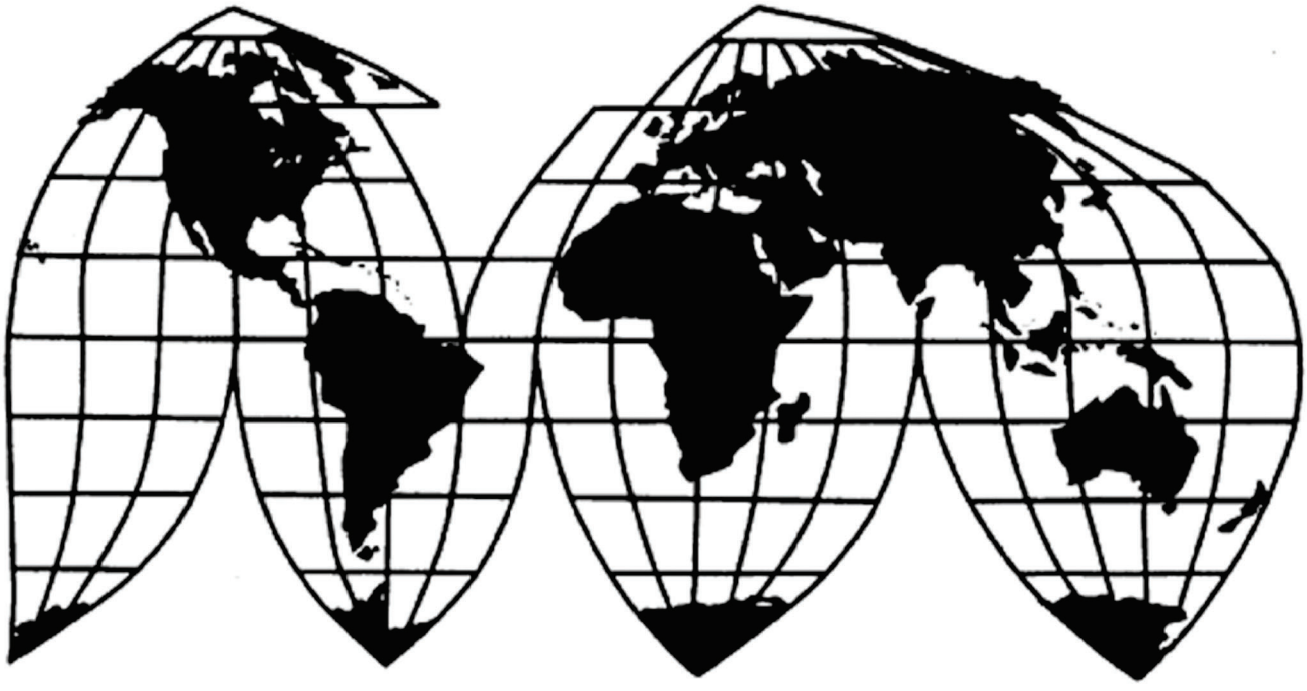
In the Matter of

CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME

Investigation No. 337-TA-971

Publication 4926 **August 2019**

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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In the Matter of

CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME

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August 2019

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME**	**Investigation No. 337-TA-971**

NOTICE OF A COMMISSION FINAL DETERMINATION OF VIOLATION OF SECTION 337; ISSUANCE OF A LIMITED EXCLUSION ORDER; TERMINATION OF INVESTIGATION

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission ("the Commission") has determined that there is a violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337) ("section 337") by respondents Sizewise Rentals LLC of Kansas City, Missouri; American National Manufacturing Inc. of Corona, California; and Dires LLC and Dires LLC d/b/a Personal Comfort Beds of Orlando, Florida (collectively, "Respondents") in the above-captioned investigation. The Commission has issued a limited exclusion order ("LEO") directed to products of the Respondents and has terminated the investigation.

FOR FURTHER INFORMATION CONTACT: Michael Liberman, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, SW, Washington, D.C. 20436, telephone (202) 205-3115. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, SW, Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at *https://www.usitc.gov.* The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *https://edis.usitc.gov.* Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on November 20, 2015, based on a complaint filed by Select Comfort Corporation of Minneapolis, Minnesota and Select Comfort SC Corporation of Greenville, South Carolina (collectively, "Select Comfort," or "Complainants"). 80 FR 72738 (Nov. 20, 2015). The complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, in the importation into the United States, the sale for importation, and the sale within the United States

after importation of certain air mattress systems, components thereof, and methods of using the same by reason of infringement of certain claims of U.S. Patent Nos. 5,904,172 ("the '172 patent") and 7,389,554 ("the '554 patent"). *Id.* In addition to the private parties named as respondents, the Commission named the Office of Unfair Import Investigations as a party in this investigation. *Id.*

Pursuant to Commission Rule 210.50(b)(1), 19 CFR 210.50(b)(1), the Commission ordered that the presiding administrative law judge ("ALJ"):

> [S]hall take evidence or other information and hear arguments from the parties and other interested persons with respect to the public interest in this investigation, as appropriate, and provide the Commission with findings of fact and a recommended determination on this issue, which shall be limited to the statutory public interest factors set forth in 19 U.S.C. 1337(d)(1), (f)(1), (g)(1).

80 FR 72738 (Nov. 20, 2015).

The evidentiary hearing on the question of violation of section 337 was held August 8-12, 2016. The final ID on violation was issued on November 18, 2016. The ALJ issued his recommended determination on remedy, the public interest and bonding on the same day. The ALJ found no violation of section 337 in this investigation. The ALJ recommended that should the Commission find a violation of section 337 in the present investigation, it issue an LEO prohibiting the importation of Respondents' air controllers and air mattress systems found to infringe the asserted patents. The ALJ also recommended the inclusion of a provision for the '554 patent, whereby Respondents could certify that certain imports are not covered by the LEO. The ALJ did not recommend that the Commission issue a cease and desist order in this investigation. The ALJ further recommended a zero bond during the period of Presidential review.

All parties to this investigation filed timely petitions for review of various portions of the final ID, as well as timely responses to the petitions.

On December 13, 2016, Respondents filed a "Motion For a Limited Re-Opening of the Record for Consideration of Prior Art Not Identified By Complainants During Discovery." Both the IA and Complainants filed timely responsive pleadings opposing Respondents' motion. The Commission has determined to deny Respondents' motion to re-open the record.

On December 19, 2016, both Complainants and Respondents filed their respective Public Interest Statement pursuant to 19 CFR 210.50(a)(4). Responses from the public were likewise received by the Commission pursuant to notice. *See* Notice of Request for Statements on the Public Interest (Nov. 29, 2016).

The Commission determined to review various portions of the final ID and issued a Notice to that effect dated January 23, 2017 ("Notice of Review"). 82 *Fed. Reg.* 8623 (Jan. 27, 2017). In the Notice of Review, the Commission also set a schedule for the filing of written submissions on the issues under review, including certain questions posed by the Commission, and on remedy, the public interest, and bonding. The parties have briefed, with initial and reply submissions, the issues under review and the issues of remedy, the public interest, and bonding.

Having examined the record in this investigation, including the parties' submissions filed in response to the Notice of Review, the Commission has determined as follows:

(1) To reverse (a) the ID's finding that Respondents' P5000, P6000, and Arco products do not meet the "guides" and "stops" limitation of claim 2 of the '172 patent; (b) the ID's finding that the Gen 3 Arco and Platinum 5000/6000 controllers do not meet the "guides" and "stops" limitation of claim 12 of the '172 patent; and (c) the ID's finding that the Gen 3 Arco and Platinum 5000/6000 controllers do not infringe claim 12 of the '172 patent;

(2) To affirm the ID's finding that the '172 Accused Products do not meet the claim limitation "pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one bladder for continuously monitoring the pressure in the at least one bladder" in claims 2, 6, 20, 22, and 24 of the '172 patent;

(3) To (a) modify the ID's finding that the '172 Accused Products do not infringe claim 9 of the '172 patent by striking the words "For the reasons stated above in the discussion of claim 2" in the first full paragraph on page 23 of the ID and, instead, find that the Accused Products do not meet the "continuously monitoring" limitation of claim 9 and therefore do not infringe claim 9 for the reasons detailed in the accompanying Commission Opinion; and (b) affirm the ID's finding of no induced infringement of claim 9 of the '172 patent;

(4) To take no position on the ID's discussion in the last paragraph on page 20 and the first paragraph on page 21 of the ID. *See Beloit Corporation v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir.1984) ("*Beloit*");

(5) To modify the ID's finding regarding non-infringement of claim 16 of the '554 patent by striking the words "For the reasons stated above in the discussion of claim 1," in the fourth paragraph on page 70 of the ID and instead find that the '554 Accused Products do not meet the "air posturizing sleep surface" limitation of claim 16 and therefore do not infringe claim 16 for the reasons detailed in the accompanying Commission Opinion;

(6) To reverse the ID's determination that the '554 Domestic Industry Products do not practice the '554 patent and thus do not satisfy the technical prong of the domestic industry requirement with respect to the '554 patent and, instead, determine that for the reasons detailed in the accompanying Commission Opinion, Complainants have satisfied the technical prong with respect to the '554 patent based only on the U15 and U11 products practicing claim 16 of the '554 patent;

(7) To take no position on the ID's determination on whether Complainants satisfied the economic prong with regard to the '554 patent. *See Beloit*, 742 F.2d at 1423.

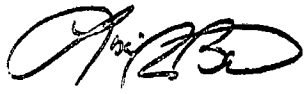
(8) To reverse the ID's determination regarding the economic prong of the domestic industry requirement with respect to the '172 patent, and find that the economic prong of the domestic industry requirement is satisfied for the '172 patent.

Accordingly, the Commission finds that there is a violation of section 337 with respect to the '172 patent in this investigation. The Commission has determined that the appropriate relief in this investigation includes an LEO prohibiting the unlicensed entry of infringing air mattress systems, components thereof, and methods of using the same that are covered by claims 12 or 16 of the '172 patent and that are manufactured abroad by or on behalf of, or imported by or on behalf of Respondents, or their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns.

The Commission has further determined that the public interest factors enumerated in section 337(d)(l) (19 U.S.C. § 1337(d)(l)) do not preclude issuance of the LEO. Finally, the Commission has determined that the amount of a bond should be set to zero (0) percent of entered value during the period of Presidential review (19 U.S.C. § 1337(j)). The Commission's order was delivered to the President and the United States Trade Representative on the day of its issuance.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 C.F.R. Part 210).

By order of the Commission.



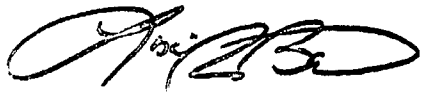
Lisa R. Barton
Secretary to the Commission

Issued: May 17, 2017

CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME **Inv. No. 337-TA-971**

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **Andrew Beverina, Esq.**, and the following parties as indicated, on **May 17, 2017.**



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Select Comfort Corporation and Select Comfort SC Corporation:

Kecia J. Reynolds, Esq.
PILLSBURY WINTHROP SHAW PITTMAN LLP
1200 Seventeenth Street, NW
Washington, DC 20036

☐ Via Hand Delivery
☒ Via Express Delivery
☐ Via First Class Mail
☐ Other:_____

On Behalf of Respondents Sizewise Rentals, LLC, American National Manufacturing, Inc., and Dires, LLC, d/b/a Personal Comfort Bed:

Tom M. Schaumberg, Esq.
ADDUCI, MASTRIANI &SCHAUMBERG, L.L.P.
1133 Connecticut Ave., NW, 12th Floor
Washington, DC 20036

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☒ Via Express Delivery
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☐ Other:_____

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME**	**Investigation No. 337-TA-971**

LIMITED EXCLUSION ORDER

The United States International Trade Commission ("Commission") has determined that there is a violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in the unlawful importation, sale for importation, or sale within the United States after importation by Respondents Sizewise Rentals LLC, American National Manufacturing Inc., and Dires, LLC ("Respondents") of certain air mattress systems, components thereof, and methods of using the same that infringe one or more of claims 12 and 16 of U.S. Patent No. 5,904,172 ("the '172 patent").

Having reviewed the record in this investigation, including the written submissions of the parties and the public, the Commission has made its determination on the issues of remedy, public interest, and bonding. The Commission has determined that the appropriate form of relief is a limited exclusion order prohibiting the unlicensed entry of air mattress systems, components thereof, and methods of using the same manufactured by or on behalf of Respondents or their affiliated companies, parents, subsidiaries, licensees, or other related business entities, or their successors or assigns.

The Commission has also determined that the public interest factors enumerated in 19 U.S.C. § 1337(d) do not preclude the issuance of the limited exclusion order.

During the Presidential review period, the Commission has further determined to set a bond in the amount of zero (0) percent of entered value for the certain air mattress systems, components thereof, and methods of using the same that are manufactured by, for, or on behalf of the Respondents.

Accordingly, the Commission hereby ORDERS that:

1. Air mattress systems, components thereof, and methods of using the same that infringe claims 12 or 16 of the '172 patent that are manufactured abroad by or on behalf of, or imported by or on behalf of, Respondents, or their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns, are excluded from entry for consumption into the United States, entry for consumption from a foreign trade zone, or withdrawal from a warehouse for consumption, for the remaining terms of the patent, except under license of the patent owner or as provided by law.

