

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

KAWASAKI KISEN KAISHA, LTD.,
and "K" LINE AMERICA, INC.,

Plaintiffs,

and

UNION PACIFIC RAILROAD CO.,

Intervening Plaintiff,

v.

PLANO MOLDING CO.,

Defendant.

Case No. 07 C 5675

Hon. Harry D. Leinenweber

MEMORANDUM OPINION AND ORDER

Before the Court are the trial record and post-trial briefs of Plaintiffs Kawasaki Kisen Kaisha, Ltd. and "K" Line America, Inc. (hereinafter, collectively, "K-Line"); Plaintiff Union Pacific Railroad Co. ("UP"); and Defendant Plano Molding Co. ("Plano"). For the reasons stated herein, the Court finds in favor of Defendant.

I. FACTUAL BACKGROUND

As the factual background of this dispute has been described repeatedly, see, e.g., ECF No. 78, only a cursory review of the underlying facts is provided here.

Plano is an Illinois corporation that designs, manufactures, and sells plastic storage boxes. Plano contacted CMT International ("CMT"), a company that assists American customers who wish to purchase products from Asia, because it needed new molds. CMT solicited bids from manufacturers, and Plano selected Kunshan, a Chinese company, as its fabricator for two steel molds ("Molds") for its Illinois factory.

World Commerce Services LLC ("World") was selected to coordinate the Molds' transportation from China to the United States. The World Bill of Lading identifies Plano as the consignee. Plano received the World Bill of Lading on April 3, 2005. It contained a "Himalaya clause" that grants World's subcontractors all warranties and indemnities defined in the bill of lading. Under Section 2.3, a "Merchant" is defined as "the Shipper, the Receiver, the Consignor, the Consignee, the Holder of this Bill of Lading and any person having a present or future interest in the Goods or any person acting on behalf of any of the above-mentioned persons." Ex. 79. According to the World Bill of Lading, if any party other than World packs the shipping container, the Merchant warrants "that the stowage and seals of the containers are safe and proper and suitable for handling and carriage and indemnifies [World] for any injury, loss or damage caused by breach of this warranty." *Id.*

As the freight forwarder, World contracted with THI Group LTD ("THI") and K-Line to ship the Molds from China to Illinois. K-Line, in turn, subcontracted shipping within the United States to UP. The Molds were packed into two crates of different sizes, weighing collectively about 25,000 lbs. These were then loaded into a large shipping container (the "Container") owned by K-Line. The Molds were on a UP train moving through Oklahoma on April 21, 2005 when the Molds broke through the bottom of the Container and fell onto the track while the train was in transit at approximately 70 m.p.h. The train derailed, causing \$4 million of damage to UP and K-Line customers. Plaintiffs claim that the Molds were not secured properly in the Container and were the cause of the derailment. They seek to hold Plano liable for the damage caused by the accident pursuant to the World Bill of Lading.

II. PROCEDURAL BACKGROUND

Following the derailment of the UP train, various Complaints were filed in the Southern District of New York by owners of cargo damaged by the derailment, as well as among the parties to this suit. K-Line filed an action in this District against Plano and CMT, but it was consolidated for pre-trial proceedings in the Southern District of New York with eight other actions. All other claims settled, leaving only Plaintiffs' suit against

Plano, which the Southern District of New York transferred back to this District.

On July 27, 2011, this Court granted Plano's Motion for Summary Judgment on Plaintiffs' breach of contract and negligence claims, finding that because it was not a party to the K-Line bill of lading, nor a principal of a party to the bill of lading, it could not be bound by it. Plaintiffs appealed, and the Seventh Circuit affirmed the Court's decision regarding the negligence claims and Plaintiffs' breach of contract claims under the K-Line bill of lading. However, the Seventh Circuit found unresolved questions of fact material to the determination of Plaintiffs' contract claims based on World's Bill of Lading. The court stated that, in analyzing Plaintiffs' contention that Plano is bound by the terms of the World Bill of Lading as a contracting party, "we must consider Plano's role in obtaining World as the freight forwarder for the molds' transportation." *Kawasaki Kisen Kaisha, Ltd. v. Plano Molding Co.*, 696 F.3d 647, 656 (7th Cir. 2012). The Seventh Circuit found this question important, because "if Plano engaged World to handle the shipment on its own behalf, it could be found liable to K-Line and Union Pacific by the plain terms of the World Bill of lading." *Id.* The Court found the evidence surrounding the Plano/CMT/World transaction "murky at best," and concluded that conflicts in the

record created a material question of fact that required remand.

