

NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition  
is not citable as precedent. It is a public record. This  
disposition will appear in tables published periodically.

## United States Court of Appeals for the Federal Circuit

99-1584, 00-1005

INSITUFORM TECHNOLOGIES, INC., INSITUFORM (NETHERLANDS) B.V.,

and INSITUFORM GULF SOUTH, INC.,

Plaintiffs/Cross-Appellants,

v.

CAT CONTRACTING, INC.,

FIRSTLINER U.S.A, INC., and GIULIO CATALLO,

Defendants-Appellants,

and

MICHIGAN SEWER CONSTRUCTION COMPANY,

Defendant-Appellant,

and

KANAL SANIERUNG HANS MUELLER GmbH & CO. KG,

Defendant-Appellee.

---

DECIDED: March 26, 2001

---

Before MAYER, Chief Judge, MICHEL, and SCHALL, Circuit Judges.

SCHALL, Circuit Judge.

## DECISION

Cat Contracting, Inc., Firstliner U.S.A., Inc., Guilio Catallo, and Michigan Sewer Construction Company (collectively, "Appellants") appeal the joinder of Insituform (Netherlands) B.V. ("Insituform B.V.") as a plaintiff and the award of damages for infringement under the doctrine of equivalents of United States Patent No. 4,366,012 (the "'012 Patent") by the United States District Court for the Southern District of Texas. Insituform Techs., Inc. v. Cat Contracting, Inc., No. H-90-1690, slip op. at 21-22, 39-40, 57 (S.D. Tex. Aug. 31, 1999) ("Insituform IV"). Cat Contracting, Inc. and Mr. Catallo also appeal the joinder of Mr. Catallo to the suit as a defendant after the liability and damages trials had concluded. Insituform Techs., Inc. v. Cat Contracting, Inc., No. H-90-1690, slip op. at 8 (Aug. 30, 1999) (order) ("Insituform III"). Insituform Technologies, Inc. ("ITI"), Insituform B.V., and Insituform Gulf South, Inc. ("IGS") (collectively, "Insituform") cross-appeal the district court's finding that Kanal Mueller Gruppe International ("KMGI") is not the alter ego of Kanal Sanierung Hans Mueller GmbH & Co. KG ("KS"). Insituform IV, slip op. at 44-45. After oral argument in this appeal, Appellants and KS filed motions asking us to apply our holdings in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 234 F.3d 558, 56 USPQ2d 1865 (Fed. Cir. 2000), to the case and, in light of Festo, vacate the district court's judgment of infringement under the doctrine of equivalents. We agree with Appellants and KS and conclude that the holdings in Festo must be applied to the earlier finding of infringement, and that, under Festo, prosecution history estoppel bars a finding of infringement under the doctrine of equivalents in this case. Therefore, we reverse-in-part, vacate-in-part, and remand.

## DISCUSSION

### I.

The '012 patent discloses a process for repairing damaged pipelines and passageways. The patent claims a method for performing such repair without removing the damaged pipe from the ground by installing a liner into the damaged pipe. Claim 1, the only claim still at issue, describes a method for impregnating the flexible tube liner with resin prior to insertion of the liner into the damaged pipe. The claimed method involves a liner that has an impermeable film on the outside and a resin-absorbent, felt layer on the inside. A vacuum is applied to the inside of the liner by cutting a window into the outer, impermeable film, applying a cup (a "vacuum cup") to the outside of the window, and connecting the other end of the cup to a vacuum source. Using the created vacuum, a section of the inside of the liner is impregnated with resin. The vacuum cup is then moved to another section of the liner while the previously used window is sealed. This process for impregnating the liner with resin allows for impregnation at the jobsite, eliminating the need to transport a heavier, already-impregnated liner to the site.

