

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF KENTUCKY
PADUCAH DIVISION
CASE NO. 5:10-CV-00046-R**

MICHAEL BRILEY

PLAINTIFF

v.

U.S. UNITED BARGE LINE, LLC

**DEFENDANT/
THIRD-PARTY PLAINTIFF**

v.

**DIXIE INDUSTRIES, a division of
COLUMBUS MCKINNON CORP.**

THIRD-PARTY DEFENDANT

MEMORANDUM AND ORDER

In advance of the final pretrial conference, the parties for this matter have filed four motions for the Court's consideration. Plaintiff Michael Briley ("Briley") moves for partial summary judgment on his claim of unseaworthiness under admiralty law (DN 103). Defendant U.S. United Barge Line, LLC ("UBL") moves for partial summary judgment on Briley's claim of retaliatory discharge, also under admiralty law (DN 108). Third-Party Defendant Dixie Industries, a division Columbus McKinnon Corporation ("Dixie"), moves to exclude testimony from UBL's expert, Dr. John E. Slater (DN 110). Dixie also moves for summary judgment on the design defect and manufacturing defect claims UBL alleges against it (DN 109). The motions are fully briefed (DN 112; DN 113; DN 117; DN 118; DN 119; DN 120; DN 121; DN 122; DN 123; DN 124) and now ripe for adjudication. Below, the Court issues its rulings.

BACKGROUND

The facts surrounding this matter are largely undisputed. Between 2005 and December 2009, Briley worked as a member of the crew aboard the M/V CAROL McMANUS

("MCMANUS"), a tugboat owned and operated by UBL. UBL is a barge company that hauls freight along the Mississippi and Ohio Rivers. At the time of this accident, Briley was the first mate aboard the vessel.

Individual barges are interconnected to one another and to the tugboat hauling them with a system of wire ropes (a group of barges controlled by a single tugboat is called its "tow"). The wire ropes are coupled to the individual barges along a series of ratchets affixed to the barges. Atop the ratchets are pelican hooks where the wire ropes are fastened (wires and ratchets are referred to as a barge's "rigging"). When barges are dropped from tow, the wiring must be removed by a tugboat's crew members. Briley and other crew members are tasked with removing the rigging when barges are dropped off at their destination.

The size of the barges and the weight of their cargo create great strain on a tow's rigging. The seamen who offered depositions in this matter said it is not uncommon for the wire ropes to break as a result of the extreme tension that builds as the barges in a tugboat's tow drift away from one another. The same seamen uniformly agreed that when undue pressure is placed on the tow's rigging, the wire ropes snap before the stress affects the ratchet and the pelican hooks to which they are attached. *See* Briley Depo, DN 112-2 p. 39; Picou Depo., DN 112-3 p. 12; More Depo., DN 112-5 p. 27; Wampler Depo., DN 112-6 p. 14; Simoneaux Depo., DN 112-4 p. 9. None of the seamen who gave testimony have ever seen a ratchet or pelican hook break as a result of increased strain from the rigging. Briley Depo, DN 112-2 p. 39; Picou Depo., DN 112-3 p. 12; More Depo., DN 112-5 p. 27; Wampler Depo., DN 112-6 p. 14; Simoneaux Depo., DN 112-4 p. 9.

In the early hours of December 21, 2009, the MCMANUS was depositing three barges

into the Upper St. Rose Fleet, north of New Orleans on the Mississippi River. Two other harbor tugboats, the M/V ANGELA (“ANGELA”) and the M/V ROBERT (“ROBERT”), were located near the MCMANUS to assist in the delivery. Briley and another crew member were charged with removing the wire ropes between the barges in preparation for their arrival. On the barge furthest astern, the men encountered difficulty removing the rigging between the final two barges. Briley claims the tension on the wire rope was too great to detach it from the ratchet’s pelican hook. At some point during his attempt to loosen the wire, Briley radioed the crews of the ANGELA and ROBERT and asked them to reposition the barges, which would slacken the wire and facilitate its unfastening. The captain of the ANGELA indicated after the fact that he was unable to move his ship in time to assist. Picou Depo., DN 112-3 p. 10. The ROBERT’s captain testified his vessel was not near the MCMANUS or its tow when the request went out. Moments after the radio transmission, the ratchet on the barge failed and either it, or the wire rope recoiling from the release of tension, struck Briley’s leg and fractured it.

A subsequent investigation of the accident revealed that the pelican hook attached to the ratchet failed under the weight of the MCMANUS’s tow. While there was some sheering on the hook from prior use, the parties concede that the equipment appeared to be in good condition before the incident. No obvious defects have been subsequently located either on or within the ratchet and pelican hook.

Briley pursues this action against UBL, alleging negligence under the Jones Act and claims of unseaworthiness, retaliatory discharge, maintenance, cure, and wages under general maritime law. Several months after the action’s initiation, UBL filed a third-party complaint against Dixie, the manufacturer of the ratchet and pelican hook. UBL argues Dixie is

responsible for indemnity and contribution because the ratchet and pelican hook were defectively designed and/or manufactured.

PENDING MOTIONS

I. Briley's Motion for Summary Judgment

Briley moves for summary judgment on his claim of unseaworthiness. He alleges the parties are in agreement on a number of pivotal facts: (1) the ratchet and pelican hook were being used for their ordinary and approved purposes when the accident occurred, (2) the pelican hook broke during that ordinary use, indicating it was defective equipment under the law of unseaworthiness, and (3) the failure of the pelican hook proximately caused his injury. As the doctrine of unseaworthiness is akin to strict liability, Briley proclaims judgement as a matter of law should follow from these concessions.¹

A. Standard for Summary Judgment

Summary judgment is appropriate where “the pleadings, the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(c). In determining whether summary judgment is appropriate, a court must resolve all ambiguities and draw all reasonable inferences against the moving party. *See Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986).