2. Notwithstanding paragraph 1 of this Order, the aforesaid certain air mattress systems, components thereof, and methods of using the same are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption under bond in the amount of zero (0) percent of entered value by, for, on or behalf of Respondents pursuant to subsection (j) of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337(j)), and the Presidential Memorandum for the United States Trade Representative of July 21, 2005 (70 Fed. Reg. 43251), from the day after this Order is received by the United States Trade Representative until such time as the United States Trade Representative notifies the Commission that this Order is approved or disapproved

but, in any event, not later than sixty (60) days after the date of receipt of this Order.

3. At the discretion of U.S. Customs and Border Protection ("CBP") and pursuant to the procedures it establishes, persons seeking to import air mattress systems, components thereof, and methods of using the same that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made appropriate inquiry, and thereupon state that, to the best of their knowledge and belief, the products being imported are not excluded from entry under paragraph 1 of this Order. At its discretion, CBP may require persons who have provided the certification described in this paragraph to furnish such records or analyses to substantiate the certification.

4. In accordance with 19 U.S.C. § 1337(l), the provisions of this Order shall not apply to air mattress systems, components thereof, and methods of using the same that are imported by and for the use of the United States, or imported for, and to be used for, the United States with the authorization or consent of the Government.

5. The Commission may modify this Order in accordance with the procedures described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

6. The Secretary shall serve copies of this Order upon each party of record in this investigation.

7. Notice of this Order shall be published in the Federal Register.

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: May 17, 2017

CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME **Inv. No. 337-TA-971**

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served by hand upon the Commission Investigative Attorney, **Andrew Beverina, Esq.**, and the following parties as indicated, on **May 17, 2017.**

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Select Comfort Corporation and Select Comfort SC Corporation:

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1200 Seventeenth Street, NW
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☐ Via Hand Delivery
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☐ Other:_____

On Behalf of Respondents Sizewise Rentals, LLC, American National Manufacturing, Inc., and Dires, LLC, d/b/a Personal Comfort Bed:

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ADDUCI, MASTRIANI &SCHAUMBERG, L.L.P.
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Washington, DC 20036

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☐ Via First Class Mail
☐ Other:_____

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

In the Matter of	
CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME	Investigation No. 337-TA-971

COMMISSION OPINION

I. BACKGROUND AND PROCEDURAL HISTORY

On October 16, 2015, Complainants Select Comfort Corporation and Select Comfort SC Corporation (collectively, "Select Comfort," or "Complainants") filed a Complaint alleging violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain air mattress systems, components thereof, and methods of using the same. *See* 80 *Fed. Reg.* 72,738 (Nov. 20, 2015). Complainants supplemented the Complaint on October 28th and November 5th. *Id.*

On November 20, 2015, the Commission instituted this investigation to determine:

> [W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain air mattress systems, components thereof, and methods of using the same by reason of infringement of one or more of claims 2, 6, 9, 12, 16, 20 and 22-24 of the '172 patent[1] and claims 1, 5, 6, 16, 22, and 26 of the '554 patent,[2] and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

Id. The named respondents are Sizewise Rentals LLC ("Sizewise"), American National

[1] U.S. Patent No. 5,904,172.

[2] U.S. Patent No. 7,389,554.

Manufacturing Inc. ("ANM"), and Dires LLC (d/b/a Personal Comfort Bed) ("Dires") (collectively, "Respondents"). A Commission investigative attorney ("the IA," or "Staff") is participating in the investigation.

The technology at issue relates to adjustable air mattress systems and components thereof. ID/RD at 3. One of the pertinent aspects of this technology relates to a valve enclosure assembly that improves control of air pressure inside an adjustable air mattress. '172 patent, Abstract. Another aspect relates to designing an adjustable air mattress system that would allow for individualized comfort sections. '544 patent, Abstract.

The '172 patent, entitled "Valve Enclosure Assembly," generally relates to an improved valve enclosure assembly. The invention disclosed in the '172 patent incorporates an improved valve enclosure design requiring smaller solenoids and thereby reducing the amount of heat generated in the improved valve enclosure assembly. '172 patent, 2:36-47. This invention enables continuous monitoring of the pressure in the air bladders during the inflate and deflate cycles by means of a tap on the improved valve assembly, instead of directly from the air bladder. '172 patent, 2:48-50; 56-61. The invention also minimizes leaks from the air bladders. '172 patent, 2:50-51.

The '554 patent, entitled "Air Sleep System With Dual Elevating Air Posturizing Sleep Surfaces," relates to an air sleep system with a pair of air posturizing sleep surfaces, which may be individually inclined and air adjusted. ID/RD at 3; '554 patent at Abstract. The invention disclosed in the '544 patent is directed to air support sleep systems, including a multi-compartment high-profile mattress system that has a base support module and an upper air posturizing module in which a pair of individually elevatable air posturizing module sections

provide posturizing support in a variety of positions. '554 patent, 1:17-23. The system allows for two separate sleeping surfaces to be individually elevated, for example when one person wants to read in bed while the sleeping partner wishes to sleep. '554 patent, 2:8-12.

Complainants accuse the following air controllers of infringement of the '172 patent: (1) Gen 3 Arco; (2) Gen 3 Koge; and (3) the Platinum 5000 ("P5000") and Platinum 6000 ("P6000") (collectively, "the '172 Accused Products"). CIB at 13.[3] The Gen 3 Arco and Gen 3 Koge

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[3]The following abbreviations of the parties' pleadings are used in this Opinion: CIB – Complainants' Initial Post-Hearing Brief; CRB – Complainants' Reply Post-Hearing Brief; RIB – Respondents' Initial Post-Heating Brief; RRB – Respondents' Reply Post-Hearing Brief; SIB – Staff's Initial Post-Hearing Brief; ComplPreHear – Complainants' Pre-Hearing Brief; RespMotReopen – "Respondents' Motion For A Limited Re-Opening Of The Record For Consideration Of Prior Art Not Identified By Complainants During Discovery;" RespMemReopen – "Respondents' Memorandum In Support Of Respondents' Motion For A Limited Re-Opening Of The Record For Consideration Of Prior Art Not Identified By Complainants During Discovery;" ComplRespReopen – "Complainants' Opposition To Respondents' Motion For A Limited Re-Opening Of The Record For Consideration Of Prior Art Not Identified By Complainants During Discovery;" IARespReopen – "Office of Unfair Import Investigations' Response to Respondents' Motion for a Limited Re-Opening of the Record for Consideration of Prior Art Not Identified by Complainants During Discovery;" ComplOpenNotice – "Complainants Select Comfort Corporation's And Select Comfort SC Corporation's Response To Commission Questions On Review And Briefing On Remedy, Public Interest, And Bonding;" ComplRespNotice – "Complainants Select Comfort Corporation's And Select Comfort SC Corporation's Combined Reply To Respondents' And OUII's Submissions On Commission Questions On Review And Briefing On Remedy, Public Interest, And Bonding;" RespOpenNotice – "Respondents Sizewise Rentals LLC's, American National Manufacturing, Inc.'s, And Dires LLC's Response To The Commission's Notice Of Review Of The Final Initial Determination;" RespRespNotice – "Respondents Sizewise Rentals LLC's, American National Manufacturing, Inc.'s, And Dires LLC's Reply Brief Regarding The Commission's Review Of The Final Initial Determination;" IAOpenNotice – "Office Of Unfair Import Investigations' Response To Commission Questions;" IARespNotice – "Office Of Unfair Import Investigations' Combined Reply To The Private Parties' Responses To Commission Questions;" ComplPet – "Complainants Select Comfort Corporation's And Select Comfort SC Corporation's Petition For Review Of Final Initial Determination On Violation Of Section 337 And Recommended Determination On Remedy And Bond;" IARespPet – "Combined Response Of The Office Of Unfair Import Investigations To Complainants' Petition For Review And Respondents' Contingent Petition For Review Of The Final Initial Determination."

products are found in the consumer products of Respondents ANM and Dires. RIB at 4; SIB at 17. The Platinum 5000 and Platinum 6000 are used in Sizewise's medical mattress systems. RIB at 5. SIB at 17-18. *See* ID/RD at 17.

Complainants allege that the following products manufactured and sold by Respondents infringe the '554 patent: the PC Flexhead models A4 (claim 16 only), A5, A6, A7, A8, A10, H9 and H11 and the corresponding Instant Comfort FlexHead models 4500, 5500, 6500, 7500, 8500, 9500, 10k3, Hybrid 3000 and Hybrid 4000, CIB at 55-56; Complainants also allege that the Sizewise Harmonize models infringe claim 26, *id.* at 55, 57 (collectively, "the '554 Accused Products"). *See* ID/RD at 61.

On May 11, 2016, the ALJ issued Order No. 19 ("Markman Order") construing certain claim limitations of the asserted patents. The evidentiary hearing was held August 8-12, 2016.

On November 18, 2016, the ALJ issued his final ID finding no violation of section 337. All parties to this investigation filed timely petitions for review of various portions of the final ID, as well as timely responses to the petitions.

The Commission determined to review the final ID in part, and issued a notice dated January 23, 2017 ("Notice of Review"), in which the Commission specified the issues under review and requested briefing. *See* 82 *Fed. Reg.* 8623-24 (Jan. 27, 2017). In particular, the Commission determined as follows:

> (1) to review the ID's findings that the P5000, P6000, and Arco products do not meet "guides and stops" limitation in claim 2 of the '172 patent, and that these products do not meet the same claim limitation in claim 12 of the '172 patent and for that reason do not infringe that claim;
>
> (2) to review the ID's finding that the '172 Accused Products do

not meet claim limitation "pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one bladder for continuously monitoring the pressure in the at least one bladder" in claims 2, 6, 20, 22, and 24 of the '172 patent;

(3) to review the ID's finding that the '172 Accused Products do not infringe claim 9 of the '172 patent;

(4) to review, in part, the ID's analysis regarding whether the '172 Accused Products infringe claim 2 of the '172 patent for the limited purpose of taking no position on the ALJ's discussion in the last paragraph of page 20 and in the first paragraph of page 21 of the ID;

(5) to review the ID's finding that claim 16 of the '554 patent is not infringed because Complainants did not establish that the accused products practice the "air posturizing sleep surface" limitation;

(6) to review the ID's finding that the '554 Domestic Industry Products do not practice the '554 patent;

(7) to review the ID's finding that Complainants did not satisfy the economic prong of the domestic industry requirement with respect to both the '172 and '554 patents.

Id. at 8624. The Commission determined not to review the remainder of the ID. *Id.* The Commission requested the parties to brief their positions on certain issues under review. *Id.* The Commission also requested written submissions on remedy, public interest, and bonding.

In accordance with the Notice of Review, all parties filed timely opening written submissions, and timely reply submissions. The Commission also received public interest comments in response to the Notice of Request for Statements on the Public Interest. 81 *Fed. Reg.* 87591 (Dec. 5, 2016).[4]

[4] The Commission received public interest comments from U.S. Senators Moran and Roberts, U.S. Congressman Yoder, and Lutheran Medical Center, Wheat Ridge, CO.

On December 13, 2016, Respondents filed a "Motion For a Limited Re-Opening of the Record for Consideration of Prior Art Not Identified By Complainants During Discovery." Respondents request that pursuant to Commission Rules 210.15(a)(2) and 210.38, the Commission exercise its discretion to re-open the record for the limited purpose of receiving evidence regarding two prior art valve control units not identified by Complainants during discovery. Respondents submit that "granting this request would allow for a finding on whether this important prior art – which is directly at issue in a parallel district court matter involving the '172 patent – renders the patent invalid and unenforceable." RespMotReopen at 1. *See* RespMemReopen at 1-6.

Complainants and the IA oppose the motion. They contend that the motion should be denied because Respondents were in possession of the relevant discovery, but failed to act while the investigation was before the ALJ. Complainants argue that the alleged prejudice that Respondents complain of is of their own making. ComplRespReopen at 1; *see id.* at 1-12; IARespReopen at 1; *see id.* at 1-3.

For the reasons provided by Complainants and the IA, noted above, we deny Respondents' motion to reopen the record.

II. SUMMARY OF DETERMINATIONS

The Commission has determined as follows with respect to the issues under review and the issues of remedy, the public interest and bonding. We affirm the ID and adopt its reasoning regarding findings under review that are not specifically discussed below.

The Commission reverses the ID's finding that Respondents' P5000, P6000, and Arco products do not meet the "guides" and "stops" limitation of claim 2 of the '172 patent. *See*

ID/RD at 27. The Commission likewise reverses the ID's finding that the Gen 3 Arco and Platinum 5000/6000 air controllers do not meet the "guides" and "stops" limitation of claim 12, *see* ID/RD at 34, and also reverses the ID's finding that the Gen 3 Arco and Platinum 5000/6000 air controllers do not infringe claim 12 of the '172 patent.

The Commission affirms the ID's finding that the '172 Accused Products do not meet the claim limitation "pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one bladder for continuously monitoring the pressure in the at least one bladder" in claims 2, 6, 20, 22, and 24 of the '172 patent.

The Commission modifies the ID's non-infringement determination regarding claim 9 of the '172 patent by striking the words "For the reasons stated above in the discussion of claim 2" in the first full paragraph on page 23 of the ID and, instead, finds that the Accused Products do not meet the "continuously monitoring" limitation of claim 9 and therefore do not infringe claim 9 for the reasons detailed *infra* in this Opinion. The Commission also affirms the ID's finding of no induced infringement of claim 9. *See* ID/RD at 33.