Insituform alleged that two processes practiced by the Appellants infringed the '012 patent. The first process ("Process 1") involved the use of four to six vacuum cups to draw a vacuum from a corresponding four to six windows in the liner. As each vacuum cup was removed, the corresponding window was sealed while the remaining vacuum cups downstream continued to create a vacuum in the liner. Insituform Techs., Inc. v. Cat Contracting, Inc., 99 F.3d 1098, 1104-05, 40 USPQ2d 1602, 1607 (Fed. Cir. 1996) ("Insituform I"). The second process ("Process 2") involved the use of multiple needles instead of vacuum cups to create a vacuum, with each needle being inserted through both the outer, impermeable film layer and the inner, resin-absorbent layer. Insituform Techs., Inc. v. Cat Contracting, Inc., 161 F.3d 688, 690-91, 48 USPQ2d

1610, 1612 (Fed. Cir. 1998) ("Insituform II").

Insituform sued Appellants in February of 1990, alleging infringement of the '012 patent. Insituform I, 99 F.3d at 1101, 40 USPQ2d at 1603. The issues of infringement and damages were bifurcated by order of the district court on March 5, 1991. In June of 1991, after a two-week jury trial, the jury returned a verdict of general infringement and no invalidity. Id. The district court granted, in part, Appellants' motion for a judgment as a matter of law ("JMOL"), finding no literal infringement. However, the court upheld the jury's finding of validity. In addition, the court ruled that the issue of infringement under the doctrine of equivalents should be tried. Id. In February of 1995, the issue of infringement by equivalents was retried in a three day bench trial, after which the district court found that the practice of both Process 1 and Process 2 infringed claim 1 of the '012 patent under the doctrine of equivalents. Id. at 1101, 40 USPQ2d at 1603-04. Appellants appealed that finding, while Insituform cross-appealed the district court's grant of JMOL of no literal infringement.

In Insituform I, we affirmed the district court's JMOL of no literal infringement. Id. at 1106-07, 40 USPQ2d at 1608. We vacated, however, the court's holding that Process 1 and Process 2 infringed under the doctrine of equivalents. Id. at 1109, 40 USPQ2d at 1610. In our decision, we addressed Appellants' contention that prosecution history estoppel precluded a finding of infringement by equivalents. Id. at 1107-08, 40 USPQ2d at 1608-10. We noted that the '012 patent's original application contained four claims relevant to Appellants' prosecution history estoppel argument. Id. at 1108, 40 USPQ2d at 1609. We observed that the first two claims "would likely have read on a process using a single cup or a single needle . . . [or] multiple cups or multiple needles." Id. We stated that, in response to the examiner's rejection of the four claims over the Everson reference, "Insituform canceled the claims and filed new, narrower claims, including what is now claim 1," which we held was "literally limited to the use of one vacuum cup . . . ." Id., 40 USPQ2d at 1610. Based on these amendments, we concluded that Insituform "gave up coverage to a process for which a single vacuum source is located at the far end of the tube," but that it could not be concluded that "Insituform relinquished coverage of processes using either multiple vacuum sources or a continuous vacuum." Id. at 1108-09, 40 USPQ2d at 1610. We held that prosecution history estoppel did not preclude Insituform from asserting that claim 1 of the '012 patent was infringed by Process 1 or Process 2 under the doctrine of equivalents. Id. at 1109, 40 USPQ2d at 1610. We remanded the case to the district court for a determination as to whether, under the correct claim construction, that claim 1 of the '012 patent required the process to use only one vacuum cup, Process 1 or Process 2 infringed under the doctrine of equivalents. Id.

Upon remand, the district court, on December 31, 1996, issued revised findings of fact and conclusions of law that found that both Process 1 and Process 2 infringed under the doctrine of equivalents. Appellants appealed. While Appellants' appeal was before this court, the district court, in early September of 1997, conducted a four day bench trial on the issue of damages. The district court issued its findings of fact and conclusions of law on the issue of damages on September 3, 1998, finding damages for the Appellants' use of both Process 1 and Process 2.

