IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AMERICAN AXLE & MANUFACTURING, INC.,	:	
Plaintiff,	:	
v.	:	C.A. No. 15-1168-LPS
NEAPCO HOLDINGS LLC and NEAPCO DRIVELINES LLC,	:	
Defendants.	:	

John W. Shaw, Jeffrey T. Castellano, and Andrew E. Russell, SHAW KELLER LLP, Wilmington, DE

James R. Nuttall, Katherine H. Johnson, Randal S. Alexander, Robert F. Kappers, and John L. Abramic, STEPTOE & JOHNSON LLP, Chicago, IL

Boyd Cloern, STEPTOE & JOHNSON LLP, Washington, DC

Attorneys for Plaintiff.

Melanie K. Sharp and Robert M. Vrana, YOUNG CONAWAY STARGATT & TAYLOR, LLP, Wilmington, DE

J. Michael Huget and Brian J. Arnold, HONIGMAN MILLER SCHWARTZ AND COHN LLP, Chicago, IL

Sarah E. Waidelich, HONIGMAN MILLER SCHWARTZ AND COHN LLP, Ann Arbor, MI

Attorneys for Defendants.

MEMORANDUM OPINION

February 27, 2018
Wilmington, Delaware

STARK, U.S. District Judge:

Pending before the Court in this patent infringement action are the following motions:

(i) Plaintiff American Axle & Manufacturing, Inc.'s ("AAM" or "Plaintiff") Motion for Summary Judgment of Infringement (D.I. 155; *see also* D.I. 206);

(ii) AAM's Motion for Summary Judgment of No Invalidity Pursuant to 35 U.S.C. §§ 101 and 102 (as to the Laskey Reference) (D.I. 159; *see also* D.I. 206);

(iii) AAM's Motion to Exclude Portions of the Testimony of Neapco's Technical Expert, Steven Becker, and Neapco's Damages Expert, Michael Chase (D.1. 157; *see also* D.I. 206);

(iv) Defendants Neapco Holdings LLC and Neapco Drivelines LLC's (collectively, "Neapco" or "Defendants") Motion for Summary Judgment of Invalidity and/or Non-Infringement (D.I. 149);

(v) Neapco's Supplemental Motion for Summary Judgment of Invalidity and/or Non-Infringement as to the New Claims (D.I. 207); and

(vi) Neapco's Motion to Preclude Certain Expert Testimony and Evidence (D.I. 208).

I. BACKGROUND

AAM filed suit against Neapco on December 18, 2015, alleging infringement of U.S. Patent Nos. 7,774,911 (the "'911 patent"), 8,176,613 (the "'613 patent"), and 8,528,180 (the "'180 patent"). (*See* D.I. 1) The pending motions are principally (if not entirely) addressed to the '911 patent.

The '911 patent "generally relates to shaft assemblies for transmitting rotary power in a driveline and more particularly to a method for attenuating driveline vibrations transmitted

through a shaft assembly." ('911 patent col. 1:4-7) The reason for attenuating such vibrations is to reduce the tonal noise that can be heard by occupants in the vehicle as a result of the vibrations. (*See id.* col. 1:8-23) "Modern automotive propshafts are commonly formed of relatively thin-walled steel or aluminum tubing and as such, can be receptive to various driveline excitation sources," which "can typically cause the propshaft to vibrate in a bending (lateral) mode, a torsion mode and a shell mode." (*Id.* col. 1:39-44) Several techniques existed in the prior art "to attenuate vibrations in propshafts including the use of weights and liners." (*Id.* col. 1:53-54) However, many of the prior art liners only attenuate shell mode vibrations and not also bending or torsion mode vibrations. (*See id.* col. 2:34-38) The '911 patent purports to provide "an improved method for damping various types of vibrations in a hollow shaft," which facilitates the damping of shell mode vibration as well as bending mode vibration and/or torsion mode vibration. (*Id.* col. 2:40-43)

On April 7, 2017, the Court issued its Claim Construction Opinion (D.I. 113), which found certain claims of the '911 patent indefinite.

On August 11, 2017, the parties filed motions with respect to the claims that remained asserted after the Court's Claim Construction Opinion. In particular, the motions were directed to '911 patent claims 22-24, 26, 27, 31, and 34-36 (the "Original Claims"). (D.I. 149, 155, 157, 159) The parties completed briefing on their initial motions on September 15, 2017.