“[N]ot every issue of fact or conflicting inference presents a genuine issue of material fact.” *Street v. J. C. Bradford & Co.*, 886 F.2d 1472, 1477 (6th Cir. 1989). The test is whether

¹ The Court previously considered a motion for summary judgment by Briley on his claim of unseaworthiness and found it to be premature. Memorandum Opinion & Order, DN 82.

the party bearing the burden of proof has presented a jury question as to each element in the case. *Hartsel v. Keys*, 87 F.3d 795, 799 (6th Cir. 1996). The plaintiff must present more than a mere scintilla of evidence in support of his position; the plaintiff must present evidence on which the trier of fact could reasonably find for the plaintiff. *See id.* (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 252 (1986)). Mere speculation will not suffice to defeat a motion for summary judgment: “the mere existence of a colorable factual dispute will not defeat a properly supported motion for summary judgment. A genuine dispute between the parties on an issue of material fact must exist to render summary judgment inappropriate.” *Monette v. Elec. Data Sys. Corp.*, 90 F.3d 1173, 1177 (6th Cir. 1996).

B. Law of Unseaworthiness

Seaworthiness is often compared to strict liability claims or those under a no-fault regime. *See Gravatt v. City of New York*, 226 F.3d 108, 116 (2d Cir. 2000); *Barlas v. United States*, 279 F. Supp. 2d 201, 206 (S.D.N.Y. 2003). These analogies follow from a shipowner’s “absolute duty to maintain a seaworthy ship, the breach of which imposes liability without fault.” *Perkins v. Am. Elec. Power Fuel Supply, Inc.*, 246 F.3d 593, 602 (6th Cir. 2001) (citing *Brown v. Dravo Corp.*, 258 F.2d 704, 706 (3d Cir. 1958)). Irrespective of this standard, a vessel is not required to be “free from all possibility of mishap, for the seaworthiness of a ship is a relative concept, dependent in each instance upon circumstances.” *Id.*

Litigants asserting a claim of unseaworthiness must show (1) the vessel’s appurtenances were not “reasonably fit for their intended use” and (2) the unseaworthy condition proximately caused the seaman’s injuries. *Churchwell v. Bluegrass Marine, Inc.*, 444 F.3d 898, 904 (6th Cir. 2006); *accord Vankuiken v. Cent. Marine Logistics, Inc.*, No. 07-14543, 2008 WL 4601379, at

*5-6 (E.D. Mich. Oct. 15 2008). For proximate cause, “[a] plaintiff must prove that the unseaworthy condition played a substantial part in bringing about or actually causing the injury and that the injury was either a direct result or a reasonably probable consequence of the unseaworthiness.” *Miller v. Am. President Lines, Ltd.*, 989 F.2d 1450, 1463 (6th Cir. 1993) (quoting *Johnson v. Offshore Express, Inc.*, 845 F.2d 1347, 1354 (5th Cir.), cert. denied, 488 U.S. 968 (1988)). The “source of the malfunction” that causes the injury is irrelevant under unseaworthiness; after all, the doctrine is but a “condition, and how that condition came into being - where by negligence or otherwise - is quite irrelevant to the owner’s liability for personal injuries resulting from it.” *Perkins*, 246 F.3d at 602 n. 6 (citing *Ferrara v. A. & V. Fishing, Inc.*, 99 F.3d 449, 453 (1st Cir. 1996)) (emphasis in original).

“[U]nseaworthiness is [generally] a question of fact for the jury and should not be resolved by the district court as a matter of law.” *Churchwell*, 444 F.3d at 904. When however “neither party can explain phenomena illustrative of a vessel or appurtenance not reasonably fit for its intended use, the shipowner is liable as a matter of law.” *Johnson v. Donjon Marine Co.*, No. 05-CV-1543, 2006 WL 3240730, at *3 (E.D.N.Y. Nov. 8, 2006) (citing *Van Carpals v. S. S. Am. Harvester*, 297 F.2d 9 (2d Cir. 1962)). Liability for equipment failure can be sidestepped if a “genuine dispute as to whether the injury was caused by an unseaworthy condition or, instead, by an isolated act of negligence.” *Id.* (citing *Sotell v. Maritime Overseas Inc.*, 474 F.2d 794, 796 (2d Cir. 1973)). Yet, the shipowner is required to show the seaman’s negligent act was the lone cause of the injury; if the seaman’s negligence “only contributed to the consequences of a preexisting unseaworthy condition,” it is insufficient to preclude summary judgment for the plaintiff. *Id.*

C. Discussion

Restating the relevant standard, Briley is entitled to summary judgment if he can show the ratchet and pelican hook were not reasonably fit for their intended use and their condition caused his injury. *See Churchwell*, 444 F.3d at 904. No one disputes the pelican hook broke under the strain of the barges and its failure caused his injury. The parties also concede that before the accident, the ratchet and pelican hook appeared to be in working order and there were no obvious flaws or imperfections. In his motion, Briley asserts that UBL and Dixie agree that the pelican hook was being used for its ordinary and intended purpose. He insists the testimony of Dr. John E. Slater, UBL's expert, on the defectively manufactured pelican hook is uncontradicted. Briley argues that the parties' concessions pave an uncontested path to judgment on unseaworthiness.

