IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PLASTIC OMNIUM ADVANCED INNOVATION AND RESEARCH,	:	
Plaintiff,	:	
v.	:	C.A. No. 16-187-LPS
DONGHEE AMERICA, INC. and DONGHEE ALABAMA, LLC,	:	
Defendants.	:	

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MEMORANDUM OPINION

November 6, 2017
Wilmington, Delaware

STARK, U.S. District Judge:

Plaintiff Plastic Omnium Advanced Innovation and Research ("Plastic Omnium" or "Plastic") brought this patent infringement suit against Defendants Donghee America, Inc. and Donghee Alabama, LLC (together, "Donghee"), alleging that Donghee's manufacture and sale of certain automotive fuel tanks infringes Plastic's U.S. Patent Nos. 6,814,921 (the "'921 patent"); 6,866,812 (the "'812 patent"); 7,166,253 (the "'253 patent"); 8,122,604 (the "'604 patent")[1]; 8,163,228 (the "'228 patent"); 9,079,490 (the "'490 patent"); 9,399,326 (the "'326 patent"); and 9,399,327 (the "'327 patent"). (*See generally* D.I. 1, 14) The asserted patents generally relate to methods for manufacturing automotive fuel tanks; they describe and claim processes "known in the industry as 'twin-sheet blow molding' or 'TSBM.'" (D.I. 14 at 3)

Presently before the Court is the issue of claim construction. The parties submitted technology tutorials (*see* D.I. 81, 86), and claim construction briefs (*see* D.I. 84, 85, 102, 105). The Court held a claim construction hearing on September 6, 2017, at which both sides presented oral argument. (*See* D.I. 184 ("Tr."))

I. LEGAL STANDARDS

The ultimate question of the proper construction of a patent is a question of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837 (2015) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388-91 (1996)). "It is a bedrock principle of patent law that the claims of a 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) (internal quotation marks omitted).

[1]Per the parties' recent stipulation (*see* D.I. 195), the '604 patent has been dismissed from this case.

"[T]here is no magic formula or catechism for conducting claim construction." *Id.* at 1324. Instead, the court is free to attach the appropriate weight to appropriate sources "in light of the statutes and policies that inform patent law." *Id.*

"[T]he words of a claim are generally given their ordinary and customary meaning . . . [which 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 1312-13 (internal citations and quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted). The patent specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

While "the claims themselves provide substantial guidance as to the meaning of particular claim terms," the context of the surrounding words of the claim also must be considered. *Phillips*, 415 F.3d at 1314. Furthermore, "[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent . . . ." *Id.* (internal citation omitted).

It is likewise true that "[d]ifferences among claims can also be a useful guide . . . . For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1314-15 (internal citation omitted). This "presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent

claim." *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).

It is also possible 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." *Phillips*, 415 F.3d at 1316. It bears emphasis that "[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)) (internal quotation marks omitted).

In addition to the specification, a court "should also consider the patent's prosecution history, if it is in evidence." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996). The prosecution history, which is "intrinsic evidence," "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." *Phillips*, 415 F.3d at 1317. "[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.*

In some cases, "the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva*, 135 S. Ct. at 841. Extrinsic evidence "consists of all evidence external to the patent and prosecution history,

including expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries "endeavor to collect the accepted meanings of terms used in various fields of science and technology." *Phillips*, 415 F.3d at 1318. In addition, expert testimony can be useful "to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Id.* Nonetheless, courts must not lose sight of the fact that "expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence." *Id.* Overall, while extrinsic evidence "may be useful" to the court, it is "less reliable" than intrinsic evidence, and its consideration "is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

Finally, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that "a claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram GmbH v. Int'l Trade Comm'n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (quoting *Modine Mfg. Co. v. U.S. Int'l Trade Comm'n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996)).

