

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
EVANSVILLE DIVISION

BERRY PLASTICS CORPORATION,)	
)	
Plaintiff,)	
)	
vs.)	3:10-cv-00076-RLY-WGH
)	
INTERTAPE POLYMER)	
CORPORATION,)	
)	
Defendant.)	

FINDINGS OF FACT AND CONCLUSIONS OF LAW

Plaintiff, Berry Plastics Corporation (“Berry”), is a direct competitor of Intertape Polymer Corporation (“Intertape”), in the manufacture and sale of a variety of tapes, including adhesive tapes. Intertape is the assignee of United States Patent No. 7,476,416 (“’416 patent”) which claims, *inter alia*, a manufacturing process for preparing an adhesive using a specially modified planetary roller extruder (“PRE”) that includes planetary mixing spindles with back-cut helical flights. On May 13, 2010, Berry filed a declaratory judgment action against Intertape, alleging that the ‘416 patent is invalid and unenforceable. Intertape filed a Counterclaim against Berry, alleging that Berry’s PRE infringes independent Claims 1 and 21, and the associated dependent claims, of the ‘416 patent. The parties tried this case before a jury from November 3, 2014, to November 17,

2014. The jury found that, *inter alia*, Intertape's '416 patent was valid¹ and that Berry's PRE did not infringe the '416 patent. (*See generally* Verdict Form, Filing No. 378).

Berry's inequitable conduct trial remained for adjudication.

The parties tried Berry's inequitable conduct claim before the court on December 7-8, 2015. Following the trial, the parties filed proposed findings of fact and conclusions of law. Being duly advised, the court further finds that Berry failed to prove, by clear and convincing evidence, that the '416 patent is unenforceable due to inequitable conduct.

The court now issues its findings of fact and conclusions of law pursuant to Federal Rule of Civil Procedure 52(a):

I. FINDINGS OF FACT

1. Intertape is the owner by assignment of the '416 patent issued on January 13, 2009. (ITX-66² ('416 patent)). The asserted '416 patent describes and claims a continuous process for preparing adhesive tape from raw materials, including a non-thermoplastic elastomer (i.e., natural rubber) and tackifying resins, using a planetary roller extruder ("PRE") that includes at least one double transversal mixing spindle comprising a plurality of back-cut helical flights. The double transversal spindles,

¹ On December 15, 2014, Berry renewed its motion for judgment as a matter of law under Federal Rule of Civil Procedure 50(b) that the '416 patent is invalid as obvious. The court agreed. (*See* Filing Nos. 518, 535).

² Exhibits from the jury trial will be cited as admitted at trial; Intertape's exhibits are cited as "ITX [number], and Berry's exhibits are cited as "PTX [number]." Testimony from the jury trial transcript will be cited by the witness' last name followed by "Tr." Testimony from the inequitable conduct bench trial will be designated as "[last name], Bench Trial Tr. at [page number]." Deposition testimony will be cited as "[last name] Dep. Tr. at [page number]." Where applicable, initial citations will include the filing number.

known as “back-cut spindles,” are designed to increase the residence time of raw materials in the extruder, which thereby increases mixing and mastication³ of the materials. The process claimed in the ‘416 patent uses at least one back-cut spindle to reduce the viscosity of the adhesive mass so that the finished adhesive can be more easily coated on to a web-form material using conventional equipment. (*Id.* col. 4, ll:24-56; *id.* col. 7, ll:14-41).

2. The named inventors are John Tynan, Jr., Richard St. Coeur, David Kovach, and Thomas Lombardo. (*See id.*; Filing No. 391, Tynan Tr. at 36). At the time the patent was issued, the inventors were employees of Intertape. (*Id.*).
3. Mark Levy and John Kane prepared and prosecuted the 60/524,505 provisional application and 10/997,827 non-provisional patent application that resulted in the ‘416 patent. (Filing No. 493-6, Kane Dep. Tr. at 22).

A. Intertape Learns of Planetary Roller Extruders

4. In the early 2000s, Intertape compounded natural rubber through a Banbury or batch process, which compounds natural rubber one batch at a time. (Tynan Tr. at 20 (describing the batch process as “kind of like making a cake”)).
5. In 2002, Intertape learned from a German patent publication that one of its competitors, Tesa AG (also known as “Beiersdorf”), had developed a continuous adhesive-making process using a PRE. (Tynan Tr. at 37). In April 2002, Kovach

³ To masticate rubber means to break down the molecular weight of the material. *See, e.g.*, ‘447 patent, col. 7, ll: 33-34.

and a colleague prepared an English translation of the patent. (Kovach Tr. at 42-43; St. Coeur Tr. at 7-8).

6. Intertape had never heard of a PRE before reading the Beiersdorf patent. (Tynan Tr. at 38).
7. Intertape decided to explore this new method of compounding natural rubber. (*Id.* at 30).

B. October 2002 European Trip

1. Visit to Battenfeld Extrusionstechnik GmbH

8. Through research, Intertape discovered that Battenfeld Extrusionstechnik GmbH, a German multi-national manufacturer of mixing equipment, designed and manufactured PREs. (Tynan Tr. at 39).
9. Tynan, Lombardo, and St. Coeur traveled to Germany to meet with Battenfeld representatives on October 16, 2002. (ITX-5). During their 2002 meeting, Battenfeld showed the Inventors PowerPoint Presentations on PRE technology. (*Id.* at 6).
10. Intertape learned that a PRE had “ten times the thermal-exchange capability of a twin-screw extruder . . . , so [Intertape] was intrigued.” (Tynan Tr. at 43; *see also* ITX-5 at 6 (noting the PRE’s ability to “provide good mixing in materials that are shear sensitive” and “thermally sensitive”).
11. Representatives of Battenfeld also introduced Intertape to different types of planetary spindles for use in a PRE. (St. Coeur Tr. at 56-57; *see also* ITX-5). Intertape learned from Battenfeld that “you can achieve different mixing effects when you go from a

spindle, full-flight spindle without notches, to a spindle with notches.” (Tynan Tr. at 43-44). Tynan explained that “when you put notches in them, you get some back-slip of the material; you get some flow-back of the material. And the material that flows back stays in the compounding zone longer than the material that gets moved forward” resulting in “more mastication.” (*Id.* at 44; St. Coeur Tr. at 57 (“[T]hey said you can cut notches into the spindle for different mixing dynamics.”)).

12. The Inventors were already familiar with back-cut mixing spindles from their work with twin-screw extruders. (*See* Filing No. 402, Kovach Tr. at 11 (“I used that style extensively in my work with the twin-screw extruders”). Kovach knew from his experience that the back-cut configuration is “designed to add more mixing and mastication.” (*Id.* at 54-55).
13. Battenfeld encouraged Intertape to run a search for U.S. patents belonging to Beiersdorf that might impede the Inventors’ efforts to develop their own adhesive compounding process in the U.S. (ITX-5 at 8).