We issued our decision on Appellants' second appeal on November 17, 1998. We upheld the district court's finding that Process 1 infringed the '012 patent under the doctrine of equivalents. Insituform II, 161 F.3d at 690, 48 USPQ2d at 1614. However, we reversed the district court's finding that Process 2 infringed under the doctrine of equivalents based on (i) the evidence of substantial differences between Process 2 and the claimed use of a single vacuum cup and (ii) "the district court's legal error in defining incorrectly the 'way' in its function-way-result analysis and dismissing structural differences as irrelevant." Id. at 693-95, 48 USPQ2d at 1615. We also held that the district court had erred in finding that KS induced infringement of the '012 patent because KS did not have knowledge of the '012 patent when it licensed the infringing Process 1 to Firstliner U.S.A., Inc.. Id. at 695, 48 USPQ2d at 1616. We remanded the case to the district court to determine whether KMG1, who continued to license Process 1 to Firstliner after Insituform filed suit against

KS in 1990, was KS's alter ego, so that KMGI's activities of licensing Process 1 after KS gained knowledge of the '012 patent could be attributed to KS. Id.

Upon remand, the district court recognized that it needed to address the question of whether KMGI was KS's alter ego and that it needed to recalculate its earlier damage award to only include the harm done by the Appellants' practice of Process 1. Insituform IV, slip op. at 2-3. To facilitate these changes to its earlier findings of fact and conclusions of law, the court permitted additional discovery and briefing by the parties. The parties conducted the permitted discovery and filed various motions. Thereafter, without any in-court testimony, the court issued revised findings of fact and conclusions of law.

The district court found that KMGI was not KS's alter ego and that KS thus was not liable for infringement by inducement. Id. at 42-45. The court also recalculated the damages to Insituform unique to Appellants' practice of Process 1. Id. at 34-36. Additionally, the court found that Insituform B.V., the current owner of the '012 patent, had properly been joined as a party to the suit via a previous order of the court on November 30, 1994. Id. at 21-22. Finally, the court granted Insituform's motion to add Mr. Catallo as a party a day before the above described revised findings of fact and conclusions of law were issued. Insituform III, slip op. 4-9. The court concluded that there would be no prejudice in adding Mr. Catallo as a party after the liability and damages trials had concluded. Id. at 8-9.

Appellants' appealed the district court's revised finding of facts and conclusions of law. Insituform cross-appealed the district court's finding that KMGI was not the alter ego of KS. Oral argument was heard on November 3, 2000. Thereafter, on November 29, 2000, we issued our en banc decision in Festo. In Festo, we held that a narrowing amendment to a claim limitation made for a substantial reason related to patentability completely bars the application of the doctrine of equivalents to that amended claim limitation. Festo, 234 F.3d at 563-64, 56 USPQ2d at 1868.

On December 28, 2000, Appellants filed a motion asking us to apply Festo to this case and, after doing so, to vacate the district court's judgment that they were liable for infringement under the doctrine of equivalents. On January 2, 2001, KS filed a motion asking us to apply Festo. However, in its motion, KS urged Festo only as an alternative ground in support of the judgment in its favor. KS's first choice is to have us affirm the ruling of the district court that it cannot be liable for infringement on Insituform's alter ego theory relating to KMGI. Insituform responded to the post-argument motions, and Appellants and KS submitted replies.

## II.

Appellants' and KS's post-oral argument motions present two questions. The first question is whether we can apply the holdings of Festo to our two earlier decisions in this case, Insituform I and Insituform II, and the final judgment of the district court that is before us in this appeal. The second question is whether, if we can revisit the earlier decisions in this case and apply our holdings in Festo, Festo bars any range of equivalents for the vacuum method limitation in claim 1 of the '012 patent and thus mandates a finding of no infringement under the doctrine of equivalents.

With regard to the first question, Insituform argues that our holdings in Festo cannot be applied to the present appeal or to our earlier decisions in this case. Insituform asserts that the issue of liability was decided by this court in Insituform II and was the subject of a final judgment by the district court over a year ago, entered pursuant to the decision in Insituform II. Insituform contends that we may only apply new law, such as Festo, to issues that are properly presented for decision in this appeal and that the question of infringement of the '012 patent by Appellants is not before us. Insituform indicates that the only issues this court can address are damages, the joinder of Mr. Catallo and Insituform B.V., and whether KMGI is the alter ego of KS. Appellants and KS respond that the holdings in Festo must be applied to all pending cases,

which include this one. They also argue that even though the questions of prosecution history estoppel and of infringement under the doctrine of equivalents were already decided by this court in Insituform I and Insituform II, since Festo changed the law under which those previous decisions were made, the law of the case doctrine does not preclude our reconsideration of those earlier holdings.