The Commission takes no position on the ID's discussion in the last paragraph on page 20 and the first paragraph on page 21 of the ID.

The Commission modifies the ID's finding regarding non-infringement of claim 16 of the '554 patent by striking the words "For the reasons stated above in the discussion of claim 1," in the fourth paragraph on page 70 of the ID and instead finds that the '554 Accused Products do not meet the "air posturizing sleep surface" limitation of claim 16 and therefore do not infringe claim 16 for the reasons discussed *infra* in this Opinion.

The Commission reverses the ID's determination that the '554 DI Products do not

practice the '554 patent, and determines that, for the reasons detailed *infra* in this Opinion, the Comfortaire U15 and U11 products practice claim 16 of the '554 patent.

The Commission reverses the ID's determination regarding the economic prong of the domestic industry requirement with respect to the '172 patent, and finds that the economic prong of the domestic industry requirement is satisfied for the '172 patent. Accordingly, the Commission finds that there is a violation of section 337 with respect to the '172 patent in this investigation. The Commission takes no position on the issue of whether Complainants satisfied the economic prong with regard to the '554 patent.

The Commission determines that: (1) the appropriate remedy is a limited exclusion order ("LEO") directed to Respondents' products that infringe the asserted claims of the '172 patent; (2) the public interest will not be adversely affected by entry of this remedial order; and (3) the amount of a bond is set at zero (0) percent of entered value during the period of Presidential review.

III. COMMISSION REVIEW

Commission review of an initial determination is limited to the issues set forth in the notice of review and all subsidiary issues therein. *Certain Bar Clamps, Bar Clamp Pads, and Related Packaging Display and Other Materials*, Inv. No. 337-TA-429, Comm'n Op. at 3 (Jan. 4, 2001). Once the Commission determines to review an initial determination, its review is conducted under a *de novo* standard. *Certain Polyethylene Terephthalate Yarn and Products Containing Same*, Inv. No. 337-TA-457, Comm'n Op. at 9 (Jun. 18, 2002). Upon review the "Commission has 'all the powers which it would have in making the initial determination,' except where the issues are limited on notice or by rule." *Certain Flash Memory*

Circuits and Products Containing Same, Inv. No. 337-TA-382, Comm'n Op. on the Issues Under Review and on Remedy, the Public Interest, and Bonding at 9-10 (Jun. 2, 1997), USITC Pub. 3046 (July 1997) (quoting *Certain Acid-Washed Denim Garments and Accessories*, Inv. No. 337-TA-324, Comm'n Op. at 5 (Nov. 1992)).

On review, "the Commission may affirm, reverse, modify, set aside or remand for further proceedings, in whole or in part, the initial determination of the administrative law judge. . . . The Commission also may make any findings or conclusions that in its judgment are proper based on the record in the proceeding." 19 C.F.R. § 210.45(c).

IV. DISCUSSION

A. ISSUES UNDER REVIEW

1. The ID's findings that the P5000, P6000, and Arco products do not meet the "guides and stops" limitation in claim 2 of the '172 patent, and that these products do not meet the same claim limitation in claim 12 of the '172 patent and for that reason do not infringe that claim

The ID found that the terms "guides" and "stops" in the '172 patent did not include screws and screw bores. Specifically, the ID relied on the following portion of the reexamination prosecution history where the patent owner distinguished its claims from prior art reference Stacy:[5]

> However, the screw bores (200) and corresponding screws are described in the '172 patent as separate and distinct features from the plurality of guides (196) and stops (198) that are provided for properly positioning components (*i.e.*, solenoids) within the valve enclosure (130) prior to fastening the components with screws inserted through the screw bores.

[5] Stacy et al., U.S. Patent No. 5,586,346 ("Stacy"). *See* JX-0004 at 64.

JX-0004 at 73-74; ID/RD at 26-27. The record also contains consistent extrinsic evidence in the testimony from Complainants' expert, Dr. Abraham. *See* Abraham Tr. at 246:9-17. The Commission determined not to review the ID on this issue. *See* 82 *Fed. Reg.* 8624.

The ID further found: "[b]ecause Select Comfort asserts that guides and stops of the P5000, P6000, and Arco products are screws and screw bores, the undersigned finds that Select Comfort has failed to establish that these products meet this limitation." ID/RD at 27. Complainants petitioned for review of this finding noting that their argument was that the accused products met the guides and stops limitations because the threaded bore holes into the manifold are guides and the black o-ring sitting on the ledge within the bore hole is the stop. ComplPet. at 24. Specifically, Complainants argued in their posthearing brief:

> Dr. Friis also admits that, on all products, the pump is connected to the manifold (valve enclosure). [Friis Hr. at 726:22-25]. Dr. Friis also admits that the P[5000]/6000 and Arco products have threaded (guides) bore holes into the manifold (valve enclosure) and that inside the threaded bore holes there is a black o-ring sitting on a ledge within the bore hole which stops the solenoid when threaded into the hole. Hr. at 736:12-25, 741:20-742:4; (P6000, JX-0137C, JX-0202C), (Arco, JX-0133C; JX-0208C).

ComplPostHear at 15. The Commission determined to review this issue.

In response to the Notice of Review, Complainants submit that they do not assert, and never asserted, that the guides and stops in the P5000, P6000, and Arco products are screws and screw bores. Complainants argue that, instead, they assert, and the record shows, that the accused P5000, P6000, and Arco products meet the guides and stops element in claims 2 and 12 of the '172 patent because they have guiding walls that guide the solenoid into place within the enclosure and valve seats/ledges that stop the solenoid within the enclosure, neither of which are

screws or screw bores. ComplOpenNotice at 2.

The IA's position is consistent with that of Complainants. The IA notes that in their post-hearing brief, Complainants alleged that the solenoids for the P5000 and P 6000 would be guided in by a rim and threaded walls, and that the stop is an o-ring. IAOpenNotice at 3 (citing Compl. IPHB at 49). The IA argues that although the guides are threaded, they are not screw bores because their purpose is to accommodate the solenoids, not screws. The IA further argues that the o-ring stop is likewise not a screw.

The IA points out that, while the Final ID found prosecution disavowal for screw bores, it did not find that the disavowal was for all threaded structures. IAOpenNotice at 4 (citing ID/RD at 26-27). The IA argues that the guides and stops of the Platinum 5000 and 6000 are not the disavowed screws and screw bores. IARespNotice at 1. The IA submits that the Platinum 5000 and 6000 instead use a rim with a threaded wall as a guide and an o-ring as a stop. *Id.*

Respondents, in contrast, argue that Complainants assert that the accused guides and stops of the P5000/P6000 and Arco are simply structural elements (*i.e.*, threading and ledges) of screws and screw bores, and that the record does not show that P5000, P6000, and Arco products meet the guides and stops limitation in claims 2 and 12 of the '172 patent. RespOpenNotice at 8. Respondents contend that the record supports a finding that Complainants assert that the guides and stops of the P5000, P6000, and Arco products are screws and screw bores. *Id.*

We find that the record supports Complainants' position. The evidence of record shows that the raised valve seat and ledge with a black o-ring in the P5000, P6000, and Arco products (which Complainants assert meet the "stops" limitation) are not a screw bore or a screw, and that the threaded interior walls of the ports of the valve enclosure that receive solenoids in the P5000,

P6000, and Arco products (which Complainants assert meet the "guides" limitation) are not screws or screw bores either. *See* CX-0456C, Abraham WS at Q54, Q55, Abraham Hr. at 234:5-7, 234:23-24, 236:10-12. *See also* ComplOpenNotice at 4-5; ComplRespNotice at 9-12; Complainants' PreHB at 49-51; CIB at 15-17; IAOpenNotice at 3-4; ID/RD at 26.

The record shows that the raised valve seat and ledge with a black o-ring in the P5000, P6000, and Arco products are the claimed stops. CX-0456C, Abraham WS at Q54-55, Abraham Hr. at 234:5-7; 234:23-24; 236:10-12; ComplOpenNotice at 5. The record further shows that the threaded interior walls of the ports of the valve enclosure in the P5000, P6000, and Arco are the claimed guides. CX-0456C, Abraham WS at Q54-55; Abraham Hr. at 217:20-218:1; 236:6-9. *See* ComplOpenNotice at 5-6. *See also* CIB at 15-16 (citing Friis Hr. at 726:15-21; 726:22-25; 736:12-25, 741:20-742:4; 737:1-6, 744:5-10; JX-0137C, JX-0202C (Platinum products); JX-0133C, JX-0208C (Arco products)).

Respondents fail to rebut this evidence. They essentially repeat their argument made before the ALJ, which he rejected, stating:

> The undersigned disagrees with Respondents that the features in the '172 Accused Products cannot be guides and/or stops. The undersigned has already considered – and rejected – similar arguments from Respondents during claim construction. At that time, Respondents proposed that "guides" be construed as "structures formed on the inner surface of the bottom of the enclosure to laterally position internal components," while "stops" be construed as "structures formed on the inner surface of the bottom of the enclosure to limit the travel of internal components." Respondents reasoned that this construction was necessary in order to comport with an embodiment in the specification and statements made during reexamination. (RMIB at 12-15.) The undersigned rejected Respondents' proposal on the grounds that "it is improper to read limitations from a preferred embodiment described in the specification - even if it is the only embodiment - into the claims

> absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." (Order No. 19 at 12 (quoting *GE Lighting Sols., Inc. v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014)).) Because there was no clear disavowal in the prosecution history of the '172 patent, the undersigned found that the meaning of "guides" and "stops" should not be limited in the manner proposed by Respondents. (*Id.*)

ID/RD at 26. This finding was not reviewed by the Commission. *See* 82 *Fed. Reg.* 8624.

Respondents further argue that the phrase "screws and screw bores" as used by the patent owner in distinguishing the prior art during reexamination was intended to exclude the structure of a threaded bore hole having one end closed (like a lightbulb socket). The IA, however, points out that the plain language of the prosecution history rebuts Respondents' argument. Specifically, during ex parte reexamination of the '172 patent, claims 2 and 12 were rejected as obvious in view of Shafer and Stacy. JX-0004 ('172 ex parte examination file history) at .00112. The Office Action stated that Shafer disclosed all of the limitations of the '172 claims except for "guides and stops disclosed within the enclosure," which were disclosed by Stacy. *Id.* at .00113. In response, the patent owner argued that the guides and stops disclosed by Stacy are screws, which are not the same as the guides and stops of the '172 patent. *See id.* at .00073-74. The patent owner argued:

> Patent Owner respectfully asserts that screw bores and screws are not "guides and stops" as discussed above with reference to the figures and specification of the '172 patent. In fact, as discussed above, the '172 patent also discloses screw bores (200) configured for receiving screws to hold the solenoids (210) in place within the valve enclosure (130). However, the screw bores (200) and corresponding screws are described in the '172 patent as separate and distinct features from the plurality and guides (196) and stops (198) that are provided for properly positioning components (*i.e.*, solenoids) within the valve enclosure (130) prior to fastening the components with screws inserted through the screw bores (200).

JX-0004 at .00073-74. Therefore, the prosecution history supports a finding that the patent owner disavowed screw bores that receive screws, but not all threaded bore holes having one end closed, as Respondents argue. *See also* IARespNotice at 2.

Respondents' attempt to expand the scope of the patent owner's reexamination arguments to apply to any threaded components by equating "screws and screw bores" with "a threaded connection" is not supported by the record. Respondents essentially argue that any threaded connection is a screw and screw bore and propose dividing a threaded connection into "two parts: (1) a male part having male threading along its outside surface (*e.g.*, a screw or a bolt)" and "(2) a female part having conforming female threading along the bore's interior surface." RespOpenNotice at 4. None of the experts or fact witnesses offered any testimony to support this argument. *See* ComplRespNotice at 10.

Based on the foregoing, we conclude that the ID clearly erred in finding that Complainants asserted that guides and stops of the P5000, P6000, and Arco products are screws and screw bores, and consequently finding that Complainants failed to establish that these products meet the guides and stops limitation. Accordingly, we reverse the ID's finding that Respondents' P5000, P6000, and Arco products do not meet the "guides" and "stops" limitation of claim 2 of the '172 patent. *See* ID/RD at 27.

Our decision further results in the reversal of the ID's finding that the Gen 3 Arco and Platinum 5000/6000 air controllers do not infringe claim 12 of the '172 patent. This is the case because, as the ID found, these products meet all other limitations of claim 12, *see* ID/RD at 33-36, and the Commission did not review that finding, *see* 82 *Fed. Reg.* 8624. This decision does not, however, affect the ID's finding that the '172 Accused Products do not infringe claim 2 of

the '172 patent because the ID also found that the accused products do not continuously monitor pressure using a processor in conjunction with the transducer, ID/RD at 32, and the Commission decided to affirm this finding, *see infra.*

2. The ID's finding that the '172 Accused Products do not meet claim limitation "pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one bladder for continuously monitoring the pressure in the at least one bladder" in claims 2, 6, 20, 22, and 24 of the '172 patent

As part of its infringement analysis with respect to claim 2, the ID considered whether the '172 Accused Products meet the claim limitation "pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one bladder for continuously monitoring the pressure in the at least one bladder." The ID found, consistent with the positions taken by the IA and Respondents, that a processor is required to perform the function of "continuously monitoring," and that a pressure transducer alone cannot monitor pressure. ID/RD at 31. Thus the ID finds that the Accused Products do not meet the limitation because they do not have a processor.

