is defined in the '884 and '287 Patents as a mixture of process residues, which are defined in turn as "the fractions that don't boil or vaporize even under vacuum conditions," Defendants fail to cite any language in the specifications that requires "heavy marine fuel oil" to contain either a "majority" or a "substantial amount" of process residues that do not boil or vaporize even at vacuum conditions. Instead, as Defendants recognize,

Magēmā expressly defines both the feed and product "heavy marine fuel oil" of its patented invention as "a residual petroleum product":

Feedstock Heavy Marine Oil Fuel is a residual petroleum product, compliant with the ISO 8217 standards for the physical properties or characteristics of a merchantable HMFO . . .

Product HMFO is a residual petroleum product based fuel, compliant with the ISO 8217 standards for the properties or characteristics of a merchantable HMFO . . .³⁸

³⁶(...continued)

No. 1-1, p. 6, and '287 Patent at Col. 1:40-41, Docket Entry No. 1-4, p. 10).

³⁷Id. (quoting '141 Patent at Col. 1:53-55, Docket Entry No. 1-2, p. 13, and '709 Patent at Col. 1:53-55, Docket Entry No. 1-3, p. 21).

³⁸Id. at 13 (quoting '709 Patent at Col. 8:4-7, 13-15, Docket (continued...))

The language cited by Defendants shows that the defining characteristic of the term "Heavy Marine Fuel Oil" as used in the patents-in-suit is that it is a residual petroleum product compliant with the ISO 8217 standards for the physical properties or characteristics of a merchantable HMFO. The ISO 8217 standards for residual marine fuels are set forth in ISO 8217 Table 2, which do not include the requirement urged by Defendants, i.e., that residual marine fuels contain either a majority or a substantial amount of process residues that do not boil or vaporize even at vacuum conditions.³⁹ Accordingly, the court is not persuaded that

³⁸(...continued)
Entry No. 1-3, p. 24).

³⁹Defendants argue that ISO 8217 – through reference to ISO 8216-1 ("categories of marine fuels"), and ISO 8216-99 (general "fuels") – imposes a requirement that Table 2 residual marine fuels include "residues from petroleum processing." See Defendants' Responsive Brief, Docket Entry No. 33, p. 17 & n. 4. But Defendants fail to cite any authority in support of their contention that "heavy marine fuel oil" must contain either a "majority" or a "substantial amount" of process residues that do not boil or vaporize even at vacuum conditions. See Markman Hearing Transcript, Docket Entry No. 47, pp. 34:2-16 (THE COURT: "Is there anything that says it has to contain a majority or substantial amount of processed residue? MR. WALKER: The only thing that we have from the specs is that distillates contain -- can contain -- some of them can contain trace amounts. So anything above a trace amount is enough to end this dispute here. Now, as a general matter substantial is a term that is going to solve the dispute in this case. Because the distillates we have pulling in are going to have no, to maybe trace residual -- I'm not even sure how you would know that, because there's no testing being done for it -- but distillates are going to be pure . . . "). Moreover, as Plaintiff points out, ISO 8216-99 has – at best – limited relevance as it is directed to general fuels, not to marine fuels. And ISO 8216-1, which is more relevant because it classifies marine fuels,

(continued...)

the patents' specifications support the Defendants' proposed construction.

Defendants argue that Plaintiff's proposed construction of "heavy marine fuel oil" as requiring compliance with ISO 8217 "renders every compliant-with-ISO-8217 limitation superfluous."⁴⁰

But, as Plaintiff argues,

Magēmā's construction does not render the claim term "compliant with ISO 8217" superfluous, but rather gives effect to the language of the claims and the express definition of HMFO in the asserted patents' specifications. The independent asserted claims use HMFO in the following context:

- . . . high sulfur **heavy marine fuel oil** is **compliant with ISO 8217:2017** . . . (Claims 1, 5 of the '884 Patent)
- . . . low sulfur **heavy marine fuel oil** is **compliant with ISO 8217:2017** . . . (Claims 1, 5 of the '884 Patent)
- . . . the Feedstock **Heavy Marine Fuel Oil** **complies with ISO 8217 (2017)** . . . (Claim 1 of the '141 Patent)
- A **heavy marine fuel oil** product that is **ISO 8217:2017 compliant** for a residual marine fuel . . . (Claim 1 of the '287 Patent)

³⁹(...continued)

classifies Table 1 distillate marine fuels in part based on whether they contain "no residuum" or "trace residuum," but classifies Table 2 residual marine fuels based on viscosity without mentioning residuum. See Plaintiff's Reply, Docket Entry No. 37, pp. 10-11 (quoting ISO 8216-99, Defendants' Exhibit F, Docket Entry No. 33-6, p. 9).

