

IP 02-1215-C H/L Knauf v Certainteed [4]  
Judge David F. Hamilton

Signed on 03/24/08

**NOT INTENDED FOR PUBLICATION IN PRINT**

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF INDIANA  
INDIANAPOLIS DIVISION

KNAUF FIBER GLASS, GMBH,	)	
	)	
Plaintiff,	)	
vs.	)	NO. 1:02-cv-01215-DFH-WTL
	)	
CERTAINTEED CORP.,	)	
	)	
Defendant.	)	

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF INDIANA  
INDIANAPOLIS DIVISION

KNAUF FIBER GLASS, GmbH,	)	
	)	
Plaintiff,	)	
	)	
v.	)	CASE NO. 1:02-cv-1215-DFH-WTL
	)	
CERTAINTTEED CORPORATION,	)	
	)	
	)	
Defendant.	)	

FINDINGS OF FACT AND CONCLUSIONS OF LAW  
ON DEFENDANT'S COUNTERCLAIM

*Introduction*

This patent infringement action is now before the court on the trial of the sole remaining claim, defendant's counterclaim seeking to have the case declared "exceptional" under 35 U.S.C. § 285 so that defendant may recover its attorney fees incurred in the action. The court now states its findings of fact and conclusions of law after a trial on that counterclaim. As explained below, the court finds that defendant has failed to prove its counterclaim by clear and convincing evidence.

Plaintiff Knauf Fiber Glass, GmbH, filed this suit against defendant CertainTeed Corporation in August 2002 alleging infringement of U.S. Patent No.

6,270,865, which issued on August 7, 2001 after an eight-year prosecution history. The '865 patent claims a narrow but commercially successful niche in a mature and "crowded" art, insulated fiberglass duct board. The patent describes a fiberglass duct board with a smooth fiberglass mat facing on the air-stream side of the board. According to the patent, the fiberglass mat facing permits smoother, faster, and less turbulent air-flow, and provides a tougher, more durable surface than other linings for duct board. In recent years, such mat-faced products have come to dominate the market for rigid fiberglass duct board.

Claim 3 of the '865 patent claims:

A rigid air duct for conducting flowing air, the air duct comprising:

a fiber glass board having an interior surface and an exterior surface, the fiber glass board being deformed to cause the interior surface to define a channel for conducting flowing air, and

a mat facing adhered to the interior surface of the fiber glass board to provide a smooth air-contacting surface lining the channel to maximize laminar flow of air flowing through the channel, the mat facing being a fabric including glass fibers, wherein the fiber glass board further includes a first shiplap edge adjacent to the interior surface and the mat facing is adhered to the shiplap edge.<sup>1</sup>

The adherence of the mat to the shiplap edges themselves was critical in ultimately obtaining the '865 patent. The significance of this feature has been highly controversial in the litigation.

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<sup>1</sup>The "shiplap edges" are formed in the manufacturing process by compressing the glass fibers more tightly in a narrow band along the board edges that are perpendicular to the direction of air flow. By alternating the sides of the compression, segments of folded duct board can be fitted together with strong overlapping male-female joints.

In May 2003, the court construed disputed claim terms. The parties responded to the claim construction ruling by stipulating that defendant CertainTeed's accused products infringed the '865 patent. CertainTeed then moved for summary judgment on several grounds, including anticipation, obviousness, and inequitable conduct. When CertainTeed filed its reply brief on summary judgment on invalidity, it submitted prior art that it had not previously provided to Knauf's counsel. Dkt. No. 119, Ex. D, also Trial Ex. 61. That prior art shows the '865 patent is almost certainly invalid as anticipated by a product already on the market in Europe. That prior art persuaded Knauf, where earlier submissions of prior art had not, to dismiss its patent infringement claims against CertainTeed. CertainTeed dismissed without prejudice its counterclaims for declarations of invalidity and unenforceability but continued to pursue its counterclaim for coercive relief under 35 U.S.C. § 285. See *Knauf Fiber Glass, GmbH v. CertainTeed Corp.*, 2004 WL 771257 (S.D. Ind. March 4, 2004) (granting Knauf's motion to dismiss its claims and denying cross-motions for summary judgment on CertainTeed's counterclaim for damages under section 285).

After the court resolved a long-pending discovery dispute concerning claims of fraud to pierce the attorney-client privilege, see *Knauf Fiber Glass, GmbH v. CertainTeed Corp.*, 2006 WL 3240520 (S.D. Ind. Sept. 28, 2006) (denying reconsideration), discovery was completed and the counterclaim was tried to the court in February 2007. As a reader will see, the legal standards that apply to that counterclaim require the court to consider the entire prosecution history and

numerous issues of validity and enforceability, as well as the entire course of the litigation itself. After trial, the parties submitted more than 200 pages of proposed findings of fact and conclusions of law. The court now states its findings of fact and conclusions of law. Substance rather than the court's label shall govern whether a particular item is treated as a finding of fact or conclusion of law.

A summary of applicable law may make the findings of fact easier to follow. In "exceptional" patent infringement cases, the court may award reasonable attorney fees to the prevailing party. 35 U.S.C. § 285. Section 285 serves two purposes: (1) to compensate the prevailing party for its expenses in prosecuting or defending the suit, and (2) to deter clearly unwarranted infringement suits. See *Automated Business Co. v. NEC America, Inc.*, 202 F.3d 1353, 1355 (Fed. Cir. 2000). In cases against infringers, section 285 can also provide a useful deterrent against both infringement and frivolous challenges to patents. See, e.g., *Eli Lilly and Co. v. Zenith Goldline Pharmaceuticals, Inc.*, 264 F. Supp. 2d 753, 759 (S.D. Ind. 2003) (awarding fees under § 285 where generic drug manufacturer's challenge to prescription drug patent was objectively baseless and reckless).

The Federal Circuit has recognized many varieties of misconduct that can make a case exceptional, including inequitable conduct before the Patent and Trademark Office (PTO) and litigation misconduct, which may include bringing an unjustified and frivolous suit for infringement. See *Epcon Gas Systems, Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1034 (Fed. Cir. 2002); *Yamanouchi*

*Pharmaceutical Co. v. Danbury Pharmacal, Inc.*, 231 F.3d 1339, 1346-47 (Fed. Cir. 2000); accord, *Evident Corp. v. Church & Dwight Co.*, 399 F.3d 1310, 1315 (Fed. Cir. 2005). In cases like this one, where accused infringers prevail on the merits, exceptional cases are normally those of bad faith litigation and/or fraud or inequitable conduct by the patentee in procuring the patent. *Superior Fireplace Co. v. Majestic Products Co.*, 270 F.3d 1358, 1377-78 (Fed. Cir. 2001); *Cambridge Products, Ltd. v. Penn Nutrients, Inc.*, 962 F.2d 1048, 1050-51 (Fed. Cir. 1992).

Patent applicants have a duty to prosecute applications in the Patent and Trademark Office with candor, good faith, and honesty. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995); 37 C.F.R. § 1.56(a) (duty applies to each individual associated with filing and prosecuting patent application). Inequitable conduct may include both deliberate misrepresentations and deliberate omissions or failures to disclose material information. *Monsanto Co. v. Bayer Bioscience N.V.*, 514 F.3d 1229, 1233-34 (Fed. Cir. 2008); *Bruno Independent Living Aids, Inc. v. Acorn Mobility Services, Ltd.*, 394 F.3d 1348, 1351 (Fed. Cir. 2005); *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1070 (Fed. Cir. 1998). The key elements are that the misrepresentation or omission must have been both (a) material and (b) made with intent to deceive the PTO. *Bruno Independent Living Aids*, 394 F.3d at 1351.

The party claiming inequitable conduct must prove its case by clear and convincing evidence. *Monsanto*, 514 F.3d at 1233-34; *Refac International, Inc. v.*

*Lotus Development Corp.*, 81 F.3d 1576, 1581 (Fed. Cir. 1996). When the showing of materiality is especially strong, the showing of intent may be proportionately less, and vice versa, but both elements still must be shown by clear and convincing evidence. See *Digital Control Inc. v. Charles Machineworks*, 437 F.3d 1309, 1313 (Fed. Cir. 2006). Deceptive intent need not be proved with direct evidence, but may be inferred from all the circumstances, especially where the evidence shows a knowing failure to disclose material information and no credible explanation for the failure. E.g., *Bruno Independent Living Aids*, 394 F.3d at 1354. Where both elements are proved, the court must also then weigh the evidence to determine whether the equities warrant a finding of inequitable conduct. *Digital Control*, 437 F.3d at 1313; *Monsanto Co. v. Bayer Bioscience N.V.*, 363 F.3d 1235, 1239 (Fed. Cir. 2004).

In deciding whether a case is exceptional, the district court must consider the totality of the circumstances. *Yamanouchi Pharmaceutical*, 231 F.3d at 1347. Even where a case is found to be exceptional, an award of attorney fees is not automatic:

The subsequent decision to award attorney fees, *vel non*, is discretionary and “permits the judge to weigh intangible as well as tangible factors: the degree of culpability of the infringer [or, presumably, the patentee], the closeness of the question, litigation behavior, and any other factors whereby fee shifting may serve as an instrument of justice.”

*Superior Fireplace*, 270 F.3d at 1378, quoting *National Presto Industries, Inc. v. West Bend Co.*, 76 F.3d 1185, 1197 (Fed. Cir. 1996).

The Federal Circuit has described charges of inequitable conduct as “an absolute plague” in patent litigation, *Burlington Industries, Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988), one that is “diverting the court from genuine issues and simply spawning satellite litigation.” *Multiform Dessicants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1482 (Fed. Cir. 1998). At the same time, where there is genuine inequitable conduct, sanctions under section 285 can provide important compensation for victims and deterrence against similar abuses of the patent system by others.

CertainTeed contends the case is exceptional because Knauf both engaged in inequitable conduct in obtaining the '865 patent and engaged in litigation misconduct. CertainTeed contends that Knauf deliberately misled the PTO regarding facts material to the patent issues and deliberately failed to inform the PTO about material prior art known to the applicants. CertainTeed also contends that Knauf has engaged in a variety of forms of litigation misconduct, but primarily that Knauf, in response to prior art supplied by CertainTeed's counsel, should have dismissed its infringement claims earlier than it actually did. CertainTeed also contends that Knauf has continued to engage in litigation misconduct even in its post-trial submissions, with supposedly unfounded arguments.