The record is not as harmonious as Briley believes. Dixie refutes his contention that the ratchet and pelican hook were defectively manufactured or designed. To rebut Slater, Dixie introduces testimony from experts Dr. R. Craig Jerner and Mr. Steven J. Roensch. Together, these witnesses opine that the pelican hook broke because it was overloaded. Had it been used in conformity with the proper and preestablished working load, they affirm that the pelican hook would not have failed.

These opinions bear on Briley's belief that the pelican hook qualifies as an unseaworthy condition. Where a ship's equipment unexpectedly malfunctions and injures a seaman, the ship is unseaworthy only when the equipment's failure arose out of its "proper and expected use." *Perkins*, 246 F.3d at 602. UBL and Dixie urge denial of this motion because if the pelican hook failed when overloaded, the result followed from its improper use.

Judging from their responses to this motion, UBL and Dixie conceive of two possible outcomes for Briley's unseaworthiness claim. The first is a ruling that the ratchet and pelican hook were defectively manufactured. Neither UBL nor Dixie disputes that defective parts and equipment create an unseaworthy condition aboard a vessel. *See Perkins*, 246 F.3d at 602 n. 6. For the second, UBL and Dixie claim Jerner's and Roensch's testimony could persuade the jury that the pelican hook failed due to an improper load. If so, the pelican hook broke outside its "intended use" and the vessel was not unseaworthy.

Distilled down, UBL and Dixie appear to request a finding that the MCMANUS's crew improperly used the pelican hook when they overloaded it. Even though the isolated misuse of equipment may inhibit an unseaworthiness claim, *e.g.*, *Scindia Steam Nav. Co., Ltd. v. De Los Santos*, 451 U.S. 156, 164-65 (1981) (a single act of operational negligence does not render a vessel unseaworthy (citing *Usner v. Luckenbach Overseas Corp.*, 400 U.S. 494 (1971))), the crew's misuse of the vessel's appurtenances may create a claim for unseaworthiness if the misuse occurs at the direction of a supervisor. *Churchwell*, 444 F.3d at 904. If the misuse happens at the direction of a seaman's superior, then whether the equipment would have functioned properly under its normal and appropriate use is immaterial. *See Taylor v. TECO Barge Line, Inc.*, 517 F.3d 372, 383 (6th Cir. 2008). Accordingly, Briley could still recover as a matter of law on his unseaworthiness claim if he and the other crew had been trained or ordered to load the ratchet and pelican hook in the fashion that led it to fail. *See Nichols v. Weeks Marine, Inc.*, 513 F. Supp. 2d 627, 635 (E.D. La. 2007) ("A vessel is unseaworthy when an unsafe method of work is used to perform vessel services." (citations omitted)).

Notwithstanding the precedent on equipment misuse, evidence on the process by which

the rigging is fastened to the barges is absent from the record. Should Briley introduce evidence at trial whereby the crew of the MCMANUS loaded the ratchet and pelican hook in accordance with a pre-approved practice or under the supervision of their superiors, judgment as matter of law may be justified even if the equipment was overborne by an excessive amount of pressure. However, the Court cannot intelligently confront whether the MCMANUS was unseaworthy as a result of defective equipment, or equipment misuse, or incorrect training on the load-bearing capabilities of the incident ratchet and pelican hook. Rather than issue judgment in favor of Briley at this time, the Court will deny this motion and await a more thorough airing of this claim at trial, after which, he may move for judgment as a matter of law.

Accordingly, Briley's motion for summary judgment is denied.

II. UBL's Motion for Partial Summary Judgment

A claim of retaliatory discharge under admiralty law against UBL was added in Briley's first amended complaint. He alleges UBL terminated him in retaliation for having filed the present lawsuit. First Amended Complaint, DN 58 ¶¶ 5-6. UBL moves to dismiss this claim because Briley recognized he could not perform the material duties of his position and resigned on his own.

The record underscores the serious nature of Briley's accident and its impact on his physical health. On June 17 and 18, 2010, Briley underwent a functional capacity exam ("FCE") in Paducah, Kentucky, to measure the injury's affect on his leg and to determine if he could continue on as first mate. The results showed Briley "might" have limitations that would prevent him from being able to perform the essential tasks of his job. King Affidavit, DN 180-2 ¶ 3. The physical therapist who examined him found new physical limitations that would hinder his

job performance. Hutto Depo., DN 108-6 p. 1. Briley realized his own physical limitations as well. He admitted during his deposition that he could not return to work and act as first mate. Briley Depo., DN 108-7 p. 1. This admission was followed shortly thereafter by an attempt to collect long-term disability with UBL's insurance carrier. DN 108-4. Briley's working relationship with UBL came to an end when he submitted his resignation letter, in which he indicated he was unable to perform his position's duties. DN 108-5.

“From the earliest times maritime nations have recognized that unique hazards, emphasized by unusual tenure and control, attend the work of seamen.” *Aguilar v. Standard Oil Co. of N.J.*, 318 U.S. 724, 727 (1943). To provide a degree of respite from the hardships, admiralty law provides safeguards that are normally unavailable to the laborers of other professions. A prohibition on retaliatory discharge of a seaman for filing a personal injury claim has been incorporated into the umbrella of protection afforded seamen. *Smith v. Atlas Off-Shore Boat Service, Inc.*, 653 F.2d 1057, 1058 (5th Cir. 1981); *Dibble v. Grand Trunk Western R. Co.*, 699 F. Supp. 123, 127 (E.D. Mich. 1988). The legal right emerges from the policy that an “employer should not be permitted to use his absolute discharge right to retaliate against a seaman for seeking to recover what is due him or to intimidate the seaman from seeking legal redress.” *Atlas*, 653 F.2d at 1062.