⁴⁰Defendants' Responsive Brief, Docket Entry No. 33, p. 18.

- . . . a heavy marine fuel oil that is ISO 8217:2017 compliant . . . (Claim 1 of the '287 Patent)
- . . . Feedstock Heavy Marine Fuel Oil complies with ISO 8217 . . . (Claim 1 of the '709 Patent)

The claims do not recite a "Heavy Marine Fuel Oil" and compliance with ISO 8217" as Defendants appear to argue, Defs. Br. at 12, but instead, recite the words "that is," "is," or "complies," all of which indicate that the claims are defining HMFO as ISO 8217:2017 compliant.⁴¹

Because the patents define "heavy marine fuel oil" as ISO 8217:2017 compliant, and the claims reiterate that definition by stating repeatedly that "heavy marine fuel oil" is ISO 8217:2017 compliant, the court is persuaded that Plaintiff's construction gives meaning to the claim language itself and is not persuaded that ISO 8217 compliance is a separate claim limitation rendered meaningless by Plaintiff's construction.

Defendants argue that Plaintiff ascribed a special meaning to the term "heavy marine fuel oil" in the prosecution history. See Spectrum International, 164 F.3d at 1378-80 (explicit meanings given to claim terms in order to overcome prior art will limit those terms accordingly). In particular, defendants argue that

[b]efore the Patent Office, Magēmā emphasized that claims drawn to "heavy marine fuel oil" are limited to residual fuels as opposed to distillates, continued to use "heavy marine fuel oil" interchangeably with "residual fuel oil," and again made clear that the two types of fuels are distinct.

⁴¹Plaintiff's Reply, Docket Entry No. 37, p. 13.

In prosecuting a related patent application, Magēmā distinguished "heavy marine fuel oil" from distillate-based fuels, just as Defendants do now. Specifically, the Patent Office rejected claims reciting an ISO 8217 compliant "Feedstock Heavy Marine fuel Oil" in prosecuting U.S. Patent Publication No. 2018/0230389. . . . Magēmā explained that two of the prior art references – "Khaled" – disclosed only "non-residual" hydrocarbons. . . . Magēmā then argued that, because the "distinction between non-residual hydrocarbons and residual hydrocarbons is well recognized by the prior art," one of skill in the art would not equate prior art non-residual hydrocarbons "with an ISO 8217:2017 compliant residual marine fuel feedstock," and, therefore, the claims are patentable over the prior art.⁴²

Defendants argue that these statements in Magēmā's June 20, 2019, response to the PTO confirm that "'heavy marine fuel oil' is residual fuel that is distinct from distillate-based fuel are binding on Magēmā and require construing 'heavy marine fuel oil' as a residual based fuel oil that contains process residues."⁴³ Defendants also point to the following statement in the prosecution history of the '884 Patent as evidence that "heavy marine fuel oil" must contain process residue: "Hydroprocessed ISO 8217:2017 compliant residual fuel oils, such as those taught by the present application" ⁴⁴

⁴²Defendants' Responsive Brief, Docket Entry No. 33, pp. 19-20 (quoting Exhibit I, Reply Under 37 CFR § 1.111 (regarding Application No. 15/892,603), pp. 2, 5, 26-27, Docket Entry No. 33-9, pp. 3, 6, 27-28).

⁴³Id. at 21-22.

⁴⁴Id. at 21.

But missing from Defendants' briefing is any disclaimer of subject matter limiting "heavy marine fuel oil" to Defendants' proposed construction, i.e., "a marine fuel oil containing a substantial amount of process residue." Instead, the references to residual fuel oils in the passages from the prosecution history that Defendants cite merely point to places where Magēmā distinguished prior art references as not disclosing a marine fuel oil compliant with the physical properties for an ISO 8217 Table 2 residual marine fuel oil. Moreover, Defendants fail to cite any evidence from the prosecution history showing that Magēmā has ever limited "heavy marine fuel oil" to "a marine fuel oil containing a substantial amount of process residue that does not boil or vaporize even at vacuum conditions." See Home Diagnostics, Inc. v. LifeScan, Inc., 381 F.3d 1352, 1358 (Fed. Cir. 2004) ("Absent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language."). The court, therefore, is not persuaded that the prosecution history supports Defendants' proposed construction, and is, instead, persuaded that the prosecution history supports Plaintiff's proposed construction of "heavy marine fuel oil."