Id. As such, the Seventh Circuit concluded:

On this record, we are unable to ascertain whether CMT or Plano arranged the molds' shipment with World. Without this determination, we cannot conclude whether or not Plano engaged World in a manner that would impose liability as a contracting party, and subject Plano to liability under the World bill of lading. As to this narrow issue, we reverse the district court's grant of summary judgment and remand for further consideration.

Id. at 657-58.

On June 24, 2013, the Court conducted a one-day bench trial focusing on the narrow issue raised by the Seventh Circuit with respect to the World Bill of Lading. Plaintiffs and Plano presented both live and deposition testimony regarding the Plano/CMT/World transaction. After the trial concluded, the Court ruled that Plano was bound to the World Bill of Lading and could be held liable to Plaintiffs pursuant to the Merchant and Himalaya clauses in the World Bill of Lading. See, *Kawasaki Kisen Kaisha, Ltd. v. Plano Molding Co.*, No. 07 C 5675, 2013 U.S. Dist. LEXIS 101118 (N.D. Ill. July 19, 2013).

The parties had earlier stipulated to delaying determination on causation and damages until after the Court ruled on whether Plano was subject to the World Bill of Lading. Having resolved that issue in the affirmative, the Court set the matter for trial on causation and damages. However, just days before trial began,

the parties stipulated to referring the issue of damages calculation to a magistrate judge, should it be necessary. ECF No. 193. Thus, on October 15, 2013, the parties began a three-day trial to determine whether Plano was indeed liable for the accident, and if so, for what categories of damages it was liable.

The trial was a classic "battle of the experts," with the vast majority of the testimony focusing on presenting evidence and testimony supporting or contesting the expert opinions of the parties. Plaintiffs' expert, Dr. Robert Vecchio, presented his opinion that the crates containing the Molds were loaded improperly into the Container in a manner that did not distribute their weight sufficiently, which overstressed the metal cross-members supporting the floor of the container. According to Dr. Vecchio, the crates were not lashed, and thus experienced "dynamic amplification," which means, in simple terms, that they bounced. This bouncing increased the stresses on the cross-members until they failed.

Plano responded with the testimony of three experts. Their primary expert, Mitchell Kaplan ("Kaplan"), testified that the cause of the failure was not the loading of the crates or dynamic amplification, but instead the defective condition of the Container. Specifically, the welds fixing the cross-members to the side of the container were defective, which made them weak

and unable to withstand the amount of stress they otherwise would. Plano also presented the testimony of two other expert witnesses, Thomas Johnson and Dr. John Slater, who testified to, among other topics, the poor condition of the welds.

Following the witness' testimony, the Court then directed the parties to submit post-trial closing briefs. The parties each filed one closing brief, and a second brief regarding the types of damages at issue in the case.

III. DISCUSSION

A. Evidentiary Rulings

Prior to trial, the parties filed Motions *in Limine* seeking to bar expert testimony pursuant to *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) and various Federal Rules of Evidence. The Court denied the Motions, noting that there is less of a need for the Court to serve as a "gatekeeper" as to expert testimony during a bench trial, since the Court can weigh the expert testimony appropriately while deciding the case. *See*, Tr. at 4; *see also*, *United States v. Brown*, 415 F.3d 1257, 1269 (11th Cir. 2005) ("There is less of a need for the gatekeeper to keep the gate when the gatekeeper is keeping the gate only for himself."). Despite this ruling, the parties in their closing briefs again encourage the Court to exclude expert testimony as improper under *Daubert*. The Court declines to do

so. The Court found all of the experts qualified and their testimony proper for consideration. However, as discussed below, the Court did consider the methods and analyses used by each expert and weighed what testimony it found most persuasive and credible, keeping their credentials and expertise in mind.

