

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLORADO  
Senior District Judge Richard P. Matsch

Civil Action No. 05-cv-00086-RPM-MJW

CCC Group, Inc.,  
a Texas Corporation,

Plaintiff,

v.

Martin Engineering Company,  
an Illinois Corporation,

Defendant.

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MEMORANDUM OPINION AND ORDER FOR JUDGMENT ON DEFENDANT'S  
COUNTERCLAIM OF INEQUITABLE CONDUCT

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Air Control Science, Inc., now a division of CCC Group, Inc., brought this patent infringement suit against Martin Engineering Company (Martin), claiming infringement of U.S. Patent No. 6,000,533 (the '533 Patent); U.S. Patent No. 6,176,368 (the '368 Patent), and U.S. Patent No. 6,135,171 (the '171 Patent). The three patents relate to systems for controlling dust in the handling of bulk material, such as coal, in mining and industrial applications. A fifteen-day trial to jury was held in March 2008. At the close of the Plaintiff's evidence, the court found the asserted claims of the '533 and '368 Patents invalid and dismissed the Plaintiffs' claims relating to those patents under Fed. R. Civ. P. 50. The Plaintiff's claims of infringement of the '171 Patent and Martin's counterclaim of invalidity were submitted to the jury, and Martin's counterclaim of inequitable conduct was reserved for later determination by the court, if necessary. On March 21, 2008, the jury returned a verdict for the Plaintiff awarding damages for

infringement of the '171 Patent and finding it valid. On September 17, 2008, the court vacated the damages award and granted Martin's motion for judgment as a matter of law for insufficient evidence of infringement.

On January 5, 2009, the court entered an amended judgment and declaration of final judgment under Rule 54(b) dismissing the Plaintiff's claims of infringement and denying Martin's invalidity counterclaim. The Plaintiff did not appeal that judgment.

The remaining issues to be determined are those raised by Martin's counterclaim of inequitable conduct, Martin's motion for attorney fees pursuant to 35 U.S.C. § 285, and Martin's amended motion for review of the Clerk's taxation of costs. Martin's allegations of inequitable conduct are central to its motion for attorney fees.

Trial to the court of the inequitable conduct counterclaim commenced on September 1, 2009. The presentation of evidence concluded on September 8, 2009, and closing arguments were submitted in writing. The court has considered the evidence presented during both trials and the briefs and arguments of counsel. This memorandum opinion contains the findings of fact and conclusions of law required by Fed. R. Civ. P. 52.

All three of the Plaintiff's patents were obtained by applications that were filed as a result of a very large coal mining project of the Powder River Coal Company (PRCC) at the Rochelle coal mine near Gillette, Wyoming. L. Alan Weakly (Weakly), an engineer employed by PRCC was responsible for avoiding environmental hazards from dust generated at transfer points dropping coal from higher conveyor belts to lower conveyor belts, some as large as seven feet in width and moving coal at a rate of 7,000 tons per hour. That was a daunting task requiring custom built equipment. Movement of bulk material by transfers between conveyor belts, into

storage vessels or into process equipment generates dust pollution of the ambient air. Air pollution is a significant problem in our industrial society. Methods to reduce air pollution in common use before this project included means for dust collection, filtration and suppression systems.

Air Control Science, Inc. (ACS), a privately owned company headed by John Fischer (Fischer), located in Boulder, Colorado, was in the business of designing and installing dust control apparatus for industrial operations. Garren Tooker (Tooker) was an engineer employed by ACS, who retired and worked as a consultant for ACS from his home in Brookings, Oregon. Steven Bradbury (Bradbury) worked as an ACS engineer in the Boulder office.

Dust Control, Inc. (DCI) was a Wyoming company engaged in designing and installing dust control equipment. Delmar Shelstad was an officer and employee of DCI. That company featured a system using an external pipe to recirculate dust laden air from the lower portion of an enclosed transfer chute back up into the upper portion of the enclosure.

Two companies, PROK International and Gulf Conveyor Systems, manufactured hood and spoon devices for controlling dust in open-air bulk material transfers. In general terms, a spoon is a loading chute for transferring bulk material from a higher location to a lower location, and is shaped and configured to reduce the velocity of the impact of the material at the lower location. A hood is a deflector device for guiding the bulk material as it moves into the transfer chute.

In July 1997, Weakly contacted Gulf requesting information regarding Gulf's Easyflow Transfer Chute. Gulf sent product information to Weakly.

In July and August 1997, Weakly discussed his project with Shelstad who gave Weakly drawings illustrating the use of an enclosed transfer point with an external pressure relief pipe to recirculate the air from the low end.

