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23 **UNITED STATES DISTRICT COURT**  
24 **CENTRAL DISTRICT OF CALIFORNIA**

25 PENSMORE REINFORCEMENT  
26 TECHNOLOGIES, LLC d/b/a  
27 HELIX STEEL,

28 Plaintiff,

v.

CORNERSTONE  
MANUFACTURING AND  
DISTRIBUTION, INC.,

Defendant.

CASE NO.: 5:21-cv-01556-JWH-SHKx

**FIRST AMENDED COMPLAINT  
FOR (1) DIRECT PATENT  
INFRINGEMENT OF '970 PATENT,  
(2) INDIRECT PATENT  
INFRINGEMENT OF '970 PATENT,  
(3) DIRECT PATENT  
INFRINGEMENT OF '881 PATENT,  
(4) INDIRECT INFRINGEMENT OF  
'881 PATENT, AND (5) COMMON  
LAW INTERFERENCE WITH  
CONTRACT**

**DEMAND FOR JURY TRIAL**

NOW COMES Plaintiff PENSMORE REINFORCEMENT  
TECHNOLOGIES, LLC d/b/a HELIX STEEL ("Helix"), by and through its

1 attorneys, and for its First Amended Complaint against CORNERSTONE  
2 MANUFACTURING AND DISTRIBUTION, INC. (“Cornerstone”), states:

3 **INTRODUCTION**

4 1. This case arises out of Cornerstone’s infringement of Helix’s patents  
5 for Concrete Reinforcing Fibers, US Patent No. 10,266,970 (“‘970 Patent”) and a  
6 Micro-Rebar Concrete Reinforcement System, US Patent No. 9,440,881 (“‘881  
7 Patent”) and Cornerstone’s tortious interference with Helix’s customers and/or  
8 prospective customers. The ‘970 and ‘881 Patents protect Helix’s concrete  
9 reinforcing Micro Rebar™ products. Micro Rebar™ is an improved alternative to  
10 traditional rebar that consists of thousands of small twisted metal fibers mixed into  
11 concrete prior to its application.



18 Helix’s patented concrete reinforcing Micro Rebar™ results in stronger, more  
19 durable, and more flexible concrete than traditional rebar, with improved fatigue  
20 endurance, crack resistance, impact capacity, energy absorption, and shatter  
21 resistance.

22 2. Cornerstone’s principals, who are also former employees of Helix,  
23 used the knowledge they gained during their tenure with Helix to help Cornerstone  
24 manufacture, import, market, and sell products that infringe Helix’s ‘970 and ‘881  
25 Patents.

3. Cornerstone’s infringing product is copied from and highly similar to Helix’s MicroRebar reinforcement, and both are covered by the claims of the ‘970 and ‘881 Patents:



4. The Court should enjoin Cornerstone, and compensate Helix for the damage caused to it.

**THE PARTIES**

5. Pensmore Reinforcement Technologies, LLC (“Pensmore”) is a limited liability company headquartered in Ann Arbor, Michigan. It operates under the assumed name Helix Steel (“Helix”). Pensmore was previously known as Polytorex, LLC.

6. On information and belief, Cornerstone is a California corporation located at 955 Cornerstone Way in the City of Corona, County of Riverside, State of California. Therefore, Cornerstone resides within the Central District of California. On information and belief, Cornerstone also operates under the name Badger Forms. (See Exhibit. A.)

**JURISDICTION AND VENUE**

7. This is a complaint for direct and contributory patent infringement arising under the Patent Act, 35 U.S.C. § 271 et seq. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

1 8. Venue is proper in this Court under 28 U.S.C. § 1400(b) because  
2 Cornerstone is a California corporation with a regular and established place of  
3 business in this District, and therefore resides in this District under 28 U.S.C. §§  
4 1391(b) and 1400(b), and because Cornerstone has committed acts of infringement  
5 in this District, directly and/or through a third party because it manufacturers,  
6 makes, imports, sells, offers to sell or uses concrete reinforcing fibers for a variety  
7 of concrete applications, including concrete reinforcing twisted steel products  
8 identified under names such as Badger 5:25, SteelX, and SteelX 5:25 within this  
9 judicial District. Cornerstone has purposefully directed its activities to this State  
10 and this District and/or purposefully availed itself of this jurisdiction.

11 9. This Court has jurisdiction over Helix’s common law claims because  
12 the amount in controversy exceeds \$75,000, and the parties are citizens of different  
13 states. 28 U.S.C. § 1332. Further, the Court has supplemental jurisdiction over  
14 Helix’s common law claims because they are part of the same case or controversy  
15 as Helix’s federal question claims. 28 U.S.C. § 1367.

16 10. This Court has personal jurisdiction over Cornerstone for the reasons  
17 identified above and according to the laws of the United States.

18 **FACTS COMMON TO ALL CLAIMS FOR RELIEF**

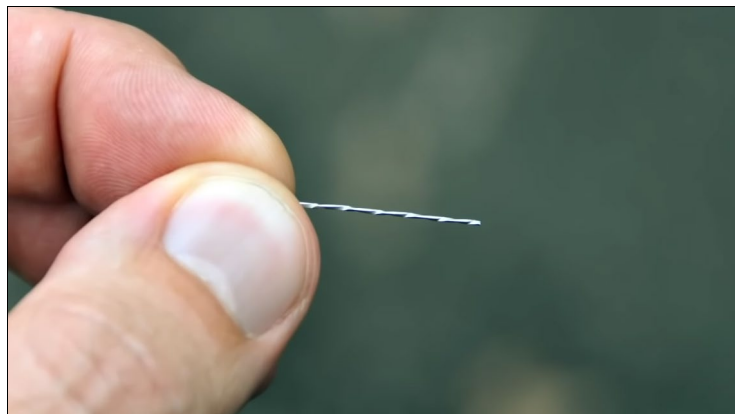
19 **A. BACKGROUND**

20 11. Helix is a leading provider of concrete reinforcement in the form of  
21 twisted steel fibers that are mixed with concrete to make the concrete stronger,  
22 more durable, and more flexible.