Citing industry and governmental definitions, Defendants argue that their proposed construction is fully supported by the extrinsic evidence.⁴⁵ However, since the intrinsic evidence

⁴⁵Id. at 23-24.

overwhelmingly supports the Plaintiff's construction, and since extrinsic evidence may only supplement or clarify – not displace or contradict – the intrinsic evidence, Phillips, 415 F.3d at 1320-23, the extrinsic evidence is not persuasive.

2. "[Having] a Maximum [of Kinematic Viscosity/or Density/Carbon Residue . . . between the Range of . . .]"

Disputed Term	Patent	Plaintiff's Construction	Defendants' Construction
"[having] a maximum [of kinematic viscosity/of density/carbon residue] . . . between the range of . . ."	'884 Patent: claim 4; '141 Patent: all asserted claims.	No construction necessary; plain and ordinary meaning applies. Docket Entry No. 28, p. 2; Docket Entry No. 32, p. 15; Docket Entry No. 37, p. 22.	having a [kinematic viscosity/density/carbon residue] that is between the range of . . . Docket Entry No. 28, p. 2; Docket Entry No. 33, p. 28.

Asserting that

Defendants' second proposed claim term is really requesting a construction of multiple claim terms pertaining to three claimed physical properties of an HMFO – kinematic viscosity, density and carbon residue – that are recited in the following general format: "having a maximum . . . that is between the range of . . .,"⁴⁶

Plaintiff states that "[f]or ease of reference, these terms are collectively referred to herein as the maximum range limitations."⁴⁷

The disputed maximum range limitations are found in Claim 4 of the '884 Patent and Claim 1 of the '141 Patent, as shown below:⁴⁸

⁴⁶Plaintiff's Opening Brief, Docket Entry No. 32, p. 15.

⁴⁷Id.

⁴⁸Id. at 15-16.

<p>'884 Patent, Claim 4 [Col. 25:45-55, Docket Entry No. 1-1, p. 18]</p>	<p>. . . wherein low sulfur heavy marine fuel oil has a <u>maximum</u> kinematic viscosity at 50° C. (ISO 3104) <u>between the range</u> from 180 mm²/s to 700 mm²/s; . . .</p> <p>. . . a <u>maximum</u> density at 15° C. (ISO 3675) <u>between the range</u> of 991.0 kg/m³ to 1010.0 kg/m³; . . .</p> <p>. . . a <u>maximum</u> carbon residue-micro method (ISO 10370) <u>between the range</u> of 18.00% wt. and 20.00% wt. . . .</p>
<p>'141 Patent Claim 1 [Col. 25:25-56, Docket Entry No. 1-2, p. 25]</p>	<p>. . . wherein said Feedstock Heavy Marine Fuel Oil has; a <u>maximum</u> of kinematic viscosity at 50° C. (ISO 3104) <u>between the range</u> from 180 mm²/s to 700 mm²/s; . . .</p> <p>. . . wherein said Feedstock Heavy Marine Fuel Oil has . . . a <u>maximum</u> of density at 15° C. (ISO 3675) <u>between the range</u> of 991.0 kg/m³ to 1010.0 kg/m³; . . .</p> <p>. . . and wherein said Product Heavy Marine Fuel Oil has: a <u>maximum</u> of kinematic viscosity at 50° C. (ISO 3104) <u>between the range</u> from 180 mm²/s to 700 mm²/s . . .</p> <p>. . . and wherein said Product Heavy Marine Fuel Oil has: . . . a <u>maximum</u> of density at 15° C. (ISO 3675) <u>between the range</u> of 991.0 kg/m³ to 1010.0 kg/m³ . . .</p>

Asserting that the term "maximum" has an ordinary and well-understood meaning and requires no further construction, and that the ISO 8217:2017 standard provides a maximum value for kinematic viscosity, density, and carbon residue for each grade of residual marine fuel oil in Table 2, Plaintiff argues that the claims recite a maximum "between the [recited] range" because they cover multiple residual fuel oil grades, each of which has different maximum values for the three claimed physical properties of an HMFO – kinematic viscosity, density and carbon residue.⁴⁹ Plaintiff explains that

⁴⁹Id. at 16.