In early September 1997, Weakly contacted PROK International requesting information about PROK's Smooth Line product. On September 5, 1997, PROK sent a facsimile transmission to Weakly, providing drawings and a draft brochure describing PROK's Smooth Line loading chutes.

To determine the size of the enclosure and relief pipe, Weakly needed to calculate the induced air flow that would be generated in the project. Induced air flow is the stream of air that is dragged along with the stream of moving material in a bulk material handling operation. Weakly sought the assistance of Tooker for that calculation.

Tooker had been involved in the redesign of dust collection systems at an ARCO mine in Gillette, Wyoming in the early 1970s. At that time the practice in the industry was to calculate induced air flow and determine the appropriate size of system components in the manner described in *Industrial Ventilation, A Manual of Recommended Practice* (American Conference of Industrial Hygienists 13th ed.) (*Industrial Ventilation*, Ex. C-23.) Tooker found that method inadequate for the problems presented at the ARCO mine. He studied *Controlling Dust at Belt Conveyor Transfer Points* (Transactions Vol. 250, Society of Mining Engineers, March 1971) (Ex. C-26) and *Environmental Control Applied to Belt Conveyor Transfer Points* (Ex. A-82) by J.N. Morrison, Jr. (*Morrison*). Tooker also studied *Plant Process and Ventilation* (2nd Ed. Industrial Press 1963) by W.C.L. Hemeon (*Hemeon*, Ex. A-29) and *Industrial Dust* (2nd Ed. McGraw-Hill 1954) by P. Drinker (*Drinker*, Exs. A-28 and C-22). Using formulas from *Hemeon*

and *Drinker*, Tooker developed his own design criteria and published an article, “*Establishing Design Criteria for Fugitive Dust Collection*” in 1985. (*Tooker I*, Ex. 56.) In May 1992, he published another article, “*Controlling Fugitive Dust in Material Handling Operations*,” describing his formulas and design methods in greater detail. (*Tooker II*, Ex. 55.) Tooker created a computer program called Dust Analyst, to perform the calculations involved in his design methodology. During the relevant time period, ACS owned the rights to the Dust Analyst computer program. Tooker had trained Bradbury in Tooker’s design methods and the use of the Dust Analyst computer program.

On September 16, 1997, Weakly wrote a letter to Tooker, describing the conveyor-to-conveyor transfer point he was designing with information about the belt width and speed and the qualities of the coal at the Rochelle mine. Weakly enclosed information from PROK about its Smooth Line transfer chute systems and drawings of the proposed system prepared by DCI, showing a system using an external pressure relief pipe with a 12 inch diameter. (Ex. C-44, attachment 6.) Weakly requested Tooker’s thoughts about the effectiveness of this proposed system and asked Tooker to calculate the volume of induced air.

In a report to Weakly dated September 22, 1997, Tooker explained that the 12 inch recirculation duct shown on the DCI drawing would not be adequate to sufficiently recirculate the induced air. (Ex. H-92.) He said that the duct would need to be enlarged to 48 inches in diameter. Tooker suggested eliminating the external pressure relief pipe and enlarging the containment enclosure, explaining how the enclosure could be designed to facilitate the internal recirculation of induced air. Tooker attached a copy of Figure 7-8 (A) from *Hemeon* to illustrate the recirculation concept. Tooker opined that a system having an enlarged enclosure for

recirculation of induced air combined with other known dust control features for mitigating the impact of the falling material and an effective skirt sealing design similar to that shown on the DCI drawing, would either eliminate the need for active devices or reduce dust emissions enough that any remaining dust could be collected by a small dust collector device in the belt loading zone area. Tooker enclosed a copy of his 1992 article and a spreadsheet showing calculations performed by the Dust Analyst program to explain how to size the enclosure of the transfer point.

Weakly incorporated the enlarged enclosure into his design, eliminating the external pressure relief pipe. Differing testimony has been presented about when and how Weakly changed his design. Tooker testified that the enlargement of the containment housing to facilitate internal recirculation was his idea, which he communicated to Weakly in the report dated September 22, 1997. During the infringement trial, Weakly testified that he talked with Tooker about the design in a telephone conversation and that changing from the relief pipe to an enlarged enclosure “was an epiphany in the sense that we both realized that this was the best way to do it.” (Tr. Mar. 5, 2008, at 52:21 – 53:9; 92:23 – 93:2; Mar. 6, 2008, at 22:10 – 18).

The documents exchanged between Weakly and ACS are consistent with Tooker’s testimony.

The suggestion of a spacious enclosure to facilitate internal circulation of dust laden air was not novel. The benefits of a spacious enclosure were known in the art. As shown by Tooker’s report, *Hemeon* discussed and illustrated the concept. *See also*, Martin’s *Foundations II*, Ex. A-31 at 26 (“The enclosure should be spacious enough to permit internal circulation of the

dust-laden air.”); *Morrison*, Ex. C-26 at M14775 (“Also, by virtue of large interior volume, spacious enclosures are able to suppress pressure surges caused by inflowing material and by the ingress of induced air.”)