This is not to say an injured seaman may not be terminated. On the contrary, “absent specific contractual provisions, sailors are at-will employees whose employment is ‘terminable at will by either party.’” *Baetge-Hall v. American Overseas Marine Corp.*, 624 F. Supp. 2d 148, 155 (D. Mass. 2009) (quoting *Atlas*, 653 F.2d at 1060). “[A] seaman is an at-will employee, and may be discharged for ‘good cause, for no cause, or even, in most circumstances, for a morally

reprehensible cause.” *Kasper v. Oglebay Norton Co.*, No. 3:97 CV 7701, 1998 WL 229597, at *1 (N.D. Ohio Feb. 18, 1998) (quoting *Atlas*, 653 F.2d 1063). “The discharge of a seaman who is not fit for duty, whether or not his disability results from the employer’s negligence, would not, of course, be wrongful.” *Atlas*, 653 F.2d at 1063.

Smith v. Atlas Off-Shore Boat Service, Inc., the seminal case for claims of retaliatory discharge, established a difficult set of precepts for a seaman to prove.

In order to prevail on the retaliatory discharge claim, the seaman must affirmatively establish that the employer's decision was motivated in substantial part by the knowledge that the seaman either intends to file, or has already filed, a personal injury action against the employer. The employer may, on the other hand, defeat the seaman's action by demonstrating that the personal injury action was not a substantial motivating factor for the discharge.

Id. at 1063-64 (footnotes omitted). Courts have looked to retaliatory discharge in other legal arenas when deciding what qualifies as “motivated in substantial part.” See *Schuppman v. Port Imperial Ferry Corp.*, No. 99-CV-3597-SWK, 2001 WL 262687, at *2 (S.D.N.Y. Mar. 15 2001) (citing to cases reviewing retaliatory discharge under Title VII). The causal connection between a seaman’s discharge and a negligence suit can be shown “directly through evidence of retaliatory animus directed against the plaintiff [or] indirectly by showing that the protected activity was followed closely by the discriminatory treatment or through other evidence such as disparate treatment of fellow employees who engaged in similar conduct.” *Id.* (citations and quotation marks omitted).

The impetus for UBL’s motion for summary judgment is the absence of proof. The company states Briley’s own actions and statements demonstrate he was not terminated for filing a Jones Act lawsuit. Admittedly, much of the evidence submitted alongside this motion contradicts Briley’s allegations. He said that he could not perform the duties of first mate and

conceded as much when he applied for disability. He made a similar admission in his resignation letter; the one-paragraph correspondence does not include allegations or insinuations that Briley has been forced to resign as a result of the personal injury lawsuit. Taking the evidence in Briley's favor, his retaliatory discharge claim lacks even a scintilla of proof.

Instead of responding to UBL's arguments, Briley remolds the allegations of retaliatory discharge. He now says UBL failed to rehire him into a position that he was physically capable of performing. Briley proposes that this failure to rehire constitutes a cognizable claim of retaliatory discharge.

Briley cites a single district court case from the Western District of Washington for the proposition that failure to rehire is actionable under maritime law. *See Folstrom v. Northern Jager Partners, L.P.*, No. C96-124C, 1997 WL 824813, at *3 (W.D. Wash. Jan. 21, 1997). The case does not stand for the proposition for which he cites it. Rather than recognizing retaliatory discharge in the context of rehiring, the court in *Folstrom* rejected this theory of recovery and only alluded to it in the decision's dicta. Perhaps more important, the Court has not encountered a single decision in this circuit that extends a seaman's claim for retaliatory discharge to include the failure to rehire.

Even supposing that the Court was willing to recognize this theory of recovery, no factual issue exists to warrant submission to a jury. Nothing more than conclusory allegations support Briley's belief that UBL terminated and refused to rehire him as a result of the lawsuit. The only allusion to the record he makes is a cursory reference to the temporal proximity of his lawsuit and the alleged retaliation. Still, temporal proximity without more is rarely enough to prove a retaliatory motive. *Cf. Johnson v. Univ. of Cincinnati*, 215 F.3d 561, 582 (6th Cir.

2000); *Hafford v. Seidner*, 183 F.3d 506, 515 (6th Cir. 1999); *Conner v. Schnuck Mkts., Inc.*, 121 F.3d 1390, 1397-98 (10th Cir. 1997). As such, the record lacks any evidence to support this particular claim.

Considering the clarity of the record and Briley's failed attempt to invent a new cause of action, the Court will grant this motion and dismiss the allegation of retaliatory discharge.

III. Dixie's Motion in Limine

UBL has retained Dr. John E. Slater to present his expert opinion on the failure of the pelican hook. He has examined the incident ratchet and pelican hook, the depositions of Briley and the other seamen, photographs of other ratchets used in the coupling process between barges, and reports on the accident. Slater has performed a variety of tests to calculate and measure the strength and metallurgical properties of the ratchet and pelican hook. From his analysis, he concludes the incident hook was defectively manufactured. Slater Report, DN 112-13 p. 3. Currently, Dixie requests the exclusion of Slater's testimony because it does not meet the relevant evidentiary prerequisites.

