

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION**

CROMPTON GREAVES, LTD.,	§	
	§	
Plaintiff,	§	
	§	
v.	§	CIVIL ACTION NO. H-08-1774
	§	
SHIPPERS STEVEDORING COMPANY,	§	
	§	
Defendant.	§	

**MEMORANDUM AND OPINION ENTERING FINDINGS OF FACT
AND CONCLUSIONS OF LAW**

This is a dispute over responsibility for damage to a large power transformer. The plaintiff, Crompton Greaves, Ltd. designs and manufactures power transformers in India. Tucson Electric Power (TEP), an electric utility, contracted with Crompton Greaves, through its subsidiary Pauwels Americas, to build and ship to the United States several power transformers. In March 2007, one of these transformers — referred to here as the “South Loop Transformer” or “the Transformer” — arrived by ocean vessel at the Port of Houston and was discharged. Shippers Stevedoring, a Texas corporation, provided stevedoring and terminal services. When the South Loop Transformer arrived at its final destination in Arizona, Crompton Greaves discovered that it was damaged and inoperable.

Crompton Greaves alleges that the South Loop Transformer was damaged due to Shippers Stevedoring’s negligence and that Shippers Stevedoring acted as Crompton Greaves’s bailee. Shippers Stevedoring contends that at least some of Crompton Greaves’s claims are barred by limitations under the Carriage of Goods by Sea Act (COGSA). Shippers Stevedoring denies that it acted as Crompton Greaves’s bailee and, alternatively, argues that Crompton Greaves failed to

make a *prima facie* case of bailment liability. Shippers Stevedoring also argues that Crompton Greaves has not proven that Shippers Stevedoring's negligence caused the Transformer's damage.

This court held a seven-day bench trial. The parties presented fact and expert testimony and exhibits on the purchase, design, construction, transportation, delivery, inspection, and repair of the South Loop Transformer. Based on the testimony and exhibits, the parties' oral and written legal arguments, and the relevant law, this court finds and concludes as follows:

- Crompton Greaves's claims against Shippers Stevedoring are barred, in part, by COGSA's one-year limitations period;
- Crompton Greaves failed to make a *prima facie* showing of Shippers Stevedoring's liability as a bailee; and
- Shippers Stevedoring has no liability to Crompton Greaves for the damage to the Transformer.

The detailed reasons for these rulings are set out below.¹

I. Findings of Fact

A. The Evidence Presented

1. The Witnesses

In the bench trial, the court heard trial testimony from numerous expert and fact witnesses.

The subject of their testimony is summarized below.

- **Sandeep Chakravarty.** Chakravarty has a B.S. in electrical engineering and an M.B.A. In 2007, Chakravarty was the general manager of the Crompton Greaves Bhopal, India plant. At the time of trial, he was responsible for Crompton Greaves's transformer sales to Europe and the Americas. (Nov. 29, 2011 Trial Excerpt at 36). Chakravarty testified about the

¹ To the extent any of the conclusions of law is a finding of fact, it should also be considered as a finding of fact. To the extent any of the findings of fact is a conclusion of law, it should also be considered as a conclusion of law.

South Loop Transformer's design, manufacturing, and transportation, and about the use of shock recorders.

- **Viswanathan Shivakumar.** Shivakumar is the operations head for the Crompton Greaves Bhopal, India plant. In 2006 and 2007, he was the production manager. (Docket Entry No. 204 at 441). Shivakumar has a bachelor's degree in electrical engineering. (*Id.*). He began working at Crompton Greaves in 1979 and has worked at the Bhopal plant since 2002. (*Id.* at 22–23). Shivakumar testified primarily about the manufacture of the South Loop Transformer, the attachment of a shock recorder to the Transformer, and the Transformer's transportation within India before shipment to the Port of Houston.
- **Gautam Mazumder.** Mazumder is the senior manager of customer services at the Bhopal plant. (Docket Entry No. 204 at 631). He testified about inspecting the South Loop Transformer around March 13, 2013 and when it arrived at TEP in Arizona.
- **Karl E. Wolff.** Wolff was called by Crompton Greaves as an expert witness. Wolff has worked as a carman apprentice, loading specialist, assistant car foreman, and lead car inspector for the Southern Pacific Railroad, where he worked with shippers on large and unusual loads. (Docket Entry No. 208 at 718–20, 726). Part of his responsibility as a railroad inspector was to ensure that cargo was properly placed on railcars. (*Id.* at 720). Wolff is also a qualified crane operator. (*Id.* at 719–20). Wolff testified about potential causes of damage to the Transformer on March 7, 13, and 31, 2007 and about custom and practice in the transportation industry.
- **David Alan Hullender.** Hullender was called by Crompton Greaves to testify as an expert witness on interpreting the shock recorder data. Hullender is a professor of mechanical engineering at University of Texas at Arlington. (Docket Entry 189 at 4). He has bachelor

and master of science degrees in mechanical engineering and a Ph.D. in mechanical engineering. (*Id.*). Hullender has expertise in testing machinery for vibration issues, stress levels, and force levels and in developing computer models to test equipment design and reliability. (*Id.* at 4–5).

- **Pravin Ghadi.** Ghadi is an engineering head of the Crompton Greaves power group. (Docket Entry No. 211 at 773). He analyzes financial and commercial aspects of Crompton Greaves plants globally. Ghadi has a postgraduate degree in finance. (*Id.*). He was hired by Crompton Greaves to work in corporate taxation, was promoted to the factory finance-manager position, and then became Pauwels Indonesia’s CFO, (*Id.* at 774–75). Ghadi testified primarily about Crompton Greaves’s damages.
- **Scott Anthony Butler.** Butler is Shippers Stevedoring’s terminal manager at the Barbours Cut Terminal. (Docket Entry No. 211 at 840). In March 2007, Butler was the assistant terminal manager at Barbours Cut, responsible for cargo movement, supervision of other employees, and yard duties. (*Id.*). Butler testified about the Transformer’s movement within the Terminal.
- **Clarence Rego.** In 2007, Rego was employed by VeriClaim as a marine surveyor. (Docket Entry No. 211 at 870). He oversaw the loading and unloading of ships and investigated claims for damaged vessels, tankers, and cargo. (*Id.*). Rego was hired by Pauwels Americas to survey the South Loop Transformer’s unloading from the vessel and its loading onto a railcar at the Barbours Cut Terminal. (*Id.* at 871–72). He testified about his observations of the Transformer while it was located at the Barbours Cut Terminal.
- **Darrel Harrelson.** In March 2007, Harrelson was Shippers Stevedoring’s equipment director. (Docket Entry No. 213 at 897). He was responsible for maintenance and logistics

for all of Shippers Stevedoring's equipment, including its cranes. (*Id.* at 898). At the time of trial, Harrelson had worked for Shippers Stevedoring for 37 years, beginning as a crane operator. (*Id.* at 898). He testified about Shippers Stevedoring's crane-usage practices and about loading the Transformer onto the railcar.

- **Derlin Marsh.** Marsh is the terminal manager at Shippers Stevedoring's Barbours Cut Terminal, a position he also held in 2007. He is responsible for supervising all of Shippers Stevedoring's operations at the Terminal. Marsh testified about the Transformer's movement within the Terminal and the relevant customs and practices at the Port of Houston.
- **Edmund Francis Feloni.** Feloni was called by Crompton Greaves to testify as an expert on transformer design and manufacturing and about the likely causes of the damage to the South Loop Transformer. He has a bachelor of science degree in electrical engineering. He specializes in power systems, including large transformers. (Docket Entry 190 at 154–55). He has worked for electrical utilities and currently consults on engineering, testing, and failure analysis primarily for government agencies, large utilities, industrial military facilities, and insurance companies. (*Id.* at 155, 157). He has reviewed over a hundred transformers on damage and loss issues. (*Id.* at 157).
- **Robert G. Ganser.** Ganser is a registered professional engineer working as a consultant on transformers. (Docket Entry No. 204 at 530–32). He received a bachelor of science degree in electrical engineering and an M.B.A. He has worked for several transformer manufacturing and repair companies on inspections and testing. (*Id.* at 532–3). As a consultant, Ganser provides design and environmental impact review and root-cause failure analysis. (*Id.* at 534–35). He was hired by TEP to inspect the South Loop Transformer after

the damage was discovered. (*Id.* at 531). Ganser testified for Shippers Stevedoring about his observations and about the likely causes of the Transformer damage.

- **Bayles Brett Holliday.** Holliday was called by Shippers Stevedoring as an expert on the shipping industry. Holliday has a bachelor of science degree. (Docket Entry No. 215 at 989). He has worked in various capacities in ports around the world, in both military and civilian terminal and stevedoring operations. (*Id.* at 989–91). Holliday testified primarily about port customs and practices.
- **Richard Mayne Bonyata.** Bonyata testified as an expert for Shippers Stevedoring about interpreting shock recorder data and about the likely causes of the Transformer damage. He has a bachelor of science in electrical engineering and is a registered professional engineer. Bonyata works for McDowell Owens Engineering, specializing in failure analysis and forensic engineering. (Docket Entry No. 215 at 1074–75). He has an extensive background performing troubleshooting services for several companies. (*Id.* at 1075–76).

The parties also submitted deposition testimony under Federal Rule of Civil Procedure 32(a), including from the following individuals:

- **Thomas Adgate.** Adgate is a welder who was hired by T&M Welding to assist in securing the South Loop Transformer to the railcar. (Adgate Dep. at 9). He testified about the process of tying down cargo but could recall little about the Transformer.
- **Michael Flores.** Flores is TEP’s transmission and distribution engineering manager responsible for medium and high-voltage transformers. He has a bachelor’s and a master’s degree in electrical engineering. (Flores Dep. at 7). Flores managed engineering, construction, and commissioning activities for the South Loop Transformer. (*Id.* at 8). He testified primarily about the problems with the Transformer.

- **William Stuart.** Stuart works for Time Marine, a company that was hired by Shippers Stevedoring to secure the Transformer to the railcar. (Stuart Dep. at 6). He is a professional naval architect. (*Id.* at 10). Stuart testified about the process of securing the South Loop Transformer and other heavy cargo to railcars.
- **Colt Mangum.** Mangum owns T&M welding services, a subcontractor for Time Marine. (Mangum Dep. at 7, 30). He testified about the process of tying down the South Loop Transformer to the railcar.
- **David McNew.** McNew is TEP's principal buyer. (McNew Dep. at 6). He testified as TEP's corporate representative about the process of purchasing the South Loop Transformer, the problems with the South Loop Transformer and the other transformers that TEP purchased from Crompton Greaves, and the process of repairing the South Loop Transformer.
- **Marc Schillebeeckx.** Schillebeeckx is the president of CG Power Systems Americas, a company wholly owned by Crompton Greaves. (Schillebeeckx Dep. at 13). He is trained as a mechanical engineer. (*Id.* at 15). At the time of the events at issue, Schillebeeckx was Vice President of Marketing and Sales for Pauwels Americas. (*Id.* at 17). He testified about bidding and contracting for the transformers that Crompton Greaves produced for TEP and the process and cost to repair the South Loop Transformer,.

2. The Evidence of the Transformer's Design and Manufacture

Crompton Greaves is an Indian corporation that manufactures and sells power transformers. In 2005, Crompton Greaves acquired the Pauwels Group, a multinational transformer-manufacturing company with headquarters in Belgium and manufacturing facilities in Washington, Missouri and Winnipeg, Canada. After the acquisition, Pauwels Americas, Inc. became Crompton Greaves's

subsidiary in the United States. Crompton Greaves used Pauwels Americas to market and sell transformers manufactured in India to customers in the United States. (Nov. 29, 2011 Trial Excerpt at 38). In 2009, Crompton Greaves and its affiliated entities began operating under the global name CG. At that time, Pauwels Americas became CG Sales Networks Americas, Inc. (*Id.* at 46).²

In April 2006, Pauwels Americas received a request for quotation (RFQ) from TEP. The RFQ invited Pauwels Americas to bid on contracts for building a series of transformers for various TEP facilities in the United States. Detailed specifications for each transformer accompanied the RFQ. Pauwels Americas submitted a bid and was awarded a contract to manufacture eight transformers for TEP. The transformer designed for the TEP South Loop Substation in Sahuarita, Arizona was known as the South Loop Transformer.

The purchase order for Pauwels Americas to build and deliver the South Loop Transformer to TEP's substation in Arizona was for \$1,250,662. This contract price was later revised to \$1,264,135 based on TEP's modifications to the specifications. (*Id.* at 40–44; Docket Entry No. 203 at 211; Pl.'s Exs. 2–5, 9). When it contracted with TEP to build the South Loop Transformer, Pauwels Americas was “acting on behalf of Crompton Greaves” as its sales agent. (Nov. 29, 2011 Trial Excerpt at 45).

Each Crompton Greaves transformer, including the South Loop Transformer, is “custom-built as per the requirements of the customer.” (Docket Entry No. 203 at 185). Crompton Greaves generated design drawings for TEP to review. It made changes based on TEP's input and submitted the new drawings to TEP. (*Id.*).

² The successor to Pauwels Americas has assigned Crompton Greaves its right to recover expenses for damage to the South Loop Transformer. (Pl.'s Ex. 47).