[f]or example, an RMG 500 has a maximum kinematic viscosity of 500 mm²/s, and accordingly, a marine fuel oil having a kinematic viscosity less than or equal to 500 mm²/s qualifies as an RMG 500, as long as it meets the other specified physical properties for an RMG 500. Similarly, an RMK 700 has a maximum kinematic viscosity of 700 mm²/s, and accordingly, a marine fuel oil having a viscosity of less than or equal to 700 mm²/s qualifies as an RMK 700, as long as it meets the other specified physical properties for a RMK 700. As such, the term "maximum between the [recited] range" will be readily understood by a jury and does not require further construction. As shown in Magēmā's technology tutorial and reproduced [in Plaintiff's Opening Brief], when presented with a lab report showing the physical properties of a feedstock sample or product sample, a person of ordinary skill in the art – as well as the jury – will readily be able to map those properties against ISO 8217:2017 Table 2 to assess whether it meets the "maximum between the [recited] range" limitation for each property.⁵⁰

Plaintiff argues that Defendants' proposal, which removes the word "maximum" entirely and disregards the range claimed through the three limitations taken together, is improper because it significantly alters the meaning and scope of the claims.⁵¹ Citing Claim 1 of the '141 Patent, Plaintiff argues that when the patentees meant "between the range" as opposed to "maximum . . . between the range," the claims use such language. Claim 1 of the '141 Patent recites that "wherein the Feedstock Heavy Marine Fuel Oil . . . has a sulfur content (ISO 14596 or ISO 8754) between the

⁵⁰Id. at 16-17 (citing Exhibit 2 to Plaintiff's Technology Tutorial, Slide 32, Docket Entry No. 30-2, pp. 38-39).

⁵¹Id. at 18-19.

range of 5.0 mass % to 1.0 mass %.”⁵² Accordingly, Plaintiff argues that Defendants’ proposed construction should be rejected as a facially improper attempt to alter the scope of the claims.⁵³

Asserting that this “dispute concerns claims for fuels that have ‘a maximum’ physical property that is ‘between’ a range,” and that “this phrasing requires the fuel, which can have non-uniform properties (i.e., multiple densities), to have a highest level of that property between the range,”⁵⁴ Defendants argue that their proposed “construction captures the only plain meaning of this phrase as requiring the fuel’s physical property to be between the claimed range.”⁵⁵ Defendants argue that Plaintiff’s “interpretation renders the disputed term meaningless because every claim already requires compliance with ISO 8217, which in turn requires having a density viscosoty, and carbon residue below the prescribed maximum for the type of fuel at issue.”⁵⁶ Defendants also argue that Plaintiff’s position is undermined by the prosecution history of a related patent, in which the PTO found that Magēmā’s view of identical language was indefinite because

⁵²Id. at 19 (quoting ‘141 Patent, Claim 1, Col. 25:39-42, Docket Entry No. 1-2, p. 25).

⁵³Id.

⁵⁴Defendants’ Responsive Brief, Docket Entry No. 33, p. 7.

⁵⁵Id. at 28.

⁵⁶Id. at 29.

[a] broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired . . . [And i]n response, Magēmā conceded that the interpretation it now advances is indefinite by amending its claims in accord with Defendants' current construction and explaining that the amendments were made to "correct the recitation of a maximum associated with a range."⁵⁷

After carefully considering the parties' arguments and the applicable law, the court concludes that the term "maximum between the [recited] range" is subject only to its plain and ordinary meaning, which needs no further construction. See Chef America, 358 F.3d at 1373 (as a general rule ordinary English words "whose meaning is clear and unquestionable" need no further construction). Defendants' arguments to the contrary are not persuasive because Defendants do not dispute Plaintiff's contention that the term "maximum" has a plain, ordinary, and well-understood meaning that requires no further construction. Defendants ask the court to construe the asserted maximum range limitations to omit the term "maximum." Because adopting Defendants' proposed construction will not clarify a disputed term but, instead, will change the scope of

⁵⁷Id. (quoting Exhibit H, Claim Rejections - 35 USC § 112 [Claims 1-18], p. 3 ¶ 10, Docket Entry No. 33-8, p. 5; and Exhibit I, Reply Under 37 CFR § 1.111 (regarding Application No. 15/892,603), pp. 3, 10, Docket Entry No. 33-9, pp. 4 (Claim 3) and 11 ("Claims 3, 8, 9, 12, and 18 have been amended to correct the recitation of a maximum associated with a range.")). See also Markman Hearing Transcript, Docket Entry No. 47, p. 79:21-24.