2. Maris

14. Intertape’s European trip also included a visit to Maris, an Italian manufacturer of twin-screw compounding extruders. (*Id.* at 2, 13-17; Tynan Tr. at 131). A twin-screw extruder has two connected barrels with two co-rotating screws. (Tynan Tr. at 31).
15. Intertape wanted to meet with the Maris representatives “to identify the advancements Maris ha[d] made on the compounding of natural-rubber-based

pressure-sensitive adhesives.” (ITX-6 at 1). The meeting with Maris representatives occurred on October 21, 2002. (ITX-5 at 13).

16. Maris “[c]laimed to have developed a process that allows for continuous compounding of solvent-based adhesives in a twin screw compounder.” (ITX-5 at 2).
17. Twin-screw extruders produce a lot of heat which can degrade the rubber. (Tynan Tr. at 34-35). Maris’ “[p]rocess development focused on keeping temperatures from running away.” (ITX-5 at 16). Intertape noted, “Solid resin adds via sidefeeders dropped temperature.” (*Id.* at 16).
18. The use of sidefeeders, solid resin, etc., “was known to [Intertape]” as a means to “cool[] the adhesive down.” (Tynan Tr. at 137).
19. According to Berry, Intertape learned from the Maris continuous process disclosure that (i) introduction of solid materials in the compounding section has advantages, (ii) all solid materials do not have to be fed all at once in the feeding section, with downstream solids additions, (iii) the elastomer is given more time to be masticated before addition of other materials, (iv) solid resin is easier to mix with rubber because molten resin lubricates, and (v) the solid materials act as a heat sink to lower the process temperature. (ITX-5 at 15-16).
20. Furthermore, Berry argues, the Inventors had not conceived of the above ideas prior to their meeting with Maris representatives.
21. Berry did not plead this basis for inequitable conduct, nor was it disclosed or argued at the inequitable conduct court trial.

C. The 3M Opposition to the Beiersdorf Patent

22. Following their European trip, Tynan requested an extensive search for Beiersdorf patents as Battenfeld had suggested. (Tynan Tr. at 45-46, 151).
23. Intertape learned that Beiersdorf had obtained a U.S. patent on its process of manufacturing an adhesive using a PRE. (*Id.* at 43-44). Beiersdorf's U.S. Patent No. 6,506,447 ("447 patent") generally claims a continuous, solvent-free, and mastication-free process for producing a pressure-sensitive adhesive from a non-thermoplastic elastomer in a PRE. (ITX-7, claim 1). The '447 patent issued from a patent application filed in the PTO on August 17, 2000. (*Id.* at 1).
24. Intertape also discovered Beiersdorf's European application was being opposed by 3M. (Tynan Tr. at 152-53).
25. The 3M Opposition was dated February 20, 2003, and uncovered by Intertape sometime before May 5, 2003. (ITX-20; Tynan Tr. at 150-53; ITX-16 ("Where is Beiersdorf's rebuttal of 3M's contest of Beiersdorf's patent?")).
26. The 3M Opposition to the Beiersdorf patent application centered on the patent's assertions of 'mastication-free' and asserted that such claims were invalid as not enabled. (*See, e.g.*, ITX-20 at 3 ("According to this definition, the term 'mastication-free' would mean that in the process of EP '584 there is no molecular weight breakdown of the elastomer at all."); Tynan Tr. at 152-53; PTX-150; Levy Tr. at 52-55)). Specifically, the Beiersdorf application claimed that there was a difference between the mastication of elastomers and the degradation of elastomers. 3M argued this differentiation between mastication and degradation "is artificial and not a

technically sound concept. How can a molecule which is broken down tell whether it was masticated or degraded? What difference does it make if the molecular weight breakdown of elastomers is referred to by two different terms; isn't it still the same process?" (ITX-20-3).

27. At Intertape's request, Prosecution Counsel monitored the 3M Opposition in Germany quarterly. (Filing No. 529, Tynan Bench Trial Tr. at 55, 131; Filing No. 530, Levy Bench Trial Tr. at 9-14).
28. Kane directly monitored the European prosecutions and provided selected documents to Levy when they appeared to be relevant. (Kane Dep. Tr. at 28-29, 36; Levy Tr. at 52; Levy Bench Trial Tr. at 12-13). Tynan primarily interacted with Levy, and thus any information from the 3M Opposition would have come from him. (Tynan Bench Trial Tr. at 27, 131-32).
29. Kane could not recall any specific documents he submitted to Levy. (Kane Dep. Tr. at 29). Levy, in turn, could not recall any specific documents he received from Kane. (*See* Levy Tr. at 52 (testifying he did not recall reviewing a specific document)).
30. There is insufficient evidence to determine which documents or information Tynan subsequently obtained. (Tynan Bench Trial Tr. at 52-53, 62-63).

D. 2003 Trials at Battenfeld

31. In April 2003, Tynan, St. Coeur, and Kovach traveled to Germany to fully explore the advantages of a PRE for compounding natural-rubber-based adhesives without the use of solvent. (*Id.* at 41, 62; Kovach Tr. at 14).

32. One of Intertape's goals of the trials was to invalidate the '447 patent claims because mastication-free PRE compounding of rubber was not possible and Intertape regarded the patent as an "obstacle." (Tynan Tr. at 56, 143-44, 200 ("Q: You did think that everyone knows, including Beiersdorf [,] that it's impossible not to masticate on the PRE equipment; is that correct? A: I said that, yes."); St. Coeur Tr. at 59).
33. During the trials of Battenfeld's PRE, Intertape used Battenfeld's test set-up, which included only standard spindles. (St. Coeur Tr. 13, 55; Kovach Tr. at 55; Tynan Tr. at 64, 198). Kovach testified they went there "for a free trial they were gracious enough to offer us, and so we were going to let them demonstrate their equipment for us." (Kovach Tr. at 56).
34. Battenfeld discussed the types of planetary spindles available for PREs, including back-cut planetary spindles, and the Inventors took photographs of them. (Tynan Tr. at 63-64; Kovah Tr. at 19).
35. Intertape discovered, as a result of the trials, that it "could take natural rubber, tackifying resin, extender, masticate the rubber in the PRE, produce an adhesive, and it had an exceptional balance of adhesion and cohesive strength." (Tynan Tr. at 65).
36. Intertape performed a molecular weight analysis of samples returned from the Battenfeld trials that confirmed mastication occurred. (ITX-18 at 2 ("There is significant molecular weight breakdown in adhesives compounded with the PRE.")).

37. Intertape shared the molecular weight data and conclusions with Prosecution Counsel Levy, and explained that “[t]his information refutes claims made in Beirsdorf [sic] patents.” (ITX-18 at 1).
38. Following the Battendorf trials, Intertape determined that it was not infringing the Beiersdorf’s “mastication-free” process, and “decided [to] move ahead with [its] better process.” (Tynan Tr. at 67).

