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RF DELAWARE, INC., Plaintiff-Appellant, v. PACIFIC KEYSTONE TECHNOLOGIES, INC., BCA INDUSTRIAL CONTROLS (1995) LIMITED, CLEAR WATER TECHNOLOGIES, INC., and MICHAEL MORRIS, Defendants-Appellees.

02-1508

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

2003 U.S. App. LEXIS 7450

April 21, 2003, Decided

PRIOR HISTORY:
[*1] Appealed from: United States District Court for the Northern District of Alabama Senior Judge Robert B. Propst. *RF Del., Inc. v. Pac. Keystone Techs., Inc., 49 Fed. Appx. 912, 2002 U.S. App. LEXIS 23285 (2002)*

DISPOSITION:
REVERSED AND REMANDED.

COUNSEL:
James J. Merek, Merek & Voorhees of Alexandria, Virginia, argued for plaintiff-appellant. With him on the brief was David H. Voorhees.

Richard R. Johnson, Shook, Hardy & Bacon, L.L.P., of Kansas City, Missouri, argued for defendants-appellees.

JUDGES:
Before MICHEL, RADER, and SCHALL, Circuit Judges.

OPINIONBY:
MICHEL

OPINION:

MICHEL, Circuit Judge.

Patentee RF Delaware, Inc. ("RFD") appeals the May 31, 2002, decision of the United States District Court for the Northern District of Alabama, RF Delaware, Inc. v. Pac. Keystone Techs., Inc., No. CV-01-PT-0348-M (N.D. Ala. May 31, 2002), entering summary judgment of non-infringement for the accused infringers, Pacific Keystone Technologies, Inc., BCA Industrial Controls Limited, Clearwater Technologies, Inc., and Michael Morris (collectively "Pacific") on the grounds that *U.S. Patent No. 5,198,124* ("*'124 patent*") and *U.S. Patent No. 5,314,630* ("*'630 patent*") did not cover the alleged infringing process and Pacific, a maker but not user of water filtering systems, did not commit any act of infringement. **[*2]** Because the district court erred in construing the claim terms "filter bed" and "filter media" in the broadest claims and also erred in granting summary judgment of non-infringement, we reverse the district court's judgment and remand the case for trial or other proceedings consistent with this opinion.

BACKGROUND

RFD owns the *'124* and *'630 patents*, relating to the use and washing of an upflow filter in combination upflow and downflow water filtration systems. Both patents cover the same subject matter and share identical written descriptions.

The *'124 patent* is entitled "Upflow Filter and Method of Washing Same" and the *'630 patent* is entitled "Systems and Methods for Clarifying Liquids." Claim 1 of the *'124 patent* reads:

1. A method of washing an upflow filter between service runs, said upflow filter including a filter bed having a non-buoyant particulate media filter layer through which influent to be filtered is directed in an upward direction during each service run for causing floc in said influent to be retained in said layer, said method of washing including the steps of:

(a) directing a combination of air and liquid in an upflow direction through the **[*3]** filter layer with the velocity of the liquid being less than one-half the minimum fluidization velocity of the filter layer for disrupting only some floc retained in said layer during a previous service run, while leaving some floc attached to said particulate media in said filter layer; and thereafter

(b) directing only liquid in an upflow direction through the filter layer at a velocity less than one-half the minimum fluidization velocity of the filter layer for removing disrupted floc from the filter while leaving in said layer floc attached to said particulate media of said filter layer.

'124 patent, col. 12, ll. 23-43 (emphases added). Claim 1 of the *'630 patent* reads:

1. In a method for clarifying water is a filter system wherein during a filtering mode step influent water is passed upwardly in a first zone through first particulate filter media contained therein and then sequentially is passed downward through a second zone through second particulate filter media contained therein, and during a backwash mode step liquid is passed upwardly through said particulate filter media in both said first and second zones, the improvement which comprises:

providing **[*4]** said first particulate media with a filter layer in the form of solid particles having a specific gravity in excess of 2 and an effective size greater than 1 millimeter; and

during backwashing of said first zone, causing a combination of air and liquid to flow upwardly through the filter layer with the liquid flow rate being less than the minimum fluidization velocity of the filter layer and with the air flow rate being in the range of approximately 1-9 Scfm/ft.2.

