UNITED STATES DISTRICT COURT
DISTRICT OF SOUTH DAKOTA
SOUTHERN DIVISION

BUERGOFOL GMBH, Plaintiff, vs. OMEGA LINER COMPANY, INC., Defendant.	Civil Action No.: 22-cv-04112-KES **FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT** **DEMAND FOR JURY TRIAL**

Plaintiff, Buergofol GmbH (hereinafter "Buergofol"), through counsel, brings this complaint against Defendant, Omega Liner Company, Inc. (hereinafter "Omega"), as follows:

PARTIES

1. Plaintiff Buergofol is a limited liability company organized under the laws of Germany, with its principal place of business at Jahnstrasse 10, 93354 Siegenburg, Germany. The Managing Director of Buergofol is Gregor Schleicher.

2. Defendant Omega is a South Dakota corporation with its principal place of business located in Lincoln County at 515 Noid Road, Canton, South Dakota 57013. Omega is engaged in the business of manufacturing and selling ultraviolet cured-in-place pipe liners for pipe renovation ("pipe liners"). The President and registered agent of Omega is Gary Strom.

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of

the United States, Title 35, United States Code.

4. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a), as this action arises under the patent laws of the United States, 35 U.S.C. §§ 271 *et seq*.

5. Omega maintains its principal place of business in, and thus resides in, the District of South Dakota.

6. Omega has committed acts of infringement in the District of South Dakota by making and selling infringing pipe liners and has a regular and established place of business in the District of South Dakota.

7. For these reasons, personal jurisdiction exists and venue is proper in this court under 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b).

U.S. PATENT NO. 9,657,882

8. U.S. Patent No. 9,657,882 (hereinafter the '882 Patent) entitled "Tubular Film and the Use Thereof" issued on May 23, 2017 to Kurt Stark, Gregor Schleicher and Abdel-Kader Boutrid. A true and correct copy of the '882 Patent is attached as Exhibit A.

9. The '882 Patent is entitled by statute to a presumption of validity.

10. Buergofol GmbH is the owner of the entire right, title and interest in and to the '882 Patent, including the right to recover for infringement thereof, by virtue of an assignment from the inventors to Buergofol recorded in the United States Patent and Trademark Office at reel/frame 033058/0817.

11. The '882 Patent describes an "insertion tube" suitable for repairing or renovating subterranean pipes such as, for example, sewer pipes. Such an insertion tube is also commonly referred to as a pipe liner. The insertion tube has three layers: 1) an inner layer, 2) a carrier layer that is impregnated with an amount of UV curable resin, and

3) an outer layer. A sewer pipe may be leaking and in need of repair. Rather than having to dig up the pipe to repair it, in a more cost effective fashion the novel insertion tube, in collapsed and deflated form, can be pulled through the pipe when the pipe is in place in the ground. The insertion tube is then expanded so that the outer layer of the insertion tube expands outward and makes good contact with the inner surface of the sewer pipe. A source of UV radiation and/or short-wave visible light is then moved through the insertion tube. UV radiation and/or short-wave light from this moveable source reaches the UV curable resin of the carrier layer, thereby causing the resin in the carrier layer to harden and to cure. Once the resin has hardened and cured, the inner layer is pulled out such that the inner layer releases and peels off from the carrier material layer, and is withdrawn from the renovated sewer pipe.

12. FIG. 1 of the '882 Patent is replicated below. The "insertion tube" or "pipe liner" 1 includes an inner tubular film 2, a carrier material 4 that is impregnated with resin, and the external tubular film 5.

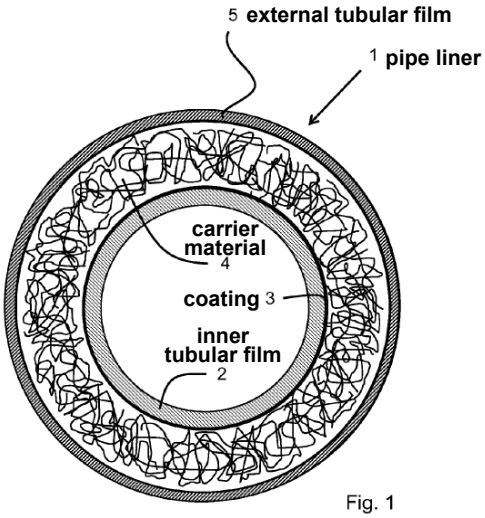


Fig. 1

13. The UV curable resin of the carrier material layer 4 should not harden prematurely prior to insertion of the insertion tube into the sewer pipe. For example, the UV curable resin should not harden prematurely during storage. Rather, the UV curable resin should cure only when desired as a result of the moveable UV source being pulled through the insertion tube at that time the insertion tube is being installed. Accordingly, the outer film 5 of the insertion tube is made so that it reflects and/or absorbs UV radiation and/or short-wave light. This prevents the unwanted premature hardening of the resin.

