

Warford v. Industrial Power Systems

CV-06-463-JL

10/20/08

UNITED STATES DISTRICT COURT
DISTRICT OF NEW HAMPSHIRE

Douglas Warford, Isabelle
Taylor, LLC, and CNA
Insurance Company

v.

Civil No. 06-cv-463-JL
Opinion No. 2008 DNH 192

Industrial Power Systems,
Inc. and A.F. Theriault
& Son Ltd.

FINDINGS OF FACT AND RULINGS OF LAW

The plaintiffs, Douglas Warford, Isabelle Taylor, LLC ("the shipowner"), and CNA Insurance Company, proceeding as Warford's assignee and the shipowner's subrogee, seek recovery for personal injury and property damage arising out of an explosion and fire on the shipowner's fishing vessel, the F/V Isabelle Taylor, insured by CNA. The defendants, Industrial Power Systems ("IPS") and A.F. Theriault & Son Ltd. ("Theriault"), have denied any liability. The court, which has jurisdiction under 28 U.S.C. § 1333(1) (maritime), conducted a bench trial in this matter over May 21-23 and May 26-27, 2008.

Each of the parties submitted a set of proposed findings and rulings both before and after trial; the parties also submitted a joint post-trial statement of agreed upon facts and timeline of significant events. With the assistance of these materials, the

court makes the following findings of fact and rulings of law, see Fed. R. Civ. P. 52(a), which result in the entry of judgment for the defendants on all claims.

Findings of Fact

1. The shipowner entered into contracts with a number of companies to work on converting the Isabelle Taylor into a mid-water pair trawler capable of refrigerating her catch at sea, enabling her use in a "pair trawling" operation with two other vessels. The conversion work included installing a refrigeration system and upgrading the vessel's electrical system.

2. This work entailed the installation of three new electrical generators, to run the refrigeration system and to provide an auxiliary power supply for the vessel. These generators, manufactured by Caterpillar, Inc., were to be supplied by Southworth Milton, an authorized Caterpillar dealer, and to be installed by defendant Theriault while the vessel was at Theriault's shipyard in Meleghan River, Nova Scotia, where she was delivered in April 2003.

3. The shipowner (together with its parent company, Shafmaster Fleet Services) entered into a written contract with Theriault specifying the scope of its work on the conversion project. In relevant part, this contract provided that Theriault

would "[i]ninstall 2 main engines, 3 gen[erator] sets, and hydraulic power engine, in cooperation with Caterpillar [C]onnect generators to ship's switchboard." Theriault was also responsible for converting the ship's electrical system--but not the generators themselves--from 220 volts to 480 volts.

4. The ship's switchboard was to be designed and installed by another contractor, defendant IPS, which entered into an agreement to that effect with the shipowner. IPS agreed, in relevant part, to "convert the vessel's switchboard to paralleling ability and to convert the ship to 480" volts. (The term "paralleling" refers to the proportional sharing of an electrical load among multiple power sources, in this case, the generators.) Theriault also agreed in its contract with the shipowner to provide "[s]upport and assistance to IPS technician(s) to convert switchboard to paralleling ability."

5. Theriault began its work converting the vessel in early April 2003. Plaintiff Warford was on board the vessel for most of this process, supporting the various contractors working on the conversion. Though Warford has no formal education or training in electrical engineering, he had worked on a number of fishing vessels, including the Isabelle Taylor, as the "ship's engineer," making him responsible for, among other things, the

continued and safe operation of the vessel's electrical system during her voyages.

6. Theriault duly brought the new generators aboard the Isabelle Taylor by cutting open her decks and securing them to her structure. While connecting one of the generators--generator no. 2--to the ship's wiring, however, an electrician working for Theriault noticed that two of the lead wires necessary to make that connection had been mislabeled. In response, a representative from Theriault contacted Southworth Milton, which arranged for another Caterpillar dealer, Atlantic Tractor, to send a technician to fix the problem. Theriault explained that it proceeded in this fashion so as not to risk voiding the warranty on the generator. Atlantic Tractor's technician eventually arrived and rewired the generator.

7. Atlantic Tractor's technician also performed "start-up" testing on the generators after they had been installed. As Atlantic Tractor informed the shipowner, however, this testing could not verify that the generators would perform properly under a full electrical load, including the demands of the new refrigeration system. Atlantic Tractor further informed the shipowner that enabling the generators to run properly under a full load would require making adjustments to their voltage regulators, components which essentially control the generators'

output. Specifically, in an e-mail to Nick Jenkins, Shafmaster's fleet operations manager, Atlantic Tractor's representative indicated that Caterpillar would "be aboard for sea trials, when we can run the [refrigeration] gear, circ[ulation] pumps, etc., etc., so I don't see any need for a return visit by" IPS.