'630 patent, col. 12, ll. 38-56 (emphases added). One key issue of this case is whether the terms "filter bed" and "filter media" can be construed to require a multi-layered structure.

The *'124* and *'630 patents* were previously interpreted by the United States District Court for the Eastern District of Virginia in an action brought by RFD against Infilco Degremont, Inc. ("IDI"), in which RFD alleged that IDI's ADVENT water treatment system literally infringed its *'124* and *'630 patents*. The Virginia district court construed claim 1 of the *'124* and *'630 patents* against RFD to require a multi-layered upflow filter. RFD and IDI subsequently settled the suit. RFD then brought an infringement suit against Pacific **[*5]** under the same patents in the Northern District of Alabama.

Pacific makes and sells water filtration equipment, including equipment named Key-Pac. There are two versions of Key-Pac. One version ("Version 1") has a filtration system that uses only a layer of sand as a filter. The other version ("Version 2") has a filtration system composed of sand that rests upon a support layer of gravel. Other than the differences in the filters, Versions 1 and 2 function similarly. That is, both versions utilize upflow and downflow filters to filter water. Both versions are accused of infringing both of RFD's patents.

The district court in Alabama held that the "filter bed" limitation in claim 1 of the *'124 patent* requires a multi-layered structure having flocculation, transitional, and filter layers. The court construed the independent claim to require the added layers of the dependent claims and of the preferred embodiment in the specification. In an analysis very similar to its analysis of the *'124 patent*, the court construed the term "first zone through first particulate filter media" in claim 1 of the *'630 patent* to require flocculation, transitional, and filter layers.

The court thus granted **[*6]** Pacific's motions for summary judgment and decided: (1) Pacific's Version 1 did not literally infringe either of the patents because it lacked flocculation and transition layers; (2) Version 2 did not literally infringe either patent because it lacked a transition layer; (3) Version 1 did not infringe under the doctrine of equivalents because a finding of equivalent infringement would allow the patent claims to encompass the prior art, and because finding infringement without the presence of a transition layer would violate the "all elements" rule; and (4) Version 2

did not infringe under the doctrine of equivalents either. The court also, with no explanation, granted Pacific's motion for summary judgment of noninfringement on the ground that it committed no act of infringement.

RFD appeals the district court's claim interpretation and its grant of summary judgment that use of Pacific's products did not infringe the method claims of the *'124* or *'630 patents* and that Pacific did not commit any act of infringement.

DISCUSSION

Our review of a district court's grant of summary judgment of patent infringement or non-infringement is plenary. *Cole v. Kimberly-Clark Corp., 102 F.3d 524, 528, 41 USPQ2d 1001, 1004 (Fed. Cir. 1996).* **[*7]** We review a district court's legal conclusions such as claim construction de novo. *Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456, 46 USPQ2d 1169, 1174 (Fed. Cir. 1998)* (en banc).

I

A key issue of this case is whether the district court properly construed the claim terms "filter bed" of claim 1 of the *'124 patent* and "first particulate filter media" of claim 1 of the *'630 patent* as requiring a flocculation layer, a transitional layer, as well as a filter layer. Before we reach the proper claim construction, however, we first address Pacific's allegation that, regardless of the soundness of the Alabama district court's claim interpretation analysis, the trial court is bound by claim constructions in rulings on partial summary judgment from the Virginia district court in a case involving the same patents that ended in an extrajudicial settlement without complete adjudication even as to liability. n1

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n1 In construing the claims, the district court in Alabama declined to decide whether the decisions of the Virginia district court construing the identical limitations in the same patents had collateral estoppel effect: "It is not necessary for this court to determine whether the ED of Virginia case collaterally estops RFD. The court does note that its decision is consistent with the holding of the Virginia case." RF Delaware, CV-01-PT-0348-M, slip op. at 45 n.63.