the patented claims by omitting the word "maximum,"⁵⁸ the court does not find Defendants' proposed construction persuasive. See Ethicon Endo-Surgery, Inc. v. United States Surgical Corp., 93 F.3d 1572, 1582 (Fed. Cir. 1996) (recognizing that courts may not read limitations out of claims, and citing Exxon Chemical Patents, 64 F.3d at 1557 (for requiring courts to "give meaning to all the words in [the] claim"))).

Defendants' cite to the prosecution history of a related patent is unpersuasive both because the prosecution of that patent is ongoing and subject to change, see Burlington Industries, Inc. v. Quigg, 822 F.2d 1581, 1583 (Fed. Cir. 1987),⁵⁹ and because the indefiniteness at issue there was not the indefiniteness of a disputed term but, instead, the indefiniteness of claims in which a disputed term appears. 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 Enterprises, Inc., 134 S. Ct. 2120, 2124 (2014). Although a determination of indefiniteness

⁵⁸See Plaintiff's Reply, Docket Entry No. 37, p. 24 (asserting that Defendants' Responsive Brief "avoids the real issue, which is the fact that Defendants' inexplicable removal of a key word ('maximum') from the express language of the claim improperly narrows the claim scope").

⁵⁹See Markman Hearing Transcript, Docket Entry No. 47, pp. 80:8-81:10 (the court's colloquy with defense counsel disclosing that the related patent has not yet been issued).

is intertwined with claim construction, a court must first determine what the terms used in a claim mean before it can determine whether the patent is invalid for indefiniteness. See Harrah's Entertainment v. Station Casinos, Inc., 321 F.Supp.2d 1173, 1176 (D. Nev. 2004), aff'd, 154 F. App'x 928 (Fed. Cir. Nov. 15, 2005) (citing Intervet America, Inc. v. Kee-Vet Laboratories, Inc., 887 F.2d 1050, (Fed. Cir. 1989) ("Ambiguity, undue breadth, vagueness, and triviality are matters which go to claim validity, . . . not to interpretation or construction.")).

Several principles mitigate against ruling on indefiniteness at the Markman stage: first, the high burden of proof on the party challenging a patent claim for indefiniteness; second, the fact that a claim is not indefinite merely because the parties dispute its meaning; and, finally, the dispositive effect of a ruling on indefiniteness, which invalidates the claim entirely.

Gilead Sciences, Inc. v. Mylan, Inc., Civil Action No. 1:14CV99, 2015 WL 1534067, *2 (N.D. W.Va. April 6, 2015). Although a court may find a claim invalid for indefiniteness after construing the term, what a term means to a person of ordinary skill in the art is a separate question from whether it is sufficiently definite to put others in the field on notice regarding the bounds of the claims. Id. For these reasons, courts have elected to wait to address indefiniteness at the summary judgment stage. Id. (denying the defendant's indefiniteness argument without prejudice, subject to renewal during summary judgment).

Accordingly, the court concludes that the term “maximum between the [recited] range” is not limited to “between the range of” as Defendants argue, but, instead, needs no construction and is subject only to its plain and ordinary meaning.

3. “A Low Sulfur Hydrocarbon Fuel Composition Consisting Essentially of: a Majority by Volume of a 100% Hydroprocessed High Sulfur Residual Marine Fuel Oil and a Minority by Volume of Diluent Materials”.

Disputed Term	Patent	Plaintiff’s Construction	Defendants’ Construction
<p>“A low sulfur hydrocarbon fuel composition consisting essentially of: a majority by volume of a 100% hydroprocessed high sulfur residual marine fuel oil and a minority by volume of Diluent Materials.”</p>	<p>’884 Patent: claims 5, 6, and 8.</p>	<p>No construction necessary: plain and ordinary meaning applies. Docket Entry No. 28, p. 3, Docket Entry No. 32, p. 20; Docket Entry No. 37, p. 26.</p> <p>Alternative: “a majority by volume of a 100% hydroprocessed high sulfur residual marine fuel oil” means “greater than 50% by volume of a 100% hydroprocessed high sulfur residual fuel oil;” and</p> <p>“a minority by volume of Diluent Materials” means less than 50% by volume of Diluent Materials.” Docket Entry No. 32, p. 20; Docket Entry No. 37, p. 26.</p>	<p>A low sulfur hydrocarbon fuel composition consisting of a 100% hydroprocessed high sulfur residual marine fuel oil. Docket Entry No. 28, p. 3; Docket Entry No. 33, p. 30.</p>