There is one other expert issue that the Court feels compelled to address. Plaintiffs did not learn that Plano intended to call Mr. Johnson and Dr. Slater as witnesses until October 4, 2013, eleven days before trial. These disclosures are clearly late under Federal Rule of Civil Procedure 26. Plaintiffs argued that since they were unable to depose these individuals prior to trial due to their late disclosure, that their testimony should be struck.

Under Federal Rule of Civil Procedure 37, "if a party fails to provide timely expert disclosures as required under Rule 26, exclusion of the untimely expert opinion is proper unless the party shows that its late disclosure was justified or harmless." *Willis v. Sears Holdings Mgmt. Corp.*, No. 10 C 5926, 2012 U.S. Dist. LEXIS 128208 at *17 (N.D. Ill. Sept. 7, 2012). Plano made no effort to justify the late disclosure of these witnesses. Despite this failure, however, the Court finds the tardy disclosure harmless. These witnesses are not new to this controversy. Mr. Johnson and Dr. Slater both served as experts for parties involved in earlier stages of this dispute. Thus,

the substance of their testimony was not a total surprise to Plaintiffs, as they have had access to Mr. Johnson and Dr. Slater's expert reports for more than five years. Indeed, Plaintiffs' expert, Dr. Vecchio, issued a rebuttal report in 2008 in response to those reports. The Court is convinced that the Plaintiffs suffered no undue surprise or prejudice by the tardy disclosure.

Finally, the parties presented the Court, in their First Amendment to Pretrial Order (ECF No. 188), with a number of objections to evidence and testimony. The Court considered and ruled on some of these objections during trial. Rather than go through and rule on any outstanding objections, the Court will address below any relevant exhibits or testimony for which a ruling on an objection is required.

B. Findings of Fact and Conclusions of Law

Pursuant to Federal Rule of Civil Procedure 52, the Court enters the following written Findings of Fact and Conclusions of Law based upon consideration of all the admissible evidence as well as this Court's own assessment of the credibility of the trial witnesses.

1. Findings of Fact

a. The Molds Were Secured Properly in the Shipping Container

One central question of this case is whether the Molds were stowed and secured properly inside the shipping container. Put simply, Plaintiffs argued that the Molds were not secured, whereas Plano argued that they were. The limited evidence before the Court, however, demonstrates that it is more likely than not that the Molds were secured within the Container.

The Court notes at the outset that neither party presented any witnesses who were actually involved in the loading of the crates into the Container. Obviously, such information would have been useful to the parties and the Court. However, the Court understands that acquiring such information from a foreign jurisdiction can, at times, be difficult. Plaintiffs suggest that, to the extent there is any uncertainty about the exact stowage of the Molds, the Court should draw an adverse inference against Plano. They argue that because Plano had "close connections" with Kunshan, it was in a better position to get such information, whereas any attempts Plano made in the New York litigation were unsuccessful. Pls.' Closing Br. at 8-9. The Court declines to draw such an inference, as the cases Plaintiffs cite in support of this notion do not stand for the broad application of such an inference in circumstances such as these.

That the parties in China involved in the loading and securing of the crates refused to get involved is unfortunate, but the Court declines to punish Plano for their inaction. Thus, the determination of whether the Molds were loaded properly must be made based on documentary evidence and the opinions of the parties' experts.

Based on the arguments of the parties, in determining whether the crates were loaded in the container correctly, there are two main questions. First, whether the crates were secured and lashed in the container, and second, whether the crates were loaded in such a way as to distribute their weight in the Container properly.

With respect to the question of whether the crates were loaded in the container in a way that distributed their weight properly, Plaintiffs cited Circular 43-D, a set of guidelines approved by the Damage Prevention and Freight Claim Committee Association of American Railroads, as support for this contention. See, Ex. 122. Illustration 3 of Circular 43-D states that "not more than 25,000 lbs. uniformly distributed in any 10 linear feet can be loaded on trailers meeting the specifications of AAR Intermodal Standards and Recommended Practices M-931." Ex. 122 at 6. In loading railroad containers, wooden pallets, wooden beams or other dunnage are used to help disburse the weight of cargo.