23 12. Helix was founded as part of a project that challenged University of  
24 Michigan Engineers to create an alternative to traditional rebar that could provide  
25 better flexural strength, resiliency, ductility, and elasticity to concrete structures.  
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7 13. Helix developed its Micro Rebar™ concrete reinforcement, also  
8 known as Helix 5-25, Helix 5-25 Micro Rebar™ or Twisted Steel Micro Rebar™.  
9 It consists of thousands of small twisted metal fibers that are mixed into concrete  
10 prior to application:



1           14. Helix invested significant time and resources to develop its concrete  
2 reinforcing Micro Rebar™ technology, and underwent stringent testing to ensure  
3 safety and efficacy.

4           15. Helix's Micro Rebar™ concrete reinforcement technology results in  
5 concrete that is stronger, more durable, and more flexible than concrete used with  
6 traditional rebar. Concrete treated with Helix's Micro Rebar™ technology requires  
7 less repairs and has a longer lifespan, thus saving time and money.

8           16. Helix's Micro Rebar™ concrete reinforcement technology meets  
9 building code requirements. Helix Micro Rebar™ is the first fiber for use in  
10 concrete with code approval for structural applications. Helix Micro Rebar™ also  
11 meets ACI, IBC and IRC codes, including those through its two evaluation service  
12 reports from ICC-ES AC 470 & ESR-3949, IAPMO EC-015 2016 and ER 279.

13           17. Helix manufactures its Micro Rebar™ product in Grand Rapids,  
14 Michigan. Helix sells genuine Helix concrete reinforcing products under its  
15 trademarks Helix™, Micro Rebar™, Twisted Steel Micro Rebar™, and TSMR™.  
16 Helix sells and distributes its proprietary Micro Rebar™ product worldwide.

17           18. Helix's proprietary concrete reinforcing Micro Rebar™ product and  
18 technology is protected by various patents, including the '970 and '881 Patents.

19           19. Helix's Micro Rebar™ concrete reinforcement is used in interior and  
20 exterior settings and in high load applications. For example, Helix has been used  
21 to replace traditional rebar in slabs designed for M1 Abrams Tank traffic by the  
22 U.S. Military.

23           20. Helix has enjoyed considerable success with its Micro Rebar™  
24 reinforcement technology. Helix's Micro Rebar™ technology has been used in  
25 hundreds of millions of square feet of concrete, and tens of thousands of successful  
26 structures. Helix has enjoyed years of successful applications with a strong record  
27 of structural success.

1           21. Helix’s Micro Rebar™ has been and remains the leading concrete  
2 reinforcing twisted steel fiber product of its kind. Helix’s products are known  
3 throughout the world to represent genuine, high-quality goods.

4           **B. THE PATENTS-IN-SUIT**

5           22. The ‘970 Patent is entitled “Concrete Reinforcing Fibers” and issued  
6 on April 23, 2019. A true and correct copy of ‘970 Patent, along with its Certificate  
7 of Correction, are attached as Exhibit B.

8           23. Pensmore Reinforcement Technologies, LLC owns by assignment the  
9 entire right, title and interest in and to the ‘970 Patent.

10           24. The ‘881 Patent is entitled “Micro-Rebar Concrete Reinforcement  
11 System” and was issued on September 13, 2016. A true and correct copy of the  
12 ‘881 Patent is attached as Exhibit C.

13           25. Pensmore Reinforcement Technologies, LLC owns by assignment the  
14 entire right, title and interest in and to the ‘881 Patent.

15           26. The ‘970 and ‘881 Patents protect concrete reinforcing fibers, as well  
16 as a method for manufacturing concrete reinforcing fibers and the design class  
17 system for micro reinforced concrete.

18           **C. CORNERSTONE’S INFRINGEMENT**

19           27. Cornerstone is owned and headed by the former vice president of sales  
20 and management team member of Helix, Hans Hausfeld. Cornerstone directly  
21 competes with Helix in the market for concrete reinforcing twisted steel fibers.

22           28. Cornerstone, frequently operating under the d/b/a name Badger  
23 Forms, intentionally targeted, solicited and employs multiple former Helix  
24 employees and sales representatives, including at least Jay Middleton, Jeff Knight,  
25 and Wes Dees. See, for instance, Exhibit D, showing Cornerstone’s U.S.  
26 Trademark Reg. No. 5528776 for “Badger Forms.”  
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1           29. Cornerstone was built on Helix’s technology platform. In addition to  
2 forming its business with former Helix personnel—each has retained confidential  
3 and proprietary Helix information—Cornerstone on information and belief  
4 arranged for Helix’s former manufacturing facility in China to manufacture and  
5 import into the United States infringing concrete reinforcing twisted steel fiber  
6 products for distribution and sale by Cornerstone.

7           30. On information and belief, Cornerstone’s infringing concrete  
8 reinforcing twisted steel fiber products are made by Helix’s proprietary process.

9           31. In an attempt to capitalize on Helix’s industry recognition and  
10 goodwill built up over many years as the leading supplier of concrete reinforcing  
11 twisted steel fibers sold under the name Helix 5-25, Cornerstone markets and sells  
12 its infringing product under substantially similar names that include, at minimum,  
13 Badger 5:25, SteelX 5:25 or SteelX (“Accused Products”). See Exhibit E, Design  
14 Process Brochure for SteelX 5:25.

