United States District Court,
S.D. Indiana, Indianapolis Division.

LAWLER MANUFACTURING CO., INC,
Plaintiff.
v.
BRADLEY CORPORATION, and Kevin B. Kline,
Defendants.

No. IP 98-1660-C M/S

April 26, 2000.

Howard E. Kochell, Barnes & Thornburg, Indianapolis, IN.

Barry L. Grossman, Foley & Lardner, Milwaukee, WI.

George E. Purdy, Bose, McKinney & Evans, Indianapolis, IN.

ORDER ON MOTION FOR PRELIMINARY INJUNCTION

McKINNEY**.**

This matter is before the Court on the motion filed by the plaintiff, Lawler Manufacturing Co., Inc. ("Lawler"), on February 17, 2000, seeking preliminary injunctive relief against the defendants, Bradley Corporation ("Bradley") and Kevin B. Kline ("Kline") pursuant to Federal Rule of Civil Procedure 65. Lawler's motion is based in part on Indiana Code s. 24-2-3-3 of the Uniform Trade Secrets Act ("UTSA"), as adopted in Indiana, which allows courts to enjoin "actual or threatened misappropriation" of trades secrets. Lawler also seeks relief under 35 U.S.C. s. 283, which authorizes courts to grant injunctive relief "to prevent the violation of any right secured by patent, on such terms as the court deems reasonable." 35 U.S.C. s. 283. Lawler's motion requests that the Court enjoin Bradley from making, using or selling Bradley's line of emergency and high-low water mixing valves and from further making, using or selling parts used to make thermostatic water mixing valves for any emergency and high-low systems. FN1

FN1. Specifically, the Bradley emergency valves are the EFX8, the EFX25 and the EFX60. Pl.'s Mot. For Prelim. Inj. at 1. Bradley's high-low valves are the HL80, the HL130 and the HL200. *Id*.

The timing of Lawler's motion is unusual because it comes over a year after Lawler filed its claim on December 3, 1998. Nevertheless, this Court held a hearing on March 16, 20 and 21, 2000, during which the parties offered both live and deposition testimony, introduced physical and documentary evidence, and presented arguments with respect to the issues raised by the pending motion. Having reviewed the evidence and considered the arguments, for the reasons discussed below, the Court has decided to DENY Lawler's

motion for a preliminary injunction on the EFX8 (2000) and EFX25 (2100) emergency valves pursuant to either its trade secrets claims or its '531 Patent infringement claims, and GRANT Lawler's motion for a preliminary injunction on the HL80 (3080), HL130 (3130), HL200 (3200) high-low valves and on the EFX60 (2300) emergency valves pursuant to its '960 Patent infringement claim.

I. ***FACTUAL AND PROCEDURAL BACKGROUND*** FN2

FN2. Although this preliminary injunction motion comes before the Court after a significant amount of discovery, the facts presented here will not be binding on this Court for other purposes. *See* Thomas & Betts Corp. v. Panduit Corp., 138 F.3d 277, 291-92 (7th Cir.1998) (discussing the difference between findings at the preliminary injunction stage and those at the summary judgment stage), *reh'g and reh'g en banc denied*. The court in *Thomas & Betts,* stated that "[t]his caution is necessary for two reasons: first, finding of fact and conclusions of law made at the preliminary injunction stage are often based on incomplete evidence and a hurried consideration of the issues; and second, different standards apply in the two contexts (reasonable likelihood of success on an injunction, and the existence of any genuine issues of material fact on summary judgment). *Id*. at 292 (citing Communications Maintenance, Inc. v. Motorola, Inc., 761 F.2d 1202, 1205 (7th Cir.1985)). Moreover, the Court made clear at the hearing on this motion that the hearing was limited to findings on injunctive relief not summary judgment. Hrg. Tr. at 39-40, Pl.s' Offer of Affs. and Deps. into Evid.; Hrg. Tr. at 282, Pl.'s Offer of Exs. Pursuant to F.R.C.P. 43(e).

This trade secret misappropriation and patent infringement suit involves two competitors in the mature market for thermostatic water mixing valves. One competitor, Lawler, although at one time a subsidiary of ITT, is a closely held corporation with two shareholders, Robert Eveleigh ("Eveleigh") and defendant, Kevin Kline ("Kline"). *See* Hrg. Tr. at 41, 43, Eveleigh Direct. Eveleigh, Kline, Steve Gregory ("Gregory") and others purchased Lawler from ITT in 1988. *See id*. at 41; Kline Dep. at 17. However, currently Eveleigh and Kline own 90% and 10% of the company respectively. *See id*. at 43.

Lawler manufactures mixing valves. Eveleigh Dep. at 17. It has two product lines that are the subject of this suit: high/low thermostatic water mixing valves and emergency valves. Hrg. Tr. at 44-45, Eveleigh Direct. Generally, a thermostatic water mixing valve controls the hot temperature of a water source. *See id*. at 43. Simplistically, such a valve mixes cold water and hot water streams to provide a single, lower hot temperature outlet stream according to the set point of the valve's thermostat. *See* Pl.'s Ex. 358, Lawler VHS Sales and Training Video. The high/low thermostatic water mixing valve is a master valve that controls the temperature from a hot water source in a hotel, school, nursing home or other building that requires hot water in multiple locations simultaneously. *See* Hrg. Tr. at 43. A key feature for such a "master control valve" is its ability to maintain the hot water temperature over a wide range of flow rates. *See id*. at 44-45. Lawler's competitors Leonard and Powers have high/low products that use a manifold system using two or more master control valves in different sizes for responding to different flow rate needs. *See* Eveleigh Aff. para. 15; 353-55, Kwekkeboom-Cross. Lawler's system, however, requires only a single valve to control flow rates ranging from two to eighty gallons per minute or from five to 200 gallons per minute. *See* Eveleigh Aff. para. 16; Hrg. Tr. at 73-74, Eveleigh-Direct; *id*. at 355 at 355, Kwekkeboom-Cross.

Similar to a high/low thermostatic water mixing valve, an emergency valve tempers the hot water passing through it with cold water. *See* Hrg. Tr. at 43. However, an emergency valve is specifically designed for a shower or eyewash fixture used in a crisis situation. *See id.; see also id*. at 187, Ovens-Direct. Lawler developed its emergency valve such that water would still flow in the event of a hot or cold water failure or

a thermostat failure. *See* Hrg. Tr. at 48, Eveleigh-Direct. In addition, when the American National Standards Institute ("ANSI") changed the "Emergency Eyewash and Shower Equipment" standard in 1998 to require a "tepid" fluid, Lawler's product was the only individual mixing valve on the market that met the standard under all failure modes. *See id*. at 48-49; Pl.s' Ex. 6, ANSI Z358.1-1998, Emergency Eyewash and Shower Equip. para.para. 4.6.6, 5.4.6, 7.4.6, 8.4.4, 9.4.5 ("Delivered flushing fluid temperature shall be tepid.").

Both Lawler's high/low thermostatic water mixing valve and its emergency valve were designed by Kline. Hrg. Tr. at 48; Kline Dep. at 34, 42; Pl.'s Ex. 11, Kevin B. Kline Resume. Lawler thought these products were unique, and in fact, Kline obtained a patent on both valves, assigning them to Lawler. *See* Pl.'s Ex. 1, United States Patent 5,323,960 (the "'960 Patent"); Pl.'s Ex. 2, United States Patent 5,647,531 (the "'531 Patent"); *see also* Hrg. Tr. at 49, Eveleigh-Direct. Although Lawler had a high/low valve on the market in 1990, it introduced its patented high/low product in 1993. *See* Eveleigh Dep. at 7-8. The company introduced its first emergency valve for shower applications at a plumbing manufacturers trade show in October 1996. Hrg. Tr. at 48. Lawler provides engineers a full array of design materials to help the engineers determine the correct size valve including an installation and maintenance manual, and a marketing compact disc ("Lawler Marketing CD").

The other major party in this suit, Bradley, is primarily a manufacturer of emergency showers. Hrg. Tr. at 97-98, Eveleigh Direct. Generally, as a manufacturer of emergency showers Bradley would be familiar with Lawler's product line. Id. at 98. In either 1988 or 1989 and again in 1995, Bradley sought to purchase Lawler (going as far as the due diligence stage in 1995), but no purchase ever occurred. Hrg. Tr. at 485, Kline-Cross.

However, in October of 1996, Kline applied for a position as an engineer at Bradley. Hrg. Tr. at 483. In its offer letter dated November 27, 2996, Bradley told Kline that his highest priority would be to design a line of thermostatic water mixing valves. Pl.'s Ex. 13, Letter, From Timothy Moeller, Dir. Engr. and R & D, Bradley Corp, Nov. 27, 1996, at 1. Kline apparently accepted the position in early December 1996, however, did not inform Lawler of his decision until February 1997 nor resign from Lawler's board of directors until April 1997. Hrg. Tr. at 112, 43, Eveleigh-Direct; id. at 486, Kline-Cross; Pl.'s Exs..

Kline's last day at Lawler was February 14, 1997. Hrg. Tr. at 112, Eveleigh-Direct; id. at 256-57, Keyes-Direct. On that day Kline packed his personal belongings in fifteen to twenty boxes and loaded them into his van. Hrg. Tr. at 257, Keyes-Direct; id. at 425, Kline-Direct.

After Kline left Lawler, the company discovered that hundreds of engineering drawings and component parts were missing. Hrg. Tr. at 107, 113, 123, Eveleigh-Direct. Lawler stored its drawings in a room filled with cabinets with drawers and bins. Hrg. Tr. at 254-56, Keyes-Direct. The cabinets held smaller drawings and the bins held larger stacks of drawings. Id. at 255-56. Lawler controlled access to the drawing room by limiting access to the room and keeping it under lock and key. Hrg. Tr. at 128-29, Eveleigh-Direct; id. at 254-55, Keyes-Direct. In addition, if an employee needed a drawing one of the employees in the office would retrieve it. Id. at 254, Keyes-Direct. Kline had access to all of the drawings. Id. at 128, Eveleigh-Direct. No information about where the component parts were stored was offered by Lawler. Based on this evidence, Lawler alleges that Kline took the missing drawings and parts.

Immediately after starting work for Bradley in February 1997, Kline started designing thermostatic water mixing valves. Id. at 520-21, Kline-Cross. On the product management side, Bradley hired a product manager for the new line after February 1997, Paul Kwekkeboom ("Kwekkeboom"). Id. at 342 43,

Kwekkeboom-Direct. Kwekkeboom's first order of business was to form a product development team and to commission a market research study. Id. at 342, 331-32 Kwekkeboom-Direct. Kwekkeboom, Kline, Bob Faulconer, Director of Purchasing, Klause Fromme, Director of Manufacturing and Phil Stuckey, Vice-President Operations comprised the original product development team. Id. at 342.

The market research study Kwekkeboom commissioned revealed that Leonard, and Powers were number one in the thermostatic water mixing valve market with Symmons a close third. Id. at 336. Lawler, with approximately 10% market share, was fourth. Id. at 336, 338; Defs.' Ex. PK2, Opinion Survey Among Specifiers of Thermostatic Mixing Valves for Bradley Corp., Dec. 2-12, 1997 ("Bradley Marketing Survey"). The top three companies all produce manifold system master controllers in contrast to Lawler's single valve system. Hrg. Tr. at 354-55, Kwekkeboom-Cross. In addition, none of them produce an emergency valve that meets the new ANSI standard. Id. at 355-56. Kwekkeboom decided to recommend that Bradley enter the thermostatic water mixing valve market, using a single valve technology developed by Kline. *See* id. at 378-79, Kwekkeboom-Redirect; Pl.'s Ex. 34, Memo, Paul Kwekkeboom to Mark Umhoefer & John Kleczka, Thermostatic Mixing Valve Project ROI, June 19, 1998.

Bradley sold its first thermostatic water mixing valve in November 1998. Hrg. Tr. at 342-43, Kwekkeboom-Direct. That product was an emergency valve. Id. at 353, Kwekkeboom-Cross (stating that prior to late 1999 Bradley had not sold any high/low valves). Bradley sold its first high/low valve sometime in late August 1999. Id. at 372. Bradley produced the standard marketing literature for the industry including brochures and a website with valve data. Id. at 377, Kwekkeboom-Redirect. Based in part on its marketing study results that indicated engineers wanted a manufacturer to provide tools to help them size valves, Bradley produced an interactive marketing compact disc ("Bradley Marketing CD") that provided such a tool. Id. at 337, Kwekkeboom-Direct; Pl.'s Ex. 34, Bradley Marketing Survey, at 25. Three thousand Marketing CDs were pressed in December 1999. Hrg. Tr. at 312, Kleczka-Cross.

Lawler filed this suit against Bradley and Kline on December 3, 1998. *See* Compl. at 1. That complaint alleged that Bradley and Kline misappropriated Lawler trade secrets, particularly its part drawings and its interactive Lawler Marketing CD, as well as other technology. Id. at para.para. 71-94. Lawler filed a supplemental complaint on June 11, 1999 alleging that Bradley's high/low thermostatic mixing valves and its emergency valves literally infringe its '960 and '531 Patents. Supp. Compl. para. 123.

Shortly after answering the complaint, the parties entered a confidentiality stipulation and protective order for proprietary business information and the parties proceeded with discovery. Late in the discovery process, in January 2000, Lawler's attorneys became aware of Bradley's plan to launch a full line of thermostatic water mixing valves. Bradley's announcement coupled with Lawler's physical analysis of Bradley's valves prompted Lawler to file the present motion for preliminary injunctive relief on February 17, 2000. Further facts pertinent to the Court's findings in this matter will be set out as necessary. The Court will now set out the standard governing its decision.