Complainants disagree and argue that the record supports a finding that a transducer alone satisfies the "pressure monitor means being operably coupled to the processor . . . for continuously monitoring the pressure . . ." limitation. ComplOpenNotice at 11. Complainants contend that the evidence shows that the '172 Accused Products meet the "pressure monitor means" element of claims 2, 6, and 20. *See* ComplPet at 27, 29, 32. Complainants submit that their expert, Dr. Abraham, convincingly explained with the help of picture exhibits and demonstratives that the '172 Accused Products have a port in fluid communication with the interior of the valve enclosure assembly where the port is designed to receive a tube.

ComplOpenNotice at 13-14 (citing CX-0456C, Abraham WS at Q58-60). Complainants argue that the picture exhibits and demonstratives with annotations of the picture exhibits show that the P5000 and P6000 have a port designed to receive a tube, with the port in fluid communication with the interior of the valve enclosure assembly and the air bladder. ComplOpenNotice at 14 (citing CX-0456C, Abraham WS at Q58-60; JX-0153C, JX-0154C, CDX-0011, CDX-0012, and CDX-0013). Complainants contend that, using demonstrative exhibit CDX-0011, Dr. Abraham explained that "[t]here's a port on the blue structure, and that port allows a tube to carry pressure information, and by that I mean pressure, to a transducer, which is shown just above the green plate-like thing, which we call a printed circuit board." ComplOpenNotice at 15 (Abraham Hr. at 279:10-14). *See also id.* at 15-20.

Respondents contend that the record supports the ID's finding that Complainants failed to carry their burden to show that the '172 Accused Products perform the function of continuously monitoring pressure. Respondents argue that while Complainants asserted that a pressure transducer (or sensor) alone (without a processor) performs the function of continuously monitoring pressure, a transducer is merely a "dumb" component that must be activated by a processor to output a voltage signal, which is converted by an analog-to-digital converter and sent to the processor which then calculates a pressure. Respondents contend that a pressure transducer alone cannot monitor pressure.

The IA notes that during claim construction briefing, the parties agreed that "pressure monitor means" was a means-plus-function term with a function of "continuously monitoring the pressure in the at least one bladder" and the structure is "[a] port in fluid communication with the interior of the valve enclosure assembly designed to receive a tube, a tube connected to the port

and to a pressure sensor for conveying the bladder pressure from the valve enclosure assembly to the pressure sensor, and the pressure sensor operatively coupled to a processor." IAOpenNotice at 5 (citing Markman Order at 94; ID/RD at 16). The IA points out that the purpose of continuous monitoring is to monitor the pressure in the air bladder, and that the evidence shows that it is the processor that continuously monitors. IAOpenNotice at 5-6 (citing '172 patent at 7:67-8:3).

We find that the evidence supports the ID's finding, which is also consistent with the express provisions in the intrinsic record. The '172 patent specification provides that:

> Further, with the controller **126** as depicted in FIG. 2, a desired inflation of either the left bladder **122** or the right bladder **124** may be commanded. Such command may require either an inflation or a deflation of the left or right bladders **122**, **124**. In order to meet the command, the processor of the pump **112** must be able to continuously monitor pressure in the respective left bladder or right bladder **122**, **124** as desired.

'172 patent, 7:63-8:3 (emphasis added).

Complainants rely on their expert witness to explain why this disclosure is consistent with the transducer continuously monitoring the pressure. ComplOpenNotice at 20. Dr. Abraham analogized the disclosure of the '172 specification to monitoring time. He testified:

> . . . It's a lot like if I had a clock in this room, the clock is the transducer. It's always telling the time. And what this is saying is the processor is our eyes. We can look at it whenever we want. What this sentence is saying is the processor must be able to look at the pressure in the transducer whenever it wants, so you can't have a broken line between the transducer and the processor.

Abraham Hr. at 205:1-8. Complainants made a similar argument in their petition for review where they referred to Dr. Abraham's testimony which analogized the disclosure of the '172

specification to monitoring tire pressure. ComplPet at 35. Dr. Abraham testified:

> It means the processor must be able to sample continuously. So - at any time. So let's say you're using one of those air pressure sensors for a car tire. You stick it on the nozzle of your car tire and that little thing shoots out. That device you attach to your car tire would be akin to the transducer. You being able to read it at any time would be your eyes sensing it. So it would be like having one of those devices attached to your car at any time. So whenever you wanted to know the pressure in your tire, you would know it.

Abraham Tr. at 260:14-25. We agree, however, with the IA that

> [Dr. Abraham's] analogy is inapt. A mechanical tire pressure sensor is not analogous to a transducer sending electrical signals to a processor. The analogy fails to address the express language of the specification that requires the processor to continuously monitor, not the transducer. Infringement is determined by analyzing the claims of the patent in light of the intrinsic evidence, not by analogies.

IARespNotice at 11. *See also* RespRespNotice at 7-9. For the same reasons, we find unpersuasive Dr. Abraham's analogy with monitoring time with the help of a clock referenced above. Complainants' reliance on extrinsic evidence that is inconsistent with the express language in the specification violates well established Federal Circuit precedent under which "a court should discount any expert testimony 'that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (citations omitted); *see id.* at 1318-19.

Because the accused products lack a processor, the ID correctly found no infringement of the "pressure monitor means" of claim 2. Accordingly, we affirm the ID as to this claim.

The ID considered that claims 6 and 20, like claim 2, include the term "continuously

monitoring," and determined that for the reasons stated in the discussion of claim 2, claims 6 and 20 are not infringed because Complainants did not establish that the '172 Accused Products "continuously monitor" pressure. ID/RD at 32, 38. The ID also found that since claims 22 and 24 depend from claim 2 which is not infringed, claims 22 and 24 are likewise not infringed. ID/RD at 39 (citing *Muniauction Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328-29 n.5 (Fed. Cir. 2008) ("A conclusion of noninfringement as to the independent claims requires a conclusion of noninfringement as to the dependent claims.")).

Accordingly, because the ID correctly found that the '172 Accused Products lack a processor and thus do not perform the function of "continuously monitoring" as required by claim 2, the ID likewise correctly found that the '172 Accused Products do not perform the function of "continuously monitoring" required by claims 6, 20, 22, and 24, and therefore do not infringe these claims. We affirm the ID as to these claims as well.

3. The ID's finding that the '172 Accused Products do not infringe claim 9 of the '172 patent

The ID states in its infringement analysis regarding claim 9:

> Claim 9, like claim 2, includes the term "continuously monitoring." For the reasons stated above in the discussion of claim 2, claim 9 is not infringed because Select Comfort did not establish that the '172 Accused Products "continuously monitor" pressure.

ID/RD at 32.

We find that the record does not support the ID's finding. While claim 9 has a "continuously monitoring" limitation, it does not have a "pressure monitor means" limitation like claim 2, *see* '172 patent, Reexamination Certificate, 1:33-36, which was significant to making a

non-infringement finding with respect to claim 2, *see* ID/RD at 29-32. Therefore, the ID made a clear error of fact and the subject non-infringement finding is not supported by the record evidence.

Nevertheless, while the "continuously monitoring" limitation of claim 9 is different than the pressure monitor means limitation in claims 2, 6, and 20, the record shows that the Accused Products do not practice the "continuously monitoring" limitation of claim 9. This limitation requires "continuously monitoring the existing pressure in the bladder at a tap on the valve enclosure assembly, the tap defining an opening through the valve enclosure assembly and into an interior of the air chamber." *See* '172 patent, Reexamination Certificate, 1:33-36. The evidence shows that the accused products do not monitor pressure when the valve is open because there is too much turbulence to take accurate measurements. RX-0844C (Friis RWS) at Q/A 31. In particular, Dr. Friis testified that ". . .[[

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Complainants contend that Dr. Friis's testimony "lacks credibility and should be given no weight" because she did not personally take measurements of the turbulence. ComplOpenNotice at 22. We, however, agree with the IA that Dr. Friis "reasonably relied on evidence provided to her by Respondents in coming to her conclusion," and that the lack of turbulence measurements in the record "is fatal to Complainants, who bear the burden of proving infringement but were

absolutely silent on this issue." IARespNotice at 6.[6]

We find unpersuasive Complainants' argument that "any alleged turbulence, and its alleged effect on accuracy, is irrelevant because neither the specification nor the claims of the '172 patent require any particular accuracy of pressure reading," ComplOpenNotice at 23. We note that Complainants waived this argument by failing to raise it in their pre-hearing brief in accordance with Ground Rule 8.2. ALJ Order No. 2 at 13; ComplPreHear at 77-82. This argument is unsubstantiated on the merits as well. As Respondents point out, Complainants' contention "supposes that the Accused Products are designed to inaccurately take pressure readings." RRB at 9. Relying on their expert, Mr. Weiman, Respondents submit that this Complainants' supposition is not supported by the record. *Id.* (citing RX-0845C at Q/A 36); *see also id.* (citing RX-0848 at Q/A·69).[7] Complainants fail to rebut Respondents' argument. *See*

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[6] During cross-examination of Respondents' expert, Dr. Friis, Complainants attempted to show that a calculation called the Reynolds number can determine the error from turbulence in a pressure reading. *See* Friis Tr. at 768:20-783:4. Complainants failed to show, however, that the Accused Products actually calculate the error rate using the Reynolds number. *See id. See also* IARespNotice at 7 ("At the hearing, lacking any evidence of infringement, Complainants attempted to show that Dr. Friis's turbulence opinion was flawed by introducing the Reynolds Number. This cross-examination technique failed. Complainants may have established that there is such a thing as a Reynolds Number, and that it can be used to determine the error in a pressure reading from a wall tapping, but they did not prove that the '172 Accused Products used the Reynolds Number.")

[7] Specifically, Respondents argue:

> Mr. Weiman explains Accused Devices have been specifically programmed to wait at least [[ ]] before taking a pressure reading. (RX-845C at A. 36). In other words, Mr. Weiman provides the testimony that the Accused Products are programmed to take pressure readings intermittently, and Dr. Friis provides the mechanical engineering reason why the Accused Products are programmed in such a way-to allow turbulence to dissipate and

ComplOpenNotice at 22.

Complainants do not show that Dr. Friis relied on information that was not true or inaccurate. *See id.* Complainants likewise fail to cite any administrative or judicial precedent that would support their contention that it was improper for Dr. Friis to rely on information provided by Respondents in rendering her opinion. *See id.* Therefore, Complainants' argument lacks factual and legal support and fails to rebut evidence of record relied upon by Respondents. *See* RX-0844C (Friis RWS) at Q/A 31.

Accordingly, we find that Complainants' assertion is not supported by the record in light of Dr. Friis' unrebutted testimony, *see* RX-0844C (Friis RWS) at Q/A 31, and note that Complainants' expert did not testify on this issue. Based on the foregoing, the record shows that the Accused Products do not meet the claim limitation "continuously monitoring" in claim 9 and therefore do not infringe claim 9 of the '172 patent.

Accordingly, we modify the ID's non-infringement determination regarding claim 9 of the '172 patent by striking the words "For the reasons stated above in the discussion of claim 2" in the first full paragraph on page 23 and, instead, find that the Accused Products do not meet the

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> take accurate readings. Indeed, the synthesis of these two opinions is found in Craig Miller's testimony:[[
>
>]]
>
> (RX-848 at A. 69). All of the testimony of Respondents' witnesses complements each other – Complainants have not shown a contradiction.

RRB at 9-10 (emphasis supplied by Respondents).

"continuously monitoring" limitation of claim 9 and therefore do not infringe claim 9 for the reasons discussed above. Because we find no direct infringement of claim 9, we also affirm the ID's finding of no induced infringement of this claim.

4. The ID's analysis regarding whether the '172 Accused Products infringe claim 2 of the '172 patent

In the process of making its determination that the '172 Accused Products do not infringe claim 2 of the '172 patent, the ID notes that Complainants' expert, Dr. Abraham, included pictures of the '172 Accused Products in his witness statement. The ID refers to one such picture, and states that it "understands [Complainants] to assert that the component labeled 'valve enclosure' in the above picture is the asserted 'valve enclosure assembly.'" ID/RD at 21.

Complainants petition for review of this statement. ComplPet at 52. They assert that there is a distinction between a valve enclosure and a valve enclosure assembly. According to Complainants, the valve enclosure is a two-piece plastic molded piece, while the valve enclosure assembly includes the valve enclosure, tubing and the pressure sensor. *Id.* at 52-53. *See also* IARespNotice at 3 n. 12.

We find that Complainants fail to identify a specific error in the ID's analysis and findings. In our view, the ID does not make a finding of "what [] a valve enclosure assembly is," as alleged by Complainants. Rather, as part of its infringement analysis, the ID merely refers to the witness statement of Complainants' expert, Dr. Abraham. ID/RD at 20 (citing CX-0456C at Q/A 45; *see also id.* at Q/A 51). The ID states that, based on Dr. Abraham's responses to questions 45 and 51, as well as Complainants' opening post-hearing brief, the ALJ "understands Select Comfort to assert that the component labeled 'valve enclosure' in the above picture is the

asserted 'valve enclosure assembly.'" ID/RD at 21.