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A

Pacific argues that RFD is bound by the claim constructions in orders issued by the Virginia district court ruling on motions for partial summary judgment in the infringement action brought by RFD against IDI. We conclude that collateral estoppel does not apply in the present case because no judgment, much less final judgment, was ever entered in the Virginia district court case.

As a purely procedural issue and in circumstances such as those presented here, the law of the regional circuit applies to the issue of collateral estoppel. *Bayer AG. v. Biovail Corp., 279 F.3d 1340, 1345, 61 USPQ2d 1675, 1679 (Fed. Cir. 2002)*. The party seeking to invoke collateral estoppel bears the burden to prove all necessary elements:

(1) the issue at stake must be identical to the one involved in the prior litigation; (2) the issue must have been actually litigated in the prior suit; (3) the determination of the issue in the prior litigation must have been a critical and necessary part of the judgment in that action; and (4) the party against whom the earlier decision is asserted must have had a full and fair opportunity to litigate the issue in the earlier proceeding. **[*9]**

In re McWhorter, 887 F.2d 1564, 1566 (11th Cir. 1989) (citation omitted).

Judicial finality - the predicate for *res judicata* - arises only from a final decision rendered after the parties have been given a reasonable opportunity to litigate a claim before a court of competent jurisdiction. Thus, if the parties to a suit enter into an extrajudicial settlement or compromise, there is no judgment, and future litigation is not barred by *res judicata* or collateral estoppel though, of course, a court may dismiss litigation thereafter filed on the same claim on the basis that the parties have by contract ended their controversy.

Kaspar Wire Works, Inc. v. Leco Eng'g and Mach., Inc., 575 F.2d 530, 542 (5th Cir. 1978) (emphasis added). *Kasper*, although a decision of the Fifth Circuit, is binding on the Eleventh Circuit, a successor court. *Bonner v. City of*

Prichard, 661 F.2d 1206, 1209 (11th Cir. 1981). "For purposes of issue preclusion . . ., 'final judgment' includes any prior adjudication of an issue in another action that is determined to be sufficiently firm to be accorded conclusive effect." *Christo v. Padgett, 223 F.3d 1324, 1339 n.47 (11th Cir. 2002)* **[*10]** (citing *Restatement (Second) Judgments § 13 (1980)*). Criteria for determining whether a decision is firm include whether the parties were "fully heard." *Id.* Christo held that a prior district court order, issued after an evidentiary hearing, satisfied the "limited standard for finality" because the district court considered a wide range of evidence from all concerned parties, notified the parties of possible preclusive effect, clearly considered the findings final, and entered a final order approving the proposed settlement. *Id. at 1339*.

Here, Pacific has not met its burden of proof to invoke collateral estoppel because the standard for judicial finality is not satisfied. The Virginia district court issued two interlocutory orders. Regarding the *'630 patent*, the court found no literal infringement but recognized a genuine issue of material fact with respect to infringement under the doctrine of equivalents; thus, it denied plaintiff RFD's motion for summary judgment of literal infringement and granted-in-part and denied-in-part defendant IDI's motion for summary judgment of non-infringement. Regarding the *'124 patent*, the court denied RFD's motion for summary **[*11]** judgment of literal infringement and granted RFD's motion for summary judgment of validity of claim 1. It made no ruling of non-infringement. The case therefore was ready for trial on infringement when RFD and IDI settled. Pacific provides no further record of any proceedings from the Virginia district court. As far as we have been shown, there was no judgment, nor a certification of a final order. Rather, the entire action between RFD and IDI was resolved solely between the parties.