At a design-review meeting, Crompton Greaves and TEP agreed that the transformers, including the South Loop Transformer, would each be shipped with two shock recorders. (Def.'s Ex. 14; Docket Entry No. 204 at 380). Pauwels Americas provided TEP with a quotation for \$2,119 for an "extra shock recorder to fulfill opposite side requirement for the South Loop transformer." (Def.'s Ex. 15; Docket Entry 204 at 385). The South Loop Transformer was designed and built with two small ledges on opposite sides of the external tank so that a shock recorder could be placed on each end.

Shock recorders are triaxial devices that use piezoelectric crystals to provide an acceleration reading. (Docket Entry No. 189 at 8). The Z-axis is the vertical axis; the Y-axis is the longitudinal-axis, which measures front-to-back acceleration; and the X-axis is the lateral axis, which measures side-to-side acceleration. (*Id.* at 30). Acceleration is typically measured in units of gravity, which are abbreviated as "g." A shock recorder can identify when a "shock event" occurs and its magnitude. The recorder does not identify the cause of a shock event.

The Transformer was shipped with one shock recorder, a ShockLog model RD317. It was set to records accelerations or shocks above 1 g. (Docket Entry Nos. 204 at 647; 207 at 704). Based on the ShockLog's settings when it was attached to the Transformer during shipping, any force over 3 g would have triggered an "alarm event." When an alarm event has been triggered, the ShockLog provides more detailed measurements — 1,024 readings per second over a 4-second period. (Docket Entry No. 189 at 104–05; Pl.'s Ex. 16 at 25).

At some point before the South Loop Transformer was built, Crompton Graves prepared a document titled "Packaging, Transport and Storage of Transformers and Its Importance." (Pl.'s Ex. 6). The document provides "general guidance" to "designers and customers for the precautions to be taken" during the transportation of power transformers "from the factory to the job site." (Docket

Entry No. 203 at 302). The document also “defines the type of transport hazards” a transformer can undergo during transit; describes how a transformer should be packaged; and defines the “transport shocks” a transformer “might withstand” during transit. (*Id.*).

At the trial, Chakravarty testified that Crompton Greaves transformers are usually designed to withstand shocks of up to 4 g along the X-axis, 4 g along the Y-axis, and 2 g along the Z-axis. (*Id.* at 303). This is consistent with the limits stated in the “Transporting Transformers” document. The shock-design limits are based on industry experience and available information that described the forces, or shock limits, that “an equipment like a transformer” should be able to withstand during rail, truck, or ship transport. (*Id.* at 304).

Chakravarty, Feloni, and Ganser agreed that there was no official or industry-wide standard defining the shock limits that a transformer should be built to withstand. (*Id.* at 303–04; Docket Entry Nos. 190 at 170–71; 204 at 539). Chakravarty testified that manufacturers generally aim for design limits of approximately 2.5 g. (Docket Entry No. 203 at 305). He believed that, given the transportation infrastructure in the United States, transporting the South Loop Transformer was not especially risky. The biggest expected risk was during rail transport because of “bumping” and other rail-related events. (*Id.* at 306–07).

Chakravarty testified at trial that the South Loop Transformer was designed to withstand 3g forces in every direction. (*Id.* at 310). Chakravarty stated in his deposition that the Transformer was designed to withstand vertical shocks of up to 2.5 g. Chakravarty explained the apparent inconsistency in his statements by noting that there is a safety factor of .5 g added to the 2.5 g design limits. (Docket Entry No. 203 at 396).

In contrast to Chakravarty, Ganser recommended a slightly higher design limit of around 3 to 3.5 g in the vertical direction.

Shivakumar testified that Crompton Greaves was given instructions by TEP to design a transformer capable of withstanding 4 g forces along the X-axis and Y-axis and a 2 g force along the Z-axis. Shivakumar explained that the Transformer was designed to be less resistant to Z-axis forces than to X- and Y-axis forces because it is more difficult to design large transformers that can withstand vertical shocks and because vertical drops are less common during transportation. (Docket Entry No. 204 at 473).³

In August or September 2006, after TEP approved the revised drawings, Crompton Greaves began building the transformers that TEP had ordered. (Docket Entry 204 at 466). In October 2006, TEP visited the Bhopal plant to inspect the South Loop Transformer while it was in the “vapor phase.” This allowed the TEP to observe the Transformer’s core and coil assembly, also referred to as a transformer’s “active part.” (Docket Entry 203 at 335–36).

When construction was completed but before the Transformer left the Bhopal plant, Crompton Greaves conducted tests, including a “sweep frequency response analysis test,” to ensure that the Transformer functioned properly, met TEP’s specifications, and met the standards set by the Institute of Electrical and Electronic Engineers (IEEE) and the American National Standards Institute (ANSI). (Docket Entry Nos. 203 at 329; Pl.’s Ex. 10). Before the test and before the shock recorder was attached, the Transformer was loaded onto a pallet to go into the test lab. After testing,

³ There are some inconsistencies in the testimony of the Crompton Greaves witnesses and in the design documents it produced about the extent of the South Loop Transformer’s ability to withstand external shocks. But these inconsistencies are immaterial to the disputes before this court. The apparent forces that the ShockLog recorded during the Transformer’s transport exceeded even the South Loop Transformer’s design and manufacturing limits. Other than the four shock measurements at issue in this suit, the ShockLog did not record any shocks to the Transformer that exceeded 2 g in the vertical direction, the lowest estimated design and manufacturing limit. If the ShockLog accurately recorded the four shock events, those measured forces exceeded the design limits.

the unit was moved again by a crane and then dismantled. (Docket Entry No. 204 at 498). No shock recorder was attached at that time.

The test results of the November 21, 2006 tests were submitted to TEP before the Transformer was shipped to the United States. (Docket Entry No. 203 at 330). TEP approved the test results. The Transformer was partially disassembled and packaged for shipping. (Docket Entry No. 204 at 472).

3. The Evidence About the Transformer's Shipment to the Port of Houston

On December 31, 2006, the South Loop Transformer left the Bhopal plant on a truck owned by Premier Transport. (Docket Entry No. 203 at 330). A crane lifted the Transformer onto the truck trailer. (Docket Entry No. 204 at 496). Shivakumar testified that he witnessed the crane loading the Transformer onto the Premier trailer. He did not observe any event that would have caused a shock to the Transformer. He stated that it is unlikely that the Transformer was dropped during the loading process because the 250-ton crane that lifted it was capable of lowering it slowly. (*Id.* at 525).

Shivakumar's testimony about the Transformer's loading could not be verified by shock-recorder data because the ShockLog recorder was not attached to the Transformer until after it was lifted onto the truck-trailer. (*Id.* at 497). Shivakumar conceded that the Transformer had also been lifted several times at the factory before the shock recorder was attached.

The shock recorder was attached and turned on after the Transformer was loaded and secured onto the truck trailer. Shivakumar testified at trial that he selected the ShockLog RD317 model recorder, mounted it on the Transformer, put in a new battery, and set the recorder to India Standard Time. (Docket Entry No. 204 at 475–76, 480, 485). The recorder's alarm setting was set to activate when the Transformer sustained a 3 g force in any direction. On cross-examination, Shivakumar was asked to explain this shock recorder setting given what he believed were the Transformer's

4-4-2 design parameters. Shivakumar responded: “I don’t know. During our training I think we had a discussion and we said it’s better to keep 3 g in all three directions . . . in case somebody gets confused and he puts the 2 the other way around.” (*Id.* at 481).

Shivakumar also testified that he did not attach a second shock recorder to the Transformer. Shivakumar stated that, although it was not normal procedure to put a cover over an empty transformer shelf, there was a cover over the shelf where the second shock recorder that TEP had requested was supposed to be put. Shivakumar stated that the second shelf was covered because the Transformer’s bill of materials included a shelf cover. (Docket Entry No. 204 at 513–14).

Chakravarty also testified that the South Loop Transformer should have left the factory with two shock recorders. (Docket Entry No. 204 at 425). Chakravarty noted that Crompton Greaves typically places only one shock recorder on each unit. (Docket Entry No. 203 at 321). He acknowledged that, during the design-review meeting, TEP had specifically asked Crompton Greaves to use the LoGee 10 as a second shock recorder on the TEP transformers. (Docket Entry No. 204 at 433). Crompton Greaves did not typically use the LoGee 10 shock recorder at its plants. It had to specially order them for the TEP transformers. Chakravarty stated that the LoGee 10 did not arrive at the Bhopal factory until after the South Loop Transformer had shipped to the United States. (*Id.*). Once it did arrive, the LoGee 10 was sent by courier to Crompton Greaves’s Washington facility. A LoGee 10 recorder was affixed as a second shock recorder to each transformer that Crompton Greaves shipped to TEP after the South Loop Transformer. (*Id.* at 433–34).

Crompton Greaves hired the National Shipping Company of Saudi Arabia (NSCSA) to ship the Transformer from the Port of Mumbai, India to the Port of Houston, Texas. To prepare for the shipment, the Transformer was placed on a NSCSA-owned Mafi-style trailer. A Mafi trailer is a

flatbed trailer with hard wheels that is designed to allow cargo to roll on and off of specialized ships equipped with ramps. Once on the Mafi trailer, the Transformer was chained down and covered with a tarp. (Docket Entry No. 203 at 368). The Mafi trailer and the Transformer were then loaded onto the NSCSA vessel, the *M/V Saudi Diriyah*, for shipment to the Port of Houston. (*Id.*). Included in the shipment were 39 wooden crates containing Transformer parts and accessories that had been removed for shipping and would be reattached to the Transformer once it arrived in Sahuarita, Arizona.

The NSCSA issued a bill of lading for the shipment.⁴ The front of the bill of lading described the shipper, consignee, cargo, and intended voyage. The bill of lading listed Crompton Greaves as the “shipper/exporter” and Pauwels America as the “consignee.” TEP was listed under the heading “notify party.” The cargo was described as “South Loop Substation Tucson Electric Power” comprising “1 uncrated main unit + 39 wooden cases = total 40 Pkgs.” “Carrier’s responsibility ceases at Houston” and “Freight paid up to Houston” are both typed underneath the description of the goods. “Houston, Texas” was listed as the port of discharge and “Biehl & Company Lines Services in Houston, Texas” was the “place of delivery.” Box 14, titled “For Transshipment to,” was left blank. (Def.’s Ex. 20).

The back side of the bill of lading detailed the rights, liabilities, and responsibilities of the parties involved in the Transformer’s shipment. Section 3 set out the “Carrier’s Liability.” Subsection 3(b) stated that “TRADES TO OR FROM THE UNITED STATES shall be subject to

⁴ “A bill of lading ‘records that a carrier has received goods from the party that wishes to ship them, states the terms of carriage, and serves as evidence of the contract for carriage.’” *Kawasaki Kisen Kaisah Ltd. v. Regal-Beloit Corp.*, 130 S. Ct. 2433, 2439 (2010) (quoting *Norfolk Southern R. Co. v. Kirby*, 543 U.S. 1, 18–19 (2004)).

the United States Carriage of Goods Act [“COGSA”] of 1936.” (*Id.*, § 23(b) (capitalization in original)).

Section 4 of the bill lading contained a “Himalaya Clause,” extending the bill of lading’s liability limitations to certain other parties. Subsection 4(c) stated:

If an action for loss or damage to the Goods is brought against the ship managers, operator, insurer, servant, independent contractor, or subcontractor of the carrier or underlying carrier, including terminal operators, stevedores, carpenters, and watchmen, such persons shall be entitled to avail themselves of the defenses and limits of liability for which the Carrier is entitled to invoke under the contract.

(*Id.*, § 4).

Section 5 described the carrier’s responsibilities. Subsection 5(a), titled “Port to Port Shipment,” stated:

The Carrier shall be liable for goods from the time the Goods have passed over the Vessel’s ramp/rail at time of loading at the Port of Loading (Box 12) until the time the Goods have passed over the Vessel’s ramp/rail at the time of discharging at the Port of Discharge (Box 13). *For goods to or from US Ports*, the Carrier shall be liable from the time of [sic] the good are received at the loading port until the time the goods have been delivered to the Merchant at the Port of Discharge.

(*Id.*, § 5(a) (emphasis in original)). Section 2 defined “Merchant” as the “Shipper, Receiver, the Consignees, the Holder of the Bill of Lading and the Owner of the Goods and servants and agents of any of these.” (*Id.*, § 2).

Subsection 5(b), entitled “Combined Transport,” applied when the bill of lading was used as a combined-transport bill of lading. It provided that:

Whenever the Goods are transported by water, air or overland, and are to be . . . carried to an in-land destination (Box 15) and freight is paid for Combined Transport, the carrier undertakes to produce the entire transport from the place where the Goods are taken in charge to the place designated for delivery and to be directly responsible to

the Merchant for such through carriage. All claims must be filed with this Carrier, who shall be solely responsible for processing them to conclusion. When any payment is made to the Merchant, the Carrier shall be automatically subrogated to all rights of the Merchant against all others, including underlying carriers, on account of such loss or damage. When loss or damage occurs during Combined Transport but it cannot be determined which Carrier or underlying carrier has custody or control of the Goods at the time of the loss or damage, the Merchant and Carrier agree that it shall be deemed that the loss or damage occurred aboard the Vessel named therein on the reverse side and Clause 3 shall apply.

(Id., § 5(b)) .