Complainants do not allege that the ID's finding on pages 20-21 is clearly erroneous, and acknowledge that even if there was an error, it was a harmless error that did not result in any erroneous determination. ComplPet at 52-54.

Based on the foregoing, we take no position on the ID's discussion in the last paragraph on page 20 and the first paragraph on page 21.

5. The ID's finding that claim 16 of the '554 patent is not infringed because Complainants did not establish that the accused products practice the "air posturizing sleep surface" limitation

While performing an infringement analysis regarding claim 16 of the '554 patent, the ID states:

> Claim 16, like claim 1, includes the term 'air posturizing sleep surface.' For the reasons stated above in the discussion of claim 1, claim 16 is not infringed because Select Comfort did not establish that the accused products practice the 'air posturizing sleep surface' limitation.

ID/RD at 70.

Complainants argue that the evidence establishes that the accused split top air mattress systems satisfy the "air posturizing sleep surface" element of claim 16, as well as the other elements of claim 16. Complainants contend that the evidence is clear and that courtroom demonstrations with Respondents' A7 air mattress system "proved that the accused products have 'air posturizing sleep surfaces' formed by the air chambers on each side of the mattress which posturiz[e] the sleep surface of the mattress." ComplOpenNotice at 33.

The IA disagrees, pointing out that the Accused Products have air chambers in the bottom portion of the sleep system, which is the very prior art configuration criticized by the '554 patent.

The IA contends that Complainants' infringement argument relies on irrelevant differences in claim language between claim 16 and the other asserted independent claims. *See* IAOpenNotice at 14-16; IARespPet at 26-28. Respondents agree with the IA that the record shows that the '554 Accused Products do not practice an "air posturizing sleep surface." *See* RespOpenNotice at 23-28; RespRespNotice at 12-13.

We note that in reaching its determination that the '554 Accused Products do not practice the "air posturizing sleep surface" limitation of claim 1, ID/RD at 70, the ID discussed, as part of its non-infringement analysis, the "first mattress case" and "second mattress case" limitations recited by claim 1. *See* ID/RD at 63-64, 68-69; see also '554 patent, 7:38-39, 7:46-47. Claim 16, however, does not recite these claim limitations. *See* '554 patent, 8:52-9:2. Therefore, the ID's finding that "[f]or the reasons stated above in the discussion of claim 1, claim 16 is not infringed because Select Comfort did not establish that the accused products practice the 'air posturizing sleep surface' limitation" is clearly erroneous.

We find, however, that the '554 Accused Products do not practice the "air posturizing sleep surface" limitation found in claim 16 for other reasons. The parties agreed that an "air posturizing sleep surface" is "the topmost surface of the upper air posturizing module," and that an "air posturizing module" is "a module which includes an air posturizing sleep surface, and an air posturizing assembly which has air chambers." Markman Order at 19. The preamble of claim 16 recites "an upper air posturizing module, and a lower base module supporting said posturizing module," *see* '554 patent, 8:52-54, and the parties agreed that the preamble of claim 16 is limiting. Markman Order at 19. Accordingly, the preamble requires that the upper air posturizing module be situated above the lower base module. The body of claim 16 provides for

"first and second individually adjustable air chambers arranged side-by-side in said air posturizing module." *See* '554 patent, 8:56-57. Therefore, the claim language requires that the air chambers be located in the upper air posturizing module above the lower base module.

Consistent with the claim language, the specification provides that the invention of the '554 patent is aimed at improving prior art beds which were designed to meet consumer demand for thicker, high-profile beds by stacking additional layers of foam on the air chambers. Such stacking foam layers on top of the air chambers, however, resulted in "hammocking," "when the cushioning overly deflates or compresses so that the body assumes a hammock position which strains the lower back." '554 patent, 1:34-41. *See also id.* at 1:41-43, 50-55. The invention of the '554 patent accomplishes the desired posturing "by providing an air support sleep system having an air posturizing sleep surface to provide proper sleep posture." *Id.*, 2:38-40. Such system comprises an upper mattress air posturizing module that has inflatable chambers providing the support for posturizing. *See id.*, 2:37-45. Consistent with these teachings, all of the embodiments of the '554 patent disclose air chambers in the upper portion of the sleep assembly, not in the lower portion of the assembly. *See* '554 patent, Figs. 1A, 1B, 2-4, 5A, 5B, 6-8.

In sum, in accordance with both the claim language and the specification, the invention of claim 16 teaches that the upper air posturizing module is above the lower base module, and that the air chambers are in the upper air posturizing module. The evidence of record shows, however, that the air chambers are located in the lower portion of the '554 Accused Products. *See, e.g.*, Abraham Tr. at 267:10-268:9 (cross-examination testimony of Dr. Abraham regarding

the air chambers' location in the bottom compartment of the accused mattress);[8] Friis Tr. at 855:6-19 (testimony that there is only foam directly underneath the sleep surface of the accused products); RX-844C (Friis) at Q/A 161 (Dr. Friis's written testimony regarding construction of the accused mattresses); RX-0848C (Miller) at Q/A 15 ("All of American National mattresses have either a single compartment cover or the air chambers are in the lower mattress compartment cover and they always have a foam edge."); JX-0211C. Therefore, we find that the '554 Accused Products do not infringe claim 16.

Complainants' allegation to the contrary is based on the differences between claim 1 and

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[8] For example, Dr. Abraham testified as follows:

> Q Okay. Okay. So -- but at least the air chambers are below that second set of zippers, the lower set of zippers; correct?
> A Correct.
>
> * * *
>
> Q . . . So here we have CDX-89 next to figure 1A of the patent. Do you see that?
> A Yes.
> Q And so you'll at least admit there's a similarity between 12 in figure IA and the upper portion of the accused and 14, which is the lower part of figure 1A and the accused mattress?
> A Yes.
> Q Okay. And you will also agree that in the patent, 12 has the air mattresses, the air bladders?
> A Yes.
> Q Okay. But in CDX – 19, those air bladders are below that second set of zippers; correct?
> A Correct.

Abraham, Tr. at 267:10-268:9.

claim 16, *see* ComplOpenNotice at 35-36, but Complainants fail to show that these differences affect the conclusion that the Accused Products do not practice this limitation and do not infringe claim 16. *See* ID/RD at 70.[9] We find that Complainants' contentions lack support in the intrinsic record and are, in fact, contrary to the language of claim 16 and the specification, including all of the disclosed embodiments. As discussed *supra*, the record, including the claim language and the specification, shows that the ID's finding that "it is the location of the air chambers that is dispositive of the issue of infringement and the '554 patent requires the air chambers to be in the upper posturizing module," ID/RD at 63, applies not only to the infringement analysis with respect to claim 1, but also to the infringement analysis with respect to claim 16. The absence of the word "mattress" in claim 16 is of no consequence for establishing non-infringement of claim 16 in light of the intrinsic and extrinsic record. *See* discussion *supra.* In fact, Complainants acknowledge that "the 'air posturizing sleep surfaces' of claim 16 means the topmost surfaces of the upper air posturizing module, where the module also includes an air posturizing assembly with air chambers." ComplOpenNotice at 34.

Complainants' allegation that "Dr. Friis' testimony confirms that the accused products have an upper air posturizing module," ComplOpenNotice at 40, is not supported by the record.[10]

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[9] As the IA points out, "Complainants seize upon the fact that claim 1 recites an 'upper mattress air posturi[zi]ng module' while claim 16 recites an 'upper air posturi[zi]ng module.'" IAOpenNotice at 15 (citing ComplPet at 63). Complainants argue that because claim 16 does not claim mattress cases, the air chambers can be anywhere. ComplOpenNotice at 35. Complainants contend that the air chambers can be in the lower part of the mattress assembly with multiple layers of foam stacked on it, "which is precisely what the prior art disclosed, and which the invention of the '554 patent was directed to improving." IAOpenNotice at 16.

[10] In particular, Dr. Friis testified:

Dr. Friis testified only that if air chambers are placed inside a bed, they will have some effect on the person lying on the bed. This testimony does not represent any admission on the part of Respondents because the air adjustable beds, by their design, have always been provided some support from the air chambers. *See* '554 patent, 1:15-2:33. *See also* IARespNotice at 8. The invention of the '554 patent purports to improve on previous air support sleep systems by placing the air chambers into the upper air posturizing module. *See* '554 patent, 8:52-60; Figs 1A-8. Moreover, according to the claim construction to which the parties agreed, an air posturizing module means "a module which includes an air posturizing sleep surface, and an air posturizing assembly which has air chambers," *see* Markman Order at 19, where the air posturizing sleep surface is "the topmost surface of the upper air posturizing module," *see id.* Dr. Friis never

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Q Now, Dr. Friis, when a sleeper lies down on the A10 and wants to increase the firmness of the mattress, they increase the pressure in the air bladders; isn't that right?
A Correct.
Q And the force of the pressure against - - I'm sorry .
The force from the pressure that's in the air bladders that's against the sleeper's body is posturizing; is that right?
A Along with other elements, correct.
Q So, now, Dr. Friis, if we have 4 inches of comfort foam and the air chambers and then a scrim in one mattress, and then we have 4 inches of comfort foam, a scrim and then air chambers, so 4 inches of comfort foam in both examples of mattresses, if a user lies down on either one of those mattresses and increases the firmness, they will feel posturization on the surface; isn't that right?
A That should be correct.

Friis, Tr: at 858:23-859:16

agreed that the '554 Accused Products have an upper air posturizing module under this claim construction. Complainants' fail to cite any evidence that would indicate otherwise. *See* ComplOpenNotice at 37-40. Moreover, Complainants' argument is inconsistent with the '554 specification. *See, e.g.,* '554 patent, 1:35-43; 1:53-57.

Based on the foregoing, we find that the record supports the ID's finding that claim 16 is not infringed because Complainants did not establish that the accused products practice the "air posturizing sleep surface" limitation. Accordingly, we modify the ID by striking the words "For the reasons stated above in the discussion of claim 1," in the fourth paragraph on page 70 of the ID and instead find that the '554 Accused Products do not meet the "air posturizing sleep surface" limitation of claim 16 for the reasons discussed above.

6. The ID's finding that the '554 Domestic Industry Products do not practice the '554 patent[11]

The ID finds that the '554 DI products do not practice either claim 1 or 16, and that, accordingly, Complainants did not satisfy the technical prong of the domestic industry requirement for the '554 patent. ID/RD at 76. It also finds that Complainants asserted that the Sleep Number i8 is representative of all Complainants' DI products. ID/RD at 74.

Complainants argue that the record supports a finding that claim 16 of the '554 patent is practiced by Comfortaire's and Select Comfort's '554 DI Products. Complainants submit that the '554 DI Products are divided into two categories: (1) the Comfortaire split top air mattress systems models U11 and U15; and (2) the Select Comfort Sleep Number® FlexTop air mattress

[11] The ALJ found that the '172 DI products satisfy the technical prong of the domestic industry requirement, ID/RD at 39, and the Commission determined not to review this finding.

system models i8, i10, iLE, x12, m6, and m7, which are also referred to as the i series, m series, and x series models. Complainants contend that the record establishes that both categories of Complainants' DI Products, *i.e.*, Comfortaire's and Select Comfort's products, practice claim 1 and claim 16 of the '554 patent, including the "air posturizing sleep surfaces" element. *See* ComplOpenNotice at 48-54.

Respondents disagree and argue that it is Complainants' burden to prove that their products practice the '554 patent, and that Complainants failed to do so. Respondents contend that Complainants chose the i8 mattress to be representative of all their products that practice the '554 patent. Respondents argue, however, that the i8 mattress, like all Select Comfort products (and Respondents' products), is an air-on-bottom design that does not contain an upper air posturizing module and thus does not practice any claim of the '554 patent, as the ALJ found. *See* RespOpenNotice at 28-34; RespRespNotice at 17-19.

The IA submits that the Select Comfort '554 DI Products do not practice any claims of the '554 patent because they do not satisfy the "air posturizing sleep surface" or "upper air posturizing module" limitations. IAOpenNotice at 16-17. The IA submits, however, that if the Comfortaire U15 is separately analyzed, the evidence shows that it satisfies claims 1 and 16 of the '554 patent. The IA argues that, unlike the i8 model representative of the Select Comfort '554 DI Products, the air chambers in the Comfortaire U15 are in the top module of the sleep system. IAOpenNotice at 24 (citing CX-0456C (Abraham DWS) at Q/A 397; JX-0127.00015).

We find that the ID clearly erred in stating that Complainants asserted that the Sleep Number i8 is representative of all of the '554 domestic industry products. ID/RD at 74. Complainants asserted that the following products practice the '554 patent: [1] the Sleep Number

FlexTop Mattresses models i8, i10, iLE, x12, m6, m7 ("SC '554 DI Products" or "Select Comfort '554 DI Products"); and [2] the Comfortaire Mattresses models U11 and U15 ("Comfortaire '554 DI Products") (collectively, "the '554 DI Products"). CIB 54-55. The record shows that the Sleep Number i8 is representative of the SelectComfort '554 DI Products only. ComplPet at 71 (citing CX-0456C, Abraham WS at Q381, Q381 to 477).