In the meantime, on September 6, 2017, the Court granted AAM's motion for reconsideration of the Claim Construction Opinion, finding that new evidence demonstrated that Defendants had failed to prove that any of the claims of the '911 patent were indefinite. (D.I. 180) The Court then ordered the parties to submit supplemental briefing to address how the

pending motions might apply to the claims that had been initially invalidated as indefinite, but were now newly-revived in the case. In particular, the supplemental briefing relates to claims 1-6, 12, 13, and 19-21 of the '911 patent (the "New Claims," and collectively with the Original Claims, the "Asserted Claims"). (D.I. 188) The parties submitted supplemental briefs and motions on December 1, 2017 and responsive briefs on December 18, 2017.

Collectively, the parties filed a total of 287 pages of briefing in relation to their many motions. The Court heard oral argument on January 18, 2018. (D.I. 217 "("Tr.")")

Independent claim 22 is representative of the Original Claims and reads:

> A method for manufacturing a shaft assembly of a driveline system, the driveline system further including a first driveline component and a second driveline component, the shaft assembly being adapted to transmit torque between the first driveline component and the second driveline component, the method comprising:
>
> providing a hollow shaft member;
>
> tuning a mass and a stiffness of at least one liner; and
>
> inserting the at least one liner into the shaft member;
>
> wherein the at least one liner is a tuned resistive absorber for attenuating shell mode vibrations and wherein the at least one liner is a tuned reactive absorber for attenuating bending mode vibrations.

Independent claim 1 is representative of the New Claims and reads:

> A method for manufacturing a shaft assembly of a driveline system, the driveline system further including a first driveline component and a second driveline component, the shaft assembly being adapted to transmit torque between the first driveline component and the second driveline component, the method comprising:

providing a hollow shaft member;

tuning at least one liner to attenuate at least two types of vibration transmitted through the shaft member; and

positioning the at least one liner within the shaft member such that the at least one liner is configured to damp shell mode vibrations in the shaft member by an amount that is greater than or equal to about 2%, and the at least one liner is also configured to damp bending mode vibrations in the shaft member, the at least one liner being tuned to within about ±20% of a bending mode natural frequency of the shaft assembly as installed in the driveline system.

II. LEGAL STANDARDS

Under Rule 56(a) of the Federal Rules of Civil Procedure, "[t]he court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." The moving party bears the burden of demonstrating the absence of a genuine issue of material fact. *See Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 585-86 (1986). An assertion that a fact cannot be – or, alternatively, is – genuinely disputed must be supported either by "citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations (including those made for purposes of the motion only), admissions, interrogatory answers, or other materials," or by "showing that the materials cited do not establish the absence or presence of a genuine dispute, or that an adverse party cannot produce admissible evidence to support the fact." Fed. R. Civ. P. 56(c)(1)(A) & (B). If the moving party has carried its burden, the nonmovant must then "come forward with specific facts showing that there is a genuine issue for trial." *Matsushita*, 475 U.S. at 587 (internal quotation marks omitted). The Court will "draw all reasonable inferences in favor of the nonmoving party,

and it may not make credibility determinations or weigh the evidence." *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000).

To defeat a motion for summary judgment, the nonmoving party must "do more than simply show that there is some metaphysical doubt as to the material facts." *Matsushita*, 475 U.S. at 586; *see also Podobnik v. U.S. Postal Serv.*, 409 F.3d 584, 594 (3d Cir. 2005) (stating party opposing summary judgment "must present more than just bare assertions, conclusory allegations or suspicions to show the existence of a genuine issue") (internal quotation marks omitted). The "mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment;" a factual dispute is genuine only where "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). "If the evidence is merely colorable, or is not significantly probative, summary judgment may be granted." *Id.* at 249-50 (internal citations omitted); *see also Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986) (stating entry of summary judgment is mandated "against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial"). Thus, the "mere existence of a scintilla of evidence" in support of the nonmoving party's position is insufficient to defeat a motion for summary judgment; there must be "evidence on which the jury could reasonably find" for the nonmoving party. *Anderson*, 477 U.S. at 252.

III. DISCUSSION

As explained below, the Court has determined that the Asserted Claims are not directed to patentable subject matter. Therefore, the Court will rule only on the motions implicating 35

U.S.C. § 101. The Court will deny as moot all other motions that address only the '911 patent – the motions relating to infringement and invalidity of the Asserted Claims of the '911 patent – and will defer ruling on the remaining motions until after conferring with the parties on how the case should now proceed.[1]

A. Section 101: Applicable Law

The parties have filed cross-motions for summary judgment on the issue of patent eligibility under 35 U.S.C. § 101. (*See* D.I. 149, 159) The Court will address both motions together.