Section 13 gave the NSCSA a lien on the shipped goods until all shipping-related charges had been paid:

All persons within the definition of Merchant shall be jointly and severally liable for and the Carrier shall have a lien on the Goods for unpaid freight, ocean as well as inland, and charges due under the Bill of Lading for any expenses incurred by the Carrier or underlying Carriers. . . . for fines, dues, tolls, surveys, lighterage and all customs duties and port charges. The Carrier's lien shall survive delivery and may be enforced at public or private sale upon ten days notice to the Consignees or Notify Party on the reverse side.

(Id., § 13).

Crompton Greaves hired Alomex, a freight forwarder, to take the Transformer on delivery at the Port of Houston and transport it by railcar to Tucson, Arizona. In Tucson, Alomex was responsible for offloading the Transformer from the railcar and transporting it by truck to the job site, where it would be placed on a pad designed by TEP. (Docket Entry No. 203 at 317). Alomex hired several subcontractors to transport the Transformer, including Shippers Stevedoring, the NSCSA's exclusive stevedore at the Port of Houston, (Docket Entry No. 213 at 933), and Vision Logistics.

According to Chakravarty, Shippers Stevedoring was responsible for taking the Transformer after the carrier delivered it to the Port of Houston, storing it in the Port, transferring it to the railcar

at the rail siding, loading it onto the railcar, and tying it down to the railcar. Vision Logistics was responsible for arranging and bringing the railcar that would carry the Transformer to the Port of Houston. Once the Transformer was loaded and tied to the railcar, Vision Logistics was responsible for transporting it to Tucson, Arizona, then arranging for the Transformer to be picked up, transported to the TEP job site, and offloaded. (*Id.* at 318). Shippers Stevedoring hired its own subcontractor, Time Marine, to secure and tie down the Transformer to the railcar. (*Id.*).

Marsh testified that based on the manifest he believed — but did not know — that the Transformer belonged to Crompton Greaves when it was shipped. (Docket Entry No. 213 at 940; Def.’s Ex. 27). Marsh was not provided sales documents. Neither Alomex nor Vision Logistics told him who owned the Transformer or who had hired Alomex. He did not have any direct contact with Crompton Greaves. (Docket Entry No. 213 at 941–42). Chakravarty acknowledged that Crompton Greaves and Shippers Stevedoring did not have a contractual relationship and did not directly communicate before or during the transportation process. (Docket Entry No. 203 at 366).

4. The Evidence on the Transformer’s Discharge at the Port of Houston

The *M/V Saudi Diriyah* arrived at the Port of Houston’s Barbours Cut Terminal on March 1, 2007. On that same day, Clarence W. Rego, a surveyor, inspected the Transformer and crates in the *Saudi Diriyah*’s hold. Rego did not notice any damage to the Transformer tank. He did observe damage to some of the crates and that the cargo had shifted during the voyage. (Def.’s Ex. 33).

Shippers Stevedoring began unloading the cargo early the next day. Rego was present when the main Transformer unit and the crates containing its attachments were discharged. At trial, Rego testified that he did not see the Transformer sustain any damage during the unloading process. (Docket Entry No. 211 at 874). A report that Rego provided to Vericclaim on April 2, 2007 — while

the Transformer was en route to Arizona — stated that, “during our presence, the tank was handled carefully and there were no shocks or damage to it.” (*Id.* at 875; Def.’s Ex. 33). Rego’s report noted that one of the crates fell off a forklift. (Docket Entry No. 211 at 881; Def.’s Ex. 33).

The witnesses disputed when the NSCSA “delivered” the Transformer. Wolff testified that, based on his experience in the shipping industry, once the cargo is unloaded from the ship, the carrier is no longer responsible. The stevedoring company becomes responsible from the time the goods are unloaded from the vessel until they are released to the entity that will transport the cargo to the next destination. (Docket Entry No. 208 at 725). Wolff did not address how the bill of lading’s contractual provisions and the intermodal shipping arrangements might affect the point of delivery.

Chakravarty also stated that he believed that the Transformer had been “delivered” once it was discharged at the Port of Houston. Chakravarty pointed to a February 8, 2007, invoice that Alomex emailed to Crompton Greaves. The invoice stated, “From delivered free on mafi, unlashd at the port of Houston, till offloaded at Sahuarita, AZ we can give you a lump sum price of USD 145,800.00.” (Pl.’s Exs. 25, 93). Alomex instructed Shippers Stevedoring to arrange to load the Transformer onto a railcar. Chakravarty testified that the phrase “discharge free on mafi” in Alomex’s email and invoice meant that the Transformer would be transported from the Port of Mumbai on a Mafi and that “they” would unload the Transformer on the Mafi to the pier at a safe resting place. According to Chakravarty, the Transformer was discharged on March 2, 2007, when the *M/V Saudi Diriyah* arrived and the Transformer and Mafi were removed from the ship by Shippers Stevedoring. (Docket Entry Number 203 at 313). There was no evidence that Shippers Stevedoring ever received the “from delivered free on mafi” instruction from Alomex.

Several Shippers Stevedoring witnesses testified that a carrier will not release cargo from its custody until the cargo has cleared customs and port charges and customs duties have been paid. Customs completed its inspection of the Transformer on March 6, 2007. (Def.'s Ex. 24). On March 8, 2007, a delivery order from Vandegrift Forwarding Co., Crompton Greaves's freight forwarder, was stamped by Biehl & Co., the NSCSA's shipping agent. The stamp, addressed to Shippers Stevedoring, instructed: "Please Release Cargo." (Def.'s Ex. 26). The delivery order stated: "All loading charges + exam charges have [sic] be satisfied with Shippers." (*Id.* (internal quotation marks in original)). Marsh testified that this stamp is a "steamship release." (Docket Entry No. 213 at 935-37). It indicated that all of the money owed to the ocean carrier had been paid and that the cargo had cleared customs. (*Id.* at 937). A similar stamp dated March 8, 2007 appeared on the NSCSA import manifest for the Transformer. (Def.'s Ex. 27). A March 9, 2007 email from Bart De Vos at Alomex to Anish Khosla at Crompton Greaves stated that, "Vandegrift confirmed us yesterday that clearance of this shipment is completed." (Def.'s Ex. 30).

Marsh and Holliday both gave uncontroverted testimony that Shippers Stevedoring would not load the Transformer until a steamship release had issued. (Docket Entry Nos. 213 at 937-38; 214 at 1001). As Holliday explained, a stevedore is "not going to do anything with the on-carriage or the on-loading of any cargo until it's released by the carrier." (Docket Entry No. 214 at 1001).

Shippers Stevedoring's invoice to the NSCSA stated "COMMENCED: 03/01/07" and "COMPLETED 03/03/07" and included a "terminal charge." (Def.'s Ex. 22). Shippers Stevedoring's invoices to Alomex included "delivering/loading charges" and "heavy lift charges." (Def.'s Exs. 21A, 21B). The invoice did not define these terms or state the dates when these services were provided.

After unloading the Transformer from the vessel on March 2, 2007, Shippers Stevedoring towed it to an open yard, near the rail line. Shippers Stevedoring shared this yard with several other terminal operators.

5. The Shock-Recorder Data Evidence

The ShockLog recorder did not record any shock events between December 31, 2006, when the Transformer was carried by truck to the Port of Mumbai, and March 7, 2007. From January 1 to January 24, the recorder measured accelerations below 1 g that are consistent with the Transformer moving down a road on a truck. (Docket Entry No. 189 at 14–15).

The ocean voyage was from January 25 to March 1. (*Id.* at 15). The recorder does not show that the Transformer was subject to strong forces during the voyage. (*Id.*). On March 2, when the Transformer was offloaded from the ship on the Mafi, a .8 g acceleration was recorded along the Y-axis, but the Z-axis did not register any values greater than .4 g. (*Id.* at 16). Between March 3 and 6, the ShockLog did not measure significant forces. This data is consistent with the Transformer sitting at rest in the Barbours Cut Terminal during this period. (*Id.*).

The ShockLog registered four alarm events. The first alarm event occurred on March 7, 2007, when the shock recorder measured maximum accelerations of 1.8 g along the X-axis, 1.12 g along the Y-axis, and 3.92 g along the Z-axis. The second and third alarm events occurred about 14 seconds apart on March 13, 2007. The shock recorder measured maximum accelerations of .38 g along the X-axis, 1.3 g along the Y-axis, and 3.84 g along the Z-axis, during the second alarm event, and .48 g along the X-axis, 1.32 g along the Y-axis, and 3.1 g along the Z-axis, during the third alarm event. The fourth alarm event occurred on March 31, 2007, when maximum accelerations were recorded of .5 g along the X-axis, .96 g along the Y-axis, and 3.2 g along the Z-

axis. The ShockLog did not measure any readings in excess of 2 g along any axis except for those recorded during the four alarm events. (Pl.'s Ex. 80).

a. The March 7 Shock Event

On March 7, 2007, just after noon, the ShockLog recorded its first alarm event. That same day, Rego visited the Barbours Cut Terminal with Dale Scheible, a Pauwels America employee, to inspect the Transformer and the crates containing the accessories. Rego arrived at the Terminal at 12:41 p.m. (Docket Entry No. 211 at 882). He spent the first hour inspecting the crates and was not able to see the Transformer from that location. (*Id.* at 884). At 1:33 p.m., Rego began taking pictures of the main unit. (*Id.*). Rego testified that the Transformer appeared to be in the same location where he saw Shippers Stevedoring place it on March 2. Rego saw no external sign of damage. (*Id.* at 875).

During his inspection, Rego removed the metal cover from the shelf holding the ShockLog recorder. He took a picture showing the uncovered shelf with both the ShockLog recorder and a LoGee 10 recorder sitting on top. (Def.'s Ex. 19A; Docket Entry No. 211 at 887). Rego testified the ShockLog was attached to the Transformer, while the LoGee 10 was not attached but loosely resting on top of the second shelf. (*Id.* at 887–89). Rego explained that David Scheible, an engineer employed by Pauwels Americas, had brought the LoGee 10 recorder with him to the inspection because he thought one was already attached to the Transformer. Scheible planned to use the recorder he brought with him to download information from the LoGee 10 recorder that was supposed to be attached to the Transformer. Rego stated that he and Scheible were not able to download the data from the ShockLog because the LoGee 10 that Scheible brought with him was incompatible with the ShockLog recorder that was attached to the Transformer. (*Id.*).

When the ShockLog records an alarm event, a flashing red light displays on the front of the recorder. In Rego's picture showing the shock recorders, which the evidence supports was taken after the recorded March 7, 2007 shock event, the ShockLog's alarm light is not lit up. (Def.'s Ex. 19A). Rego's report for Vericclaim does not note that the alarm light was on. (Def.'s Ex. 33).

Crompton Greaves argues that the March 7 recorded shock could be explained by Shippers Stevedoring having dropped the Transformer while trying to move it. There were Shippers Stevedoring employees present at the yard on March 7. (Docket Entry No. 213 at 854). Wolff, Crompton Greaves's expert witness, hypothesized that Shippers Stevedoring may have damaged the Transformer by trying to move it in preparation for an inspection scheduled that day by Rego and Scheible. Based on the pictures Rego took, Wolff noted that, on March 7, the Transformer was placed between two other large containers, making it difficult to inspect. (Docket Entry No. 208 at 731, 744-45). Wolff speculated that a lift truck may have been used to move the Transformer, and that truck may not have been properly coupled to the Mafi trailer. (*Id.* at 735). Wolff explained that if the truck's lift does not have the metal probe fully inserted into the Mafi trailer, when the truck moves forward, the probe could slide out, dropping the Mafi 12 to 15 inches to the ground. (*Id.* at 735-36). Wolff admitted that his theory was based entirely on the ShockLog record of an apparent shock event on March 7. (*Id.* at 755). Neither Wolff nor anyone else saw Shippers Stevedoring trying to move the Transformer on March 7, 2007. Wolff presented no evidence, direct or circumstantial, supporting his speculation, other than the shock recorded on that date.

Feloni, another Crompton Greaves expert, also suggested in his report and testimony that Shippers Stevedoring may have tried to move the Transformer on March 7. Feloni speculated that Shippers Stevedoring may have expected that the railcar that was supposed to transport the Transformer to Arizona would arrive at the Terminal on March 8. (Pl.'s Ex. 96; Docket Entry No.

190 at 270–71). Feloni suggested that, on March 7, Shippers Stevedoring may have tried to move the Transformer closer to the rail line so that it could be lifted onto the railcar when it arrived. (*Id.*). Feloni based this view entirely on the timing of the recorded shock event and date the railcar could have arrived at the Terminal. A timeline produced by Shippers Stevedoring suggests that a railcar had arrived in LaPorte, Texas on March 7. (Pl.’s Ex. 24). The evidence shows that the railcar for the Transformer did not arrive at the Terminal until March 12.

Shippers Stevedoring denies that it moved the Transformer on March 7, 2007. Every Shippers Stevedoring employee who was deposed and who testified at trial consistently and credibly denied moving the Transformer at any time between March 2 and 12 or being aware of anyone who did move the Transformer during that period. (Docket Entry Nos. 211 at 852; 213 at 952). Butler and Marsh also testified that the Barbours Cut Terminal stevedores are union employees who do not normally work during their scheduled lunch hour, which runs from 12:00 p.m. to 1:00 p.m. That is when the ShockLog recorded the alarm event. Union rules require that Shippers Stevedoring’s employees be paid time-and-a-half if they work during lunch, and any such overtime pay is documented. (Docket Entry No. 211 at 84). Shippers Stevedoring’s time sheets do not show that anyone was paid time-and-a-half on March 7, 2007. (Def.’s Ex. 25).