Since we applied the rule of law established in Festo to the parties in that case, Festo, 234 F.3d at 587-91, 56 USPQ2d at 1885-90, the holding in Festo "must be given full retroactive effect in all cases still open on direct review and as to all events, regardless of whether such events predate or postdate [the] announcement of the rule." Harper v. Va. Dep't of Taxation, 509 U.S. 86, 97 (1993). When a court has "applied a rule of law to the litigants in one case it must do so with respect to all others not barred by procedural requirements or res judicata." James B. Beam Distilling Co. v. Ga., 501 U.S. 529, 544 (1991). Thus, even if we have already decided issues regarding prosecution history estoppel and infringement under the doctrine of equivalents in a previous decision, if those issues are still open on direct review, we must apply the holdings of Festo.

Insituform is correct that a final judgment is binding under the doctrine of res judicata and that a final judgment was entered by the district court in this case on August 31, 1999. However, that final judgment is the very judgment that is now presented to us for review in this appeal. Since the judgment is still open and before us for review, we are required, under the Supreme Court's decisions in Harper and James B. Beam, to apply our holdings in Festo. See Harper, 509 U.S. at 94-97; James B. Beam, 501 U.S. at 541-44. Additionally, our decisions in Insituform I, 99 F.3d at 1109, 40 USPQ2d at 1610, and Insituform II, 161 F.3d at 695, 48 USPQ2d at 1616, were not final judgments because both remanded the case back to the district court for further proceedings. Our decisions cannot be given res judicata effect. See Mendenhall v. Barber-Greene Co., 26 F.3d 1573, 1580-81, 31 USPQ2d 1001, 1005-07 (Fed. Cir. 1994) (noting that an earlier decision on liability was not binding because it "resulted in a remand for further proceedings").

The law of the case doctrine may, however, bar this court from revisiting our decisions in Insituform I and Insituform II. The doctrine generally prohibits a court from revisiting an issue once it has been previously decided in a pending litigation. Mendenhall, 26 F.3d at 1580-81, 31 USPQ2d at 1005-07; see also Az. v. Cal., 460 U.S. 605, 618-19 (1983); Koyo Seiko Co., Ltd. v. United States, 95 F.3d 1094, 1097 (Fed. Cir. 1996). The law of the case doctrine is not, however, a limitation on a court's judicial power. Rather, it is a doctrine that directs a court's discretion to revisit issues. Mendenhall, 26 F.3d at 1582, 31 USPQ2d at 1007. There are three well-established exceptions to the law of the case doctrine, one of which is where "controlling authority has since made a contrary decision of the law applicable to the issues." Gould, Inc. v. United States, 67 F.3d 925, 930 (Fed. Cir. 1995). An intervening change in applicable authority can be the basis to reconsider an earlier decision. Mendenhall, 26 F.3d at 1582, 31 USPQ2d at 1007.

Here, Festo represents an intervening change in controlling authority. In Insituform I and Insituform II, we held that Insituform's amendments to the claims of the '012 patent did "not prohibit application of the doctrine of equivalents completely, but only with respect to the subject matter surrender of a large, single vacuum source . . . ." Insituform II, 161 F.3d at 692, 48 USPQ2d at 1614. Under Festo, in contrast, once prosecution history estoppel by amendment is found, all equivalent subject matter is surrendered. Festo, 234 F.3d at 569, 56 USPQ2d at 1872. Festo falls into the above-noted exception to the law of the case doctrine because it represents a change in the authority that controlled Insituform I and Insituform II and that allowed this court to find that Insituform's narrowing claim amendments caused a surrender of a limited range of equivalents, instead of a surrender of all equivalents.