Under 35 U.S.C. § 101, "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." There are three exceptions to § 101's broad patent-eligibility principles: "laws of nature, physical phenomena, and abstract ideas." *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). "Whether a claim recites patent eligible subject matter is a question of law which may contain disputes over underlying facts." *Berkheimer v. HP Inc.*, ___ F.3d ___, 2018 WL 774096, at *6 (Fed. Cir. Feb. 8, 2018).

In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012), the Supreme Court set out a two-step "framework for distinguishing patents that claim

[1]At the hearing, Neapco advised the Court they did not think the Court would need to resolve infringement issues if it determined the patent is not eligible for patentability. (*See* Tr. at 54) While AAM stated it preferred the Court to rule on all the issues before it, AAM recognized that the Court could exercise its discretion on this matter. (*See id.* at 74) It appears that the only motion that may arguably remain ripe is AAM's motion to preclude Neapco's damages expert, Mr. Chase. (D.I. 157)

laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). First, courts must determine if the claims at issue are directed to a patent-ineligible concept ("step one"). *See id.* If so, the next step is to look for an "'inventive concept' – *i.e.*, an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself" ("step two"). *Id.* The two steps are "plainly related" and "involve overlapping scrutiny of the content of the claims." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016).

At step one, "the claims are considered in their entirety to ascertain whether their character ***as a whole*** is directed to excluded subject matter." *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015) (emphasis added); *see also Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (stating first step "calls upon us to look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter").

Courts should not "oversimplif[y]" key inventive concepts or "downplay" an invention's benefits in conducting a step one analysis. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337-38 (Fed. Cir. 2016); *see also McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. Sept. 13, 2016) ("[C]ourts 'must be careful to avoid oversimplifying the claims' by looking at them generally and failing to account for the specific requirements of the claims.") (quoting *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016)). "Whether at step one or step two of the *Alice* test, in determining the patentability of a method, a court must look to the claims as an ordered combination, without ignoring the requirements of the individual

steps." *McRO*, 837 F.3d at 1313.

At step two, courts must "look to both the claim as a whole and the individual claim elements to determine whether the claims contain an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Id.* at 1312 (internal brackets and quotation marks omitted). The "standard" step two inquiry includes consideration of whether claim elements "simply recite 'well-understood, routine, conventional activit[ies].'" *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (quoting *Alice*, 134 S. Ct. at 2359). "Simply appending conventional steps, specified at a high level of generality, [is] not ***enough*** to supply an inventive concept." *Alice*, 134 S. Ct. at 2357 (internal quotation marks omitted) (emphasis in original).

However, "[t]he inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art." *Bascom*, 827 F.3d at 1350. In *Bascom*, the Federal Circuit held that "the limitations of the claims, taken individually, recite generic computer, network and Internet components, none of which is inventive by itself," but nonetheless determined that an ***ordered combination*** of these limitations was patent-eligible under step two. *Id.* at 1349. The Federal Circuit has looked to the claims as well as the specification in performing the "inventive concept" inquiry. *See Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) ("[N]either the claim nor the specification reveals any concrete way of employing a customized user interface.").

The Federal Circuit recently elaborated on the step two standard, stating that "[t]he question of whether a claim element or combination of elements is well-understood, routine and

conventional to a skilled artisan in the relevant field is a question of fact. Any fact, such as this one, that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence." *Berkheimer*, 2018 WL 774096, at *5; *see also Aatrix Software, Inc. v. Green Shades Software, Inc.*, ___ F.3d ___, 2018 WL 843288, at *5 (Fed. Cir. Feb. 14, 2018) ("While the ultimate determination of eligibility under § 101 is a question of law, like many legal questions, there can be subsidiary fact questions which must be resolved en route to the ultimate legal determination."); *Automated Tracking Sols., LLC v. Coca-Cola Co.*, ___ Fed. Appx. ___, 2018 WL 935455, at *5 (Fed. Cir. Feb. 16, 2018) ("We have held that 'whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.'") (quoting *Berkheimer*, 2018 WL 774096, at *5). "Whether a particular technology is well-understood, routine, and conventional goes beyond what was simply known in the prior art. The mere fact that something is disclosed in a piece of prior art, for example, does not mean it was well-understood, routine, and conventional." *Berkheimer*, 2018 WL 774096, at *6. "When there is no genuine issue of material fact regarding whether the claim element or claimed combination is well-understood, routine, [and] conventional to a skilled artisan in the relevant field, this issue can be decided on summary judgment as a matter of law." *Id.*