Plaintiffs do not claim that the total weight of the Molds violated Circular 43-D, but that the weight was too concentrated. Plaintiffs claim that the crates were loaded in the center of the Container. Again, neither party presented testimony from anyone involved in the loading explaining where in the Container the crates were placed or how they were secured. Instead, Plaintiffs rely on information found in an investigation report written after the accident by a company called Intertek Caleb Brett (the "Intertek Report"), and a "Testification" from Shanghai Ocean Shipping Tally Company (Ex. 127). The Court notes that while they rely on the Testification as to the location of the crates in the center of the Container, Plaintiffs ignore the statement in the document that the crates were "packed sound." Ex. 127 at WCS000185. The Intertek Report also states that the crates were placed in the center of the Container. While no one from Intertek testified at trial regarding the report, both parties rely on it heavily without objection, so the Court will admit it into evidence.

In any event, Dr. Vecchio's assessment of the accident is that the crates containing the Molds fell through the center of the container, in the area between cross-beams 10-13, because their weight was not distributed properly. As Vecchio explained, "the weight of the mold crates, one of the mold crates was higher than the floor capacity and caused the floor beams to be

overloaded, which caused them to fracture, which allowed the molds to pass through the floor." Tr. at 103. In other words, "the mold weight was too concentrated relative to the footprint that it was placed in on the floor of the container and consequently overloaded the floor." *Id.* at 102.

Dr. Vecchio asserted that the crates would not have burst through the bottom of the container had their weight been disbursed properly. What appears to be the remains of one pallet, along with many other pieces of wood, were found in the container after the incident. See Pls.' Ex. 278-P, Tr. 110-112. Dr. Vecchio testified that the pallet in the picture was, according to his estimation just from looking at the photograph, approximately four feet by four feet, a standard size for a pallet. *Id.* at 110-12, 184. He also acknowledged that the pallet would have been sufficient to disburse the weight of the smaller crate. *Id.* at 186. It is, however, unknown which crate sat on this pallet.

Dr. Vecchio also opined that there was a second pallet based on information he was provided by Plaintiff's attorneys and the Intertek Report, which indicated that the crates were on pallets. Tr. at 191. When asked what he did to determine whether there was a second pallet, he said LPI "looked through the debris to see what was there, and I reported what was there." *Id.* at 193. When asked if he saw other pallets, Dr. Vecchio stated, "[n]ot in

recognizable form." *Id.* So even though Dr. Vecchio believed there was a second pallet, he assumed that whatever may have happened to it, it was not sufficient to disburse the weight of the crates.

Which leads the Court to the largest problem with Dr. Vecchio's assertions - they are based on speculation that the Court finds unpersuasive. It bears repeating first that no evidence was put forth as to how the crates were actually loaded in the container, and Dr. Vecchio did no investigation as to how they were loaded. Dr. Vecchio states that the one pallet found in the container is the only one found in "recognizable form." *Id.* That would not surprise the Court, considering the damage that the derailment caused. According to Dr. Vecchio's own estimates, between 50-66% of the container's floor was gone after the accident, and as he acknowledged, there was "wood everywhere." (Tr. at 187, 201-02) ("There were also multiple containers that were damaged, and there was wood everywhere from all of the containers that were damaged.") More than 30 cars derailed, and debris was found several miles west of the derailment. However, aside from the possibility that the second pallet was the proper size and was simply destroyed in the derailment, it is clear that, contrary to Dr. Vecchio's testimony, there were remnants of pallets found at the crash site. Exhibit 281 appears to show two pallets that survived the

accident, as well as several long boards. Dr. Vecchio testified that he did not remember if he had seen the picture before.

The presence of all of the wood debris, as well as the pallets and boards shown in Exhibit 281, is important because Dr. Vecchio himself acknowledged that dunnage of the proper size, such as square pieces of lumber or wood planks, could be used to distribute the crates' weight. Indeed, he testified that if the heavier crate had been supported by dunnage of a sufficient length, the larger crate would not have fallen through the container floor. While he said that he had not calculated the dimensions of the necessary dunnage, he indicated he thought such boards would need to be at least 8 feet long. He also acknowledged that the boards in Exhibit 281 were approximately eight feet long. The Court also notes that two pallets of the size found in the container put together would also be approximately eight feet by eight feet.

Put simply, the evidence presented does not support Dr. Vecchio's conclusion that the weight of the crates was not distributed properly. Plaintiffs presented no evidence as to how the crates were actually loaded. The evidence also showed that the pallet found in the container could have supported the smaller crate, or served as partial support for the larger crate. The wood and debris found at the crash site indicates that it was

likely that both crates were placed on pallets or dunnage to help disburse their weight properly.