15           32. Also on information and belief, Cornerstone partnered with former  
16 Helix Australian distributor Reuben Ramsay to sell its infringing concrete  
17 reinforcing twisted steel fibers in the United States and Australia under the brand  
18 name “SteelX.” See Exhibit F, Cornerstone’s U.S. Trademark Reg. No. 6250129  
19 for “SteelX.” See also Exhibit G, specimen of product packaging for SteelX  
20 submitted by Cornerstone as evidence to support the U.S. SteelX trademark  
21 registration.





33. Cornerstone markets and sells the Accused Products through its network of former Helix sales representatives, employees, and associates by claiming that its Accused Products are equivalent to Helix's product, thus

1 conceding that its product is nothing more than a re-branded duplicate of Helix’s  
2 product.

3 34. Helix learned that Cornerstone was attempting to introduce a  
4 duplicate of Helix’s patented Micro Rebar reinforcement into the United States.  
5 On February 21, 2020, Helix sent Cornerstone a letter notifying Cornerstone of the  
6 ‘970 and ‘881 patents, its potential infringement of those patents, and warning  
7 Cornerstone that any unauthorized marketing, sale, or offer to sell an infringing  
8 concrete reinforcement fiber product into the United States would result in  
9 damages and irreparable harm.

10 35. Despite possessing knowledge of Helix’s ‘970 and ‘881 patents,  
11 Cornerstone continued with its plans to market, offer to sell and sell the Accused  
12 Products in United States, including representing that the Accused Products are the  
13 same as Helix’s patented Micro Rebar reinforcement.

14 36. Helix recently learned that Cornerstone (Badger Forms) is actively  
15 marketing and selling the Accused Products in the United States, including to  
16 Helix’s customers.

17 37. For instance, in an August 5, 2020 email from Cornerstone (Badger  
18 Forms) principal Jay Middleton to the City of Overland Park, Kansas (a Helix  
19 customer), Middleton represented to the City of Overland Park that he used to work  
20 for Helix, left Helix, but maintained his commitment to the idea that you can make  
21 better concrete with twisted steel fiber in the concrete so “we launched our own  
22 brand of that product.” (Exhibit H.)

23 38. Cornerstone (Badger Forms) followed up with another email on April  
24 22, 2021 informing the City of Overland Park that “we finally have stock of our  
25 twisted steel concrete reinforcement product, called SteelX, here in KC.” (Exhibit  
26 I.)

1           39. In another example, an April 24, 2021 email from Cornerstone  
2 (Badger Forms) principal Middleton to the City of Overland Park, Badger claims,  
3 asserts and markets the Accused Products as “physically equivalent” to Helix’s  
4 patented Micro Rebar (TSMR product) described in IAPMO E-015 and ICC AC-  
5 470. See Exhibit J, a portion of which is reproduced below.

6

7 From: Jay Middleton <jay@badgerforms.com>  
 8 Date: Sat, Apr 24, 2021 at 8:10 AM  
 9 Subject: Re: acceptable criteria  
 10 To: Brown, Jim <jim.brown@opkansas.org>

11 Hi Jim,

12 Thank you for being open to discussion on another way to provide you what you need to be comfortable. Please refer  
 13 to the attached report from Twining laboratory, which is an approved laboratory for both ICC and IAPMO, this  
 14 document shows that our Badger 5:25 product (now branded as SteelX) is physically equivalent to a TSMR product that  
 15 you are familiar with and is also described in the Iapmo E-015 and ICC AC-470 acceptance criteria (let me know if  
 16 you need copies of those criteria). For the design procedure and calculations, we followed ACI-332 section 8.2.1.1  
 17 MOR calculation method with our product MOR values, the engineering firm was able to confirm the calculations are  
 18 correct and certifies our SteelX 5:25 Gold with 9 lbs/yd3 meets or exceeds the IRC and ACI standard's required  
 19 capacity when used and constructed with other details in the foundation drawing (dowels, dead men, etc.). We are  
 20 hopeful that this clears the way for acceptance of our product on stamped engineering drawings. Looking forward to  
 21 your reply.

22 All the best,  
 23 Jay

24           40. Recently, on information and belief, Helix learned that Cornerstone  
25 (Badger Forms) recently applied for permits for a foundation job in Grain Valley,  
26 Missouri using the Accused Products.



1           41. On information and belief, Cornerstone (Badger Forms) placed the  
2 Accused SteelX Products into foundations in Grain Valley, Missouri. Also on  
3 information and belief, Cornerstone relied on its equivalence to Helix's patented  
4 TSMR product covered by the same IAPMO EC-015 standard in order to obtain  
5 approval for the permits and job.

6           42. Cornerstone markets, sells and/or offers to sell the Accused Products  
7 directly to Helix customers and others, including through former Helix personnel  
8 who now work for Cornerstone.

9           43. Cornerstone's Accused Products infringe one or more claims of the  
10 '970 and '881 Patents.

11           **D. CORNERSTONE'S TORTIOUS INTERFERENCE**

12           44. Cornerstone is also intentionally and tortiously interfering with  
13 Helix's customers and/or prospective customers.

14           45. Cornerstone has intentionally caused and/or induced one or more of  
15 Helix's customers and/or distributors to breach Helix's distribution agreements  
16 with those customers and/or distributors, including to terminate or decrease their  
17 business relationship with Helix.

18           46. For example, Helix (which was, at the time, known as Polytorex, LLC)  
19 entered into a Distributorship Agreement with Liteform Technologies on June 7,  
20 2013. See Exhibit N ("Liteform Agreement"). Hans Hausfeld signed the Liteform  
21 Agreement as a duly authorized officer on behalf of Helix.

22           47. The Liteform Agreement provided Liteform with the right to act as a  
23 non-exclusive distributor of the Helix 5-25 product in certain regions, and with the  
24 right to act as the exclusive distributor of the Helix 5-25 product in other regions.