B. Step One

With respect to step one, the issue presented is whether the Asserted Claims as a whole are directed to laws of nature: Hooke's law and friction damping. AAM does not dispute that Hooke's law is the linear relationship between force F and displacement x of a spring with stiffness k, specifically $F=kx$. (*See* D.I. 160 at 6; D.I. 160-4 at ¶ 389) AAM also does not dispute

that the frequency is affected by a change in mass *m* or stiffness *k*. (*See* D.I. 150 at 29-30; D.I. 151 at 496 (inventor Sun testifying frequency is changed by adjusting mass and stiffness); D.I. 153 at 142 (AAM executive director testifying, "the natural frequency is strictly a function of stiffness and mass"); D.I. 160 at 6) Furthermore, AAM's expert stated that friction damping, or the reduction in friction, "is a property of physics experienced by any two surfaces in contact." (D.I. 172 at 6 (quoting D.I. 160-4 at ¶ 396); *see also* D.I. 150 at 30-31)

Neapco argues, "[t]he Asserted Claims do nothing more than use a prior art liner design (*e.g.*, cardboard having, for certain embodiments, elastomer winding) and apply (or just characterize) the physics behind 'tuning' and vibration attenuation or damping." (D.I. 150 at 28) Therefore, Neapco asserts, in order to "tune" the liner, one merely applies Hooke's law and then measures the amount of damping. (*See* D.I. 150 at 29; Tr. at 53)

The Court agrees with Neapco. There is no dispute that adjusting the mass and stiffness of the liner will change the amount of damping of a certain frequency. The claimed methods are applications of Hooke's law with the result of friction damping. (*See, e.g.*, D.I. 151 at 496 (inventor Sun testifying that "tuning" is "basic physics"))

AAM's arguments to the contrary are unavailing. AAM contends that the Asserted Claims are patent-eligible because they are directed to industrial processes for manufacturing very large automotive components, rather than any law of nature or natural phenomenon. (*See* D.I. 160 at 5; Tr. at 21 (arguing "[m]ethod of manufacturing a prop shaft is not some law of nature")) But the Asserted Claims do not disclose a method of manufacturing a propshaft; instead, considered as a whole, they are directed to the mere application of Hooke's law, and they fail to instruct ***how*** to design the tuned liners or manufacture the driveline system to attenuate

vibrations. *See Elec. Power*, 830 F.3d at 1355-56 (discussed further in step two). AAM's other argument – that the tuned liners in the propshaft make up a complex system with multiple degrees of freedom, so Hooke's law, which relates to "a very simple spring and mass," does not apply (*see* D.I. 160 at 6; Tr. at 22) – also fails. There is no genuine dispute of material fact that a liner with multiple degrees of freedom may be broken down mathematically into multiple, single degrees of freedom, and Hooke's law can then be applied to each individually. (*See, e.g.*, D.I. 151 at 512 (inventor Sun testifying, "a tunable liner theoretically or mathematically can be simplified as just single degree[s] of freedom[] of mass spring systems," and if one breaks down each of the modes, "they're all a combination of [] single degree[s] of freedom[]"); D.I. 173-1 at 45 (Neapco's expert explaining if one has a multi-degree of freedom system, then "you're going to be applying Hooke's Law in a couple of axes"))

Looking at the "focus" of the claims and their "character as a whole," *Elec. Power*, 830 F.3d at 1353, Neapco has met its burden at step one.

C. Step Two

A claimed method "is not unpatentable simply because it contains a law of nature or a mathematical algorithm." *Diamond v. Diehr*, 450 U.S. 175, 187 (1981) (internal quotation marks omitted). In fact, it is "commonplace that an ***application*** of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." *Id.* In the present case, then, it is necessary to proceed to step two, and consider "what the claim elements add," and specifically whether they identify an "inventive concept." *Elec. Power*, 830 F.3d at 1353.