II. *STANDARDS*

A preliminary injunction is an extraordinary remedy that will only issue on a clear showing of need. *See* Eli Lilly & Co. v. American Cyanamid Co., 82 F.3d 1568, 1578 (Fed.Cir.1996); *see also* Cooper v. Salazar, 196 F.3d 809, 813 (7th Cir.1999) (citing Mazurek v. Armstrong, 520 U.S. 968, 972 (1997)). The movant bears the burden of proving its entitlement to such relief. Cooper, 196 F.3d at 813; Reebok Int'l, Ltd. v. J. Baker, Inc., 32 F.3d 1552, 1555 (Fed.Cir.1994). Generally, in order to obtain an injunction, a plaintiff must show:

1) a reasonable likelihood of success on the merits; 2) irreparable harm; 3) the inadequacy of any remedy at law; 4) the balance of hardships tipped in its favor; and 5) the adverse impact on the public interest. *See* Cooper, 196 F.3d at 813. The first three factors are considered threshold questions that must be satisfied before balancing the interests of the parties or weighing the impact on the public interest. *See id*.

In patent cases, however, a court must consider four factors including a reasonable likelihood of success on the merits, irreparable harm, the balance of hardships tipped in favor of the movant, and the impact of the injunction on the public interest. *See* Hybritech Inc. v. Abbott Labs., 849 F.2d 1446, 1451 (Fed.Cir.1988); *see also* Reebok Int'l, 32 F.3d at 1555. The Court must balance these factors against each other and against the relief sought. *See* Hybritech, 849 F.2d at 1451. Although a court should make findings with respect to each of the four factors, it is not always necessary to make findings about the relative harms and the public interest when a movant has failed to carry its burden on the first two crucial factors. *See* Reebok Int'l, 32 F.3d at 1556 ("Because, irrespective of relative or public harms, a movant must establish both a likelihood of success on the merits *and* irreparable harm ... the district court may deny a preliminary injunction based on the movant's failure to establish either of these crucial factors without making additional findings respecting the other factors."). However, a court must consider all four factors when deciding to grant a preliminary injunction. *See id*.

In a patent case, a movant who makes a strong showing of likelihood of success on the merits enjoys the benefit of a presumption of irreparable harm. *See id*. However, the presumption is rebuttable and acts as a procedural device to shift the burden of production on irreparable harm to the alleged infringer. *See id*.

It is clear that regardless of the context in which the preliminary injunction motion occurs, the first hurdle for a movant is the likelihood of success on the merits. Therefore, Lawler's showing for an injunction under either its trade secrets argument or its patent infringement argument must start with that element. The Court will address each of Lawler's arguments in turn.

III. *TRADE SECRETS*

At the hearing, Lawler presented testimony that Kline and Bradley misappropriated its information about the following items: 1) the reasons behind Lawler's choice to underrate the actual performance capacity of its 911E emergency valve; 2) the Lawler Marketing CD itself and the reasons Lawler chose to use a "Hunter's Curve" calculation in its Lawler Marketing CD; 3) the product mix Lawler developed based on years of experience; 4) the use of a return port on thermostatic water mixing valves installed in recirculating hot water systems to reduce the effect of temperature creep; 5) the assembly process for Lawler thermostats; 6) the selection and use in Bradley valves of a particular bellows component manufactured by Robertshaw to specifications provided to Robertshaw by Lawler; and 7) the use of a particular thermostat body design. Lawler argues that Bradley considers this same information regarding Bradley's line of thermostatic water mixing valves confidential, therefore, the same type of information should be confidential to Lawler. Moreover, Lawler described its efforts to protect its secrets: limiting access to its facilities, its computerized costing and financial data and its engineering drawings. Further, all of Lawler's engineering drawings have a confidentiality legend or are stamped confidential. FN3 Even with this evidence, the Court is not persuaded that the balance of the factors weigh in Lawler's favor.

FN3. Lawler drawings typically contain a legend that reads:
EXCEPT AS MAY BE OTHERWISE PROVIDED BY CONTRACT, THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF LAWLER MANUFACTURING CO., INC. AND ARE

Pl.'s Ex. 116, ITT Hoffman Specialty, Bellows Drawing, Mar. 29, 1978. Older drawings acquired from ITT without the legend are stamped confidential. *See* Eveleigh Aff. para. 9.

A. LIKELIHOOD OF SUCCESS ON THE MERITS

Trade secret protection is a matter of state law. Under the Indiana Uniform Trade Secret Act ("IUTSA"),

"[t]rade secret" means information, including a formula, pattern, compilation, program, device, method, technique, or process, that:

(1) derives independent economic value, actual or potential, for not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use; and

(2) subject of efforts that are reasonable under the circumstances to maintain its secrecy.

Ind.Code s. 24-2-3-2. The definition of trade secret actually sets forth the elements for showing that information is a trade secret. *See* Amoco Prod. Co. v. Laird, 622 N.E.2d 912, 915 n. 1 (Ind.1993). In addition, combinations of publicly known or readily ascertainable information may be a trade secret if the combination is unique and was not previously known in the market place. Weston v. Buckley, 677 N.E.2d 1089, 1092 (Ind.Ct.App.1997) (citing Amoco Prod., 622 N.E.2d at 920), *trans. denied*. Whether information is readily ascertainable depends upon the degree of time, effort and expense required to duplicate or acquire the information by proper means. *Id*. However, "the mere availability of other proper means will not excuse a trade secret misappropriation." Amoco Prod., 622 N.E.2d at 918. The party asserting a trade secret has the burden to show that replicating the information would require substantial investment of time, expense and effort. *Id*. Furthermore, although definitive Indiana law on the subject is controlling, case law from other Uniform Trade Secret Act jurisdictions is relevant authority for construction of trade secret law in the state. *Id*.

A party that asserts misappropriation of its trade secrets may seek an injunction or damages. *See* Ind.Code s.s. 24-2-3-3 to 4; Bridgestone/Firestone, Inc. v. Lockhart, 5 F.Supp.2d 667, 680 (S . D.Ind.1998). Misappropriation includes the disclosure or use of a trade secret by a person who either used improper means to acquire knowledge of the information, or had a duty to maintain the secrecy of the information, or obtained the information from a person who had a duty to maintain its secrecy. *See id*. s. 24-2-3-2. As defined above, the party asserting misappropriation of a trade secret must identify the trade secrets and prove that they exist. *See* Nickelson v. General Motors Corp., 361 F.2d 196, 199 (7th Cir.1966); Eaton Corp. v. Appliance Valves Corp., 526 F.Supp. 1172, 1178 (N.D.Ind.1981), *aff'd* 688 F.2d 842 (7th Cir.1982); Amoco Prod., 622 N.E.2d at 920.

Therefore, in order for Lawler to succeed in showing a likelihood of success on the merits of its misappropriation of trade secrets claim, it must show that the information had independent value, that the information is not readily ascertainable, that the information in combination was unique and not previously known in the market place, that Lawler took reasonable steps to protect the information, and that Kline and

Bradley used the trade secrets they obtained from Lawler. For the reasons discussed below, the Court finds the likelihood of success is low that Lawler could prove all of the above stated elements for each of its asserted trade secrets.

The Court notes at the outset that Lawler did not have a secrecy agreement, confidentiality agreement or non-compete agreement with any of its employees, including Kline. *See* Hrg. Tr. at 139, Eveleigh-Cross; *id*. at 406-07, Kline-Direct. Although this fact is not dispositive on the element that Lawler must have made efforts "reasonable under the circumstances" to keep its confidential information secret, it is a factor weighing against Lawler on that element for each of its alleged secrets.

1. Underrating the Performance of the 911E Valve

Lawler did not show that the reason it chose to underrate the performance of its 911E valves had independent economic value as required by the definition of trade secret. Although the strategy behind this decision by Lawler is something only an insider would likely know, Lawler presented no evidence that this information was valuable to Bradley's efforts in designing its mixing valve product line. It is not likely Lawler could prove misappropriation of a trade secret under those circumstances because it is missing a required element of a trade secret.

2. Lawler Marketing CD and "Hunter's Curve"

Lawler claims that the CD it used for marketing was confidential. However, Eveleigh testified that Lawler simply transferred the information from its sales and training video to a CD so that its customers would have better access to the information. Hrg. Tr. at 45, Eveleigh-Direct. Eveleigh also testified that generally Lawler wanted its customers to see its video because it could convince them to use Lawler's valves. Hrg. Tr. at 142-46, Eveleigh-Cross. Likewise, a reasonable inference is that Lawler used its CD for a similar purpose: To provide engineers with information they could use to specify Lawler valves. Lawler chose to publicize its valves with a video and a CD. It cannot now claim that information it purposefully made public is a trade secret.

Furthermore, Lawler argues that the "Hunter's Curve" it used in the video and the reasons for its use made Bradley's use of a similar calculation in its Bradley Marketing CD misappropriation. This argument is without merit. Kline testified that engineers use standard equations, or "Hunter's Curve" based on those equations, for determining the size thermostatic water mixing valve needed for a particular building. Hrg. Tr. 398-99, Kline Direct; Pl.'s Ex. 188, Fax from Kevin Kline to Greg Panovich, Channel One, Table 12 Hot Water Demand in Fixture Units [140 (deg.)F (60 (deg.)C) Water]. Specifying engineers can find the information in an American Society of Plumbing Engineers Data Book. Hrg. Tr. at 399. Lawler provided no testimony to the contrary. Moreover, it is logical that Kline, a design engineer for approximately twenty-eight years, would know what equations engineers would use to size valves. Even if Lawler had Kline sign a confidentiality and non-compete agreement, Lawler would have had no legal basis for demanding that Kline refrain from using general knowledge he gained during his employment at Lawler while working for Bradley. *See* Flotec, Inc. v. Southern Research, Inc., 16 F.Supp.2d 992, 999-1000 (S.D.Ind.1998) (discussing the difference between information in the public domain and information that is secret); Eaton Corp. v. Appliance Valves Corp., 526 F.Supp. 1172, 1179 (N.D.Ind.1981) (" 'Matters which are generally known in the trade cannot be made secret by being so labeled in an agreement.' ") (quoting Packard Instrument Co. v. Reich, 412 N.E.2d 617, 6233 (Ill.Ct.App.1980)). Thus, it is clear that Bradley used the Hunter equations in its CD as a tool for engineers to size valves because that is the industry standard, not because Kline or Bradley misappropriated Lawler's secret information.

3. Lawler's Product Mix

Lawler also claims that its product mix is a trade secret, but it makes no effort to hide its product specifications from the public. Bradley's product manager, Kwekkeboom, easily obtained information about Lawler's product specifications by searching the internet and collecting brochures that Bradley sales representatives obtained at trade shows. Hrg. Tr. at 323-31, Kwekkeboom-Direct; Def.'s Ex. PK1, Lawler Manufacturing Co., Inc. Plumbing Products Data Sheets. In addition, Lawler's Eveleigh testified that other manufacturers' multi-valve master control products had been on the market prior to Lawler's development of the high/low valve. Hrg. Tr. at 72, Eveleigh Direct. Further, at least one of the features of these valves, whether Lawler's single valve or a multi-valve manifold system, fall under the ASSE 1017 standard; Eveleigh testified that manufacturers in the industry design to meet the performance requirements contained in that standard. *Id*. at 44. Lawler even advertised the standards its product met. *See* Compl. Ex. C, Reprint, *Lawler's 911 Emergency Shower Valve Answers the ANSI Call,* PM Engineer (July/Aug.1998) ("Lawler's Model 911 and 911E will help you meet ANSI Z358.1-1998 today."); *id*. Lawler Mfg. Co. Literature, Model 911 Thermostatic Mixing Valve for Emergency Shower Fixtures ("Meets ANSI Standard Z358.1 of 30 gpm of water at 60 (deg.)-95 (deg.) F. (15 (deg.)-35 (deg.) C.) [.]"); Defs.' Ex. PK1, Lawler 802/805 Hi-Low Water Mixer, <http:// www.lawlervalve.com/802805.html> ("These one piece, single body valves contain a liquid filled thermostat, a stainless steel piston and liner, and meet ASSE 1017 requirements."). The performance criteria of Lawler's product mix is thus readily ascertainable and not secret. Based on the evidence Lawler presented, it is unlikely it could succeed in creating an inference otherwise.

4. Return Port Solution to Temperature Creep Problem

Lawler claims that the "temperature creep" phenomenon and its return port solution to the problem are trade secrets. However, Eveleigh testified that Lawler obtained information about the temperature creep phenomenon itself from a published paper written by an engineer. Hrg. Tr. at 126, Eveleigh-Direct. Moreover, Eveleigh testified that Lawler actually planned to solve the temperature creep problem by adopting "a standard industry practice of recirculating the water back to the cold water side of the mixing valve and the cold water feed of the heaters." *Id*. However, Lawler never actually adopted this solution in its emergency valve technology; nor apparently adopted the return port solution for any of its valves. *See id*. at 126-27.