Bradbury suggested to Fischer that ACS should seek a patent on a transfer point dust enclosure that recirculates induced air flow, with the size of the enclosure determined according to the induced air flow calculations performed by the Dust Analyst program. (Ex. B-33.) On October 3, 1997, Fischer and Bradbury met with Donald Duft (Duft), an experienced patent attorney in Boulder. They discussed the patent process. Duft assigned the patent application project to William Wilbar (Wilbar), a lawyer with less experience in Duft’s firm.

On November 18, 1997, Tooker sent another report to Weakly. (Ex. 29.) In that report, Tooker provided design parameters for the proposed transfer house at the Rochelle mine. Tooker again included calculations from the Dust Analyst program and provided some information about how the Dust Analyst program calculates the collection air volume for an enclosed conveyor-to-conveyor transfer.

Weakly gave the name Passive Enclosure Dust Control System (PECS) to the system he was designing. He communicated with the Wyoming Department of Environmental Quality regarding its criteria for Best Available Control Technology (BACT) and the process for obtaining BACT designation for the PECS. On November 25, 1997, PRCC submitted information to the Wyoming Department of Environmental Quality to support BACT designation for a prototype passive enclosure control system for dust control in coal plants. (Ex. E-36.) That submission included Tooker’s report dated September 22, 1997, with the attached Dust Analyst calculations, the *Hemeon* illustration, and Tooker’s 1992 article.

Weakly continued his design work during November and December, 1997.

In January 1998, Weakly obtained commitments from PROK and DCI to provide materials and services for the construction of the new enclosed transfer point at the Rochelle mine. PROK and DCI agreed to share the estimated costs of \$162,000.

On January 26, 1998, Tooker and Bradbury filed a patent application for a Passive Enclosure Dust Control System, describing the invention as a dust containment housing that encloses a first station and a second station with space inside the housing for a region of low air pressure to relieve the region of high air pressure created by the impact of the bulk material as it moves from a first station to a second station, so that the region of low pressure defines a circulation compartment allowing dust particles suspended in the air either to remain suspended or settle out of the air inside the containment housing. Although there is some conflicting testimony from Fischer, the evidence supports a finding that Weakly was not told that ACS would seek a patent based on the PRCC project.

Fischer and Bradbury met with Weakly several times in January and February, 1998, to follow the progress of the project at the Rochelle mine. Installation of the new system was completed on March 20, 1998. Weakly concluded that it contained dust emissions within an acceptable level, without the addition of dust collection or suppression devices.

In July 1998, Weakly saw a copy of an ACS advertising brochure, describing ACS's Dustless Transfer system and a statement that ACS had a patent pending for a dust control system that eliminates the need for dust collection or suppression devices. After reviewing the brochure, Weakly called Bradbury and accused ACS of professional dishonesty. Weakly objected to ACS referring to its system as the Best Available Control Technology. The

Wyoming Department of Environmental Quality had not yet determined that the passive dust control system installed at the Rochelle mine satisfied the BACT criteria.

The Plaintiff characterizes the conflict between Weakly and ACS as an advertising dispute. That is contrived to attempt to avoid the defendant's argument that there was a dispute about inventorship. The disagreement was about ACS's contribution to the passive dust control system installed at the Rochelle mine. ACS was advertising invention of the recirculation concept that Tooker had explained to Weakly. ACS was advertising that its proprietary Dust Analyst computer program was essential to the design of such a system. Weakly was angry that ACS was claiming a patent based on Weakly's work and thereby attempting to control marketing of it. Weakly contended that he and Shelstad had conceived and developed the entire passive system installed at the Rochelle mine. Weakly's position was that Tooker's contribution was merely the application of concepts that were already publicly available in *Hemeon*, *Morrison* and Tooker's own articles.

Weakly and Fischer testified at both trials that there was no inventorship dispute and the focus of their disagreement was on ACS's marketing tactics. Fischer testified that after ACS eliminated the reference to BACT in its brochure, the dispute was resolved. The testimony of Weakly and Fischer on this subject is not credible. It is contradicted by overwhelming documentary evidence. The evidence supports a finding that Weakly came to realize that ACS was rushing to capitalize on his project at the Rochelle mine.