E. Entex Rust & Mitschke GmbH

1. The DIK Paper

39. Intertape identified Entex Rust & Mitschke GmbH as a manufacturer of PREs from the specification of the ‘447 patent. (Kovach Tr. at 21).
40. In June 2003, St. Coeur, Kovach, and Lombardo attended a National Plastics Expo (“NPE”) in Chicago, Illinois, to find out whether Entex’s processing lab could handle flammable solvents. (Tynan Bench Trial Tr. at 88-89).
41. Of the three Inventors who attended the NPE, only Kovach and Lombardo met with Entex sales representative Michael Batton. (St. Coeur Bench Trial Tr. at 204).
42. Batton testified that he handed Kovach and Lombardo a copy of a speech that he gave and distributed to the attendees of a DIK seminar in Hannover, Germany on March 23, 2003. (Filing No. 410, Batton Tr. at 26, 67, 72). The speech is titled “Rubber – the tailor-made material” and subtitled “Compounding of Elastomer Masses in a Planetary Roller Extruder.” (PTX-37 (“DIK Paper”)).
43. The DIK Paper discloses that a PRE can be used to compound rubber-based formulations. (*Id.*, Fig. 20; Rauwendaal Tr. at 170; Mount Tr. at 62). It also

discloses an exemplary process diagram, (PTX-37 at 12), and states that a PRE can be fed with rubber, resin and other constituents simultaneously. It especially mentions that the modular PRE system allows “compounding of materials which are difficult to disperse or homogenize, as for example recycled materials, adhesives, caoutchoucs, etc.” (PTX-37 at 15; Rauwendaal Tr. at 171). And it discloses that such a system could be set up with spindles satisfying claim 1, such as the Noppenspindel. (PTX-37 at 16, Fig. 20; Mount Tr. at 68-69, 143; *see also* Rauwendaal Tr. at 171 (testifying that the DIK Paper discloses a PRE modular design to manufacture adhesives and discloses the claimed spindle)).

44. Kovach testified that Batton did not give him a copy of the DIK Paper. (Kovach Tr. at 27).
45. Kovach memorialized the Inventor’s meeting with Batton in a memo he prepared and distributed a few days after the NPE. (ITX-22 (Kovach’s memo); Kovach Tr. at 24-25, 82). The DIK Paper is not mentioned in the memo. Kovach testified that, if he had received the DIK Paper, it would have been issued a document number and filed along with the memo. (Kovach Tr. at 27, 82-83; *see also* Filing No. 493-8, Lombardo Dep. Tr. at 106 (confirming that “it [was] the practice of [the Inventors] to circulate information with each other that was relevant to the PRE work [they] were doing”); Tynan Bench Trial Tr. at 161 (same)).
46. Lombardo does not recall receiving the DIK Paper from Batton. (Filing No. 493-7, Lombardo Dep. Tr. at 45-46).

47. St. Coeur testified that he did not receive any materials from the Entex booth at the NPE, did not see any materials that were available for visitors to take from the Entex booth, and did not see any materials received by Lombardo or Kovach from the Entex booth. (St. Coeur Tr. at 15, 61-62). He further testified that it would have been “odd” if Lombardo or Kovach had received materials from Batton but did not share those materials with him. (St. Coeur Bench Trial Tr. at 205).
48. Tynan and Prosecution Counsel testified that they never saw or had possession of the DIK Paper during prosecution of the ‘416 patent. (Tynan Bench Trial Tr. at 161; Filing No. 493-6, Kane Dep. Tr. at 80; Filing No. 401, Levy Tr. at 28-29). Furthermore, Intertape searched its files for the DIK Paper, but did not find it. (Tynan Bench Trial Tr. at 161-62).

2. Entex Trials

49. After discussions with Batton, Intertape learned that Entex had a lab-scale PRE that was capable of processing solvents. (Kovach Tr. at 25; St. Coeur Tr. at 15). The ability to use solvents was important to Intertape because Intertape used solvents in several of its manufacturing plants. (Kovach Tr. at 31). Therefore, Intertape arranged for trials at Entex. (St. Coeur Tr. at 15).
50. In November 2003, Intertape conducted trials at Entex’s facility in Bochum, Germany. (Tynan Tr. at 69, 71; St. Coeur Tr. at 26; Kovach Tr. at 28). In preparation for the trials, Intertape communicated with Batton and with two other Entex employees, Karl Roewer and Siegfried Luechtefeld, in August 2003. (*Id.* at 17 (discussing ITX-26 (Entex questionnaire)), 22).

51. Luechtefeld has a degree in engineering with an emphasis on polymer extrusion, and, at all relevant times, served as Entex's technical laboratory engineer. (Filing No. 405, Luechtefeld Tr. at 4).
52. On August 6, 2003, Intertape filled out a Questionnaire for Test Preparation for Entex, which included information regarding the material to be tested, transport of the material, and operating parameters. (ITX-26). The following day, Intertape responded with its own questions for Entex, including the types of planetary elements (spindles) available, the type of solvent used, and the length of the laboratory extruders. (ITX-27).
53. On August 28, 2003, Intertape and Entex had a telephone call to discuss the features of the Entex PRE and the types of spindles that Entex could make available to Intertape for testing. (Kovach Tr. at 36-37, 83-84; St. Coeur Tr. at 23-25).
54. On August 29, 2003, Roewer sent Kovach a series of eight (8) emails between 11:56 a.m. and 11:58 a.m. German time which described the features of its PRE and included photographs of various spindles, including the Noppenspindel. (Kovach Tr. at 38; PTX-24; PTX-140). Roewer copied Luechtefeld and Batton on the emails. (PTX-24; PTX-140).
55. The August 29 emails to Kovach explained the Entex technology and expressly pointed out that "[f]or processing elastomers, [Entex] had developed a special version of planetary spindles" and attached a photo of the Entex Noppenspindel. (PTX-24 at 1-2). Although Intertape was familiar with back-cut spindles, they had

never seen an image of Entex's proprietary back-cut spindle—the Noppenspindel—prior to their contact with Entex. (Tynan Tr. at 168; St. Coeur Tr. at 74).

56. The August 29 emails further described “transversal mixing planetary spindles” and included photographs of the Entex Igelspindel. (PTX-24 at 1, 3, 16, 20-21). The Igelspindel includes openings in the flights that “increase the resting time of the material inside the extruder and this leads to better homogenization.” (*Id.* at 16). Entex specifically noted that the “transversal mixing planetary spindles” were for processing elastomers. (*Id.*).

57. In addition, Luechtefeld testified that he sent a ninth email to Roewer at 12:04 p.m. on August 29, 2003, after Roewer had sent the other eight emails to Intertape. (Filing No. 406, Luechtefeld Tr. at 4 (discussing PTX-140); *see also* Filing No. 335-10, Roewer Decl. ¶ 6; Filing No. 335-2, Luechtefeld Decl. ¶ 10). The email, known as the “Test Set-Up Email,” included an image from an excel spreadsheet entitled “Test Set Up” and showed Luechtefeld’s proposal for the test set-up using double transversal spindles (or Noppenspindles) as the planetary spindles to be installed in the PRE for compounding Intertape’s formulation. (Luechtefeld Tr. at 4-5; PTX-140). The email was forwarded by Roewer to Kovach forty-five (45) minutes later. (Roewer Decl. ¶ 7; PTX-140).