With the benefit of hindsight, it is now sufficiently clear that the patent in this case should not have been issued. As explained in detail below, however, the

court finds that defendant CertainTeed has failed to prove by clear and convincing evidence that Knauf acted inequitably in prosecuting the patent or in pursuing the lawsuit, or that the case is otherwise exceptional. In the court's view, the most exceptional aspect of this case is that plaintiff Knauf promptly and voluntarily dismissed its claims of infringement after defendant CertainTeed provided strong prior art to plaintiff's counsel. See *Q-Pharma, Inc. v. Andrew Jergens Co.*, 360 F.3d 1295, 1299, 1304 (Fed. Cir. 2004) (affirming and finding no abuse of discretion in district court's denial of attorney fees under § 285 where plaintiff acted reasonably and in good faith in bringing infringement suit that it later dismissed). The court therefore will enter judgment for Knauf on the remaining counterclaim of CertainTeed.

### *Findings of Fact*

#### *I. The Parties, the Market, and the Products*

Plaintiff Knauf is a German corporation with its principal United States facility in Shelbyville, Indiana. Knauf manufactures and sells fiberglass products, including rigid duct board and flexible duct liners.

Defendant CertainTeed is a wholly owned subsidiary of Saint-Gobain Corporation, which is a holding company for the North American businesses owned by a privately held French corporation, Compagnie de Saint-Gobain. CertainTeed also manufactures and sells fiberglass products, including rigid duct

board and flexible duct liners. CertainTeed previously owned the manufacturing facility in Shelbyville, Indiana that is now Knauf's principal United States facility.

Knauf and CertainTeed are two of the four principal competitors in the United States market for fiberglass ventilation duct board. The other two are Owens-Corning and Johns-Manville, which sells duct board under the name Schuller. Duct board is manufactured by compressing and heating fiberglass into a rigid board. At a construction site, the flat board can then be cut and folded to form a rigid ventilation duct. Knauf and CertainTeed also manufacture flexible duct liner, which consists of a flexible fiberglass blanket.

Because flexible duct liners with fiberglass mat facings were on the market well before Knauf's claimed invention, one key issue in this case is how similar flexible duct liner is to rigid duct board. CertainTeed contends that the two categories of products are so closely analogous that the court should infer deliberate fraud and inequitable conduct from Knauf's failure to tell the PTO about its mat-faced flexible duct liner in the course of prosecuting an application for a patent on a mat-faced rigid duct board. To understand this and other issues, it is useful to understand the relative advantages and disadvantages of sheet metal air ducts, which often have flexible duct liners made of fiberglass blankets, and fiberglass ducts made of rigid fiberglass duct board. Sheet metal ducts are sturdier and can withstand higher internal air pressure and velocity. The internal surfaces of metal air ducts are very smooth, which facilitates the flow of more air

at higher velocity than is possible with a comparable fiberglass duct. Sheet metal ducts, however, provide little thermal or acoustic insulation, so they are often lined with flexible fiberglass duct liners. The duct liners are flexible blankets of fiberglass that are pinned or otherwise fastened to the inside of metal ducts.

Fiberglass duct board is produced in flat sheets that can be cut and folded at a construction site for installation. The duct board is rigid and provides both thermal and acoustic insulation. As compared to metal ducts, fiberglass duct board has a much rougher surface that increases friction and turbulence in air flow, reducing the volume and velocity of air flow. The rougher surface can also collect dirt. The evidence shows that many customers believe (or believed at relevant times) that the rougher surface can also collect bacteria and mold. Whether this belief among customers is accurate or not, it has presented a genuine marketing challenge to manufacturers of fiberglass duct board.

## II. *Knauf's Claimed Invention and Prosecution of the '865 Patent*

### A. *Knauf's Development of Mat-Faced Duct Board*

In the early 1990's, Knauf was troubled by competitors' success with premium duct board products with smoother hardened surfaces on the air-flow surfaces, such as a sprayed-on acrylic coatings. Johns-Manville and CertainTeed marketed premium products by catering to customers' concerns that ordinary fiberglass duct board accumulated dirt and bacteria and led to poor indoor air

quality. See Exs. 165, 171; Tr. 217 (Brower); see also Tr. 138-41 (Rivers of CertainTeed addressing same concerns). Knauf's leaders did not believe there was any genuine air quality problem with ordinary duct board. The combination of customers' concerns and competitors' marketing led them to believe, however, that they needed a new product to compete in this niche of the market. Also, smoother air-flow surfaces could reduce friction and turbulence, allowing faster air flow without needing more powerful fans to push air through the ducts.

Knauf decided to try to develop a new premium product to address these concerns. Mike Gravino was placed in charge of a committee to develop the product. Named inventor Bob Hauk was on the committee. Named inventor Patrick Noonan joined later.

The committee considered a number of different solutions to the problem, including facings of metallic foil or heavier acrylic sprays. Ex. 149, Gravino Dep. 65-67. At a dinner with Hauk in March or April 1993, Noonan came up with the idea of producing a duct board with a fiberglass mat facing. Tr. 294-95 (Noonan). At Hauk's request, named inventor Frederick Beyer also took part in experiments to make a mat-faced duct board.<sup>2</sup>

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<sup>2</sup>Beyer and Cunningham testified more generally that the idea for the mat facing arose in late 1992 or early 1993. Tr. 156 (Beyer); Ex. 151, Cunningham Dep. 73. The court credits Noonan's more specific date range of March or April 1993, which he linked to a specific industry meeting. The record does not provide a reliable basis for deciding between March and April, but the precise month is not material to the disputed issues.

Beyer's account of the invention is simple. At Noonan's suggestion, he decided to see if he could bond a fiberglass mat to the standard rigid duct board product. He started by trying the same commercially available fiberglass mat that Knauf used in one of its flexible duct liner products, called Duct Liner M. Before he tried the experiment, Beyer did not have any particular expectations about how the mat facing would work; he was just trying it out. He knew that the duct liner product was much less dense than the fiber board product. He thought that the curing or drying process might not work as well on the denser material of the fiber board. Noonan also had concerns about both the curing process with the very different materials and the quality of the resulting bond between the mat lining and the duct board. As Beyer testified, Knauf used glue with the duct liner product, and he did not use glue with the experimental duct board product.

Mat-faced duct board eventually became very successful in the marketplace and the technical challenges appear not to have been too complex. With the benefit of hindsight, it has been easy for CertainTeed to argue that the solution claimed by Knauf would have been obvious to a person of ordinary skill in the art of rigid duct boards. In addition, with the benefit of hindsight, we know that essentially the same product had been on the market in Europe for several years and that CertainTeed had independently developed essentially the same product approximately two years before Knauf did, but had not commercialized it.

The credible testimony from Knauf witnesses, corroborated in part by a CertainTeed witness, indicates that it was not obvious to them that using the mat from flexible duct liner would work on the rigid duct board. “Obvious to try” was not the test, at least at the relevant time. See, e.g., *In re Deuel*, 51 F.3d 1552, 1559 (Fed. Cir. 1995).<sup>3</sup> Inventor Beyer wondered whether the mat would stick as well to the duct board, Tr. 159, and he encountered problems with the mat wrinkling during the manufacturing process. Tr. 189. Inventor Noonan expected difficulty in curing the mat-faced board because the mat would be a barrier for air flow used to cure (dry) the wet fiberglass. Tr. 323-25. Noonan was concerned about wrinkling, Tr. 324, 332, which would create turbulent air flow and thus defeat one major objective of the invention. Tr. 324, 332. Noonan was also concerned about how well the mat would hold up in the cutting, trimming, and packaging processes, Tr. 324, and with how well the mat would adhere to the duct board. *Id.* at 325.

Knauf’s witness Cunningham explained the important differences in performance needed for mat facing, depending on whether it is used with a flexible liner or a rigid board. The mat in a flexible liner must resist cutting and tearing

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<sup>3</sup>In *KSR International Co. v. Teleflex Inc.*, 550 U.S. —, —, 127 S. Ct. 1727, 1742 (2007), the Supreme Court modified the standard for obviousness. The Court concluded that “obvious to try” might show obviousness in some instances, such as where there is a design need or market pressure to solve a problem and a finite number of identified, predictable solutions, so that a person of ordinary skill would have good reason to try those solutions. As important as *KSR* is in shaping obviousness issues, it does not affect CertainTeed’s inequitable conduct claim based on actions that occurred years before *KSR* was decided.

so that the flexible material can be pinned to the sheet metal duct with pins and washers. Ex. 151, Cunningham Dep. 77-78. For use with a rigid board, by contrast, the mat would need to be easy to cut. *Id.* These concerns about using mat with duct board were corroborated at least in part by CertainTeed's Ponder. When he developed the same product for CertainTeed, he was also concerned with how well the mat would bond to the shiplap edges of the board. Tr. 35-36; accord, Tr. 302 (Noonan).<sup>4</sup>

Along these lines, Beyer and Noonan gave important testimony about the differences between duct liner and duct board. See Tr. 186-89 (Beyer), 323-31 (Noonan). The duct liner is flexible, of course, while the duct board is rigid, with square edges. The duct liner is made into rolls. The duct board is made into rigid, flat sheets. The rigid duct board has the outer "FSK" (foil-scrim-kraft) layer to provide an air-tight seal, while the flexible duct liner does not. The duct liner fiberglass is much less dense than the compressed material that forms the duct board, which makes the liner easier to cure. Tr. 186-87 (Beyer). The two products are made with different manufacturing equipment. The mat facing for

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<sup>4</sup>CertainTeed has argued that these differences and difficulties are irrelevant "since the alleged problems solved by the invention were to reduce air friction and minimize the growth of bacteria and mold in an air duct and not to improve the method of manufacturing fiberglass duct boards." CertainTeed Reply to Knauf's Proposed Findings of Fact at 11; see also *id.* at 28. This response by CertainTeed misses the point. The inventors were to trying to develop not an abstract idea but a useful and commercially viable product. If they could not solve all sorts of problems in manufacturing to produce a consistent, high quality product at a reasonable price, their effort would have been a failure. It does not matter whether they also developed any patentable innovations in manufacturing methods.

duct liner is on the bottom, and the mat facing for duct board is on the top, tending to emphasize the differences between the products. Tr. 187-88 (Beyer). CertainTeed's Ponder made the same point. Tr. 20.

Knauf's Glenn Brower also testified about these differences between duct liner and rigid duct board. Tr. 278-80. The rigid duct board is structural and must itself hold the air pressure inside, whereas flexible duct liner is added to the rigid sheet metal duct that contains the air pressure. The two categories of product are subject to different Underwriters Laboratory standards. Duct liner is tested only for flame and smoke. Rigid duct board must meet many more standards. Customers also have different performance criteria for the two categories of products.