The credible evidence does not show any attempt by Shippers Stevedoring to lift and move the Transformer on March 7, 2007. The credible evidence shows that lifting, loading, and moving the Transformer would require so much equipment and manpower as to generate records and recollection. Neither exists for March 7, 2007.

b. The March 13 ShockLog Recorder Event

On March 12, 2007, the railcar meant to carry the South Loop Transformer to Arizona arrived at Barbours Cut Terminal. Butler testified that, on the same day, Shippers Stevedoring used

a truck with a Mafi attachment to move the Transformer near the rail line. (Docket Entry No. 211 at 846–47). Due to the Transformer’s weight, the truck’s hydraulics were not able to lift it. Butler arranged for a forklift to make it easier for the truck to raise the Mafi. (*Id.* at 848). Butler did not see the Transformer drop during the operation. He did not see the Mafi probe slip out of or disengage from the truck. (*Id.* at 849).

When the Transformer arrived at the rail line, two cranes were in place with the crew, which included among others Darrel Harrelson, the Shippers Stevedoring employee responsible for the crane equipment, and a marine surveyor. (*Id.* at 850). In total, about one dozen people were involved in loading the Transformer onto the railcar. (*Id.* at 851). Butler testified that it was “just a normal lift.” (*Id.*). Butler watched as the cranes picked up the Transformer without issue and loaded it onto the railcar smoothly. (*Id.*) Butler did not observe the Transformer drop and he heard no report of any problems. (*Id.* at 852). Marsh also testified that he watched the Transformer being moved from the Mafi to the railcar. He did not notice any problems with the lift. None of the people present reported any difficulties. (Docket Entry No. 213 at 948–51).

Rego also observed the transfer of the Transformer from the Mafi trailer onto the railcar on March 12. (Docket Entry No. 211 at 876). He testified that Shippers Stevedoring took care to align the Transformer on the railcar and to place plywood sheets on the railcar before the lift. (*Id.* at 877). Rego noted in his report for Vericclaim that the Transformer “was carefully loaded into position with no shocks.” (Def.’s Ex. 35 at 6). After Crompton Greaves received reports that some of the accompanying crates had been damaged during the ocean voyage, Gautam Mazumder, an engineer who worked for Crompton Greaves, was sent to the Port of Houston to inspect the Transformer. (Docket Entry No. 204 at 632). Mazumder arrived on March 12, 2012. He met with Rego, who told him that the Transformer had been loaded onto the railcar earlier that day. (*Id.* at 633).

On March 13, 2007, Time Marine, which Shippers Stevedoring hired to secure the Transformer to the railcar, began the securement process. On that date, the ShockLog recorded two shock events 14 seconds apart. (Pl.'s Ex. 80).

Hullender testified that the timing and magnitude of the March 13, 2007 shock events were consistent with Shippers Stevedoring loading or repositioning the Transformer on the railcar. (Docket Entry No. 189 at 27). He speculated that a crane operator could have set the Transformer down and then decided to lift it again to reposition it. (*Id.*). That scenario could result in the accelerations that were measured on the ShockLog recorder. (*Id.* at 28). Hullender stated that the recorded 1.3 g acceleration on the Y-axis and the 3.1 to 3.84 g acceleration on the Z-axis could mean that when the Transformer was lowered to the railcar, "it was not perfectly level and you [could] actually have one end coming down before the other." (*Id.* at 29; Pl.'s Ex. 80).

Wolff proposed a similar theory at trial. He testified that the first thing welders securing the railcar usually do is ensure that the cargo's center of gravity is properly aligned with the railcar's center. If the cargo is not aligned properly, it would have to be lifted again and realigned. (Docket Entry No. 208 at 730). Wolff testified that the Transformer may not have been properly aligned on March 12 and that Shippers Stevedoring tried to lift and move it to a proper position on March 13, using only one crane. Alternatively, the Transformer might have been properly aligned but the plywood underneath might have been improperly placed. (*Id.* at 758). Wolff stated that the Transformer may have been lifted 1 to 1.5 inches and dropped, followed by a second similar attempt. Wolff testified that this would explain two shocks recorded 14 seconds apart. He thought a crane operator may not have realized that lifting the Transformer and dropping it such a slight distance had the potential to create a damaging force. (*Id.* at 731–32).

Shippers Stevedoring disputes the theories Wolff and Hullender suggested. Harrelson testified that he made sure the Transformer was properly aligned on the railcar on March 12 before he released the crane rigging. (Docket Entry No. 213 at 909). Harrelson supervises all of Shippers Stevedoring's crane activities and is required to be present whenever cargo weighing more than 100,000 pounds is lifted. (*Id.* at 900). Harrelson did not see any cranes being used on March 13. He testified that, if any cranes had been used, he would have been notified so that he could observe. (*Id.* at 909–10).

Harrelson's testimony is credible. It is corroborated by Shippers Stevedoring's crane-usage records and the billing invoices that it sent to Alomex. Shippers Stevedoring keeps daily crane-usage records. According to Harrelson, Shippers Stevedoring's consistent practice is to make an entry noting any use of its cranes. (*Id.*). The crane-usage records show that the two 140-ton P&H cranes at the Barbours Cut Terminal were used on March 12 from 1:00 p.m. to 3:00 p.m. (Def.'s Ex. 28; Docket Entry 213 No. at 901). According to the records, the cranes were not in use on March 13. Shippers Stevedoring charged Alomex for six hours of crane usage. Harrelson testified that there is a three-hour minimum per day for use of each crane. (Docket Entry No. 213 at 902). This is consistent with Shippers Stevedoring using the two cranes for two hours on March 12 and not using them on March 13.

Harrelson also credibly testified that it would not even have been possible for one crane to lift the Transformer. (*Id.* at 910). Photographs taken of Shippers Stevedoring loading the Transformer onto the railcar show that two cranes were used. (Def.'s Ex. 1M). Rego's Vericclaim report also indicates that two cranes were used to load the Transformer. (Def.'s Ex. 33 at 6). Harrelson admitted that a single crane might be able to lift one end of the Transformer but credibly testified that two cranes were used on March 12. (Docket Entry No. 213 at 919).

Rego returned to the Terminal on March 13 to observe the securement of the Transformer to the railcar. He did not see the Transformer being lifted in that process. (Docket Entry No. 211 at 877, 885). He did not notice any other activity that might have damaged the Transformer. (*Id.* at 878). Rego's report for Vericclaim states that a plywood sheet had already been placed under the Transformer on March 12. (Def.'s Ex. 33 at 6). This makes it unlikely that, as Wolff speculated, the Transformer had been repositioned on March 13 so that Shippers Stevedoring could place or reposition a plywood sheet underneath it.

Mazumder also observed the securement of the Transformer to the railcar on the morning of March 13. (Docket Entry No. 204 at 634). Mazumder stated that the cranes that had been used to lift the Transformer onto the railcar were still in place on March 13 but were not used while he was there. (*Id.* at 635). Mazumder did not see anything occur that might have damaged the Transformer on March 13. (*Id.* at 681). This, with the crane-usage records, makes it implausible that, as Wolff and Hullender suggested, the Transformer was lifted not once — but twice — during the securement process.

Thomas Adgate, one of the welders working for Time Marine's subcontractor to secure the Transformer on March 13, testified that, although it was unusual, there were "a couple of times" that cargo had already been transferred onto a railcar before his team arrived to secure it. (Adgate Dep. at 34). Adgate could not specifically recall securing the South Loop Transformer to the railcar on March 13. (*Id.* at 22–23, 44–45, 49–50, 60–61).

Coyt Mangum, who was part of the securement team, testified that it would have been unusual for Shippers Stevedoring to have placed the Transformer on the railcar the day before the securement process was scheduled. (Mangum Dep. at 45–46). Mangum also stated that he observed Shippers Stevedoring load the Transformer onto the railcar from the Mafi on the morning of March

13 — not on March 12, as all the other direct record evidence suggests. (*Id.* at 33, 43–45). Mangum’s testimony that the Transformer was loaded onto the railcar on March 13 is likely mistaken. It contradicts testimony and evidence provided not only by Shippers Stevedoring and its employees but also by Mazumder, a Crompton Greaves employee, and Rego, whose report was filed before the damage to the Transformer was discovered.

The Transformer was lifted onto the railcar on March 12, and no credible evidence shows that one end was abruptly dropped — much less dropped twice — during that process.

c. The March 31 ShockLog Recorder Event

On March 19, 2007, Union Pacific began towing the railcar carrying the South Loop Transformer to Tucson, Arizona. (Docket Entry Nos. 213 at 981; 208 at 725). On March 31, 2007, while the Transformer was still on Union Pacific’s railcar, the ShockLog recorded a fourth shock event. (Pl.’s Ex. 80). Shippers Stevedoring has suggested that the March 31, 2007 recorded event may have been caused by “rail humping.” This term refers to rail cars bumping against one another at relatively low speeds as a result of the way they are coupled. (Docket Entry No. 208 at 747). “Humping” is capable of damaging cargo. The railcar carrying the Transformer had a “Do Not Hump” sign attached to it. (Pl.’s Ex. 96; Docket Entry No. 215 at 1110–11, 1123, 1176–77, 1180–81).

6. The Evidence as to the Discovery of the Damages

On April 3, 2007, the railcar arrived in Tucson, Arizona. On April 6, 2007, cranes were used to lift the Transformer onto a flatbed truck. The following day, the Transformer arrived in Sahuarita, where it was unloaded onto a specially designed pad at the South Loop Substation. (Docket Entry No. 203 at 372; Pl.’s Ex. 67; Def.’s Ex. 30).

Mazumder was present at Sahuarita when the South Loop Transformer arrived. (Docket Entry No. 204 at 640). He performed a Megger test, which measures a transformer's core-to-ground resistance. The South Loop Transformer failed the test. (*Id.* at 641). When Mazumder removed the metal cover over the shelf holding the ShockLog recorder, he noticed that the warning light was flashing, indicating that the ShockLog had measured at least one alarm event. (*Id.* at 643). Mazumder then removed the ShockLog from the Transformer and downloaded the shock data onto his computer. (*Id.* at 644). Mazumder saw only one shock recorder on the Transformer. (*Id.* at 668). Mazumder performed an internal inspection of the Transformer. (*Id.* at 649). The inspection revealed that the Transformer's core was displaced. (*Id.* at 653). He also noticed nuts, bolts, and loose insulation lying at the bottom of the Transformer, and indentations in the metal where the washers and bolts had previously been tightened. (*Id.* at 655, 657). Mazumder then performed a "sweep frequency response analysis," to compares the electronic signature of the Transformer as measured on the job site with the electronic signature that was measured in the factory before shipping. This comparison showed that the core had shifted from its original location, evidence that the unit had been damaged. (Docket Entry No. 203, at 327).

Based on these tests, Crompton Greaves initially concluded that the Transformer could be repaired, but not "on the job site." The repair work required "untanking" to identify the problem. (*Id.*). "Untanking" involves cutting open a transformer's top cover and extracting the core and core assembly from the transformer tank. At TEP's recommendation, Crompton Greaves shipped the Transformer to Edison ESI, a repair facility in Westminster, California, for untanking and then repair. (Docket Entry Nos. 203 at 328, 338; 190 at 222). Crompton Greaves estimated that the cost to repair the Transformer at Edison was approximately \$570,000, which would be less than the remanufacturing cost. (Docket Entry No. 203 at 338).

At the Edison facility, the Transformer was untanked and tests were done to identify the location of the core-to-ground fault. The active parts were also inspected. Several people, including inspectors from TEP and Crompton Greaves, and the underwriter's representative, saw the Transformer at the Edison facility. (*Id.* at 340). Their conclusion was that the Transformer's core had shifted downward and the insulation had been damaged in multiple places. (*Id.* at 341). According to Chakravarty, further repairs at ESI were "ruled out" because the facility did not have "the right equipment in-house to repair th[e] unit." (*Id.* at 342). ESI also refused to give a warranty for the repairs because the damage was so extensive. (Docket Entry No. 190 at 208–09; Def.'s Ex. 54). Crompton Greaves considered whether to repair the unit in its facilities in India, Canada, or Belgium. It chose Canada because it was the least expensive and the fastest option, and would also allow TEP to participate in the repair process. (Docket Entry No. 203 at 343; Pl.'s Ex. 58).⁵

Ganser testified that TEP hired him as a consultant to inspect the South Loop Transformer at the Edison facility. Ganser sent a report to Mike Flores, TEP's manager of engineering. (Docket Entry No. 204 at 548; Def.'s Ex. 62). In his report and at trial, Ganser noted numerous deficiencies in the Transformer that he ascribed to poor design and defective manufacturing. Among other things, Ganser observed that the Transformer was missing bolts and a washer and nut assembly, (Docket Entry No. 204 at 550), had misplaced paint inside the tank (which can cause a transformer to fail), (*id.* at 551); had misplaced HV end blocks (which are necessary to support the winding), (*id.* at 557); had an incorrectly measured lead (which could result in a fire), (*id.* at 559); had stuffing filling the gap between the core step and the block (which could cause the core to move due to

⁵ Additional testimony and documents were presented at trial on the appropriate amount of Crompton Greaves's damages. Because this court has found that Shippers Stevedoring is not liable for the damage to the South Loop Transformer, much of the evidence relating to damage is not reviewed in this opinion.

improper support), (*id.* at 561); had loose insulation; and had rust on the laminations (suggesting that harmful moisture had entered the tank), (*id.* at 562–64).