58. At the jury trial, Kovach testified that he did not recall seeing that email in August 2003. (Kovach Tr. at 78-79).

59. The parties also presented conflicting evidence regarding whether this email reflected Luechtefeld’s ideas or ideas that Intertape had conveyed to Luechtefeld during the

August 28 phone call. For example, Kovach testified that Intertape designed the trials, set up the parameters, and determined the objective of the trials. (Kovach Tr. at 28). Kovach explained:

They were trials. They were our adhesive. We are adhesive experts. We understand our products, our adhesives and what it takes to mix them. So Entex is an equipment manufacturer; they're not an adhesives expert. We would design our own trials and our own processes and then try to utilize their equipment expertise to make that happen.

(*Id.*). He also testified that Entex never made a recommendation or suggestion about what type of spindle to use during the trials. (*Id.* at 41). St. Coeur confirmed his testimony. (St. Coeur Tr. at 6 (testifying Entex did not suggest how trials should be set up because “we were going to take control of these trials. We already had worked up a plan . . . we’d already had formulations in mind; we already had a process in mind . . .”); *see also id.* at 25 (testifying Entex did not recommend during conference call to use back-cut spindles)).

60. Luechtefeld testified that he alone decided to use back-cut spindles during Intertape’s trials at Entex and that he prepared the test set-up shown in PTX-140 without any input from Intertape other than basic information Intertape provided in response to the Entex questionnaire. (Luechtefeld Tr. at 15-16).
61. Luechtefeld could not recall whether he participated in the telephone call with Kovach and St. Coeur the day before the proposed test set-up depicted in PTX-140 was emailed to Intertape. (Filing No. 404, Luechtefeld Cross-Exam Tr. at 9).
62. Roewer did not testify about the August 28 call at trial.

F. Patent Application

63. On November 24, 2003, Intertape filed a provisional application with the United States Patent and Trademark Office (“PTO”) that included a photograph of a Noppenspindel. (ITX-2; Tynan Tr. at 74; Levy Tr. at 5, 50).
64. One year later, Intertape filed non-provisional application no. 10/997,827 entitled “Process for preparing adhesive using planetary extruder.” (ITX-1; Tynan Tr. at 163). The ‘827 patent application claimed priority to the provisional application and was published on August 4, 2005. (ITX-66 at 1).

G. April 2004 Beiersdorf Visit

65. Tynan, St. Coeur and Lombardo visited Beiersdorf in April 2004. (PTX-132).
66. Dr. Robert Gereke, the Executive Vice President of Tesa, informed Intertape that, in his opinion, “‘mastication’ is a process that one conducts intentionally through the use of chemical, oxygen, or mechanical energy. . . . [It] is not a must in the [Beiersdorf] process. It is not a purpose of the process. [Dr. Gereke] admitted that with the [Beiersdorf] process, some mastication is experienced, as it cannot be completely avoided.” (*Id.* at 6).

H. Batton’s Inventorship Challenges

67. In October 2005, Batton sent an email to Tynan stating: “I just received word of your patent concerning our extruder. John[,] you told me that you made a release concerning our production process so that no one would be able to patent this. Please confirm.” (ITX-49 at 1).
68. Tynan responded:

Just to be clear, the patent application is directed specifically to the use of the Noppen Spindeln in the PRE for the compounding of pressure-sensitive adhesives from non-thermoplastic elastomers. [Intertape] filed the patent application to protect its investment in bringing this technology on line. It has not yet been determined whether or not the patent will actually be granted. While I mentioned to you, Herr Rust, and Entex's patent counsel during our meeting in Herr Rust's office that [Intertape] had previously employed the strategy of anonymous disclosure for a previous invention, thereby preventing others from using it[,] I also stated that this strategy was also an option for disclosing the PRE adhesive compounding process. However, I made it clear that while this strategy was an option, I was not authorized to make the strategy determination for [Intertape]. As a consequence, I could make no promises on [Intertape's] behalf. . . .

(PTX-17 at 1).

69. Tynan copied Prosecution Counsel Levy to make him aware of Batton's email. (*Id.*; Tynan Bench Trial Tr. at 101 ("Anything that might harm the process or harm our chances of getting our patent would have concerned me and I would have wanted to make counsel aware of it.")).
70. More than a year later, in March of 2007, Ralf Quack, principal of Entex's U.S. sales representative, Triad Sales, LLC, accompanied Batton to a meeting with Tynan during which Batton raised the issue of Intertape's pending application for the '416 patent. (ITX-52; Tynan Bench Trial Tr. at 157).
71. At that meeting, Batton argued to Tynan that Intertape was trying to patent Entex's process because, before Intertape ran trials with Entex in 2003, Entex had already used back-cut spindles to masticate rubber. Batton also argued that he had introduced this technology to Kovach and Lombardo at the 2003 NPE. (ITX-52 at 2;

Tynan Bench Trial Tr. at 157-58). Batton accused Tynan of stealing Entex's technology. (Filing No. 493-9, Quack Dep. Tr. at 114-15; Tynan Bench Trial Tr. at 158).

72. Tynan retorted that Intertape was the first to come up with the idea of compounding pressure-sensitive adhesives in a PRE using a back-cut spindle. (ITX-52 at 2; Tynan Bench Trial Tr. at 158 (“[W]e’re not trying to patent protect the processing or compounding of elastomers in a PRE. What we’re trying to do is protect the compounding of a pressure-sensitive adhesive in a PRE with a non-thermoplastic elastomer. So the scope of our work was much more narrower [sic] than what Entex had apparently been doing before us.”)). He also mentioned that Intertape previously learned of PREs and back-cut spindles at Battenfeld, and that Battenfeld had designed back-cut spindles that Entex did not have. (Tynan Bench Trial Tr. at 158-59; ITX-52 at 2).
73. Quack, who witnessed the disagreement between Tynan and Batton, testified that both Tynan and Batton “are very honest, sincere, and they mean absolutely what they say.” (Quack Dep. Tr. at 117).
74. Batton did not offer any evidence, either during or after the March 2007 meeting, to support his accusation that Entex had first conceived of the invention claimed in the ‘416 patent and that Intertape had stolen it. (Tynan Bench Trial Tr. at 160). Tynan, therefore, did not believe that Batton’s inventorship argument had merit. (*Id.*).
75. Intertape continued to work with Entex to conduct PRE tests after the 2007 meeting among Tynan, Batton, and Quack, but neither Batton nor anyone else from Entex

questioned the Inventors' status as inventors or took issue with Tynan's explanation until after the dispute at issue in this case arose. (*Id.*). As explained by Quack, Entex's position was that, until the PTO granted or rejected the patent, Entex could do nothing. (Quack Dep. Tr. at 120-21).

76. At the bench trial, Tynan testified that when he signed the Inventor's Declaration in the '416 patent application, it "never crossed his mind" to name anyone from Entex as a co-inventor. (Tynan Tr. at 151).