We note that in their response to the Notice of Review, Complainants reduced the scope of their technical prong argument by failing to pursue their allegations pertaining to claim 1 of the '554 patent. Before the ALJ, Complainants argued that "The SC i8, i10, iLE, x12, m6, and m7, and Comfortaire U15 ("554 DI products") practice each limitation of claim 1," CIB at 74, and that "[t]he 554 DI products, including the Comfortaire U11, practice claim 16 when applying the constructions from Order 19," *id.* at 77 (citing CX-0456C, Abraham WS at Q427-52). Subsequently, in their petition for review of the final ID, Complainants argued that "[t]he ALJ clearly erred in finding the Comfortaire U15 did not practice claims 1 or 16 of the '554 patent." ComplPet at 72. In response to the Notice of Review, Complainants do not argue that any of their '554 DI Products practices claim 1 of the '554 Patent. *See* ComplOpenNotice at 48-54. *See also* RespRespNotice at 17 ("Complainants completely abandoned their technical prong theory as to the Claim 1 of the '554 Patent by only presenting arguments as to Claim 16."); IARespNotice at 12. Therefore, in light of Complainants' pleadings, only Complainants' allegations that their '554 DI products practice claim 16 of the '554 patent remain at issue before the Commission.

We find that the ID's finding regarding the i8 product applies only to the Select Comfort

'554 DI Products. *See* ID/RD at 74-75.[12] We further find that the ID clearly erred in finding that "[f]or the reasons stated above in the discussion of claim 1, the [Select Comfort] '554 DI products do not practice claim 16 because they do not meet the "air posturizing sleep surface" limitation." ID/RD at 75. Specifically, while the ID correctly finds that the i8 product does not practice claim 1 of the '554 patent, the ID clearly errs in finding that this product does not practice claim 16 because claim 16, like claim 1, includes the term "air posturizing sleep surface" and that "[f]or the reasons stated above in the discussion of claim 1, the '554 DI products do not practice claim 16 because they do not meet the 'air posturizing sleep surface' limitation." ID/RD at 75.

We note that in reaching its determination that the '554 DI Products do not practice the "air posturizing sleep surface" limitation of claim 1, ID/RD at 75, the ID discussed, as part of its non-infringement analysis, the "first mattress case" and "second mattress case" limitations recited by claim 1. *See id.*, *see also* '554 patent, 7:38-39, 7:46-47. Claim 16, however, does not recite these claim limitations. *See* '554 patent, 8:52-9:2. Therefore, the ID's finding that "[f]or the reasons stated above in the discussion of claim 1, the '554 DI products do not practice claim 16 because they do not meet the 'air posturizing sleep surface' limitation," ID/RD at 75, is clearly erroneous.

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[12] We note that the ID found that the Select Comfort '554 DI products do not practice any claims of the '554 patent because they do not satisfy the "air posturizing sleep surface" limitation. ID/RD at 74. As discussed above, the record supports this finding which is sufficient for a determination that the Select Comfort '554 DI Products do not practice claim 1. The record also shows that the Select Comfort '554 DI Products do not practice claim limitation "air posturizing module," *see* '554 patent, 7:29-33; Markman Order at 19; RX-0844C at Q/A 121; IAOpenNotice at 17, *id.* at 18-23, which is an additional ground supporting the ID's finding that the Select Comfort '554 DI products do not practice claim 1.

We discussed in detail whether the '554 Accused Products meet the "air posturizing sleep surface" limitation of claim 16 in the context of the infringement analysis, and, based on the record, concluded that the products do not meet this claim limitation and thus do not infringe claim 16. *See supra.* The technical prong analysis and conclusions with respect to the Select Comfort '554 DI products are analogous to the infringement analysis and conclusions with respect to the '554 Accused Products.

Turning to the Comfortaire '554 DI Products (*i.e.*, U15 and U11 products), we note that the ALJ believed that "[a]ccording to Select Comfort, the Sleep Number i8 is representative of all of the '554 domestic industry ("DI") products." ID/RD at 74. Accordingly, he did not make any technical prong findings with regard to Comfortaire U15 and U11 products asserted by Complainants.

As noted above, Complainants argue that Comfortaire U11 and U15 products practice claim 16 of the '554 patent only. The record supports Complainants' argument. Dr. Abraham testified that Comfortaire U11 and U15 products meet claim 16. *See* CX-0456C, Abraham WS at Q427. Dr. Abraham specifically testified that U11 and U15 have an air system with an upper air posturizing module and a lower base module supporting the posturizing module, thus meeting claim 16's preamble. *Id.* at Q429. Dr. Abraham stated that "Exhibit JX-0127C contains the photographs of the Comfortaire U15, which are also exemplary of the U11 product." *Id.* at Q430. Dr. Abraham noted that the first two photographs show views of the upper posturizing module and the third photograph shows the lower base module of the Comfortaire U15. *Id.* Dr. Abraham further testified that the Comfortaire U11 and U15 products meet the claim element "a pair of adjustable air posturizing sleep surfaces." *Id.* at Q431-432. Dr. Abraham stated that

Exhibit JX-0127C contains photographs of the Comfortaire U15, which is exemplary of the U11. *Id.* at Q433. Dr. Abraham noted that the first two photographs show views of the upper posturizing module and the third photograph shows the lower base module. *Id.* Dr. Abraham further testified that the Comfortaire U11 and U15 products meet all other claim limitations of claim 16 as well. *See* Q434-451. Dr. Abraham noted that Respondents' expert Dr. Friis "agrees that Comfortaire U15 Split Top model bed practices claim 16 of the '554 Patent." *Id.* at Q454. While Respondents argue that "there is insufficient evidence that the U15 practices any claim of the '554 Patent, nor is there any evidence that the U15 is exemplary of the U11," RespRespNotice at 19, they, however, fail to rebut Dr. Abraham's testimony on this issue.

Thus, the record supports the ID's conclusion that Complainants failed to establish that the Sleep Number i8 products and other DI products of which the i8 product is representative practice claim 1 or claim 16 and, consequently, failed to establish that such products satisfy the technical prong of the domestic industry requirement for the '554 patent. However, this finding applies to the Select Comfort '554 DI Products only, rather than to all of the '554 DI products. *See* discussion *supra*. We therefore reverse the ID's determination that "the '554 domestic industry products do not practice either claim 1 or 16," ID/RD at 76, and determine that, for the reasons detailed above, the Comfortaire U15 and U11 products practice claim 16.

7. The ID's finding that Complainants did not satisfy the economic prong of the domestic industry requirement for either the '554 or '172 patents

a. The '554 patent

As discussed in detail *supra*, we found that the '554 patent is not infringed. Therefore, we find that there is no violation of section 337 with respect to the '554 patent. Accordingly, the

Commission takes no position on the issue of whether Complainants satisfied the economic prong with regard to the '554 patent. *See Beloit Corporation v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir.1984).

b. The '172 patent

The ID finds that Complainants did not show a domestic industry for the '172 patent based upon 19 U.S.C. § 1337(a)(3)(A) or (B). ID/RD at 89-91. The ID's conclusion is based on its findings that Complainants did not specify which costs are allocable to the '172 patent and which expenses are allocable to the '554 patent, and that Complainants improperly combined the domestic industry articles when summarizing their purported investments and activities. ID/RD at 88.

The ID finds that Complainants made no attempt to properly allocate the portion of the total [[ ]] in rents that is attributable to the '172 DI products and the portion that is allocable to the '554 DI products. The ID finds Complainants' proposed allocation to be unacceptable; *i.e.* allocating 100 percent of the rental expenses to the '172 patent, and then a portion of those same expenses to the '554 patent DI products. The ID concludes that, therefore, Complainants failed to show a domestic industry for either the '172 patent or the '554 patent based upon 19 U.S.C. 1337(a)(3)(A). ID/RD at 89.

The ID likewise finds that Complainants failed to allocate employee expenses between the '172 patent DI products and the '554 patent DI products. The ID finds that Complainants again allocated 100 percent of the relevant expenses (in this case, employee compensation) to the '172 patent DI products and then allocated a portion of the same expenses to the '554 DI products. *Id.* at 91. Accordingly, the ID finds that Complainants did not show a domestic

industry for either the '172 patent or the '554 patent based upon 19 U.S.C. 1337(a)(3)(B). The ID concludes that Complainants failed to show that they meet the economic prong of the domestic industry requirement for either the '172 patent or the '554 patent. *Id.*

Complainants and the IA argue that Complainants' investments in plant and equipment, as well as in labor and capital, satisfy the economic prong of the domestic industry requirement with respect to both the '172 and '554 patents. Complainants submit that they are in the business of selling luxury air mattress systems. ComplOpenNotice at 55 (citing CIB at 88-89; CRB at 37; CX-0445C, Schwantes WS at Q31; CX-0449C, Karr Direct WS at Q13). They essentially argue that control units and split-top mattresses are a single product. *See* ComplOpenNotice at 56-58; *id.* at 68. Complainants assert that it is not disputed that each air sleep system manufactured and sold by Complainants includes an air controller, which is an essential component of the air mattress system. *Id.* (citing CX-0445C, Schwantes WS at Q21; CX-0449C, Karr Direct WS at Q27). Complainants note that while 100 percent of their air mattress systems include an air controller system, the mattress construction may be different for various models of the air mattress system.

Complainants argue that their investments in plant and equipment, as well as their employment of labor and capital, are significant with respect to both asserted patents. Complainants point out that the evidence related to their expenses is not disputed. Complainants contend that, contrary to the ID's finding, they did properly allocate expenses for the separate DI products. They submit that together, Complainants Select Comfort and Comfortaire have spent [[ ]] in facility rent expenses for the manufacture, design, and management for the DI products and [[ ]] in property and equipment expenses for the DI products.

ComplOpenNotice at 55. Complainants argue that using a sales-based allocation methodology, they properly allocated their expenses for plant and equipment to each asserted patent, thus determining how much of the expenses for facility rent is for manufacture, design, and management of the products which practice the '172 patent and how much of the expenses for facility rent is for manufacture, design, and management of the products which practice the '554 patent. Complainants argue that the expenses allocable to the products practicing the '172 patent are significant and the expenses allocable to the products covered by the '554 patent are also significant. According to Complainants, Commission precedent does not support the ID's findings that Complainants did not prove that the domestic industry requirement is satisfied.

The IA agreed with Complainants' position. IAOpenNotice at 33-34. He asserts that the "articles" at issue in this investigation for both the '172 and '554 patents are "air mattress systems," and argues that the ID erred in adopting the Respondents' arguments regarding the "articles" at issue in this investigation and concluding that the "articles" are "control units with air pumps" (for the '172 patent), and "split-top mattresses" (for the '554 patent). IAOpenNotice at 35 (citing ID/RD at 88). The IA contends that the Final ID's implicit finding that the "article" is not an "air mattress system" with regard to both the '172 and '554 patents conflicts with the Commission's interpretation of the statutory language under similar circumstances. *See* IAOpenNotice at 35. The IA argues that under Commission precedent, whether a particular product is an article of commerce, and therefore an article within the scope of 19 U.S.C. § 1337(a)(2), depends on the realities of the marketplace in which it exists. IAOpenNotice at 35-36 (citing *Certain Double-Sided Floppy Disk Drives and Components Thereof*, Inv. No. 337-TA-215, Comm'n Op. at p. 23 (Nov. 1985) ("The Commission does not adhere to any rigid

formula in determining the scope of the domestic industry as it is not precisely defined in the statute, but will examine each case in light of the realities of the marketplace."); *Certain Video Game Systems and Wireless Controllers and Components Thereof*, Inv. No. 337-TA-770, Comm'n Op. at p. 66 (Oct. 28, 2013) ("The Commission has held that in certain circumstances, the realities of the marketplace require a modification of the principle that the domestic industry is defined by the patented article."); *Certain Personal Computers and Components Thereof*, Inv. No. 337-TA-140, Comm'n Op. (March 1984)). The IA contends that based on the record and judicial and administrative precedent, the articles of commerce that are the articles protected by the '172 and '554 patents are "air mattress systems." *Id.* at 35-40.

Respondents support the ID's finding that Complainants failed to meet the economic prong of the domestic industry requirement. Respondents submit that Commission and Federal Circuit precedent require a complainant to allocate expenditures to each product covered by the asserted patents. Respondents contend that this investigation involves two types of articles: air control units (alleged to practice the '172 patent) and split-top mattresses (alleged to practice the '554 patent). Respondents submit that in accordance with longstanding precedent and the statutory provisions, Complainants were required to allocate their purported investments in plant and equipment to each product. RespOpenNotice at 35 (citing 19 U.S.C. § 1337(a)(3) (requiring the investments to be "with respect to the articles protected by the patent ....")). Respondents argue that Complainants failed to do so, and that in presenting their domestic industry case, Complainants allocated all of their plant and equipment expenses to control units, and allocated those same expenses to split-top mattresses. Respondents argue that this methodology makes it impossible to determine the alleged expenses attributable to each domestic industry product. As

a result, Respondents note, the ALJ correctly found that Complainants failed to demonstrate domestic industry with respect to both patents. Respondents argue that it is imperative that all Section 337 complainants prove their domestic industry in a manner consistent with governing precedent, regardless of the complainant's size, revenues, or overall U.S. presence.

For the reasons that follow, the Commission finds that Complainants satisfied the economic prong for the '172 patent.