Brower was thoroughly familiar with both duct liner and duct board products in 1993. He was aware of the mat-lined duct liners and the performance issues that were arising in the market in the early 1990's for rigid duct board. He testified credibly, in the court's view, that the solution of using the mat facing from a duct liner product was not obvious to him at the time.<sup>5</sup>

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<sup>5</sup>CertainTeed attacked Brower's credibility by pointing out that his resume included one exaggerated claim concerning his academic credentials. Tr. 240-41. This circumstance did not help Brower's credibility, of course, but he readily admitted the matter, and overall the court found Brower to be a credible witness in his testimony before the court.

In carrying out the experiments that led to the Knauf patent application, inventor Beyer did not have to change the overspray used for duct board, and he found that the mat facing bonded well to the duct board. Co-inventor Noonan said essentially the same thing. Still, there were problems that took roughly two to four months to work out. The duct board produced in the experiments included the feature of shiplap edges. Beyer knew that the mat would cover the shiplap edge, based on how the manufacturing equipment worked. Tr. 161. Noonan testified credibly that covering the shiplap edges with the mat is a valuable feature because the mat helps protect glass fibers from “traveling” or breaking free from the surface of the duct board. Tr. 332-33.

Beyer testified that he did not know of any other competitor who was doing the same thing with a fiberglass mat facing at the time of the invention. Tr. 191. There is no evidence that any of the other inventors or persons involved in the patent applications knew of any competitor doing the same thing at that time, in 1993.

Also, relevant to CertainTeed’s attack on the identity of the inventors, the court finds that all three of the named inventors – Hauk, Noonan, and Beyer – played substantial roles in developing the claimed invention. CertainTeed has not shown that any other inventor was omitted from the application. CertainTeed has shown at most some minor differences in recollection about the respective roles of the three named inventors. At the time of the original application, the three

necessarily agreed and swore that each had played a part in the invention. There is no clear and convincing evidence to the contrary.

B. *The Original 1993 Application*

Knauf filed the original patent application on August 11, 1993, No. 08/104,975. Ex. 1. The application named as inventors Patrick Noonan, Robert Hauk, and Frederick Beyer. The law firm of Baker & MacKenzie represented Knauf and the inventors. Partner James Staples supervised associate Michael Hull, who prepared and filed the application.

The original application contained ten claims to mat-faced duct boards and eight claims for manufacturing methods. The original claims did not specify that the duct boards had shiplap edges. The specification identified two problems that the invention supposedly solved: turbulent flow arising from the roughness of the air stream surface, and the accumulation of dirt, dust, and microorganisms on the air stream surface. The inventors said they had solved these problems by providing “an improved insulated air duct with a smooth interior surface mat that may be treated with biocides and further that provides for increased laminar flow adjacent to the duct board.” Ex. 1 at 13, *ll.* 14-17.

The PTO issued an initial office action on March 9, 1994 rejecting claims 1 and 3 as anticipated by U.S. Patent No. 3,394,737 issued to Hoffmann and others

(Ex. 45). See Ex. 2. The PTO also rejected all claims as obvious based on U.S. Patent No. 4,839,222 issued to Jain (Ex. 48), which disclosed adhering a mat to the interior of a fiber glass duct board.

On June 15, 1994, the applicants cancelled their original claims and filed new claims 15-24 directed to duct board itself, as opposed to a method for manufacturing it. Ex. 3. The applicants argued that Hoffmann was directed to flexible covering for flexible tubing, which taught nothing about the inside surface of rigid air ducts. The applicants distinguished Jain because it was directed to coatings applied to the inner surface of fiberglass duct boards, as distinct from the application of a fabric or fiberglass mat to the inside of the board.

On August 26, 1994, the PTO rejected all of the new claims as obvious in light of Jain and U.S. Patent No. 4,709,523 issued to Broderick (Ex. 47). See Ex. 4. The applicants tried again on October 19, 1994, with a new filing cancelling claims 15-24 and filing new claims 25-32. Ex. 5. The applicants again distinguished Jain because it did not suggest having a mat facing without a separate coating as an air stream surface. They argued that a duct board made according to Jain would be more expensive because it would require two extra coatings - an adhesive to bind the mat to the board, followed by an aqueous coating on top of the mat to form the air-stream surface. Ex. 5 at 5-6. On November 22, 1994, attorney Hull had an interview with the patent examiner. Hull argued that there was no teaching of an embodiment with a fabric layer

without a coating. Ex. 6. The applicants later abandoned this original application.

On January 22, 1995, the same applicants filed Application No. 08/378,704, which was a continuation-in-part (CIP) application. Ex. 7. Attorney Staples of Baker & MacKenzie filed the CIP application with a revised specification and different drawings. The CIP application asserted that standard fiber glass ducts could operate with a maximum air velocity of 2400 feet per minute, while the air ducts using the claimed mat facing were rated for air velocities up to about 5000 feet per minute. Ex. 7 at 4. The specification in the CIP stated that the preferred mat facing would be a saturated polyester/glass mat with an antimicrobial additive and a base weight of about 30 pounds per 3000 square feet and a tensile strength of about seven pounds per inch minimum in the machine direction and about five pounds per inch minimum in the cross direction. *Id.* at 9.

On September 8, 1995, the PTO issued its initial office action on the CIP, rejecting all claims as obvious in light of U.S. Patent No. 3,092,529 issued to Pearson (Ex. 43), U.S. Patent No. 3,394,737 issued to Hoffmann (Ex. 45), and U.S. Patent No. 3,768,523 issued to Schroeder (Ex. 46). See Ex. 8. The examiner wrote:

Pearson teaches a rigid duct board with a foil, kraft, and scrim outer covering. Hoffmann et al. teaches an inner woven material that provides for

a smooth air flow and can be made of glass or other suitable fibers. Schroeder teaches an inner fiber layer which can be made of glass or other compatible fibers that provides smooth air flow. The instant invention claims a rigid fiber board with a scrim, kraft, and foil outer layer and an inner glass fiber mat layer that provides a smooth surface for air flow. It would have been obvious to one of ordinary skill in the art to use a woven glass fiber fabric on the inside of the board duct of Pearson in order to provide a smooth flow because of the teachings of either Schroeder or Hoffmann et al. Selection of various fibers compatible with glass fiber bonding would have been within the ordinary skill of the art absent unexpected results.

Ex. 8 at 4-5 (citations omitted).

The applicants responded on November 20, 1995 with an amendment and arguments. Ex. 9. The applicants explained: “The specific problem in the art to which applicants’ invention is directed is the undesirably high power requirements to push air through a duct system due to the turbulent, non-laminar air flow in the ducting.” Ex. 9 at 3. The applicants criticized the use of acrylic coatings as not smooth and uniform enough. *Id.* at 3-4. The applicants told the PTO that attaching a non-woven fabric mat to the duct board had the “surprising” effect of yielding a smoother surface than any other solution tried up to the date of the applicants’ development. *Id.* at 4.

On February 2, 1996, the applicants filed a supplemental amendment to report the results of comparative testing that they argued had demonstrated the superiority of the claimed invention over a “standard” duct board product then on

the market in an air erosion test required for UL approval of duct products. Ex. 10.

On February 21, 1996, the PTO rejected all claims as obvious in light of Pearson, Hoffmann, Schroeder, and Jain. Ex. 11. The examiner contended that both Hoffmann and Schroeder taught the desirability of having a smooth inner surface made of a non-woven fabric material that would be obvious to apply to the rigid duct board of Pearson. The examiner also said that the experimental results would not be considered unless they were submitted in proper declaration form and compared the claimed invention to the cited references. Ex. 11 at 5-6.

On June 21, 1996, the applicants submitted three statements by Brower, who was then the marketing manager for technical services at Knauf. Exs. 12-14. Exhibit 12 stated that the air erosion tests had been conducted under Brower's direction and control and that the results were described accurately. Exhibit 13 stated:

At this time, and at the time of filing the present application and its predecessor application, the use of liquid coatings on the inside, air contacting surface of a duct board is not sufficient to meet market requirements, which market requirements include (a) structural integrity; i.e., lack of erosion, (b) minimal turbulence of the flow of air inside a duct, and (c) increased abuse resistance to present duct cleaning techniques.

Ex. 13 at 4. Brower also stated that the Pearson and Hoffmann references would not suggest to him that a non-woven fabric mat should be applied to the air

stream surface on the inside of a duct board. Brower distinguished the Hoffmann patent because the wire coil would contact the air stream, thus creating turbulence. Brower distinguished the Schroeder patent because it described not a rigid duct board but a duct liner that had no special air surface facing of any kind, so that it would not suggest the use of a non-woven fabric mat on the air stream surface to minimize turbulent air flow. *Id.* at 6-7. Brower testified at trial that he stood by these arguments about Hoffmann and Schroeder. Tr. 229-31. The court credits that testimony as his honest views even though, with the benefit of hindsight, there is ample reason to disagree on the merits.

In Exhibit 14, Brower described a test of Knauf's new mat-faced duct board against two competing duct boards that used coatings. The test looked at the ability to avoid damage to the surface when brushed with cleaning equipment. He also stated that air-flow friction loss testing showed that the claimed invention was significantly better than the competing products with coatings. *Id.* at 6.

On August 15, 1996, the PTO issued an advisory action acknowledging the Brower statements and again rejecting all claims based on the prior art. Ex. 15. The examiner said that the tests comparing the mat-faced duct board to the coated duct boards were not relevant to the non-woven fabric facings described in the prior art references. The examiner also said that using fabric to provide a smooth surface would be expected to have the effects emphasized by the applicants. The applicants then abandoned the CIP application.

C. *The 1996 Application*

Knauf then hired a different law firm, Barnes & Thornburg, to work on the application. On November 21, 1996, Barnes & Thornburg filed a continuation application No. 08/753,257. Ex. 17. Before the PTO took action, the applicants filed a preliminary amendment that sought to add back to the specification several paragraphs from the original 1993 application that had been deleted from the intervening CIP application. Ex. 18. The new claims added some claims regarding the specific properties of the mat facing (weight and tensile strength). Some new claims also added the limitation that the duct board would have shiplap edges covered by the mat facing.

On April 4, 1997, the PTO rejected the new claims on several grounds, including that they were obvious in light of the Pearson, Hoffmann, and Schroeder patents, and also in view of Kanagawa, U.S. Patent No. 5,300,592 (Ex. 50). Ex. 19. The applicants asked for reconsideration. Ex. 20. Attorney Mark Newman had an interview with the examiner on July 1, 1997. Ex. 21.