I. '416 Patent Prosecution

1. Prior Art Status of PREs with Back-Cut Spindles

77. During the prosecution of the '416 patent, Intertape submitted five information disclosure statements ("IDS statements"). (Levy Tr. at 30; ITX-1 at 104-06, 245-46, 356-58, 444-46, 449-53). None of the IDS statements mention that the Entex PRE including the double transversal mixing spindles comprising a plurality of back-cut helical flights is actually prior art for processing elastomers. (*Id.*).
78. The PRE, as set forth in the claims, which includes at least one back-cut spindle, is not listed on the cover of the '416 patent as a cited reference. (ITX-66 (cover page and "References Cited"))).
79. The specification of the '416 patent provides that PREs "have been known and have typically been used in processing of thermoplastics such as PVC. . . ." (*Id.*, col. 1, ll: 39-40).
80. The specification of the '416 patent does not use the words "prior art" in its description of back-cut planetary spindles, but it does state that: "Planetary roller

extruders having double transversal spindles **28** are commercially available from Rust-Mitschke-Entex.” (*Id.*, col. 4, ll:50-52; Tynan Tr. at 87).

81. Levy thought the sentence in the patent specification stating that PREs with the claimed back-cut spindles were commercially available from Entex put the Examiner on notice that the claimed spindle was in the prior art. (Levy Tr. at 24). Levy also stated:

I have prosecuted many patent applications through the Patent Office, and the examiners almost routinely, when they come across a sentence in a patent application that says this element is – this piece of equipment is commercially available, they will use that as a basis for rejection. So I think that, again, the examiners interpret the disclosure in the application as an indication that it is prior art and then shift the burden to the patent applicant to prove it is not.

(*Id.* at 8).

82. Intertape’s expert, Dr. Rauwendaal, opined, “It’s clearly commercially available, so if it’s commercially available, clearly it’s prior art.” (Rauwendaal Tr. at 133).
83. The ‘416 patent also uses the words “commercially available” to describe other prior art equipment in addition to PREs. For example, the ‘416 patent states, “One example of such a [slot die] is commercially available from SIMPLAS and is shown in Fig. 4.” (‘416 patent, col. 5, ll:49-52; Tynan Bench Trial Tr. at 169-70).

2. Prior Art References

a. D4 Reference

84. The D4 reference (DE 2719095), a German patent reference, was submitted by 3M in September 7, 2007, during the opposition proceedings addressed above. (*See* Findings of Fact, § B). The D4 reference illustrates a PRE with spindles having

openings in the flights, and is prior art to the '416 patent claims. (PTX-150 at 18-19). U.S. Patent No. 4,192,617 ("Spielhoff") is the U.S. equivalent of D4.

- 85. D4 was not listed as prior art in the '416 patent application.
- 86. The Applicants did not recall ever seeing D4. (Kane Dep. Tr. at 66-67; Tynan Bench Trial Tr. at 62, 64-65; Levy Bench Trial Tr. at 14-15).
- 87. Berry failed to establish, through testimony or documentary evidence, that anyone from Intertape, including the Applicants, were aware of D4 or Spielhoff during the prosecution of the '416 patent application.

b. The Hawrylco and Beiersdorf Patents

- 88. The Hawrylco patent, U.S. Patent No. 5,536,462, and the Beiersdorf patents⁴ were disclosed to the Examiner by an IDS statement. (ITX-1 at 105 (IDS sheet listing Beiersdorf patents), 358 (IDS sheet listing Hawrylco)).
- 89. Hawrylco discloses a twin screw extruder for the processing of a thermoplastic elastomer, polyvinyl chloride resin. (PTX-273, Hawrylco patent). Hawrylco teaches that the use of back-cut slots in the helical flights "allow back flow of the masticating melt, increase the shear action and turbulence of mixing." (*Id.*, col. 6, ll:40-43).
- 90. As addressed above, the '447 patent discloses a process for the continuous production of self-adhesive formulations using non-thermoplastic elastomers and other components in a PRE, homogenizing that adhesive, discharging it, and coating it onto a web-form material. (*See* '447 patent, claim 1).

⁴ The two Beiersdorf patents, U.S. Patent No. 6,506,447 and U.S. Patent No. 6,780,271, have essentially the same disclosure. (Levy Tr. at 16).

91. Claim 1 claims that this process is “mastication-free.” (*Id.*).
92. With respect to planetary spindles, the ‘447 patent explains, “Of course, any roll cylinder can be equipped differently in terms of the number and nature of the planetary spindles and so can be adapted to the particular formulation and processing requirements.” (‘447 patent, col. 8, ll:13-16).

3. Examiner’s Rejection of the ‘827 Application

93. In 2008, during the prosecution of the ‘827 patent application (which later became the ‘416 patent), the patent Examiner rejected claims 1-33 as obvious over the Beiersdorf patents, taken in view of Hawrylko. (ITX-1 at 461-62; Levy Tr. at 100-103).
94. Intertape responded by arguing to the patent Examiner that the Beiersdorf patents “teach away” from mastication, whereas Intertape’s process purposefully sought to increase mastication by using back-cut spindles. (ITX-1 at 488-90; Levy Tr. at 21-22).
95. Intertape also argued that Hawrylko “is limited to the processing of thermoplastic materials and fails to provide any teaching with respect to processing of non-thermoplastic materials.” (ITX-1 at 489). And although Hawrylco disclosed the use of back-cut mixing elements in a twin screw extruder, Intertape asserted the teaching was not sufficient to prove obviousness because the reference was not directed to the production of pressure-sensitive adhesives from a non-thermoplastic elastomer in a PRE. (*Id.* at 489-90; Levy Tr. at 22-23).

96. The Examiner agreed that Intertape's claimed process was not obvious, and allowed the claims of the '416 patent to issue. (ITX-1 at 497).

II. CONCLUSIONS OF LAW

1. To the extent any of the foregoing findings of fact is a conclusion of law, it is hereby adopted as a conclusion of law. To the extent any of the conclusions of law set forth below is a finding of fact, it is hereby adopted as a finding of fact.
2. "Inequitable conduct is an equitable defense to patent infringement that, if proved, bars enforcement of a patent." *Therasense, Inc. v. Becton, Dickinson and Co.*, 649 F.3d 1276, 1285 (Fed. Cir. 2011).
3. "Inequitable conduct includes affirmative misrepresentations of material fact, failure to disclose material information, or submission of false material information, coupled with an intent to deceive." *Novo Nordisk Pharms., Inc. v. Bio-Tech. Gen. Corp.*, 424 F.3d 1347, 1359 (Fed. Cir. 2005) (internal quotation marks and citations omitted).
4. "'To prove inequitable conduct, the challenger must show by clear and convincing evidence that the patent applicant (1) misrepresented or omitted information material to patentability, and (2) did so with the intent to deceive the PTO.'" *Network Signatures, Inc. v. State Farm Mut. Auto. Ins. Co.*, 731 F.3d 1239, 1242 (Fed. Cir. 2013) (quoting *In re Rosuvastatin Calcium Patent Litig.*, 703 F.3d 511, 519 (Fed. Cir. 2012)).