The disputed term appears in Claim 5 of the ’884 Patent, which claims

[a] low sulfur hydrocarbon fuel composition consisting essentially of: a majority by volume of a 100% hydroprocessed high sulfur residual marine fuel oil and a minority by volume of Diluent Materials, wherein prior to hydroprocessing the high sulfur heavy marine fuel oil is compliant with ISO 8217:2017 but has a sulfur content (ISO 14596 or ISO 8754) greater than 0.5 wt. %; and wherein the low sulfur heavy marine fuel composition is compliant with ISO 8217:2017 and has a sulfur content (ISO 14596 or ISO 8754) less than 0.5 wt %; and wherein the Diluent Materials are selected from the group consisting of: hydrocarbon materials; non-hydrocarbon materials; and, solid materials and combinations thereof.⁶⁰

Asserting that

Defendants do not appear to dispute the meaning of the many terms within this phrase (e.g., "low sulfur," "hydrocarbon fuel composition," "majority," "minority," or "100% hydroprocessed.")[, but i]nstead, . . . propose a construction that completely reads out the "majority," "minority," and Diluent language from the claim,⁶¹

Plaintiff argues that "[a] construction that would read out such significant portions of claim language is improper,"⁶² and that "[t]o re-write the claims as Defendants proposed would eliminate a fundamental difference in claim scope between Claim 1 and claim 5, ignoring the principle of claim differentiation and its presumption that each claim in a patent has a different scope."⁶³

Citing the prosecution history of the '884 Patent, Defendants argue that "Magēmā defended its claims with the argument that its

⁶⁰'884 Patent, Col. 25:56-26:7, Docket Entry No. 1-1, p. 18.

⁶¹Plaintiff's Opening Brief, Docket Entry No. 32, pp. 20-21.

⁶²Id. at 21.

⁶³Id. at 22.

patents are not drawn to blends,"⁶⁴ and is now seeking to change statements made during the prosecution of the '884 Patent.⁶⁵ Asserting that "Magēmā's representation concerning the scope of claim 5 is binding,"⁶⁶ Defendants argue that

Magēmā mistakenly accuses Defendants of deleting "majority" and "minority." Defendants' construction simply makes clear that the "majority" of hydroprocessed high sulfur residual fuel is so significant, and the "minority" of other materials so insignificant, that the composition can be characterized as "essentially" hydroprocessed high sulfur residual fuel oil.⁶⁷

Plaintiff replies that "contrary to Defendants' [argument], Magēmā did not clearly disavow the use of blends as recited in the ordinary language of Claim 5 and is not seeking . . . to change statements made during prosecution."⁶⁸ Plaintiff argues that

the prosecution history comports with the plain language of Claim 5, understood by the patent office when granted, covering a fuel composition consisting essentially of a "majority" of 100% hydroprocessed high sulfur fuel oil and a "minority" of Diluent Materials.⁶⁹

After carefully considering the parties' arguments and the applicable law, the court concludes that the term "[a] low sulfur

⁶⁴Defendants' Responsive Brief, Docket Entry No. 33, p. 30 (citing Exhibit J, Reply Under 37 CFR § 1.111, ¶¶ 21, 49-50, and 54-56, Docket Entry No. 33-10, pp. 17 and 23-24).

⁶⁵Id. at 31 ("To the extent Magēmā's statement made during prosecution is at odds with the plain language of the claims, it does not deserve a mulligan.").

⁶⁶Id. at 30-31.

⁶⁷Id. at 31.

⁶⁸Plaintiff's Reply, Docket Entry No. 37, p. 28.