In contrast, Bradley incorporated a return port on the cold water side of each valve. *See* Hrg. Tr. at 127, Eveleigh-Direct. In addition, Lawler presented evidence that Kline actually educated the Bradley valve marketing team about the temperature creep phenomenon and suggested a return port on the cold water side as a solution to the problem. Pl.'s Ex. 18, Memo, To Paul Kwekkeboom From Kevin Kline, Thermostatic Valve Operation When Set Temperature is Near the Incoming Hot Water Temperature, July 29, 1997; Hrg. Tr. at 351, Kwekkeboom-Cross. With this evidence Lawler appears to imply that Kline improperly disclosed the information to Bradley and that Bradley inappropriately used the information in its valve designs.

However, Lawler apparently did not either independently identify the temperature creep phenomenon or invent a unique solution to the problem. To the contrary, Lawler personnel simply read published literature and adopted a "standard industry practice." Without a showing of more added value, or a substantial investment of time, expense or effort to recreate the information, Lawler cannot claim that readily ascertainable, standard industry practice is a trade secret.

5. Thermostat Assembly Process

Lawler also alleges that its thermostat assembly process is a trade secret, however, the company offered no testimony that its process was unique or was kept secret. Lepay Keyes ("Keyes"), Lawler's Production Supervisor, testified that Kline had some involvement with thermostats before he started working for Lawler. Hrg. Tr. at 251-52, Keyes-Direct. Once at Lawler, Kline supervised the production process, building thermostats himself. *See id.* at 259-60. Keyes described Kline as "the one that [sic] was skilled in actuators and in the thermostats." *Id.* at 260. After Kline left the company, Keyes developed a production procedure manual to ensure that Lawler could teach new employees its production process, including the thermostat assembly process. *See id.* No other testimony or exhibits exemplify that this process was unique to Lawler. Moreover, other than the general assertion by Eveleigh about locking the facility and not telling customers about its manufacturing process, Lawler never described what it did to keep its thermostat assembly process a secret.

Kline and Bradley presented evidence that techniques for soldering the parts of a thermostat and volume filling techniques were published by third parties such as Robertshaw in its literature. Hrg. Tr. at 391-92, Kline-Direct; Pl.'s Ex. 126B, Robertshaw Bellows Catalog, at 24, 32. In addition, Kline testified that thermostat technology using bellows was old technology, originally used for thermostats in cars. Hrg. Tr. at 392-93. Lawler presented no testimony or evidence to the contrary.

From the evidence presented, it is possible to infer that the process for assembling thermostats was a trade secret simply from the fact that Keyes had to develop a procedure manual for assembling thermostats after Kline left because he was the person responsible for thermostat assembly and described as one skilled in the art. *See* Hrg. Tr. at 260. However, the fact that Lawler needed to formalize its process in writing in order to preserve it for future reference does not by itself prove that Lawler's assembly process was unique or that the company took reasonable steps to assure its secrecy. At the hearing Eveleigh testified that other competing products in the master control valve market also used thermostats. Hrg. Tr. at 81, Eveleigh-Direct. Nevertheless, he did not testify that Lawler's process for assembling those thermostats was any different from that of Lawler's competitors. Keyes also did not so testify.

In addition, the fact that few people at Lawler knew how to assemble thermostats does not make the process a trade secret, particularly in light of the fact that Lawler had fifteen employees in total to design, manufacture, sell and ship its products. *See* Hrg. Tr. at 105-06, Eveleigh-Direct. Under such circumstances, one or two people specializing in certain aspects of assembly seems logical, not secretive.

Further, even assuming that Kline learned the thermostat assembly process exclusively at Lawler, without evidence that Lawler attempted to keep that process secret, Kline and Bradley's use of a thermostat assembly process is not misappropriation of Lawler's trade secret.

6. Kline and Bradley's Selection of Robertshaw Bellows

Lawler presented evidence that Kline designed a particular bellows for use in Bradley's valve thermostats using information he learned at Lawler. Specifically, Lawler offered an ITT drawing dated March 29, 1978 of a bellows with ITT's part number 7658-00. Pl.'s Ex. 116, ITT Hoffman Specialty, Bellows Drawing, Mar. 29, 1978. ITT's drawing contained a confidentiality legend. *See id.; infra* n. 3. In addition, Lawler presented a Robertshaw drawing of the same bellows part dated April 27, 1978 with Robertshaw's part number A-00755-A102. Pl.'s Ex. 117, Fulton Syphon Div., Robertshaw Controls Co., Eng. Drawing, Apr. 27, 1978. The Robertshaw drawing also states, "REF: CUST. DWG. 7658-00," presumably a reference to the part number on ITT's drawing. *Id.* Robertshaw's drawing does not contain a confidentiality legend or stamp. *Id.*

However, Eveleigh testified that Robertshaw acknowledged Lawler's confidentiality legend and stamp. Hrg. Tr. at 122, Eveleigh-Direct. Eveleigh also testified that after Kline left Lawler, a parts inventory revealed that several bellows parts were missing. Hrg. Tr. at 123.

In addition to the evidence showing Lawler's interest in that particular bellows design, the Court accepted into evidence Kline's handwritten fax to Robertshaw asking it to quote on specific quantities of bellows either built to Kline's attached specifications or the Robertshaw equivalent. Pl.'s Ex. 136A, Fax to Linda Pearson at Robertshaw From Kevin Kline, Jan. 27, 1998. One of the drawings attached to that fax specified a bellows with forty convolutions (one of the specifications required for bellows), identical to that of ITT's drawing for its part number 7658-00. *Id*. at 3. A Robertshaw salesperson contacted Kline to get more specific information about what Kline needed; Kline told the salesperson that he wanted a bellows similar to the one Robertshaw made for "McDonald, Miller and Hoffman, and Lawler." FN4 Hrg. Tr. at 506, Kline-Cross. Kline testified that the Robertshaw salesperson faxed him drawings of the parts requested and Kline subsequently made Bradley drawings that conformed with those specifications. Hrg. Tr. at 513-14. One of the drawings faxed to Kline was Robertshaw's part number A-00755-A102 that had the mark "REF: CUST. DWG. 7658-00." *See* Hrg. Tr. at 514-15. Two Robertshaw literature pieces were also received into evidence, one entitled "Robertshaw Bellows Principles," the other entitled "Bellows, Catalog R." Pl.'s Exs. 126B, Robertshaw Bellows Principles; 126A, Robertshaw, Bellows, Catalog R. Kline testified during the hearing that he did not reference "Robertshaw Bellows Principles" when ordering the forty convolution bellows from Robertshaw. Hrg. Tr. at 500.

FN4. McDonald, Miller and Hoffman was the predecessor company for ITT's Hoffman division. *See* Hrg. Tr. at 506-07, Kline-Cross. Kline worked for that division prior to his purchase of ITT's Lawler division. Pl.'s Ex. 11, Resume, Kevin B. Kline; Hrg. Tr. at 77, Eveleigh-Direct; *id*. at 383, Kline-Direct.

Lawler argues that this evidence proves that the Robertshaw bellows with forty convolutions with Robertshaw's part number A-00755-A102 was designed specifically for ITT, Lawler's predecessor, and therefore that part was Lawler's trade secret. Kline knew about the part because he was the engineer at Lawler who built thermostats using those bellows. Kline also knew that Lawler part drawings were confidential. Further, Kline and Bradley misappropriated that trade secret by approaching Robertshaw to manufacture bellows with the same specifications.

Based on the evidence presented, Lawler's success on this argument, although not "likely" in the normal sense of the word, is more than negligible. *See* Abbott Labs. v. Mead Johnson & Co., 971 F.2d 6, 12 & n. 2 (7th Cir.1992); International Kennel Club of Chicago, Inc. v. Mighty Star, Inc., 846 F.2d 1079, 1084 (7th Cir.1988). What makes this a close call is whether Lawler took reasonable steps to keep the information secret.

Kline testified that he knew about the bellows design not only because of his work at Lawler, but also from his work at ITT's Hoffman division. Hrg. Tr. at 388-90, Kline-Direct. This is a reasonable statement given that the original ITT drawing for the part was made by ITT's Hoffman Specialty division. In addition, other than the legend on the ITT drawing, there is no other evidence that Robertshaw was asked to keep the part design confidential. The fact that Robertshaw had a drawing of the part on its own drafting paper, with a Robertshaw part number containing only a reference to a customer part drawing weighs against Lawler's claim that Robertshaw respected the secrecy of this part. Robertshaw's drawing does not contain a confidentiality label of any kind. Nor has Lawler presented physical evidence of a confidentiality agreement

between the two companies. Arguably, Robertshaw's publication of the part on its own drafting paper, without a confidentiality stamp makes the part specification readily ascertainable and not a trade secret. This conclusion is supported by the publication of Robertshaw's part number for this particular bellows in its "Robertshaw Bellows Principles," as well as by the fact that this part has been used in valves since at least 1978 and, with some effort to dissemble a valve, the part's specifications can be readily discerned. *See* Pl.'s Ex. 1726B at 16, Fig. 4, Data, Bellows Characteristics; *see also* Skoog v. McCray Refrigerator Co., 211 F.2d 254, 257 (7th Cir.1954); Flotec, Inc. v. Southern Research, Inc., 16 F.Supp.2d 992, 1000 (S.D.Ind.1998) (discussing the outer limits trade secret protection when information is readily discernable).

Nevertheless, Lawler did present evidence that it tried to keep the part specifications secret by using a confidentiality legend on its drawings. Furthermore, the standard for "readily ascertainable" by publication is trumped by whether the party using the information actually reverse engineered the product to obtain it or simply used knowledge gained during a confidential relationship with the party asserting a trade secret. *See* Rockwell Graphic Sys ., Inc. v. DEV Indus., Inc., 91 F.3d 914, 917 n. 4 (7th Cir.1996); Amoco Prod., 622 N.E.2d at 920. Here it is unclear whether Kline and Bradley actually reversed engineered the information or not. Kline specifically testified that he did not obtain the specifications by using the "Robertshaw Bellows Principles" chart. Moreover, he specifically asked the Robertshaw salesperson for the equivalent to the bellows used by ITT's Hoffman division, and Lawler. Hrg. Tr. at 506, 514, Kline-Cross. In addition, Kline stated that he had a bellows part with that configuration in his possession. *Id*. at 524. The implication is that Kline obtained the information only through his work both at ITT, Hoffman and at Lawler and thus during a relationship of confidence.

Therefore, the issue is whether the steps Lawler took to keep the information secret were reasonable under the circumstances, and the answer remains unclear on the current state of the record. The Court will weigh this likelihood of success on the merits with the other factors for issuing an injunction in a subsequent section.

7. Thermostat Body Design

Similar to its allegations about the bellows, Lawler asserts that Kline and Bradley misappropriated its trade secret thermostat body design. Lawler produced a voided prototype drawing of a thermostat body design originally intended for use in its 911E valve, but never used. Pl.'s Ex. 353, Lawler Mfg. Co., Inc., Thermostat Body, Drawing No. 8334-24, Nov. 4, 1995 ("Lawler Thermostat Body"); Hrg. Tr. at 149, Eveleigh-Redirect. The original drawing was missing from Lawler's files after Kline left the company. Hrg. Tr. at 149. Lawler also produced a drawing of a Bradley thermostat body for one emergency valve, EFX50. Pl.'s Ex. 370, Bradley Corp., Thermostat Body, Drawing No. BRD 008700, Jan. 23, 1998 ("Bradley Thermostat Body"). The internal shape of the thermostat bodies in both drawings are remarkably similar. In addition, some of the dimensions are also the same. *Compare* Pl.'s Ex. 353, Lawler Thermostat Body *with* Pl.'s Ex. 370, Bradley Thermostat Body. In addition, Lawler presented evidence that Kline had produced drawings for thermostat bodies and valve liners for Bradley by March 1997, approximately one month after he started working for that company.

Lawler has created an inference that Kline and Bradley could have used knowledge Kline gained from his experience at Lawler to design thermostat bodies for Bradley. Thermostat technology itself appears to be old because both Eveleigh and Kline testified that thermostats have been around since at least the 1960s. Hrg. Tr. at 44, Eveleigh-Direct; *id*. at 393, Kline-Direct. Presumably the designs for them are similar as well, however, there is no evidence in the record about this fact, therefore it is difficult to assess the likelihood

that Kline could know the optimum shape for a mixing valve thermostat body without his experience at Lawler. Consequently, it is also difficult to assess the likelihood of success for Lawler's argument that Kline could not have produced drawings for a thermostat body within one month of starting work at Bradley without using Lawler trade secrets.

In regard to the specific thermostat design for the Bradley emergency valve, Bradley pointed out that the part dimensions for the parts are different. In addition, it is unclear from the record whether this shape thermostat body, whether with the same dimensions or not, were disclosed by Lawler's '531 emergency valve patent or by the actual emergency valve itself. Thus drawing into question the actual "secrecy" of this shape thermostat body.

Regardless of the secrecy of Lawler's design, Bradley presented no evidence that the differences it pointed out were material or were intended for a purpose it independently discovered. Bradley offered Kline's research notebooks perhaps for this reason, however, it did not point to specific evidence that Kline had researched and discovered a thermostat body shape that would give optimum results in an emergency valve. It is not the Court's place to comb through evidence to support a parties argument.

Although the evidence Lawler presents on this issue is weak, there is some likelihood that it would succeed in showing that it had a trade secret in this particularly shaped thermostat body. The Court will weigh this finding, along with its similar finding with respect to the bellows, with the other factors for issuing an injunction in the next section.