14. The UV curable resin the carrier material layer should, however, receive UV radiation from inside the insertion tube from the moveable UV radiation source, when the UV radiation source is being moved through the insertion tube while the insertion tube is being installed. The inner film 2 is therefore at least to some extent permeable to UV radiation and/or short-wave light. Accordingly, UV light and/or short-wave light from the UV radiation source can pass through the inner film 2 and can reach the UV curable resin of the carrier material 4.

15. As described in the '882 Patent, prior art liners exhibited difficulties in enabling the inner film to satisfactorily peel off from the remaining cured portion of the insertion tube, without leaving a residue and film fragments on the inside of the renovated sewer pipe. In a novel aspect, a "coating" of the inner film includes a "migrating compound." The coating 3 is shown in FIG. 1 of the '882, which is replicated above. The migrating compound migrates outward from within the inner film to the interface between the inner film and the carrier material. After resin hardening, this migrating compound acts as a release agent that facilitates the release of the inner film 2

from the carrier material 4. The '882 Patent explains at column 15, lines 15-18 that in one example the migrating compound is a release wax, more particularly ethylene bis stearamide (EBS).

U.S. PATENT NO. 8,794,269

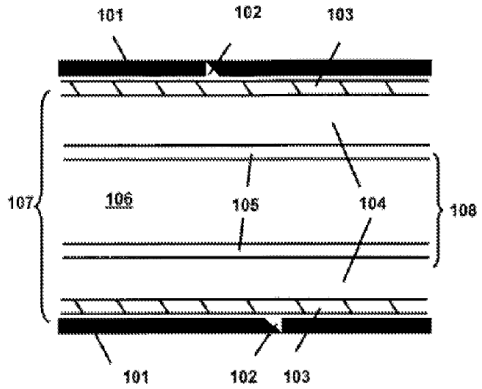
16. U.S. Patent No. 8,794,269 (hereinafter the '269 Patent) entitled "Multi-Layer Film Permeable To UV Radiation" issued on August 5, 2014 to Henrik Hummel. A true and correct copy of the '269 Patent is attached hereto as Exhibit B.

17. The '269 Patent is entitled by statute to a presumption of validity.

18. Buergofol GmbH is the owner of the entire right, title and interest in and to the '269 Patent, including the right to recover for infringement thereof, by virtue of: a) an assignment from the inventor Henrik Hummel to Huhtamaki Films Germany GmbH & Co. KG recorded in the United States Patent and Trademark Office starting at reel/frame 029817/0679, b) a name change from Huhtamaki Films Germany GmbH & Co. KG to Infiana Germany GmbH & Co. KG as referenced in the commercial register of the District Court of Bamberg, Germany recorded in the United States Patent and Trademark Office starting at reel/frame 035277/0038 and 037030/0361, c) a name change from Infiana Germany GmbH & Co. KG to Loparex Germany GmbH & Co. KG as referenced in the commercial register of the District Court of Bamberg, Germany recorded in the United States Patent and Trademark Office starting at reel/frame 052408/0363, and d) an assignment from Loparex Germany GmbH & Co. KG to Buergofol GmbH recorded in the United States Patent and Trademark Office at reel/frame 060769/0531.

19. The '269 Patent describes an "insertion tube" that is suitable for renovation of subterranean pipes, especially sewer pipes. Such an insertion tube is also

commonly referred to as a pipe liner. The insertion tube has three portions: 1) an internally situated tube, 2) a support material saturated with a reactive synthetic resin, and 3) an externally situated tubular film. FIG. 1 of the '269 Patent is replicated below. The insertion tube 107 includes an internally situated tube 105, a support material 104 that is saturated with reactive synthetic resin, and an externally situated tubular film 103.



20. A sewer pipe may be leaking and in need of repair. Rather than having to dig up the pipe to repair it, in a more cost effective fashion the novel insertion tube, in collapsed and deflated form, can be pulled through the pipe when the pipe is in place in the ground. The insertion tube is then expanded so that the outer externally situated tubular film of the insertion tube expands outward and makes good contact with the inner surface of the sewer pipe. A source of UV radiation and/or short-wave visible light is then moved through the insertion tube. UV radiation and/or short-wave light from this moveable source reaches the reactive synthetic resin, thereby causing the resin to cure and harden. Once the resin has cured and hardened, the internally situated tube of the insertion tube is pulled away from the support material of the insertion tube, such that the internally situated portion releases and peels off from the support material portion, and is

withdrawn from the renovated sewer pipe.