8. Don Edwards, a service technician for IPS, was on board the vessel for two weeks in October 2003, at work installing the switchboard designed by the company. Though Edwards had planned on "fine tuning" the voltage regulators as part of this work, the vessel could not yet produce the electrical loads necessary to complete that process, due principally to the fact that the new refrigeration system had yet to be installed. Edwards had also discovered that the regulators that came with the generators were not all made by the same manufacturer, which he believed would result in operational problems. He communicated this belief to both Southworth-Milton and the shipowner; Southworth-Milton told Edwards, in response, that the regulators should work fine together. Ultimately, Edwards asked Southworth-Milton to send a technician to set up the voltage regulators, but this request went unanswered. Edwards was unable to finish installing the switchboard during this period because he lacked certain components that had yet to be supplied by the shipowner.

9. Despite the incomplete nature of this and other aspects of the conversion project, the shipowner elected to remove the vessel from Theriault's shipyard on December 13, 2003. In a contemporaneous "Borrower and Shipyard Certificate" executed by the shipowner and Theriault, the shipowner acknowledged that the vessel was "complete," except for the electrical panel, refrigeration, electronics, and the fishing deck layout, which were the responsibility of contractors other than Theriault.

10. The vessel was returned to her home port of Newington, New Hampshire. While the generators were operable under the relatively small loads necessitated by this journey, the generators could not yet be paralleled, as Edwards informed Warford before he set out for Newington. This meant that the vessel was not ready for fishing, because the load demanded by the refrigeration system--which was not yet installed, in any event--required at least two generators running in parallel. Warford did not notice any problems with the generators during the voyage from Nova Scotia to Newington.

11. After the vessel returned, Edwards resumed his work on installing the switchboard until December 20, 2003. On that day, he and Warford worked together to parallel the generators, succeeding in getting them to share a load of 200 kilowatts. The men agreed, in fact, that "load sharing [was] fine," according to

Edwards's contemporaneous field note; Warford testified at trial that Edwards also said that the generators should continue to parallel correctly even after adding the load from the refrigeration system, which had still not yet been installed. Warford also testified, however, that he could not remember whether Edwards also told him that, to ensure proper operation of the generators, Caterpillar needed to adjust their regulators.

12. The switchboard that IPS installed aboard the vessel consisted of a metal cabinet, which housed, among other components, rows of fuse blocks. These could be accessed by swinging open the cabinet door, which itself contained a number of gauges, indicator lights, and dials, including dials for adjusting the speed and voltage of the regulators. Due to an overhead obstruction, however, the cabinet door could be opened only forty-five degrees without forcing it.

13. Before Edwards left the vessel, he and Warford reviewed the procedure for paralleling the generators, which involved making manual adjustments to their voltage and frequency using the controls on the outside cover of the switchboard. To ensure that the readings on the gauges accompanying these controls were correct, Edwards used a handheld electrical meter--known, by the name of its manufacturer, as a "Fluke meter"--to measure the voltage and the frequency of each generator at a fuse inside the

switchboard. This required Edwards to open the cover of the switchboard to place one of the alligator clips from the meter onto one of the fuse blocks associated with that generator. Each fuse block had metal tabs, both above and below the fuse, where a clip could be attached; this configuration is the hallmark of an "open" fuse block. Edwards clipped his meter below the fuse, interposing it between the power source and the clip to protect himself in case of a possible short circuit. After placing the clip, Edwards took a reading of the voltage or the frequency there before partially closing the cover to adjust the controls until the meter indicated the appropriate levels. Warford observed Edwards carrying out this procedure multiple times.

14. On January 15, 2004, Warford was aboard the vessel attempting to run the generators in parallel to provide the necessary power for charging the refrigeration system, which had since been installed. One of the generators, however, kept shutting down during this process, leading Warford to call Edwards for advice. Edwards asked Warford whether Caterpillar had adjusted the voltage regulators yet; in response, Warford said that work had not yet been done. Edwards then told Warford to follow the procedure they had used in successfully paralleling the generators in December: start one generator, adjust it to the required voltage and frequency, place it on-line (i.e., send

its output to the switchboard), then repeat the process with the other generators, setting them to the same voltage and frequency.

15. Warford began this procedure by shutting off the power to the entire vessel. Then, with the aid of a flashlight, he attached one of the alligator clips from his Fluke meter to the fuse block associated with one of the generators before starting it up, in order to get the voltage and frequency readings necessary to adjust it by using the controls on the outside of the panel door. After adjusting the first generator to the correct levels, Warford turned off the power to the vessel and repeated the same steps to adjust the second generator.

16. In the process of adjusting the third generator, however, Warford placed the alligator clip of his meter across the tabs of two adjacent fuses, creating a short circuit. The clip had also been placed on the "high side" of the fuse, i.e., so that the fuse was not interposed between the power source and the clip, resulting in an explosion and flash fire, rather than a blown fuse. Warford suffered severe burns to his face and left hand. The fire also destroyed the electrical panel.