A. Daubert Standard

Pursuant to Federal Rule of Evidence 702 and the seminal opinion of *Daubert v. Merrill Dow Pharm., Inc.*, 509 U.S. 579 (1993), scientific, technical, or other specialized knowledge is admissible in opinion form if it will assist the jury to decide a factual issue. An expert's opinion is admissible if it satisfies three requirements: "First, the witness must be qualified by 'knowledge, skill, experience, training, or education.' Second, the testimony must be relevant, meaning that it 'will assist the trier of fact to understand the evidence or to determine a fact in issue.' Third, the testimony must be reliable." *In re Scrap Metal Antitrust Litigation*, 527 F.3d

517, 528-29 (6th Cir. 2008). “As a gatekeeper, the trial judge has discretion in determining whether a proposed expert’s testimony is admissible based on whether the testimony is both relevant and reliable.” *Rose v. Truck Centers, Inc.*, No. 09-3597, 2010 WL 3069613, at *4 (6th Cir. Aug. 6, 2010) (citing *Johnson v. Manitowoc Boom Trucks, Inc.*, 484 F.3d 426, 429 (6th Cir. 2007)); see *Daubert*, 509 U.S. at 589). The trial judge must assess “whether the reasoning of methodology underlying the testimony is scientifically valid and [] whether that reasoning or methodology properly can be applied to the facts in issue.” *Daubert*, 509 U.S. at 592-93.

Notwithstanding his or her role as gatekeeper, a trial judge is not the court’s “armed guard.” *Ruiz-Troche v. Pepsi Cola of P.R.*, 161 F.3d 77, 86 (1st Cir. 1998). “[T]he rejection of expert testimony [under *Daubert*] is the exception rather than the rule.” Fed. R. Evid. 702 (advisory committee notes). The expert’s proponent needs only to show by a “preponderance of the evidence that the expert’s reasoning and methodology is scientifically valid.” Charles Wright & Victor Gold, 29 Fed. Prac. & Proc. Evid. § 6266 at 276 (1997) (citation omitted). Once the court is satisfied this standard has been met, the expert’s testimony “should be tested by the adversary process - competing expert testimony and active cross-examination - rather than excluded from jurors’ scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies.” *Ruiz*, 161 F.3d at 85 (citing *Daubert*, 509 U.S. at 590).

B. Slater’s experience, testing, and conclusions

In the fields of metallurgy and failure analysis, Slater wields an impressive educational pedigree and amount of experience. He has a masters and Ph.D. in metallurgy from the University of Cambridge and performed his post-doctoral research at the Ohio State University. DN 112-7. He has worked as a failure analyst and materials engineer since 1985 for Invetech

Inc., for which he is now the principal. He has published and lectured extensively on metallurgy and the corrosion of metals. The Court finds Slater qualified to offer opinion testimony at trial, insofar as it is reliable and relevant.

As for Slater's testing and methodology, he was retained to examine the incident ratchet and pelican hook, measure its metallurgical properties, and compare those findings to an exemplar ratchet and pelican hook. He performed two examinations of the incident ratchet and each yielded a separate expert report, published respectively on January 16, 2012 and January 30, 2012 (herein "January 16 test" and "January 30 test"). DN 112-8; DN 112-12.

The January 16 test was a "non-destructive examination," where Slater inspected the incident ratchet without performing a chemical or molecular analysis. DN 118-8 at 2. Based on his observations and measurements, Slater determined that the minimum breaking strength of the ratchet and pelican hook was 126,000 lbs, with a working load limit of 42,000 lbs. DN 112-8 p. 2. The wire rope in service at the time of the accident had a minimum breaking strength of 83,600 lbs, meaning the pelican hook should have been one third stronger than the wire rope. DN 112-8 p. 3. The ratchet showed signs that it was "largely brittle," in particular the "small shear lip" and the "minor throat spreading" at the point of fracture.² DN 112-8 p. 2. Slater

² Slater's opinions are better understood with a brief refresher on certain metallurgical terms.

- The "ductility" of a metal is "the property that enables solid substances, particularly metals, to undergo cold, visible, plastic deformation. The metal thus becomes permanently extended . . . with corresponding reduction in cross-sectional areas without actual fracturing or separation." C.R. Tottle, *An Encyclopedia of Metallurgy and Materials* 80 (Macdonald and Evans 1984) (herein "*Encyclopedia of Metallurgy*").
- A "brittle fracture" is "the sudden and catastrophic failure of engineering components without prior plastic deformation." *Encyclopedia of Metallurgy*, p. 30.
- The term "plastic deformation" is "used in reference to the permanent (inelastic) distortion of metals under applied stresses which strain the material beyond its elastic

explained in his deposition that the presence of a “minor” shear lip in the incident ratchet meant that the metal did not display the expected ductility during the fracture. Rather, the minor shear lip was evidence of a “brittle fracture,” which Slater analogized to breaking a piece of chalk instead of the bend-and-give normally associated with metals under high stress. Slater Depo., DN 110-2 p. 10-11. The lack of “throat spreading” further signaled a brittle fracture because it precluded the plastic deformation associated with ductile metal. Slater Depo., DN 110-2 p. 24-25. According to Slater, the absence of plastic deformation in the incident ratchet at the fracture site signified that the metallurgical properties of the ratchet and pelican hook were “less than optimum.” DN 112-8 p. 3. He anticipated that chemical, hardness, and microscopic tests would show that the metal used to create the hook was exposed to excessive quantities of heat. DN 112-8 p. 3. Slater also hypothesized that a properly functioning ratchet and pelican hook would not have failed before the rigging’s wire ropes. DN 112-8 p. 3.

For the January 30 tests, Slater and his associates removed samples of the incident ratchet and the exemplar ratchet to conduct hardness tests and metallography and chemical analysis. DN 112-12 p. 1. The hardness measurements revealed differences between the exterior and the interior of the pelican hook. DN 112-12 p. 2. The incident ratchet also exhibited higher scores on the hardness scale relative to the exemplar ratchet. DN 112-12 p. 2. Since a harder metal is less ductile, the higher hardness score meant the incident ratchet was more brittle than the

limit. The deformation is accompanied by changes in the internal state of the metal, involving distortion of the crystal structure.” *Encyclopedia of Metallurgy*, p. 230.

