Scaltech v. Retec/Tetra

178 F.3d 1378 (1999) | Cited 27 times | Federal Circuit | June 4, 1999

Appealed from: United States District Court for the Southern District of Texas

Judge Kenneth M. Hoyt

ON PETITION FOR REHEARING

ORDER

Retrec/Tetra, L.L.C. petitions for rehearing of our decision of September 10, 1998 vacating the district court's summary judgment ruling that U.S. Patent No. 5,433,717 is invalid under 35 U.S.C. § 102(b) (1994) and remanding for further proceedings.

To clarify certain issues, and to take account of the intervening Supreme Court decision in Pfaff v. Wells Elec., Inc., 119 S. Ct. 304 (1998),

IT IS ORDERED THAT:

The petition for rehearing is granted to the extent that we amend our opinion of September 10, 1998. The amendments are incorporated into new Part III of the opinion and the opinion is reissued as of this date.

FOR THE COURT

Jan Horbaly , for Giles S. Rich, Circuit Judge

Giles S. Rich Circuit Judge

DECIDED: June 4, 1999

Before RICH, PLAGER and GAJARSA, Circuit Judges.

RICH, Circuit Judge.

Scaltech, Inc. (Scaltech) appeals from the judgment of the United States District Court for the Southern District of Texas, H-95-4190, granting a motion for summary judgment in favor of

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Retec/Tetra, L.L.C. (Retec), holding U.S. Patent No. 5,433,717 invalid because an embodiment of the claimed invention was "on sale" within the meaning of 35 U.S.C. § 102(b) (1994). We vacate and remand.

BACKGROUND

Scaltech is in the business of recycling industrial waste produced during the refining of petroleum products. Retec is in the business of producing delayed coker quench streams for use in producing delayed petroleum coke. Their paths crossed when they both used waste products from the petroleum refinery process to produce coke, albeit apparently for different purposes--Retec for producing coke and Scaltech for disposing of waste.

Scaltech is the assignee of record of U.S. Patent No. 5,433,717 (the '717 patent) issued 22 August 1995 on the application of Robert M. Scalliet, filed on 19 January 1993 and entitled "Recycle of Waste Streams." The '717 patent is generally directed to a process for the disposal of oil refinery waste in conjunction with a "delayed coking" process by which oil refiners produce coke. Coke is a porous solid that is produced as a by-product in the oil refining process. It is frequently burned as a fuel.

Production of coke by the "delayed coking" method involves heating the crude oil residue and introducing it into a vessel called a coker drum under specified conditions that result in transformation of the crude oil residue into coke. The coke is then cooled, or "quenched," by the controlled introduction of an aqueous slurry of solids, or "quench stream," into the coker drum. According to the '717 patent, quantities of refinery waste may be successfully disposed of in the quench stream of the delayed coker unit if the waste introduced to the quench stream is comprised of greater than seventy percent of the solids having a particle size less than 15 microns. The '717 patent teaches that this may be accomplished by the treatment of the waste before it is introduced into the quench stream to remove most of the free oil or mobile organic material and reduce the solid particle size. This leaves the de-oiled waste solids suspended in water, or an aqueous slurry of the waste solids, which is then introduced into the delayed coker quench stream.

Claims 1 and 6 are the only independent claims in the '717 patent. Claim 1 reads:

"In a process for producing delayed petroleum coke, wherein a liquid hydrocarbon feed stream is introduced into a delayed coking vessel under delayed coking conditions and the coke produced is quenched, the improvement comprising:"

"treating a waste stream containing water, organic compounds and solids so as to cause attrition of said solids to produce a delayed coker quench stream containing from about 5 to about 35% by weight solids, water and less than about 6% by weight mobile organics, said solids in said coker quench stream having a particle size distribution such that greater than about 70% of the total solids volume comprises solids having a particle size of less than about 15 microns; and"

"introducing said coker quench stream into said coking vessel during quenching."

"Claim 6, the broadest claim, reads:"

"A process for producing delayed coker quench stream for use in producing delayed petroleum coke wherein a liquid hydrocarbon feed stream is introduced into a delayed coking vessel under delayed coking conditions and the coke produced is quenched, comprising:"

"treating a waste stream containing water, organic compounds and solids so as to cause attrition of said solids to produce a delayed coker quench stream containing from about 5 to about 35% by weight solids, water and less than about 6% by weight mobile organics, said solids in said coker quench stream having a particle size distribution such that greater than about 70% of the total solids volume comprises solids having a particle size of less than about 15 microns."