The orders granting partial summary judgment were not sufficiently firm to have preclusive effect. Different from *Christo*, there is no evidence that an evidentiary hearing was conducted to construe the claims of either patent before the orders were issued. RFD asserts that the Virginia district court did not even entertain oral argument on the claims of the *'124 patent*. Thus, it is questionable whether the parties were "fully heard" before the Virginia district court reached its decisions on claim constructions. Also different from *Christo*, the Virginia district court did not put the parties on notice that the orders could have preclusive effect. The court issued the order for the *'630 patent* **[*12]** only after it ordered the parties to schedule a settlement conference and no agreement was reached at the conference. Further, unlike *Christo*, the record before us does not show that the Virginia district court entered a final order approving the proposed settlement between RFD and IDI. Pacific thus has not met its burden to show that the interlocutory orders were sufficiently firm to be final judgments. We conclude that the orders issued by the Virginia district court do not estop RFD from enforcing the same patent claims against Pacific in the present case or prevent the trial court in Alabama from adopting a claim construction contrary to that made by the Virginia district court.

Additionally, we conclude that the district court in Alabama did not abuse its discretion in declining to hold RFD judicially estopped by its admission in a preliminary injunction proceeding that, in the context of that proceeding, the claim interpretation of the Virginia district court was binding. n2 "The doctrine of judicial estoppel is that where a party successfully urges a particular position in a legal proceeding, it is estopped from taking a contrary position in a subsequent proceeding **[*13]** where its interests have changed." *Data Gen. Corp. v. Johnson, 78 F.3d 1556, 1565 (Fed. Cir. 1996)* (emphasis added). RFD did not succeed in urging its position, for its motion for a preliminary injunction was denied. The district court in Alabama indeed conducted its own claim construction without relying on RFD's admission, and it did not abuse its discretion in doing so. n3

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n2 "The decision whether to invoke judicial estoppel lies within the court's discretion, and a refusal to apply the doctrine is reviewed under the 'abuse of discretion' standard." *Data Gen., 78 F.3d at 1565*.

n3 "Judicial estoppel is designed to prevent the perversion of the judicial process and, as such, is intended to protect the courts rather than the litigants." *Id.*

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B

Turning to the merits of the claim construction, we hold that the trial court improperly construed the claim terms "filter bed" and "first particulate filter media" as requiring multiple layers. The court erred in improperly importing **[*14]** limitations of the specification into claims of the *'124* and *'630 patents* and erred in reading limitations of narrower or dependent claims of the *'124 patent* into a broader independent claim.

(1) The *'124 patent*

Claim 1 of the *'124 patent* teaches a method of washing an upflow filter that includes "a filter bed having a non-buoyant particulate media filter layer." Claim 7, another independent claim, teaches a similar method that provides a filter bed "having a non-buoyant particulate media filter layer and a particulate non-buoyant static flocculation layer." Claim 12, which depends from claim 7, also includes "a transitional layer of particulate material between the flocculation layer and the filter layer." In the specification, the *'124 patent* discloses a filter bed 26, a flocculation layer 52, a transitional layer 54, and a filter layer 56. *'124 patent*, Fig. 1. In "the most preferred embodiment of the invention," the filter bed 26 "includes a lower static flocculation layer 52, a transitional support layer 54 and a clarifier or filter layer 56." Id. col. 6, ll. 21-25.

The district court interpreted the term "filter bed" and concluded that "filter bed" in the *'124 patent* must **[*15]** encompass flocculation, transitional, and filter layers. Finding that the term was not defined in independent claim 1, the court stated that it "must review the other claims to determine whether the term 'filter bed' has been further defined." RF Delaware, CV-01-PT-0348-M, slip op. at 40. The court thus incorporated a flocculation layer from claim 7 and a transitional layer from claim 12. Id. at 41. Next, the court examined the specification and determined that the written description and drawings were consistent with its conclusion that the filter bed was multi-layered. Moreover, "the 'Description of the Preferred Embodiment of the Invention' section further dictates this conclusion" because "in this section RFD provides that 'the most preferred embodiment of the invention includes a lower static flocculation layer 52, a transitional support layer 54 and a clarifier or filter layer 56.'" Id. at 43. To refute RFD's argument that the court should not consider the preferred embodiment, the district court emphasized that "the preferred embodiment describes the claimed invention" because description of the preferred embodiment corresponds to various dependent claims. Id. **[*16]** at 44.