II. CONSTRUCTION OF DISPUTED TERMS

A. Parison Terms

(1) "extruded parison of closed cross section"[2]

(2) "extruding a [multilayered] parison"[3]

Plastic Omnium (1) "an extruded plastic body having a closed cross section" (2) "extruding a [multilayered] plastic body having a closed cross section"
Donghee (1) "a plastic tube with a closed cross section formed by forcing plastic through a die" (2) "forcing plastic through a die head to form a plastic tube [of multiple layers] with a closed cross section"
Court (1) "a tubular preform with a closed cross-section that has been forced through a die, and is cut or split as it exits the die or at some time thereafter" (2) "a [multilayered] tubular preform with a closed cross-section that has been forced through a die, and is cut or split as it exits the die or at some time thereafter"

There is no disagreement between the parties as to the "ordinary and customary" meaning of the term "parison." (*See, e.g.*, D.I. 85 at 5-6, D.I. 105 at 2) As Plastic states, the term refers to a "hollow plastic tube exiting the die of an extrusion head." (D.I. 105 at 2) Donghee, citing the two patents' disclosures, as well as technical encyclopedias and dictionaries, contends that this definition should play a prominent role here. (*See* D.I. 85 at 4-6) In Plastic's view, however, Donghee "conflat[es] the use of the term 'parison' in conventional blow molding with the use of the term 'parison' in Plastic Omnium's improved and novel . . . process." (D.I. 84 at 3) Plastic

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[2]This term appears in claims 1, 2-5, 8, and 9 of the '921 patent.

[3]This term appears in claims 16, 25, 27, 30-32, 39, 41, 44, and 45 of the '812 patent.

urges the Court to find that the "conventional definition of 'parison' does not apply to the asserted patents." (D.I. 105 at 2)

More specifically, Plastic argues that here the term "parison" should not be construed to require that "a traditional, plastic test-tube like structure . . . be formed outside of the extrusion head/die." (D.I. 84 at 3) Instead, according to Plastic, the relevant technology "uses a traditional extrusion head to form a parison that is split or cut into two sheets of plastic ***as it is being extruded***." (*Id.*) (emphasis added) Thus, the "extruded parison" here "refers to the preform shape that is intended to be ***split or cut*** into two sheets." (D.I. 105 at 5)

"To act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning." *Aventis Pharma S.A. v. Hospira, Inc.*, 675 F.3d 1324, 1330 (Fed. Cir. 2012) (internal quotation marks omitted). This "clear expression" may be "inferred from clear limiting descriptions of the invention in the specification or prosecution history." *Id.*; *see also Phillips*, 415 F.3d at 1313 ("Importantly, the 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.").

The Court agrees with Plastic that the '921 and '812 patents do not use the term "parison" is its conventional, plain and ordinary meaning. Instead, among other things, the patents specify that the "parison" is cut in two as it leaves the die at the end of the extrusion head. (*See, e.g.*, '921 patent at 3:24-27; '812 patent at 2:46-47) In this context, this "parison" cannot be strictly limited to a fully-formed tubular structure existing in its entirety outside the extrusion head/die.

Having concluded that the term "parison" as used in the asserted claims is not to be given

its plain and ordinary meaning, the principal disagreements between the parties seem to be identifying the point at which the molten plastic within the extrusion head becomes a "parison," and identifying the location of the die.

While the Court agrees with Plastic that "the claimed 'parison' may be split . . . at the exit of the extrusion head/die, . . . or . . . even after a plastic tube has exited the extrusion head/die" (D.I. 84 at 4; *see also* '921 patent at 3:24-27 (describing splitting of tubular structure right as it leaves extrusion head)), the Court finds no support for Plastic's additional contention that its claimed process includes the splitting of molten plastic "***within*** the extrusion head/die" (D.I. 84 at 4) (emphasis added). There is no disclosure in the patents' specifications that contemplates the splitting of the tubular preform at any stage earlier than right as the previously tubular structure leaves the die/extrusion head. Thus, the Court agrees with Donghee that the construction of the "extruded parison" terms should not include molten plastic (or a tubular preform) present inside the die/extrusion head. (*See generally* D.I. 85 at 5) ("Nowhere in the patents is an extruded parison described as the molten plastic inside of the machine.") The Court further agrees with Donghee that Plastic is incorrect in its contention that the die can be located anywhere. (*See generally* Tr. at 24; D.I. 105 at 3)[4]

Accordingly, the Court will construe the term "parison" as referring to a plastic tube with a closed cross section that is shaped by – and has reached the end of – a die, and is split either immediately upon exiting the die or at some point thereafter.