21. The resin of the support material 104 should not harden prematurely prior to installing the insertion tube, for example, during storage. Rather, the UV curable resin should cure only when desired as a result of the moveable UV radiation source being pulled through the insertion tube at the time the insertion tube is installed. Accordingly, the externally situated tubular film 103 of the insertion tube is made so that it reflects and/or absorbs UV radiation and/or short-wave light. This prevents the unwanted premature hardening of the resin.

22. The resin of the support material 104 should, however, receive UV radiation from inside the insertion tube from the moveable UV radiation source, when the UV radiation source is being moved through the insertion tube while the insertion tube is being installed in the pipe. The internally situated tube 105 is therefore at least to some extent permeable to UV radiation. Accordingly, UV radiation from the UV radiation source can pass through the internally situated tube 105 and can reach the UV curable resin of the support material 104.

23. As described in the '269 Patent, in the prior art there were problems and difficulties associated with an internally situated tube being both permeable to UV radiation as well as having mechanical properties sufficient for the internally situated tube to withstand the high loads that arise during pipe renovation. In a novel aspect, the internally situated tube 105 is a multilayer film that is at least to some extent permeable to UV radiation. This multi-layer film is made of: a layer (a) comprised of at least one thermoplastic such as a polyethylene (PE), an adhesive-promoter layer (b), an internally situated layer (c) comprised of at least one polyamide (PA), an adhesive-promoter

layer (d), and a layer (e) comprised of at least one polyamide (PA) layer. The thermoplastic of layer (a) has a VICAT softening point of at least 100 degrees Celsius.

FACTUAL BACKGROUND

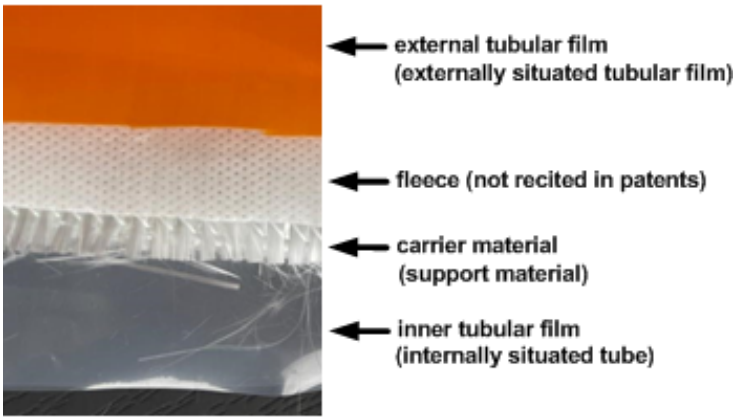
24. Buergofol is informed and believes and thereupon alleges that Omega has sold and/or continues to sell, offer for sale and manufacture multiple different models of an ultraviolet cured-in-place pipe (CIPP) lining named the "Omega Liner" which has an inner film, an external film, and a carrier material (between the inner and external films) that contains a reactive resin.

25. Omega has manufactured its Omega Liner at its facility in Canton, South Dakota, as indicated in "Omega's Liner Installation Manual Rev. 1.4 October 2020", which is attached hereto as Exhibit C and which states on page 6, "The Omega Liner is a fiberglass reinforced, cured in place pipe. It consists of an inner foil material, multiple layers of fiberglass reinforcement, a fleece barrier layer and a UV protective outer foil. The reinforcement layers are vacuum impregnated with the UV activated resin material."

26. Omega has offered for sale an ultraviolet cured-in-place pipe lining using a brochure, which is attached hereto as Exhibit D. The brochure advertises a pipe liner that includes an orange UV-resistant outer foil, middle layers of fiberglass impregnated with UV-curing resin, and a polyethylene polyamine [sic] inner foil.

27. On information and belief, one of the models of the "Omega Liner" made and sold by Omega is a 10-inch-diameter, UV CIPP Omega Liner that has an orange external tubular film, a fleece layer, a carrier or support material layer that is impregnated with a reactive resin, and an inner tubular film. A portion of this 10-inch-diameter Omega Liner was obtained by Buergofol. This portion of the Omega Liner was

examined and observed to have three components (in addition to a fleece layer). A photograph of the liner portion is replicated below. The various components have been cut so that they are visible in overlapping fashion in the photograph.



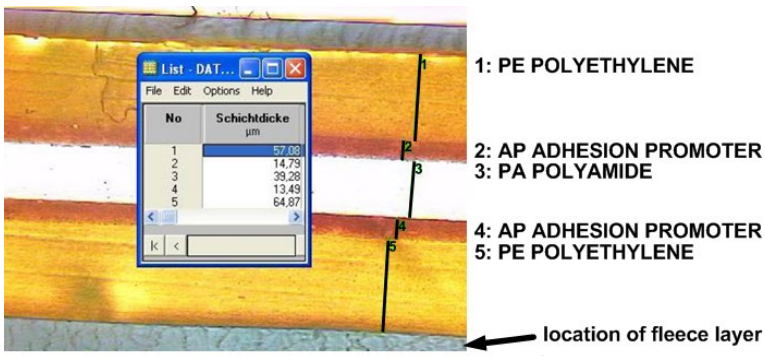
The bottom layer in the photograph above is an inner tubular film. In the photograph, the inner tubular film appears as a clear or translucent film that extends from underneath the other liner components in the photograph. In the photograph, a white fibrous layer is disposed on the inner film, and a white fleece layer is disposed on the white fibrous layer. An orange-colored external tubular film is disposed on the fleece layer.