It is well established that, generally, patent terms are given their plain, ordinary, or accustomed meaning to one of ordinary skill in the relevant art. *Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1341, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001)*. Under the doctrine of **claim differentiation,** "each claim in a patent is presumptively different in scope." *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc., 239 F.3d 1225, 1233, 57 USPQ2d 1679, 1685 (Fed. Cir. 2001)*. Although **claim differentiation** is not a "hard and fast rule of construction," it is applicable where "there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims." *Id.* Moreover, claims are not necessarily and not usually limited in scope simply to the preferred embodiment. See *Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1370, 65 U.S.P.Q.2d 1865, 1870 (Fed. Cir. 2003)* (holding that the district court improperly read limitations from the specification into the claims). Thus, when a claim term is expressed in general descriptive words, **[*17]** it typically will not be limited to a numerical range that may appear in the written description as referring to a preferred embodiment or in other, narrower claims. *Modine Mfg. Co. v. U.S. Int'l Trade Comm'n, 75 F.3d 1545, 1551, 37 USPQ2d 1609, 1612 (Fed. Cir. 1996)*.

Here, the language of claim 1 is clear on its face that the filter claimed includes "a filter bed having a non-buoyant particulate media filter layer." Nowhere in this claim do words appear that could refer to a flocculation layer or a transitional layer. In the specification, the filter bed, filter layer, flocculation layer, and transitional layer are separately described, each given different numeric designations and plainly describing the "most preferred embodiment." To construe the "filter bed" of claim 1 as including a flocculation, a transitional, and a filter layer conflicts, moreover, directly with the claim language of "a filter bed having a . . . filter layer." Such construction also renders redundant or meaningless the limitation "a flocculation layer" in claim 7 and the limitation "a transitional layer" in claim 12. Furthermore, such construction is not supported by the doctrine of **claim [*18] differentiation,** especially as the only meaningful difference between claims 7 and 12 is the limitation regarding a transitional layer, and a major difference between claim 1 and claim 7 is the latter's addition of a flocculation layer.

The district court also erred in reading the limitations of the specification incorporating the "most preferred embodiment" into the claim limitation "filter bed." A basic claim construction canon is that one may not read a limitation into a claim from the written description. *Renishaw PLC v. Marposs Societa' Per Azioni, 158 F.3d 1243, 1248, 48 USPQ2d 1117, 1120 (Fed. Cir. 1998)*. Although one may look to the written description to define a disputed term already in a claim limitation, "the resulting claim interpretation must, in the end, accord with the words chosen by the patentee to stake out the boundary of the claimed property." *Id.* Here, to the extent there is any dispute regarding the plain meaning of the term "filter bed," to interpret it as requiring a filter layer, a flocculation layer, and a transitional layer runs afoul of the patent boundaries expressly set by the patentee with different claims. The patentees chose to **[*19]** use the limitation "filter layer" for a filter bed in claim 1, the limitations of "filter layer" and "flocculation layer" for a filter bed in claim 7, and the limitations of "filter layer," "flocculation layer," and "a transitional layer" for a filter bed in claim 12. A court may not use the specification to reset the clearly defined boundaries of the different claims.

The district court concluded that the preferred embodiment described the entire claimed invention, because it found correlation between the teachings of the preferred embodiment and the various dependent claims. However, the opposite conclusion would follow from the court's findings. An independent claim usually covers a scope broader than the preferred embodiment, especially if the dependent claims recite the precise scope of the preferred embodiment. n4 Thus, although claim 12 recites the "most preferred embodiment" taught by the specification, in which a filter bed includes a filter layer, a flocculation layer, and a transitional layer, the court may not import the same limitations to the filter bed in claim 1 or 7, as the patentee clearly set a different boundary by claiming a filter bed with only "a" filter layer **[*20]** in claim 1 and a filter bed with only a filter layer and a flocculation layer in claim 7.