5. Prior art is material to patentability if it is “but-for material.” *Therasense*, 649 F.3d at 1291. “When an applicant fails to disclose prior art to the PTO, that prior art is but-for material if the PTO would not have allowed the claim had it been aware of the undisclosed prior art.” *Id.* In making this assessment, the court in a sense steps into the shoes of the PTO and applies the preponderance of the evidence standard and gives claims their broadest reasonable construction. *Id.* at 1291-92.
6. A reference is not but-for material if it is merely cumulative. *See, e.g., Dig. Control, Inc. v. Charles Mach. Works*, 437 F.3d 1309, 1319 (Fed. Cir. 2006).
7. A reference is cumulative if it “teaches no more than what a reasonable examiner would consider to be taught by the prior art already before the PTO.” *Regents of the Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1575 (Fed. Cir. 1997).
8. The accused infringer must also prove that the patentee acted with a specific intent to deceive. *Therasense*, 649 F.3d at 1290.
9. “[A] finding that particular conduct amounts to ‘gross negligence’ does not of itself justify an inference of intent to deceive; the 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).
10. “‘In a case involving nondisclosure of information, clear and convincing evidence must show that the applicant *made a deliberate decision* to withhold a *known* material reference.’” *Therasense*, 649 F.3d at 1290 (quoting *Molins PLC v.*

Textron, Inc., 48 F.3d 1172, 1181 (Fed. Cir. 1995)) (emphasis in *Therasense*).

11. Stated differently, the accused infringer must prove “by clear and convincing evidence that the applicant knew of the reference, knew that it was material, and made a deliberate decision to withhold it.” *Id.*
12. Specific intent to deceive may be inferred from indirect and circumstantial evidence. *Id.*

However, to meet the clear and convincing evidence standard, the specific intent to deceive must be the single most reasonable inference able to be drawn from the evidence. Indeed, the evidence must be sufficient to *require* a finding of deceitful intent in the light of all the circumstances. Hence, where there are multiple reasonable inferences that may be drawn, intent to deceive cannot be found.

Id. at 1290-91 (internal citations and quotation marks omitted) (emphasis in original).

A. The Prior Art Status of PREs with Back-Cut Spindles

13. The PRE as set forth in the claims of the ‘416 patent is prior art to the claims and is material to patentability. (Filing No. 356 at 2 (Stipulations)). The prior art PRE’s were not made of record before the PTO and are thus not cumulative of any prior art before the ‘416 patent Examiner.
14. Berry’s inequitable conduct claim hinges on the “commercially available” sentence in column 4 of the ‘416 patent specification: “Planetary roller extruders having double transversal spindles **28** are commercially available from Rust-Mitschke-Entex.” (‘416 patent, col. 4, ll: 50-52). Berry argues that the “commercially available” statement did not put the patent Examiner on notice that

PREs with back-cut spindles were in the prior art. This is best exemplified, Berry argues, in the Examiner's rejection of the '416 patent as obvious in light of the Beiersdorf patents "taken in view of Hawrylco." (ITX-1 at 461).

15. The Examiner found that the lone element of the '416 patent independent claims not expressly taught by the Beiersdorf patents was the claimed spindle. (*Id.* (finding all steps present in the Beiersdorf patents, but they "lack a teaching that at least one of the planetary spindles is a double transversal mixing spindle comprising a plurality of back-cut helical flights.")). The Examiner pointed to the "of course" teaching of the Beiersdorf patents and the twin-screw Hawrylco reference arguing it "would have been obvious for one having ordinary skill in the art to have added slots/back-cuts in the helical flights of at least one of the planetary spindles in the process of [the Beiersdorf patents], upon seeing the prior art Hawrylco, in order to increase mixing and shear action" (*Id.* at 461-62).

16. The Applicants responded to the Examiner as follows:

The [Hawrylco] reference is limited to the processing of thermoplastic materials and fails to provide any teaching with respect to processing of non-thermoplastic materials. Furthermore, the reference fails to provide any teaching with respect to the use of a planetary roll[er] extruder as set forth in the claims of the pending application.

(*Id.* at 489).

17. According to Berry, the Examiner would not have cited the inferior Hawrylco reference if the Examiner had known that PREs with back-cut spindles were prior art for rubber compounding applications; instead, the Examiner would have relied on the prior art PREs with back-cut spindles to find the invention claimed in the

‘416 patent application obvious.

18. The court rejects Berry’s argument for three reasons. First, had Prosecution Counsel and the Inventors (collectively the “Applicants”) sought to conceal the existence of PREs with back-cut spindles from the Examiner’s knowledge, they would not have inserted the “commercially available” statement in column 4 of the ‘416 patent specification. Indeed, “[t]he Federal Circuit has consistently held that disclosure of a reference to the PTO within the specification of a patent application is indicative of lack of intent to deceive.” *TecSec, Inc. v. Int’l Bus. Machs. Corp.*, 763 F.Supp.2d 800, 813 (E.D. Va. 2011); *see Bayer AG v. Housey Pharm., Inc.*, 128 Fed. Appx. 767, 770 (Fed. Cir. 2005) (patentee did not knowingly withhold references, but rather disclosed them in specification); *Andrew Corp. v. Gabriel Elec., Inc.*, 847 F.2d 819, 823-24 (Fed. Cir. 1988) (patentee disclosed prior art generically in the patent application, thus showing no intent to withhold); *Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1568 (Fed. Cir. 1984) (The patentees “describe[d the PX-15 device] in column 1 of their patent application as prior art This disclosure is inconsistent with intent to perpetrate fraud on the PTO.”); *Grantley Patent Holdings, Ltd. v. Clear Channel Commc’ns, Inc.*, 540 F.Supp.2d 724, 730 & n.4 (E.D. Tex. 2008) (no evidence that patentee made deliberate decision to withhold a reference—the “Maxagrid inventory management system”—because he disclosed this system in his patent specification and described it as “[c]ommerciably available”).
19. Second, patent Examiners are “persons of scientific competence in the fields in

which they work,” *In re Berg*, 320 F.3d 1310, 1315 (Fed. Cir. 2003), and they “are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art,” *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1304 (Fed. Cir. 2008) (internal quotation marks and citation omitted). The Examiner, therefore, was likely not led astray from the Applicants’ use of the word “commercially available” as opposed to “prior art.”

20. Lastly, the Examiner’s reliance on Hawrylco is not indicative of her failure to appreciate that PREs can be equipped with back-cut spindles. The basis of her rejection *assumes* that PREs can be fitted with back-cut spindles. The issue before her was whether a person of ordinary skill in the art would read the ‘447 patent’s “of course” language and be *motivated to combine* the teaching of the ‘447 patent with a back-cut spindle for purposes of compounding rubber-based adhesives. The Applicants’ response, therefore, was based on the motivation to combine, and not on whether back-cut spindles were or were not available as prior art.
21. Consequently, the court cannot conclude that the only reasonable inference from the evidence is that the Applicants intended to deceive the PTO regarding the prior art status of PREs with back-cut spindles.
22. Based on the foregoing, Berry has failed to prove, by clear and convincing evidence, that the Applicants withheld the prior art status of PREs with back-cut spindles with the specific intent to deceive the PTO.