B. IRREPARABLE HARM ABSENT AN INJUNCTION

As discussed above, Lawler has shown that it has a slight chance of success in proving that Kline and Lawler misappropriated its trade secrets about a particular bellows and a particular thermostat body design. Similarly, Lawler makes some showing of harm from this misappropriation, however, not that the harm is irreparable.

Lawler contends that this case is like that in Pepsico, Inc. v. Redmond, 54 F.3d 1262 (7th Cir.1995), where there was a strong showing that disclosure of trade secrets was inevitable and an injunction issued. Lawler argues that Kline will inevitably use Lawler's trade secrets in his capacity as valve design engineer and already has. It follows from this inevitable disclosure that Lawler will suffer harm because its competitor will not have as long a development period as Lawler. Moreover, Lawler already has suffered harm because its largest customer, Haws Corporation ("Haws"), asked for a price decrease on Lawler's emergency valve product line based upon Bradley's aggressive pricing. Pl.'s Ex. 350, Letter to Bob Eveleigh from Allen D. Zeigler, Haws Corp., Nov. 23, 1999. In addition, Eveleigh testified that Lawler dropped its list price on its emergency valves in October 1999. Hrg. Tr. at 100, Eveleigh-Direct. Lawler concludes that it cannot wait until June for a trial on the merits of this case to stop Kline and Bradley from exploiting its trade secrets, otherwise it will experience irretrievable price decreases.

Lawler bolsters its price decrease argument with evidence that Bradley's emergency valve does not meet the ANSI standard for flow rate when hot water failure is simulated. Hrg. Tr. at 61-67, Eveleigh-Direct; Pl.'s Ex.338, Lawler Test Results on Bradley 2200 @ 85 (deg.)F, Mar. 6, 2000. Lawler contends that its goodwill suffers with every Bradley valve that fails in the market, therefore, Lawler's reputation is irreparably harmed.

The Court is not persuaded that the evidence weighs in favor of finding irreparable harm.FN5 First, and most importantly, Lawler relies heavily upon the argument that Kline had access to information at Lawler and went to work at Bradley in essentially the same capacity, therefore, disclosure of trade secrets was inevitable .FN6 Yet, Lawler waited until December 1998 to file this law suit and until February 2000 to file this motion for a preliminary injunction. Lawler's delay in seeking an injunction weighs against finding irreparable harm when it knew in February 1997 that Kline was going to work for a competitor and could have sought such an injunction at that time.

FN5. In patent infringement cases as well as in trademark infringement cases in some circuits, on a strong showing of likelihood of success on the merits, the plaintiff is entitled to a presumption of irreparable harm. *See Eli Lilly v. American Cyanamid,* 32 F.3d 1568, 1578 (Fed.Cir.1996); Federal Exp. Corp. v. Federal Espresso, Inc., 201 F.3d 168, 174 (2d Cir.2000); American Bd. of Psychiatry & Neurology, Inc. v. Johnson-Powell, 129 F.3d 1, 3 (1st Cir.1997). Some courts have applied the same presumption in trade secret cases. *See Flotec,* 16 F.Supp. at 999. However, the presumption appears to arise only in cases where there is a strong showing of likelihood of success on the merits. *See id*. The Court need not decide this issue in this case because any presumption that Lawler would be entitled to is rebutted by its delay in seeking injunctive relief.

FN6. Lawler's reliance on Pepsico, Inc. v. Redmond, 54 F.3d 1262 (7th Cir.1995), a case involving inevitable disclosure of trade secrets, is misplaced. In *Pepsico,* the plaintiff drink manufacturer brought its suit immediately after it learned that one of its key marketing executives was leaving it to work in the same capacity for a direct competitor. Pepsico, 54 F.3d at 1265. The *Pepsico* court affirmed the trial court's grant of a preliminary injunction based in part on the strength of Pepsico's evidence that the executive had access to its trade secrets and would inevitably disclose them in his capacity in marketing at the competitor. In this case, Lawler had similar evidence at the time Kline left the company, but waited to act upon it for two years. Lawler's case is one of actual misappropriation because of the timing of its lawsuit and the timing of its preliminary injunction motion. *Pepsico* is not on point.

Lawler argues that it did not know the extent of Kline's involvement in Bradley's valve business until discovery, therefore, the Court should excuse its delay in seeking a preliminary injunction. Yet Keyes testified that Kline told Lawler employees he would be competing with Lawler in his new job. Hrg. Tr. at 257, Keyes-Direct. In addition, both Keyes and Eveleigh testified that they discovered drawings and parts missing from Lawler's premises fairly soon after Kline left. Hrg. Tr. at 259; *id*. at 123-24, Eveleigh-Direct. Further, Keyes suspected Kline had taken something extra with him because she thought his personal belongings could not have taken up the number of boxes he took from Lawler the day he left. Hrg. Tr. at 257-58. Moreover, Lawler suspected wrongdoing in 1998 when it filed this suit in response to Bradley's entry into the emergency valve market. These facts suggest Lawler had evidence that Kline would "inevitably disclose" trade secrets well before discovery started. Under these facts, the Court will not excuse Lawler's delay in seeking an injunction on its trade secret claim.

Second, Lawler made no effort to secure its secrets with a confidentiality agreement with its employees or with its suppliers. It did take some steps to protect its drawings, such as the legend, however, one of its suppliers clearly copied a drawing without maintaining the same level of confidentiality. These facts belie Lawler's claim that the secrets have immeasurable worth, otherwise Lawler would have taken additional steps to keep them confidential.

In addition, Lawler articulated a specific price drop for its emergency products after Bradley's entry into the water mixing valve market. Lawler can quantify this differential. Lawler also asserts loss of its goodwill because Bradley's emergency valve does not meet ANSI requirements. However, Lawler has not shown a decrease in its sales or other evidence that this loss of goodwill has happened with Bradley's entry into the market or is likely to happen.

Lawler's arguments that it will be irreparably harmed if this Court does not enjoin Bradley from making, selling or using Bradley's line of thermostatic water mixing valves fail in the context of trade secrets because it waited two years after Kline left the company to seek injunctive relief, which belies an inference of irreparable harm. Additionally, Lawler can clearly articulate its losses as a result of Bradley's entry into the emergency valve business and it has seen a steady increase in its emergency and high/low valve sales since 1997, even after Bradley's entry into the market.

C. SUMMARY

Lawler has shown a more than negligible likelihood of success on the merits. However, Lawler has not shown that Kline and Bradley's alleged misappropriation of its trade secrets will result in irreparable harm because it waited over two years after Kline left the company and it discovered drawings and part missing to ask the Court for injunctive relief. As a result of these findings, the Court DENIES Lawler's motion for preliminary injunction based on the trade secrets claim.

IV. *PATENT INFRINGEMENT CLAIMS*

In a patent infringement case, in order for a preliminary injunction to issue, the plaintiff must show: (1) a reasonable likelihood of success on the merits; (2) irreparable harm; (3) the balance of hardships tipped in its favor; and (4) an adverse impact on the public interest. Hybritech, Inc. v. Abbott Labs., 849 F.2d 1446, 1451 (Fed.Cir.1988). A court must balance these factors against each other and against the magnitude of the relief sought. *Id*. Although a court should make findings with respect to each these factors, it is not always necessary to make findings about the relative harms and the public interest when the plaintiff has failed to carry its burden on the first two elements. Reebok Int'l Ltd. v. J. Baker, Inc., 32 F.3d 1552, 1556 (Fed.Cir.1994). On the other hand, when a court grants a preliminary injunction, it must make findings on all four factors. *Id*.

In patent cases, a movant who clearly establishes the first factor will enjoy the benefit of a presumption on the second. *Id*. The presumption is rebuttable. Moreover, it does not even arise unless there is a strong showing of a likelihood of success on the merits. *See* Eli Lilly & Co., 82 F.3d 1568, 1578 (Fed.Cir.1996); Reebok Int'l, 32 F.3d at 1556. As discussed above, the Court will start the preliminary injunction analysis with Lawler's likelihood of success on the merits of its patent infringement claim.

A. LIKELIHOOD OF SUCCESS ON THE MERITS

In a patent case, likelihood of success on the merits requires a reasonable showing of patent validity and infringement. Reebok Int'l, 32 F.3d at 1555. The validity of Lawler's patents has not been established by prior adjudication. However, Lawler enjoys the statutory presumption of patent validity. 35 U.S.C. s. 282. This presumption merely gives Lawler the right to have validity judged by whether the challenger's evidence is sufficient to meet a clear and convincing standard. *See* C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1348 (Fed.Cir.), *reh'g denied,* 161 F.3d 1380 (1998), *cert. denied,* 119 S.Ct. 1804 (1999); PPG Indus., Inc. v.

Guardian Indus. Corp., 75 F.3d 1558, 1566 (Fed.Cir.1996); New England Braiding Co. v. A.W. Chesterton Co., 970 F.2d 878, 882 (Fed.Cir.1992) (noting that presumption of validity "acts as procedural device which places the burden of going forward with evidence and the ultimate burden of persuasion of invalidity at trial on the alleged infringer"). Thus, Bradley has the burden of proving that the ' 960 Patent and the '531 Patent are invalid.

With respect to Lawler's patent infringement claim, to predict the likelihood of success on the merits, the Court must assess whether Lawler can show by a preponderance of the evidence that every limitation of the claim or claims allegedly infringed has been found in the accused product, either literally or by an equivalent. Becton Dickinson & Co. v. C.R. Bard, Inc., 922 F.2d 792, 796 (Fed.Cir.1990); Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 935 (Fed.Cir.1987), *cert. denied,* 485 U.S. 961, 1009 (1988). The analysis is a two step process. *See* K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1362 (Fed.Cir.1999). First, the Court must interpret the disputed claims, "from a study of all relevant patent documents," to determine their scope and meaning. *Id. See also* Dolly, Inc. v. Spalding & Evenflo Cos., Inc., 16 F.3d 394, 397 (Fed.Cir.1994); Becton Dickinson, 922 F.2d at 796. Second, the Court must determine if the accused device comes within the scope of the properly construed claims, either literally or by a substantial equivalent. *See* K-2 Corp., 191 F.3d at 1362; Dolly, 16 F.3d at 397; SmithKline Diagnostics v. Helena Labs. Corp., 859 F.2d 878, 889 (Fed.Cir.1988).

The purpose of claim construction is to elaborate the normally terse claim language in order to explain and understand, but not to change, the scope of the claim. *See* Scripps Clinic & Res. Found. v. Genentech, Inc., 927 F.2d 1565, 1580 (Fed.Cir.1991), *reh'g denied; see also* K-2 Corp., 191 F.3d at 1364 ("Courts do not rewrite claims; instead, [they] give effect to the terms chosen by the patentee."). Unless evidence pertinent to the interpretation of a claim is in dispute, claim interpretation may be resolved by the Court as a matter of law. Markman v. Westview Inst., Inc., 517 U.S. 370, 372 (1996) (hereinafter Markman II); Markman v. Westview Inst., Inc., 52 F.3d 967, 979 (Fed.Cir.1995) (hereinafter *Markman I*), *aff'd* 517 U.S. 370 (1996); Lantech, Inc. v. Keip Mach. Co., 32 F.3d 542, 546 (Fed.Cir.1994); Becton Dickinson, 922 F.2d at 796. " 'To ascertain the meaning of claims, [courts] consider three sources: The claims, the specification, and the prosecution history.' " Markman I, 52 F .3d at 979 (quoting Unique Concepts, Inc. v. Brown, 939 F.2d 1558, 1561 (Fed.Cir.1991)). The prosecution history of either patent is not in evidence in this case, therefore the Court will focus on the claims and the specifications. When a court engages in claim construction, it must do so with an eye for the understanding of those of ordinary skill in the art. K-2 Corp., 191 F.3d at 1365. However, the general rule is that a court will give claim terms their ordinary and accustomed meaning. Id. at 1362. This general rule is trumped if the written description or the prosecution history sets forth a different meaning in clear and deliberate language, *see* id. at 1363; Markman I, 52 F.3d at 979, or if the ordinary meaning of a disputed term would deprive the claim of clarity. *See* K-2 Corp., 191 F.3d at 1363.

If, after reviewing all available intrinsic evidence, some genuine ambiguity still exists in the claims, a court may look to extrinsic evidence, including testimony of witnesses and references to the specification, the prior art and other claims. *See* id; Vitronics Corp. v. Conceptronics, Inc, 90 F.3d 1576, 1584 (Fed.Cir .1996); Markman I, 52 F.3d at 979-81. The scope of a court's inquiry in this regard is limited given the Federal Circuit's admonition: "If the patent's claims are sufficiently unambiguous for the PTO, there should exist no factual ambiguity when those same claims are later construed by a court of law...." Markman I, 52 F.3d at 986. Therefore, expert and inventor testimony, dictionaries, and learned treatises may be used to assist a court's understanding of the patent, or the field of technology, but not to vary or contradict the terms of the claims. Id. at 980-81.

Absent a finding of literal infringement, a court could find that an accused device infringes by applying the judicially-created equitable doctrine of equivalents. K-2 Corp., 191 F.3d at 1366; Becton Dickinson, 922 F.2d at 797; ZMI Corp. v. Cardiac Resuscitator Corp., 844 F.2d 1576, 1581 (Fed.Cir.1988). Under this doctrine, an accused device may infringe "where the elements of the accused device are substantially equivalent to the corresponding elements of the asserted claim." K-2 Corp., 191 F.3d at 1366 (citing Warner-Jenkinson Co. v. Hilton Davis Chem. Co ., 520 U.S. 17, 29 (1997)). "Infringement under the doctrine of equivalents is a question of fact." *Id*.