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n4 Although Pacific points out one sentence in the specification, which indicates that a filter bed with a flocculation layer is more effective than one without the flocculation layer, that sentence alone does not lead to the conclusion that the filter bed in claim 1 is inoperative without a flocculation layer. Whether a filter bed with only a filter layer can work goes to validity of the claim (not in issue here), not how it is construed, because in the present case the claim language is clear on its face.

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The district court also noted that a "filter bed in accordance with this invention" was described as including a flocculation layer in the Summary of the Invention. The relevant sentence reads:

A filter bed in accordance with this invention includes an upstream, static flocculation layer of particulate, non-buoyant material having a porosity and particle size for providing a velocity gradient in the range of approximately **[*21]** 40-60 reciprocal seconds at liquid flow rates in the range of 10-15 gallons per minute/sq.ft., to thereby promote the mixing and flocculation of the coagulated liquid influent.

'124 patent, col. 4, ll. 42-49. In the Summary of the Invention, the first paragraph describes a filter bed having a filter layer only. The next seven paragraphs, which precede the sentence regarding the flocculation layer, all refer to "the most preferred embodiment." Thus, the description of the flocculation layer, in the last paragraph of the Summary of the Invention, seems to logically refer to the most preferred embodiment, especially in view of the specificity of the description. Moreover, the description of the flocculation layer quoted above correlates precisely with the limitations of claim 17. To read the above description of the flocculation layer into the term "filter bed" in all claims of the patent renders claim 17 meaningless.

We thus conclude that the "filter bed" of the *'124 patent* has its ordinary meaning of being a structure with filtering functions. The filter bed of claim 1 has "a non-buoyant particulate media filter layer." The filter bed of claim 1 does not require a flocculation **[*22]** layer or a transitional layer, although the filter beds of claim 7 and its dependent claims have a filter layer and a flocculation layer, and the filter bed of claims 12-13 is multi-layered with the filter, flocculation, and transitional layers.

(2) The *'630 patent*

Claim 1 of the *'630 patent* teaches a method for clarifying water using a filter system which allows influent water to be "passed upwardly in a first zone through first particulate filter media" and "providing said first particulate media with a filter layer." The district court "turned to the Specification for a detailed written description and visual depiction of the invention." RF Delaware, CV-01-PT-0348-M, slip op. at 47. From examining the written description and drawings, the court concluded that the first "filter media" must have a multimedia, non-buoyant filter bed containing multiple layers: a flocculation layer, a transitional support layer, and a clarifier or filter layer.

Again, we hold the court improperly imported limitations from the specification into the broad claim. Claim 1 provides the first particulate media with a filter layer, which is clearly described and indicated as element 56 in the specification. **[*23]** Although the specification teaches that the most preferred embodiment contains a multi-layered filter bed 26 having a flocculation layer 52, a transitional layer 54, and a filter layer 56, the patentee only chose a single filter layer for the first particulate media filter to set the boundary of claim 1. The district court interpreted claim 1 as requiring a multi-layered filter bed because "the Specification describes the process of Claim 1 in detail," "the preferred embodiment includes three layers," and "these three layers are visually depicted in Figures 1 and 2 of the patent." Id. at

47-48. However, courts may not use the teaching of the specification to contradict the clear language of the claims. To require the filter media of claim 1 to be multi-layered would impermissibly read limitations from the specification into the claim. See *Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187, 48 USPQ2d 1001, 1005 (Fed. Cir. 1998)* (declining to limit the term "video delay circuit" to the specific function disclosed in the preferred embodiment).

We therefore conclude that the term "filter media" must be construed as requiring only one filter layer as **[*24]** is taught by claim 1 of the *'630 patent*.