In *Mayo*, 556 U.S. at 72, the claims covered "processes that help doctors who use

thiopurine drugs to treat patients with autoimmune diseases determine whether a given dosage level is too low or too high" by "describing the relationships between the concentration in the blood of certain thiopurine metabolites and the likelihood that the drug dosage will be ineffective or induce harmful side-effects." The Supreme Court held that the claims there were not patent-eligible because they "inform a relevant audience about certain laws of nature; any additional steps consist of well-understood, routine, conventional activity already engaged in by the scientific community; and those steps, when viewed as a whole, add nothing significant beyond the sum of their parts taken separately." *Id.* at 79-80.

As in *Mayo*, the question before the Court is whether the process claimed in the '911 patent "has additional features that provide practical assurance that the process is more than a drafting effort designed to monopolize the law of nature itself." *Id.* at 77. Patentees should not obtain claims that "simply recite a law of nature and then add the instruction 'apply the law.'" *Id.* at 77-78.

Since claims must be considered as a whole, it is important to consider the "ordered combination" of the method's steps, *id.* at 79, because "a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made," *Diehr*, 450 U.S. at 188. For example, in *Diehr*, even though the "process used a known mathematical equation," the Supreme Court "found the overall process patent eligible because of the way the additional steps of the process integrated the equation into the process as a whole." *Mayo*, 566 U.S. at 80. The combination of steps was not "obvious, already in use, or purely conventional." *Id.* at 81; *see also Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050-51 (Fed. Cir. 2016) (finding that new and improved

claimed method of freezing and thawing hepatocytes twice, as result of discovered phenomenon that hepatocytes can survive multiple freeze-thaw cycles, was patent-eligible because, even though the individual steps were known in the art, repetition of the process was previously taught away from).

However, adding instructions to the claimed method that "add nothing specific to the laws of nature other than what is well-understood, routine, conventional activity, previously engaged in by those in the field," is insufficient to constitute an inventive concept. *Mayo*, 566 U.S. at 82. For example, in *Parker v. Flook*, 437 U.S. 584, 585-86 (1978), the claim was not patent-eligible because it simply applied a novel mathematical algorithm to the otherwise well-known steps of a method in a particular technological environment. *See also Mayo*, 566 U.S. at 81-82 (discussing *Flook*). Thus, "[t]he process itself, not merely the mathematical algorithm, must be new and useful." *Flook*, 437 U.S. at 591; *see also Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1377 (Fed. Cir. 2015) ("For process claims that encompass natural phenomenon, the process steps are the additional features that must be new and useful."). "[A]ppending routine, conventional steps to a natural phenomenon, specified at a high level of generality, is not enough to supply an inventive concept." *Ariosa*, 788 F.3d at 1378.

Here, as the '911 patent itself explains, the method of manufacturing a shaft assembly of a driveline system by inserting a liner into the propshaft was well-known in the prior art.[2] (*See,*

[2]Since the hearing on these motions, the Federal Circuit has expressly observed that the patent eligibility inquiry, which is a question of law, may involve issues of fact. *See Berkheimer*, 2018 WL 774096, at *6. But here the record reveals no genuine disputes of material fact. The parties here do not dispute that the non-tuning claim limitations are well-understood, routine, and conventional. Nor is there any genuine dispute of material fact that the tuning limitations are non-inventive applications of Hooke's law. Thus, "this issue can be decided on summary judgment as a matter of law." *Id.*

e.g., '911 patent col. 2:23-34) What AAM claims is new – for example, in independent claim 22 – are two claim elements. First is the claim limitation "tuning a mass and a stiffness of at least one liner," which the Court has construed as "controlling a mass and stiffness of at least one liner to configure the liner to match a relevant frequency or frequencies." (D.I. 113 at 6) But this claim limitation is just the application of Hooke's law.[3] AAM argues that this element makes the claim inventive because "[p]rior to this invention, people used untuned liners and just put them in the prop shaft in hopes of getting some general damping," whereas the claimed method requires one "to actually target certain frequencies and modes." (Tr. at 23) One's intentional act of controlling the characteristics of a liner is not inventive, because, as Neapco explained at oral argument, controlling the characteristics of a liner "is just an inherent part of any design process." (Tr. at 33) Since Hooke's law governs the relationship between mass, stiffness, and frequency, the "tuning" claim limitation does nothing more than suggest that a noise, vibration, and harshness ("NVH") engineer (D.I. 156 at 5) consider that law of nature when designing propshaft liners to attenuate driveline vibrations.