Ganser admitted that he had not been informed of the shock recorder data before he drafted his report. He conceded that some of the damage he found in the South Loop Transformer could have been caused by a downward force. (*Id.* at 571). Nevertheless, Ganser testified that he would have recommended that TEP not accept delivery of the South Loop Transformer for reasons unrelated to any damage that could be ascribed to shock events. (*Id.* at 572). Ganser noted that TEP had experienced problems of various kinds with almost all of the transformers it ordered from Crompton Greaves. These problems included parts damaged during shipping, clearance problems, deviations from TEP’s specifications, a core-to-ground fault, and moisture infiltration. (*Id.* at 573). He believed these deficiencies reflected a lack of quality control at Crompton Greaves’s Bhopal, India plant.

Ganser also testified that the South Loop Transformer design lacked the structural support necessary to prevent damage during shipping. (*Id.* at 574). That lack meant that the South Loop Transformer could have been damaged by forces below 2.5g. (*Id.* at 618).

Crompton Greaves called Feloni to rebut the conclusions that Ganser expressed in his report for TEP. Feloni reviewed Ganser’s report and other relevant evidence but did not inspect the Transformer. Nor did he review photographs of the manufacturing process. (Docket Entry No. 190 at 263–65). Based on the evidence he did review, Feloni concluded that the “structural deformation . . . and other deficiencies picked up in this transformer are due to rough handling.” (Docket Entry No. 190 at 179). He testified that many of the quality-control issues Ganser identified were unrelated to the damage found in the Transformer’s core and coil assembly, (*id.* at 227), and that the design of the Transformer’s support structure was consistent with industry standards, (*id.* at 178).

Feloni noted that, although the many of the other transformers that Crompton Greaves manufactured for TEP required repair before they were placed into operation, unlike the South Loop Transformer, none arrived with damage to their core and coil assembly. (*Id.* at 217–18). Feloni also testified that a transformer can be shipped from India to the United States without exposure to shocks in excess of 2 g. (*Id.* at 288).

Based on the reports and testimony provided by Ganser and Feloni, and the other relevant evidence in the record, the court finds that poor manufacturing quality controls and design flaws increased the South Loop Transformer’s susceptibility to damage during transportation. But based on the reports and testimony about other Crompton Greaves transformers designed, manufactured, and shipped to TEP, the court finds that the South Loop Transformer would likely not have been so extensively damaged unless it had been exposed to accelerations beyond those reasonably expected in moving and transporting a transformer.

B. Interpreting the Shock Recorder Data

Shippers Stevedoring argued that the shock recorder mounted to the Transformer had not been properly calibrated and that, as a result, its measurements may not have been accurate. Shippers Stevedoring alleges that RD317 model ShockLog recorders must be calibrated annually and points out that the ShockLog on the Transformer had last been calibrated on April 30, 2004, more than a year before the Transformer was shipped. (Def.’s Ex. 12).

Calibration certificates and consistency with other known events can be used to determine a shock recorder’s reliability. (Docket Entry No. 189 at 22). The ShockLog attached to the South Loop Transformer was purchased by Crompton Greaves in 2005. (*Id.* at 24). Hullender, one of Crompton Greaves’s expert witnesses, sent the ShockLog back to the manufacturer to check its calibration. (*Id.* at 22). The August 2009 calibration results revealed that the recorder was still “in

spec” and was functioning correctly. (*Id.* at 24, 26; Def.’s Ex. 13). Crompton Greaves has shown that the shock recorder attached to the Transformer was in working order during the shipping process.

The parties disputed which, if any, of the four alarm events recorded by the shock recorder were triggered by low-frequency forces that were likely to damage the Transformer and which were triggered by high-frequency vibrations that are unlikely to cause damage. Hullender performed tests to exclude the possibility that the alarm events were caused by blows to the shelf to which the ShockLog recorder was bolted. These blows would produce high-frequency vibrations unlikely to damage the Transformer. Based on these test results, Hullender concluded that such blows could not have produced the low frequencies registered by the shock recorder during the first three alarm events. (Docket Entry No. 189 at 35–36, 38).

Bonyata, Shippers Stevedoring’s expert on shock recorders, challenged Hullender’s conclusions. Bonyata contended that the first three alarm events were false positives produced by extreme high-frequency shocks. He pointed to the ShockLog manual statement that “[w]hen a ShockLog recorder is bolted to a resonant metal structure, such as an aluminum or steel beam or girder and this structure is struck with a metal object, very large high frequency accelerations will be applied to the ShockLog recorder.” (Pl.’s Ex. 16 at 119). The manual stated that high frequency shocks can affect the ShockLog data. The manual recommended using rubber isolators when affixing the shock recorder to metal surfaces to avoid such false positives:

These accelerations are out of the measuring bank of the ShockLog recorder and ideally would produce no indication at all. In practice, very slight non-linearities in the ShockLog recorder sensors can covert the high frequency accelerations signals into an ‘offset’ which decays away over a period of a few seconds. The ShockLog recorder can discriminate between wanted signals of a few g at below 150 Hz and unwanted signals of several thousand g at high frequencies. Its

discrimination is further improved by installing it on the supplied vibration isolators. (These do not significantly affect performance below 150Hz).

(*Id.*) It further provided:

If there is a possibility of the structure you are monitoring receiving metal to metal impacts you should check that the ShockLog recorder does not give unwanted responses with the Setup parameters you will intend to use. Installing the ShockLog recorder on the supplied vibration isolators will reduce its, (already small), susceptibility to this effect.

(Pl.'s Ex. 16 at 120).

The manual included two sample graphs comparing how a recorder measures data produced by high-frequency shocks when that recorder is mounted with and without rubber isolators. (Pl.'s Ex. 16 at 120). Bonyata testified that the graphs of the March 7 and March 13 shock events closely resemble the graph in the ShockLog manual showing the false offsets that result when a shock recorder that is mounted without rubber isolators measures high-frequency accelerations. He believed that the graph for the March 31 event, however, depicted a genuine low-frequency shock event that could have damaged the Transformer. (Docket Entry No. 215 at 1117–18). Bonyata noted that the March 7, 2007 shock signals took several seconds to decay back to zero, while a true low-frequency shock would have decayed much faster. (*Id.* at 1117). Bonyata also testified that, when he looked at the full four seconds of data for the second and third alarm events — both of which occurred on March 13, 2007 — he noticed that the data for the second event showed three separate impact events occurring about a second apart from one another and that the data for the third event showed two separate impacts about a second-and-a-half from one another. Bonyata concluded that the five impacts were consistent with the Transformer being struck with five heavy hammer blows. (*Id.* at 1121; Pl.'s Ex. 37; Def.'s Ex. 98).

Hullender disputed the need for rubber isolators to mount the RD317 model ShockLog on the Transformer shelf. The ShockLog manual was produced for both the RD298 and RD317 models. Hullender pointed to language in the manual that he believed suggested that, while rubber isolators should be used when mounting the RD298 model, they were not necessary for the RD317 model. The language stated: “Due to our policy of continuous improvement, the RD317 Micro ShockLog recorder is more tolerant of high frequency shocks and rubber isolators are not normally required.” (Pl.’s Ex. 16 at 119).

Hullender testified that objects vibrate at their resonant frequencies. The frequency of the Transformer plate on which the model RD317 ShockLog recorder was mounted was less than 200 Hz. Hullender believed this was not high enough to cause the recorder to produce false-positive readings. (Docket Entry No. 215 at 1160). In comparison, the frequency of the accelerations that produced the offset displayed in the manual was 10,000 Hz. (*Id.* at 1161; Pl.’s Ex. 16 at 119). Hullender also ran a computer simulation, which he said showed that having isolators would not have affected the data recorded during the four recorded alarm events. (Docket Entry No. 189 at 50).

Hullender also disagreed, in part, with Bonyata’s conclusions about the March 31 alarm event. Hullender noted that the data for the March 31 alarm event showed that there were a lot of associated high-frequency shocks. (*Id.* at 33). He believed that the high-frequency accelerations corresponded to internal changes in the equipment. This suggested that “things [were] moving around on the inside that didn’t move around on the inside in the first impact.” (*Id.*). Noting that there were three prior alarm events, Hullender believed that this was evidence that the Transformer’s internal parts had previously been damaged.

This court finds Hullender's method for analyzing the role of rubber isolators reliable and well-supported by the manual, the shock recorder's data, and the computer simulation that he performed. Crompton Greaves's failure to use rubber isolators in mounting the ShockLog to the shelf of the South Loop Transformer did not affect the reliability of the ShockLog data.

Hullender's inferences based on the shock recorder data from the March 31, 2007 alarm event are less convincing. Even if Hullender is correct that the presence of high-frequency accelerations on March 31 corresponds to internal components already loose within the Transformer, this does not mean that these internal changes resulted from forces reflected in one of the prior ShockLog recorded events. It is equally consistent that the Transformer parts had become loose because the design and manufacturing deficiencies previously noted, because of damage that occurred before the shock recorder was installed, or because of the low-frequency shocks on March 31, 2007, and not on some earlier date.

III. Conclusions of Law

A. Shippers Stevedoring's Adverse-Inference Request

Shippers Stevedoring has renewed its prior request for an adverse inference against Crompton Greaves that a second shock recorder was attached to the Transformer during the shipping process and that the data that would have been recovered from the second shock recorder would have conflicted with the data from the ShockLog. (Docket Entry No. 137, ¶ 34). In support, Shippers Stevedoring points to the fact that Crompton Greaves and TEP agreed to ship the Transformer with two shock recorders and that pictures taken of the Transformer on March 7 at the Port of Houston show both an attached RD317 recorder and a LoGee 10 recorder sitting beside it on the Transformer's shelf.

Shippers Stevedoring also contends that Crompton Greaves has not produced the ShockLog’s security log and requests an adverse inference that the information contained in the security log would have been favorable to Shippers Stevedoring. Shippers Stevedoring argues that Crompton Greaves sent the ShockLog back to the manufacturer to be recalibrated without consulting opposing counsel in advance. (*Id.*, ¶ 35).

“Spoliation is the destruction or the significant and meaningful alteration of evidence.” *Rimkus Consulting Grp. v. Cammarata*, 688 F. Supp. 2d 598, 612 (S.D. Tex. 2010). Allegations of spoliation, including the destruction of evidence in pending or reasonably foreseeable litigation, are addressed in federal courts through applicable rules or statutes.⁶ A court may use its inherent power over the litigation process only if the alleged conduct occurs before a case is filed or if there is no statute or rule that adequately addresses the conduct. *See Chambers v. NASCO, Inc.*, 501 U.S. 32, 43–46 (1991); *Natural Gas Pipeline Co. of Am. v. Energy Gathering, Inc.*, 2 F.3d 1397, 1408 (5th Cir. 1993) (summary calendar). A court’s inherent power is “interpreted narrowly, and its reach is limited by its ultimate source — the court’s need to orderly and expeditiously perform its duties.” *Newby v. Enron Corp.*, 302 F.3d 295, 302 (5th Cir. 2002) (footnote omitted) (citing *Chambers*, 501 U.S. at 43).

Crompton Greaves argues that there is insufficient evidence that a second shock recorder was ever attached to the Transformer during the shipping process or that, even if a second recorder was attached, Crompton Greaves destroyed it in bad faith. As a general rule, in the Fifth Circuit, the severe sanctions of granting default judgment, striking pleadings, or making an adverse inference may not be imposed unless there is evidence of bad faith. *Condrey v. SunTrust Bank of Ga.*, 431

⁶ In diversity suits, federal courts apply federal evidence rules rather than state law on spoliation. *Condrey v. SunTrust Bank of Ga.*, 431 F.3d 191, 203 (5th Cir. 2005).

F.3d 191, 203 (5th Cir. 2005); *King v. Ill. Cent. R.R.*, 337 F.3d 550, 556 (5th Cir. 2003); *United States v. Wise*, 221 F.3d 140, 156 (5th Cir. 2000). “‘Mere negligence is not enough’ to warrant an instruction on spoliation.” *Russell v. Univ. of Tex. of Permian Basin*, 234 F. App’x. 195, 208 (5th Cir. 2007) (per curiam) (quoting *Vick v. Tex. Emp. Comm’n*, 514 F.2d 734, 737 (5th Cir. 1975)); *see also King*, 337 F.3d at 556 (“King must show that ICR acted in ‘bad faith’ to establish that it was entitled to an adverse inference.”); *Vick v. Tex. Emp. Comm’n*, 514 F.2d at 737 (“The adverse inference to be drawn from destruction of records is predicated on bad conduct of the defendant. Moreover, the circumstances of the act must manifest bad faith. Mere negligence is not enough, for it does not sustain an inference of consciousness of a weak case.” (quotation omitted)).

The evidence in the record provides no basis for an adverse inference. The records shows that only one shock recorder — the ShockLog RD317 model — was attached to the Transformer during shipment. Shivakumar and Chakravarty have admitted, and the evidence shows, that TEP asked Crompton Greaves to use a second shock recorder, a LoGee 10 model, on the transformers that it ordered. Both Shivakumar and Chakravarty consistently testified, however, that the LoGee 10 recorders Crompton Greaves purchased did not arrive in time to be used when the South Loop Transformer was shipped. Only one shock recorder was bolted to the Transformer. The court also finds credible Rego’s testimony that Scheible had brought the LoGee 10 recorder shown in the picture he took on March 7. That recorder was not attached to the Transformer’s shelf, but simply resting on it. (Def.’s Ex. 19A; Docket Entry No. 211 at 887–89). The court also finds that Shippers Stevedoring has not demonstrated that Crompton Greaves acted in bad faith when it sent the Shock Log recorder to the manufacturer to be recalibrated.