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[4]Both patents specify that the "die" is located at the "extrusion head['s]" "lowest point." ('921 patent at 3:4-5; *see also* '812 patent at 2:37-38 (referring to "extruder whose head is terminated by the die"); *see also* Tr. at 24-25 (identifying location of extrusion head or die as important dispute))

(3) "split or at least two part parison"[5]

Plastic Omnium Plain and ordinary meaning. If an express construction is deemed necessary: "a plastic body for blow-molding that is split or made into two parts"
Donghee "a plastic tube with a closed cross section formed by forcing plastic through a die, which is then cut"
Court "a tubular preform with a closed cross-section that has been forced through a die, and is cut or split as it exits the die or at some time thereafter"

The parties appear to agree that the Court's construction of this term follows from its construction of the first two "parison" terms. (*See, e.g.*, D.I. 84 at 6) ("The disputed term 'split or at least two part parison' raises similar issues as the 'parison' terms recited in the '921 and '812 patents.") As Donghee notes, "the '327 patent expressly incorporates, by reference, the European counterpart of the '812 patent . . . and the PCT parent of the '921 patent . . . in explaining how to make a split or at least two-part parison." (D.I. 85 at 6-7) The Court finds no basis on which to construe the term "split or at least two part parison" in a manner distinct from its preceding constructions above.

(4) "extruded tubular parison"[6]

Plastic Omnium "extruded tubular preform intended to form the wall of the fuel tank after molding"

[5]This term appears in claims 1, 7, 9, and 15 of the '327 patent.

[6]This term appears in claim 2 of the '228 patent.

Donghee "tubular preform intended to form the wall of the fuel tank after molding, formed by forcing plastic through a die"
Court "a tubular preform with a closed cross-section that has been forced through a die, and is cut or split as it exits the die or at some time thereafter"

Similarly here, there is no basis for the Court's construction of this term to differ from its construction of the "parison" terms construed above, and the parties' arguments with respect to this term refer back to their contentions regarding the earlier terms. (*See, e.g.*, D.I. 84 at 8) ("As before, the dispute between the parties is whether the term 'extruded tubular parison' should be . . . narrowed to require a plastic tube to exit an extrusion/die head before it is cut into two sheets.")

B. Molding Terms

(1) "during the operation of molding the shell" and "during molding"[7]

(2) "at the same time as said tank is manufactured by moulding with a mould"[8]

(3) "at the time of manufacture of the tank when moulding"[9]

Plastic Omnium Plain and ordinary meaning. If an express construction is deemed necessary: (1) "during the processing of forming the tank shell and before joining the shells" (2) & (3) "during the blow molding process"

[7]These terms appear in claims 5 and 9 of the '921 patent.

[8]This term appears in claims 1, 2, 7, 8, and 12-14 of the '490 patent.

[9]This term appears in claims 1 and 7 of the '327 patent.

Donghee (1) "while the sheet is being compression and/or blow molded to form the shell" (2) & (3) "while the plastic is being thermoformed or blow molded to form the tank"
Court (1) "during the process of forming the tank shell and before joining the shells, until the plastic is no longer molten and pliable" (2) & (3) "during the blow molding process, until the plastic is no longer molten and pliable"

Donghee characterizes the parties' dispute as "one of timing and ambiguity." (D.I. 85 at 9) Donghee contends that these terms are limited to the attachment of components during the period of time when the tank plastic "is actually being shaped" – that is, at some point before the plastic "has taken the shape of the mold." (*Id.* at 11-12) In support of its position, Donghee argues that "[t]he verb 'molding' (or 'moulding') has a well understood meaning – it refers to the act of shaping material." (*Id.* at 9)

Plastic responds that Donghee's proposals are "nonsensical" because they would require "accessory attachment to occur . . . simultaneously with the molten plastic being forced against the mold cavity to give the fuel-tank walls their shape." (D.I. 105 at 9) Plastic says this would be a "technical nightmare, if not an outright impossibility." (*Id.*) Plastic also refers to certain intrinsic evidence that it argues supports its view that the relevant period extends beyond the literal shaping process (*see id.* at 10-12); it contends that these "molding" terms contemplate the installation of accessories in a manner that utilizes the "flow" or "pliable" nature of molten plastic (*id.* at 10).