28. The inner tubular film of the Omega Liner was tested by Buergofol and determined to include three layers. The three layers are: 1) an inner polyethylene (PE) layer, 2) a middle layer of an adhesion promoter (AP) material, and 3) an outer polyamide (PA) layer. The outer PA layer was measured to be approximately 46 microns thick and was determined to include an amount of wax, more specifically ethylene bis stearamide (EBS). This EBS wax is a migrating compound that migrates from within the PA layer to the surface of the external side of the PA layer that faces the white fibrous layer in the photograph above. If Omega's UV-curing liner functions as advertised and

cures in the presence of UV radiation, then the inner tubular film of the liner must, at least to some extent, be permeable to UV radiation.

29. The white fibrous layer of the Omega Liner was examined by Buergofol and determined to be a support material (woven fiberglass) that was to be impregnated with, or that was to be saturated with, a reactive resin. Page 7 of a technical document entitled "Omega-Liner™ Product Information 2021" (attached hereto as Exhibit E) indicates that the reactive resin of the Omega Liner includes a UV-curing agent. Page 6 of Omega's Liner Installation Manual (attached hereto as Exhibit C) states, "The Omega Liner is a fiberglass reinforced, cured in place pipe. It consists of an inner foil material, multiple layers of fiberglass reinforcement, a fleece barrier layer and a UV protective outer foil. The reinforcement layers are vacuum impregnated with the UV activated resin material."

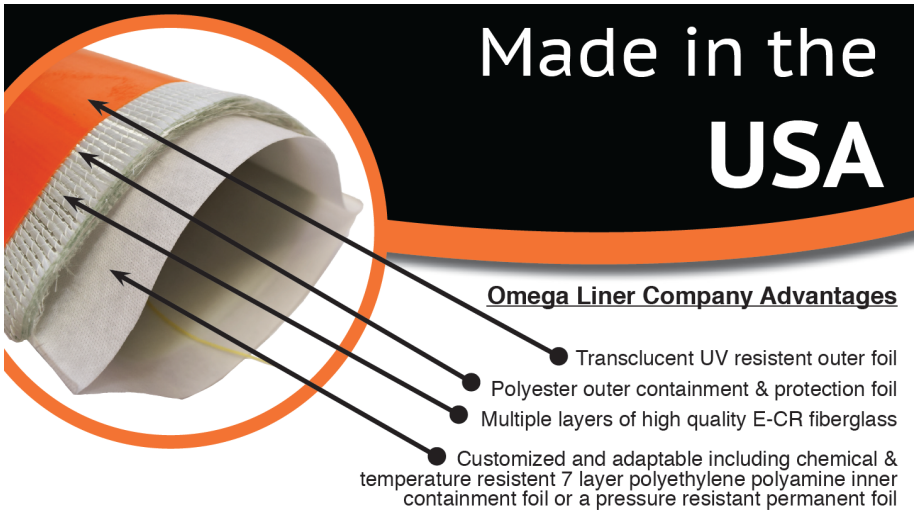
30. The orange external tubular film of the Omega Liner was tested by Buergofol and determined to have a five-layer structure PE/AP/PA/AP/PE with the approximate layer thicknesses of 57/15/39/13/65 microns, respectively, where PE denotes polyethylene, where AP denotes adhesion promoter, and where PA denotes polyamide, as shown below in the cross-sectional annotated magnified photograph of a cross-section of the external film of the 10-inch-diameter Omega Liner.



opaque external tubular film

31. On information and belief, the polyethylene (PE) layers of the orange external tubular film of the Omega Liner include a yellow pigment that reflects visible light of short wavelengths. The external film of the Omega Liner was tested and determined to reflect or absorb approximately 99.67% of visible light of short wavelengths between 400 and 500 nm. The adhesion promoter (AP) layers of the external film of the Omega Liner include a compound that absorbs UV radiation. The external film portion of the Omega Liner was tested and determined to reflect or absorb approximately 99.85% of UV radiation between 200 and 400 nm.

32. In addition to the 10-inch-diameter Omega Liner (pictured above in paragraph 27), on information and belief Omega manufactures another model of Omega Liner that has a "7 layer polyethylene polyamine inner containment foil." A portion of the brochure (attached hereto as Exhibit D) is replicated below.