Not knowing what was in the ACS patent application, Weakly and Shelstad contacted Samuel Digirolamo (Digirolamo), a St. Louis patent attorney in November, 1998 because they were concerned that ACS was claiming their PECS design. To support his claim of inventorship,

Weakly prepared a chronology, dated February 9, 1999, describing the development of the PECS and the dispute with ACS. (Ex. C-44.) In mid-February 1999, Weakly provided Digirolamo with a copy of his chronology and numerous documents relevant to the development of the PRCC project.

On March 18, 1999, Digirolamo filed a patent application for Weakly and Shelstad, claiming invention of a Passive Enclosure Dust Control System. In general terms, they claimed a passive dust control system comprised of a containment housing with sufficient volume for circulation of induced air flow generated within the enclosure; a deflector and transfer chute, and as to some claims, an enclosed outlet area or stilling zone with spaced curtains to impede air movement through the zone.

On October 1, 1999, Digirolamo sent a certified letter to Fischer informing him that a patent application had been filed “covering the design, construction and operation of the PECS system installed at the Rochelle mine as well as variations thereof.” (Ex. B-65.) Digirolamo’s letter demanded that everyone associated with ACS cease from interfering with customers and potential customers of Weakly and/or DCI and stop claiming that ACS had designed the system installed at the Rochelle mine.

On November 5, 1999, ACS filed a continuation-in-part (“CIP”) application. This new patent application included claims for a passive dust control system having a circulation compartment as claimed in the pending application, with the addition of various secondary dust control features.

On December 14, 1999, the ‘533 Patent issued to Tooker and Bradbury, with ACS as assignee.

Digirolamo obtained a copy of the '533 Patent. After discussing with Weakly whether to initiate an interference proceeding, they decided against it.

In an Office Action dated February 10, 2000, the Examiner rejected all the pending claims of the Weakly/Shelstad patent application, citing the '533 Patent, among other patents, to conclude that the claims were not patentable under 35 U.S.C. § 102 and § 103.

On March 15, 2000, Weakly, Fischer and Shelstad met at a Holiday Inn in Gillette, Wyoming. At that meeting, Weakly told Fischer that the ACS technology "plagiarized" the Hemeon and Morrison publications. Fischer expressed his concern that "both patents might be in jeopardy if we fight legally." (Ex. C-52.)

On May 8, 2000, Weakly and Shelstad responded to the Examiner's rejection of their application claims. They amended the claims, further defining the chute member element of their claims and pointing out distinctions between the amended claims and the prior art cited by the Examiner. They did not tell the Examiner that they disputed the inventorship claims in the '533 Patent. The '171 Patent issued to Weakly and Shelstad on October 24, 2000.

On January 23, 2001, the '368 Patent issued to Tooker and Bradbury, with ACS as the assignee.

Weakly eventually purchased Shelstad's interest in the '171 Patent. In April 2004, ACS entered into an agreement with Weakly, giving ACS a license and control of the '171 Patent. ACS then brought this infringement suit against Martin, claiming infringement of all three patents. Having successfully defended the claims of infringement, Martin now claims that all three patents-in-suit were obtained through inequitable conduct and that this action was brought in bad faith.

“A patent may be rendered unenforceable for inequitable conduct if an applicant, with intent to mislead or deceive the examiner, fails to disclose material information or submits materially false information to the PTO during prosecution.” *Digital Control, Inc. v. Charles Machine Works*, 437 F.3d 1309, 1313 (Fed. Cir. 2006). The party challenging the enforceability of a patent must prove materiality and intent by clear and convincing evidence. When materiality and intent are both established, the court must decide whether enforcement of the patent is inequitable. *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995).

Materiality may be determined under any one of several recognized tests. See *Digital Control*, 437 F.3d at 1314-16. PTO Rule 56, 37 C.F.R. § 1.56, describing the duty of disclosure, is one test for materiality. That section provides, in relevant part:

. . . , information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
  - (i) Opposing an argument of unpatentability relied on by the Office, or
  - (ii) Asserting an argument of patentability.

37 C.F.R. § 1.56(b). Another standard is the “reasonable examiner” standard. Under that standard, a statement or omission is material if a reasonable examiner would consider the misrepresented or omitted material important in deciding whether to issue the patent. See *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1363 (Fed. Cir. 2003).

The intent element “must generally be inferred from the facts and circumstances surrounding the applicant's overall conduct.” *Dippin’ Dots, Inc. v. Mosey*, 476 F.3d 1337, 1345

(Fed. Cir. 2007) (quoting *Paragon Podiatry Lab., Inc. v. KLM Labs. Inc.*, 984 F.2d 1182, 1189 (Fed. Cir.1993)). “[T]he involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.” *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 876 (Fed. Cir.1988) (en banc). The Federal Circuit has emphasized that “materiality does not presume intent, which is a separate and essential component of inequitable conduct.” *GFI, Inc. v. Franklin Corp.*, 265 F.3d 1268, 1274 (Fed.Cir.2001). Gross negligence is not sufficient. *See Kingsdown Med. Consultants*, 863 F.2d at 876.