- A “shear lip” is “an area, at the edge of a flat fracture surface, where the plane of the fracture is about 45° to the direction of the loading. It occurs by ductile shear at the final stage of crack propagation leaving, usually, a sharp fracture edge.” Colin D. Brown, *Dictionary of Metallurgy* 201 (John Wiley & Sons Ltd. 1998).

exemplar ratchet. The metallographic analysis “revealed a relatively coarse almost barinitic structure in both hooks,” but the second phase particles in the incident ratchet’s hook were “significantly more prevalent.” DN 112-12 p. 2. Slater concluded the microstructure of the incident ratchet displayed “undesirable features” that “would be expected to give a tendency to brittle intergranular fracture[,] particularly under high rates of loading.” DN 112-12 p. 2.

These deficiencies at the elemental level of the ratchet, combined with the lack of plastic deformation at the fracture site and the load-bearing capability of the wire ropes as opposed to the ratchet, led Slater to conclude that the incident ratchet’s hook was “defectively manufactured.” DN 112-12 p. 3. Put another way, Slater believes the ratchet and pelican hook were defective because under the stress of the MCMANUS’s tow, the hook should have bent before it broke apart. This bending (or “plastic deformation”) would have created a large shear lip at the point of failure. The presence of a minor shear lip and the negative results from the January 30 tests on the incident ratchet are demonstrative of a brittle fracture, which is the mark of a defective ratchet and hook.

C. Dixie’s objections to Slater

Dixie does not challenge Slater’s qualifications but does object to the reliability and the relevancy of his opinions. With regard to the former, it makes four assertions about the scientific principles underlying his remarks. First, Dixie argues the presence of a shear lip at the point of failure thwarts Slater’s scientific diagnosis of a brittle fracture. Second, even if the hook was brittle, Slater has not shown a brittle hook is tantamount to a defective hook. Third, Dixie charges that Slater’s calculations are flawed because he does not know the gauge of the wire rope in use at the time of the accident. Fourth, Dixie attacks Slater’s methodology, specifically

the situs of his hardness measurements and the type of tests he performed. After review, the Court is unconvinced that these objections warrant the exclusion of his testimony.

Dixie says the presence of a shear lip on the pelican hook proves some degree of plastic deformation occurred. With this evidence of ductility, it asserts Slater's methodology actually shows the absence of a brittle fracture. Dixie has misread Slater's commentary on shear lips and their impact on the brittleness of metals. The parties are in agreement that the shear lip on the incident hook was relatively minor. In his deposition, Slater explained that the smaller the shear lip at the fracture point, the less ductile and more brittle the metal. Slater depo., DN 110-2 p. 10. Thus, the minor shear lip at the fracture site supports Slater's opinion that the equipment was brittle and defectively manufactured.

Next, Dixie argues that Slater has not made the connection between a brittle hook and a defective hook. It contends that even if the Court were to accept Slater's conclusion that the ratchet and pelican hook were brittle, a finding of defect would not necessarily follow. Dixie charges that Slater's opinion, from his pronouncement of brittleness to his conclusion of defect, constitutes a "logical leap" without any testable methodology.

The Court disagrees with this characterization. In the report issued after the January 30 tests, Slater stated that a brittle hook exhibits "improper and substandard metallurgical properties" that affects its strength. DN 112-12 p. 3. He said that a ratchet that was not brittle would be able to withstand significantly greater forces due to its higher breaking strength. DN 112-12 p. 3. He then provided explicit guidance on how this particular ratchet was defective:

Question: And then you go on to say that -- in the last conclusion that the incident hook was thus defectively manufactured. Now, what is the basis for stating that it was defectively manufactured?

Slater Answer: Because the properties that it exhibited in its failure were properties

that a component such as that should not exhibit. In other words, a component such as that should not -- should not fail no matter what you do to it in a brittle manner such as this one did.

Slater depo., DN 110-2 p. 37. From a metallurgical standpoint, the brittle fracture and the lack of ductility present serious questions about the structural integrity of this ratchet and pelican hook.

One of Dixie's own employees acknowledges the veracity of Slater's conclusion. In his deposition, Troy Raines, a product engineer for Dixie, explained the importance of brittle fractures when measuring the ductility of the company's products:

Question: Dixie strives to achieve ductility in the hooks which it manufactures through this process. Correct?

Raines answer: Yes.

Question: Okay. If a hook is not ductile and fractures in a brittle manner, then it does not meet the desired objectives in the manufacturing process, does it?

[objections]

Raines answer: So, hypothetically, if there were a hook that were brittle, it would not meet our criteria.

Question: Okay. And that hook would be defective, would it not?

Raines answer: Yes.

Raines depo., DN 112-10 p. 11. Viewing Slater's opinions alongside Raines's admissions, Slater's comments on brittle fractures are adequate to establish a manufacturing defect. *See Wheeler v. HO Sports, Inc.*, 232 F.3d 754, 757 (10th Cir. 2000) (applying Oklahoma law) ("A product is defective in manufacture if it deviates in some material way from its design or performance standards."); *Gerber v. Hoffmann-La Roche, Inc.*, 392 F. Supp. 2d 907, 922 (S.D. Tex. 2005) (applying Texas law) ("A manufacturing defect exists when a product does not conform to the design standards and blueprints of the manufacturer and the flaw makes the product more dangerous and therefore unfit for its intended or foreseeable uses."). Slater's testing on the ratchet and pelican hook exposed overly hardened metal that risked a brittle

fracture. These chemical measurements were corroborated by the minor shear lip at the fracture point along with the difficulty reconciling the failure of the ratchet with the load-bearing capability of the wire ropes. The Court finds Slater's testimony and conclusions on brittleness are supported by sound, reliable methodology. *Cf. Scrap Metal*, 527 F.3d at 529-30 ("The task for the district court in deciding whether an expert's opinion is reliable is not to determine whether it is correct, but rather to determine whether it rests upon a reliable foundation, as opposed to, say, unsupported speculation.").