Sections 337(a)(2) and (3) set forth the requirements for determining the existence of a domestic industry in investigations instituted under section 337(a)(l)(B)-(E) as follows:

> (2) Subparagraphs (B), (C), (D), and (E) of paragraph (1) apply only if an industry in the United States, relating to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established.
>
> (3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned –
>
> (A) significant investment in plant and equipment;
>
> (B)) significant employment of labor or capital; or
>
> (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. §§ 1337(a)(2), (3). The domestic industry requirement consists of an "economic prong" and a "technical prong." *See, e.g.; Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). To meet the economic prong of the domestic industry requirement, the complainant must establish that at least one of the criteria listed in subparagraph (a)(3) is satisfied "with respect to the articles protected by the patent." 19 U.S.C. § 1337(a)(3); *Certain*

Variable Speed Wind Turbines and Components Thereof, Inv. No. 337-TA-376, USITC Pub. No. 3003 (Nov. 1996), Comm'n Op. at 21 (Sep. 23, 1996), remanded on other grounds, *Enercon GmbH v. Int'l Trade Comm'n*, 113 F.3d 1256 (Fed. Cir. 1997).[13]

We find that the articles of commerce that are protected by the '172 patent are "air mattress systems." Relevant claim language of the '172 patent indicates that the claimed invention is for use in an "air inflatable mattress." For example, claim 12 of the '172 patent recites:

> 12. An improved valve enclosure assembly for use with an air inflatable mattress having at least one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve enclosure assembly being fluidly coupled intermediate the pump and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising:
>
> an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, a plurality of guides and stops being disposed within the enclosure for correctly positioning components within the enclosure;
>
> at least one valve operably coupled to the enclosure being in selective fluid communication with the air chamber and being in fluid communication with the at least one air bladder for selectively fluidly coupling the air chamber to at least one air bladder; and
>
> pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one valve for

[13] In the present investigation, the Commission determined not to review the ID's finding that Complainants satisfied the technical prong of the domestic industry requirement for the '172 patent. 82 *Fed. Reg.* at 8624.

monitoring the pressure in the at least one bladder.

'172 patent, 10:61-11:18 (emphasis added). The preambles of the asserted claims of the '172 patent recite that the improved valve enclosure assembly is for use "with an air inflatable mattress," and the preamble is limiting. Order No. 19 at 9; CIB at 36; RIB at 3. Furthermore, the asserted claims of the '172 patent require that the air controller is in fluid communication with air bladders (air chambers) within the air mattress system and that the pressure in the air bladders (air chambers) within the air mattress system is monitored. *See* '172 patent, cls. 2, 6, 12, 16, and 20. The claim language indicates that the air control units represent a component of the air mattress system, which is designed, manufactured, and sold by the Complainants.[14]

The articles sold by Complainant are air mattress systems, which are reflected in the title of this particular investigation, *i.e.*, "Certain Air Mattress Systems, Components Thereof, and Methods of Using the Same." The record shows that all of the Complainants' air mattress systems at issue in this investigation have air controllers. CX-0445C (Schwantes DWS) at Q/A 75. With regard to the domestic industry products, Complainants point out that:

> Complainants are in the business of selling luxury air mattress systems. CIB at 89; CRB at 37; CX-0445C, Schwantes WS at Q31 ("The company has one product really luxury air adjustable sleep systems."); CX-0449C, Karr Direct WS at Q13 ("Comfortaire designs, manufactures, assembles, markets, and sells adjustable air mattress systems under the brand Comfortaire®."). It is not disputed that each air sleep system manufactured and sold by Complainants includes an air controller, which is an essential component of the system. CX-0445C, Schwantes WS at Q21; CX-0449C, Karr Direct WS at Q27. Specifically, for the '172 patent, the air controller is coupled to the air bladders inside the air

[14] Complainants' air controllers and air mattress systems are manufactured and assembled in the United States. *See* CX-0445C (Schwantes DWS) at Q/A 41, 47, 54.

> mattress system and is used to control the firmness of the air mattress by inflating or deflating the air bladders of the air mattress sleep system. CX-0456C, Abraham WS at Q265. All Select Comfort air mattress systems have either the ADAT or Sleep IQ air controller and all Comfortaire air mattress systems have the Q10 air controller. CIB at 89; CRB at 37; CX-0445C, Schwantes WS at Q21; CX-0449C, Karr Direct WS at Q27. Thus, the ADAT, Sleep IQ, and Q10 air controllers are the essential air controllers for all (100%) of Complainants' products.

ComplPet at 76-77 (emphases added).

Furthermore, the record shows that the patented articles at issue, *i.e.*, the air controllers covered by the '172 patent, are not themselves actual articles of commerce, but are physically incorporated as components in downstream articles of commerce, *i.e.*, Complainants' air mattress systems employing these air controllers. *See* CX-0445C at Q/A 20-22; CX-0449C at Q/A 26-27. The record also shows that the asserted domestic investments are central to enabling Complainant to exploit the patented technology implemented by the air controllers covered by the '172 patent used as components of Complainants' air mattress systems. *See* CX-0445C at Q/A 40-41, 44-47, 54-55; CX-0449C at Q/A 47-59.

Accordingly, we find that under Commission precedent, the record in the present investigation supports a finding that Complainants satisfied the economic prong requirement with respect to their air controllers covered by the '172 patent and incorporated as a part of Complainants' air mattress systems. *See Certain Video Game Systems and Wireless Controllers and Components Thereof*, Inv. No. 337-TA-770, Comm'n Op. at 66-67, 70 (Oct. 28, 2013).

We note that the ID's finding that Complainants did not demonstrate that they satisfied the economic prong of the domestic industry requirement was based on the ID's finding that Complainants made "[. . .] no attempt to allocate what portion of the [[ ]] in rents is

attributed to the '172 DI products and what portion of the [[ ]] in rents is allocable to the '554 DI products." ID/RD at 89. As discussed *supra*, however, the record shows that the "articles protected by the patent" are properly defined as "air mattress systems," all of which contain control systems for air controllers covered by the '172 patent, and therefore Complainants properly accounted for their investments with respect to the '172 patent.

We find that with respect to investments in plant and equipment that Complainants credited to articles protected by the '172 patent under 19 U.S.C. § 1337(a)(3)(A), Complainants calculated investments made by Select Comfort, and those made by Comfortaire. The investments include (1) rental payments for five Select Comfort facilities and two Comfortaire facilities; and (2) equipment used for the "DI products" from 2013 to 2015.

Rental Payments. The rental payments that Complainants identified based on the evidence of record are summarized in the chart below:[[

]]ID/RD at 88-89 (citing CX-0445 at Q/A 8, 31, 35,41, 47; CX-0449C at Q/A 13, 42, 48, 54).

Property and Equipment. We find that Complainants likewise introduced into the record evidence that Select Comfort spent [[ ]] and Comfortaire spent [[ ]] on equipment leases and purchases from 2013 to 2015. CIB at 91 ("[f]or the '172 Patent, 100% of these expenses are DI expenses, because all products include an air controller."); CX-0445C (Schwantes DWS) at Q/A 55; CX-0449C.

We find that Complainants' investments in plant and equipment under 19 U.S.C. § 1337 (a)(3)(A) are significant with respect to the articles protected by the '172 patent. The record shows that all of the investments relied on by Complainants are made with respect to the articles protected by the patent, and that the size of investments in the domestic industry products (air mattress systems) is represented by the totals of the combined Select Comfort and Comfortaire rental payments of [[ ]] and the combined [[ ]] invested in plant and

equipment purchases. In other words, 100% of the investments can be credited to investments made with respect to the articles that are protected by the '172 patent. *See e.g.* CX-0445C (Schwantes DWS) at Q/A 8; 31; 35; 41; 47; CX-0449C (Karr Direct DWS) at Q/A 13; 42; 48; 54.

Our reasoning concerning Complainants' investments under 19 U.S.C. § 1337 (a)(3)(A) likewise applies to 19 U.S.C. § 1337 (a)(3)(B). We find that the record evidence shows that Complainants' investments in labor and capital with respect to articles protected by the '172 patent under 19 U.S.C. § 1337(a)(3)(B) are as follows:[[

]] IAOpenNotice at 46.

We find that Complainants' investments in labor and capital under 19 U.S.C. § 1337(a)(3)(B) are significant with respect to the articles protected by the '172 patent. The record shows that all of the investments relied on by Complainants are made with respect to the articles protected by the patent, and that the size of investments in the domestic industry products (air mattress systems) is represented by the totals relating to the [[ ]] [[ ]] identified in the table above that worked on design, manufacturing, engineering, marketing and distribution (excluding sales) of DI Products. CX-0445C, Schwantes WS at Q60. The [[ ]] employees working on R&D, engineering and technical projects relating to the DI Products. *See* ComplOpenNotice at 71 (citing CX-0445C, Schwantes WS at Q60; Schwantes Hr. at 61:1-4). In other words, the Complainants' [[ ]] represent qualifying labor under 19 U.S.C. § 1337(a)(3)(B). When the total number of Complainants' employees (*i.e.*, 3,484 employees, *see* CX-0445C, Schwantes WS at Q58; Schwantes Hr. at 59:23-25) is used in the quantitative analysis to determine significance, the [[ ]] of Complainants' employees, while their compensation represents [[ ]] of Select Comfort's total compensation over the same time period. We find that these amounts are both quantitatively and qualitatively significant.

Based on the foregoing, we find that Complainants satisfied the economic prong of the domestic industry requirement with respect to the '172 patent, and reverse the ID's determination on this issue. Accordingly, we find that there is a violation of section 337 with respect to the '172 patent in this investigation.

B. REMEDY, THE PUBLIC INTEREST, AND BONDING

1. Remedy[15]

In a Section 337 proceeding, the Commission has "broad discretion in selecting the form, scope, and extent of the remedy." *Viscofan, S.A. v. United States Int'l Trade Comm'n*, 787 F.2d 544, 548 (Fed. Cir. 1986). Complainants seek an LEO covering Respondents' products that infringe the '172 patent and CDOs as to each of the Respondents, *i.e.*, ANM, Sizewise, and Dires. ComplOpenNotice at 79-87.

a. An LEO Covering Products That Infringe the '172 Patent

Section 337(d) authorizes the Commission to issue an LEO directed to a respondent's infringing products. 19 U.S.C. § 1337(d). An LEO instructs U.S. Customs and Border Protection to exclude from entry all articles that are covered by the patent at issue that originate from a named respondent in the investigation. *Fuji Photo Film Co. Ltd. v. Int'l Trade Comm'n*, 474 F.3d 1281, 1286 (Fed. Cir. 2007). The ALJ recommends that, in the event the Commission finds a violation, an LEO should issue prohibiting the importation of Respondents' air controllers and air mattress systems found to infringe the '172 patent. ID/RD at 94.

Respondents concede that an LEO is appropriate, if the Commission finds that a violation has occurred. RIB at 90; RespOpenNotice at 58-69. They request that any LEO include a provision allowing Respondents to certify that certain imports are not covered by the terms of the order since some components are imported for use in non-accused products. RIB at 90;

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[15] The Commission determined that there is no violation of section 337 with respect to the '554 patent. Accordingly, we discuss the remedy issues pertaining only to the '172 patent.

RespOpenNotice at 58-69.

Complainants argue that the Commission should issue an LEO barring the entry of the air mattress systems with a P5000, P6000, and Arco and Koge Gen 3 air controllers, and components of those controllers. ComplOpenNotice at 79-80; CIB at 93-94. Complainants submit that a certification provision is not necessary to facilitate the importation of non-infringing imports. CIB at 94; CRB at 39; ComplOpenNotice at 79-80.

The IA recommends an LEO barring the importation of infringing air controllers and air mattress systems. SIB at 80; IAOpenNotice at 49. The IA agrees with Respondents that a certification provision should be included in any LEO. SIB at 80; IAOpenNotice at 49.

Based on the record, and consistent with the ALJ's recommendation, we find that the appropriate remedy in this investigation is an LEO covering Respondents' accused products that have been found to infringe the asserted claims of the '172 patent. *See* ComplOpenNotice at 79-80; CIB at 93-94. The LEO also includes a certification provision. *See* RespOpenNotice at 59; IAOpenNotice at 49.

b. **CDOs**

Under section 337(f)(1), the Commission may issue a CDO in addition to, or instead of, an exclusion order. 19 U.S.C. § 1337(f)(1). Cease and desist orders are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order.[16] *See, e.g., Certain Table Saws Incorporating Active*

[16] When the presence of infringing domestic inventory is asserted as the basis for a CDO, Chairman Schmidtlein does not subscribe to the view that the inventory needs to be

Injury Mitigation Technology and Components Thereof, Inv. No. 337-TA-965, Comm'n Op. at 4-6 (Feb. 1, 2017) (public version); *Certain Protective Cases and Components Thereof*, Inv. No. 337-TA-780, USITC Pub. No. 4405 (July 2013), Comm'n Op. at 28 (Nov. 19, 2012) (citing *Certain Laser Bar Code Scanners and Scan Engines, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-551, Comm'n Op. at 22 (June 14, 2007)). A complainant seeking a CDO must demonstrate, based on the record, that this remedy is necessary to address the violation found in the investigation so as to not undercut the relief provided by the exclusion order. *Certain Integrated Repeaters, Switches, Transceivers, and Products Containing Same*, Inv. No. 337-TA-435, USITC Pub. No. 3547 (Oct. 2002), Comm'n Op. at 27 (Aug. 16, 2002) ("[C]omplainants bear the burden of proving that respondent has such an inventory. Because complainants failed to sustain their burden, we have determined not to issue a cease and desist order."); *see also* H.R. Rep. No. 100-40, at 160 (1987) ("When the Commission determines that both remedies [*i.e.*, an exclusion order and cease and desist order] are necessary, it should be without legal question that the Commission has authority to order such relief.").