17. In the investigation that followed, it was discovered, upon removing the metal cover from generator no. 1, that the lead wires attached to the neutral splice block had several inches of their insulation burned off. (A splice block is a piece of metal

to which wires can be easily attached, using nuts and bolts, in order to complete a connection.) One of the three bolts attaching the cables to the block had become loose inside the nut. The plaintiffs' expert witness, Frederick Osborne, and Theriault's expert witness, Richard Martin, agreed that this was evidence of a bad connection in the splice block, which resulted in the heat that caused the burning discovered after the accident; the condition was not caused by the accident. They also agreed that the bad connection would not have revealed itself in the operation of the generators prior to Warford's attempt to place a full load on them on the day of the accident.

18. Osborne and Martin further agreed that the bad connection could have contributed to the difficulty Warford was having in synchronizing the generators on January 15. But, they also agreed, the fact that the voltage regulators were from different manufacturers (which Edwards had identified as a potential problem while the vessel was still at Theriault's shipyard in Nova Scotia) would not have contributed to any difficulty in synchronizing the generators.

19. The evidence was in conflict, however, as to how generator no. 1 came to have the loose connection in the first place. It was undisputed that Theriault's work installing the generators aboard the vessel would not have involved making any

connections to the neutral splice block, which simply "completes the windings" internal to the generator. Indeed, during their time aboard the vessel in Nova Scotia, neither Warford nor Edwards ever saw anybody from Theriault working on the internal wiring of the generators.

20. Furthermore, the yard supervisor, the project foreman, and the electrician from Theriault who worked on converting the vessel testified that the generators arrived at its yard with their neutral splice blocks covered in electrical tape, and denied having taped or otherwise manipulated the neutral splice blocks themselves during the installation. Edwards agreed that, in his experience, Caterpillar generators arrive from their manufacturer with their internal connections already taped. Osborne testified, however, that, in his experience, Caterpillar generators come from the manufacturer without their internal connections taped, putting the onus of checking and taping the connections on the installer. Another employee of the shipowner corroborated this view.

21. Osborne acknowledged that, if a generator does arrive with its internal connections taped, an installer acts reasonably in refraining from untaping them to check for tightness.

22. The neutral splice block in generator no. 1 showed evidence of having been taped at some point prior to the fire

and, in fact, had been tied to an aluminum bracket that is not a standard feature of Caterpillar generators. From this evidence, the plaintiffs ask the court to infer that Theriault, contrary to the testimony of its witnesses, must have been responsible for taping the neutral splice block in generator no. 1.

23. The court declines to draw that inference. Jenkins acknowledged in an e-mail to Theriault following the accident that "all three gen[erators] were wired for 220 [volts] at the factory and then converted to 480 [volts] somewhere between there and your yard." There was no further evidence as to where that work had been done or who had done it. Significantly, there was no testimony or documentary evidence from Caterpillar, Southworth-Milton, or Atlantic Tractor as to whether any of them had been responsible for converting the generators to a higher voltage, or even to corroborate the testimony from the plaintiffs' witnesses that Caterpillar generators arrive from the manufacturer without their internal connections taped.

24. Given the absence of any direct proof as to who taped the neutral splice block in generator no. 1, the court finds the most plausible inference to be that the taping was done by whomever converted the generators to the higher voltage. That work, unlike the work Theriault did in connecting the generators to the vessel's electrical system, would seem likely to require

manipulating the neutral splice block inside the generators (though this, too, is a matter of inference because there was no testimony directly to that effect). In any event, though the court did not consider Theriault's witnesses to be particularly credible in testifying that the generators arrived at the shipyard with their neutral connections taped, the court cannot find, by a preponderance of the evidence, that it was Theriault personnel who taped the neutral splice block in generator no. 1.¹

25. The switchboard that IPS designed and built for the Isabelle Taylor lacked a number of features which, the plaintiffs contend, made it defective or unreasonably dangerous and contributed to Warford's mishap. First, the plaintiffs claim that, instead of open fuse blocks, the switchboard should have had either circuit breakers or "finger-safe" fuse blocks, which would have prevented Warford from attaching his meter clip to two different fuses. But the plaintiffs' expert witness, Osborne,

¹There is also Theriault's practice of refraining from working inside the generators so as not to void their warranties, which it followed when it contacted Caterpillar after discovering the mislabeled wires in generator no. 2. See ¶ 6, supra. The mislabeled wires, incidentally, were in a different generator from the one where the bad connection was ultimately discovered; the parties agree that the mislabeling, which was corrected while the vessel was still in Nova Scotia, had nothing to do with the accident.

gave no testimony on the use of circuit breakers, as opposed to fuses, in marine switchboards.