With respect to the question of whether the crates were secured and lashed in the container, the evidence presented indicates that they were. First, the Intertek Report relied upon heavily by both parties states clearly that the Molds were secured upon loading. In describing the loading of the Molds into the container, Section 3.05 of the Intertek Report states:

Only two cases were loaded in [the container] when the appearance of two cases was noted in sound condition, the stowage position was at the middle of the Container No. TRLU2733410. **On completion of stowage, securing and lashing was done and the container was sealed** by Shanghai Ocean Shipping Tally Co., Ltd with the seal No. CK34459.

Ex. 130 (emphasis added). Dr. Vecchio relied heavily on the Intertek report for a variety of information and data in forming his opinion. Dr. Vecchio testified that it was his understanding "that the Intertek report provided the best available information," and that he "had no reason not to believe it." Tr. at 208, 259. Despite such heavy reliance on the Intertek Report for a wealth of other information regarding the accident, Plaintiffs disregard the statement about the Molds being secured and lashed completely, arguing that "the post-derailment investigation did not unearth any evidence this was done." Pls.' Closing Br. at 8. Dr. Vecchio echoed this argument that the

Molds were not secured and lashed, claiming that he saw no evidence the Molds were lashed within the container, and that dents in the floor of the container support the conclusion that no lashing had been done.

The Court finds Dr. Vecchio's testimony on the subject of the securing and lashing of the Molds to be unpersuasive. First, Circular 43-D, upon which Dr. Vecchio relies to state that the crates were not loaded properly, gives no indication that lashing is a necessary requirement for securing cargo in a container. See, Ex. 122. Second, Dr. Vecchio's theory of the accident hinges on the idea that the Molds were not lashed down properly in the container, began to bounce around when they were subject to vertical amplification, and eventually broke through the bottom of the container, thereby causing the derailment. The lashing, or alleged lack thereof, is thus critical to his theory. Yet he disregarded the statements of the Intertek Report that the Molds were, in fact, secured and lashed despite acknowledging that the report was the best source of information and relying on it heavily for other information. Nor did he contact the drafters of the Intertek Report to follow up with them about their statements as to the lashing of the Molds.

Third, the Intertek report is not the only indication that the Molds were secured. In an email from THI's Joana Feng to World's John Wember, Feng stated that "wooden brackets" were used

"to fix the case[s] in order not to move when transmitting [sic]." Ex. 280 at WCS 00254. Dr. Vecchio testified that he had never seen that document before, so when he was preparing his report, he did not take it into account. Tr. at 257-58.

Fourth, the physical evidence upon which Dr. Vecchio relies to support the theory that the Molds were not lashed down is inconclusive. This evidence takes the form of several "significant dents" in the wood floor of the container. Tr. 247-48. He claims that, in his opinion, those dents show that the Molds were not lashed vertically. But there is no evidence indicating when or how those dents were caused. Dr. Vecchio could not say definitively whether the dents were caused by the bottom of the pallet, or the molds themselves if they had broken through the crates before falling through the floor. Tr. 280. Nor could he say when they occurred. Indeed, after acknowledging that they could have occurred at the grade crossing the train passed over prior to the accident or when the container was offloaded from the truck in China, Dr. Vecchio acknowledged "those dings could occur anywhere where there was a significant dynamic amplification." Tr. at 281. This testimony is in line with that of Plano's expert Thompson, who indicated that ". . . the dings show that at least at some point the crates were moving around. Whether it was towards the end of the failure or more towards the beginning, we don't know." Tr. at 486. This

testimony makes it clear that it is just as likely that the dents occurred when the Molds were being loaded into the container (possibly before being lashed) or after the floor began to fail.

The Court acknowledges that neither side presented any material found in the Container that they claim was the lashing for the crates. But again, because no testimony was presented as to how the crates were lashed into the Container, it is not clear what that material was, or whether investigators even searched for it. Again, with the amount of damage and debris, it is entirely possible the lashing was lost or destroyed in the derailment. In addition, the derailment scene was not protected from possible scavengers immediately following the accident. See, S. Gannon Dep. at 146 (noting that the scene was not "secure" the night after the derailment). It is certainly possible that a bystander could have removed lashing, or other debris, from the unsecured site if it had any value.