However, the doctrine of equivalents is limited and subject to estoppel. First, a patent claim may not be extended to encompass subject matter that could not have been patented, therefore, a claim may not "encompass subject matter existing in the prior art." Id. at 1366-67. Likewise, it may not cover slight, obvious or "trivial" variations of the prior art. Id. at 1367 (citing 35 U.S.C. s. 103(a); Southwall Techs. Inc. v. Cardinal IG Co., 54 F.3d 1570, 1580 (Fed.Cir.), *cert. denied,* 516 U.S. 981 (1995)). Moreover, "[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole." Warner-Jenkinson, 520 U.S. at 29; Pennwalt, 833 F.2d at 935. The doctrine may not operate to eliminate a patent element. Warner-Jenkinson, 520 U.S. at 29. "An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element." Id. at 40. Application of these limitations are a question of law, even though infringement generally under the doctrine of equivalents is a question of fact. *See* id. at 39 n. 8; K-2 Corp., 191 F.3d at 1366-67.

Second, a patentee may not recover subject matter surrendered during patent prosecution by amendment or argument. Warner-Jenkinson, 520 U.S. at 30-31; K-2 Corp., 191 F.3d at 1367. The scope of this estoppel argument depends on the circumstances of the case. *See* K-2 Corp., 191 F.3d at 1368. Furthermore, "particular subject matter disclosed in the patent specification but not claimed is deemed to have been surrendered." *Id*. Application of these limitations are also a question of law. *See id*. (citing Warner-Jenkinson, 520 U.S. at 39 n. 8).

In the case at bar, Lawler asserts that Bradley has infringed both the '960 Patent and the '531 Patent. Specifically, Bradley's HL200 (3200), HL130 (3130), HL80(3080), and EFX60 (2200) valves infringe the '960 Patent, and Bradley's EFX60 (2200), EFX25 (2100), and EFX8 (2000) infringe the '531 Patent. As to each patent, Bradley argues that it's products do not infringe and in the alternative, that the patent is invalid. Beginning with the '960 Patent, the Court will address the parties' arguments with respect to each patent.

1. '960 Patent

(a) Patent Infringement

Having examined and considered the claim language, the specification, and the context of the '960 invention, the Court is satisfied that Lawler has demonstrated more than a reasonable likelihood of success on the merits. Of the sixteen claims contained in the '960 Patent, the parties have focused on the language in claim 1 that describes a multiple response thermostat element. FN7 *See* Pl.'s Ex. 1, ' 960 Patent. The relevant language in claim 1 reads:

FN7. The other elements included in claim 1 are not in dispute.

1. A thermostatic control valve assembly for mixing a hot fluid and a cold fluid for discharge at a controlled temperature, the valve assembly comprising:

* * *

a multiple response thermostat disposed within said mixing chamber between said outlet and said flow control valve means, said multiple response thermostat including a first thermostat portion having a first response rate and a second thermostat portion having a second faster response rate, said first thermostat portion being connected in series with said second thermostat portion and said second thermostat portion being operably connected to said flow control means.

Pl.'s Ex. 1, '960 Patent, Col. 9, *ll*. 22-44.

Bradley argues that its valves have a single, non-segmented thermostat without segmented coils, therefore, its thermostats are not multiply responsive and do not meet the definition for multiple response thermostat as it is described in the patent. Def.'s Br. in Opp'n at 31; Hrg. Tr. at 32, Defs.' Opening Statement. Moreover, Bradley asserts that if claim 1 is interpreted to include its thermostat, the patent is invalid because several prior art references disclose such a thermostat. Id. None of the prior art references asserted by Bradley were disclosed to the patent office with Lawler's patent application.

In contrast, Lawler argues that the plain language of claim 1 requires only that a multiple response thermostat have a first portion and a second portion, in series, having a first and a second response rate respectively; it is not limited to having thermal coils. Pl.'s Br. at 47; Hrg. Tr. at 650-51 (citing Pl.'s Ex. 1, '960 Patent, col. 6, *l*. 63). Lawler also argues that the portions must run the length of the thermostat. Hrg. Tr. at 240, Ovens-Redirect. In addition, claim 2 adds thermal coils to the multiple response thermostat described in claim 1, therefore, Bradley's more narrow interpretation of claim 1 must fail for claim 2 to add anything to the invention. Hrg. Tr. at 651, Pl.'s Closing Arg. Lawler asserts that the thermostats used in Bradley's high/low HL200 (3200), HL130 (3130), and HL80 (3080) valves and its EFX60 (2200) emergency valves have a first portion and a second portion, each having a different response rate, and those portions are in series. Pl.'s Br. at 46-47. Therefore, the Bradley valves using such a thermostat in combination with the other elements of claim 1 infringe Lawler's '960 Patent.

Generally, the Court agrees with Lawler. The Court starts with the plain language of claim 1. K-2 Corp., 191 F.3d at 1362. The claim itself does not mention or describe a thermostat that uses thermal coils. Instead, the claim describes a multiple response thermostat that has "a first thermostat portion having a first response rate and a second thermostat portion having a second faster response rate." Pl.'s Ex. 1, col. 9, *ll*. 38-40. In addition, claim 1 requires that the two portions be connected in series, the "second thermostat portion being operably connected to [the] flow control valve means." *Id*. col. 9, *ll*. 43-44. The first mention of a multiple response thermostat in the specification describes it as "segmented to provide multiple response rates tailored to the desired operational characteristics of the thermostatic control valve." *Id*. col. 6, *ll*. 41-44. The specification goes on to describe the thermostat depicted in Figure 6, which shows a thermostat "variation of the thermal coil variety.... Also contemplated, however, are other segmented thermostats." *Id*. col. 6, *ll*. 56-63. Therefore, a multiple response thermostat as described in claim 1 must have 1) two segments or portions, 2) with different response rates, 3) connected in series, and 4) the portion with the faster response rate operably connected to the flow control valve means. There is no requirement that the thermostat have thermal coils and the specification clearly indicates that multiple response thermostats other than those described in the patent itself are contemplated. Dr. Ovens confirmed that one skilled in the art would

similarly read claim 1. Hrg. Tr. at 167-68, Ovens-Direct; *id*. at 220, Ovens-Cross.

Reading claim 1 in light of claim 2 confirms this conclusion. Under the doctrine of claim differentiation, different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope. *See* Comark Comm. Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998). Generally then, limitations in dependent claims are not read into the independent claims upon which they depend, even to avoid invalidity or infringement. *See* Karlin Tech. Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 971-72 (Fed.Cir.1999). Here, claim 2 depends on claim 1: "2. The thermostatic control valve assembly of claim 1, wherein said multiple response thermostat includes a thermal coil containing first and second volumes of temperature sensitive fluid corresponding to said first and second response rates, respectively." Pl.'s Ex. 1, col. 9, *ll*. 45-49. Claim 2 clearly adds thermal coils containing temperature sensitive fluid that correspond to the portioned thermostat described in claim 1. Claim 2 adds nothing else to the invention described in the patent. Although the doctrine of claim differentiation is not a hard and fast rule, *see* Comark Comm., 156 F.3d at 1187, in this case it supports a construction of claim 1 that allows for a multiple response thermostat without coils.

The parties also presented testimony by its experts about the meaning of "in series." Bradley's expert, Julius Ballanco ("Ballanco"), testified that two thermostat portions would be in series if they were connected with the end of one to the beginning of the other, regardless of their orientation relative to the length of the thermostat or the length of the mixing chamber. Hrg. Tr. at 603-04, Ballanco-Cross. Thus, if a cylindrical thermostat portion was connected to the end of a thermal coil thermostat portion, with the coils wrapped around the cylindrical portion, those portions would be in series. On the other hand, Lawler asserts that "in series" means segmented along its length. Hrg. Tr. at 240, Ovens-Redirect.

Starting with the plain language of the '960 Patent, the Court finds Lawler's definition closer to the mark. The '960 Patent's specification provides that the thermostat pictured in Figure 6 "is designed to expand or contract along the axis defined by the push rod in response to a change in the temperature surrounding the thermostat." Pl.'s Ex. 1, '960 Patent, col.6, *ll*. 57-58. In addition, the thermostat portions must have an orientation that allows the incoming fluid to reach one thermostat portion more quickly than the other to accomplish the stated purpose of the invention: Quick temperature control over a wide range of flow rates, particularly low flow conditions. *See* id. col. 1, *ll*. 51-60; col. 2, *ll*. 45-46; col. 6, *ll*. 47-55. The specification reads:

Generally, [the] thermostat [pictured in Figure 6] includes a first thermostat portion connected in series with a second thermostat portion. [The second t]hermostat portion has a faster response but smaller travel than [the first] portion to provide immediate, accurate control nearest the discharge of [the] flow control valve, where at low flows the hot and cold fluids may not be fully mixed. Conversely, [the first] thermostat portion has a slower response but greater travel than [the second] portion to provide subsequent control way [sic] from the discharge of [the] flow control valve, where the hot and cold fluids are more fully mixed.

Id. col. 6, *ll*. 45-55 (number references omitted). This description of thermostat portions in series corresponds to a definition of "in series" that requires an orientation of thermostat portions such that one comes in contact with mixed fluid at a different time than the other.

Moreover, the specification also specifically distinguishes a thermostat that is comprised of a cylinder portion with a thermal coil portion wrapped around the cylinder and has fluid chambers open to each other. Id. col. 6, *ll*. 40-44 ("Unlike the linear thermostat of valve assembly 10 [pictured in Figure 1], thermostat

140 is segmented to provide multiple response rates tailored to the desired operational characteristics of the thermostatic control valve."). The thermostat pictured in Figure 1 of the '960 Patent is a thermostat with thermal coils wrapped around a cylinder. The invention in the '960 Patent is different because the thermostat portions are stacked one on top of the other rather than one surrounding the other, regardless of whether there are coils or not. Thus, a definition of "in series" that simply requires one end connected to another, without reference to placement linearly or sequentially along a length does not completely describe the invention in claim 1 of the '960 Patent.

The extrinsic evidence confirms this conclusion. First, the American Heritage Dictionary defines "series" as "[a] number of objects or events arranged or coming one after the other in succession," or "[a] group of objects related by linearly varying successive differences in form or configuration." AMERICAN HERITAGE DICTIONARY (3d Ed. SoftKey Int'l Inc.1994). Either definition implies an arrangement that has different objects strung along a length rather than different objects overlapping one another.

Second, Kline testified that the '960 Patent distinguished a simple thermostat of the design suggested by Ballanco by extending one of the ends far enough so that one portion would operate after the other rather than simultaneously. Hrg. Tr. at 458-59, Kline-Cross. In addition, Kline testified that this could also be phrased that a multiple response thermostat as described by the '960 Patent is "segmented along its length as it comes down and pushes on the push rod." Id. at 459. Ovens similarly described this requirement stating that "in series"

means the two [thermostat portions] are lined up one after the other, that the head end of one is connected to the tail end of the next, and whatever comes out of the first portion directly acts as part of the input to the second portion, or passes directly through the second portion to wherever the second portion's output is. This is like putting links in a chain one right after another.

Hrg. Tr. at 164, Ovens-Direct. Although this testimony does not specifically address the question of how one skilled in the art at the time the '960 Patent issued would perceive "in series," Kline's testimony as inventor talking about the differences between the thermostat used in the Lawler 66 valve, which existed at the time Kline patented the valve combination described in the ' 960 Patent, is revealing. This is particularly true in light of its direct contradiction of Ballanco's definition and Bradley's argument stemming therefrom. Thus, the Court is persuaded that "in series" requires an orientation of thermostat portions that are connected in a chain such that one portion comes in contact with fluid in the mixing chamber at a different time than the other.

Bradley argues that even with a construction of claim 1 that allows for a multiple response thermostat without coils, its thermostat does not have two portions that have two different response rates. Bradley asserts that its thermostat has a single, non-segmented internal chamber and does not have a multiple response characteristic, therefore, it is not a multiple response thermostat. Def.'s Br. in Opp'n at 30-31. The thermostat itself and the test data provided by Lawler, however, contradict this argument.

The thermostat Bradley uses in its high/low HL80 (3080), HL130 (3130) and HL200 (3200) valves and its EFX60 (2200) emergency valves was entered into evidence. Pl.'s Ex. 372. That thermostat has a cylindrical portion of a larger diameter and longer length connected to a cylindrical portion of a smaller diameter and shorter length. The inner chamber of each cylindrical portion corresponds within a thickness of brass to the diameter of the outer dimension. The larger diameter portion has a bellows inside of it. The smaller diameter portion has a push rod inside of it. Absent thermal coils, the Bradley thermostat has the same shape as the

thermostat in the '960 Patent's Figure 6. Pl.'s Ex. 1, '960 Patent, Fig. 6.

Similarity in appearance is not enough, however. Whether the two portions have different response rates is the key inquiry. Dr. Ovens and Mr. Ballanco testified at the preliminary injunction hearing about how the shape of a thermostat and whether or not it had thermal coils could affect its response rate. *See* Hrg. Tr. at 164-65, 182, Ovens-Direct, id. at 219-20, Ovens-Cross; id. at 547-48, 549-51, 553-54, Ballanco-Direct. According to that testimony, thermostat cylinders of different diameters and different lengths will have different temperature response rates. *See, e.g.,* Hrg. Tr. at 551, Ballanco-Direct. Similarly, thermal coils of different diameters and different lengths would have different response rates. *See, e.g.,* Hrg. Tr. at 549-51. The Bradley thermostat, as described above, has two distinctly shaped cylinders, one longer than the other, the longer one having a wider diameter as well. Pl.'s Ex. 372. Based on the teachings of the experts, the thermostat portions would have different response rates because the heat transfer to the fluid inside the chambers would be different over time. *See, e.g.,* Hrg. Tr. at 550-51 (describing how tubing of different diameters and different lengths will have different surface areas thus creating a different response rate).