26. As to finger-safe fuse blocks, Osborne opined that "the danger is too great" to use open fuse blocks, but could not identify any standard that they violated or any marine switchboard manufacturer who uses them. Though IPS's expert witness, James Daley, acknowledged that finger-safe blocks are safer, he explained that open fuse blocks are still the industry standard because they provide the ease of access necessary to find and replace blown fuses in a switchboard. Indeed, Osborne acknowledged that finger-safe fuse blocks would have prevented Warford from even using a meter to adjust the levels of the generators, because that would have required holding the lead to the fuse block, manipulating the meter, and manipulating the controls on the outside of the door all at the same time, which is impossible for one worker to do alone.

27. Second, the plaintiffs claimed that IPS should have designed and built the switchboard with a plexiglass shield covering the fuse holders. Osborne, again, did not identify any standard that required a plexiglass shield in this context but, even putting that problem aside, he acknowledged that Warford was intentionally trying to touch the clip from his meter to the fuse

holders to perform his work.² Thus, a plexiglass shield, like the finger-safe fuse holders, might have prevented the accident, but would also have hindered necessary access to the fuses. Furthermore, Daley testified that no industry standard requires the use of a plexiglass shield in this context.

28. Third, the plaintiffs claimed that the fuses should have been placed closer to where the power entered the switchboard to avoid an inadvertent short. As Osborne admitted, however, this design would not have prevented the accident here. Warford did not accidentally contact a fuse holder while trying to access a different component, but was purposely trying to touch a fuse holder with the clip of his meter; the accident happened when he touched the clip to two fuse holders at the same time.

29. Fourth, the plaintiffs claimed that warnings of high voltage should have been placed on the switchboard or, relatedly, that the one high-ampacity area inside--the tops of the fuse holders--should have been identified as such. Osborne testified, however, that "there's no way I can indicate that [the presence of these warnings] would have changed anything in this particular

²Osborne explained that holes can be placed in the shield to accommodate a probe from an electrical meter, but this configuration, like the finger-safe fuse blocks, would have made it impossible for Warford to use a meter to adjust the generators.

incident," given Warford's experience working with high-voltage marine electrical panels. The court is also persuaded by Daley's opinion that warning labels are not required on marine switchboards because they are intended to be accessed only by experienced personnel who are aware of the attendant dangers.

30. Following the accident, Edwards returned to Newington to repair the switchboard. These repairs did not incorporate any of the safety features--finger-safe fuse holders, a plexiglass shield, a different configuration of the fuses in relation to the power supply, or warning labels--that Osborne deemed lacking.

31. Meanwhile, a representative from Caterpillar was on board working with the generators. Though he initially had difficulty in getting them to share loads in parallel, he succeeded once he had replaced the one dissimilar voltage regulator with a model more like the other two. Still, none of the expert witnesses who testified believed that the difference in the regulators contributed to Warford's difficulty in getting the generators to share loads on the day of the accident. Based on this testimony, the court finds that the dissimilarity in the regulators did not contribute to the accident.

32. After the accident, the Isabelle Taylor did not go fishing until February 4, 2004. Had the accident not occurred, it is possible--though hardly a given--that the vessel would have

gone fishing on January 17, 2004. The shipowner claims nearly \$202,600 in lost profits due to the accident. To compensate Warford for his medical expenses and other injuries he suffered from the accident, CNA, the shipowner's insurer, paid him nearly \$267,100. The defendants agree that this was a reasonable settlement of his claims against the shipowner.

33. As part of this settlement, Warford executed a "General Release, Indemnity Agreement, and Assignment." Through this agreement, Warford released all of his claims against CNA, the shipowner, and a number of affiliated entities, and assigned to them "all of [his] rights and causes of actions against third parties which are or may be responsible for [his] injuries . . . , including but not limited to, [IPS] and Southworth-Milton." Warford, the shipowner, and CNA (proceeding as Warford's assignee, per the agreement, and as the shipowner's subrogee) subsequently commenced this action against IPS and Theriault, but not Southworth-Milton.

Rulings of Law

34. Before turning to the merits of the plaintiffs' various theories of liability, the court must consider a threshold issue raised repeatedly by the defendants. They argue that Warford, by virtue of his release agreement with the other plaintiffs, did

not retain the right to proceed personally against the defendants for damages in excess of what he received in the settlement. This is correct, see ¶ 33, supra, but the point appears to be academic, at least from the defendants' perspective. If Warford did assign his claims for additional damages against them to CNA, then CNA is the proper plaintiff; if he did not, then he is the proper plaintiff. In either case, Warford and CNA are both named plaintiffs here, so at least one plaintiff has the right to proceed against the defendants to recover for any damages Warford sustained in excess of the settlement. Whether it is Warford or CNA who keeps those damages (assuming any are recovered) under their agreement would not seem to matter to the defendants.

35. The defendants essentially concede as much in their revised requests for findings and rulings, where they state, "It has been argued that Warford merely assigned his rights to [CNA]; he did not waive his rights entirely. This may be so; in any case, CNA acquired all of Warford's rights." The defendants argue that the identity of the proper plaintiff still matters, though, because "CNA's complaint seeks to recover only the sums that it paid on his behalf" in the settlement, to the exclusion of any additional damages to which Warford might be entitled. On this theory, CNA possesses Warford's right to recover those damages, but CNA has not asserted that right in the complaint.