Based on the limited evidence before the Court, it concludes that it is more likely than not that the Molds were secured and lashed in the Container. In any event, Plaintiffs failed to meet their burden of showing that they were not lashed. They disregard the "best information available" in disregarding the Intertek Report, neither they nor their expert contacted or discussed the loading and storage of the Molds with any of the clearly identifiable parties involved in their stowage, and they

read more significance into the dents in the flooring than the Court is willing.

b. The Shipping Container was Defective

The Court finds that the shipping container was defective. The bottom of the container consisted of twenty metal cross-members (numbered, for purposes of trial, 1-20, with 1 at the door end and 20 at the nose end) that were welded to the side rails of the container. These cross-members supported the floor of the container. The purpose of the welds was to transfer the load from the cross-members to the side rail. Defendants put forth evidence establishing that a significant number of the cross-members had a bad weld to the side rails of the container.

The expert testimony and physical evidence indicate that many of the welds were defective. The purpose of all welding in steel products is to not have the weld fail, but to have the base metal surrounding the weld fail if the weld is overloaded. If done properly, the weld will not break, and instead the weld will hold and the base material to which the weld is attached will fail and tear, resulting in "plastic deformation." Failures that do not demonstrate plastic deformation indicate that the weld was bad. Various conditions, such as poor repairs and corrosion, can weaken a weld.

Plano's expert Kaplan testified that an examination of cross-members 14, 15, 17 and 19 showed welds that had been

repaired previously and that were "quite poor." Tr. at 318. They had "virtually every weld problem that you can have," including lack of penetration, undercutting, porosity and corrosion. *Id.* These welds were subjected to chemical analyses and metallurgical analyses according to protocols agreed to by the parties which demonstrated that these welds were poor.

Kaplan also examined the welds on cross-members 10, 11, 12 and 13, which were the cross-members Dr. Vecchio identified specifically as being the ones that failed and led to the derailment. All of those cross-members except for No. 11 also demonstrated that they suffered from poor welds, as many of them failed without any plastic deformation. For example, while one of the welds in No. 10 showed some plastic deformation indicating it was a good weld (see Ex. 142 at 50), the other weld on that cross-member showed no plastic deformation, indicating it was an improper weld (*id.* at 51). Photographs presented at trial of the welds demonstrated that several welds failed without any, or with very slight, plastic deformation.

Kaplan's conclusions regarding the quality of the Container's welds were supported by other witness' testimony. For example, Dr. Slater testified that he observed "clear evidence" of poor welding in the container. Tr. at 523. He stated that "[e]ffectively about half or more than half of the welds joining the side sill to the floor beams were effectively

poor in relation to the method of fracture or their prior corrosion and cracking possibility as a result of fatigue." *Id.* at 526. Keith Cronin, who investigated the derailment, testified that he examined the welds and saw some that had old breaks in them as evidenced by rust within the welds. Cronin Dep. at 106. He also indicated that one of the welds had been broken for an extended period of time. *Id.* at 83.

In contrast, Dr. Vecchio concluded that the condition of the welds had no bearing on the derailment. He argued that many of the relevant welds did show significant tearing of the side sills, arguing that such tearing indicates that the welds were strong enough since it was the side sill that tore and not weld that failed. This reasoning is consistent with that of Plano's experts. However, in reviewing the photographs of the welds, it is undeniable that many of the welds appear to have suffered little or no plastic deformation. Indeed, during his direct examination on the subject, Dr. Vecchio ignored the fact that a photograph from his own report of cross-member No. 10, one of the key cross-members Dr. Vecchio claims failed, showed a weld failure with no tearing of the side sill at all. *See, Ex. 142* at 51. The court notes that several other welds Dr. Vecchio claims showed plastic deformation did not appear to show much tearing. *See, id.* at 54 (No. 12), 56-57 (No. 13). Many of these defective

welds were located in the center of the car, where Vecchio concluded the Molds fell through to the track.

Based on the testimony and evidence, the Court finds that the Container, particularly many of the welds of the cross-members to the side sill of the Container, was defective.