The duty to prosecute patent applications with candor, good faith, and honesty extends to the inventors, attorneys and others who are substantively involved in the preparation or prosecution of the application. *Molins*, 48 F.3d at 1178, n.6.

Fischer substantially participated in the prosecution of the ACS patents. Although not named as an inventor, he was involved in the strategic decisions, including what information should be disclosed in the specification of the ‘533 Patent and determinations about the secondary dust control features claimed in the ‘368 Patent. (*See* Ex. 30; Ex. L-16.) The Dust Analyst computer program was proprietary to ACS and disclosure of its methodology would require Fischer’s approval. If a patent could be obtained without that disclosure, ACS would have a clear business advantage in the market for dust containment devices and methods by having the patents and the protection of the proprietary computer program. Fischer closely supervised Bradbury’s activities and was substantively involved in the patent application process. Both Fischer and Bradbury discussed a patent application with Duft, an experienced patent attorney, on October 3, 1997. Duft assigned the patent application project to

Wilbar, an attorney with much less experience, to provide legal services with minimal supervision by Duft. Bradbury communicated with Wilbar under Fischer's supervision. Tooker did not have any direct conversations with Duft or Wilbar.

On October 15, 1997, Bradbury and Tooker submitted a written description of the problem and invention to Wilbar. (Ex. A-36.) Wilbar asked the inventors to provide technical information about the prior art and instructed Bradbury on how to do a patent search. Bradbury located numerous patents related to the general subject matter of the purported invention and gave them to Wilbar. Bradbury copied Figure 1-1.2 from Martin's *Foundations II* publication and gave it to Wilbar as an illustration of prior art.

After receiving that information, Wilbar told Bradbury there should be more specificity about how to size the recirculation chamber. In a telephone conference on December 22, 1997, Tooker, Bradbury and Fischer "agreed that they would continue the patent application process by including a description of the calculation process for arriving at the amount of the induced air flow that must be circulated within the transfer chute enclosure." (Ex. 30.) Tooker prepared a memo explaining calculations derived from *Hemeon*, *Drinker*, and *Industrial Ventilation*. Tooker sent selected pages from these publications to Bradbury, who gave them to counsel. He did not provide the software in the Dust Analyst program.

Wilbar submitted the patent application to the PTO on January 26, 1998. The applicants did not disclose any of the patents that Bradbury had discovered through his patent searches. *Hemeon*, *Drinker* and *Industrial Ventilation* were mentioned in the specification. The specification described Figure 1 as an illustration of prior art.

The applicants submitted an Information Disclosure statement, disclosing two foreign patents directed to active dust control systems. The Examiner uncovered and cited U.S. Patent No. 5,129,508. Those were the only three references cited during the prosecution of the '533 patent.

Those same three patents were the only references cited during the prosecution of the '368 patent. ACS did not identify any intervening or additional prior art when it applied for that patent.

The '533 Patent was allowed in a first Office Action and issued on December 14, 1999. The '368 Patent issued on January 23, 2001.

The Plaintiff argues that the actions of the ACS representatives must be judged “in light of what they regarded the invention to be,” stating that “ACS, Fischer, Tooker, and Bradbury believed that ACS was the first to come out with a sized chamber to allow internal recirculation at a transfer point.” (Pl.’s closing argument at 11.) The Plaintiff’s argument misses the mark. The conduct of the ACS representatives must be evaluated in light of the patents they submitted to the PTO for approval.

Bradbury’s memo to Fischer described the invention as a conveyor transfer point enclosure that recirculates induces air, with “the size of recirculation enclosure determined by induced air flow calculated by Dust Analyst©.” (Ex. B-33.) However, the ACS representatives knew that the recirculation concept was not novel, the use of spacious enclosures was known in the art of bulk material handling and Tooker’s design criteria and formulas were already published.

To obtain the '533 Patent, the inventors and their counsel gave the PTO Examiner a misleading portrayal of prior art through their use and description of Figure 1. Figure 1 is the

same as Figure 1.1-2 of Martin's *Foundations II*, with the addition of arrows indicating air flow and numbers identifying specific components. *Foundations II* was not identified as the source of the illustration. In *Foundations II*, that drawing represents a generic enclosed transfer point and was not shown to represent a summary of the state of the art. The entire *Foundations II* book addresses dust control for bulk material transfers involving conveyors. The selective use of a single illustration from *Foundations II*, without identifying the source or providing the book to the Examiner, was contrary to the duty of candor. Bradbury testified that he had not read the entire *Foundations II* book and was unaware of its teachings. That testimony is not credible. Bradbury obviously knew enough about *Foundations II* to use it to illustrate prior art. He must have known that *Foundations II* addressed chute design and the advantages of spacious enclosures.