Scaltech brought suit against Retec for infringement of the '717 patent. After completing a modicum of discovery, Retec raised the affirmative defense of patent invalidity under 35 U.S.C. § 102(b), alleging that Scaltech sold or offered for sale a process embodying the claimed invention of the '717 patent more than one year before its filing date. On 24 February 1997, Retec filed a motion for summary judgment seeking a holding of patent invalidity.

The district court granted summary judgment in favor of Retec, holding the patent invalid under 35 U.S.C. § 102(b) as a result of an "on sale" bar. This appeal followed.

DISCUSSION

I.

On summary judgment, the district court found the invention claimed in the '717 patent was "on sale" within the meaning of 35 U.S.C. § 102(b). Summary judgment is appropriate when there is no genuine issue as to any material fact and the moving party is entitled to a judgment as a matter of law. Fed. R. Civ. P. 56(c). We undertake plenary review of a grant of summary judgment. See Keystone Retaining Wall Sys., Inc. v. Westrock, Inc., 997 F.2d 1444, 1449, 27 USPQ2d 1297, 1301 (Fed. Cir. 1993).

II.

The following facts pertinent to the alleged offer for sale are either undisputed or represent non-movant Scaltech's version. See Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986). In 1987 Scaltech was treating refinery waste at Chevron's refinery in Port Arthur, Texas. Scaltech was using a Guinnard DC-6 vertical disk centrifuge (the DC-6 centrifuge) to remove the oil from the raw waste, return the oil to the refinery, and press the wet solids into cakes for shipment to hazardous land fill locations.

While Scaltech was performing this contract, Chevron began testing an alternative solution for disposing of its refinery wastes involving injecting the waste into the coking process. Coke is made at the end of the refining process by injecting the unrefined hydrocarbons into large drums, called coker units. In the coker unit it is heated to a very high temperature in the "coking cycle." During the coking cycle the hydrocarbon materials are converted to solid coke fuel. Prior to removal from the coker unit, water is introduced to cool the coke bed. The cooling process is called the "quench cycle."

Injection of refinery waste into the coke bed during the quench cycle was initially suggested by Mobil Oil Company in 1975 and is described in detail in United States Patent No. 3,917,564 (the Meyers Patent). When waste injection rates began to exceed one to two pounds of solids per ton of coke, however, refineries frequently encountered unacceptable problems with the process. Chevron was no exception. It struggled with uneven solid formation in the coke, noxious odors, and soft spots in the coke bed. Thus, this method did not appear to be a viable method for the disposal of all its waste products.

When Chevron asked its waste disposal contractor, Scaltech, for suggestions to improve the process, the named inventor of the '717 patent, Robert Scalliet, suggested that the above-outlined problems might be caused by excessive oil in the waste feed. He theorized that oil might be plugging the coke pores in the coker unit. Scalliet offered to provide a few loads of the de-oiled waste sediments, produced by processing the waste through a centrifuge, so that Chevron could test Scalliet's theory. It was using the de-oiling method to prepare the hazardous waste cakes which were tucked into landfill. Chevron picked up one or two truck loads of the waste matter and apparently injected it into its coker unit. Scaltech did not actually participate in the injection. It only provided the de-oiled waste sediment that was part of its hazardous waste disposal process.

Scaltech's contract to make hazardous waste cakes for Chevron was not renewed. In 1988, Scaltech heard third hand that Chevron was pleased with the results of the injection of de-oiled waste into its coke. Based on these promising comments, Scaltech thought that it might have a method to overcome the one to two pound waste per ton of coke limitation posed by the Meyers patented process. It sought access to a coker unit such that it could test its theories. Between 1988 and 1991, Scaltech contacted six different refineries and proposed to use the DC-6 centrifuge to process refinery waste. In four of the proposals, it described the process as a test or a trial. In two, a 30 March 1988 proposal to Chevron and a 15 November 1988 proposal to Champlin, it did not expressly identify the procedure as experimental. The court relied on these final two proposals to invalidate the '717 patent. In none of the proposals did Scaltech indicate that it would control either (1) the particle size to be injected in the coker unit or (2) the specific solids concentration in the material to be delivered to the coker unit. The only equipment described was the DC-6 centrifuge which it had been using to de-oil the solids at Chevron.

In December 1991 Scaltech entered into a contract with CITGO to separate the oil from its refinery waste and process the hazardous waste sediment. At that time CITGO opted to dispose of hazardous

waste sediment in a cement kiln rather than in the hazardous waste cakes Chevron was producing. While performing this contract, Scaltech received permission, in early 1992, to test the process of disposing of the de-oiled waste by injection into the coker quench cycle.