25           48. The Liteform Agreement was for an initial term of one year, which  
26 automatically renewed. Liteform continued to act as a distributor under the  
27

1 Liteform Agreement for Helix over the past 8 years. Neither Helix nor Liteform  
2 had terminated the Liteform Agreement until recently, when Liteform sent Helix  
3 notice that it no longer wished to renew the Liteform Agreement beyond its  
4 expiration date in June of 2022.

5 49. The Liteform Agreement contains a non-competition clause, which  
6 provides that during the term of the agreement and for six months after termination  
7 of the agreement, Liteform cannot directly or indirectly represent or sell any  
8 product of a company that competes with Helix. (Ex. N, ¶11(b)). The Liteform  
9 Agreement is governed by Michigan law. (Ex. N, ¶11(g)).

10 50. Cornerstone has knowledge of Helix's contractual relationship with  
11 Liteform as evidenced by at least the fact that Cornerstone's principal, Hans  
12 Hausfeld, signed the Liteform Agreement on behalf of and as an officer of Helix  
13 during his employment with Helix.

14 51. Upon information and belief, Cornerstone recently supplied the  
15 competing and infringing SteelX 5:25 product to Liteform, which then supplied  
16 SteelX 5:25 to at least one customer.

17 52. Upon information and belief, Liteform received an order for Helix 5-  
18 25, but instead of providing Helix 5-25 to the customer, Liteform provided SteelX  
19 5:25 to the customer without notifying the customer of the switch. Liteform  
20 received the SteelX 5:25 product from Cornerstone.

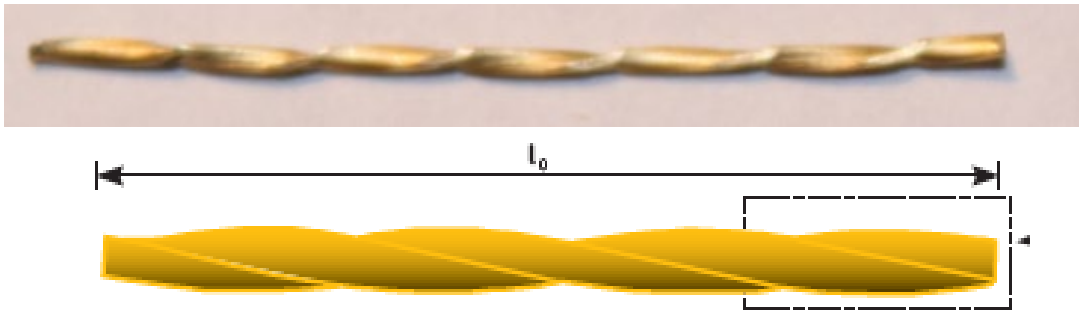
21 53. Cornerstone supplied its competing SteelX 5:25 product to Liteform  
22 knowing that Liteform intended to sell the SteelX 5:25 to customers in violation of  
23 the Liteform Agreement. Cornerstone knows that its sales of SteelX 5:25 to  
24 Liteform constitute a direct violation of the Liteform Agreement, and constitute  
25 intentional and tortious interference with the Liteform Agreement.

**FIRST CAUSE OF ACTION:**  
**VIOLATION OF 35 U.S.C. § 271 –**  
**DIRECT INFRINGEMENT OF THE '970 PATENT**

54. Helix incorporates the above paragraphs as though fully set forth herein.

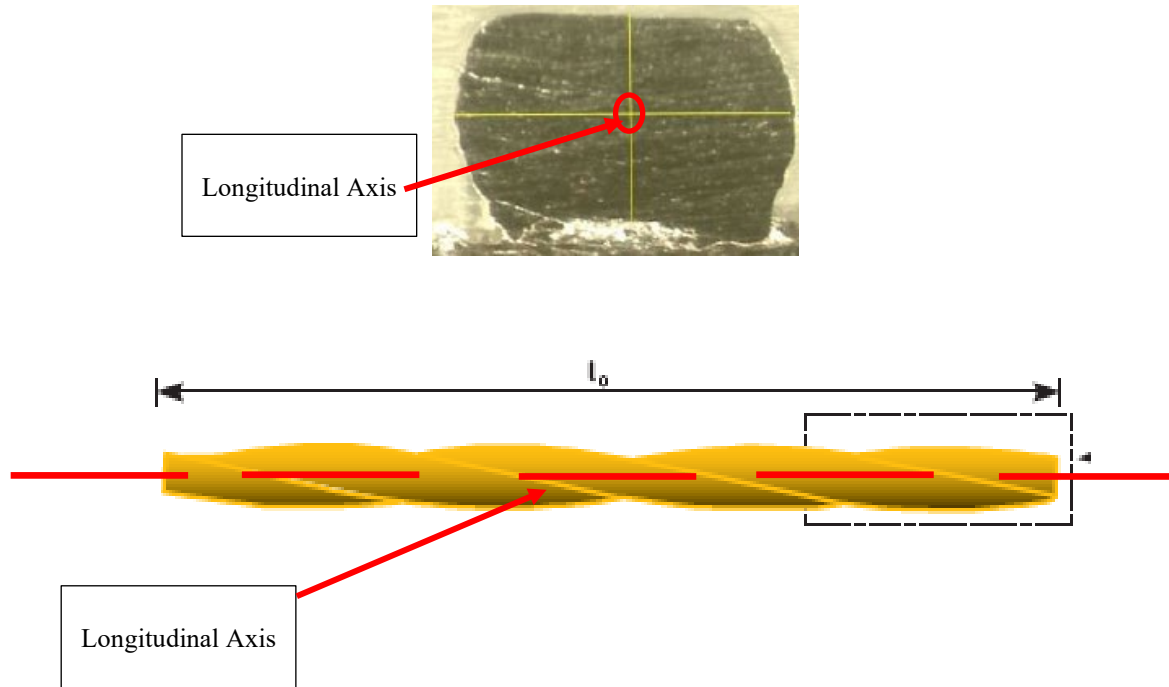
55. In violation of 35 U.S.C. § 271, Cornerstone has infringed and continues to infringe, literally or under the doctrine of equivalents, at least claim 1 of the '970 Patent by making, using, selling, or offering for sale within the United States, or importing into the United States, concrete reinforcing twisted steel fibers that are covered by one or more claims of the '970 Patent, including but not limited to the Accused Products.