*c. Defective Welds in the Shipping Container
Caused the Molds to Fall Through the
Bottom of the Container and Cause the Derailment*

The heart of this dispute is what caused the derailment: inadequate, unstable stowage and weight overload, as concluded by Dr. Vecchio, or the weak welds at the bottom of the container, as suggested by Plano's experts. The Court finds Plano's position is supported by a preponderance of the evidence.

Dr. Vecchio's theory is that the crates fell through the center of the container, in the area of cross-beams 10-13, because their weight was not distributed properly pursuant to Circular 43-D. He claims the weight distribution problem was exacerbated by the failure to lash the crates properly, which caused dynamic amplification, and testified that there were no problems with the welds. Among other support for his conclusions, Dr. Vecchio relied upon a finite element analysis ("FEA"), a computer model that he used to calculate the stresses in the Container. Dr. Vecchio asserts that his FEA supports his causation theory.

Plano's experts disagreed with Dr. Vecchio's conclusions. Their testimony varied, but they were in agreement that the weak welds were the reason the crates fell through the floor of the container. Plano presented their own FEA that demonstrated the Container should have been able to support the crates, even if they were not stowed in accordance with Circular 43-D.

The Court finds Plano's explanation more convincing. As explained above, Plaintiffs failed to establish that the crates were loaded into the Container improperly. Based on the evidence, it appears likely that the crates were stowed and secured properly, which is contrary to fundamental conclusions reached by Dr. Vecchio. This cuts against his claim that the weight was not distributed properly in the Container, and it contradicts his theory of dynamic amplification playing a role in the failure of the container. In addition, the Court found that many of the welds were defective, including welds in the cross-members where Dr. Vecchio claims the Molds first fell through the floor. The Court is convinced that these defective welds weakened the container floor, and led ultimately to the crates falling through the floor of the Container, thereby causing the derailment.

As explained by Kaplan, the strength of the welds affects the strength of the container. Weakened welds mean that the Container could bear less weight, and would fail prematurely.

When the weld on one end of a cross-member failed, the structural integrity of that entire cross-member was lost. Put another way, once a weld failed, the entire cross-member ceased to be a load-carrying member. Weight would then be redistributed to the remaining cross-members, adding to the stress placed on those and increasing the chances that other faulty welds would fail as well.

Dr. Vecchio testified that the welds were not defective and had no bearing on the derailment. The Court finds this to be crippling to his opinion, as it is clear based on the testimony of several experts as well as the evidence presented to the Court that many of the welds in the Container were in poor condition and failed. The fact that Dr. Vecchio views the welds as though they were completely sound is simply contrary to the evidence, and makes his opinion as to the cause of the derailment far less credible.

The Court notes that both parties argue at great length as to what the deficiencies are in both FEAs. The Court is convinced that neither of them is perfect. As with any scientific analysis, some variables were assumed or neglected on both sides. For example, Dr. Vecchio's FEA failed to take into account forklift pockets in the Container's floor that are stronger than the other cross-members and used the wrong number of cross-members, whereas Kaplan's assumed that the floorboards

were glued to the beams when they were screwed into place. The Court suspects that such variables may each have some effect on the outcome of a sensitive analysis such as an FEA. On a whole, though, the Court finds the shortcomings with Dr. Vecchio's FEA to be more problematic, and have more of an impact on its outcome, than those of Plano's FEA.

After considering the evidence and testimony, the Court finds that the derailment was caused when the weakened welds of the Container's cross-members failed, allowing the crates with the Molds inside to fall through the floor and ultimately cause the derailment of the train.

2. Conclusions of Law

a. Burden of Proof

The parties seem to be at odds as to the burden of proof they bear in this action. Plano claims that Plaintiffs bear the burden of proof as to whether Plano owed them a duty under the World Bill of Lading, and whether Plano breached that duty. Plaintiffs claim that Plano bears "the impossible burden of proving its contention that defective container welds allowed the non-compliant load to breach the container cross-beams and cause the derailment." Pls.' Closing Br. at 16. This seems to be based on Clause 10.5 of the World Bill of Lading, which states:

Merchant shall inspect containers before stuffing them and the use of the containers

shall be *prima facie* evidence of their being sound and suitable for use.