Continuing in this vein, Dixie emphasizes that Slater does not know whether the hook was being used for its intended purpose when it snapped, which precludes him from stating that it was defectively manufactured. This argument ignores the preparation Slater embarked upon when he created his opinions. His review of the seamen's depositions allowed him to glean the customary and intended use of ratchets and pelican hooks in a maritime setting. Any unfamiliarity with the intricacies of work on a barge may be addressed on cross examination. Furthermore, Slater's conclusions about the pelican hook's failure transcend the equipment's intended purpose. He is adamant that under no circumstances should the ratchet and pelican hook have failed in the manner that they did. Slater depo., DN 110-2 p. 37. Ergo, precisely how the ratchet and pelican hook were being used is immaterial when judging the admissibility of Slater's opinion.

Dixie stresses that Slater's opinions should be excluded because he did not account for the gauge of the wires in the rigging on the MCMANUS. Slater however referred to a wire rope manual provided to him by the primary supplier of wire rope to UBL. He used the measurements of the wire rope from this catalogue to reach his conclusions. This process for

calculating the size and strength of the wire ropes in the rigging is a basis for cross examination at trial, but not exclusion of Slater's opinion. *In re Welding Fume Products*, No.

1:03-CV-17000, MDL 1535, 2005 WL 1868046, at *5 (N.D. Ohio Aug. 8, 2005) ("As long as an expert's scientific testimony rests upon 'good grounds, based on what is known,' it should be tested by the adversary process-competing expert testimony and active cross-examination-rather than excluded from jurors' scrutiny for fear that they will not grasp its complexities or satisfactorily weigh its inadequacies." (quoting *Ruiz-Troche*, 161 F.3d at 85)).

Dixie's final quibbles with Slater's methodology - his samples for the hardness testing were improperly gathered and he should have performed additional microscopic tests - are easily discarded as well. The challenges to the metallography and chemical analysis do not render Slater's measurements and conclusions so unreliable that they should be excluded. These objections should be addressed on cross examination instead of in this motion. *See Daubert*, 509 U.S. at 596 ("Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.").

Lastly, Dixie takes issue with the relevancy of Slater's opinions. It asserts that UBL must show a feasible alternative design for a prima facie case of defective design. Since Slater makes no attempt to provide a secondary design for the pelican hook, Dixie posits that his testimony is insufficient to support the ultimate conclusion that the ratchet and pelican were defective.

Dixie omits from its analysis the law surrounding manufacturing defects. For general maritime law, the Sixth Circuit permits recovery under products liability. *Schaeffer v.*

Michigan-Ohio Nav. Co., 416 F.2d 217, 221 (6th Cir. 1969). UBL pursues two separate theories of defect under products liability law: manufacturing defect and design defect. Third-Party Complaint, DN 48 ¶ 8. Liability for design defects follows when the “foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design by the seller or other distributor.” Restatement (Third) of Torts: Product Liability, § 2(b) (1998).³ Litigants under this theory are required to show that a reasonable alternative design was available at the time of the sale or distribution. *See id.* § 2 cmt. d. A manufacturing defect occurs when the “product departs from its intended design even though all possible care was exercised in the preparation and marketing of the product.” Restatement (Third) of Torts: Product Liability, § 2(a) (1998); *accord Minda v. Biomet, Inc.*, 182 F.3d 900, at *1 (2d Cir. 1999) (table) (“To prove the existence of a manufacturing defect, a plaintiff must establish that the product was not built to specifications or that it did not conform to the manufacturer's intended design.”). “Common examples of manufacturing defects are products that are physically flawed, damaged, or incorrectly assembled.” Restatement (Third) of Torts: Product Liability, § 2 cmt. c (1998). No showing of alternative design is required for a manufacturing defect claim. *Nationwide Agribusiness Ins. Co. v. SMA Elevator Const. Inc.*, 816 F. Supp. 2d 631, 663 (N.D. Iowa 2011) (acknowledging that manufacturing defects under subsection (a) of the Third Restatement do not require a risk-utility assessment).

³ Other circuits have adopted the Restatement Third of Products Liability for maritime cases. *See Oswald v. Resolute Industries, Inc.*, 642 F.3d 856, 860 (9th Cir. 2011); *St. Paul Fire & Marine Ins. Co. v. Lago Canyon, Inc.*, 561 F.3d 1181, 1190 n. 18 (11th Cir. 2009); *Krummel v. Bombardier Corp.*, 206 F.3d 548, 552 (5th Cir. 2000). The parties agree that the Restatement (Third) is the source of law that should guide the present controversy. *See* Dixie Motion for Summary Judgment, DN 109-1 p. 5; UBL Response to Motion, DN 113 p. 3. In light of this precedent and the parties’ agreement, the Court will apply the rules from the Restatement Third.

Though it may not be enough to support a claim of design defect, Slater's testimony is relevant because it bears upon the claim of manufacturing defect. Dixie is incorrect that the testimony is irrelevant to the instant controversy.⁴

In sum, Slater's opinion is based on his substantial experience in metallurgy, supported by a reliable and testable methodology, and relevant to UBL's theory that Dixie defectively manufactured the ratchet and pelican hook. The protestations Dixie includes in its motion are best reserved for cross examination. For that reason, its motion in limine is denied.