36. The complaint, however, specifically seeks to recover on behalf of both CNA and Warford, or simply "Plaintiffs," for "damages related to the personal injuries of Warford," or, even more broadly, just "damages." In support of their more limited reading, the defendants rely solely on an allegation that "CNA paid Warford an amount to resolve his claim against [the shipowner] In consideration of amounts received, Warford assigned rights up to that amount to CNA" (emphasis added). But, as the defendants recognize, this allegation is incorrect: Warford assigned CNA "all of [his] rights and causes of actions against third parties," including the right to recover damages in excess of the settlement. Even assuming, despite this undisputed fact, that the plaintiffs should be bound by the contrary allegation in their complaint, it would follow only that Warford, rather than CNA, has the right to proceed against the defendants for those sums. Again, this distinction makes no difference to the defendants, so there is no reason to hold the plaintiffs to their mistaken allegation to the contrary.

37. The court rules, based on the unambiguous language of the settlement agreement, that Warford assigned all of his rights against the defendants to CNA, including his right to recover damages in excess of what he got in the settlement, and that the complaint pleads a claim for those damages on behalf of CNA.

With that formality out of the way, the court proceeds to consider the merits of the plaintiffs' claims.

38. The plaintiffs have brought a number of claims against the defendants: negligence (count I); breach of contract (count II); breach of implied warranty, including the implied warranty of workmanlike performance (counts III and V); strict products liability (count IV); breach of express warranty (count VI); and indemnification and contribution (count VII). These claims, in turn, arise out of two categories of wrongdoing: defects in the generators and defects in the switchboard. First, the plaintiffs fault the defendants for the condition of the generators on the day of the accident, which, the plaintiffs allege, required Warford to try to adjust the generators by using his manual Fluke meter to take readings inside the switchboard, in turn causing the accident. Second, the plaintiffs fault IPS for the design of the switchboard. The court will consider these theories in turn.

I. Defects in the Generators

39. The plaintiffs claim that the generators' inability to share an electrical load on the day of the accident was due to either (a) the dissimilar voltage regulators or (b) the bad connection in the neutral bus bar. This first alternative is unsupported by the evidence. As the court has found, based on

the agreement of all the expert witnesses, see ¶ 31, supra, the dissimilarity in the regulators did not contribute to the problem Warford was having with the generators on the day of the accident. Any wrongdoing by the defendants in the form of the dissimilar regulators, then, did not cause the plaintiffs' alleged injuries and therefore cannot support any of their claims. See 1 Thomas J. Schoenbaum, Admiralty and Maritime Law § 5-3, at 188 (4th ed. 2004) ("Proof that the wrongful act caused the damage is an essential element of a cause of action under the general maritime tort law.").³

41. Unlike the dissimilar regulators, the bad connection in the neutral bus bar in generator no. 1 could have caused the problem Warford was experiencing on the day of the accident. See ¶ 18, supra. So the plaintiffs argue that the accident would not have happened if the defendants had (a) inspected the connections inside the generators, or (b) ensured that the generators would properly share an electrical load, which, in turn, would have revealed the bad connection. For the reasons explained infra, neither of these theories has merit.

³Though the defendants rely extensively on New Hampshire law, federal maritime law provides the rules of decision in this case. See 1 Schoenbaum, supra, § 3-11, at 143.

42. The court has found that, when the generators arrived at Theriault's shipyard, the neutral bus bar in generator no. 1 had already been taped, likely by whomever was responsible for converting the generators from 220 volts to 480 volts. See ¶ 24, supra. As Osborne acknowledged, then, the defendants acted reasonably by installing the generator without untaping the connection to check it. See ¶ 21, supra. The court rules that the defendants were not negligent, nor did they breach the implied warranty of workmanlike performance, by failing to inspect the taped connection in the neutral bus bar in generator no. 1. Theriault likewise fulfilled its express contractual duty to "install" the generators,⁴ see ¶ 3, supra. "Where it has performed its tasks as a skillful workman should, . . . the [maritime] repair firm will not be held responsible for defects attributable to faulty workmanship." Little Beaver Enters. v. Humphreys Rys., Inc., 719 F.2d 75, 78 (4th Cir. 1983).

43. The defendants also did not breach any duty to ensure that the generators would properly share an electrical load, because the defendants had no such duty, either as matter of contract or otherwise. The provisions of a maritime contract are

⁴The plaintiffs have not identified any provision of the shipowner's contract with IPS that even arguably required it to inspect the generator, or any "express warranty" by either defendant as to the quality of the generators.

given their plain meaning unless they are ambiguous. See, e.g., Royal Ins. Co. of Am. v. Orient Overseas Container Line, Inc., 514 F.3d 621, 634 (5th Cir. 1984). While, as the plaintiffs emphasize, each defendants' contract required it to "convert the vessel's switchboard to paralleling ability," see ¶ 4, supra, this language does not obligate the defendants to ensure that the generators themselves would operate in parallel--only that the switchboard would enable them to do so. And, apart from its allegedly unsafe design, see ¶¶ 25-29, the plaintiffs have not identified any defect in the switchboard that would have interfered with its function in paralleling the generators. That defect, it is agreed, was in the generators, and their functioning was not the defendants' responsibility under the plain meaning of their contracts with the shipowner.