The Court is not persuaded that Donghee's narrow view is consistent with the ordinary and customary meaning of these terms as a skilled artisan would perceive them. The Court

agrees with Plastic that the relevant "process" lasts as long as "the plastic is still molten and pliable." (*Id.* at 14)

C. "preassembled structure"[10]

Plastic Omnium Plain and ordinary meaning. If an express construction is deemed necessary: "a premade structure"
Donghee "a set of multiple parts previously joined into a single arrangement that attaches to at least several accessories"
Court "a set of multiple parts previously joined into a single arrangement that is capable of attachment to at least one accessory"

Emphasizing claim language specifying that the relevant "accessor[ies]" are "supported by a preassembled structure" ('253 patent at claim 1), and noting that the word "preassembled" implies "a structure previously assembled from multiple parts" (D.I. 85 at 15), Donghee argues that "preassembled structures" are distinct structures that attach to accessories (and are not themselves accessories), and are not merely "premade" but, rather, comprise multiple parts that are joined at some earlier point in time. Plastic counters that "the specification requires only that the 'preassembled structure' be produced in a separate process from the blow-molded fuel tank – *i.e.*, it is a 'premade structure.'" (D.I. 105 at 15)

The Court agrees with Donghee that the term "preassembled structure" here refers to a structural feature comprising at least two parts, which is initially distinct from the accessory or accessories that it "supports" and can then be joined with the relevant accessor(ies). This is

[10]This term appears in claims 40 and 41 of the '812 patent as well as claims 1, 2, 3, 11, 12, and 14 of the '253 patent.

consistent with the patents' disclosure that the structure: is "preassembled" (which the Court does not understand to merely mean "premade," as Plastic suggests); it "support[s]" the "inserted accessory" or accessories ('253 patent at 4:12-16); it "comprises at least one device configured to anchor said preassembled structure to an internal wall" ('253 patent at claim 1); and that the "preassembled structure" can be inserted "independently of the . . . insertion of accessories . . . to the internal wall of the hollow body" ('253 patent at 4:23-26).

The Court finds insufficient support, however, for Donghee's assertion that any given "preassembled structure must attach to 'at least several accessories' for the invention to make sense" (D.I. 85 at 16), or that it must at least be capable of attaching to several accessories. Donghee's proposal would result, improperly, in importing a limitation from the specification. The claims may be satisfied so long as the "preassembled structure" is capable of attaching to at least one accessory.

D. "orifice"[11]

Plastic Omnium Plain and ordinary meaning. If an express construction is deemed necessary: "hole"
Donghee "a hole that passes through the accessory [or support for an accessory]"
Court "hole"

The parties' disagreement here is whether the term requires the claimed "orifice" to extend fully through the relevant accessory or only some portion of the accessory. Donghee,

[11]This term appears in claims 1, 13, 25-27, 33, 34, and 44 of the '326 patent.

pointing to the '326 patent's disclosure, argues that the invention is limited to "'a method for stake-fastening an accessory in a plastic fuel tank whereby the accessory is equipped with at least one ***orifice which passes right through the accessory***.'" (D.I. 85 at 17) (quoting '326 patent at 2:15-18) Donghee also points out that the claims explicitly require that the relevant accessory have a "wall portion," and an "orifice" which "passes through the wall portion of the accessory." (*E.g.*, '326 patent at claim 1)

Plastic responds that the plain and ordinary meaning of the term "orifice" is simply "hole," and further cites to the patent's disclosure, which indicates that the two words are synonymous. (*See* '326 patent at 3:34) Plastic also argues that Donghee's construction would be redundant, as the "claims themselves define the precise structural relationship of the 'orifice' or 'hole' with respect to the claimed wall portion of the accessory." (D.I. 84 at 20)

The Court agrees with Plastic. Although the patent refers to an "orifice" or "hole" that "passes right ***through*** [the accessory's] wall" ('326 patent at 3:34 (emphasis added); *see also, e.g.*, *id.* at claim 1) – rather than ***into*** the accessory wall – this disclosure is not sufficient to make Donghee's proposed construction correct. *See generally Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) (explaining that "standard for disavowal of claim scope is . . . exacting").