On information and belief, based on the brochure, the described Omega Liner has a "7 layer" inner "polyethylene polyamine inner containment foil," a carrier material layer of "multiple layers of high quality E-CR fiberglass," and an orange outer "UV resistent outer foil." On information and belief, the structure of the Omega Liner pictured above is substantially the same as the structure of the 10-inch diameter Omega Liner (pictured in paragraph 27 above), but for the number of polyethylene (PE) and polyamide (PA) layers of its inner tubular film (also called "inner containment foil").

COUNT I
(Infringement of U.S. Patent No. 9,657,882)

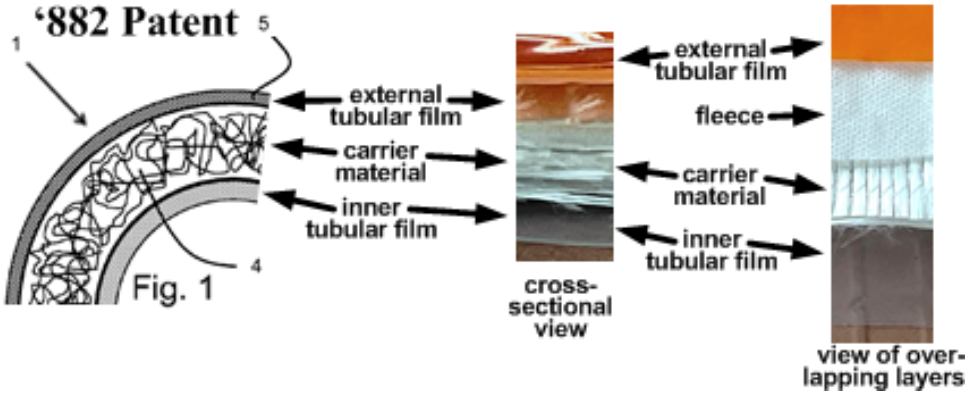
33. Paragraphs 1-32 are incorporated here as though set forth here in full.

34. Buergofol has not licensed or otherwise authorized Omega to make, use, sell or offer for sale any products that embody the claimed inventions of the '882 Patent.

35. The 10-inch-diameter Omega Liner literally infringes claim 1 of the '882 Patent because the Omega Liner embodies each and every element recited by claim 1.

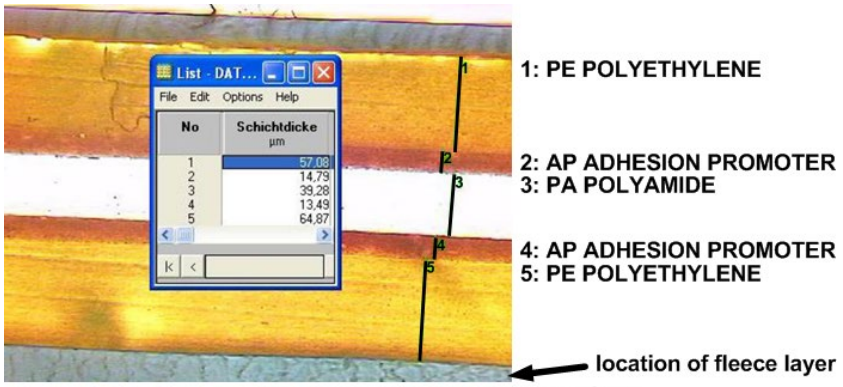
36. As indicated by the preamble of claim 1 of the '882 Patent, claim 1 recites an "insertion tube for use in trenchless sewage pipe renovation." The 10-inch-diameter Omega Liner is an insertion tube for use in trenchless sewage pipe renovation.

37. The insertion tube of claim 1 of the '882 Patent is recited to comprise three portions: 1) "an inner tubular film," 2) "a carrier material" that is "impregnated with a reactive plastic resin," and 3) "an opaque external tubular film." On information and belief, the 10-inch-diameter Omega Liner has an inner tubular film, a carrier material that is impregnated with a reactive plastic resin, and an opaque external tubular film. A cross-sectional view and a view of the four layers overlapping one another are shown below (shown on the right) in comparison to the layers shown in an annotated portion of FIG. 1 of the '882 Patent (shown on the left). The fleece layer of the 10-inch-diameter Omega Liner is neither recited in claim 1 nor shown in FIG. 1.