It carefully monitored the oil content of the waste feed run into the DC-6 centrifuge and the waste solids slurry run into the coker unit. It determined that the waste solids slurry was virtually free of oil and, to their surprise, it discovered that the particles were also of very small size. The particle size was not being reduced by the DC-6 centrifuge itself, but rather by the ejection of the solid slurry onto a cast iron plate as it exited the centrifuge at high velocity. It concluded that the problems of the Meyer patent process were that the oil and the large particles were blocking the pores and preventing high absorption rates throughout the coke bed. By carefully monitoring the solid injection rates and gradually increasing the solid concentrations it was able to inject 18 pounds of solids per ton of coke. Having discovered the necessary conditions of small particle size and high solids concentration, it then filed a patent application.

III.

The question on appeal is whether the claimed invention was offered for sale within the meaning of § 102(b). We conclude that, on the record before us, the district court erred by failing to address whether an embodiment of the claimed invention was offered for sale.

Section 102(b) reads in relevant part: "[a] person shall be entitled to a patent unless . . . the invention was . . . in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b). A claimed invention is considered to be on sale within the meaning of § 102(b) if, more than one year before the filing date to which the claim is entitled (the critical date), two conditions are satisfied. First, the product must be the subject of a commercial offer for sale. See Pfaff v. Wells Elecs., Inc., 119 S. Ct. 304, 311 (1998). Second, the invention must be ready for patenting. See id. at 312. One way to satisfy the second condition is by proof of reduction to practice before the critical date. See id.

The "invention" which has been offered for sale must, of course, be something within the scope of the claim. See Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 607 (1950) (a claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using, or selling the protected invention). Hence, the first determination in the § 102(b) analysis must be whether the subject of the barring activity met each of the limitations of the claim, and thus was an embodiment of the claimed invention. In this case, claim 6, set forth above, is the broadest claim. It specifically requires that the "delayed coker quench stream [contain] . . . about 5 to about 35% by weight solids . . . less than about 6% by weight mobile organics [and the solids] . . . having a particle size distribution such that greater than about 70% of the total solids volume comprises solids having a particle size of less than about 15 microns." The record does not indicate whether an embodiment of the claimed invention was offered for sale. The district court did

not address whether the process that was offered in the 30 March 1988 proposal to Chevron or the 15 November 1988 proposal to Champlin would necessarily have satisfied the claim limitations relating to small particle size and high solids concentration.

We note that there is no requirement that the offer specifically identify these limitations. See, e.g., RCA Corp. v. Data General Corp., 887 F.2d 1056, 1060, 12 USPQ2d 1449 (Fed. Cir. 1989); Sonoscan, Inc. v. Sonotek, Inc., 936 F.2d 1261, 1263, 19 USPQ2d 1156, 1158 (Fed. Cir. 1991). Nor is there a requirement that Scaltech must have recognized the significance of these limitations at the time of offer. See Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 USPQ 773, 777-78 (Fed. Cir. 1985); Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 633, 2 USPQ2d 1051, 1054 (Fed. Cir. 1987). If the process that was offered for sale inherently possessed each of the claim limitations, then the process was on sale, whether or not the seller recognized that his process possessed the claimed characteristics. See In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986).

Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient to establish inherency. See Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1269, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). However, if the natural result flowing from the operation of the process offered for sale would necessarily result in achievement of each of the claim limitations, then claimed invention was offered for sale. See id.

The district court must determine if the process offered for sale, in its normal use, inherently satisfies each claim limitation. If so, then the offer creates a § 102(b) bar. The district court did not perform this analysis. Therefore, we vacate the district court's holding and remand for a determination as to whether the process on sale inherently satisfies each claim limitation.

We have considered the parties' other arguments and conclude that they are either unpersuasive or unnecessary for resolution of this appeal. [1] Accordingly, we vacate the court's ruling on summary judgment that the '717 patent is invalid by reason of an on sale bar and remand for further proceedings consistent with this opinion.

VACATE AND REMAND

1. Scaltech argues that its invention was still experimental at the time Scaltech was soliciting an opportunity to practice the invention. This argument fails because it is premised on the "experimental stage" doctrine which has been rejected by both this court and the Supreme Court. See Lough v. Brunswick Corp., 86 F.3d 1113, 39 USPQ2d 1100 (Fed. Cir. 1996); City of Elizabeth v. American Nicholson Paving Co., 97 U.S. 126 (1877). Commercial exploitation, if not incidental to the primary purpose of experimentation, will result in an on sale bar, even if the invention was still in its experimental stage. See Paragon Podiatry Lab., Inc. v. KLM Labs., Inc., 984 F.2d 1182, 1185, 25 USPQ2d 1561, 1563 (Fed. Cir. 1985).