On September 17, 1997, the PTO again rejected all claims on several grounds, including obviousness. Ex. 22. The applicants had argued that the Kanagawa patent was not an analogous art. The Kanagawa patent addressed a heat-setting resin that could be used with fibers. The examiner reasoned that the common problem of selecting high strength and fibers that could withstand heat

would motivate a person with ordinary skill in the art to combine the teachings of the different references. Ex. 22 at 5.

Attorney Newman had another interview with the examiner on December 12, 1997. He continued to argue that Kanagawa was not an analogous art. Ex. 23. Also on December 12, 1997, the applicants filed an amendment under 37 C.F.R. § 1.116 that again argued that Kanagawa was a non-analogous art so that a person of ordinary skill in the art of duct boards would not have been motivated to look to that art for guidance. Ex. 24 at 3-4.

The applicants persuaded the examiner to approve issuance of U.S. Patent No. 5,783,268 on July 21, 1998. Ex. 25. Because that is not the patent in suit, there is still more ground to cover in the prosecution history to reach the '865 patent in suit. On that same day, the applicants filed a continuation application. Ex. 26. The PTO rejected all the new claims on October 13, 1998. Ex. 27. One reason was double-patenting based on the '268 patent, but that problem was cured with a terminal disclaimer. The examiner also rejected the new claims as obvious based on Pearson, Hoffmann, and Schroeder. Ex. 27 at 2-3.

On December 16, 1998, attorney Newman had another interview with the examiner. Ex. 28. On February 22, 1999, the applicants filed another amendment and reply. Ex. 30. They argued that the Pearson, Schroeder, and Hoffmann patents were different in terms of how any facing might be bonded to

the principal duct material. On April 15, 1999, the PTO again rejected all claims as obvious in view of Pearson, Hoffmann, and Schroeder, in view of U.S. Patent No. 2,341,030 (“Unsworth”), U.S. Patent No. 5,421, 938 (“Cunningham”), and the Jain patent cited earlier. See Ex. 31.

On September 15, 1999, attorney Newman had another interview with the examiner. He argued the prior art again, and he sought to distinguish Cunningham on the basis that it did not teach shiplap joints. The examiner disagreed with Newman’s arguments. Ex. 32. Also on September 15, 1999, the applicants asked for reconsideration in writing. Ex. 33. They argued that the Unsworth patent, which addressed a method for making fibrous batts (Ex. 41), was not art analogous to fiberglass air ducts. Ex. 33 at 2. They argued that the examiner’s obviousness conclusion was based on hindsight reconstruction of the claimed invention. As part of their arguments, the applicants asserted that they claimed having the mat facing adhere to the shiplap joint surfaces themselves, which the prior art did not show. *Id.* at 3.

On October 22, 1999, the PTO again rejected the claims as obvious. Ex. 34. As for having the mat facing adhere to the shiplap edges, the examiner wrote that “it would have been an obvious matter to apply the fabric to the entire inner surface of the duct board, which would include the shiplap edges, if these were formed before joining of the fabric to the [fiberglass] batt.” *Id.* at 8.

The applicants then filed an appeal of the examiner's rejection. In their revised appeal brief, filed May 15, 2000, the applicants distinguished both Hoffmann and Schroeder on several grounds, including that both were "designed to produce FLEXIBLE duct tubing in a continuous process" and that their teachings did not extend to rigid duct board. Ex. 35 at 7-8. In general, the applicants argued that the examiner had improperly combined teachings from several different areas of technology with the benefit of hindsight to conclude that what the applicants had developed would have been obvious to someone of ordinary skill in the art of fiberglass duct boards. Shiplap edges were well known in the field, but on that issue, the applicants argued, it would not have been obvious to manufacture the boards so that the fiberglass mat would adhere to the shiplap edges themselves. Ex. 35 at 10-11.

Upon consideration of the appeal, the PTO allowed claims 8, 9, 24, and 25, and stated that some additional claims would be allowable if rewritten in certain respects. The examiner agreed with the applicants' argument that "there is no specific teaching in the cited references regarding the instant claimed basis weight and tensile strengths of the mat facing." Ex. 36 at 7. Most of the proposed claims were still rejected on multiple grounds, including obviousness. After one more round of reconsideration and rejection, see Exs. 37 and 38, the applicants finally acquiesced, cancelled the rejected claims, and rewrote the other claims to address the examiner's objections. Ex. 39. The '865 patent finally issued on August 7, 2001. Ex. 40.

D. *The Challenged Statements to the PTO*

CertainTeed contends that in prosecuting the applications that led to the '865 patent, the Knauf applicants and their attorneys made a number of deliberately false material statements to the PTO and deliberately chose not to provide other material information to the PTO. The court addresses first the alleged false statements, turning to the omissions in the next section.

First, Knauf told the PTO that its use of the mat facing was “a step backward” that had the “surprising” effect of yielding a smooth surface, better than “any other expedient tried up to the date of applicants’ development.” Ex. 9 at 4. CertainTeed has not shown that this statement was false, let alone that it was deliberately false. CertainTeed did not ask the inventors about this subject. CertainTeed did ask Knauf’s Cunningham, who credibly supported this point of view in his deposition. He testified that flexible duct liner did not provide a reliable guide for rigid duct board performance because duct liner has a “very un-uniform surface” with “lots of highs and lows in the surface,” so that the turbulence in duct liner results from the unevenness in the flexible material rather than the mat. Ex. 151, Cunningham Dep. 170-71.

Knauf’s Brower testified later (at trial) that he would not have been surprised by this effect because he knew that mat facings were generally smoother than coatings. Tr. 224. The applicants made the statement about surprise to the

PTO before Brower became involved in the patent application. See Ex. 12 (Statement No. 1 of Brower, dated June 19, 1996). The evidence also indicated that Brower was more familiar with mat-faced duct liner than the inventors were. As far as the inventors were concerned, the claim of surprise apparently was true. CertainTeed has failed to show by clear and convincing evidence that any person at Knauf deliberately misled the PTO with respect to the claimed surprising effect.

CertainTeed also contends that the Knauf applicants described the state of the art in a deliberately misleading way when they said that acrylic coatings on duct board were not good enough to satisfy “present-day designers,” were “not sufficient to meet market requirements,” and were “obsolete” at a time when Knauf and its competitors were all selling duct boards with acrylic coatings as premium products. CertainTeed Proposed Finding of Fact at 70, ¶ 150, citing Ex. 9 at 4, Ex. 13 at 4. CertainTeed has not shown that these statements were false, and hindsight has shown them to have been correct. Although mat-faced duct board got off to a slow start in the market, it has come to dominate the market in recent years. CertainTeed’s own witnesses have testified to that effect. See Tr. 100 (Ponder); Tr. 123 (Rivers). The evidence shows that mat-faced board is tougher and more durable than acrylic-coated board. Brower, Noonan, and Cunningham all testified to that effect. Tr. 274-76 (Beyer), 333 (Noonan), Ex. 151, Cunningham Dep. 94. The court finds no reason to disbelieve them, especially in light of the later success of mat-faced board over acrylic-coated board. And even allowing for

honest disagreement on the merits, the court sees no reason to doubt the honesty of the applicants' beliefs that mat facing was and is better than acrylic coating.

In addition, it is not surprising that someone who believes he has an improved product believes the older products on the market are obsolete or not adequate. Nor is it surprising that someone who is still selling the older type of products in the market would not attack them as actually inadequate or dangerous. There was nothing dishonest or deceptive about the fact that Knauf personnel believed (a) that existing products were safe and (b) that the mat-faced invention was better and would provide more comfort to customers concerned about safety and air quality. Cunningham testified that Knauf's customers were not fully satisfied with acrylic coatings. Ex. 151, Cunningham Dep. 85-86. The evidence also showed that Knauf performed tests showing that duct board with mat facing was tougher than acrylic-coated or uncoated duct boards. Tr. 274-75 (Brower). While it took some years for the mat-faced products to capture the market, the evidence shows that improved mat-faced products now dominate the market for duct board. Ex. 119. CertainTeed's own witnesses testified that CertainTeed itself had been looking for a solution for indoor air quality issues in the marketplace, Tr. 81-82 (Ponder), and that CertainTeed believed in 1993 and 1994 that a mat facing would reduce fibrous dust in a duct board. Tr. 141-46 (Rivers); see also Ex. 165 (CertainTeed market research on indoor air quality); Ex. 163 at col. 1 (CertainTeed patent application from 2002 asserting benefits of mat facing on duct board). CertainTeed has failed to show by clear and convincing

evidence that anyone made a deliberately false representation to the PTO concerning the state of the market or the commercial need for the claimed invention.

CertainTeed also contends that Knauf and the applicants misled the examiner by telling the PTO that the invention provided its benefits “without adding substantially to the cost of manufacture of insulated duct board.” Ex. 1 at 13; Ex. 40 at col. 5, *ll.* 4-6 ('865 patent). CertainTeed contends this was a deliberate lie. CertainTeed has offered evidence that Knauf’s total production costs in 1996 for mat-faced duct board were 36.73 cents per square foot versus 23.40 cents for duct board without the mat. Ex. 108.

The court is not persuaded by clear and convincing evidence that there was any deliberate material misrepresentation on the subject of costs. First, the allegedly false statement was vague. The patent examiner could not have put too much weight on it; the mat-faced duct board obviously used some additional materials and thus would have involved *some* additional costs. If the statement is understood as referring only to costs of the manufacturing process, as distinct from the cost of materials, the court has no reason to discredit it. That is how Cunningham described the statement in his testimony. Ex. 151, Cunningham Dep. 151-52. That is a reasonable understanding of the statement. The statement could also reasonably be understood as referring to the overall cost of the finished product, which is how CertainTeed interprets it. If the examiner had

wanted details about what was meant by “the cost of manufacture” or by “substantially,” he could have asked, but there is no indication that this vague statement was material to the issuance of the patent. Also, more recent developments show that lower cost mat material has been used successfully, further reducing the cost difference between mat-faced and plain duct board to the extent that the improved mat-faced products now dominate the market. See Ex. 119 (new mat costs 75% less than the original mat).