Our conclusion, that Festo can be applied in this case, is supported by our recent decision in Litton Systems, Inc. v. Honeywell Inc., 238 F.3d 1376, 57 USPQ2d 1653 (Fed. Cir. 2001). In Litton, we reconsidered one of our earlier decisions in the case in light of our holdings in Festo. Id. at 1380-81, 57 USPQ2d at 1656-57. We

recognized that, in the earlier decision, we had applied the flexible bar approach to prosecution history estoppel and had remanded the case to the district court to determine whether there was infringement under the doctrine of equivalents. Id. at 1380, 57 USPQ2d at 1656. In Festo, however, we specifically repudiated the flexible bar. Id. We stated in Litton that "[b]ecause we have adopted a contrary rule of law regarding the scope of prosecution history estoppel for amended claim limitations, the law of the case doctrine does not preclude us from applying the complete bar adopted en banc in Festo." Id. We proceeded to hold that, under Festo, Litton was estopped from claiming any equivalents to the amended claim limitation in dispute. Id. Based on the complete bar, we upheld the district court's grant of JMOL and summary judgment of no infringement under the doctrine of equivalents. Id. at 1381, 57 USPQ2d at 1657.

We are mandated, under the Supreme Court's decisions in Harper and James B. Beam, to apply the rule of law announced in Festo to all cases before us for review in which the application of Festo is not barred by procedural requirements or res judicata. As noted above, res judicata does not bar our review of infringement because the only final judgment in this case is before us in this appeal. In addition, the law of the case doctrine does not apply because Festo was an intervening decision that changed the law upon which the district court relied and the law upon which we relied on in Insituform I and Insituform II.

### III.

Turning, to the second question presented by the post-oral argument motions, Insituform contends that prosecution history estoppel does not apply to claim 1 of the '012 patent because claim 1 does not include any limitations that were not already found in claims 1-4 of the original application. Insituform asserts that the claim limitation in question, the use of a single cup to create a vacuum, was present in original claim 4. Therefore, Insituform argues, the claim limitation was not added or amended to secure allowance, and the complete bar to equivalents does not apply. Appellants and KS respond by arguing that during the prosecution of the '012 patent, Insituform, in response to the examiner's rejection under 35 U.S.C. § 103, canceled its original independent claim 1, and substituted it with a new independent claim that was narrower in scope than the original claim. They assert that Insituform narrowed the scope of the original claim by amending the vacuum method claim limitation to describe the use of a single vacuum cup. Appellants and KS conclude that since this amendment narrowed the vacuum method limitation, Festo bars any range of equivalents for the claimed use of a single vacuum cup.

We noted in Insituform I that Appellants' Process 1 involved the use of four to six cups to draw a vacuum from a corresponding number of slits in a flexible tube in order to impregnate the entire resin absorbent inner layer with resin. Insituform I, 99 F.3d at 1104-05, 40 USPQ2d at 1607. Appellants argued to this court, and the district court, that prosecution history estoppel limited issued claim 1 to the specific vacuum method described—a one cup process. Id. at 1107, 40 USPQ2d at 1609. In Insituform I, we indicated that issued claim 1 was limited to the use of one vacuum cup, but noted that original claim 1 did not limit the number of cups used to create a vacuum. Id., at 1108, 40 USPQ2d at 1610. Original claim 1 stated, in relevant part, that:

. . . the resin absorbent layer is impregnated with a curable resin by applying a vacuum to the inside of a flexible tube whilst the resin is brought into impregnation contact with the resin absorbent material . . . .

Id. at 1103, 40 USPQ2d at 1605 (emphasis added). Original claim 2 depended from claim 1 and further limited claim 1 to a specific quantity of resin. Id., 40 USPQ2d at 1606. Original claim 3 depended from claims 1 and 2 and further limited the two claims to the use of a nip roller for feeding the resin into the flexible tube. Id. Original claim 4 depended from claims 1 and 2 and limited the two claims to the use of one vacuum cup. Id. at 1103-04, 40 USPQ2d at 1606. These four original claims were rejected under 35 U.S.C. § 112 for lack

of specificity and under 35 U.S.C. § 103 in light of the Everson reference. Id. at 1104, 40 USPQ2d at 1606.

In response, Insituform canceled all of its claims, claims 1-9, and added claim 10, which it indicated incorporated the substance of original claims 1-4. Id. Claim 10 described, in relevant part, the:

. . . drawing through the window a vacuum in the interior of the tube downstream of said one end by disposing over the window a cup connected by a flexible hose to a vacuum source which cup prevents ingress of air into the interior of the tube while the tube is being evacuated, the outer layer of the tube being substantially impermeable to air . . . .