56. An analysis of a sample of Cornerstone's Accused Products reveals that Cornerstone's Accused Products comprise a reinforcing fiber. Below is a photo of one of the Accused Products, and an image taken from Cornerstone's SteelX 5:25 design brochure, both showing the Accused Products. See Exhibit E.



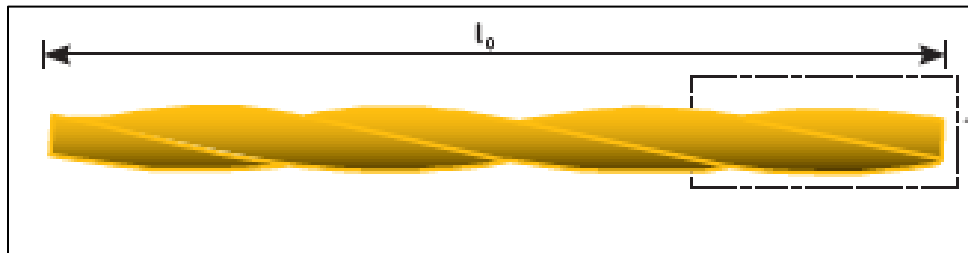
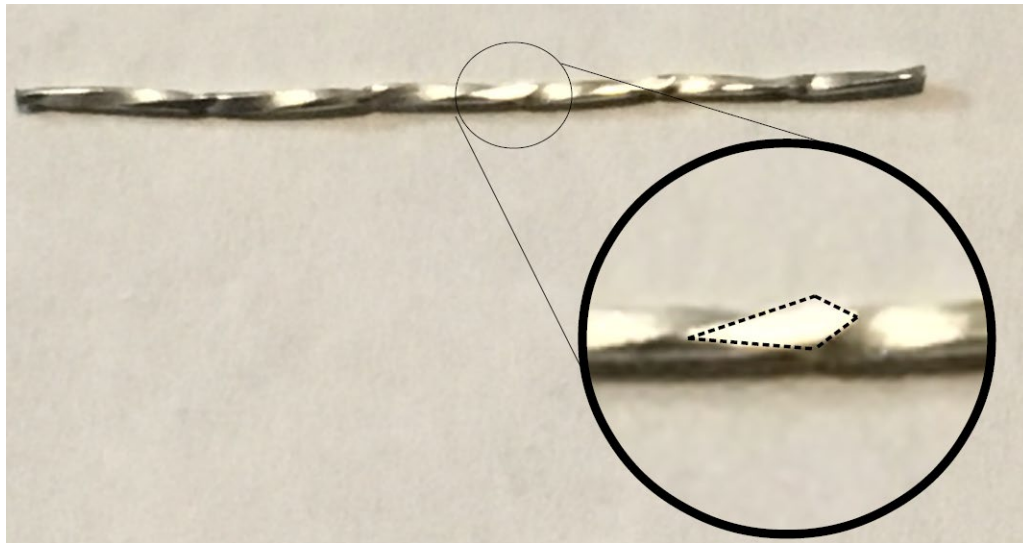
57. Cornerstone's Accused Products comprise a body defining a longitudinal axis and having a cross section in the shape of a bilateral truncated circle.

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58. Measurements of a sample show that the bilateral truncated circle of Cornerstone's Accused Products have an aspect ratio calculated to be between 1.53 and 1.93, wherein the aspect ratio is a ratio of width ( $w$ ) to thickness ( $t$ ) of the body. In particular, a sample measured 0.62 mm (0.0244 inches) in width, and 0.40 mm (0.0157 inches) thick, with an aspect ratio of 1.55.

59. Cornerstone's Accused Products have a body that is twisted along its longitudinal axis.



60. Cornerstone's Accused Products have a body with a thickness measured to be between 0.01375 inches and 0.0159 inches. In particular, a sample measured 0.40 mm (0.0157 inches) thick.

61. As a direct and proximate consequence of Cornerstone's infringement, Helix has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights, and has suffered, is suffering, and will continue to suffer injury and damages for which it is entitled to relief under 35 U.S.C. § 284 adequate to compensate for such infringement, including lost profits, but in no event less than a reasonable royalty.

62. Cornerstone's infringement is further causing and will continue to cause Helix irreparable harm, for which there is no adequate remedy at law. Unless and until enjoined by this Court, Cornerstone will continue to infringe the '970



1 Patent. Under 35 U.S.C. § 283, Helix is entitled to an injunction against further  
2 infringement.

3 63. Additionally, on information and belief, Cornerstone knows and has  
4 known that its Accused Products infringe at least claim 1 of the '970 patent.

5 64. On information and belief, Cornerstone has made no attempt to design  
6 around the '970 patent. Cornerstone's infringement was undertaken willfully and  
7 without permission or license to use Helix's '970 Patent.

8 65. On information and belief, Cornerstone's infringement of at least  
9 claim 1 of the '970 patent has been willful. Helix has been damaged as the result  
10 of Cornerstone's willful infringement, and seeks increased damages, up to and  
11 including treble damages.

12 66. Helix is entitled to and claims all damages allowable by law including,  
13 injunctive relief, adequate compensation for the infringement, costs, interest,  
14 attorney fees, and for the sales of infringing product as well as the sales of any  
15 accessory/ancillary products.