II

An infringement analysis involves two steps in which the court first determines the correct claim scope, and then compares the properly construed claim to the accused method or device to determine whether all of the claim limitations are present either literally or by a substantial equivalent. *Renishaw, 158 F.3d at 1247-48*. Although claim construction is a question of law, infringement, either literal or under the doctrine of equivalents, is a question of fact. *Bai v. L & L Wings, Inc., 160 F.3d 1350, 1353, 48 USPQ2d 1674, 1676 (Fed. Cir. 1998)*. Thus, viewing the facts and inferences in the light most favorable to RFD, summary judgment of non-infringement is proper only if no genuine issues of material fact remain. *Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1266-67, 59 USPQ2d 1865, 1869 (Fed. Cir. 2001)*.

A

We hold that the district court improperly granted summary judgment of non-infringement. The district court granted summary judgment of non-infringement based on its incorrect interpretation of the claim terms "filter bed" and "first zone through **[*25]** first particulate filter media" as requiring multiple layers. The court found that use of Pacific's Version 1 or 2 did not literally infringe the methods of the *'124* or the *'630 patents* because they lacked the flocculation and/or the transitional layer. The court also found that use of Version 1 or 2 did not infringe under the doctrine of equivalents because these devices were not insubstantial or unimportant changes from RFD's three-layer filter bed, and a finding of equivalent infringement would allow the patent claims to encompass the monomedia sand filter in prior art as described in a 1968 article by Carl Hamann and Ross E. McKinney, and finding infringement without the presence of a transition layer would violate the "all elements" rule.

Having determined that the filter bed in claim 1 of the *'124 patent* and the filter media in claim 1 of the *'630 patent* do not require layers other than a filter layer, we conclude that the district court's infringement analysis was premised on an erroneous claim construction. The court required a filter bed or media to be multi-layered, even though neither the flocculation nor the transitional layer is a limitation of claim 1 of either of the **[*26]** patents. As a result, the court's finding of substantial difference was not legally supportable as it was comparing the alleged infringing method to a patent claim that required a filter bed having all of the filter, flocculation, and transitional layers.

The district court's application of the "all elements" rule also fails. Under the "all elements" rule, there can be no infringement under the doctrine of equivalents if even one limitation of a claim or its equivalent is not present in the accused device or method. *Kustom Signals, Inc. v. Applied Concepts, Inc., 264 F.3d 1326, 1333, 60 U.S.P.Q.2d 1135, 1140 (Fed. Cir. 2001)*. Here, the district court conducted its "all elements" rule analysis on the premise that claim 1 of the *'124* and *'630 patents* requires a three-layer filter bed. Finding that Pacific's system did not have RFD's three-layer filter bed or its equivalent, the court concluded that there could be no equivalent infringement. Again, the court's conclusion based on the "all elements" rule is erroneous because the element it found lacking from the accused infringing system is not an limitation of claim 1 of the *'124* and *'630 patents*.

The district court **[*27]** further improperly adopted Pacific's practicing prior art argument. To prove that it was merely practicing prior art, Pacific needs to establish that its method is in the prior art. *Fiskars Inc. v. Hunt Mfg. Co., 221 F.3d 1318, 1323, 55 U.S.P.Q.2d 1569, 1573-74 (Fed. Cir. 2000)*. There is no evidence in the record to show that the single article cited or any of the upflow filters disclosed in the article anticipate or render obvious the patented invention covering the accused infringing method. n5 Simply because a filter having a monomedia filter layer is in the prior art does not establish that the remaining limitations of the claimed invention are also in the prior art.

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n5 RFD notes that Pacific did not raise the prior art defense until after the district court issued a draft opinion on the issue of equivalence of the filter bed. RFD states that it was never provided any discovery on the issue. On remand, the district court may allow the defense to be properly raised and discovery conducted.

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Thus, we reverse the district court's summary judgment of non-infringement as based on the improper claim interpretation of requiring a filter bed or media to contain all of the filter, flocculation, and transitional layers, and remand the case for trial or further analysis consistent with the proper claim construction.