B. The Alleged Misconduct Involving the Beiersdorf Patents

23. In response to the Examiner’s rejection of the ‘827 application, the Applicants

argued that the Beiersdorf patents “clearly teach away from any process that involves mastication,” and that “the importance of the process being mastication-free is evidenced throughout the ‘447 patent.” (ITX-1 at 488-89). The Applicants also stated, “In fact, one of ordinary skill in the art considering the teachings of these references would never consider adding a double transversal planetary spindle to a standard planetary roller extruder to increase mastication because of the repeated references in these documents emphasizing that the process should be mastication-free.” (*Id.* at 490). Thus, Intertape asserted, “Applicants’ inclusion of a double transversal planetary spindle to induce additional mastication goes counter to the teachings in the prior art and represents a novel and non-obvious advancement in the art.” (*Id.*).

24. Berry asserts the Applicants’ response to the Examiner’s rejection was based on a false premise, as the Applicants knew the Beiersdorf patents’ claimed process was not “mastication-free.” The Applicants knew the process was not mastication-free, Berry continues, because the Applicants monitored the 3M Opposition, conducted their own tests, and learned from Dr. Gereke what the Beiersdorf patents meant by the term “mastication-free.” Had the Examiner been informed of this error in the Beiersdorf patents, Berry continues, she would have rejected the Applicants’ assertions and maintained the rejection of the claims. Intertape asserts that the Applicants’ response was mere attorney argument, and thus, does not constitute an affirmative misrepresentation of a material fact.

25. Under Federal Circuit law, where a patentee has submitted a reference for the PTO

to review, the patentee “is free to advocate its interpretation of its claims and the teachings of the prior art,” and the Examiner “is free to accept or reject the patentee’s arguments” based on the Examiner’s own review of the prior art.

Innogenetics, N.V. v. Abbott Labs., 512 F.3d 1363, 1379 (Fed. Cir. 2008)

(affirming summary judgment in favor of patent holder on inequitable conduct claim); *accord Young v. Lumenis, Inc.*, 492 F.3d 1336, 1349 (Fed. Cir. 2007)

(“The Examiner had the [reference] to refer to . . . and the Examiner was free to reach his own conclusions and accept or reject [the patentee’s] arguments.”); *Akzo N.V. v. U.S. Int’l Trade Comm’n*, 808 F.2d 1471, 1482 (Fed. Cir. 1986) (“The Examiner was free to reach his own conclusion regarding the [invention] based on the prior art in front of him.”).

26. A patentee’s arguments regarding the teachings of the reference are not factual representations upon which a claim of inequitable conduct can be based. *Young*, 492 F.3d at 1349 (“We . . . fail to see how the statements in the October 2005 Response, which consist of attorney argument and an interpretation of what the prior art discloses, constitute affirmative misrepresentations of material fact.”); *Life Techs., Inc. v. Clontech Labs., Inc.*, 224 F.3d 1320, 1326 (Fed. Cir. 2000) (“[T]he inventors merely advocated a particular interpretation of the [prior art] This argument did not contain any factual assertions that could give rise to a finding of misrepresentation.”); *Akzo*, 808 F.2d at 1482 (“The mere fact that DuPont attempted to distinguish the [invention] from the prior art does not constitute a material omission or misrepresentation.”).

27. Berry asserts the Applicants' false representations about the Beiersdorf patents' "mastication-free" process "exceeded the bounds of acceptable argument by misrepresenting the content of the prior art during prosecution of the '416 patent and thus what one skilled in the art would understand." *See Parkervision, Inc. v. Qualcomm Inc.*, 2013 WL 230179, at *4 (M.D. Fla. Jan. 22, 2013) (representations to the PTO about the prior art may "exceed [...] the bounds of acceptable argument if they were based on distorted facts or were contrary to what a person of skill in the art would understand a reference to disclose.").
28. A patentee, however, does not commit inequitable conduct by making arguments about what certain references teach, while simultaneously failing to disclose information that shows the teaching of the reference is wrong. *See Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358 (Fed. Cir. 2008).
29. In *Ortho-McNeil, supra.*, Mylan (the alleged infringer) argued that Ortho-McNeil (the patentee) made a misrepresentation to the PTO by stating that the Kochetkov reference taught that certain compounds had no utility even though Ortho-McNeil's in-house test results demonstrated that the compounds had useful anticonvulsive properties. *Id.* at 1363. The district court found, and the Federal Circuit agreed, that Ortho-McNeil did not make any misrepresentations on that basis:

The quoted passage merely accurately characterizes the references as claiming limited utility for the Kochetkov compounds. Ortho-McNeil made no assertions about the compounds themselves, but only repeated the disclosures of the Kochetkov references. . . . Read in context, the Kochetkov references do not disclose any utility. On this

point, [Ortho-McNeil] is correct. Moreover, [Ortho-McNeil] did not assert that the compounds themselves possessed no utility. Thus, Ortho-McNeil made no misrepresentations to the Patent Office.

Id.

30. Here, the Applicants disclosed the Beiersdorf patents to the PTO and made arguments about the teachings of the Beiersdorf patents—not about the Beiersdorf process as practiced. Under *Ortho-McNeil*, such conduct does not constitute inequitable conduct. Moreover, the Applicants’ arguments about the teachings of the Beiersdorf patents do not constitute factual misrepresentations upon which a claim of inequitable conduct can be based. The court finds the Applicants’ arguments in response to the Examiner’s rejection were proper and are supported by the text of the Beiersdorf patent.
31. Based on the authorities cited above, Berry has failed to prove, by clear and convincing evidence, that the Applicants committed inequitable conduct by making arguments for patentability based on the teachings of the Beiersdorf patents or by failing to disclose their suspicions that the Beiersdorf patents, as practiced, produce some level of mastication.

C. The Failure to Disclose the DIK Paper

32. The DIK Paper is prior art to the ‘416 patent.
33. It discloses that a PRE can be used to compound rubber-based formulations, and also discloses that such a system can be equipped with spindles that fall within the claimed spindles of the ‘416 patent. (*See* PTX-37).
34. The Applicants disclosed this same information in the ‘416 patent specification

and through disclosure of the Beiersdorf patents.

35. The information is cumulative and, therefore, not material.
36. But even if the DIK Paper was but-for material, the Applicants were unaware of the reference. Although Batton testified that he handed a copy of the DIK Paper along with other materials to Kovach and Lombardo at the NPE in Chicago, Illinois, the Inventors deny ever having received the document. Likewise, Prosecution Counsel deny having possession of any written materials from Entex, including the DIK Paper, during the prosecution of the '416 patent. The court finds no reason to doubt the Applicants' testimony.
37. Berry has thus failed to prove, by clear and convincing evidence, that the Applicants committed inequitable conduct by making a deliberate decision to withhold a copy of the DIK Paper from the PTO with the specific intent to deceive.

D. Failure to Name Luechtefeld as a Co-Inventor and to Disclose the August 29 Emails

38. An "inventor" is the person who conceived of the patented invention. *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998).
39. "Patent issuance creates a presumption that the named inventors are the true and only inventors." *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1460 (Fed. Cir. 1998).
40. Berry asserts the '416 patent is invalid because the Inventors derived the claimed subject matter from Luechtefeld of Entex, as exemplified by the August 29 emails.