Shippers Stevedoring’s requests for an adverse inference on the basis of Crompton Greaves’s alleged spoliation are denied.

B. COGSA's One-Year Limitations Period

Shippers Stevedoring argued at trial that, even if it was responsible for the damage to the South Loop Transformer, COGSA applies to limit Shippers Stevedoring's claims. COGSA contains a one-year statute of limitations for loss or damage claims. COGSA § 3(6), 49 Stat. 1207, 1209 (1936) (codified at 46 U.S.C. § 30701 note). Crompton Greaves alleges that Shippers Stevedoring is responsible for damaging the transformer on March 7 and March 13, 2007. Crompton Greaves did not file this lawsuit until June 3, 2008. Crompton Greaves's claims against Shippers Stevedoring for actions it took on those dates are barred to the extent that COGSA applies.

Ordinarily, COGSA governs bills of lading "from the time when the goods are loaded on to the time when they are discharged from the ship." *Id.*, § 1(e).⁷ Courts refer to this as the "tackle to tackle" period. *Norfolk So. R.R. v. Kirby*, 543 U.S. 14, 29 (2004). An earlier law, the Harter Act, "applies to the period between the discharge of the cargo from the vessel and "proper delivery." *Mannesman Demag Corp. v. M/V CONCERT EXPRESS*, 225 F.3d 587, 592 (5th Cir. 2000). Contracting parties may extend the period during which COGSA's liability limits apply to include "the custody and care and handling of goods prior to the loading on and subsequent to the discharge from the ship." COGSA, § 7 (codified at 46 U.S.C. § 30701 note) ("Nothing contained in [COGSA] shall prevent a carrier or a shipper from entering into any agreement, stipulation, condition, reservation, or exemption as to the responsibility and liability of the carrier or the ship for the loss or damage to or in connection with the custody and care and handling of goods prior to the loading

⁷ COGSA was previously codified in the appendix to Title 46 of the U.S. Code. When Title 46 was recodified in 2006 by Pub. L. 109-304, Oct. 6, 2006, 120 Stat. 1485, COGSA was not included except as a statutory note to the first section of the Harter Act, 46 U.S.C. § 30701. See David W. Robertson & Michael F. Sturley, *Recent Developments in Admiralty and Maritime Law at the National Level and in the Fifth and Eleventh Circuits*, 32 TUL. MAR. L.J. 493, 500 (2008) (explaining the codification issues). COGSA was not repealed by the recodification. See, e.g., *Ambraco, Inc. v. Bossclip B.V.*, 570 F.3d 233, 237 (5th Cir. 2009) (applying COGSA).

on and subsequent to the discharge from the ship on which the goods are carried by sea.” Courts have treated “delivery” for the purposes of COGSA and the Harter Act as equivalent. *Mannesman*, 225 F.3d at 594.

Shippers Stevedoring argues that Crompton Greaves and the NSCSA modified the COGSA default rules by inserting a Himalaya Clause into their bill of lading. The Himalaya Clause, section 4(c) of the bill of lading, limits the liability of “the ship managers, operator, insurer, servant, independent contractor, or subcontractor *of the carrier or underlying carrier*, including terminal operators, stevedores, carpenters, and watchmen.” (Def.’s Ex. 20 (emphasis added)). A Himalaya Clause is interpreted like any other contract term. *Kirby*, 543 U.S. at 31. This Himalaya Clause is clear and unambiguous. *See id.* at 31–32; *Henley v. Edlemon*, 297 F.3d 427, 430 & n.5 (5th Cir. 2002) (describing the federal law of contract interpretation). Under this Himalaya Clause, COGSA defenses and liability limitations are available only if Shippers Stevedoring can show that it was a manager, operator, insurer, servant, independent contractor, or subcontractor of the NSCSA. *See Dewanchand Ramsaran Indus. Ltd. v. Ports Am. Tex., Inc.*, 2010 WL 707380, at *6–7 (S.D. Tex. Feb. 24, 2010).

Shippers Stevedoring also argues that the bill of lading’s “responsibility clause” extends COGSA’s applicability beyond the tackle-to-tackle period. Section 3(a) of the bill of lading provides that for port-to-port shipments to or from United States ports, “the Carrier shall be liable from the time of [sic] the Goods are received at the loading port until the time the Goods have been *delivered* to the Merchant at the Port of Discharge (Box 13).” (Def.’s Ex. 20, § 35(a) (Emphasis added)). Houston is listed in Box 13 of the bill of lading as the Port of Discharge. The bill of lading defines the “Merchant” as “the Shipper, the Receiver, the Consignee, the Holder of the Bill of Lading, and the Owner of the Goods and the servants or agents of any of these.” (Def.’s Ex. 20).

Crompton Greaves is identified as the “Shipper”; Pauwels Americas, Inc. is identified as the “Consignee”; and Tucson Electric Power Co. is identified as the “Receiver.” The bill of lading also states that trades to or from the United States “shall be subject to the United States Carriage of Goods by Sea Act of 1836” (*Id.*, § 3(b)) and that “[a]ll liability whatsoever of the Carrier shall cease unless suit is brought within 12 months after delivery of the goods or the date when the goods should have been delivered.” (*Id.*, § 7).

Crompton Greaves concedes that the bill of lading extended COGSA’s applicability beyond when the cargo passed “over the ship’s rail.” (Def.’s Ex. 20, § 5(a)). It argues, however, that Shippers Stevedoring delivered the Transformer for the NSCSA on March 2, 2007, when the Transformer was set down on the pier. In *Servicios-Expoarma, C.A. v. Indus. Maritime Carriers, Inc.*, 135 F.3d 984 (5th Cir. 1998), the Fifth Circuit defined “delivery” under COGSA as “the point at which the carrier has fulfilled its responsibilities to carry, discharge, and otherwise perform its contractual duties with respect to the cargo.” *Id.* at 992. The court noted that “[d]elivery’ occurs when the carrier places the cargo into the custody of whomever is legally entitled to receive it from the carrier.” *Id.* Under general maritime law, a carrier is required to “unload the cargo onto a dock, segregate it by bill of lading and count, put it in a place of rest on the pier so that it is accessible to the consignee, and afford the consignee a reasonable opportunity to come and get it.” *Id.* at 993 (quoting *Tapco Nigeria v. M/V WESTWIND*, 702 F.2d 1252, 1255 (5th Cir. 1983) (quotation marks and citation omitted)). The general duty of delivery is subject to the custom-of-the-port doctrine. *Id.* (“[W]hile contract and maritime law generally will dictate into whose custody an ocean carrier is required to deliver cargo, such law will be overridden by the established law or custom of the port of delivery.”).

Although the *Servicios-Expoarma* court referred to placing cargo “in a place of rest on the pier” as evidence of delivery, the facts of the case before it, the court’s treatment of relevant prior decisions, and other language from the opinion suggest that, in determining the timing of delivery, the court was primarily concerned with when a carrier or its agent gave up control over and custody of the goods for which it was responsible. In *Servicios-Expoarma*, a company shipped building materials from New Orleans to La Guaira, Venezuela. On arrival in La Guaira, the materials were discharged from the vessel and moved 30 meters to a warehouse owned by a third party, where they were stored pending customs clearance, and then released to the consignee. The shipper sued the carrier more than one year after the materials were moved to the customs warehouse but less than one year after the consignee received them. The panel concluded that “once [the carrier] had properly placed its cargo in the hands of the party authorized to receive it, [the carrier] had ‘delivered’ the cargo, and the one-year time-for-suit period began to run.” *Id.* at 993. La Guaria’s laws required that all cargo be taken to an authorized customs warehouse. According to the court, the time of delivery was not when the goods were placed on the pier but “when [the customs warehouse] took possession of the cargo.” *Id.* at 993 n.22.

In support of its position, the court cited *A. Russo & Co. v. United States*, 40 F.2d 39 (5th Cir. 1930), a pre-COGSA case in which an ocean vessel carried goods and then transferred them to a railroad. The vessel’s bill of lading required the consignee to sue the ocean carrier within six months of delivery. The consignee sued more than six months after the carrier provided the goods to the railroad but less than six months after the consignee received the goods. The court concluded that delivery occurred when the goods were placed with the railroad. As a result, the consignee’s claims were barred. According to the *Servicios-Expoarma* court, “[i]t is . . . apparent from *Russo*

that ‘delivery’ occurred when the ocean carrier had fulfilled its obligations under the bill of lading by placing the cargo into the hands of the railroad.” *Id.* at 991.⁸

Other decisions by the Fifth Circuit and courts in other jurisdictions are consistent in focusing on whether a carrier or its agent has control or custody of goods to determine when delivery has occurred. In *Koppers Co. Inc. v. M/S Defiance*, 704 F.2d 1309 (4th Cir. 1983), the Fourth Circuit considered whether a consignee’s claims against a stevedoring company were limited by COGSA. The stevedoring firm had discharged the goods from the ship that carried them and set them down in the terminal’s container yard. The goods were damaged the next day while the stevedores were towing them to a shed owned by the carrier to be stored before inland shipment by the consignee. The court held that COGSA applied because delivery had not yet occurred when the cargo was damaged. In determining the time of delivery, the court focused on whether the stevedoring company “was performing services for [the carrier] pursuant to their stevedoring contract” and whether the company was “subject to the general control and supervision of” the carrier. *Id.* at 1312; *see also Tapco Nigeria*, 702 F.2d at 1257 (“[T]he correct focus in ascertaining whether delivery has been accomplished for purposes of the Harter Act is not, as the appellants urge, on the location where the goods are unloaded, but rather on whether delivery was to persons charged by the law and usage of the port with the duty to receive cargo and distribute it to the consignee.” (quotation marks omitted)); *Colgate Palmolive Co. v. M/V “Atlantic Conveyor,”* 1996 WL 742861, at *5 (S.D.N.Y. Dec. 31, 1996) (“Although constructive delivery under the Harter Act in certain circumstances can include discharge at a fit wharf and proper notice to the consignee . . .

⁸ The *Servicios-Expoarma* court also pointed to comments that were made in Congress prior to COGSA’s passage. It noted: “the [congressional] committee seemed to agree that under COGSA, ‘delivery’ was accomplished by relinquishing the goods to the land carrier, who is not necessarily the ultimate consignee.” *Id.* at 992.

constructive delivery generally requires placing the goods at the disposal of the party entitled to receive them.”); *M.C. Mach. Sys., Inc. v. Maher Terminals, Inc.*, 753 A.2d 617, 627 (N.J. 2000) (noting that the argument “that proper delivery is satisfied by merely unloading the goods from a ship onto a wharf or pier has been frequently rejected”). “Custody” and “control” are the critical factors in deciding whether delivery occurred here.

Shippers Stevedoring contends that it acted on the NSCSA’s behalf and that the NSCSA still exercised ultimate control over the Transformer on March 7, 2007. Shippers Stevedoring relies primarily on a delivery order from Vandegrift Forwarding Co., Crompton Greaves’s freight forwarder, which Biehl & Co., the NSCSA’s shipping agent, stamped on March 8, 2007. The stamp, addressed to Shippers Stevedoring, stated: “Please Release Cargo,” and, ““All loading charges + exam charges have be [sic] satisfied with Shippers”” (Def.’s Ex. 26 (internal quotation marks in original)). Marsh testified that this “steamship release” signified that the money owed to the ocean carrier had been paid and the cargo cleared customs. (Docket Entry No. 213 at 935–37). A similar stamp, dated March 8, 2007, appears on the NSCSA import manifest for the Transformer. (Def.’s Ex. 27). A March 9, 2007 email from Bart De Vos at Alomex to Anish Khosla at Crompton Greaves acknowledged that “Vandegrift confirmed [sic] us yesterday that clearance of this shipment is completed.” (Def.’s Ex. 30). Marsh testified that the consignee is not permitted to take possession of its cargo and that the cargo is not permitted to leave the terminal until the steamship release has been issued. (Docket Entry No. 213 at 938). Holliday similarly testified that stevedores “are not going to do anything with the on-carriage or the on-loading of any cargo until it’s released by the carrier.” (Docket Entry No. 214 at 1001). A shipping release is standard in the shipping and terminal industry. (*Id.* at 1001–02). Shippers Stevedoring’s testimony that the steamship release

is required before cargo can be released into the possession of the consignee or its agents was un rebutted at trial.⁹

Crompton Greaves argues that Shippers Stevedoring stopped acting as the NSCSA's agent and began acting as Crompton Greaves's agent before March 7, 2007. Crompton Greaves argues that: Shippers Stevedoring's stevedoring and terminal handling services are separate and distinct operations, each with its own staffing; Shippers Stevedoring was acting according to Crompton Greaves' instructions, made through Alomex, before March 7, 2007, including by tracking the location of the railcar that Alomex had arranged to transport the Transformer to Arizona before the *Saudi Diriyah's* arrival in Houston; the NSCSA bill of lading is stamped "port-to-port"; and Crompton Greaves's agreement with Alomex includes the language "[f]rom delivered free on mafi, unlashd at the port of Houston till offloaded at Sahuarita, AZ."