B

Pacific argues that regardless of whether its devices infringe the *'124* or the *'630 patent* when being used, it committed no infringing acts because, as a manufacturer and seller of water treatment equipment, it does not perform the methods that are covered by the patents. Pacific also argues that it did not have knowledge of the RFD patents at the time it sold its products to be liable for inducement of infringement or contributory infringement. The district court granted Pacific's motion for partial summary judgment of no infringing acts without specific findings.

"A method claim is directly infringed only by one practicing the patented method." *Joy Techs., Inc. v. Flakt, Inc., 6 F.3d 770, 775, 28 U.S.P.Q.2d 1378, 1382 (Fed. Cir. 1993)*. "Although not direct infringement under *35 U.S.C. § 271(a)*, a party's acts in connection **[*29]** with selling equipment may, however, constitute active inducement of infringement or contributory infringement of a method claim under *35 U.S.C. § 271(b) and (c)*." *6 F.3d at 774*. If the court finds on remand that one who uses Pacific's products infringes the *'124* or *'630 patent*, Pacific may be liable for inducement of infringement if it actively induces the infringement. *35 U.S.C. § 271(b) (2000)*. In the event that direct infringement exists, Pacific could also be found liable for contributory infringement if it knows the products to be "especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use." *35 U.S.C. § 271(c) (2000)*.

RFD contends n6 that Pacific directly infringed the *'124* and *'630 patents* by testing its products at a pilot plant and by starting up its products at the specific installations of its customers. RFD notes a declaration by Pacific's president, Michael Morris, that Pacific "trains the operators, starts up the plant and verifies the quality of the water treated by the **[*30]** equipment." RFD also argues that Pacific committed inducement or contributory infringement because it manufactured and sold its allegedly infringing products knowing the products were patented and infringing. Mr. Morris stated at his deposition that sometime in 1999 he discussed with people at IDI a patent infringement suit between RFD and IDI. On October 4, 2000, a director at Pacific's parent company sent a facsimile to IDI mentioning discussions with Mr. Morris about "the Roberts Filter Patent Dispute." Attached to that facsimile were figures 1 and 2 of the *'124* and *'630 patents* and claims 1-3 of the *'124 patent*.

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n6 RFD did not address this issue until Pacific filed its response brief, although RFD in its opening brief mentions that it believes the district court based its summary judgment on its claim construction and would reply to the "no acts of infringement" issue if Pacific raises it in its brief. Pacific rightly complains that this is improper and biases it because it will not have a chance to respond to RFD's arguments made only in RFD's reply brief. However, in this particular case, we find RFD's improper briefing is not material to the conclusion of the case.

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We conclude that there are genuine issues of material fact regarding whether Pacific tested or started up any infringing equipment, thereby committing direct infringing acts. There are also genuine issues of material fact concerning whether Pacific sold systems knowing about the *'124* and *'630 patents* and that its equipment would infringe when used.

Thus, the district court erred in granting summary judgment of non-infringement on the ground that no infringing act was committed. We note, however, liability for either active inducement of infringement or for contributory infringement is dependent upon the existence of direct infringement by customers. *Joy Techs., 6 F.3d at 775*. "Either form of 'dependent infringement' cannot occur without an act of direct infringement." *Id.*

CONCLUSION

We hold that the claim terms "filter bed" and "filter media" as used in claim 1 of the *'124* or *'630 patent* only require a single filter layer. In construing the terms as requiring a filter layer, a flocculation layer, and a transitional layer, the district court erred in importing limitations of the specification and of narrower or dependent claims into broad, independent claims. **[*32]** As a result, we reverse the court's grant of summary judgment of noninfringement, which

was premised on erroneous claim construction, and remand the case for infringement analysis consistent with the proper claim interpretation. We also reverse the district court's grant of summary judgment of no infringing acts because genuine issues of material fact remain. However, further proceedings on indirectly infringing acts are not needed if the court finds no direct infringement by customers when the accused infringing system is in use. Accordingly, the judgment of the district court is, in all respects challenged on appeal,

REVERSED AND REMANDED.