16 67. Helix further seeks a declaration that it is entitled to three times the  
17 amount of damages found or assessed pursuant to 35 U.S.C. § 284.

18 **SECOND CAUSE OF ACTION:**  
19 **VIOLATION OF 35 U.S.C. § 271 –**  
20 **INDIRECT INFRINGEMENT OF THE '970 PATENT**

21 68. Helix incorporates the above paragraphs as though fully set forth  
22 herein.

23 69. Cornerstone has indirectly infringed on at least claim 1 of the '970  
24 Patent including by inducing others, including its independent sales  
25 representatives, distributors, other re-sellers, customers, Helix customers and other  
26 end users of the Accused Products to directly infringe at least claim 1 of the '970

1 Patent including by making, using, selling, or offering to sell Cornerstone's  
2 Accused Products.

3 70. On information and belief, Cornerstone intentionally took actions that  
4 induced others, including its independent sales representatives, distributors, other  
5 re-sellers, customers, Helix customers and other end users of the Accused Products,  
6 to directly infringe at least claim 1 of the '970 Patent.

7 71. Cornerstone has known of the '970 patent since at least February 21,  
8 2020, and has induced infringement since at least that time.

9 72. Cornerstone's actions demonstrate an intent to cause the acts that form  
10 the basis of the direct infringement, and that Cornerstone did so with the specific  
11 intent to infringe the '970 patent.

12 73. Cornerstone has also contributed to the infringement of at least claim  
13 1 of the '970 patent by others, including its independent sales representatives,  
14 distributors, other re-sellers, customers, Helix customers and other end users of the  
15 Accused Products, that directly infringe at least claim 1, by making, using, selling  
16 or offering to sell the Accused Products recited in at least claim 1 of the '970 patent.  
17 For example, Cornerstone's customers and/or the end users have incorporated  
18 Accused Products into their reinforced concrete projects.

19 74. Cornerstone has contributorily infringed and is a contributory  
20 infringer because, with knowledge of the '970 Patent, it supplies the Accused  
21 Products, which comprise a material part of the claimed combination, where the  
22 Accused Products are not a staple article of commerce, and have no substantial  
23 non-infringing uses.

24 75. Cornerstone knew that the Accused Products were especially made or  
25 adapted for use in a manner that would infringe at least claim 1 of the '970 patent.  
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1 76. Helix has been damaged as a result of Cornerstone’s indirect  
2 infringement, and is entitled to relief under 35 U.S.C. §§ 283 and 284 based on  
3 Cornerstone’s induced and/or contributory infringement.

4 **THIRD CAUSE OF ACTION:**  
5 **VIOLATION OF 35 U.S.C. § 271 –**  
6 **DIRECT INFRINGEMENT OF THE ‘881 PATENT**

7 77. Helix incorporates the above paragraphs as though fully set forth  
8 herein.

9 78. In violation of 35 U.S.C. § 271, Cornerstone has infringed and  
10 continues to infringe, literally or under the doctrine of equivalents, at least claim 3  
11 of the ‘881 Patent by making, using, selling, or offering for sale within the United  
12 States, or importing into the United States, concrete reinforcing twisted steel fibers  
13 that are covered by one or more claims of the ‘881 Patent, including but not limited  
14 to the Accused Products and the design class system in which they are sold.

15 79. Cornerstone claims that its product complies with IAPMO<sup>1</sup> EC 015  
16 and that it is “physically equivalent” to Helix’s 5-25 Micro Rebar TSMR, covered  
17 by the IAPMO EC 015 criteria. (See Exhibit J; see also Exhibit K, third party  
18 Twining Report certifying that Cornerstone’s Accused Products meets the  
19 requirements per these acceptance criteria and sections to be classified as a  
20 ‘Twisted Steel Micro Rebar’ (TSMR) product per Iapmo’s EC 015-2016 Section  
21 3.1....”).

22 80. Claim 3 of Helix’s ‘881 Patent includes similar elements as the  
23 IAPMO EC 015 standard. Because Cornerstone claims the Accused Products  
24 meets IAPMO’s EC 015 criteria, Cornerstone’s Accused Products infringes at least  
25 Claim 3 of the ‘881 Patent.

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<sup>1</sup> International Association of Plumbing and Mechanical Officials.

1           81. More specifically, on information and belief, Cornerstone's Accused  
2 Products are a micro reinforcement comprised of a twisted steel fiber having  
3 elastic, perfectly plastic behavior up to the point of dominant crack formation in a  
4 concrete matrix reinforced by the micro reinforcement. Cornerstone's Accused  
5 Products comprise twisted steel fibers that are physically equivalent to Helix's 5-  
6 25 Micro Rebar TSMR, both of which comprise twisted steel fiber having elastic,  
7 perfectly plastic behavior up to the point of a dominant crack formation. See  
8 Exhibit M; see also Exhibit J. Additionally, the twisted steel fiber further includes  
9 stable tensile resistance after dominant crack formation up to a characteristic length  
10 determined by length, material used to manufacture and the number of twists  
11 provided in the twisted steel fiber. See, for instance, Ex. L, IAPMO EC-015  
12 Sections 3 and 8 requiring twisted steel fiber complying with the standard to have  
13 a stable tensile resistance after dominant crack formation up to a characteristic  
14 length determined by length, material used to manufacture and the number of twists  
15 in the twisted steel fiber. See also Exhibit J.