CertainTeed has also attacked Knauf for challenging the examiner’s finding that it would be obvious for the mat to cover the shiplap edge, Ex. 35 at 10, while Knauf knew that covering the shiplap edge was inherent in the manufacturing process. Witnesses from both Knauf and CertainTeed testified that having the mat cover the shiplap edge was inherent in the methods each company developed to manufacture its respective mat-faced products. See Tr. 78 (Ponder); Tr. 161 (Beyer); Ex. 151 at 138 (Cunningham); Ex. 149 at 75 (Gravino). But that testimony describes the claimed invention, not something that would have been obvious *ex ante*. The evidence showed that the inventors for both companies had doubts and concerns at the time about how well the new process would work with shiplap edges. Tr. 35-36 (Ponder); Tr. 323, 342-43 (Noonan). Noonan testified that he thought it would be difficult to cover the shiplap edge with the mat facing. The court finds no reason to doubt the honesty of Noonan’s testimony on that point. For purposes of CertainTeed’s counterclaim, the court need not decide whether it was actually inherent in the manufacturing process that the shiplap

edge would be covered with the mat facing. The point is that CertainTeed has not shown by clear and convincing evidence that Knauf's inventors knew that covering the shiplap edge with the mat facing was easy and inherent in the process *before* they developed that process and adapted it to include the addition of the mat facing. In sum, CertainTeed has not shown by clear and convincing evidence that anyone made any deliberately false material representation to the PTO in the prosecution that led to the '865 patent.

E. *Information Not Provided to the PTO*

CertainTeed also attacks Knauf and the applicants for having failed to provide material information about the prior art to the PTO. CertainTeed has not shown by clear and convincing evidence that any attorney or anyone else deliberately chose not to provide to the PTO any material prior art that they knew was material. CertainTeed focuses its argument on several specific items that it says were prior art known to the applicants and their attorneys that should have been disclosed to the PTO.

More generally, CertainTeed points out that the applicants provided no prior art of any type to the examiner, leaving to him the task of studying the prior art. A patent applicant has no affirmative duty to search the prior art. *E.g., Frazier v. Roessel Cine Photo Tech, Inc.*, 417 F.3d 1230, 1238 (Fed. Cir. 2005) (reversing finding of inequitable conduct to the extent it was based on failure to disclose

prior art that district court found the applicants should have discovered). Three of the four patent attorneys who testified said that it was not unusual not to provide prior art; two (Newman and Hull) explained that their clients normally would not pay them to conduct an independent search for prior art. See Tr. 357 (Rezek); Ex. 150, Newman Dep. 40-41 Ex. 147, Hull Dep. 22-23. The fourth attorney, Staples, testified that he conducted only a limited search of prior art in this case. Ex. 148, Staples Dep. 14. The absence of searches of the prior art does not show that this case is exceptional, even if a more stringent patent law system might insist on such efforts by an applicant. Turning to the specific omissions argued by defendant:

1. *Knauf's Duct Liner M*

CertainTeed condemns Knauf and the applicants most sharply for having failed to tell the PTO that they first developed the claimed invention by applying to the rigid duct board material the same off-the-shelf fiberglass mat that Knauf used to line its flexible Duct Liner M product. The material described in the specification of the '865 patent was similar but not identical to "Manniglass 1296" made by Lydell. See Ex. 35 at 9 (arguing that prior art did not teach the specific weight or tensile strength of the claimed mat). CertainTeed relies on Exhibits 57 and 111. Exhibit 57 is a Duct Liner M "submittal sheet" for Duct Liner M from 1988. Exhibit 111 is a purchasing specification for a Lydall Manning fiberglass

mat identified as “28# Manniglass 1296 Black” issued in 1999, replacing one from 1998.

Exhibit 111 is not prior art, for it dates from six years after the claimed 1993 invention. The prior art from 1988 does not indicate that the mat facing on the flexible duct liner contained all of the relevant characteristics in the claims of the '865 patent, including specific weight and tensile strength and the presence of biocides.

Knauf contends that CertainTeed has failed to prove the exhibits refer to the same materials used in the 1993 invention of the Knauf mat-faced duct board. The court agrees; CertainTeed did not ask the key questions as to whether the exhibits refer to the same material used in 1993. Cunningham testified that the tensile strength revealed in Exhibit 111 was substantially different from that disclosed in the patent specification. Ex. 151, Cunningham Dep. 178. Knauf clearly told the PTO that it was not contending that a mat made of glass and organic fibers was new. See CertainTeed Proposed Findings of Fact at 59, ¶ 9; Ex. 20 at 2. What Knauf claimed was new was the application of the fiberglass mat facing to a rigid duct board. It turns out that that feature was not new, but there is no clear and convincing evidence that Knauf knew that at the time it was pursuing the applications.

CertainTeed argues that Knauf's applicants deliberately chose not to disclose its Duct Liner M and did so to allow them to make arguments to the PTO to distinguish the Hoffmann, Schroeder, and Pearson patents that they could not have made if they had disclosed Duct Liner M. The court is not persuaded that the failure amounted to inequitable conduct.

The duty of disclosure applies to known prior art that is not cumulative and that is material. See *Digital Control, Inc. v. Charles Machine Works*, 437 F.3d 1309, 1315-16 (Fed. Cir. 2006) (reviewing standards for materiality); 37 C.F.R. § 1.56(b) (adopting broad standard of materiality requiring that information not be cumulative). The prosecution history shows that the examiner viewed Hoffmann and Schroeder as teaching a fiberglass mat on the air-flow surface of a duct product. See Ex. 8 at 4; Ex. 11 at 3; Ex. 19 at 3-4; Ex. 22 at 4-5; Ex. 27 at 2-3; Ex. 31 at 2-3; Ex. 34 at 2-3. Hoffmann described a flexible duct product. Ex. 45. Schroeder dealt with a cylindrical duct but also suggested that its duct could also be used as a duct liner. Ex. 46, col. 4, ll. 55-56. Both described the use of a fiberglass fabric as the air-stream surface for smooth air flow. The examiner relied on Hoffmann and Schroeder throughout the prosecution history to show the use of a mat facing on an interior surface of a duct to provide a smooth surface for air flow. See, e.g., Ex. 31 and 34. That is the same information that Duct Liner M would have provided, so its disclosure would have been only cumulative.<sup>6</sup>

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<sup>6</sup>CertainTeed correctly points out that the Knauf applicants did not believe that Duct Liner M was cumulative. Instead, the applicants argued vigorously that  
(continued...)

The court finds that CertainTeed has met its burden of proof on the materiality of Duct Liner M. In light of the examiner's reliance on Hoffmann and Schroeder, the applicants should have informed the examiner about Duct Liner M so that he could evaluate its significance for himself.

Although CertainTeed has met its burden of proof on the issue of materiality, it has not done so on the issue of deliberate intent. Evidence shows that Cunningham told patent attorney Staples about Duct Liner M, even though Cunningham did not think it was material. Ex. 151, Cunningham Dep. 120-22, 148-49. Staples did not remember much about the subject, but he testified credibly that he probably would have been influenced by Knauf's belief that the products were too different to be material. Tr. 425-26, 444. As explained in detail above, the technical people, the inventors, anticipated difficulty in putting a mat facing on a rigid duct board. Inventor Noonan testified that he did not think the Duct Liner M product was relevant to the Knauf duct board application, based on the differences between the flexible duct liner product and the rigid duct board product. Tr. 328-30. Inventor Beyer testified to the same effect. Tr. 186-89 (explaining differences); see also Tr. 279-80 (Brower testifying that neither he nor

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<sup>6</sup>(...continued)  
flexible products were so different from the rigid duct boards that the examiner should not use the flexible products as analogous art. They did not persuade the examiner on this point. Whether this prior art is material and non-cumulative must be decided on an objective basis, while intent is a question of subjective state of mind. In this case, the examiner's reliance on Hoffmann and Schroeder supports CertainTeed's view of materiality but also tends to show that Duct Liner M would have been only cumulative regarding the examiner's reasons for rejecting the claims.

anyone he knew in the industry regarded flexible duct liner and rigid duct board as similar or related products). CertainTeed offered no evidence to the contrary. The court credits the Knauf witnesses' testimony as honest, although the court finds they were ultimately mistaken in that belief.

At bottom, the dispute here is over the relationship between rigid duct board and flexible duct liner. If flexible duct liner is a closely analogous art to which a person of ordinary skill in the art would turn, there was little or nothing new in Knauf's claimed invention, even on its own terms, apart from the products of competitors. The evidence from the Knauf witnesses was that they considered these two different types of products to be so significantly different that the flexible duct liners were not material to improvements in rigid duct boards. The evidence at trial spelled out many differences between flexible liners and rigid board and the issues and problems the inventors expected in taking the mat used with flexible liners and applying it to rigid board. See pp. 12-17, above.

The court, when deciding whether CertainTeed had shown a *prima facie* case of fraud to pierce the attorney-client privilege, focused on the similar functions that the mat serves in the two types of products, especially to provide a smoother surface for faster, less turbulent air flow. See Entry on Motion to Compel and Related Matters at 8-14 (Feb. 2, 2006) (Dkt. No. 164). With the more complete record of evidence presented at the trial, the court believes it now understands the issue better. The court has also tried harder to consider the issue as it appeared

*ex ante*, without the benefit of hindsight based on the claimed invention. The court concludes that Knauf personnel and attorneys honestly considered the two product lines to be so different that the flexible products were not material to the claimed invention for mat-faced rigid duct board. See *Warner-Lamber Co. v. Teva Pharmaceuticals USA, Inc.*, 418 F.3d 1326, 1346-47 (Fed. Cir. 2005) (affirming finding that inventors honestly failed to appreciate materiality of information they did not disclose to PTO). The court finds that Knauf personnel and attorneys were mistaken as to whether the Duct Liner M was material prior art, but CertainTeed has not shown by clear and convincing evidence that anyone acted with deliberate intent to deceive or mislead the PTO.

## 2. *Other Competitors' Products and Catalogs*

CertainTeed argues that Knauf should have disclosed to the PTO a range of additional information about competitors' products, both rigid duct boards and flexible duct liners. See CertainTeed Proposed Findings of Fact at 67-68, ¶ 38. This argument does not identify specific pieces of prior art that would have been both material and non-cumulative for the examiner, nor does it show that any person at Knauf actually knew of the information and deliberately decided to withhold it.<sup>7</sup>

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<sup>7</sup>In the dispute over attorney-client privilege, CertainTeed argued that the applicants had deliberately chosen not to inform the PTO about a prior Schuller (Johns-Manville) flexible duct liner called Linacoustic R. CertainTeed did not pursue that theory at trial and mentioned it only in a footnote in its post-trial submissions. The court will not speculate about what a more complete record (continued...)