The specification of the '533 Patent discusses formulas found in *Hemeon* and *Drinker*, but the inventors did not provide those publications to the Examiner. The inventors did not disclose that *Hemeon* teaches the concept of providing sufficient volume to allow for air recirculation within a dust containment housing. *Drinker* states that "[l]ocal points of high pressure created by falling material within enclosed equipment can be relieved by providing a free air channel back to a zone of negative pressure in the system." (Ex. A-28 at p. 223.) *Morrison* also teaches that spacious enclosures permit internal recirculation of dust-laden air. (Ex. C-26.) A reasonable examiner would have found these references important because they refute the applicants' portrayal of prior art.

Tooker's design methodology used formulas for calculating induced air flow derived from *Hemeon* and *Drinker* and *Industrial Dust*. The specification of the '533 Patent discloses

formulas from those references, but that discussion is less complete than Tooker's own articles. Tooker's articles are material prior art and should have been disclosed. Those articles would have shown that Tooker's design criteria were not new.

The specification discusses formulas relevant to the calculation of induced air in connection with its description of how to properly size the claimed apparatus. The language of the specification suggests that application of these formulas is the information required to determine the volume of the enclosure that causes induced air to recirculate within the containment housing. That is not true. In the memo dated October 15, 1997, Bradbury and Tooker described the invention as a method or an engineered design. (Ex. 36 at AC 1896-97, "The Dustless Transfer is a passive method . . . . The Dustless Transfer will provide passive dust emission control by a *design* integrated into an enclosed transfer chute." (emphasis added.)) To patent such a method would have required disclosure of Tooker's design methodology and the steps performed by ACS's Dust Analyst computer program. Instead the ACS representatives finessed that issue by disclosing only certain formulas relevant to the determination of induced air flow, referring to *Hemeon*, *Drinker*, and *Industrial Ventilation*. The ACS representatives knew that Tooker's design method was more complex. The Plaintiff's trial brief, submitted before the jury trial, asserted that the '533 and '368 Patents teach "a technology that applies a fluid dynamics program to create a recirculation chamber in the transfer point." Pl.'s Trial Br., doc. 231, at 7 & 10. However, ACS did not disclose the "fluid dynamics program" when it applied for the '533 Patent, and – as Wilbar confirmed in his deposition – the claims of the 533 Patent do not claim how to size the containment unit. (Wilbar dep. (June 8, 2006) 48:16 – 49-7.)

The Dust Analyst program and the steps performed by it were not fully disclosed. The decision of what not to disclose was deliberate. (*See* Ex. 30.)

When Tooker and Bradbury applied for the '533 Patent on January 26, 1998, they knew that Tooker's contribution was to configure the enclosed chamber that was but part of the ongoing project. What Tooker did was apply methodology he had already developed to assist Weakly in determining the size of the containment housing of the system at the Rochelle mine, considering the size and speed of the belts, the height of the drop, the particle size of the material, and other factors. Tooker contributed to the project by discouraging the use of a pressure relief pipe and suggesting the use of an enlarged enclosure with other known dust control apparatus. The innovation in the industry, if any, was the entire system installed at the Rochelle mine. ACS intentionally sought to exploit Tooker's contribution to a complex system in a classic illustration of the tail wagging the dog. The experimental project at the Rochelle mine was reduced to practice when Weakly completed and tested it.

The claims of the '533 Patent would not have been allowed if the examiner had been informed of this material undisclosed information. To provide Figure 1 in the '533 as a graphic depiction of prior art was misleading and deceitful in its oversimplification of what was known in the industry. The effort to characterize recirculation of air to precipitate the dust from it as something new and novel was a blatant misrepresentation of facts known to the applicants.

ACS filed its second patent application on November 5, 1999, when the inventorship dispute with Weakly was not yet resolved. Like the '171 Patent, the '368 Patent claims a passive dust control system having an enclosure that allows recirculation, combined with other dust control features. The fair inference is that ACS applied for the '368 Patent because the

recirculation chamber claimed in the '533 patent application might not be enough to be patentable alone and that the inventorship dispute with Weakly might cause further inquiry from the Examiner.

When ACS applied for the '368 Patent, its pattern of deceitful conduct continued. The '368 Patent is odd because the purported invention is a passive system, but some of the patent claims include active components. The Plaintiff has never explained this inconsistency. The Plaintiff asserts that the ACS representatives reasonably believed that *Foundations II*, *Morrison* and the undisclosed sections of *Hemeon* and *Drinker* were not material because those references discuss spacious enclosures for recirculation in connection with active dust control systems. The inclusion of claims encompassing active dust control systems in the '368 Patent makes that explanation implausible.