16           82. On information and belief, Cornerstone's Accused Products comprise  
17 a twisted steel fiber with a strain capacity increase requirement determined by  
18 tensile test results indicating a statistically significant increase (minimum of 95%  
19 confidence, the maximum p-value in a two sample t-test, 0.05) in tensile strain  
20 capacity versus structural plain concrete, wherein a minimum of six control (plain  
21 concrete) specimens are considered in the analysis in addition to a minimum  
22 number of twisted steel fiber samples. See, for instance, Ex. L, Section 8.1 of  
23 IAPMO EC 015 which requires conforming products to meet this requirement:  
24 "Tensile test results shall indicate a statistically significant increase (minimum of  
25 95% confident, the maximum p-value in a two sample t-test, 0.05) in tensile strain  
26 capacity compared to structural plain concrete. A minimum of six control (plain  
27  
28

1 concrete) specimens shall be considered in the analysis in addition to the minimum  
2 number of TSMR samples required in Section 6.0.”

3 83. On information and belief, Cornerstone’s Accused Products comprise  
4 a twisted steel fiber with a post-crack tensile stability requirement determined by  
5 tensile test results indicating that the median of a load carried at  $S_a$  (design crack  
6 width) of the test specimen divided by a maximum load after 0.01 in displacement  
7 is equal to or greater than 0.85, wherein the twisted steel fiber crack width,  $S_a$ , is  
8 the crack width resulting from tensile stresses typically measured for structural  
9 design applications and represents the average upper limit of displacement in a  
10 direct tension test where the stress remains stable, wherein  $S_a$  is set forth as:  $S_a =$   
11  $\sigma + X/3$  where  $\sigma$  = material elongation as stated on raw material certification test  
12 reports, inch (mm),  $X$  = elongation from twist, representing the materials  
13 approximate ability to “stretch” and need not be exactly determined, inch (mm),  
14  $x = 1 - \cos(\text{atan}(n2\pi d/l))$ , and where  $n$  = number of full twists in the twisted steel fiber,  
15  $d$  = equivalent diameter of the twisted steel fiber, inches (mm),  $L$  = length of the  
16 twisted steel fiber, inches (mm), and  $X$  = percentage reduction in length from  
17 twisting of the twisted steel fiber, and where the resulting values of  $S_a$  are used as  
18 a reference point for computing tensile resistance and compute maximum  
19 allowable crack widths. See, for instance, Section 3.1 of IAPMO EC 015 which  
20 specifies a design crack width resulting from tensile stresses and requires tensile  
21 tests to indicate that the median of the load carried at  $S_a$  divided by the maximum  
22 load after 0.01 inch (0.25 mm) displacement is equal to or greater than 0.85, and  
23 utilizes the same formula referenced above to calculate  $S_a$ :

1  $S_a = \bar{\delta} + X/3$  (Eq.-1)

2 Where:

3  $\bar{\delta}$  = material elongation as stated on raw material certification test reports, inch (mm).

4  $X$  = elongation from twist, representing the materials approximate ability to “stretch” and need not be exactly determined, inch (mm).

5 
$$X = 1 - \cos(\text{atan}(\frac{n2\pi d}{l}))$$
 (Eq.-2)<sup>i</sup>

6 Where:

7  $n$  = number of full revolutions of the part

8  $d$  = equivalent diameter of the wire, inches (mm)

9  $L$  = length of the part, inches (mm)

10  $X$  = percentage reduction in length from twisting the part

11 (Exhibit L.) See also, for instance, Section 8.0 of IAPMO EC 015 which specifies  
 12 that tensile tests shall indicate that the median of the load carried at  $S_a$  divided by  
 13 the maximum load after 0.01 inch (0.25mm) displacement is equal to or greater than  
 14 0.85. (Exhibit L.)

15 84. As a direct and proximate consequence of Cornerstone’s  
 16 infringement, Helix has been, is being, and, unless such acts and practices are  
 17 enjoined by the Court, will continue to be injured in its business and property  
 18 rights, and has suffered, is suffering, and will continue to suffer injury and damages  
 19 for which it is entitled to relief under 35 U.S.C. § 284 adequate to compensate for  
 20 such infringement, including lost profits, but in no event less than a reasonable  
 21 royalty.

22 85. Cornerstone’s infringement is further causing and will continue to  
 23 cause Helix irreparable harm, for which there is no adequate remedy at law. Unless  
 24 and until enjoined by this Court, Cornerstone will continue to infringe the ’881  
 25 Patent. Under 35 U.S.C. § 283, Helix is entitled to an injunction against further  
 26 infringement.

27 86. Additionally, on information and belief, Cornerstone knows and has  
 28 known that its Accused Products infringe at least claim 3 of the ’881 patent.

1 87. On information and belief, Cornerstone has made no attempt to design  
2 around the '881 patent. Cornerstone's infringement was undertaken willfully and  
3 without permission or license to use Helix's '881 Patent.

4 88. On information and belief, Cornerstone's infringement of at least  
5 claim 3 of the '881 patent has been willful. Helix has been damaged as the result  
6 of Cornerstone's willful infringement, and seeks increased damages, up to and  
7 including treble damages.

8 89. Helix is entitled to and claims all damages allowable by law including  
9 injunctive relief, adequate compensation for the infringement, costs, interest,  
10 attorney fees, and for the sales of infringing product as well as the sales of any  
11 accessory/ancillary products.

12 90. Helix further seeks a declaration that it is entitled to three times the  
13 amount of damages found or assessed pursuant to 35 U.S.C. § 284.

14 **FOURTH CAUSE OF ACTION:**  
15 **VIOLATION OF 35 U.S.C. § 271 –**  
16 **INDIRECT INFRINGEMENT OF THE '881 PATENT**

17 91. Helix incorporates the above paragraphs as though fully set forth  
18 herein.

19 92. Cornerstone has indirectly infringed on at least claim 3 of the '881  
20 Patent including by inducing others, including its independent sales  
21 representatives, distributors, other re-sellers, customers, Helix customers and other  
22 end users of the Accused Products to directly infringe at least claim 3 of the '881  
23 Patent including by making, using, selling, or offering to sell Cornerstone's  
24 Accused Products.