44. The absence of any express contractual commitment to ensure that the generators would work in parallel strongly suggests the absence of any implied duty toward that end, since "the nature and extent of an implied warranty of workmanlike service and any resulting indemnity depend upon the terms of the contract which gave rise to that warranty." Maritime Overseas Corp. v. Ne. Petroleum Indus., Inc., 706 F.2d 349, 354 (1st Cir. 1983). To hold a defendant to an implicit obligation that exceeds its express contractual duties, then, requires evidence

"that the parties intended [the defendant] should bear ultimate responsibility for the . . . operation or that [the defendant] was in a better position than [others] to prevent accidents during that operation." Id. at 354-55. The evidence here is to the contrary.

45. By all outward indications, the parties intended that Caterpillar--rather than the defendants--remained responsible for testing the generators under a full load to ensure that they operated properly. Atlantic Tractor, in fact, specifically informed the shipowner: that the start-up testing on the generators (which, notably, was performed by Atlantic Tractor, not the defendants) could not verify how they would work under a full electrical load; that doing so would also require adjusting the voltage regulators; and that a representative from Caterpillar would be aboard the ship for sea trials to make those adjustments. See ¶ 7, supra. Indeed, Atlantic Tractor emphatically told the shipowner that IPS need not be involved in this process. See id.

45. Moreover, as a practical matter, the defendants could not have ensured that the generators shared loads properly, because the problem caused by the loose connection in generator no. 1 would not have manifested itself until a full load was placed on the electrical system. See ¶ 17, supra. And the

refrigeration system--which was necessary to generate a full load--was not installed until after the vessel had left Theriault's shipyard and after Edwards had finished with the switchboard.⁵ See ¶ 14, supra. This sequence of events confirms the parties' understanding that Caterpillar, not the defendants, was responsible for ensuring that the generators worked properly.

46. While federal maritime law recognizes the general rule that a defendant is liable for breaching a duty voluntarily assumed by affirmative conduct, see, e.g., Sagan v. United States, 342 F.3d 493, 498 (6th Cir. 2003), the defendants did not, through any conduct identified by the plaintiffs, so assume the duty to ensure the proper operation of the generators. To the contrary, Theriault's actions suggest that it relied on Atlantic Tractor to perform this work, including the initial start-up. See ¶¶ 6-7, supra. The fact that Theriault's yard supervisor may have taken on the burden of coordinating the arrival of the various components necessary for the conversion project--while, it should be noted, maintaining that "actual responsibility for delivery of all this iron is not on our

⁵Indeed, as the shipowner acknowledged in removing the vessel from the yard, Theriault's job was "complete" at that point, even though work remained on the electrical panel and refrigeration system. See ¶ 9, supra.

shoulders"--is insufficient to transform the company into a "general contractor" bound to ensure the complete success of the conversion project. As is clear by now, Theriault could not have reasonably been expected to carry the task to completion, given how much of it had been purposefully left to other parties, as a matter of both contract and course of dealing, and clearly did not intend to do so.

45. As for IPS, Edwards did indicate that "load sharing [was] fine," even under the anticipated demands of the refrigeration system, before he left the vessel in Newington in December 2003. See ¶ 11, supra. And Warford testified that he relied on this assurance in attempting to run the refrigeration system off the generators on the day of his accident. The fact remains, however, that the shipowner knew, at least since the vessel left Nova Scotia, that the services of Atlantic Tractor would be required to make the necessary adjustments to the generators so they could operate properly under a full load, see ¶ 7, supra; Warford was also aware of that requirement, see ¶¶ 11, 14, supra. And Edwards himself had asked Southworth-Milton, during the same period, to send a technician to set up the voltage regulators. See ¶ 8, supra. The court rules that IPS did not voluntarily assume any duty to ensure that the generators worked correctly under a full load.