Ex. 79. Plaintiffs claim that this clause places the burden on Plano to show that the container was not sound and suitable for use when it was loaded, and that unsoundness caused the derailment.

In a civil suit, the burden is usually on the plaintiff because it is the party asking the court to alter the status quo. *Binder v. Bristol-Myers Squibb, Co.*, 184 F.Supp.2d 762, 768 (N.D. Ill. 2001). Indeed, the "party asserting the 'affirmative of an issue has the burden of proving the facts essential to its claim.'" *Id.* (quoting *Auburndale State Bank v. Dairy Farm Leasing Corp.*, 890 F.2d 888, 893 (7th Cir. 1989)). Parties claiming a warranty under a maritime contract, such as the one at issue here, bear the burden of proof. *See, e.g., Central Oil Co. v. M/V Lamma-Forest*, 821 F.2d 48, 49 (1st Cir. 1987). Clause 10.5, which deals with the condition of the Container, does nothing to change the fact that Plaintiffs brought this action alleging that Plano violated Clause 10.2. Specifically, Plaintiffs claim that Plano breached its warranty that the "stowage and seals of the containers are safe and proper and suitable for handling and carriage," and that it would indemnify Plaintiffs for any damage caused by such breach. Ex. 79. The question of whether the stowage and seals were safe and proper is

a different question than whether the container was sound and suitable. Thus, Plaintiffs bear the burden of proving the Plano owed them a duty under Clause 10.2 of the World Bill of Lading, and that Plano breached that duty through unsafe or improper stowage of the crates in the container.

Even accepting Plaintiff's contention that Clause 10.5 puts a burden on Plano to show that the container was defective, as discussed above, the Court finds that Plano has met that burden.

b. Plaintiffs Failed to Establish that Plano Breached Clause 10.2 of the World Bill of Lading

At the outset, the Court notes that the parties argue at length as to whether Plano was even subject to Clause 10.2 of the World Bill of Lading based on the question of whether Plaintiffs received the goods already packed into the Container, a condition precedent. The Court assumes, without finding, that Plano is subject to Clause 10.2. Even with that assumption, however, Plaintiffs have failed to show that Plano breached the warranty in Clause 10.2.

Under Clause 10.2 of the World Bill of Lading, the Merchant warrants that the stowage and seals of the containers are "safe and proper and suitable for handling and carriage" Ex. 79. The Bill of Lading does not define what constitutes "safe and proper" or "suitable for handling." However, Plaintiffs and their expert Dr. Vecchio argued that the Molds

were not secured in the container properly based on two main failures - the failure to distribute the Mold's weight properly, and the failure to lash the Molds. As stated previously, the Court found that Plaintiff failed to carry their burden of proving these alleged failures, and that it was more likely than not that the Molds were stowed and secured properly based on the evidence presented. As such, Plaintiffs have failed to prove that Plano breached the warranty in Clause 10.2 that the Molds were stowed in the Container in a safe and proper manner that was suitable for handling.

Furthermore, the Court has concluded that the derailment was not due to improper weight distribution and lack of lashing, as proposed by Dr. Vecchio, but because the floor of the Container was weakened due to poor welds between the cross-members and the side of the Container. Thus, it was not the alleged breach of the warranty that caused the derailment, but the poor condition of the Container. Put simply, in the battle of the experts, the Court found Plano's experts, their theory of failure, and the evidence upon which they relied more convincing and credible than that of Plaintiffs' expert, Dr. Vecchio.

For these reasons, the Court finds that Plaintiffs failed to establish that Plano breached any warranty. The Court thus finds in favor of Plano.

c. Plano Owes Plaintiffs No Damages for the Derailment

As the Court has concluded that Plano did not breach the World Bill of Lading, the Court also holds that Plano does not owe Plaintiffs any damages stemming from the derailment.

IV. CONCLUSION

For the reasons stated herein, and in open court, the Court rules as follows:

1. denies the parties Motions *in Limine* (ECF Nos. 180, 183, 186);
2. finds that Plaintiffs failed to prove that Plano breached the World Bill of Lading; and
3. enters judgment in favor of Plano.

IT IS SO ORDERED.



Harry D. Leinenweber, Judge
United States District Court

DATE: 12/30/2013