38. Claim 1 of the '882 Patent recites that "the opaque external tubular film" is "impermeable to liquids and at least partially reflects or absorbs UV radiation or visible light of short wavelengths." The external tubular film of the 10-inch-diameter Omega Liner was tested and determined to have a 5-layer structure PE/AP/PA/AP/PE with the

approximate layer thicknesses of 57/15/39/13/65 microns, respectively, where PE denotes polyethylene, AP denotes adhesion promoter, and PA denotes polyamide, as shown below in the cross-sectional image of only the external tubular film portion of the 10-inch-diameter Omega Liner.



opaque external tubular film

On information and belief, the polyethylene (PE) layers of the external tubular film of the Omega Liner include a yellow pigment that reflects visible light of short wavelengths. Approximately 99.67% of visible light of short wavelengths between 400 and 500 nm is reflected or absorbed by the external tubular film. The adhesion promoter layers of the external tubular film of the Omega Liner include a compound that absorbs UV radiation. Approximately 99.85% of UV radiation between 200 and 400 nm is reflected or absorbed by the external tubular film that reflects or absorbs ultraviolet (UV) radiation having a wavelength of 200 to 400 nm and short-wavelength visible light having a wavelength of 400 to 500 nm.

39. The "carrier material" of claim 1 of the '882 Patent is recited to be "impregnated with a reactive plastic resin arranged between the external film and the inner tubular film." The "Omega's Liner Installation Manual Rev. 1.4 October 2020"

(Exhibit C) states on page 6, "The Omega Liner is a fiberglass reinforced, cured in place pipe. It consists of an inner foil material, multiple layers of fiberglass reinforcement, a fleece barrier layer and a UV protective outer foil. The reinforcement layers are vacuum impregnated with the UV activated resin material." Accordingly, the carrier material of the 10-inch-diameter Omega Liner when used includes a reactive plastic resin.

40. Claim 1 of the '882 Patent recites that the "inner tubular film" comprises one or multiple layers, an inner facing external side, an outer facing external side, and a "coating." Claim 1 of the '882 Patent further recites that the "coating" is "at least one of (1) a coating with a polysiloxane, or (2) a coating or covering with at least one migrating compound" where the coating "is applied over a section or an entire circumferential area of the outer facing external side facing the carrier material." The migrating compound must be incorporated into the inner tubular film so that it can "migrate" to the surface. Thus, claim 1 must cover the disclosed embodiment in which the outer layer of the "inner tubular film" incorporates the "migrating compound" which is applied to the external side of the inner film facing the carrier material by migrating out to the surface of that external side. The 10-inch-diameter Omega Liner was tested and determined to be a three-layer film with the structure PA/AP/PE, where PA denotes polyamide, where AP denotes adhesion promoter, where PE denotes polyethylene, the where PA layer has a thickness of approximately 46 microns, and where the combined AP/PE layers have a combined thickness of approximately 162 microns. The PA layer was determined to include a migrating compound that migrates from within the PA layer to the surface of the external side of the PA layer that faces the carrier material and thereby coats or covers the external side. The migrating compound was determined to be a wax, namely ethylene bis

stearamide (EBS).

41. Upon information and belief, Omega has been, and currently is, infringing the '882 patent, either literally or under the doctrine of equivalents, by making, using, selling, and offering for sale in the United States, including within this judicial district, pipe liners that fall within the scope of at least one claim of the '882 Patent, in violation of 35 U.S.C. § 271(a).

42. Omega's acts of infringement of the '882 Patent complained of herein have caused and will continue to cause Buergofol immediate and irreparable harm unless such infringing activities are enjoined by this Court pursuant to 35 U.S.C. § 283. Buergofol has no adequate remedy at law for Omega's acts of infringement. As a result of Omega's infringement of the '882 Patent, Buergofol has been and continues to be damaged in an amount yet to be determined.

43. The requirements of 35 U.S.C. § 287 have been complied with. No owner of the '882 Patent ever made, used, or sold any patented article in the United States, nor did any such owner ever license the '882 Patent to anyone.

COUNT II
(Infringement of U.S. Patent No. 8,794,269)

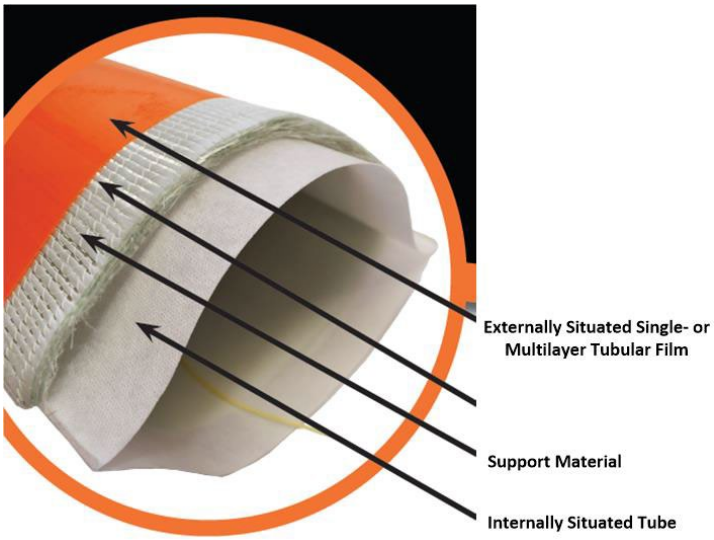
44. Paragraphs 1-32 are incorporated here as though set forth here in full.