IV. Dixie's Motion for Summary Judgment

Dixie moves for summary judgment on UBL's claims of design defect and manufacturing defect (DN 109). This motion for summary judgment and Dixie's motion in limine are two sides of the same coin. Without Slater's expert testimony, Dixie urges dismissal of these product liability claims. The Court's unfavorable ruling on Dixie's motion in limine stymies many of the arguments in this motion.

As previously stated, for a manufacturing defect a plaintiff must present evidence that a product "departs from its intended design even though all possible care was exercised in the preparation and marketing of the product." Restatement (Third) of Torts: Product Liability, § 2(a) (1998). The law requires a plaintiff to show that the "defendant sold or distributed the product," "was engaged in the business of selling or distributing the product," that the product "contained a manufacturing defect that departed from its intended design," and the defect proximately caused the harm. *Nationwide Agribusiness*, 816 F. Supp. 2d at 663 n. 8 (formatting

⁴ The Court discusses the relevancy of Slater's opinions and its sufficiency to establish a manufacturing defect in Section IV of its opinion.

altered) (reviewing the elements necessary for manufacturing defect claim under Restatement (Third) of Products Liability). Dixie does not contest three of the four elements - that it is involved in the manufacture and distribution of the ratchet and pelican hook and that the failure caused Briley's injury. Instead, Dixie puts forward that there is inadequate proof of a defect or that the equipment departed from its intended design.

The Court finds that Slater's expert testimony can shoulder the weight of UBL's claim. He indicted the metallurgical components of the hook showed deficiencies in the hardness test and the metallographic analysis. He compared these shortcomings in the incident ratchet to an exemplar ratchet, permitting him to draw the necessary scientific conclusions that the metal was brittle and lacked ductility. In addition, Slater explained that irrespective of the forces placed on the hook during the incident, it never should have failed in the manner that it did. This expert opinion provides direct evidence of the manufacturing defect, which overrides any argument by Dixie for summary judgment.

Additionally, the admissions of Troy Raines and the testimony of the seamen are reliable circumstantial evidence of a manufacturing defect. Jurisdictions treat circumstantial evidence differently when evaluating the sufficiency of evidence underlying a claim of manufacturing defect. Some courts require expert testimony to accompany a suit for manufacturing defect, *e.g.*, *Whitted v. General Motors Corp.*, 58 F.3d 1200, 1208-09 (7th Cir. 1995) (finding that Indiana law may use circumstantial evidence to establish manufacturing defect only if presented through expert testimony); others permit the same claim to proceed to a jury on circumstantial evidence alone. *E.g.*, *Ebenhoech v. Koppers Industries, Inc.*, 239 F. Supp. 2d 455, 472 (D.N.J. 2002) (litigant may prove manufacturing defect either through expert testimony or by circumstantial

evidence under New Jersey law). In any event, circumstantial evidence plays an important role to establish manufacturing defect claims, with or without the aid of expert testimony. *See, e.g., Canning v. Broan-Nutone, LLC*, 480 F. Supp. 2d 392, 404-05 (D. Me. 2007) (finding the Restatement (Third) of Products Liability permits circumstantial evidence to prove manufacturing defects); *Arnold v. Krause, Inc.*, 232 F.R.D. 58, 71 (W.D.N.Y. 2004) (“To establish a prima facie case of strict products liability based on a manufacturing defect, ‘plaintiff may rely upon the circumstances of the accident and proof that the product did not perform as intended.’” (quoting *Brown v. Borruso*, 238 A.D. 2d 884(N.Y. App. Div. 1997))).

The statements by Dixie’s own engineer and the seamen go a long way toward a finding that the equipment was defectively manufactured. Raines testified that only substandard pelican hooks would lack the ductility necessary to avoid a brittle fracture. Raines depo., DN 113-8 p. 5. This acknowledgment about the importance of ductility in pelican hooks, along with Slater’s conclusion that the incident pelican hook was not ductile, bears an inference that the equipment in the present matter “depart[ed] from its intended design.” Restatement (Third) of Torts: Product Liability, § 2(a) (1998). The seamen’s depositions offer an additional circumstantial foundation for the claim of manufacturing defect. All agreed that pelican hooks and ratchets suffering sudden failures are not just uncommon, but practically unheard of. The unanimity of these statements corroborates Slater’s belief that the ratchet and hook were defectively manufactured.

As for the claim of design defect, UBL has failed to put forth adequate evidence to survive this motion for summary judgment. Products liability suits for design defects require a reasonable alternative design, something Slater has failed to provided. *Id.* § 2 cmt. d. Without

an alternative design, this theory is ripe for dismissal.

Accordingly, Dixie's motion for summary judgment is granted in part and denied in part. UBL's claim of manufacturing design may continue to the jury while the claim for defective design is dismissed.

CONCLUSION

For the aforementioned reasons, IT IS HEREBY ORDERED:

- (1) Plaintiff's motion for partial summary judgment (DN 103) is DENIED.
- (2) Defendant's motion for partial summary judgment (DN 108) is GRANTED.
Plaintiff's claim for retaliatory discharge is hereby dismissed.
- (3) Third-party Defendant's motion in limine (DN 110) is DENIED.
- (4) Third-party Defendant's motion for summary judgment (DN 109) is GRANTED
IN PART AND DENIED IN PART. Third-party Plaintiff's claim for defective design is hereby dismissed.