The facts that Shippers Stevedoring has separate stevedoring and terminal staffs, and that the Transformer may have been placed at the terminal staff's disposal, do not determine the key issues of control and custody. Several courts have held that COGSA may be contractually extended to cover terminal operators that are working on behalf of a carrier as well as stevedores. *See, e.g., B.*

⁹ Shippers Stevedoring further asserts that the steamship release is necessary to preserve the NSCSA's contractual lien against the cargo it has carried. Shippers Stevedoring points to language from Section 13 of NSCSA's bill of lading stating that "the Carrier shall have a lien on the Goods for unpaid freight, ocean as well as inland, and charges due under the Bill of Lading for any expenses incurred by the Carrier . . . For dues, tolls, surveys, lighterage and all customs duties and port charges," (Def.'s Ex. 20, § 13), and to *Atlantic Richfield Co. v. Good Hope Refineries, Inc.*, 604 F.2d 865(5th Cir. 1979), in which the Fifth Circuit held that "[t]he lien for freight and demurrage is possessory in nature, and, therefore, it is ordinarily lost by unconditional delivery of the cargo," *id* at 872. Possession is not necessary to preserve a lien against shipped goods. Since *Atlantic Richfield*, the Fifth Circuit has clarified that parties to a bill of lading "may agree that the lien survives beyond discharge." *Arochem Corp. v. Wilomi, Inc.*, 962 F.2d 496, 500 (5th Cir. 1992). The NSCSA bill of lading covering the Transformer states that, "[t]he Carrier's lien shall survive delivery and may be enforced at public or private sale upon ten days notice to the Consignee or Notify Party on the reverse side." (Def.'s Ex. 20, § 13). The NSCSA had contractually preserved its lien on the South Loop Transformer and its accessories.

Elliot Ltd. v. John T. Clark & Sons of Md., Inc., 704 F.2d 1305, 1309 (4th Cir. 1983) (holding that a bill of lading extended COGSA’s liability limitations to a terminal operator because, “[a]t the time of the damage, [the operator] had possession of the cargo pursuant to its contract with [the ocean carrier’s] predecessor in interest”); *Certain Underwriters at Lloyds’ v. Barber Blue Sea Line*, 675 F.2d 266, 270 (11th Cir. 1982) (finding that a terminal operator was the carrier’s agent until the cargo was loaded onto the consignee’s trucks).

The fact that Shippers Stevedoring performed services at the request of Pauwels’s agent, Alomex, similarly does not show delivery to Shippers Stevedoring acting on the consignee’s behalf. The question is not whether services had been performed or when the contract between Alomex and Shippers Stevedoring “began” but when, given the nature of those services and the contract language, responsibility for and control over the cargo passed from the carrier to the consignee or its agent. *See, e.g., Wemhoener Pressen v. Ceres Martin Terminals*, 5 F.3d 734, 742 (4th Cir. 1993) (holding that a stevedore preparing cargo for inland shipping, nevertheless, “had custody of the goods pursuant to its contract with the [carrier].”). Shippers Stevedoring appears to have performed services under its contract with Alomex as early as February 28, 2007 — for example, by tracking the location of the railcar that Vision Logistics had arranged to transport the Transformer to Arizona before the Saudi Diriyah’s arrival in Houston. But the record does not show that Alomex had responsibility for, or custody of, the Transformer until after March 7, 2007.

Crompton Greaves also suggests that the Transformer was damaged on March 7, 2007 while Shippers Stevedoring was moving it. Crompton Greaves asserts that “the only logical” reason for moving the Transformer would have been to fulfill responsibilities to Alomex. The record presents insufficient credible evidence to show that Shippers Stevedoring moved the Transformer on March

7 and no evidence that, if Crompton Greaves did move the Transformer at that point, it was acting on behalf of Alomex and not of the NSCSA.

Crompton Greaves has also failed to show through witness testimony or other trial evidence that the terms “port to port”¹⁰ and “delivered free on mafi” determine the point at which delivery occurred. Chakravarty testified that the phrase “delivered free on mafi” meant that control over the cargo would pass to Alomex once Shippers Stevedoring discharged the Transformer in the Port of Houston on the Mafi trailer at a safe resting place on the pier. According to Chakravarty, this meant that the NSCSA delivered the Transformer on March 2, 2007. (Docket Entry No. 203 at 313). Chakravarty does not explain the basis for this statement. The evidence also does not show that Shippers Stevedoring received documents stating that the Transformer was to be “delivered free on mafi.” That phrase appears only in emails between Alomex and Crompton Greaves employees, (Pl.’s Ex. 25), and in an invoice from Alomex to Crompton Greaves, (Pl.’s Ex. 93). The phrase “carrier’s responsibility ceases at Houston,” inscribed on the front of the NSCSA’s bill of lading, was also unexplained. (Def.’s Ex. 20).

The relevant law and the credible evidence at trial show that the NSCSA delivered the Transformer after March 7, 2007 and that Shippers Stevedoring was working for the NSCSA until the delivery date. Crompton Greaves’s claims arising out of damage to the Transformer that occurred before that date are barred by limitations.

C. The Bailment Claim

¹⁰ The phrase “port to port” appears as the heading to Subsection 5(a) of the NSCSA’s bill of lading. As explained above, the paragraph’s text extends the NSCSA’s responsibility beyond discharge.

Crompton Greaves has alleged that Shippers Stevedoring was its bailee with respect to the South Loop Transformer.¹¹ A bailment relationship generally requires: (1) a contract, either express or implied; (2) delivery of property to the bailee; and (3) acceptance of the property by the bailee. *Russell v. Am. Real Estate Corp.*, 89 S.W.3d 204, 210 (Tex. App.—Corpus Christi 2002, no pet.); *see also Smith v. Radam, Inc.*, 51 S.W.3d 413, 417 (Tex. App.—Houston [1st Dist.] 2001, no pet.) (a bailment relationship results from a contract under which bailed goods are delivered by the bailor and accepted by the bailee for a specific purpose). An implied bailor–bailee relationship may give rise to an implied bailment contract. *Smith*, 51 S.W.3d at 417. In an implied bailment, delivery and acceptance need not be formal. *Russell*, 89 S.W.3d at 211. Knowing possession of, or control over, property may establish an implied bailment. *Id.* The creation of a bailment requires that possession and control over an object pass from the bailor to the bailee. *Allright Auto Parks, Inc. v. Moore*, 560 S.W.2d 129, 130 (Tex. Civ. App.—San Antonio 1977, writ ref’d n.r.e.).

Shippers Stevedoring argues that it could not have been Crompton Greaves’s bailee because the two companies did not have a direct, formal contractual relationship. A direct or formal contractual relationship is not necessary for an implied bailment. *Russell*, 89 S.W.3d at 211 (“In general, knowingly taking property into possession or control is a sufficient acceptance and may suffice to establish an implied bailment.”); *see also Berlow v. Sheraton Dallas*, 629 S.W.2d 818 (Tex. App.—Dallas 1982, writ ref’d n.r.e.) (finding that evidence that a hotel accepted delivery of a package intended for a guest and stored it for one month sufficiently supported the jury’s finding of an implied bailment).

¹¹ Neither party alleges that Chapter 7 of Texas’s enactment of the Uniform Commercial Code — the provision governing warehousing — applies. TEX. BUS. & COM. CODE § 7.101 *et. seq.*

The decision in *Soto v. Sea-Road Int'l, Inc.*, 942 S.W.2d 67 (Tex. App.—Corpus Christi 1997, no pet.), is instructive. In *Soto*, a South Korean textile company hired the plaintiff, Sea-Road International, to handle the inland transportation of a fabric order placed by the Textile Corporation. Sea-Road received the fabric and, at Textile's request, forwarded it to the defendant, Luciana Soto, who had a warehouse in Brownsville, Texas. Sea-Road ordered Soto to "check with Sea Road Int'l before releasing any merchandise." *Id.* at 69. The goods were damaged in Soto's warehouse. On appeal, Soto argued that because he did not have a contract or a formal relationship with Sea-Road, no bailment relationship was created. The appellate court rejected his argument. It found that Soto's acceptance of the fabric with Searoad's specific instructions for release, combined with expert testimony that such instructions are understood in the industry as obligatory, provided sufficient evidence of a bailment. *Id.* at 72. "[F]ormal communication . . . was not necessary." *Id.*

Shippers Stevedoring also argues that it could not have been Crompton Greaves's bailee because it did not know that Crompton Greaves owned the Transformer during the period of the alleged bailment. The NSCSA's bill of lading states that Crompton Greaves was the shipper, Pauwels Americas was the consignee, and TEP was the recipient, and does not specify which of those parties owned the Transformer during the shipping process. (Def.'s Ex. 20). Witnesses for both parties testified that Shippers Stevedoring and Crompton Greaves did not communicate directly. But the cases do not support the argument that such direct communication with, or knowledge of, the cargo owner is necessary.

In *Sanroc Co. Intern. v. Roadrunner Transp., Inc.*, 596 S.W.2d 320 (Tex. Civ. App.—Houston [1st Dist.] 1980, no writ), the plaintiff, Sanroc, hired Reo Export Company to pick up a trailer and arrange for its storage. Reo picked up the trailer and hired Roadrunner Transportation to store it. When Sanroc attempted to claim the trailer from Roadrunner, it was

missing. Sanroc sued alleging that Roadrunner had acted as its bailee in storing the trailer. No evidence at trial showed that Sanroc and Roadrunner had a contractual relationship or that Roadrunner knew that Sanroc owned the trailer. Sanroc argued that Reo, acting as its agent, had created a bailment relationship with Roadrunner. *Id.* at 322. Noting that “[a]n agent may make a contract for his undisclosed principal and that principal may sue on the contract,” the appellate court held that, as a matter of law, Roadrunner was Sanroc’s bailee.

Other courts applying Texas law have followed the reasoning in *Sanroc*. See *N. Marine Underwriters, Ltd. v. FBI Exp., Inc.*, 697 F. Supp. 2d 695 (S.D. Tex. 2009) (finding that a bailment relationship would exist between a shipper and a subcontractor if the shipper could show that the subcontractor was the agent of the shipping company it hired); *Gebr. Bellmer KG v. Terminal Serv. Hous., Inc.*, 523 F. Supp. 941, 946 (S.D. Tex. 1981) (finding that a terminal operator employed directly by a ship’s agent was the bailee of the cargo carried by the ship when it had actual custody of the cargo); *Wells v. Nordic Shipping Corp.*, 1987 WL 4793, at *2 (S.D. Tex. Apr. 27, 1987) (citing *Sanroc* approvingly); see also *Nelson v. Schanzer*, 788 S.W.2d 81, 87 (Tex. App.—Houston [14th Dist.] 1990, writ denied) (holding that a constable acting under a court order related to forcible entry and detainer was empowered by law to make a bailment contract with a company to move and store a renter’s personal belongings, even though the renter’s belongings were removed from his home involuntarily). *But see Hoye v. Like*, 958 S.W.2d 234, 237 (Tex. App.—Amarillo 1997, no pet.) (suggesting, in dicta, that a bailment over cattle did not exist absent evidence that the caretaker knew the cattle’s owner).

In some other jurisdictions, courts have broadly construed the rights of bailors to sue “subbailees” for damage to their goods. See, e.g., *Indem. Ins. Co. of N. Am. v. Hanjin Shipping Co.*, 348 F.3d 628, 638 (7th Cir. 2003) (“Channel should be regarded as a sub-bailee that owed the same

kind of duties to O'Hare Services as O'Hare Services owed to the shipper.”); *Sega of Amer., Inc. v. A.M. Exp. Freight, Inc.*, 1995 WL 577784, *6 (S.D.N.Y. Sept. 29, 1995) (“It is the law in New York that a bailor may recover directly from a sub-bailee for loss of or damage to the subject of the bailment, and the court can see no reason to apply a different rule to carriers” (internal citations omitted)); *Grace v. Sterling, Grace & Co.*, 30 A.D.2d 61, 65 (N.Y. App. Div. 1968) (“It is settled that where a bailee of goods or securities re-bails, re-pledges, or on some other contractual basis delivers possession of the same to another, and the latter is guilty of negligence or other misfeasance resulting in the loss of or injury to the property, the latter is liable directly to the owner who was the original bailor.”).

The parties in this case have not addressed whether Shippers Stevedoring acted as the NSCSA’s agent in performing stevedoring and terminal services or whether the subbailee theory that other jurisdiction’s apply is also supported by Texas law. Given these issues, the court assumes, without deciding, that Shippers Stevedoring acted as Crompton Greaves’s bailee in storing, discharging, storing, and loading the Transformer.

A bailment relationship does not create a specific cause of action but instead allows the bailor to choose the form of relief for breach, such as an action for breach of contract or an action for conversion. *See Int’l Freight Forwarding, Inc. v. Am. Flange*, 993 S.W.2d 262, 269 (Tex. App.—San Antonio 1999, no pet.); *see also Prime Prods., Inc. v. SSI Plastics, Inc.*, 97 S.W.3d 631, 638 (Tex. App.—Houston [1st Dist.] 2002, pet. denied) (a bailment claim is not a separate cause of action from a breach of contract claim). A bailor can make a *prima facie* showing of negligence by the bailee by presenting evidence showing that a bailment relationship existed; the goods were delivered to the bailee in good condition; and that the goods were returned damaged. *Prime Prods.*, 97 S.W.3d at 635; *D&D Assoc., Inc. v. Sierra Plastics, Inc.*, 570 S.W.2d 205, 207 (Tex.