### 3. *CertainTeed's ToughGard Product*

The evidence shows that while the application was pending, Knauf provided information to its patent attorneys about CertainTeed's ToughGard product, which was also a rigid duct board with a fiberglass mat facing that appeared on the market in the spring or summer of 1994. Ex. 151, Cunningham Dep. 112, 147-48; see also Tr. 426 (Staples testifying that he became aware of a mat-faced duct board product sometime after Knauf filed the initial application). Staples looked to see if he could find information that was prior art that described the product, and he did not. *Id.* at 424-25, 430. The attorney considered the information and concluded that he did not need to provide that information to the PTO.

A more thorough search that included products on the market in Europe would have turned up an anticipatory product but would not necessarily have indicated that ToughGard itself was prior art. CertainTeed has not shown by clear and convincing evidence that Knauf's failure to tell the PTO about CertainTeed's ToughGard product was deliberately deceptive. CertainTeed has not shown that anyone at Knauf knew anything about ToughGard until nearly a year after Knauf filed its first patent application. CertainTeed also has not shown that anyone at Knauf thought that ToughGard was prior art.

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<sup>7</sup>(...continued)  
might have shown about Linacoustic R. Even if Linacoustic R might have been material to the application CertainTeed has not shown by clear and convincing evidence that the applicants or others associated with the application deliberately chose not to inform the examiner about non-cumulative and material prior art.

CertainTeed seeks to prove by circumstantial evidence first that Knauf should have realized that ToughGard was prior art, and second that some unidentified person at Knauf probably did realize that ToughGard was prior art and then must have chosen deliberately not to tell the PTO about it. Even the first step is shaky here and is certainly not supported by clear and convincing evidence. The evidence does not support the second step at all.

In 1990, CertainTeed itself decided to try to develop a mat-faced duct board. CertainTeed offered evidence that it experimented with different types of mat facings on flexible duct liners. Tr. 17-19 (Ponder). CertainTeed conducted its initial experiments and produced its first samples in August and September 1990. See Ex. 159 (January 2, 1991 report on tests of rigid duct board faced with fiberglass mat). According to the oral testimony of Ponder and Rivers, their new product also featured shiplap edges. The court credits that testimony. CertainTeed did not bring its product to market in 1991 or 1992 because it did not see a commercial market for the product at that time. In early 1993, however, CertainTeed perceived a market for the product based on customers' perceptions that unlined fiberglass duct board raised concerns about inside air quality. (The court finds that the concerns of customers were not scientifically valid, but for present purposes, that is beside the point. If a company could come up with a new invention that gave customers better peace of mind, so be it. A capitalist market treats the customers' preference as significant, whether objectively valid

or not. Even more to the point, both Knauf and CertainTeed reacted to these preferences in similar ways.)

CertainTeed gained Underwriters Laboratories approval for its mat-faced duct board on August 18, 1993. Ex. 124. In July 1994, CertainTeed demonstrated a mat-faced duct board product to some of its distributors in the United States. In late 1994, CertainTeed changed the name of the new product to ToughGard, which was sold in the United States after 1994. ToughGard did not sell especially well. In 2002, CertainTeed introduced a less expensive mat-faced duct board called Ultra Duct Gold, which has sold well. Both CertainTeed products are manufactured with shiplap edges that are covered by the mat facing.

The evidence thus shows that the CertainTeed ToughGard product was developed, but not commercialized, before the invention claimed by Knauf in the '865 patent. For purposes of CertainTeed's counterclaim, the question is when Knauf realized that fact.

CertainTeed argues that Knauf (a) should have known and (b) further *must* have known that ToughGard was prior art for Knauf's claimed 1993 invention. That argument depends on assumptions about how long it would have taken ToughGard to bring the new product to market after its invention. CertainTeed has shown that it had ToughGard on the market in July 1994, some 15 to 16 months after Knauf conceived of its claimed invention. The evidence did not show

that it would be unreasonable to expect that a product of this type could be on the market within one year after invention. CertainTeed obtained Underwriters Laboratories approval for its product five months after the initial trial run. Tr. 98-99 (Ponder).

CertainTeed has argued that Knauf at the very least should have told the PTO about ToughGard in connection with its CIP application, which Knauf filed in 1995 after ToughGard was on the market. However, CertainTeed has not shown that ToughGard was relevant to any of the new matter in the Knauf CIP application, for which ToughGard might have been prior art. The court will not construct an argument for CertainTeed to that effect.

From the evidence at trial, the court is satisfied that ToughGard was in fact prior art that CertainTeed developed a little more than two years before Knauf developed its claimed invention. CertainTeed has not shown by clear and convincing evidence, however, that the applicants or attorneys realized that fact during the prosecution that led to the '865 patent. During the litigation itself, Knauf and its lawyers were not required to take at face value the claims of CertainTeed and its lawyers or the uncorroborated testimony of CertainTeed employees about when they developed the mat-faced duct board.<sup>8</sup> There is little

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<sup>8</sup>The law has long looked with disfavor upon invalidating patents on the basis of mere testimonial evidence absent other evidence that corroborates that testimony. The Supreme Court recognized over one hundred years ago that testimony concerning invalidating activities can be 'unsatisfactory' due to 'the (continued...)

corroboration of CertainTeed's oral testimony about the time of its invention of the anticipating-infringing product. CertainTeed has not produced any documents that describe a duct board product with a mat facing covering shiplap edges before Knauf conceived of the invention claimed in the '865 patent. (Exhibit 159 says nothing, for example, about shiplap edges.)

To sum up the court's findings on the alleged inequitable conduct in prosecuting the patent applications before the PTO, the court finds that CertainTeed has failed to prove inequitable conduct by clear and convincing evidence. CertainTeed has shown that a more thorough search of the prior art would have turned up prior art that would have prevented issuance of the '865 patent. However, CertainTeed has failed to prove that the applicants made any false material statements to the PTO, let alone that they did so deliberately. With respect to failures to disclose, the court concludes that Knauf's flexible Duct Liner M was material prior art but was cumulative, in view of the examiner's approach to prior art, including the Hoffmann and Schroeder references. Even if that information were not cumulative, however, and even though Knauf and its attorneys probably should have recognized it as material, CertainTeed has not

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<sup>8</sup>(...continued)  
forgetfulness of witnesses, their liability to mistakes, their proneness to recollect things as the party calling them would have them recollect them, aside from the temptation to actual perjury.” *Finnigan Corp. v. International Trade Comm’n*, 180 F.3d 1354, 1365 (Fed. Cir. 1999), quoting *The Barbed-Wire Patent*, 143 U.S. 275, 284 (1892). Uncorroborated oral testimony rarely satisfies the burden of proving invalidity by clear and convincing evidence. *Finnigan Corp.*, 180 F.3d at 1365 & n.8.

shown by clear and convincing evidence that anyone at Knauf or its attorneys (a) actually viewed Duct Liner M as material and then (b) made a deliberate decision not to tell the PTO about it. CertainTeed has not shown by clear and convincing evidence any other deliberate failure to provide material information to the PTO.

### III. *Knauf's Prosecution of this Lawsuit*

#### A. *The Course of this Lawsuit*

Knauf filed this action on August 5, 2002 alleging that defendant CertainTeed was infringing claims of the '865 patent. On September 25, 2002, CertainTeed filed its answer denying the claims of infringement and counterclaiming for a declaratory judgment that the '865 patent is invalid and unenforceable based on inequitable conduct. CertainTeed also asked for damages in the form of attorney fees for an exceptional case under 35 U.S.C. § 285. Formal and informal discovery began promptly.

On May 16, 2003, CertainTeed filed motions for summary judgment on invalidity and unenforceability based on alleged inequitable conduct. In support of the inequitable conduct motion, CertainTeed included a 1988 brochure for a European product called Climaver 284. The brochure showed a mat-faced duct board with shiplap edges, but did not show the mat on the shiplap edges themselves. Dkt. No. 66, Ex. 40; Trial Ex. 58. Five days later, on May 21, 2003, CertainTeed moved to compel the production of Knauf's privileged documents and

communications on the theory of the crime/fraud exception to the attorney-client privilege. On July 7, 2003, Knauf filed its opposition to CertainTeed's motions, and Knauf filed its own motion for summary judgment on the defenses of invalidity and unenforceability.

On May 30, 2003, the court held a *Markman* hearing and construed disputed terms of the patent, ruling orally at the conclusion of the hearing. In the wake of the court's *Markman* ruling, the parties reached a stipulation that CertainTeed's accused products – ToughGard ES and UltraDuct Gold duct board – directly infringed claims 3 and 6 of the '865 patent. That stipulation of infringement shifted the focus of the case to the defenses of invalidity and unenforceability.

In what then became a decisive step in the case, CertainTeed filed its reply briefs in support of its summary judgment motions on September 19, 2003. With its reply briefs, CertainTeed filed copies of a different Climaver 284 document from 1991 that showed a rigid duct board with fiberglass mat facing that covered shiplap edges on the airflow surface. See Dkt. No. 118 at 5, citing Dkt. No. 119, Ex. D (also Trial Ex. 61). Plaintiff Knauf reviewed the new materials. Rather than file any further materials in support of its own motion or take further discovery, on November 10, 2003, Knauf provided CertainTeed a covenant not to sue for infringing any Knauf patents by the manufacture, use, or sale of mat-faced fiberglass duct board. On the same day, Knauf moved to dismiss its complaint

and CertainTeed's counterclaims with prejudice. On November 25, 2003, CertainTeed responded and agreed that all claims in the case should be dismissed except for its counterclaim for attorney fees under 35 U.S.C § 285.

The court sorted out the pending motions in an entry on March 24, 2004. See *Knauf Fiber Glass, GmbH v. CertainTeed Corp.*, 2004 WL 771257 (S.D. Ind. March 24, 2004). The court dismissed with prejudice Knauf's claims of patent infringement, dismissed without prejudice CertainTeed's counterclaims for a declaratory judgment, and denied as moot both parties' motions for summary judgment on invalidity. The court also found that CertainTeed's counterclaim for damages for inequitable conduct should not be dismissed. The court denied on the merits both parties' motions for summary judgment on the issue of inequitable conduct, and kept under advisement CertainTeed's motion to compel production of privileged documents and communications.