AAM argues that a second inventive concept is that the Asserted Claims cover a dual-tuned liner to absorb vibrations in both bending and shell modes (*see* Tr. at 22-24), as reflected in the claim limitation "wherein the at least one liner is a tuned resistive absorber for attenuating shell mode vibrations and wherein the at least one liner is a tuned reactive absorber for attenuating bending mode vibrations." In the Court's view, this claim limitation is, instead, the

---

[3]The same result applies to claim 1, which has as a claim limitation "tuning at least one liner to attenuate at least two types of vibration transmitted through the shaft member," which the Court construed as "controlling characteristics of at least one liner to configure the liner to match a relevant frequency or frequencies to reduce at least two types of vibration transmitted through the shaft member." (D.I. 113 at 5)

result that is achieved from performing the method rather than an active step in the method.

In sum, as in *Mayo*, 566 U.S. at 79-80, the Asserted Claims "inform a relevant audience [NVH engineers] about certain laws of nature [Hooke's law and friction damping]; any additional steps consist of well-understood, routine, conventional activity already engaged in by the scientific community [inserting liners with certain characteristics into propshafts to attenuate driveline vibrations]; and those steps, when viewed as a whole, add nothing significant beyond the sum of their parts taken separately [having the same, but potentially slightly improved, effect of attenuating certain frequencies and modes of driveline vibrations]." Hence, as in *Mayo*, the Asserted Claims here are not patent-eligible.

The Court further agrees with Neapco that another obstacle to the Asserted Claims being patent-eligible is that they "are not directed to any specific, discrete liner design but rather a solution to the problem of attenuating shell and bending mode vibrations generally by applying physics." (D.I. 172 at 9) *Electric Power Group*, 830 F.3d at 1530, provides support for this conclusion. That case involved patents that "describe and claim systems and methods for performing real-time performance monitoring of an electric power grid by collecting data from multiple data sources, analyzing the data, and displaying the results." *Id.* at 1351. The Court searched for an inventive concept in "***how*** the desired result is achieved," and found that the claims did not include any requirement for performing the claimed functions with anything other than "off-the-shelf, conventional . . . technology." *Id.* at 1355. Then, pointing to "an important common-sense distinction . . . between desired results (functions) and particular ways of achieving (performing) them," the Court explained, "there is a critical difference between patenting a particular concrete solution to a problem and attempting to patent the abstract idea of

a solution to the problem in general." *Id.* at 1356 (internal quotation marks omitted). "[C]laims, defining a desirable [] result and not limited to inventive means of achieving the result, fail under § 101." *Id.* at 1351; *see also McRO*, 837 F.3d at 1314 ("A patent may issue for the means or method of producing a certain result, or effect, and not for the result or effect produced.") (internal quotation marks omitted).

Here, the Asserted Claims simply instruct one to apply Hooke's law to achieve the desired result of attenuating certain vibration modes and frequencies. They provide no particular means of how to craft the liner and propshaft in order to do so. Thus, like the claims in *Electric Power Group*, the claims here are invalid under § 101.

D. Preemption

AAM further argues that "the Asserted Claims provide no risk of preempting Hooke's law in its entirety." (D.I. 160 at 7) However, "[w]here a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot." *Ariosa*, 788 F.3d at 1379.

E. Machine or Transformation Test

AAM also argues that the Asserted Claims are patent-eligible under the machine-or-transformation test. (*See* D.I. 160 at 9-10) This test provides that a process claim is patent-eligible if "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." *Bilski v. Kappos*, 561 U.S. 593, 600 (2010). To satisfy the test, the use of a machine "must impose meaningful limits on the claim's scope." *In re Bilski*, 545 F.3d 943, 961 (Fed. Cir. 2008). "In other words, the machine must play a significant part in permitting the claimed method to be performed." *CyberSource Corp. v. Retail Decision, Inc.*,

654 F.3d 1366, 1375 (Fed. Cir. 2011) (internal quotation marks omitted).

Here, because the Asserted Claims are nothing more than applying a law of nature to a conventional method to achieve an abstract solution to a problem, the Asserted Claims fail to provide any meaningful limits on the scope of the claim. The machine or transformation test does not help AAM.

IV. CONCLUSION

The Asserted Claims of the '911 patent are invalid under § 101, as they are directed to nonpatentable subject matter. Thus, the Court will grant Neapco's motion for summary judgment with respect to § 101 and will deny AAM's cross-motion on the same issue. The other motions – with the exception of AAM's motion directed to striking testimony from Neapco's damages expert – will be denied as moot. An appropriate Order follows.