App.—Waco 1978, no writ.). This *prima facie* showing gives rise to a rebuttable presumption that the bailee's negligence caused the damage. *Prime Prods.*, 97 S.W.3d at 635. This presumption can be rebutted by evidence showing that the bailee used all ordinary care in handling the property or by showing some other cause of the loss or injury. *Id.*

In this case, the record does not satisfy all the elements for a *prima facie* showing of negligence. Crompton Greaves has not shown that Shippers Stevedoring received the Transformer in good condition. Crompton Greaves did not place a shock recorder on the South Loop Transformer until after it had been loaded onto the truck in India. By that time, Crompton Greaves had already moved and lifted the Transformer several times. No trial evidence was presented that Crompton Greaves inspected or further tested the Transformer after the last, in-factory tests were performed and before it was loaded onto the truck and the shock recorder was attached. Although Mazumder testified that he was present when the Transformer was lifted by crane onto Premier's trucks and did not observe any obvious shock events, he did not state that he was present on the other occasions that the Transformer was moved before the ShockLog was attached.

There is also evidence suggesting that a shock event sufficiently serious to damage the Transformer might not be apparent to an observer. Crompton Greaves's own experts testified that dropping the Transformer several inches or even lowering it too quickly might be enough to result in significant damage. And the evidence shows that the Transformer had design and manufacturing problems before it came into Shippers Stevedoring's possession. While the problems did not prevent the Transformer from passing the tests conducted at the factory, they did make it more likely that internal damage would occur to the core.

Crompton Greaves has also not shown that the damage to the Transformer occurred while it was in Shippers Stevedoring's possession.¹² As noted, the Transformer was moved in India after it had been tested and before the ShockLog was attached. Possession of the Transformer passed through a series of parties, including, after it left the Barbours Cut Terminal, Union Pacific. Several witnesses testified that railroad transportation can generate significant forces that can damage cargo, due to humping and for other reasons. During the fourth alarm event, the ShockLog recorded forces that were sufficiently strong to damage the Transformer. "Where there is a succession of bailees, there is a presumption that damage to the bailed goods occurred while the goods were in the possession of the last bailee, in the absence of evidence to the contrary." *Hous. Aviation Prod. Co. v. Gulf Port Crating Co.*, 422 S.W.2d 844, 845–46 (Tex. Civ. App.—Houston [1st Dist.] 1967, writ ref'd n.r.e.) (quotation omitted). Crompton Greaves has not overcome the presumption that the Transformer was damaged while it was in a subsequent bailee's possession.

Even if Crompton Greaves had shown that the Transformer was damaged while it was in Shippers Stevedoring's possession, it would also need to prove that the Transformer was damaged while Shippers Stevedoring was working under its contract with Alomex in order to avoid COGSA's one-year limitations period. The evidence shows that the March 7 shock event could have damaged the Transformer. Crompton Greaves has not shown that the Transformer was delivered in good

¹² Shippers Stevedoring makes the argument that it lacked control of the transformer on March 7 and March 13, 2007, the dates on which the ShockLog recorder measured the first three shock events. Shippers Stevedoring points out that it was acting as the NSCSA's contractor on the former date and as Alomex's contractor on the latter date and that it followed instructions from both companies. This argument is not persuasive. The trial evidence shows that Shippers Stevedoring exercised exclusive control over the location and movement of the Transformer within the terminal. That other parties may have provided it with the general instructions necessary to coordinate the transportation process does not diminish Shippers Stevedoring's actual physical custody and control over the Transformer.

condition to Shippers Stevedoring (acting on behalf of Alomex) by Shippers Stevedoring (acting on behalf of the NSCSA).

There is also reliable evidence that Shippers Stevedoring exercised reasonable care while the Transformer was in its custody. Rego was present on March 2, when the Transformer was unloaded from the vessel; on March 7, just after the first recorded shock event; on March 12, when the Transformer was loaded onto the railcar; and on March 13, around when the second and third shocks were recorded. In his report and testimony, Rego credibly testified that Shippers Stevedoring carefully handled the Transformer and that he did not see anything that might have damaged it. Other witnesses who were present on these dates, including other Shippers Stevedoring employees and Scheible, a Crompton Greaves employee, credibly testified that they did not see Shippers Stevedoring mishandle the Transformer. Other evidence is consistent with this testimony.

The court finds and concludes that Crompton Greaves has failed to make a *prima facie* showing under bailment law that Shippers Stevedoring was negligent. The court also finds and concludes that Shippers Stevedoring has shown that it exercised ordinary care in handling the Transformer.

D. Negligence

Although Crompton Greaves may not rely on a bailment theory, it may still assert an ordinary negligence claim against Shippers Stevedoring. In Texas, the elements of negligence are that: (1) the defendant owed the plaintiff a duty of care; (2) the defendant breached the duty; and (3) the defendant's breach proximately caused injury to the plaintiff. *IHS Cedars Treatment Ctr. v. Mason*, 143 S.W.3d 794, 798 (Tex. 2003).¹³

¹³ Texas state law governs a stevedore's alleged negligence for conduct occurring after cargo has been delivered by the ocean carrier. *Moller S.S. Co., Inc. v. Atchinson, Topeka, &*

Shippers Stevedoring argues the evidence is not sufficient to show that Shippers Stevedoring proximately caused the Transformer's damage. Under Texas law, proximate cause consists of two elements: cause-in-fact and foreseeability. *Lee Lewis Constr., Inc. v. Harrison*, 70 S.W.3d 778, 784 (Tex. 2001). Cause-in-fact means the actions of the defendant were a "substantial factor in causing the injury without which the harm would not have occurred." *Id.* Foreseeability means that an "actor, as a person of ordinary intelligence, should have anticipated the dangers that [its] negligent act created for others." *Id.* at 785. The foreseeability element does not require that the defendant anticipate the precise manner that the injury will occur. It is enough if the injury is of the general character that an actor might reasonably anticipate that its actions might cause that injury. *Id.*

A plaintiff may prove causation by direct or circumstantial evidence. *Alza Corp. v. Thompson*, 2010 WL 1254610, at *8 (Tex. App.—Corpus Christi Apr. 1, 2010, no pet.) (citing *Ford Motor Co. v. Ridgway*, 135 S.W.3d 598, 601 (Tex. 2004)). "The question of causation is a fact question for the jury, and the jury has broad latitude to infer causation from the circumstances surrounding an accident, especially when it is not possible to produce direct proof of causation." *Id.* (citing *Farley v. MM Cattle Co.*, 529 S.W.2d 751, 755 (Tex. 1975)). "The plaintiff need not exclude all possibility that the accident occurred other than as he alleges. Rather the plaintiff is only required to convince the jury by a preponderance of the evidence that the accident occurred as alleged." *Id.* (citing *Farley*, 529 S.W.2d at 756; *Renfro Drug Co. v. Lewis*, 235 S.W.2d 609, 621 (Tex. 1950)). A plaintiff's "best guess" of the cause of an accident is too speculative to establish cause-in-fact. *Loeser v. Sans One, Inc.*, 187 S.W.3d 685, 686 (Tex. App.—Houston [14th Dist] 2006). "Evidence that is so slight as to make any inference a guess is in legal effect no evidence."

Santa Fe Ry. Co., No. H-82-0159, 1984 WL 2682, at *2–3 (S.D. Tex. Aug. 27, 1984) (citing *Colgate Palmolive Co. v. S.S. Dart Can.*, 724 F.2d 313, 315 (2d Cir. 1983)).

Ford Motor, 135 at 601. “In cases with only slight circumstantial evidence, something else must be found in the record to corroborate the probability of the fact’s existence or non-existence.” *Marathon Corp. v. Pitzner*, 106S.W.3d 724, 729 (Tex. 2003) (quoting *Lozano v. Lozano*, 52 S.W.3d 141, 148 (Tex. 2001)).

Shippers Stevedoring argues that the evidence is insufficient to show causation under the Texas Supreme Court’s decision in *Marathon*, 106 S.W.3d 724. In *Marathon*, an air-conditioning repairman sued a motorcycle dealership after he fell from the roof of a building the dealership rented. *Id.* at 725–26. The repairman did not recall the accident. He relied on expert testimony that included evidence that the premises did not comply with building and mechanical codes to prove negligence. The dealership violated the codes because the air-conditioning units did not have a 30-inch workspace in front of the access panels and because the units did not have a power disconnect on the roof so that all electrical power to the units could be shut off by someone working on the roof. *Id.* at 727–28. One expert testified that, based on testimony from the repairman who completed the repairs after the accident, the plaintiff “had almost finished repairing a freon leak.” *Id.* at 728. The expert testified that after repairing a freon leak, repairmen usually restart the air-conditioning unit by connecting two low-voltage lines. The expert speculated that if the air-conditioning unit had been turned off downstairs — which was possible because the building was not in code compliance — the plaintiff would have reached inside the air-conditioning unit’s access panel to bypass the control circuit and start the unit. The expert testified that “[a]lthough it was common for repairmen to do this . . . it could result in an electrical shock or flash.” *Id.* There was, however, no evidence that the air-conditioning unit had been turned off downstairs. A second expert testified that “the lack of space between the units caused [the plaintiff] to reach into the access panel at an angle that made it more likely that he would come into contact with a high-voltage wire.” *Id.* at 728–29. The court,

noting that the experts' testimony piled "speculation on speculation and inference on inference," reversed the jury verdict in favor of the plaintiff because "the circumstances 'could give rise to any number of inferences, none more probable than the other.'" *Id.* at 729 (citing *Hammerly Oaks, Inc. v. Edwards*, 958 S.W.2d 387, 392 (Tex. 1997)). For example, the court reasoned, because the plaintiff's injuries were also consistent with an assault and battery and because there was no ladder at the scene — supporting an inference that someone else was present at some point — it was equally plausible that the plaintiff was attacked. *Id.* The court concluded that "in cases with only slight circumstantial evidence, something else must be found in the record to corroborate the probability of the fact's existence or non-existence." *Id.* (quoting *Hammerly Oaks*, 958 S.W.2d at 392).

In denying Shippers Stevedoring's summary-judgment motion, this court found *Marathon* distinguishable because, in that case, the plaintiff presented competing liability theories of equal plausibility, while here, Crompton Greaves presented summary-judgment evidence supporting only one liability theory — that Shippers Stevedoring damaged the Transformer on March 7 while trying to load it onto a railcar. At trial, however, Crompton Greaves presented additional evidence suggesting that the damage to the Transformer might have occurred on March 7, March 13, March 31, or some combination of the above. Crompton Greaves argued multiple possible causes of the damage for each date. But Crompton Greaves has not pointed to any witnesses who observed the South Loop Transformer drop or to other evidence, direct or circumstantial, that would make one of the theories it proposed at trial more likely than the others. *See, e.g., Loeser v. Sans One, Inc.*, 187 S.W.3d 685, 687 (Tex. App.—Houston [14th Dist.] 2006, pet. denied) (affirming summary judgment on claims that a bouncer had negligently broken the plaintiff's leg while removing him from a bar because, due to the plaintiff's lack of memory of the events, he presented no evidence

of “any aspect of either the method used to remove him from the stage (or premises) or the manner in which that method was employed”). That several of Crompton Greaves’s theories were set forth in expert testimony by Hullender, Feloni, and Wolff is immaterial. “An expert who presents ‘little more than his credentials and a subjective opinion’ does not provide any evidence that can support a judgment.” *W. Atlas Int’l, Inc. v. Randolph*, 2005 WL 673483, at *2 (Tex. App.—Corpus Christi Mar. 24, 2005, no pet.) (citing *Merrell Dow Pharm. v. Havner*, 953 S.W.2d 706 (Tex. 1997)).

Even if Crompton Greaves is correct that Shippers Stevedoring’s negligence damaged the Transformer, Crompton Greaves has not presented any credible evidence that would make it more likely that the Transformer was damaged on March 13 than on March 7. As explained above, if the Transformer was damaged on March 7, while Shippers Stevedoring was working under its contract with the NSCSA, Crompton Greaves’s negligence claim would be barred by COGSA’s one-year limitations period.

By contrast, Shippers Stevedoring has presented evidence that damaging forces could have been generated before March 7 or after March 13. Shippers Stevedoring has also shown that it exercised reasonable care in handling the Transformer.

Given the lack of evidence of a breach of a duty of care or of causation, the evidence is insufficient to determine that an act or omission by Shippers Stevedoring, as opposed to an act by another party that cannot be attributed to Shippers Stevedoring, damaged the Transformer. Crompton Greaves has failed to prove that the Transformer was damaged due to Shippers Stevedoring’s negligence.

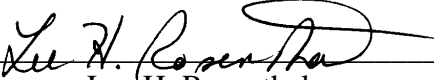
III. Conclusion

For the reasons stated above, this court finds and concludes:

- Crompton Greaves's claims against Shippers Stevedoring are barred, in part, by COGSA's one-year limitations period.
- Crompton Greaves failed to make a *prima facie* case of negligence under its bailment theory.
- Shippers Stevedoring has no liability to Crompton Greaves for the damage to the Transformer.

Counsel are directed to submit a proposed final judgment consistent with these Findings of Fact and Conclusions of Law no later than February 15, 2013.

SIGNED on February 5, 2013, at Houston, Texas.



Lee H. Rosenthal
United States District Judge