E. Shaping terms

(1) "shaping the protruding molten plastic"[12]

(2) "the protrusion having been shaped"[13]

Plastic Omnium These claim terms are definite. If an express construction is deemed necessary: (1) "shaping the top of the protruding molten plastic to provide a self-formed plastic rivet" (2) "the top of the protruding molten plastic having been shaped to overhang the at least one orifice"
Donghee Indefinite. If not: (1) "applying a counterform to deform the protruding molten plastic" (2) "the protrusion having been deformed by the application of a counterform"
Court (1) "shaping the protruding molten plastic to provide a self-formed plastic rivet" (2) "the protruding molten plastic having been shaped to overhang the at least one orifice"

As Donghee contends that these "shaping" terms are indefinite, it bears the burden of showing, by clear and convincing evidence, that this claim language, "viewed in light of the specification and prosecution history," fails to "inform those skilled in the art about the scope of the invention with reasonable certainty." *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d

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[12]This term appears in claims 1 and 13 of the '326 patent and claims 1, 7, 9, and 15 of the '327 patent.

[13]This term appears in claims 25-27, 33-34, and 44 of the '326 patent.

1374, 1378 (Fed. Cir. 2015) (quoting *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014)). In particular, Donghee asserts that the claims are "impermissibly ambiguous," and therefore invalid, because they are "internally inconsistent or nonsensical." (D.I. 85 at 18) Donghee points to the method claims' reference to a "self-formed plastic rivet." A rivet made by "deliberately shaping the plastic," Donghee says, "is, by definition, not self-formed." (*Id.* at 18 (emphasis omitted); *see also* '326 patent at claim 1) Similarly, Donghee suggests that the apparatus claims are ambiguous because they can be read to include both "active[]" shaping or "shap[ing] by the law of nature whereby molten plastic takes on some form." (D.I. 85 at 18; *see also, e.g.*, '326 patent at claim 25)

Donghee has failed to prove indefiniteness. Plastic explains that the method claims' reference to "self-formed" is to the rivet's formation from "some of the plastic of which the wall of the tank is made" (D.I. 105 at 18) (internal quotation marks omitted), rather than "a separate rivet inserted into or through the fuel-tank's wall" (*id.*).

Alternatively, Donghee seeks a construction that would limit the terms to active shaping through use of a counterform. Donghee argues this is necessary because (1) "passive shaping [is] not described in the patents," and (2) the relevant claims' "shaping" step is preceded by a "forcing" step, which results in the formation of "molten plastic protruding through the orifice of the accessory." (D.I. 102 at 9) (emphasis and internal quotation marks omitted) In Donghee's view, a "construction that encompasses passive shaping would render superfluous" the "shaping" step, because the "forcing" step already "requires plastic to flow through the orifice and form a protrusion on the opposite side." (*Id.*)

The Court is not persuaded. While it is clear that the "forcing" step would necessarily

produce "molten plastic protruding through the orifice" ('326 patent at claim 1), there is nothing to suggest that every type of "protru[sion]" will necessarily take on the shape of a rivet. The Court further agrees with Plastic that requiring the use of a counterform would, under the circumstances, improperly "limit[] the claims to a preferred embodiment." (D.I. 105 at 18)

Accordingly, the Court will adopt Plastic's proposed construction, except without including language requiring that the "shaping" occur at the "top" of the "protruding molten plastic," as such a restriction is not supported.