⁶⁹Id.

hydrocarbon fuel composition consisting essentially of: a majority by volume of a 100% hydroprocessed high sulfur residual marine fuel oil and a minority by volume of Diluent Materials” is subject only to its plain and ordinary meaning, which needs no further construction. See Chef America, 358 F.3d at 1373 (as a general rule ordinary English words “whose meaning is clear and unquestionable” need no further construction). Defendants’ arguments to the contrary are not persuasive because the terms “majority” and “minority” have a plain, ordinary, and well-understood meaning that requires no further construction, and because adopting Defendants’ proposed construction will not clarify a disputed term but, instead, will change the scope of the patented claims by omitting the words “majority” and “minority.”⁷⁰ See Ethicon Endo-Surgery, 93 F.3d at 1582 (courts may not read limitations out of claims), and Exxon Chemical Patents, 64 F.3d at 1557 (courts must “give meaning to all the words in [the] claim”).

Defendants’ cite to the prosecution history is not persuasive because as Plaintiff explains, “Magēmā did not clearly disavow the use of blends as recited in the ordinary language of Claim 5 and is not seeking . . . to change statements made during prosecution.”⁷¹ Instead,

⁷⁰Id. (asserting that Defendants’ “proposed construction improperly reads out the ‘majority,’ ‘minority,’ and Diluent language from the plain language of Claim 5”).

⁷¹Id.

[t]he prosecution history explained that the prior art disclosed a "fuel oil blend which includes a majority of non-hydroprocessed residual hydrocarbon in a ratio to the other hydrocarbon components" with "no more than 50% hydroprocessed hydrocarbons" (see, e.g., Klusmann Declaration (Jones Opening Br. Decl. Ex. 8) at ¶ 10 (Droubi) (emphasis in original)) or marine fuel oil "blends containing 50% or less of non hydroprocessed residual hydrocarbon and thus are not a 100% hydroprocessed heavy marine fuel oil" (id. at ¶ 50 (Kraus) (emphasis added)). The prosecution history further explained that "a low sulfur heavy marine fuel oil consisting essentially of a 100% hydroprocessed high sulfur heavy marine fuel oil, such a those claimed, are not available on the market as bunker fuels." Klusmann Declaration (Jones Opening Br. Decl. Ex. 8) at ¶ 55 (emphasis added). "Those claimed" refers to "a low sulfur heavy marine fuel oil, not the "low sulfur hydrocarbon fuel **composition**" of Claim 5. The other prosecution history statements upon which Defendants rely, such as "the claimed low sulfur fuel oil consist[ing] of a fully finished and ISO 8217:2017 compliant high sulfur heavy marine fuel oil that has been 100% hydroprocessed," similarly make distinctions between the prior art and the "low sulfur heavy marine fuel oil" that is not at issue in Claim 5.⁷²

Thus, the prosecution history that Defendants cite distinguishes the prior art and the "low sulfur heavy marine fuel oil" that is not at issue in Claim 5 of the '884 Patent, which covers a "low sulfur hydrocarbon fuel composition."⁷³

Accordingly, the court concludes that the term "[a] low sulfur hydrocarbon fuel composition consisting essentially of: a majority by volume of a 100% hydroprocessed high sulfur residual marine fuel oil and a minority by volume of Diluent Materials" is not limited

⁷²Id. at 27-28.

⁷³Id. at 28.

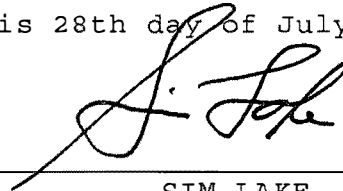
to “[a] low sulfur hydrocarbon fuel composition consisting of a 100% hydroprocessed high sulfur residual marine fuel oil,” as Defendants argue, but, instead, needs no construction and is subject only to its plain and ordinary meaning.

III. Order

For the reasons stated above, the court adopts the following constructions for the disputed terms:

Patent	Disputed Term	Construction
"heavy marine fuel oil"	All asserted claims of all asserted patents.	A petroleum product fuel compliant with the ISO 8217:2017 standards for bulk properties of residual marine fuels except for the concentration levels of the Environmental Contaminates.
"[having] a maximum [of kinematic viscosity/of density/carbon residue] . . . between the range of . . ."	'884 Patent: claim 4; '141 Patent: all asserted claims.	No construction necessary; plain and ordinary meaning applies.
"A low sulfur hydrocarbon fuel composition consisting essentially of: a majority by volume of a 100% hydroprocessed high sulfur residual marine fuel oil and a minority by volume of Diluent Materials"	'884 Patent: claims 5, 6, and 8.	No construction necessary; plain and ordinary meaning applies.

SIGNED at Houston, Texas, on this 28th day of July, 2021.



SIM LAKE
SENIOR UNITED STATES DISTRICT JUDGE