The court ruled on the motion to compel on February 2, 2006, granting it in part and denying it in part. Dkt. No. 164. The court found that CertainTeed had presented a prima facie case of fraud, but had not proven fraud, in Knauf's failure to disclose to the PTO Knauf's own Duct Liner M product, the flexible duct liner product that used a mat facing on its airstream surface similar to what Knauf claimed as the preferred embodiment of the '865 invention.<sup>9</sup> The court

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<sup>9</sup>The preferred embodiment was not identical to the mat used on Duct Liner M. As Cunningham testified, the preferred embodiment had a different tensile (continued...)

ordered Knauf to produce any withheld privileged documents referring or relating to Duct Liner M or any other flexible duct liners for *in camera* inspection and to provide sworn interrogatory answers regarding those matters as to which Knauf had claimed a privilege. *Id.* at 24-25. The court denied the broader relief that CertainTeed sought, production directly to CertainTeed of all privileged documents in the case. Knauf responded by reporting that there were no privileged documents within the scope of the court's order for *in camera* inspection. CertainTeed sought reconsideration of the court's order, which the court denied on September 29, 2006. *Knauf Fiber Glass, GmbH*, 2006 WL 3240520, at \*1. The court then set a schedule to complete discovery and bring the remaining counterclaim to trial.

B. *Prior Art Provided to Knauf's Counsel*

From the outset of the litigation, CertainTeed asserted that it had sold "millions" of the infringing product before Knauf had invented the invention claimed in the '865 patent. Counsel for Knauf promptly requested CertainTeed to provide information about those sales and said that Knauf would be willing to dismiss its claims in response to such evidence. Ex. 167. CertainTeed did not respond with evidence of its own sales. It provided instead a French catalog showing a product called Climaver 284 and a fabrication manual from Johns-Manville. Exs. 115 & 116. The Climaver 284 document provided in November

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<sup>9</sup>(...continued)  
strength. See Ex. 151, Cunningham Dep. 178.

2002 was different from the document that CertainTeed included with its reply brief in September 2003, which led Knauf to dismiss its claims. Compare Ex. 115 with Ex. 61.

In its post-trial submissions, CertainTeed has conceded the critical difference between the Climaver documents it provided in November 2002 and the document it provided in September 2003. Only the document provided in September 2003 showed a rigid duct board with a fiberglass mat facing *that covered the shiplap edges*, as claimed in the '865 patent. CertainTeed argues that Knauf should have dismissed in response to documents that did not show that the mat facing covered the shiplap edges. CertainTeed Reply to Knauf's Proposed Findings of Fact at 33-34. CertainTeed's argument is that Knauf knew that covering the shiplap edges was inherent in the manufacturing process, so that Knauf and its attorneys must have known from the earlier documents that the Climaver product anticipated the '865 patent's claims. The short answer is that although Knauf and its attorneys knew that the process Knauf itself used to make the mat-faced duct board resulted in covering the shiplap edges, the documents that CertainTeed provided in November 2002 did not show either the process or the result for the Climaver 284 product. And Knauf's knowledge of its own development of the product would not show that it knew or even should have known that someone else must have solved the same problem the same way.

In the most extreme form of this argument, CertainTeed argues that Knauf should have taken into account “the difficulty in locating documents over ten years old and witnesses capable of authenticating them.” CertainTeed Reply to Knauf’s Proposed Findings of Fact at 46. A reasonable plaintiff, CertainTeed contends, “would have anticipated that, with a continued effort to locate prior art documents, CertainTeed would find additional evidence invalidating the ’865 patent, as it did.” *Id.* In other words, CertainTeed argues that Knauf should have dismissed its case much earlier based upon the expectation that CertainTeed *would eventually find* invalidating prior art! Recall that CertainTeed is trying to prove that Knauf acted in bad faith. CertainTeed has stretched its arguments far past the breaking point.

CertainTeed contends that its attorney’s November 4, 2002 letter to Knauf’s counsel (Ex. 115) also included price lists for Climaver 284 from 1990 and 1991 showing that the product was available with shiplap edges. CertainTeed Proposed Conclusion of Law at 87, ¶120, citing Exhibits 127 and 128 (English translation of 127); see also Exhibits 125 and 126 (English translation of 125). The cover letter refers to “two prior art references discussing fiber glass mat faced duct board being sold throughout Europe more than one year prior to the filing of the application of the patent-in-suit.” Ex. 115. Exhibit 115 contains two documents, neither of which is Exhibit 125 or Exhibit 127. The second exhibit uses the phrase “bordes canteados,” which CertainTeed asserts means shiplap edges.

CertainTeed Reply to Knauf's Proposed Findings of Fact at 41 (citing Ex. 115). But neither document shows a mat facing covering the shiplap edges.

On March 25, 2003, CertainTeed's president sent a letter directly to Knauf's president with copies of some prior art and demanded that Knauf dismiss the lawsuit. Ex. 129. On April 15, 2003, CertainTeed's counsel sent Knauf's counsel additional prior art and warned that CertainTeed would seek attorney fees if Knauf did not dismiss the case before CertainTeed filed summary judgment motions. Ex. 117. Knauf declined to do so until it received the materials that CertainTeed filed with its reply brief. CertainTeed has not shown that Knauf acted in bad faith by declining to dismiss in response to the March 25, 2003 and April 15, 2003 letters.

More generally, CertainTeed argues that Knauf should have known, and further that Knauf must have known, that the '865 patent was invalid for obviousness. CertainTeed goes so far as to argue that the court should find in its favor because Knauf has not proved that the '865 patent's claims were *not* obvious. CertainTeed Reply to Knauf's Proposed Findings of Fact at 2. This transparent attempt to reverse the burden of proof is an invitation to legal error. On its counterclaim, CertainTeed always has the burden of proving litigation misconduct by clear and convincing evidence. It cannot meet that burden by shifting it to Knauf.

CertainTeed's argument also ignores just how difficult it can be to prove that a claimed invention would have been obvious to persons of ordinary skill in the relevant art, at least without improper reliance on hindsight. CertainTeed argued for obviousness in its 2003 motion for summary judgment, see Dkt. No. 118 at 13-16 (reply brief), an issue the court never reached. Even if CertainTeed was right about that subject, which the court does not decide, CertainTeed has not gone the further step of showing that its obviousness defense was so strong that any reasonable plaintiff would have given up and dismissed its claims.

Within just a few weeks after CertainTeed filed the second Climaver 284 brochure showing the shiplap edges covered with the mat facing, Knauf dismissed its infringement claims against CertainTeed. Knauf did not seek additional discovery or impose conditions on its dismissal. It simply dismissed its claims and argued that the case should be over.

CertainTeed also contends that Knauf should have dismissed its patent infringement claims in response to a fabrication manual for a Johns-Manville product. Ex. 52. CertainTeed first provided the document to Knauf with a letter dated November 7, 2002. Ex. 116 (referring to Johns-Manville fabrication manual). The Johns-Manville document describes a mat-faced duct board as early as 1970. Knauf argued that CertainTeed did not offer evidence that the manual was actually published so as to be available as prior art. The court admitted the document, however. Assuming that it had been published, Knauf

points out correctly that the Johns-Manville fabrication manual did not disclose a mat-faced duct board with shiplap edges, which would have been needed to anticipate the '865 claims. See Ex. 52 at 3 (stating that standard duct board (Type SD) was available with shiplap edges but not stating that the mat-faced duct board (Type MSD) was available with them). The Johns-Manville document may have strengthened an obviousness defense, but it was not unreasonable for Knauf to choose not to dismiss in response to the document.

### *C. Other Litigation Issues*

CertainTeed also contends that the court should find that Knauf engaged in litigation misconduct in other forms, including supposed discovery abuses. CertainTeed is actually complaining about Knauf's initial objections to requests for production of documents and some interrogatories. If CertainTeed was not satisfied with the initial responses, it never went so far as to challenge those objections by moving to compel discovery (apart from the privilege issues mentioned above). CertainTeed has not shown any discovery abuses at all, let alone anything that would transform the entire case into an exceptional case under section 285. If there were problems, CertainTeed could have raised them with the court. CertainTeed's argument in reply, that it would have filed a motion to compel if the case had continued on the merits, is a sign of a party that does not know when to quit. CertainTeed's stated reasons for not filing a motion to compel – that it expected Knauf to dismiss and that CertainTeed did not need the

discovery to prove its defenses – show only that the initial objections caused CertainTeed no harm.

CertainTeed also complains that Knauf engaged in litigation misconduct when it dismissed its own infringement claims and proposed that CertainTeed's counterclaims be dismissed with prejudice rather than without prejudice. Knauf's request was erroneous in this respect, but it is worth recalling that the font of this body of law, *Super Sack Mfg. Corp. v. Chase Packaging Corp.*, 57 F.3d 1054, 1055, 1060 (Fed. Cir. 1995), affirmed dismissal of the defendant's declaratory counterclaims "with prejudice." Dismissal for lack of subject matter jurisdiction is ordinarily without prejudice on the merits, of course, because the court has not adjudicated the merits of the claim and the decision does not bar a future decision on the merits. See, e.g., *Murray v. Conseco, Inc.*, 467 F.3d 602, 605 (7th Cir. 2006) ("A court that lacks subject matter jurisdiction cannot dismiss a case with prejudice."), citing *Frederiksen v. City of Lockport*, 384 F.3d 437, 438-39 (7th Cir. 2004) (recognizing occasional loose language by courts and noting distinction between dismissal for lack of jurisdiction, which is conclusive as to jurisdictional issues, and dismissal "without prejudice"). Consistent with this general principle, later Federal Circuit law seems to have corrected this ambiguity in *Super Sack* and indicates that dismissal of counterclaims for lack of jurisdiction in response to a *Super Sack* declaration should be without prejudice. See, e.g., *Intellectual Prop. Dev., Inc. v. TCI Cablevision of Cal., Inc.*, 248 F.3d 1333, 1342 (Fed. Cir. 2001).

This minor error by Knauf is certainly understandable; it caused no harm and did not amount to litigation misconduct.

CertainTeed also complains that Knauf engaged in litigation misconduct by refusing to stipulate to the authenticity and publication of some of CertainTeed's prior art evidence. Knauf and CertainTeed stipulated to the vast bulk of documentary evidence. Each reserved a few objections, none of which the court deemed frivolous. There was no litigation misconduct of this sort.

Finally, CertainTeed complains that litigation misconduct is evident from Knauf's lack of evidence of validity, from the lawyers' lack of memory, and even from the lack of evidence of inventor Hauk's good faith. On this last point, CertainTeed seems to have forgotten both that CertainTeed itself had the burden of proof and that Mr. Hauk died before the '865 patent even issued. What evidence was Knauf supposed to offer? CertainTeed's criticisms of the patent lawyers' lack of recollection are not enough to show litigation misconduct. The lawyers have prosecuted a lot of patents, and these events were long ago. The court does not find that any of the attorneys who prosecuted the patent applications testified falsely to a lack of memory. CertainTeed has failed to prove litigation misconduct by clear and convincing evidence.