In addition, Dr. Ovens tested the Bradley thermostat to determine if it was likely that the two differently shaped portions of the part would have different response rates.FN8 *See* Hrg. Tr. at 173-81, Ovens-Direct; Pl.'s Ex. 247A, Ovens Test Results, Bradley Thermostat, Compare Small and Large Diameters. The test utilized insulation to minimize the response of the thermostat portion not under test. Hrg. Tr. at 173-75. Using this test, the two different portions did have different response rates, one relatively faster than the other. *See* Hrg. Tr. at 177-78; Pl.'s Ex. 247A. Moreover, tests that Eveleigh ran on the Bradley thermostat and its corresponding high/low valve reveal that the valve and the thermostat exhibit the non-linear temperature response characteristic that the valve disclose by the ' 960 Patent was designed to elicit. *See* Hrg. Tr. at 83-89, Eveleigh-Direct. *Compare* Pl.'s Ex. 332, Temperature Control Results for Lawler HiLow 802 Valve *with* Pl.'s Exs. 333, Temperature Control Results for Bradley 3080; 334, Temperature Control Results for Lawler 802 Valve with Bradley 3080 Thermostat; 335, Temperature Control Results for Bradley 3080 with Thermostat Installed Upside Down.

FN8. Bradley's expert, Ballanco, testified that Dr. Ovens' test method would not perfectly insulate the response of each portion of the thermostat because the ambient temperature could affect the results and the fluid within the chamber could flow from one portion to the other freely and would also affect the results. Hrg. Tr. at 546, Ballanco-Direct. Dr. Ovens agreed that the method could not perfectly isolate each portion, however, the results can predict the relative response rates because each test was done under conditions as controlled as possible. Hrg. Tr. at 178-80, Ovens-Direct; id. at 227-29, Ovens-Cross. The Court recognizes this limitation and will use the data as a relative comparison of the response rate for the two portions.

Although the Court recognizes the imperfections of Dr. Ovens' test, it is persuaded by both expert's testimony about the structure necessary to create a different response rate and the test data provided by Lawler for the Bradley 3080 valve that Lawler is likely to succeed in showing that the Bradley thermostat is a multiple response thermostat, which infringes the '960 Patent in combination with the other elements of the patent. Therefore, Lawler has more than a reasonable likelihood of success in proving that Bradley's high/low HL80 (3080), HL130 (3130) and HL200 (3200) valves and its EFX60 (2200) emergency valves infringe Lawler's '960 Patent.

(b) Patent Validity

Having found more than a reasonable likelihood of success on the merits of infringement of the '960 Patent, the Court now turns to an analysis of Bradley's invalidity argument. As discussed above, a patent is presumed to be valid. 35 U.S.C. s. 282. At the preliminary injunction stage, a challenger's evidence of invalidity must be "sufficiently persuasive that it is likely to overcome the presumption of patent validity." PPG Indus., Inc. v. Guardian Indus. Corp., 75 F.3d 1558, 1566 (Fed.Cir.1996). In other words, the challenger's evidence must raise a "substantial question" of invalidity. *Id.*

Bradley's evidence raises two challenges to the validity of the '960 Patent. First, Bradley argues that if claim 1 is read to include its thermostat, then it is invalid because prior art anticipates and makes obvious two thermostat portions with different response rates, in series. Bradley cites U.S. Patent No. 2,282,152, issued on May 5, 1942 to Edward Babbin (the "Babbin Patent"), as well as an old Lawler valve, the Lawler 4000, as the relevant prior art. *See* Pl.'s Ex. 250, E. Babbin, Double Action Shower Mixing Valve, May 5, 1942, Patent No. 2,282,152 (the "Babbin Patent"); Pl .'s Ex. 376, Lawler 4000 Valve Cutaway.

An anticipation defense is based on the requirement that an invention be novel or new. "The novelty requirement lies at the heart of the patent system." I DONALD S. CHISUM, CHISUM ON PATENTS s. 3.01 (Rel. No. 71, Sept. 1999) (hereafter "CHISUM ON PATENTS"). Novelty, however, is related to the nonobvious requirement. If the invention is novel, then "further inquiry must be made into whether it is new enough" to be patented. Id. Bradley's second argument is directed toward the later question, whether claim 1 of the '960 Patent was obvious in light of the same prior art references. "A claimed invention is unpatentable if the differences between it and the prior art 'are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.' " Robotic Vision Sys., Inc. v. View Engineering, 189 F.3d 1370, 1376 (Fed.Cir.1999) (quoting 35 U.S.C. s. 103(a)). *See also* Graham v. John Deere Co., 383 U.S. 1, 13-14 (1966). The Court will address each of these arguments in turn.

The defense of anticipation "requires that the same invention, including each element and limitation of the claims, was known or used by others before it was invented by the patentee." Hoover Group, Inc. v. Custom Metalcraft, Inc., 66 F.3d 299, 302 (Fed.Cir.1995). *See also* C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1349 (Fed.Cir.1998); Hupp v. Siroflex of Am., Inc., 122 F.3d 1456, 1461 (Fed.Cir.1997). A challenger cannot prove anticipation "by combining more than one reference to show the elements of the claimed invention." CHISUM ON PATENTS s. 3.02. Thus, a prior patent or device must contain all of the elements and limitations in the disputed patent as arranged in the patented device. *See* C.R. Bard, 157 F.3d at 1349; Hoover Group, 66 F .3d at 303.

The first prior art reference provided by Bradley is the Babbin Patent. Bradley argues that the thermostat described in the Babbin Patent has two portions, each with a different response rate, in series, and all parts of the thermostat come in contact with the water. Hrg. Tr. at 549-51, Ballanco-Direct. The Babbin Patent thermostat has a cylindrical core, wrapped with thermal coils. Babbin Patent, p. 2, *ll*. 12-33. Both the cylinder and the coils are filled with thermally responsive fluid. *Id.*, p. 2, *ll*. 33-35. Ballanco testified that the cylinder portion and the thermal coil portion would have two different response rates and are in series because the end of one is attached or connected to the beginning of the other. Hrg. Tr. at 549-50. As discussed in the section above, it is doubtful that this thermostat is in fact one that has portions in series, however, even if it did, the patent does not teach the invention in the '960 Patent.

The Babbin Patent drawings, the specification and the claims never disclose that the thermostat embodied in the patent has two portions, each with a different response rate, oriented in series and that both portions are

disposed within the fluid mixing chamber as required by claim 1 of the '960 Patent. *See* Pl.'s Ex. 1, '960 Patent, col. 9, *ll*. 35-36 ("a multiple response thermostat disposed within said mixing chamber ..."). To the contrary, the Babbin Patent discloses that one end of the thermostat extends into a tube and cylindrical part that has openings to the hot and cold sides of the valve. Pl.'s Ex. 250, Babbin Patent, p. 2, *ll*. 8-20. The other end is exposed to the mixing body. Id., p. 2, *ll*. 18-20. Thus, the Babbin Patent is missing several key elements that make the '960 Patent unique, namely, a multiple response thermostat with two portions that have different response rates, oriented in series such that both portions are fully exposed in the mixing chamber.

Bradley also argues that the Lawler 4000 valve discloses the invention of the '960 Patent's claim 1. The Lawler 4000 valve has a thermostat with a cylindrical body surrounded by thermal coils at one end. Pl.'s Ex. 376, Lawler 4000 Valve Cutaway ("Lawler 4000"). However, the part of the cylindrical portion without thermal coils is imbedded in the housing of the valve body, it is not disposed within the mixing chamber. Therefore, it does not anticipate the part of claim 1 that requires both the first thermostat portion and the second thermostat portion be disposed within the mixing chamber.

At the hearing, Bradley also pointed to the Lawler 66 valve and a Symmons valve as prior art. *See* Hrg. Tr. at 551-57, Ballanco-Direct. The Lawler 66 valve has a thermostat with a cylindrical portion that is completely surrounded by thermal coils. Pl.'s Ex. 364A, Thermostat from Lawler 66 Valve. The entire combined assembly is disposed within the mixing chamber of the valve. Pl.'s Ex. 364, Lawler 66 Valve. However, as discussed above, this thermostat assembly does not disclose the invention of the '960 Patent requiring the thermostat portions to be in series, or oriented such that one portion is exposed to mix fluid first, and another portion is exposed to mixed fluid later. Similarly, the Symmons valve has two thermal coil portions, one with a smaller diameter tubing than the other, the larger diameter tubing coil wrapped around the coil formed by the smaller diameter tubing. Def.'s Ex. JB3, Symmons valve. However, the two different thermostat portions are not in series as defined by the ' 960 Patent where one thermostat portion is oriented closer to the inlet and one oriented closer to the outlet of the valve. Therefore, neither the Lawler 66 valve nor the Symmons valve anticipate the claim 1 of the '960 Patent.

Bradley's anticipation arguments fail to show by clear and convincing evidence that the Lawler '960 Patent was invalid. The Court will now turn to a consideration of the obviousness challenges.

Bradley argues that the '960 Patent invention was obvious in light of the prior art in the Babbin Patent, a Powers valve, the Lawler 66 valve and the Symmons valve. Determination of whether or not an invention is obvious is a legal conclusion. WMS Gaming Inc. v. International Game Technology, 184 F.3d 1339, 1355 (Fed.Cir.1999). However, the underlying inquiries are factual. *Id*. The inquiries for obviousness are 1) the scope and content of the prior art, 2) the level of ordinary skill in the field of the invention, 3) the differences between the claimed invention and the prior art, and 4) any objective evidence of nonobviousness, such as long-felt need, commercial success, the failure of others, or evidence of copying. *Id.;* C.R. Bard, 157 F.3d at 1351. As discussed above, the party asserting invalidity based on obviousness carries the burden of proof, however, that burden "is more easily carried when the references on which the assertion is based were not directly considered by the examiner during prosecution." WMS Gaming, 184 F.3d at 1355 (citing Applied Mat'ls, Inc. v. Advanced Semiconductor Mat'ls Am., Inc., 98 F.3d 1563, 1569 (Fed.Cir.1998) ("The presentation at trail of additional evidence that was not before the PTO does not change the presumption of validity or the standard of proof, although the burden may be more or less easily carried because of the additional evidence.")). However, when a patented invention is a combination of known components that create a new result, the prior art must suggest or motivate the combination. *See id*.

"The suggestion to combine may be found in explicit or implicit teachings within the references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved." *Id*. Thus, to meet its evidentiary burden on the issue of obviousness, Bradley must have evidence that the components claimed to be obvious both existed at the time of Lawler's invention, and that combining them as Lawler did was suggested or taught by the prior art.

Bradley offers the Babbin Patent thermostat, a Powers thermostat, the Lawler 66 thermostat and the Symmons valve thermostat as evidence of the obviousness of a multiple response thermostat as described in the '960 Patent. Essentially, Bradley offers Ballanco's testimony that these thermostats have two portions, in series as evidence that they make the multiple response thermostat described by claim 1 obvious. Hrg. Tr. at 550, 553-54, 557, Ballanco-Direct. Its argument fails as to each prior art reference.

With respect to the Babbin Patent thermostat, the patent discloses a thermostat with two portions without describing them as such. In addition, the patent does not require that the two portions be in series as this Court has interpreted that term. To be in series, the thermostat portions must come one after the other, not overlap with respect to the inlet and outlet for the water. The Babbin Patent does not require that the cylinder and coils of its thermostat have that orientation. Moreover, the bulk of the cylindrical portion of the thermostat described by the Babbin Patent is imbedded in a tube rather than exposed in the mixing chamber.

Similarly none of the thermostats in the valves Bradley offers as prior art make obvious the orientation of thermostats in series as interpreted by this Court. The prior art suggestions make the thermal coils co-extensive with the cylindrical portions of the thermostat. Moreover, Ballanco tested the Lawler 66 thermostat, the Powers thermostat and the Bradley EFX8 (2000) thermostat (configured like the Lawler 4000 valve thermostat) similarly to how Ovens tested the Bradley thermostat. However, his choice of portions was only suggested by the linear dimension, not the dimension he purported as teaching "two thermostat portions in series:" the cylindrical portion and the thermal coil portion connected at one end. *See* Defs.' Ex. JB1, Julius A. Ballanco, Test Report, Test for Thermostat for Thermostatic Mixing Valves. In other words, Ballanco's test parameters do not coincide with his own definition of two thermostat portions. Rather, it utilizes the teaching of the '960 Patent of two thermostat portions in series, or oriented such that one sees fluid before the other, to arbitrarily create two thermostat portions.