Id. (emphasis added). Insituform argued that the amendments taught an improvement over Everson. Id. The examiner allowed the claims without further comment. Id. Claim 10 was renumbered as claim 1 of the issued patent. Id.

Notably, Insituform does not argue that the above amendments were not made for a substantial reason related to patentability. Rather, it argues that the amendments did not narrow the original claims and did not amend the vacuum method limitation. However, present claim 1 is narrower than any of the original claims considering that it includes limitations from original claims 1-4 and that original claim 4 only included limitations from claims 1-2. Indeed, we noted in Insituform I that "Insituform canceled [claims 1-4] and filed new, narrowed claims, including what is now claim 1." Id. at 1108, 40 USPQ2d at 1609. In addition, claim 1 was amended as to the specific claim limitation at issue?the method used to create a vacuum. The original claim 1 did not limit the number of cups that could be used to create a vacuum, while the new claim 1 did present such a limitation. Insituform substituted the new claim for the original independent claim 1 and narrowed the scope of the vacuum method limitation during prosecution.

The factual scenario present in the '012 patent's prosecution is very similar to that presented in Festo with respect to the Stoll patent. The Stoll patent contained an original claim 1 that did not have a magnetizable sleeve limitation, but dependant claim 8, depending from claim 1, did have such a limitation. Festo, 234 F.3d at 582-83, 56 USPQ2d at 1834. Stoll cancelled claim 1 and claim 8, and presented a new, independent claim that included a magnetizable sleeve limitation. Id. We noted that "we [were] presented with the situation where the added claim [limitation] was introduced through a new claim, instead of through an amendment to an original claim. Nevertheless, the addition of the magnetizable sleeve claim [limitation] can be said to have narrowed the scope of the original claim because the new claim replaced the original claim." Id. at 587-88. 56 USPQ2d at 1887. We concluded that prosecution history estoppel applied to the magnetizable sleeve limitation and that no range of equivalents could be asserted for this limitation. Id. at 588, 56 USPQ2d at 1888.

In this case, Insituform, during prosecution, replaced original independent claim 1 with a new independent claim. Therefore, as in Festo in the case of the Stoll patent, the original claim and the original claim as amended, the new claim, must be compared. The new claim, as we observed in Insituform I, includes a limitation as to the number of vacuums to be used, and thus the vacuum method limitation was narrowed. Under Festo, Insituform cannot assert any range of equivalents for this claim limitation. Thus, the Appellants' use of Process 1, which uses multiple cups, cannot infringe under the doctrine of equivalents, the only finding of infringement affirmed by this court, Insituform II, 161 F.3d at 692-93, 48 USPQ2d at 1614.

#### IV.

Since none of the Appellants, or KS, can be held liable for infringement of the '012 patent in light of Festo, an intervening change in controlling law in this case, the district court's final judgment of liability and damages must be reversed. As noted above, KS urges us to affirm the district court's ruling on the alter ego

issue instead of directing that the complaint against it be dismissed based upon Festo. However, the application of Festo disposes of Insituform's infringement claim with respect to both Appellants and KS, thereby rendering moot the alter ego issue with respect to KS.

In conclusion, we grant the Appellants' motion to vacate the judgment and KS's motion to apply this court's decision in Festo. The judgment of infringement in favor of Insituform is reversed. We remand the case to the district court, which is instructed (i) to vacate all orders entered after the finding of infringement as moot, including those relating to damages and Mr. Catallo's joinder as a defendant; and (ii) to dismiss the case as to all parties.

Each party shall bear its own costs.

#### FOOTNOTES:

[1] Firstliner U.S.A. was formally known as Inliner U.S.A.

[2] Insituform II replaced our opinion in Insituform Techs., Inc. v. Cat Contracting, Inc., 156 F.3d 1199, 48 USPQ2d 1019 (Fed. Cir. 1998), that was recalled after our order granting a petition for rehearing by KS, Insituform Techs., Inc. v. Cat Contracting, Inc., No. 97-1232 (Fed. Cir. Oct. 30, 1998) (order).

[3] As noted, we do not render any decision on the issue of whether KMGI is the alter ego of KS.