Pannu v. Iolab Corp., 155 F.3d 1344, 1349-50 (Fed. Cir. 1998) (“[T]he naming of the correct inventor or inventors [is] a condition of patentability; failure to name them renders a patent invalid.”). To establish derivation, a party challenging the patent’s validity must establish two elements: (1) prior conception of the invention by another, and (2) communication of the conception to the patentee. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1576 (Fed. Cir. 1997).

41. Conception is “the completion of the mental part of the invention,” and occurs “only when the idea is so clearly defined in the inventor’s mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.” *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1227-28 (Fed. Cir. 1994).
42. “[W]hen a party seeks to prove conception through the oral testimony of a putative inventor, the party must proffer evidence corroborating that testimony.” *Shu-Hui Chen v. Bouchard*, 347 F.3d 1299, 1309 (Fed. Cir. 2003). Corroborating evidence is preferably shown by a contemporaneous disclosure. *Burroughs Wellcome*, 40 F.3d at 1228.
43. A person qualifies as a joint-inventor, and should be named as such under 35 U.S.C. § 116, if he or she contributes in some significant manner to the conception or reduction to practice of the invention, and the contribution is not insignificant in quality and does more than merely explain to the real inventors well-known concepts or the current state of the art. *Pannu*, 155 F.3d at 1351. In making this determination, the “court must determine what [the alleged co-inventor’s]

contribution was and then whether that contribution's role appears in the claimed invention.” *Ethicon*, 135 F.3d at 1461.

44. According to Berry, Leuchtefeld's machine test set-up, as shown in the "Test Set-Up Email" dated August 29, 2003 (PTX-140), is the first corroborated conception of the idea of PRE compounding of a natural rubber-based adhesive using multiple barrel sections with each including at least one back-cut spindle. The email, Berry continues, provided more than enough information to enable one skilled in the art to make and use the Entex PRE to compound rubber-based adhesives as described and claimed in the '416 patent. Thus, Berry asserts, Leuchtefeld is the true inventor or, at the very least, should have been named as a co-inventor. As further support for its argument, Berry maintains that the Inventors knew they were not the true inventors of the '416 patent as evidenced by Batton's complaints "and the admission that the heart of the '416 patent was prior art to the applicants that had been developed by Entex." (Filing No. 517, Berry's Conclusion of Law ¶ 311).
45. On August 29, Intertape received the first eight emails, which described the features of the Entex PRE and included photographs of various planetary spindles, including the Noppenspindel.
46. Berry presented no evidence that the Applicants considered the first eight emails material to patentability.
47. The ninth email—the Test Set-Up Email—is material to patentability because it disclosed a PRE with back-cut spindles for the purpose of manufacturing

adhesives from natural rubber.

48. The parties presented conflicting evidence over whether Kovach, or anyone else at Intertape, received the ninth email, known as the “Test Set-Up Email.” The email, admitted as PTX-140, reflects that Roewer forwarded the email to Kovach, and Roewer testified that he in fact forwarded the email to Kovach. Kovach testified at the jury trial that he did not recall receiving it.
49. The parties also presented conflicting evidence as to who conceived of the test set up disclosed in the Test Set-Up Email. Luechtefeld testified that he alone conceived of the test set-up. Kovach and St. Coeur testified that Intertape designed the trials and that Entex did not make any recommendation or suggestion about the type of spindle to use during the trials.
50. Both Berry’s and Intertape’s witnesses were credible.
51. Given this conflict in the evidence, the court finds that Berry failed to prove, by clear and convincing evidence, that the Applicants’ believed Luechtefeld was the true inventor and made a deliberate decision to withhold that information from the PTO.
52. And for the same reason, the court finds that Berry failed to prove, by clear and convincing evidence, that Intertape failed to disclose the August 29 emails, including Test Set-Up Email, from the PTO with intent to deceive.

E. Failure to Disclose D4 and Spielhoff

53. The Applicants testified that they were not aware of the D4 reference during the prosecution of the ‘416 patent application.

- 54. Berry did not develop any testimony or present any evidence to show that the Applicants knew about Spielhoff during prosecution of the '416 patent.
- 55. Berry has therefore failed to prove, by clear and convincing evidence, that the Applicants made a deliberate decision to withhold D4 and its U.S. equivalent, Spielhoff, from the PTO.

F. Failure to Disclose Prior Art Information from Maris

- 56. Berry asserts the '416 patent is not only invalid for Intertape's failure to disclose to the PTO the prior art status of PREs with back-cut spindles, but also for Intertape's failure to disclose the information it derived from Maris regarding downstream solids addition which form the basis for dependent claims 7 and 31-33.
- 57. Berry, however, did not plead this as a basis for its inequitable conduct claim, it was not disclosed in discovery, and it was not argued at the inequitable conduct trial. Berry first raised this argument in its post-trial briefing.
- 58. Allegations of inequitable conduct must be pled with particularity under Federal Rule of Civil Procedure 9(b). *See Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1326-27 (Fed. Cir. 2009) ("Rule 9(b) requires identification of the specific who, what, when, where, and how of the material misrepresentation of omission committed before the PTO.").
- 59. Because Berry failed to plead any allegations regarding Maris, and failed to raise the argument until a post-trial motion, Berry's argument based on the information Intertape learned from its visit to Maris in 2002 is waived. *See Lazare Kaplan*

Int'l, Inc. v. Photoscribe Techs., Inc., 628 F.3d 1359, 1376 (Fed. Cir. 2010)

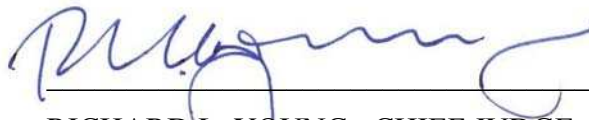
(“[L]itigants waive their right to present new claim construction disputes if they are raised for the first time after trial.”); *Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1331 (Fed. Cir. 2009) (“Raising this argument for the first time in a motion for judgment as a matter of law . . . was too late.”).

60. Even if Berry had raised the Maris allegations in a timely manner, the information allegedly derived from Maris relates only to dependent claims 7 and 31-33.
61. A dependent claim is necessarily patentable over the prior art if the independent claim from which it depends is patentable. *Ortho-McNeil*, 520 F.3d at 1365.
62. Here, Berry failed to prove, by clear and convincing evidence, that the Examiner would not have allowed the independent claims of the ‘416 patent to issue if the PTO had been aware of the prior art at issue. Consequently, if independent claims 1 and 21 would have issued notwithstanding the Maris information, then dependent claims 7 and 31-33 would have issued as well, regardless of whether any information relating to Maris had been disclosed.
63. Furthermore, Berry did not offer any evidence that anyone associated with the prosecution of the ‘416 patent made a deliberate decision to withhold information relating to Maris.
64. Therefore, even if the court were to consider the information allegedly derived from the Maris 2002 visit, the court would still find that Berry had not proven, by clear and convincing evidence, that the Applicants committed inequitable conduct by failing to disclose the Maris information.

III. CONCLUSION

For the reasons stated herein, the court finds that Berry has failed to prove, by clear and convincing evidence, that Intertape's '416 patent is unenforceable due to inequitable conduct.

SO ORDERED this 25th day of August 2016.



RICHARD L. YOUNG, CHIEF JUDGE
United States District Court
Southern District of Indiana

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