In addition, the prior art thermostat example in the Babbin Patent does not have both portions fully exposed in the mixing chamber as taught by the '960 Patent. The Babbin Patent teaches instead that only a part of the cylindrical portion is so exposed, while the thermal coil portion is completely so exposed. There is little if any suggestion in the that reference to extend a longer length of the cylinder portion into the mixing chamber as taught by the '960 Patent. Kline even testified that if a simple thermostat with a cylindrical portion surrounded by a thermal coil portion was a multiple response thermostat as described by the '960 Patent, he would have had to disclose the Lawler 66 valve to the Patent and Trademark Office ("PTO"), but he did not do so. Hrg. Tr. at 459, Kline-Cross. Kline testified that the multiple response thermostat in the '960 Patent was different because it is "segmented along its length as it comes down and pushes on the push rod," and is disposed within the mixing chamber of the valve. Id. at 459, 461. Kline's testimony reveals that one skilled in the art at the time of the invention perceived a difference between the thermostatic valve assemblies described by the prior art and the multiple response thermostat disposed within the mixing chamber of the valve described by the '960 Patent. Although not direct evidence of nonobviousness, Kline's perception at the time of the invention is indicative of the thinking of one skilled in the art-the existing thermostatic mixing valve assemblies did not adequately respond to changes in flow rate of water-something other than a cylinder wrapped with thermal coils was needed.

Finally, the problem solved by the Lawler '960 Patent, quick temperature control over a wide range of flow rates, was a long-felt need. Hrg. Tr. at 70-72, Eveleigh-Direct; id. at 158, Ovens-Direct; Pl.'s Ex. 1, '960 Patent, col. 1, *ll*. 18-20, 32-35, 46-47. Prior to the '960 invention, multiple valves were used rather than a single valve with multiple responses. In addition, Lawler's new valve was met with some skepticism. Hrg. Tr. at 89, Eveleigh-Direct. However, once tried, the product clearly became successful with Lawler achieving sales of $986,000.00 in 1999. Hrg. Tr. at 140, Eveleigh-Direct; Eveleigh Aff. para. 28.

In summary, Bradley has failed to show by clear and convincing evidence that the Lawler '960 Patent is invalid for anticipation or obviousness. Having met the challenges raised by Bradley, Lawler has succeeded in showing more than a likelihood of success on the merits of its '960 Patent infringement claim.

2. '531 Patent

Having examined and considered the claim language, the specification, and the context of the '531 invention, the Court is not satisfied that Lawler has demonstrated a reasonable likelihood of success on the merits. Of the nine claims contained in the '531 Patent, at the preliminary injunction hearing the parties focused on the language in claim 6 that describes specific working parts of a thermostatic mixing valve that are either "in communication" or "in fluid communication," and correspondingly, whether the Bradley valves infringe that claim. *See* Pl.'s Ex. 2, '531 Patent, col. 14, *ll*. 7-13. In addition, the parties focused on whether the Bradley valves infringe claim 8, which describes the specific configuration of a backseat valve relative to an opening for hot water into the valve.FN9 *See* id. col. 14, *ll*. 29-33. A court must interpret the claims before applying them to the alleged infringing device, thus the analysis starts with interpretation of claim 6.FN10

FN9. The Court notes that in its Brief in Opposition to Lawler's motion for preliminary injunction, Bradley argues that the "slots" that provide the opening for the relatively colder liquid in its valve assembly are not apertures. Defs.' Br. in Opp'n at 45. However, the plain meaning of aperture is an opening without a limit on the geometry of the opening. Ballanco admitted as much during the hearing. Hrg. Tr. at 572-73, Ballanco-Cross. Bradley seemingly abandoned this argument at the preliminary injunction hearing, however, the Court finds that slots are apertures, although an aperture is not necessarily a slot.

FN10. As with the '960 Patent, neither party has submitted the prosecution history to aid the Court in interpreting the claim language. Therefore, the Court must rely upon the specification and other claims in the patent in construing the disputed claims.

The language in claim 6 reads:

6. A thermostatic mixing valve comprising:

a housing defining a liquid chamber;

a thermally responsive control member disposed within said liquid chamber and having an actuator operable in response to the temperature of liquid within said liquid chamber;

a hollow valve liner defining a number of apertures in communication with a first source of relatively colder liquid and defining a first bore in communication with a second source of relatively hotter liquid, said liner further defining a shuttle bore in fluid communication between said liquid chamber and said number of apertures and said first bore; and

a shuttle valve disposed within said shuttle bore and operably coupled to said actuator, said shuttle valve configured to said actuator, said shuttle valve configured to variably restrict the flow of liquid through said first bore in response to movement of said thermostat actuator without restricting the flow of liquid through said number of apertures.

Pl.'s Ex. 2, '531 Patent, col. 14, *ll*. 1-19.

The phrase in dispute is "a hollow valve liner defining ... a first bore in communication with a second relatively hotter liquid ." Id. col. 14, *ll*. 7-10. Bradley argues that its EFX 8 (2000), EFX25 (2100) and EFX60 (2200) valves do not have a "hollow valve liner" that defines a first bore that is adjacent to or touching a relatively hotter source of liquid. Defs.' Br. in Opp'n at 42; Hrg. Tr. at 565, Ballanco-Cross. Instead, the valve liner has slots that come in contact with the relatively hotter source of liquid; those slots in turn come in contact with the main cavity of the valve, or the first bore. Defs.' Br. in Opp'n at 43; Pl.'s Ex. 375, Bradley 2200 Inner Valve Cutaway ("Bradley 2200 Valve"). Thus, the first bore is not "in communication" with the source of hot liquid because it is not directly open to the source itself, the initial "bore area" is in communication with the slots. *See* Hrg. Tr. at 565, 567, Ballanco-Cross. Thus, "in communication" is relative to parts and means directly connected or touching, whereas "in fluid communication" is relative to fluid and means fluid flowing freely. *See* id. at 569-70.

In contrast, Lawler argues that the liner defines a bore, physically adjacent to the slot that opens in to the relatively hotter source of fluid and because the hotter fluid flows freely through the bore defined by the liner, the "first bore" is "in communication" with the relatively hotter liquid. In other words, in this phrase of claim 6, "in communication" means the same thing as "in fluid communication." Id. at 194, Ovens-Direct.

The Court finds that in the context of the '531 Patent "in communication" can be broader than "in fluid communication," however, it is not the narrow "adjacent to" or "directly connected with" suggested by Bradley. First, utilizing the intrinsic evidence of the specification and the other claims the Court finds some limited guidance. The claim itself uses the two different phrases, therefore, it is logical to presume that they mean different things. In ordinary grammar, fluid in the phrase "in fluid communication" modifies communication. Thus in common usage "in fluid communication" connotes a mode of making a connection-by fluid-rather than the more general concept of being "in communication" by any mode or means of communicating, whether through liquid or electrical signals or through a particularly shaped opening.

Beyond this simple grammatical analysis, the specification only makes the meaning of "in communication" more elusive by describing the preferred embodiment of claim 6 using the conjugation "communicate" instead of "in communication." *See* Pl.'s Ex. 2, '531 Patent, col. 7, *ll*. 63-67 ("The hot liquid bore opens into the hot liquid chamber so that liquid can be communicated through the bore and up through the shuttle bore of the valve liner."). However, there is nothing in the specification or the other claims of the '531 Patent that would limit "in communication" to adjacent.

Having reviewed the intrinsic evidence and still finding ambiguous the term "in communication," the Court will now turn to extrinsic evidence. The dictionary describes "communication" as the act of transmitting or

connected to or open to. *See, e.g.,* WEBSTER'S THIRD NEW INT'L DICTIONARY 460 (Merriam-Webster Inc.1981). That common meaning is not modified by either a specific mode of communication or by the limiter "directly." Therefore, the Court finds that "in communication" means open to or connected to in a broader sense than adjacent to. Likewise, it is broader than "in fluid communication" because it is not limited to one mode or means of communication.

Bradley also argues that the language of claim 6 requires that the first bore and the shuttle bore be two separate pieces rather than different parts of the same piece. The plain language of claim 6, however, is not so limiting. The claim requires that the hollow valve liner define a bore in communication with the hotter liquid source, and that the liner define a shuttle bore as well. Pl.'s Ex. 2, '531 Patent, col. 14, *ll*. 9-11. In turn, the shuttle bore has a shuttle valve disposed within it such that the piece can variably restrict the flow of relatively hotter water through the first bore. Id. col. 14, *ll*. 14-19. Although the preferred embodiment shows the first bore and the shuttle bore as two distinct pieces, there is no limiting language in the claims that would require the first bore and the shuttle bore to be configured that way. The claim only specifies that the liner must define each part and that those parts are in communication or in fluid communication with other parts. Therefore, a valve liner that defines both a first bore in communication with a relatively hotter liquid source and a shuttle bore with its corresponding communication requirements can be different parts of the same piece.

Although Bradley's arguments about interpretation of claim 6 do not all fall in its favor, the Court finds persuasive one of its argument that its valve does not infringe the '531 Patent. Bradley makes a number of arguments that its valve does not infringe. First, it avers that its valve does not have a "first bore in communication with a second source of relatively hotter liquid." Id. col. 14, *ll*. 9-10. This argument fails under the interpretation above for "in communication." Two of Bradley's valves have slots in their liner that opens into an annular cavity or bore, which is the entrance for the relatively hotter liquid into the valve assembly.FN11 *See* Pl.'s Ex. 375, Bradley 2200 Valve Liner Cutaway. As discussed above, the shape of the opening to the bore defined by the liner is not important so long as the bore is connected to the relatively hotter source of liquid. Bradley cannot assert that the bottom annular cavity is not communicating with the hot water that is flowing into it through the opening formed by the slot. Such an argument would be similar to saying that the pantry is not in communication with the kitchen because there is a doorway between them.

FN11. The Bradley EFX8 (2000) valve has a bore opening directly into the reservoir of hotter liquid, therefore that part clearly falls within this disputed language in claim 6. *See* Pl.'s Ex. 246A, Bradley EFX8 (2000) Valve Drawing.

Bradley also argues that its valve assembly does not have "a shuttle bore in fluid communication between said liquid chamber and said number of apertures and said first bore." Pl.'s Ex. 2, '531 Patent, col. 14, *ll*. 11-13. Specifically, Bradley has separated with an insert the area in which the shuttle valve moves from the portion of the valve liner where the apertures are cut. The insert creates an inner bore through which the relatively hotter fluid moves from the shuttle bore area. In addition, the insert has holes cut in it to allow fluid from the relatively colder apertures to mix with the relatively hotter fluid on the inside of the insert. Ballanco testified that the relatively hotter fluid would likely mix with the relatively colder fluid inside the secondary chamber created by the insert rather than in the area between the holes in the insert and the apertures in the liner. Hrg. Tr. at 561-62, Ballanco-Direct, id. at 610-11, Ballanco-Cross (questions from the Court). Thus, the shuttle bore was not in fluid communication with the apertures defined by the valve liner because the fluid stream that had passed through the shuttle bore never reached the apertures.

Lawler presented Dr. Ovens' testimony that fluid could flow freely between any of these areas and thus, the shuttle bore was in fluid communication with the apertures even with the insert that creates a specific pathway through the inner bore for the relatively hotter fluid. Id. at 194, 204, Ovens-Direct. Yet, during cross examination Dr. Ovens stated that the relatively hotter water never contacted the apertures in normal operation, otherwise it would have to flow backwards and the check valve prevents the water from flowing backward. Id. at 236, Ovens-Cross. Given that both experts suggested that the relatively hotter fluid would not flow past the apertures in the Bradley valve assembly, it is difficult to see how that assembly could literally infringe the language in claim 6 that "said liner further defin[es] a shuttle bore in fluid communication between said liquid chamber and said number of apertures and said first bore...." Pl.'s Ex. 2, '531 Patent, col. 14, *ll*. 10-13. There simply is no "fluid communication" between the shuttle bore and the apertures.

Furthermore, neither party entered into evidence test data or information about the likelihood that the relatively hotter water would or would not push through the holes in the insert and reach the fluid area near the apertures. However, the Court is not without some evidence that this conclusion is correct. Lawler entered evidence that the Bradley emergency products that use this valve configuration did not meet ANSI Z358.1-1998, the standard requiring tepid water at a minimum of twenty gallons per minute for fifteen minutes, because there was a drop in the water pressure below twenty gallons per minute when hot water failure was simulated. Hrg. Tr. at 61-67, Eveleigh-Direct; Pl.'s Ex. 338, Lawler Test Results on Bradley 2200 @ 85 (deg.) F, Mar. 6, 2000. Similar tests Lawler performed on its comparable emergency valve product did not show such a drop. Hrg. Tr. at 69-71; Pl.'s Ex. 339, Lawler Test Results on Lawler 911E @ 80 (deg.)F, Mar. 6, 2000. Although not direct evidence that the Bradley valve does not infringe, it does show that the difference between the valve assemblies is significant from a performance standpoint.

The Court finds that Lawler has not shown a likelihood of success on the merits of its claim that Bradley's EFX 8 (2000), EFX25 (2100) and EFX60 (2200) valves infringe the '531 Patent. Although the parties presented evidence on the validity of the '531 Patent, it is unnecessary for the Court to address this issue having determined that it is not likely Bradley infringes the patent.

3. Summary

The Court has determined that Lawler's likelihood of success in proving that Bradley's HL80 (3080), HL200 (3200), HL130 (3130) and EFX60 (2200) valves infringe Lawler's '960 Patent is high. However, it has also determined that Lawler's likelihood of success in proving that Bradley's EFX60 (2200), EFX25 (2100) and EFX8 (2000) valves infringe Lawler's '531 Patent is very low. The Court will now assess the irreparable harm to Lawler if an injunction is not granted.