45. Buergofol has not licensed or otherwise authorized Omega to make, use, sell or offer for sale any products that embody the claimed inventions of the '269 Patent.

46. The Omega Liner with the 7-layer inner containment foil (pictured in the brochure of Exhibit D) literally infringes claim 1 of the '269 Patent because the Omega Liner embodies each and every element recited by claim 1.

47. As indicated by the preamble of claim 1 of the '269 Patent, claim 1 claims an "insertion tube" that is "suitable for the renovation of subterranean pipes, optionally subterranean sewer pipes." The Omega Liner (pictured in the brochure of Exhibit D) is an insertion tube for use in trenchless sewage pipe renovation. The brochure refers to the insertion tube as "The Contractor's Choice ULTRAVIOLET CURED IN PLACE PIPE LINING."

48. The insertion tube of claim 1 of the '269 Patent is recited to comprise three portions: 1) an "internally situated tube," 2) a "support material" with a "reactive synthetic resin," and 3) an "externally situated single- or multilayer tubular film." On information and belief, the Omega Liner (pictured in the brochure of Exhibit D) has an "internally situated tube," 2) a "support material" with a "reactive synthetic resin," and 3) an "externally situated single- or multilayer tubular film." The Omega Liner, as pictured in the brochure of Exhibit D, is shown below in annotated form to identify the three portions.



49. Claim 1 of the '269 Patent recites that the "internally situated tube" is an "optionally nonconditioned multilayer film that is impermeable to liquids and that is at least to some extent permeable to UV radiation." On information and belief, the Omega Liner (pictured in the brochure of Exhibit D) has substantially the same structure as does the 10-inch-diameter Omega Liner pictured above in paragraph 27, but for the number of polyethylene (PE) and polyamide (PA) layers of its inner tubular film (also called its "internally situated tube"). If Omega's UV-curing liner functions as advertised and cures in the presence of UV radiation, then the internally situated tube of the Omega Liner must, at least to some extent, be permeable to UV radiation, as recited in claim 1.

50. Claim 1 of the '269 Patent recites that the "multilayer film" of the internal situated tube is made of 1) a layer "a" comprised of at least one "thermoplastic" polymer, 2) an adhesive-promoter layer "b", 3) an internally situated layer "c" comprised of at least one "homo- and/or copolyamide," 4) an adhesive-promoter layer "d", and 5) a layer "e" comprised of at least one "homo- and/or copolyamide." On information and belief, the Omega Liner (pictured in the brochure of Exhibit D) has substantially the same structure as does the 10-inch-diameter Omega Liner pictured above in paragraph 27, but for the number of polyethylene (PE) and polyamide (PA) layers of its inner tubular film (also called its "internally situated tube"). Whereas the inner tubular film of the 10-inch-diameter Omega Liner was tested and determined to be a three-layer film with the structure PA/AP/PE (where PA denotes polyamide, AP denotes adhesion promoter, and PE denotes polyethylene), on information and belief the inner-layer film of the Omega Liner (pictured in the brochure of Exhibit D) has seven layers as indicated on the brochure, where in addition to the three PA/AP/PE layers of the 10-in-diameter Omega

Liner, four additional layers are present between the AP and the PE layers. The four additional layers of the 7-layer inner tubular film of Exhibit D are the layers PA/AP/PE/PE disposed between the AP and PE layers of the PA/AP/PE layers of the 10-in-diameter Omega Liner, which results in the 7-layer film PA/AP/PA/AP/PE/PE/PE.

51. Upon information and belief, the 7-layer inner tubular film **PA**/**AP**/**PA**/**AP**/PE/PE/**PE** of the Omega Liner offered for sale in the brochure of Exhibit D includes the five layers recited in claim 1 of the '269 Patent, which are bolded and underscored in the preceding layer designations. From right to left in the preceding layer designations, the bolded and underscored layers include 1) a PE layer comprised of at least one "thermoplastic" polymer, 2) an adhesive-promoter layer AP, 3) an internally situated layer PA comprised of at least one "homo- and/or copolyamide," 4) an adhesive-promoter layer AP, and 5) a layer PA comprised of at least one "homo- and/or copolyamide."

52. Claim 1 of the '269 Patent recites that "the VICAT softening point of the thermoplastic olefin homo- or copolymer of the layer (a) is at least 100° C." On information and belief, the Omega Liner (pictured in the brochure of Exhibit D) has substantially the same structure as does the 10-inch-diameter Omega Liner pictured above in paragraph 27, but for the number of polyethylene (PE) and polyamide (PA) layers of its inner tubular film (also called its "internally situated tube"). The external thermoplastic olefin polymer layers of the 3-layer and 7-layer inner films are substantially the same. The VICAT softening point of the thermoplastic layer of the inner tubular film of the 10-inch-diameter Omega Liner (pictured above in paragraph 27) was tested by Buergofol and determined to be greater than one hundred degrees Celsius.