46. The plaintiffs also claim that the defendants failed to warn them "not to attempt to operate the generators" or "to investigate the reason of their irregularity," as Warford was doing at the time of the accident.⁶ But the defendants "had no duty to warn the shipowner of hazards of which the shipowner was aware or could reasonably have been expected to be aware." Canal Barge Co. v. Torco Oil Co., 220 F.3d 370, 376-77 (5th Cir. 2000). Here, the shipowner knew, because Atlantic Tractor told it, that the generators had yet to be tested under the demands of the refrigeration system, see ¶ 7, supra, so it should have come as no surprise that they did not work properly when Warford attempted to place that system on-line on the day of the accident. Warford was likewise on notice that Caterpillar's participation was necessary to ensure that the generators paralleled correctly under a full load. See ¶¶ 11, 14, supra. So the defendants had no duty to warn the plaintiffs of a risk they already appreciated: that the generators might not work

⁶Insofar as this argument is intended to suggest that the defendants should have warned Warford about the dangers of opening the electrical panel, it fails because those dangers were obvious, see ¶ 29, supra, and there is generally no duty under maritime law to warn of obvious dangers. See, e.g., Jackson v. Egyptian Navigation Co., 364 F.3d 113, 117-18 (3d Cir. 2004).

properly under the demands of the refrigeration system until Caterpillar made the necessary adjustments.

47. Furthermore, even if the defendants did have a duty to ensure the functioning of the generators under a full load, and breached it, that breach was not the cause of the plaintiffs' injuries. Maritime law recognizes the doctrine of superseding cause to relieve a defendant of liability, even though its actions substantially contributed to the plaintiff's injury, where "the injury was actually brought about by a later cause of independent origin that was not foreseeable," including the plaintiff's own behavior. Exxon Co., U.S.A. v. Sofec, Inc., 517 U.S. 830, 837 (1996).⁷ It is undisputed that the accident would not have occurred had Warford not placed the alligator clip from

⁷As the Court explained in Exxon, the concept of superseding cause is distinct from the concept of comparative fault, even where the superseding cause takes the form of the plaintiff's own negligent actions. 517 U.S. at 837-38. The court's ruling that Warford's actions were the superseding cause of the plaintiff's injuries, then, does not require it to resolve the parties' dispute over whether the shipowner's comparative fault can bar a claim for breach of the implied warranty of workmanlike service, as opposed to a claim for negligence. Compare Curcuru v. Rose's Oil Serv., Inc., 846 N.E.2d 401, 413 (Mass. App. Ct. 2006) (holding that comparative negligence does not bar warranty claim under maritime law) with Knight v. Alaska Trawl Fisheries, Inc., 154 F.3d 1042, 1046 (9th Cir. 1998) (holding to the contrary). Again, causation is an essential element of a breach of warranty claim under maritime law, 1 Schoenbaum, supra, § 5-8, at 224, and cannot be shown when it was the plaintiff's own conduct that provided a superseding cause of his injury, id. § 5-3, at 192.

his meter across the terminals of two different fuses, or if he had placed the clip on the protected side of the fuses rather than the unprotected "high" side. See ¶ 16, supra.

48. Even if it was the defendants' wrongdoing that caused Warford to try to parallel the generators on the day of the accident, the way he went about that was the actual cause of the accident. And the plaintiffs have not suggested--nor can the court find--that Warford's disregard of the fundamentals of electrical circuitry on that day was foreseeable to the defendants, particularly given his long history of working with maritime electrical systems,⁸ see ¶ 5, supra. The court rules that Warford's actions were the superseding cause of the plaintiffs' injuries, even if the defendants were at fault in failing to ensure the proper operation of the generators.

49. Finally, as a matter of law, the defendants cannot be held liable for the defects in the generators under theories of strict products liability or breach of implied warranties of merchantability or fitness for a particular purpose. Though

⁸Warford testified at trial that, in attempting to parallel the generators on the day of the accident, he simply followed the procedures he had seen Edwards carrying out or the directions Edwards gave over the telephone. But Warford did not claim that Edwards showed or told him how to place the alligator clip and, even if he had, there is no way that an experienced electrician would have showed or told him to do it across two different fuses, on the unprotected side.

maritime law incorporates the doctrine of strict products liability, E. River Steamship Corp. v. Transamerica Delaval, Inc., 476 U.S. 858, 865 (1986), that liability attaches only to “[o]ne who sells any product,” Restatement (Second) of Torts § 402A (1965).⁹ Caterpillar and its dealers, rather than the defendants, were the “sellers” of the generators; they were delivered to Theriault’s shipyard for installation aboard the vessel. And one who merely installs a defective product is not subject to strict liability under § 402A. See, e.g., Winters v. Fru-Con Inc., 498 F.3d 734, 745 (7th Cir. 2007); Counts v. MK-Ferguson Co., 862 F.2d 1338, 1340-41 (8th Cir. 1988); Malloy v. Doty Conveyor, 820 F. Supp. 217, 219-222 (E.D. Pa. 1993); 1 Louis R. Frumer & Melvin I. Friedman, Products Liability § 5.13[2], at 5-120--5-122 (1960 & 2008 supp.).