B. IRREPARABLE HARM ABSENT INJUNCTION

The Court has found that Lawler has made a strong showing of likelihood of success on the merits of its '960 Patent infringement claim. As to that claim, Lawler is entitled to a presumption of irreparable harm. Such a presumption arises when a patentee makes a clear showing that its patent is being infringed and is valid. *See* Polymer Tech. Inc. v. Bridwell, 103 F.3d 970, 973 (Fed.Cir.1996); Bio-Technology Gen'l Corp. v. Genentech, Inc., 80 F.3d 1553, 1558 (Fed.Cir.), *cert. denied,* 519 U.S. 911 (1996); Sofamor Danek Group, Inc. v. DePuy-Motech, Inc., 74 F.3d 1216, 1222 (Fed.Cir.1996); Reebok Int'l Ltd. v. J. Baker, Inc ., 32 F.3d 1552, 1556 (Fed.Cir.1994). The presumption is based on the concept that "the principal value of a patent is its statutory right to exclude, [thus] the nature of the patent grant weighs against holding that monetary

damages will always suffice to make the patentee whole." Hybritech, 849 F.2d at 1456-57. *See also* Polymer Tech., 103 F.3d at 976 (quoting *Hyrbritech* with approval). However, the presumption is rebuttable and acts as a procedural device to shift the burden of production on the issue of irreparable harm to the alleged infringer. *See* Polymer Tech., 103 F.3d at 976.

Bradley argues that the presumption should be rebutted for several reasons. First, Lawler delayed in seeking this preliminary injunction for fifteen months after filing suit even though Bradley was selling its emergency valve line at the time the suit was filed. Defs.' Br. in Opp'n at 4. Furthermore, Lawler's sales have increased from the time Kline left the company in February 1997, through 1998 when Bradley introduced its emergency valve product line, and even through to the date of the hearing in March 2000. *Id*. at 6; Hrg. Tr. at 29-30, Defs.' Opening Statement; *id*. at 673, Defs.' Closing Statement. Although the Court agrees that these factors can rebut the presumption of irreparable harm, the strength of the rebuttal is not enough to overcome Lawler's evidence.

Lawler had no knowledge that Bradley had continued to develop additional thermostatic water mixing valve products that used the allegedly infringing thermostat until September 1999 at the earliest, and most likely until January 2000. When Lawler filed this suit in 1998, it did so in response to Bradley's entry into the emergency valve market with products that Lawler claimed Kline had developed using Lawler trade secrets. *See generally* Compl. Lawler added the patent infringement claim in June 1999. *See* Am.Compl. Bradley made the first sales of its high/low master control valve in late summer or early fall of 1999. Hrg. Tr. at 305, Kleczka-Cross. Furthermore, Lawler was unaware of Bradley's intent to introduce an entire line of thermostatic mixing valves until Lawler deposed James Carroll ("Carroll"), president of Bradley, in January 2000. Carroll Dep. at 1 (stating the deposition was taken on January 10, 2000). Carroll's comments were further confirmed in a February 25, 2000 Bradley press release announcing its intention to proceed with a full thermostatic mixing valve product launch.FN12 Hrg. Tr. at 623-24, Bolin-Direct; Pl.'s Ex. 340, Bradley Press Release, Majority of Patent Infringement Allegations Dropped in Thermostatic Mixing Valve Suit, Feb. 25, 2000. Until the January deposition, Lawler had been under the impression that Bradley had put its thermostatic water mixing valve product launch on hold until after the trial in this suit. Lawler apparently had no information that would lead it to believe differently. Nor did Bradley provide evidence that would negate the reasonableness of Lawler's belief under the circumstances. Lawler filed for this preliminary injunction on February 17, 2000, hardly a delay given the January 10, 2000 date of Carroll's deposition.

FN12. The press release stated:
MENOMONEE FALLS, WIS.,-Lawler Manufacturing has dropped three of five patent infringement allegations in its suit against Bradley regarding its introduction of a line of thermostatic mixing valves.

The remaining two assertions will be upheld only in the unlikely event that the courts agree with Lawler's liberal interpretations of applicable patent laws, according to Bradley's attorneys.

"The Bradley thermostatic mixing valve products are different and do not infringe on the Lawler patents," say Barry Grossman, an attorney representing Bradley.

"It is clear that Lawler has filed suit to protect market share against a superior product and not because Bradley has infringed on its patents," he says.

Grossman says that the remaining two assertions of patent infringement take "an expansive reading of the patent law," which if properly construed will show that the Bradley Navigator thermostatic mixing valves do not infringe the Lawler patents.

"If the Lawler interpretations of U.S. patent laws are upheld, it in fact means that Lawler's own thermostatic mixing valve patents are invalid," Grossman asserts.

The Bradley Navigator line of thermostatic water mixing valves were developed over a three-year period and incorporate research conducted with specifying engineers, according to a Bradley spokesperson.

"Bradley is confident with its position in this action and of the uniqueness of the new Navigator line of thermostatic mixing valves," state Jim Carroll, president of Bradley Corporation. "It took our design team years of effort and a major capital investment to create this innovative product. We would have come to market faster and at less cost had we created a product like on already in the market. The introduction of the Navigator line is good for the industry and good for our customers."

Bradley is continuing its full national roll out of the Navigator thermostatic mixing valve line and does not foresee any delays due to the litigation.

* * *

Pl.'s Ex. 340, Bradley Press Release, Majority of Patent Infringement Allegations Dropped in Thermostatic Mixing Valve Suit, Feb. 25, 2000.

Furthermore, although loss in market share and sales to the infringing product is helpful in establishing irreparable harm, it is not a necessary element. Nor is it availing that Bradley considers the estimated harm to Lawler minimal because it could pay that amount of damages. As discussed briefly above, one of the primary benefits of owning a patent is the right to exclude. *See* Polymer Tech., 103 F.3d at 975-76. Concomitant with that right is the patentee's ability to protect itself from intangible harm that will arise if the patentee does not express its interest in protecting its property. *See* id. at 976 (discussing the scope of the right to exclude others). Lawler has not sought to license its '960 Patent technology to anyone. Further, the company feels it has a unique position in the market place relative to the other major competitors because the competing products are more cumbersome and expensive overall. Thus, without an injunction to protect its property interest in is patent, Lawler could suffer irreparable damage to its reputation as an innovator-a label with immeasurable worth in an industry that Bradley's product manager described as mature.

In addition, Lawler presented evidence that when Bradley entered the emergency valve market Lawler was forced to lower its emergency valve prices to its major customer. *See* Pl.'s Ex. 350, Letter to Bob Eveleigh from Allen D. Zeigler, Haws Corp., Nov. 23, 1999. This is evidence of competitive tactics that could hurt

Lawler in the high/low thermostatic mixing valve market if Bradley is not enjoined from selling its mixing valves that infringe the ' 960 Patent. Accordingly, the Court finds that Bradley has not provided enough evidence to overcome the presumption of irreparable harm to Lawler with regard to the '960 Patent.

Briefly, with regard to the '531 Patent, Lawler presented evidence that it would suffer irreparable damage to its goodwill if Bradley was allowed to continue selling the EFX emergency valve product line. The primary evidence Lawler presented was the failure of Bradley's emergency valve products to meet the ANSI specification for tepid water (without temperature spikes) and maintain a flow rate of twenty gallons per minute for fifteen minutes even in failure mode. Although the Court agrees that such a product could damage Lawler's sales efforts with its 911 emergency valve product line, balanced against the nearly negligible likelihood that Bradley's emergency valves infringe the '531 Patent, the Court is not persuaded that Lawler will be irreparably harmed. In addition, Bradley's argument that Lawler delayed in seeking an injunction is more persuasive with respect to the emergency valves because Bradley's introduction of those products prompted Lawler to file this suit in 1998. Certainly Lawler could have filed for an injunction sooner if its goodwill would be damaged irreparably by Bradley's continued marketing of an inferior infringing product.

In summary, Lawler is entitled to a presumption of irreparable harm based on the strength of its showing of likelihood of success on the merits relative to its '960 Patent infringement claim. Moreover, Bradley has failed to present enough evidence to rebut that presumption. Further, Lawler is not entitled to the presumption on its '531 Patent claim because the likelihood that Bradley infringes that patent is low. Finally, Lawler has not presented enough evidence to show irreparable harm on the '531 Patent infringement claim that would entitle it to a preliminary injunction for those products.

The Court, having found that Lawler has succeeded in providing persuasive evidence on the first two elements of a preliminary injunction on the '960 Patent, will now balance the hardships of the parties.

C. BALANCE OF HARDSHIPS

Even with the evidence Bradley presented that it will be harmed if an injunction issues, the Court finds that the balance tips in favor of granting the preliminary injunction. Bradley asserts that an injunction now will potentially cause it to lose its business with a large distributor. Hrg. Tr. at 297-99, Kleczka-Direct. Bradley currently sells its line of emergency fixtures (primarily emergency shower equipment) through W.W. Grainger ("Grainger"), a large distributor of industrial products. Id. at 295-96. Although Grainger grants exclusive contracts to suppliers, every five years it will put the business up for bid. Id. at 297. According to Bradley, in addition to maintaining good relations with Grainger during the five year contract period, the key to keeping the business is introducing new products. Id. Three of Bradley's thermostatic mixing valves that have been offered to Grainger are involved in this suit. Id. Bradley hypothesizes that it will lose its twenty year relationship with Grainger if it is enjoined from selling those products. Id. at 298. In addition, Bradley estimates that its sales to Grainger are approximately $4 million per year, or a total of $20 million in sales and approximately $12 million in profits over the five year contract term. Id. at 299. At the time of the hearing, Grainger was only selling Bradley emergency valves, it had not started selling Bradley high/low valves. Id. at 302, Kleczka-Cross.

Bradley also presented evidence that it had spent $1.7 million developing its thermostatic water mixing valve technology over three years. Id. at 292, Kleczka-Direct; id. at 305, Kleczka-Cross. Approximately $700,000.00 of that investment was in inventory. Id. at 306, Kleczka-Cross. However, only approximately

$500,000.00 was spent before December 1998 when this suit was filed. Id. at 309.

Although Bradley has presented evidence that it could lose a large and profitable customer, as of the date of the preliminary injunction hearing it had not sold its high/low thermostatic water mixing valves to Grainger. Moreover, of the products that it had introduced, the emergency valves, only one would be enjoined based on the findings of this Court, the EFX60 (2200). In addition, as Lawler aptly points out, "[o]ne who elects to build a business on a product found to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected." Windsurfing Int'l, Inc. v. AMF, Inc., 782 F.2d 995, 1003 n. 12 (Fed.Cir.), *cert. denied,* 477 U.S. 905 (1986). It is clear from Bradley's press release in February 2000 that it had assumed the risk of proceeding with the launch of a product line involved in a patent infringement suit.

Furthermore, Bradley had the opportunity to mitigate its investment in the thermostatic water mixing valve market when this suit was filed in 1998, but it chose not to do so. Therefore, its investments after that time can only be attributed to its decision to gamble on Kline's ability to engineer around his own patents.

Because the harm to Bradley is in large part self-inflicted and minimized by the more narrow scope of this Court's findings with respect to Lawler's request for an injunction, the balance of harms weighs heavily toward Lawler. The Court will now assess the harm to the public interest if Bradley is enjoined from making, using or selling its HL80 (3080), HL130 (3130), HL200 (3200) and its EFX 60 (2200) products.

D. PUBLIC INTEREST

There is no evidence that the public interest in competition will be affected by a preliminary injunction against Bradley, but the public's interest in the protection of patents would be harmed if the Court erroneously denied an injunction against the '960 Patent infringing products. Lawler presented testimony that other master control valve products were on the market. Hrg. Tr. at 354, Kwekkeboom-Cross. In addition, evidence was presented that Lawler was rated fourth in the thermostatic water mixing valve market generally. Pl.'s Ex. 30, Letter, From George Whitely, Stephan & Brady Marketing Research Firm, to Jon Dommisse, Bradley, Dec. 16, 1997. Although none of the other competitors have a single valve product, that is a benefit Lawler obtained by virtue of its patent and there was no evidence that Lawler could not successfully service the market for single valve high/low products. Furthermore, the Court has found that Lawler has more than a reasonable likelihood of success on the merits of its '960 Patent infringement claim, which means the public interest favors protecting the patent. The balance of the evidence reveals that the public interest will not be harmed if an injunction issues on the products infringing the '960 Patent.

V. CONCLUSION

The Court has thoroughly reviewed the evidence presented by the parties in support of their positions at the hearing held in this matter on March 16, 20 and 21, 2000, and that was attached to their briefs. After careful consideration, the Court finds that Lawler's motion for a preliminary injunction with respect to the trade secrets should be DENIED, with respect to products infringing the '531 Patent should also be DENIED, but with respect to products infringing the '960 Patent should be GRANTED. Bradley is preliminarily enjoined from making, using, selling or offering to sell its HL80 (3080), HL130 (3130), HL200 (3200) and EFX60 (2200) valves, colorable imitations thereof, and from making, using, selling or offering to sell the thermostat assembly used in its HL80 (3080), HL130 (3130), HL200 (3200) and EFX60 (2200) valves, until after a full trial on the merits of this infringement action. Lawler shall post a bond with the Court to secure this injunction in the amount of $500,000.

IT IS SO ORDERED this __ day of April, 2000.

S.D.Ind.,2000.
Lawler Mfg. Co., Inc. v. Bradley Corp.