As for the asserted lack of evidence of validity, an issued patent is presumed valid until proved invalid by clear and convincing evidence. Knauf brought its

case, as it was entitled to do, and it critically evaluated the evidence of invalidity submitted by CertainTeed. When it became clear that the evidence of invalidity based on anticipation was so strong and specific that the defense would have to prevail, Knauf promptly dismissed its claims. From the outset, Knauf had invited information from CertainTeed about its defenses and considered the information that was provided. When Knauf reviewed the materials included with CertainTeed's reply brief in support of summary judgment, Knauf responded promptly by moving to dismiss its claims of infringement. Perhaps Knauf should have reached that conclusion earlier, but the fact that it reached the conclusion when it did, in response to documents that Knauf and its attorneys had not seen before, is highly probative of Knauf's intent. Knauf's intent was not to pursue abusive litigation.

### *Conclusions of Law*

The court has jurisdiction over the parties and over the subject matter of CertainTeed's counterclaim under 35 U.S.C. § 285. The court will not repeat the introduction to the applicable law set forth above at pages 4-7.

#### *I. Knauf's Prosecution of the Patent Application*

Patent applicants have a duty to prosecute applications in the Patent and Trademark Office with candor, good faith, and honesty. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995); 37 C.F.R. § 1.56(a) (duty applies to each

individual associated with filing and prosecuting patent application). The duty applied here to the patent attorneys prosecuting the applications, as well as to the named inventors and at various times to Messrs. Brower, Gravino, and Cunningham.

Inequitable conduct may include both deliberate misrepresentations and deliberate omissions or failures to disclose material information. *Bruno Independent Living Aids, Inc. v. Acorn Mobility Services, Ltd.*, 394 F.3d 1348, 1351 (Fed. Cir. 2005); *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1070 (Fed. Cir. 1998). The key elements are that the misrepresentation or omission must have been both (a) material and (b) made with intent to deceive the PTO. *Bruno Independent Living Aids*, 394 F.3d at 1351. When the showing of materiality is especially strong, the showing of intent may be proportionately less, and vice versa. *Digital Control Inc. v. Charles Machineworks*, 437 F.3d 1309, 1313 (Fed. Cir. 2006). Where both elements are shown, the court must weigh the evidence to determine whether the equities warrant a finding of inequitable conduct. *Id.*; *Monsanto Co. v. Bayer Bioscience N.V.*, 363 F.3d 1235, 1239 (Fed. Cir. 2004).

On the issue of intent, CertainTeed has the burden of showing by clear and convincing evidence that one or more individual human beings acted with intent to deceive the PTO. CertainTeed has not identified any individual who, it contends, acted with deliberate intent to mislead the PTO.

CertainTeed has argued instead that it can build its case of inequitable conduct by combining the knowledge of several individuals, so that each should be presumed to know what any one of them knew, and then each may be deemed to have acted with intent to deceive by failing to inform the PTO about information the individual did not personally know. That is not the standard to prove inequitable conduct. CertainTeed has asserted: “Information known by one partner is deemed to be known by all members of the partnership.” CertainTeed Proposed Concl. of Law at 54, ¶ 27, citing *Evident Corp. v. Church & Dwight Co.*, 399 F.3d 1310, 1316 (Fed. Cir. 2005). The proposition is not relevant here. In *Evident Corp.*, the Federal Circuit held that a partnership could be held jointly and severally liable for inequitable conduct of its partners. The court did not hold that a case of inequitable conduct, which requires deliberate intent to deceive, could be built on a theory of constructive, collective knowledge by presuming that one person knew what another person knew.

In *Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.*, 120 F.3d 1253, 1256-58 (Fed. Cir. 1997), the Federal Circuit upheld a finding of inequitable conduct based on the actions of a specific individual. The evidence showed that the applicant’s patent counsel knew about a particular patent and had analyzed it but failed to disclose it. In other cases, the Federal Circuit has rejected attempts to show inequitable conduct by relying on collective knowledge. See *Nordberg, Inc. v. Telsmith, Inc.*, 82 F.3d 394, 396-97 (Fed. Cir. 1996) (affirming finding of no inequitable conduct; a copy of prior art was in corporation’s files of

several hundred patents, but there was no showing that any employee had actually searched the files and found the prior art, and employees involved in the application were not aware of the prior art); *B.F. Goodrich Co. v. Aircraft Braking Systems Corp.*, 72 F.3d 1577, 1584-85 (Fed. Cir. 1996) (affirming finding of no intent to deceive; omitted prior art reference was in files of several employees, but evidence did not show that inventor or attorney knew of it).

As set forth in detail in the court's findings of fact, CertainTeed has failed to prove by clear and convincing evidence that anyone involved in the applications that led to the '865 patent engaged in inequitable conduct, with deliberate intent to mislead or conceal material information from the PTO.

In its proposed findings and conclusions, CertainTeed has repeatedly tried to shift the burden of proof to Knauf to show that it did not engage in inequitable conduct. *E.g.*, CertainTeed Proposed Findings of Fact at 62, ¶ 21 ("Knauf faced a particularly heavy burden to show that its failure . . . was innocent"); *id.* at 63, ¶ 23 (referring to Knauf's "failure of proof"). These arguments are an invitation to legal error. The burden of proof and persuasion always remains on CertainTeed to prove inequitable conduct by clear and convincing evidence. CertainTeed has tried to meet that burden by relying on inferences from circumstantial evidence. The court denied summary judgment for Knauf because the court found that those inferences were *permissible* based on the evidence in the record. See 2004 WL 771257 at \*3; see generally *Bruno Independent Living Aids, Inc. v. Acorn*

*Mobility*, 394 F.3d at 1354-55 (affirming findings of inequitable conduct). But that was only summary judgment. After a trial on the merits, the issue is whether CertainTeed has persuaded the trier of fact with clear and convincing evidence. The court is not required to accept every permissible inference, and in fact could not do so here because the weight of the evidence supports different inferences about Knauf's intentions.

CertainTeed correctly points out that a patent applicant's failure to disclose his own prior art invention can provide sufficient circumstantial evidence of intent to deceive. *LaBounty Mfg., Inc. v. United States International Trade Comm'n*, 958 F.2d 1066, 1076-77 (Fed. Cir. 1992) (affirming administrative law judge's finding of deceptive intent). As explained in detail in the findings of fact, however, Knauf has introduced substantial and credible evidence explaining why the applicants did not consider Duct Liner M to be material. As the Federal Circuit has explained, "inequitable conduct requires not intent to withhold, but rather intent to deceive. Intent to deceive cannot be inferred simply from the decision to withhold the reference where the reasons given for the withholding are plausible." *Dayco Products, Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1367 (Fed. Cir. 2003) (reversing summary judgment finding inequitable conduct as a matter of law). Although the evidence might also reasonably support a contrary finding, the court finds that CertainTeed has not proved by clear and convincing evidence that anyone acted with intent to deceive the PTO. See, e.g., *LNP Engineering Plastics, Inc. v. Miller Waste Mills, Inc.*, 275 F.3d 1347, 1360-61 (Fed. Cir. 2001) (affirming

finding that failure to disclose material prior art was not deliberate and that applicant did not engage in inequitable conduct).

The applicant for a patent must be the inventor of the invention. See 35 U.S.C. § 102(f). A patent is invalid if it names persons other than the true inventors or if it fails to name all the true inventors. *Trovan, Ltd. v. Sokymat SA, Irori*, 299 F.3d 1292, 1301 (Fed. Cir. 2002). CertainTeed argues that the '865 patent is invalid for failure to meet this requirement and that Knauf and the applicants deliberately misled the PTO on this subject. CertainTeed has not supported this challenge with evidence. CertainTeed has taken the position that Knauf has litigated various aspects of this case without foundation and in bad faith, based primarily on circumstantial evidence. This belated argument by CertainTeed, unsupported by evidence, would provide a similar circumstantial basis for making the same criticism of CertainTeed, at least with respect to this portion of the case. But it is time for this litigation to come to an end, and the court does not draw the inference of bad faith from the circumstantial evidence in this instance. Cf. *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 2002 WL 1801647, \*2 (S.D. Ind. July 5, 2002) (finding that most aspects of complex patent case did not warrant exceptional case finding under § 285 where both sides with highly skilled counsel had “at times argued for positions with slender factual and/or legal support”).

### III. *Knauf's Pursuit of this Lawsuit*

The court's findings of fact show that CertainTeed has failed to prove litigation misconduct by clear and convincing evidence. Knauf brought a case it was entitled to bring, as the holder of a presumptively valid patent. The fact that Knauf was seeking a market advantage from the right to exclude that belongs to a patent holder says only that this was a patent infringement case. As it turned out, of course, the patent was weak and ultimately was almost certainly invalid for anticipation. But Knauf dismissed voluntarily when confronted with strong prior art. That voluntary dismissal provided the strongest evidence of its intentions.

#### IV. *Totality of the Circumstances*

The '865 patent appears to have been invalid as anticipated, and it certainly was not a model of how a healthy patent system should function. Perhaps there was some collective or individual negligence involved in the collective effort to obtain the patent, but that is not the standard under section 285, *e.g.*, *Kingsdown Medical Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988), and the court does not make any finding of negligence. The court is not persuaded, and certainly not by clear and convincing evidence, that any person acting on behalf of Knauf acted with deliberate intent to deceive the PTO or engaged in inequitable conduct in this litigation. The most salient and exceptional aspect of this case is that Knauf promptly and voluntarily dismissed its claims in response to the prior art that CertainTeed first provided to Knauf with its September 2003 reply brief in support of summary judgment. That decision is powerful evidence that Knauf was not acting in bad faith at any time, either in the litigation or in the patent prosecution.

It is also worth noting that awards of attorney fees under section 285 are not the only deterrent to negligence or misconduct before the PTO. Knauf has wound up spending an enormous amount of time and money first obtaining and then trying to enforce a patent that turned out to be invalid and flawed from the beginning. Those expenses are also significant deterrents to encourage more thorough searches of prior art.

The court has considered all the arguments in the parties' voluminous post-trial submissions. Arguments not addressed specifically have been deemed not substantial enough to require specific discussion. For the reasons described above, the court will enter final judgment in favor of plaintiff on the remaining counterclaim and dismissing all other claims and counterclaims consistent with earlier rulings.

So ordered.

Date: March 24, 2008

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DAVID F. HAMILTON, CHIEF JUDGE  
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