F. "stretched"[14]

Plastic Omnium Plain and ordinary meaning. If an express construction is deemed necessary, the term "bend which is stretched" means: "bend which is elongated relative to its relaxed state"
Donghee "extended in length by pulling"
Court "extended in length relative to a relaxed state"

The precise contours of the parties' disputes with respect to this term are not entirely clear. To the extent the parties disagree as to whether what is being "stretched" is only the "pipe," and not also the "bend" in the pipe, the Court agrees with Donghee that it is the pipe that is being stretched. (*See* '228 patent at 3:52-55) (explaining that claimed process uses "pipe" which features "bend," and that "bend" is "any deformation that allows ***the pipe*** to be lengthened when stretched") (emphasis added) To the extent the parties dispute whether the only manner by which stretching may be accomplished is by pulling, the Court agrees with Plastic that no such

[14]This term appears in claims 1-4 and 7-9 of the '228 patent.

limitation is warranted. To the extent the parties disagree as to what it means to be "extended," the Court again agrees with Plastic that "extended" requires a length greater than when the pipe is in its relaxed (unstreteched) state.

III. CONCLUSION

The Court construes the disputed terms as explained above. An appropriate Order follows.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PLASTIC OMNIUM ADVANCED INNOVATION AND RESEARCH,	:	
Plaintiff,	:	
v.	:	C.A. No. 16-187-LPS
DONGHEE AMERICA, INC. and DONGHEE ALABAMA, LLC,	:	
Defendants.	:	

ORDER

At Wilmington, this **6th** day of **November, 2017**:

For the reasons set forth in the Memorandum Opinion issued this date,

IT IS HEREBY ORDERED that the disputed claim terms in this case (*see* D.I. 83-1) are construed as follows:

Claim Term	**Court's Construction**
Parison Terms (1) **"extruded parison of closed cross section"** ('921 patent, claims 1, 2-5, 8, and 9)	(1) "a tubular preform with a closed cross-section that has been forced through a die, and is cut or split as it exits the die or at some time thereafter"
(2) **"extruding a [multilayered] parison"** ('812 patent, claims 16, 25, 27, 30-32, 39, 41, 44, and 45)	(2) "a [multilayered] tubular preform with a closed cross-section that has been forced through a die, and is cut or split as it exits the die or at some time thereafter"
(3) **"split or at least two part parison"** ('327 patent, claims 1, 7, 9, and 15)	(3) "a tubular preform with a closed cross-section that has been forced through a die, and is cut or split as it exits the die or at some time thereafter"
(4) **"extruded tubular parison"** ('228 patent, claim 2)	(4) "a tubular preform with a closed cross-section that has been forced through a die, and is cut or split as it exits the die or at some time thereafter"

Molding Terms (1) **"during the operation of molding the shell"** and **"during molding"** ('921 patent, claims 5 and 9) (2) **"at the same time as said tank is manufactured by moulding with a mould"** ('490 patent, claims 1, 2, 7, 8, and 12-14) (3) **"at the time of manufacture of the tank when moulding"** ('327 patent, claims 1 and 7)	(1) "during the process of forming the tank shell and before joining the shells, until the plastic is no longer molten and pliable" (2) & (3) "during the blow molding process, until the plastic is no longer molten and pliable"
"preassembled structure" ('812 patent, claims 40, 41; '253 patent, claims 1, 2, 3, 11, 12, and 14)	"a set of multiple parts previously joined into a single arrangement that is capable of attachment to at least one accessory"
"orifice" ('326 patent, claims 1, 13, 25-27, 33-34, and 44)	"hole"
Shaping Terms (1) **"shaping the protruding molten plastic"** ('326 patent, claims 1 and 13; '327 patent, claims 1, 7, 9, and 15) (2) **"the protrusion having been shaped"** ('326 patent, claims 25- 27, 33-34, and 44)	(1) "shaping the protruding molten plastic to provide a self-formed plastic rivet" (2) "the protruding molten plastic having been shaped to overhang the at least one orifice"
"stretched" ('228 patent, claims 1-4 and 7-9)	"extended in length relative to a relaxed state"

HONORABLE LEONARD P. STARK
UNITED STATES DISTRICT JUDGE