Claim 25 of the '368 Patent claims a passive dust control system having a recirculation duct, but the applicants did not disclose that such pressure relief pipes were well known prior art. Bradbury testified that he believed that prior art was limited to patents, and he did not understand the term intervening prior art. Bradbury's explanation is not credible. In the '533 and '368 Patents, Figure 1 is identified as prior art, and Bradbury admitted that he copied that drawing from Martin's *Foundations II* publication. It is incongruent for Bradbury to say that he believed that prior art was limited to patents when he used a drawing of apparatus shown in a publication to illustrate prior art.

ACS had begun distributing an advertising brochure for the Dustless Transfer system to potential customers by July 1998. The drawing in the Dustless Transfer brochure depicts a system with laminar air flow guides, a secondary dust control feature claimed for the first time in

the '368 Patent. The ACS representatives violated duties of candor by not disclosing ACS's commercialization of apparatus claimed for the first time in that patent application.

The inventorship contest provided the motivation for the deceitful conduct displayed by the ACS representative during the prosecution of the '533 and '368 Patents. ACS recognized the potential commercial value of passive dust control systems. ACS was aware that others might seek a patent based on the passive system installed at the Rochelle mine. Hoping to win the race for a patent monopoly, the ACS inventors carved out one part of the system (the recirculation chamber) and claimed inventorship of it. To support that effort, they provided the PTO with a misleading description of prior art and withheld material prior art.

Inequitable conduct in the prosecution of the '533 and '368 Patents was shown by clear and convincing evidence. The egregious conduct displayed by the ACS representatives renders the patents unenforceable.

When Weakly and Shelstad sought legal advice about ACS's marketing of its passive dust control system, they knew ACS had filed a patent application. The inventorship dispute and the competing ACS patent application also motivated Weakly and Shelstad to violate their duty of candor to the PTO.

In February 1999, when Weakly and Shelstad met with Digirolamo, they reviewed Weakly's chronology about the development of the passive enclosure dust control system installed at the Rochelle mine. They discussed pressure relief pipes, the Gulf and PROK hood and spoon product information, the PROK drawings, stilling sheds, Tooker's reports, Tooker's 1992 article, *Hemeon, Morrison, Drinker, and Industrial Ventilation*.

Digirolamo submitted the patent application on behalf of Weakly and Shelstad on March 18, 1999. The Plaintiff now acknowledges that the invention claimed in the '171 Patent is a combination of elements that were all previously known in the art. A combination invention may be patentable, but when inventors seek a patent for such an invention, the known elements that comprise the building blocks of the new combination are material prior art and should be disclosed to the Examiner. Weakly, Shelstad and Digirolamo violated duties of candor by failing to disclose *Hemeon*, *Tooker II*, *Morrison*, the Gulf Easy Flow hood and spoon product, and the PROK product information and drawings. In addition, the '171 Patent applicants should have informed the PTO about the competing ACS application. They knew that ACS had filed its own patent application originating from the same passive dust control system described in the Weakly/Shelstad patent application.

The Plaintiff argues that *Hemeon*, *Tooker II* and *Morrison* were not material because they addressed the design of active systems and Weakly's invention was a passive system. That argument is contrived. The term "passive" simply rephrases the claimed novelty of the new system and is not useful for determining materiality. Principles and apparatus relevant to the design of active systems are relevant to the design of passive systems, as shown by the chronology of the PECS development. Weakly's passive enclosure dust control system employed concepts and features taught by *Hemeon*, *Tooker II*, and *Morrison*. A reasonable examiner would have considered those publications important in deciding whether to issue the patent.

Weakly's and Digirolamo's reasons for their nondisclosure of *Hemeon* and *Tooker II* are artificial. The specification of the '171 Patent includes language taken directly from *Tooker II*.

When PRCC submitted information to the Wyoming Department of Environmental Quality seeking BACT designation for a passive enclosure dust control system, Weakly provided copies of *Tooker II* and the *Hemeon* illustration to explain the operation of the passive dust control system. That conduct belies the Plaintiff's argument that the subject matter of those publications was too remote to be material to the claimed invention.

Contrary to the Plaintiff's arguments, the Gulf Easy Flow product information and the PROK Smooth Line product information were material prior art. The Gulf and PROK product information describe the combination of a loading device (which serves the function of reducing the impact of the material at the second location) and a deflector device (which keeps the moving stream of material together in a compact form) and show that these devices were known in the art of bulk material handling. It is irrelevant that these particular products had been used primarily in unenclosed transfers. Similar apparatus for performing those functions had been used in enclosed transfer operations. By failing to disclose this prior art, the applicants implied that these features of their invention were novel. They knew better. Tooker's report dated September 22, 1997, included the following comment about the PROK Smooth Line curved transfer chute: "There are other similar transfer chute design concepts available that propose the same effect." Tooker testified that "this concept [the hood and spoon concept] had been used ever since I've been in the industry." (*See* Tr. Mar. 5, 2008, at 30:20 – 31:17.)