25 93. On information and belief, Cornerstone intentionally took actions that  
26 induced others, including its independent sales representatives, distributors, other  
27

1 re-sellers, customers, Helix customers and other end users of the Accused Products,  
2 to directly infringe at least claim 3 of the '881 Patent.

3 94. Cornerstone has known of the '881 patent since at least February 21,  
4 2020, and has induced infringement since at least that time.

5 95. Cornerstone's actions demonstrate an intent to cause the acts that form  
6 the basis of the direct infringement, and that Cornerstone did so with the specific  
7 intent to infringe the '881 patent.

8 96. Cornerstone has also contributed to the infringement of at least claim  
9 3 of the '881 patent by others, including its independent sales representatives,  
10 distributors, other re-sellers, customers, Helix customers and other end users of the  
11 Accused Products, that directly infringe at least claim 3, by making, using, selling  
12 or offering to sell the Accused Products recited in at least claim 3 of the '881  
13 patent. For example, Cornerstone's customers and/or the end users have  
14 incorporated Accused Products into their reinforced concrete projects.

15 97. Cornerstone has contributorily infringed and is a contributory  
16 infringer because, with knowledge of the '881 Patent, it supplies the Accused  
17 Products, which comprise a material part of a claimed combination, where the  
18 Accused Products is not a staple article of commerce, and has no substantial non-  
19 infringing uses.

20 98. Cornerstone knew that the Accused Products was especially made or  
21 adapted for use in a manner that would infringe at least claim 3 of the '881 patent.

22 99. Helix has been damaged as a result of Cornerstone's indirect  
23 infringement, and is entitled to relief under 35 U.S.C. §§ 283 and 284 based on  
24 Cornerstone's induced and/or contributory infringement.



**FIFTH CAUSE OF ACTION:**  
**COMMON LAW INTERFERENCE WITH CONTRACT**

1  
2 100. Helix incorporates the above paragraphs as though fully set forth  
3 herein.

4 101. Helix has valid contracts with its third party distributors and/or  
5 customers, including but not limited to Liteform, that provided an economic benefit  
6 to Helix.

7 102. Cornerstone has knowledge of Helix's contractual relationship with  
8 its distributors and/or customers, including its contractual relationship with  
9 Liteform, as evidenced by the fact that Cornerstone's principal was an employee  
10 of Helix, and signed the Liteform Agreement on behalf of Helix.

11 103. Cornerstone sold SteelX 5:25 or similar product to Helix's distributors  
12 and/or customers, or otherwise entered into an agreement to sell SteelX 5:25 or  
13 similar product to Helix's distributors and/or customers, including Liteform,  
14 knowing that doing so resulted in a violation of Helix's contracts with its  
15 distributors and/or customers, and that doing so would induce Helix's distributors  
16 and/or customers, including Liteform, to breach Helix's contracts with its  
17 distributors and/or customers, including the Liteform Agreement.

18 104. Helix's customers and distributors breached their agreements with  
19 Helix, including but not limited to Liteform, as a direct result of Cornerstone's  
20 tortious conduct. For example, Liteform breached the Liteform Agreement with  
21 Helix by providing SteelX 5:25 to its customers, including providing SteelX 5:25  
22 instead of providing Helix 5-25.

23 105. Liteform also terminated its longstanding relationship with Helix on  
24 November 21, 2021 as a direct result of Cornerstone's tortious conduct.

25 106. Cornerstone engaged in intentional, willful and wrongful conduct by  
26 causing and/or inducing Liteform to breach the Liteform Agreement.  
27

1 Cornerstone's intentional, willful and wrongful conduct caused harm to Helix,  
2 including lost sales and lost profits.

3 107. Helix has sustained damages as a result of Cornerstone's tortious  
4 interference with its customers and distributors, including but not limited to  
5 Liteform, in the form of at least lost sales, lost profits and lost market share.

6 **PRAYER FOR RELIEF**

7 WHEREFORE, Helix respectfully requests that this Honorable Court:

- 8 a) Issue a judgment that Cornerstone is liable for direct and/or indirect  
9 infringement of one of more claims of both the '970 and '881 Patents;
- 10 b) Issue an injunction prohibiting Cornerstone and each of their agents,  
11 servants, employees, attorneys, and any other persons who are in  
12 active concert or participation with any of them from engaging in  
13 further actions to infringe the '970 Patent and/or '881 Patent,  
14 including but not limited to making, using, selling, manufacturing,  
15 advertising, marketing, attempting to sell, or importing the Badger  
16 5:25 product, SteelX 5:25 product or similar infringing products;
- 17 c) Award Helix all damages adequate to compensate Helix for the  
18 infringement that has occurred, pursuant to 35 U.S.C. § 284, including  
19 lost profits, but in no event less than a reasonable royalty, plus  
20 prejudgment and post-judgment interest;
- 21 d) Award Helix an amount equal to adequate compensation for  
22 Cornerstone's willful patent infringement, multiplied by three  
23 pursuant to 35 U.S.C. § 284;
- 24 e) Declare this an exceptional case within the meaning of 35 U.S.C. §  
25 285 and that Helix be awarded attorney's fees, costs, and expenses  
26 incurred in connection with this action;
- 27  
28

- f) Award Helix damages sustained as a result of Cornerstone’s interference with contracts, including lost sales, lost profits, lost market share, any profit obtained by Cornerstone resulting from the interference, appropriate punitive damages, and attorney’s fees, costs and expenses resulting from the interference;
- g) Award Helix the costs associated with bringing this action; and
- h) Award Helix any further relief that this Court deems just and proper.

Dated: December 8, 2021

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**DEMAND FOR JURY TRIAL**

1 Helix demands a jury trial as to all claims and issues that are triable by jury  
2 in this action.  
3

4 Dated: December 8, 2021

UMBERG ZIPSER LLP

5  
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