53. Claim 1 of the '269 Patent recites that the externally situated tubular film "reflects and/or absorbs UV radiation and/or short-wave, visible light." On information and belief, the Omega Liner (pictured in the brochure of Exhibit D) has substantially the same structure as does the 10-inch-diameter Omega Liner pictured above in paragraph 27, but for the number of polyethylene (PE) and polyamide (PA) layers of its inner tubular film (also called its "internally situated tube"). The "external tubular film" of the 10-inch-diameter Omega Liner (pictured above in paragraph 27) was tested by Buergofol. Approximately 99.67% of visible light of short wavelengths between 400 and 500 nm is reflected or absorbed by the external tubular film. The adhesion promoter layers of the external tubular film of the Omega Liner include a compound that absorbs UV radiation. Approximately 99.85% of UV radiation between 200 and 400 nm is reflected or absorbed by the external tubular film that reflects or absorbs ultraviolet (UV) radiation having a wavelength of 200 to 400 nm and short-wavelength visible light having a wavelength of 400 to 500 nm.

54. Claim 1 of the '269 Patent recites that the "support material" is "saturated with a reactive synthetic resin." On information and belief, the Omega Liner (pictured in the brochure of Exhibit D) has substantially the same structure as does the 10-inch-diameter Omega Liner pictured above in paragraph 27, but for the number of polyethylene (PE) and polyamide (PA) layers of its inner tubular film (also called its "internally situated tube"). The fiberglass layer of the Omega Liner pictured in the brochure of Exhibit D therefore is to be saturated with resin as is the fiberglass layer of the 10-inch-diameter Omega Liner (pictured above in paragraph 27). Page 4 of the technical document entitled "Omega-Liner™ Product Information 2021" (attached hereto

as Exhibit E) lists "Unsaturated Polyester" and "Vinyl Ester" as the "Resin System(s)" of the Omega Liner. Under "Resin System Data" on page 7, the curing agents of the Omega Liner are described as "UV-curing: UV-initiators."

55. Upon information and belief, Omega has been, and currently is, infringing the '269 patent, either literally or under the doctrine of equivalents, by making, using, selling, and offering for sale in the United States, including within this judicial district, pipe liners that fall within the scope of at least one claim of the '269 Patent, in violation of 35 U.S.C. § 271(a).

56. Omega's acts of infringement of the '269 Patent complained of herein have caused and will continue to cause Buergofol immediate and irreparable harm unless such infringing activities are enjoined by this Court pursuant to 35 U.S.C. § 283. Buergofol has no adequate remedy at law for Omega's acts of infringement. As a result of Omega's infringement of the '269 Patent, Buergofol has been and continues to be damaged in an amount yet to be determined.

57. The requirements of 35 U.S.C. § 287 have been complied with. No owner of the '269 Patent ever made, used, or sold any patented article in the United States, nor did any such owner ever license the '269 Patent to anyone.

PRAYER FOR RELIEF

WHEREFORE, Buergofol requests judgment against Omega as follows:

1. Adjudging that Omega has infringed the '882 Patent in violation of 35 U.S.C. § 271(a);

2. Granting an injunction permanently enjoining Omega, as well as its

owners, employees, agents, officers, directors, attorneys, successors, affiliates, subsidiaries and assigns, and all of those in active concert and participation with any of the foregoing persons or entities from infringing, contributing to the infringement of, and/or inducing infringement of the '882 Patent;

3. Ordering Omega to account to Buergofol and pay damages to compensate Buergofol for Omega's infringement of the '882 Patent, with pre-judgment and post-judgment interest and costs, pursuant to 35 U.S.C. § 284; and

4. Adjudging that Omega has infringed the '269 Patent in violation of 35 U.S.C. § 271(a);

5. Granting an injunction permanently enjoining Omega, as well as its owners, employees, agents, officers, directors, attorneys, successors, affiliates, subsidiaries and assigns, and all of those in active concert and participation with any of the foregoing persons or entities from infringing, contributing to the infringement of, and/or inducing infringement of the '269 Patent;

6. Ordering Omega to account to Buergofol and pay damages to compensate Buergofol for Omega's infringement of the '269 Patent, with pre-judgment and post-judgment interest and costs, pursuant to 35 U.S.C. § 284; and

7. Awarding such other and further legal and equitable relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Buergofol hereby requests a trial by jury on all issues so triable pursuant to Rule 38 of the Federal Rules of Civil Procedure.

Dated this 13th day of July, 2023

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