Digirolamo must have been aware that a well-informed Examiner might reject the application claims on the basis of anticipation or obviousness. Yet the applicants and counsel made no disclosures, choosing instead to wait and see what prior art the Examiner located. When Digirolamo obtained a copy of the '533 Patent in December 1999, he should have

informed the PTO, rather than waiting to see whether the Examiner located it. That type of gamesmanship is anathema to the ex parte system of patent prosecution.

The Examiner identified ten prior art patents, including the '533 Patent, and initially rejected all the pending application claims. Weakly and Shelstad responded to that Office Action on May 8, 2000, by amending the chute member element of their claims and arguing that none of the prior art cited by the Examiner included a chute that served the function of eliminating the direct impact of the material at the second location. The applicants also argued that references cited by the Examiner failed to teach a stilling zone.

Those arguments were misleading. Devices for eliminating the direct impact of the material at the second location were well known in the industry. Weakly's and Shelstad's decision to include apparatus for mitigating the direct impact of falling material within the enclosure was not a "eureka moment." Weakly's choice of the PROK hood and spoon was wise because those particular products apparently perform those functions extremely well, but the concept of using a loading device and deflector within the containment housing of an enclosed transfer point was not novel. Keith Shelstad, one of DCI's owners, testified that before DCI's involvement in the Rochelle project, DCI had used a "spoon like thing" and a hood. He stated that the PROK design was "on the order of what [DCI] was doing, but more streamlined.

(K. Shelstad dep., Feb. 23, 2006, 110:21 – 111:17; 114:15 – 22.)

The stilling zone feature was not new either. *Morrison* and *Tooker II* described that feature and were inconsistent with that argument for patentability.

Inequitable conduct in the prosecution of the '171 Patent was shown by clear and convincing evidence.

The jury rejected Martin's contentions that the '171 Patent was invalid as both obvious and anticipated. This court is bound by that verdict. Like infringement, it may be that the jury failed to understand the requirements of the law. Were it not for the preclusive effect of the jury verdict, this court would have found invalidity.

A person with reasonable knowledge of the prior art would know that these patents were the product of overreaching and exaggerating the novelty of what was done at the Rochelle mine.

The two inventor groups obscured the conflict as to who invented what by misleading the PTO into believing that separate patents should be issued. They were successful and then made the business arrangement that, ultimately, gave ACS the ability to bring this unwarranted suit for infringement.

Martin seeks an order declaring this case exceptional under 35 U.S.C. § 285 and awarding Martin its attorney fees. Because inequitable conduct charged to the Plaintiff is a basis for this award, it is appropriate relief.

Martin has also moved for review of the clerk's taxation of costs, seeking additional costs and litigation expenses pursuant to 28 U.S.C. § 1920, 28 U.S.C. § 1927 and 35 U.S.C. § 285. Litigation expenses requested pursuant to 35 U.S.C. § 285 will be considered in connection with the determination of the attorney fees and nontaxable expenses to be awarded under that statute. The clerk's taxation of other cost items will be reviewed separately.

Based on the foregoing, it is

ORDERED that the clerk shall enter judgment in favor of Defendant Martin Engineering on its counterclaim of inequitable conduct, declaring that U.S. Patent No. 6,000,533 is unenforceable; declaring that U.S. Patent No. 6,176,368 is unenforceable, declaring that U.S.

Patent No. 6,135,171 is unenforceable, and stating that the Defendant will be awarded attorney fees pursuant to 35 U.S.C. § 285 and costs pursuant to 28 U.S.C. § 1920; it is

FURTHER ORDERED that the Defendant's Motion for Attorney Fees pursuant to 35 U.S.C. § 285 is granted. Pursuant to the order entered on October 10, 2008, the Defendant shall submit a statement of the total amount of fees and nontaxable expenses sought, providing the information and documentation required by D.C.Colo.LCivR 54.3. The Plaintiff shall have twenty days from that filing to file its objections; it is

FURTHER ORDERED that no later than 14 days after the entry of judgment the Defendant shall file a second amended motion for review of the clerk's taxation of costs, identifying only the additional costs the Defendant claims are taxable pursuant to 28 U.S.C. § 1920.

Dated: January 19, 2010

BY THE COURT:

s/Richard P. Matsch

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Richard P. Matsch, Senior District Judge