50. Similarly, while maritime law incorporates the Uniform Commercial Code, including Article 2, see Southworth Mach. Co. v. F/V Corey Pride, 994 F.2d 37, 40 n.3 (1st Cir. 1993), those provisions--including the implied warranties of merchantability and fitness for a particular purpose--do not apply to the

⁹Liability has since been expanded to one “who sells or distributes” the product, Restatement (Third) of Torts: Products Liability § 1 (1998), but, as the authorities cited infra make clear, that category also excludes those outside the chain of distribution who merely install the product, like the defendants.

defendants' installation of the generators. "Article 2 of the U.C.C. applies to 'transactions in goods.' It does not govern agreements to provide services," including installation. Merritt Logan, Inc. v. Fleming Cos. (In re Merritt Logan, Inc.), 901 F.2d 349, 361 (3d Cir. 1990); see also, e.g., Malloy, 820 F. Supp. at 222; In re Trailer & Plumbing Supplies, 133 N.H. 432, 437-38 (1990). The defendants are not liable for the defects in the generators under any theory asserted by the plaintiffs.¹⁰

II. Defects in the Switchboard

51. The plaintiffs assert a number of claims against the defendants based on the alleged defects in the design of the switchboard. See ¶ 38, supra. To prevail on any of these claims, of course, the plaintiffs must prove that the switchboard

¹⁰CNA asserts claims for indemnification and contribution based on its settlement, as the shipowner's insurer, of Warford's claim against it. But, as the shipowner's subrogee, CNA is entitled to indemnification only if the shipowner (1) had a contractual right of indemnification or (2) was liable to Warford (i) vicariously, for the defendants' torts or (ii) as a seller of a product supplied by the defendants. Restatement (Third) of Torts: Apportionment of Liability § 22(a) (2000). None of those conditions is satisfied here. (CNA might also be entitled to indemnification for the defendants' breach of the implied warranty of workmanlike performance, see Ryan Stevedoring Co. v. Pan-Atl. S.S. Corp., 350 U.S. 124, 132-35 (1955), but no such breach has been proven.) CNA is not entitled to contribution because, as discussed at length, it has not proven the defendants' liability. See Restatement (Third) of Torts: Apportionment of Liability § 23 cmt. j.

was, in fact, defective in some way that contributed to their injuries. See 1 Schoenbaum, supra, § 5-6, at 208. They have not carried that burden.

52. Again, the plaintiffs allege four defects in the switchboard: (a) the use of open, instead of "finger-safe," fuse blocks, (b) the absence of a plexiglass shield over the fuse blocks, (c) the placement of the fuses less than the shortest possible distance from the power source, and (d) the lack of warnings outside or inside the panel. But Osborne conceded, and the court finds, that neither (c) nor (d)--assuming, dubitante, that they were defects at all--contributed in any way to the accident. See ¶¶ 27-28, supra.

53. As to the open fuse blocks and the lack of a plexiglass shield, the court finds that these were not defects. To prevail on any claim based on a defective product, "the plaintiff must, in every case, in every jurisdiction, show the product was defective. It is not enough for the plaintiff to show that a better, safer, or different design would have prevented his or her injury." 1 Frumer & Friedman, supra, § 8.01[5], at 8-20 (quotation marks, emphases, and footnotes omitted). Thus, even though Osborne and Daley more or less agreed that the finger-safe fuse blocks and plexiglass shield would have made the switchboard

“safer,” see ¶¶ 25-26, supra, it does not follow that their absence made the switchboard defective.

54. A product “is defective in design when the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design.” Restatement (Third) of Torts: Products Liability § 2(b) (1998). The evidence overwhelmingly indicates neither finger-safe fuse blocks nor a plexiglass shield covering the fuse blocks to be a reasonable alternative design in a switchboard on a commercial vessel. Osborne could identify neither any industry standard that required these features nor any manufacturer who uses them. See ¶¶ 25-26, supra. Under maritime products liability principles, this does not necessarily doom the plaintiffs’ claims, see Frantz v. Brunswick Corp., 866 F. Supp. 527, 534 (S.D. Ala. 1994), but it does suggest that the features are not part of a reasonable design. Indeed, Daley explained (and Osborne acknowledged) that the use of finger-safe fuse blocks or a shield makes it more difficult to take readings from the panel or even to change fuses. See ¶¶ 26-27, supra. These tasks are essential to the continued safe operation of a vessel and are regularly performed by experienced personnel like Warford. Finally, it is telling that, even when IPS rebuilt the

switchboard after the accident, neither finger-safe blocks nor a shield were incorporated. See ¶ 29.

55. In the face of this evidence, the plaintiffs offered only Osborne's conclusory statements that it was not "prudent and workmanlike"--a phrase he later acknowledged to be essentially subjective--to design the panel without the finger-safe blocks or the shield. The court found this testimony unconvincing. The court finds that these features do not embody a reasonable alternative design and, consequently, that their omission from the switchboard did not amount to the defect necessary to support any of the plaintiffs' claims.

Conclusion

Based on the foregoing, the court rules in the defendants' favor on all the plaintiffs' claims. The clerk shall enter judgment accordingly and close the case.

SO ORDERED.



Joseph N. Laplante
United States District Judge

Dated: October 21, 2008
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