The ALJ does not recommend that any CDO issue in this investigation because Respondents lack commercially significant inventories of the infringing products in the United States. ID/RD at 95. Complainants request that CDOs issue against each of the Respondents, *i.e.*, ANM, Sizewise, and Dires. In seeking this remedy, Complainants rely exclusively on their

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"commercially significant" in order to issue a CDO. *See, e.g.*, *Certain Table Saws Incorporating Active Injury Mitigation Technology and Components Thereof*, Inv. No. 337-TA-965, Comm'n Op. at 6-7, n.2 (Feb. 1, 2017) (public version). In Chairman Schmidtlein's view, the presence of some infringing domestic inventory, regardless of the commercial significance, provides a basis to issue a CDO. *See id.*

contention that each Respondent maintains commercially significant inventory in the United States. CIB at 95-99; CRB at 39-41; ComplOpenNotice at 81-87. Respondents submit that "[t]he evidence unequivocally shows that no Respondent maintains significant inventory of Accused Products, and Complainants have not demonstrated that, without CDOs, an exclusion order might be circumvented." RIB at 91. The IA agrees that no CDO should issue.

With respect to respondent ANM, we find that the record lacks evidence sufficient to determine whether ANM holds commercially significant, or any, inventory of the infringing products. Complainants assert that ANM maintains a commercially significant inventory of the air mattress systems and components of the air mattress system that infringe the '172 patent, and in support refer to various documents indicating that Respondents imported infringing air controllers and components, [[ ]], used to assemble air mattress systems [[ ]]. ComplOpenNotice at 82-84. The record indicates, however, certain evidentiary gaps and inconsistencies in Complainants' argument.

Evidence of such gaps are highlighted by the Respondents. Specifically, Respondents point out that the documents relied on by Complainants show that, in October [[ ]], ANM ordered certain [[ ]] without confirming that each of these items was the type of product at issue in this litigation. RespRespNotice at 37 (citing JX-0052C). Respondents likewise argue that another document, JX-0089C (ANM [[ ]] dated December [[ ]]) only addresses [[ ]] but does not indicate any inventory of control units. *Id.* (citing JX-0089C). In addition to these gaps, the evidence cited by Complainants does not indicate what portion, if any, of these components are used in producing infringing air

mattress systems.[17]

Furthermore, there are inconsistencies in the record that cast doubt on Complainants' claim. For example, Complainants submit that they "agree that ANM has no inventory for the P6000," CRB at 39. However, the record suggests that although ANM's inventory of the Platinum 6000 air controllers [[ ]], RX-0846C (Seth WS) at Q/A 67, ANM still has [[ ]] air controllers. Complainants' admission and lack of further information on these controllers calls into question the weight of this evidence. Miller Tr. at 388:5-389:15. Indeed, the only information of record indicates that these air controllers are for [[ ]] and the record lacks any proof by the Complainants of how these models may or may not relate to the accused products in this investigation. *See id. See also* IAOpenNotice at 51.

We find that, on this record, the evidence is not sufficient to establish that ANM [[ ]] of infringing products, let alone a commercially significant inventory of the infringing products, to warrant issuance of a CDO against ANM.

With respect to respondent Dires, Complainants argue that [[ ]] A10 Flex Head mattresses were sold in 2015 and there were [[ ]] in inventory as of December 2015. ComplOpenNotice at 86. Complainants contend that Dires' inventory is commercially significant in view of the number of products sold in 2015. *Id.* (citing *Certain Three Dimensional Cinema Sys. and Components Thereof*, Inv. No. 337-TA-939 Comm'n Op. at 63 (Aug. 22, 2016) (commercial significance of inventory may be determined by comparing the number of units to the number of units in inventory)). The evidence shows that Dires is an

[17] ANM manufactures air mattress systems containing non-accused controllers. CX-0178C (Miller Dep. Tr. at 56: 8-15).

online retailer of mattresses manufactured by [[ ]], RX-0849C at Q/A 19. While Dires maintains a few sample mattresses at its call center in Florida, it does not [[

]], but rather when Dires receives a customer order, it [[

]], [[ ]]. RX-0846 at Q/A 62; *See also* RespOpenNotice at 63. Complainants' assertion that the sample air mattress systems at the Dires call center contain infringing air controllers is unsupported. ComplOpenNotice at 86 (citing CX-0178C, Miller Dep. At 57:7-9). Complainants allege that the sample mattresses Dires maintains at its call center include infringing air controllers. ComplOpenNotice at 86 (citing CX-0178C, Miller Dep. at 57:7-9). The deposition testimony cited by Complainants discusses controllers in mattresses sold to customers, not the sample mattresses at the Dires call center. Thus, Complainants have failed to establish that those sample mattresses contain infringing controllers. Moreover, the beds in Dires' possession are samples and not offered for sale. Therefore, there is no indication based on these limited facts provided by the Complainant that a CDO is warranted against Dires. Accordingly, we find that the record does not support a CDO directed against Dires. *See also* IARespNotice at 32.

Finally, with respect to respondent Sizewise, the record shows that the only product at issue is the P6000 therapeutic support surface system, an acute care medical device which consists of the control unit (found to infringe the '172 patent) and the domestically-manufactured mattress. RespOpenNotice at 64. The control unit and mattress [[

]]. Hr'g Tr. at 1060:17-1061:4, 1138:8-22. Respondents contend that Complainants do not sell a competing product and therefore a CDO would not prevent any future injury to Complainants. RIB at 94-96.

With respect to the Platinum 6000 air controllers, the ALJ found:

> The evidence shows that Sizewise has approximately [[ ]] P6000 systems in its rental pool, although approximately [[ ]] units are currently being used by patients. (McCarty, Tr. at 1053:9-24.) The evidence does not show, however, that this rental pool constitutes inventory. The evidence shows that the P6000 control units are part of systems included in a [[ ]] and kept to meet the ongoing needs of hospitals and nursing homes as part of active rental contracts. (RX-0847Cat Q/A 57-58, RX-0846C at Q/A 69, McCarty Tr. at 1030:15-19, 104512-3.) Thus, rather than constituting products for a respondent to sell at a future date (and thus inventory), "much of SizeWise's P6000 inventory is actively subject to rental contracts or is actively being in used at hospitals." (RX-0846C at Q/A 72; *see also* RX-0847C at Q/A 57-58; RX-0846C at Q/A 69, McCarty, Tr. at 1030:15-19, 1045:161046: 15.) The evidence further shows that the rental pool does not currently [[ ]]

ID/RD at 97-98.

Irrespective of whether the Sizewise rental pool represents a commercially significant inventory (or a significant commercial operation), we find, based on public interest considerations (specifically, public health and welfare), as discussed below, and the fact that the '172 patent at issue here will expire on July 28, 2017 (*i.e.*, 11 days after the period of the Presidential review ends), that no CDO should be issued against Sizewise in this investigation.

Based on the foregoing, we determine that no CDOs will issue in the present investigation.[18]

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[18] Chairman Schmidtlein supports the Commission's decision finding that CDOs are not warranted against ANM and Dires on the grounds that the record fails to show that they have any inventory of infringing products in the United States. The "commercial significance" of any purported infringing inventory in the United States is not pertinent to Chairman Schmidtlein's analysis. *See, e.g.*, *Certain Table Saws*, Comm'n Op. at 6-7, n.2. With regard to Sizewise, Chairman Schmidtlein agrees with the Commission's determination not to issue a CDO. She observes that irrespective as to the presence of P6000 inventory in the United States, the public

2. Public Interest

Before issuing a remedy for a violation of Section 337, the Commission must consider the effect of the remedy on certain public interest considerations: (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) the U.S. production of articles that are like or directly competitive with those which are the subject of the investigation, and (4) U.S. consumers. 19 U.S.C. §§ 1337(d), (f), (g).

In connection with the ALJ's Recommended Determination on remedy, the public interest and bonding, and pursuant to Commission Rule 210.50(b)(1), 19 C.F.R. § 210.50(b)(1), the Commission ordered that the presiding ALJ:

> [S]hall take evidence or other information and hear arguments from the parties and other interested persons with respect to the public interest in this investigation, as appropriate, and provide the Commission with findings of fact and a recommended determination on this issue, which shall be limited to the statutory public interest factors set forth in 19 U.S.C. §§ 1337(d)(1), (f)(1), (g)(1).

80 *Fed. Reg.* 72,738 (Nov. 20, 2015).

Based on the record, the ALJ found that Respondents have not shown that an LEO issued by the Commission would have an adverse effect on public health and welfare in the United States, competitive conditions in the United States economy, the production of like or directly competitive products in the United States, or United States consumers. ID/RD at 107.

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interest factors counsel delaying the implementation of any CDO beyond the expiration date of the patent. In her view, this makes issuance of any CDO against Sizewise, which might otherwise be warranted, unnecessary. Finally, Chairman Schmidtlein observes that the presence of domestic inventory is the sole basis asserted by the Complainants for CDO relief. *See* ComplOpenNotice at 81-87.

In reaching his Recommended Determination on the issue of whether a remedy in this investigation would have an adverse effect on the public health and welfare, the ALJ considered that Respondents raised the public interest issue only with respect to one of Sizewise's products, the Platinum 6000 therapeutic support surface system. RIB at 95. Before the Commission, Respondents focus their public interest comments on a potential CDO that would limit Sizewise's ability to have continued access to its existing rental pool. *See* RespOpenNotice at 72. Respondents argue that, if a violation is found as to the '172 patent, the Commission should exempt the P6000 from the order and U.S. hospitals and nursing homes should not be precluded from using the P6000 system. Respondents assert that the P6000 is used in the acute care environment and is prescribed in serious and time-sensitive healthcare situations. *Id.* at 75. They state that therapeutic support surfaces are most often used in wound management and the care of pressure ulcers, and are used as a replacement for standard hospital mattresses or as an overlay on top of standard hospital mattresses. *Id.* The bed and control unit for the Platinum 6000 are [[ ]] and [[ ]] as a system. *Id.*; McCarty Tr. at 1061:2-4. Respondents submit that Complainants make no competing product and do not participate in the healthcare industry. *Id.* at 72 n.31, 82.

Respondents argue that the P6000 provides a distinct combination of features and therapies which provides better patient care, that hospital clinicians specifically prescribe the P6000 for situations where its modalities are necessary to provide a certain level of treatment, that the P6000 is a low-cost, high quality therapeutic support surface relative to other options, and that Sizewise is the sole importer of the P6000 from [[ ]] of the [[ ]]. *Id.* at 76-77, 79.

Respondents state that to enter and remain competitive in the market for therapeutic support surface systems, a supplier must obtain many certifications and accreditations. Respondents assert that U.S. health care providers largely use Group Purchasing Organizations ("GPOs") to obtain products from manufacturers and distributers, especially in the rental context. Respondents argue that the various requirements that GPOs have of suppliers, plus the fact that a new entrant must wait until an open period to begin negotiations for a GPO contract, make it difficult for a new entrant to provide healthcare institutions with a product. *Id.* at 77-78.

Respondents state that Sizewise is the second largest participant in the therapeutic support device rental market, accounting for [[ ]] of this segment. Respondents assert that, at any given time, approximately [[ ]] of Sizewise's rental inventory is in active use. *Id.* at 78-79.

Respondents state that because the '172 patent expires in July of 2017, the order would be short-lived. *Id.* at 81. Respondents argue that this would undermine the incentive for Sizewise's competitors to fill the void caused by a CDO. *Id.*

Complainants assert that the public interest will not be adversely affected by excluding the P6000. They state that the P6000 accounts for [[ ]] of the therapeutic bed market, and that a direct substitute alternative product, the OnCare Quartet Range, is readily available for rent by Sizewise's competitor UHS. Complainants note that since the remedy is prospective in nature, a remedial order will not remove any P6000s already in use in a medical setting, and that no hospital or medical setting will have a bed removed from underneath a patient. ComplOpenNotice at 92.

Complainants argue that their position is consistent with Commission precedent. Complainants state that the demand for therapeutic beds is met by others, and that exclusion of

the P6000 will not affect the price of therapeutic beds offered by Sizewise's competitors. *Id.* at 91-104.

The IA takes the position that the public health and welfare factor does not weigh against the entry of an LEO. IARespNotice at 32. Its arguments with respect to a CDO were discussed earlier.

Public interests comments submitted in the record likewise reflect the public interest concerns related to public health and welfare regarding disruptions to the availability of Sizewise Platinum 6000 for the acute patient care environment.[19]

As noted above, Respondents focus their public interest comments on any CDO with respect to Sizewise. The evidence shows that Sizewise's product, the Platinum 6000, is used in the acute care environment and is typically used for wound management and the care of ulcers related to pressure points created by conventional mattresses. RespOpenNotice at 75. Sizewise competes mostly in the rental market for therapeutic support beds. RX-0847C (McCarty WS) at Q/A 15. SizeWise's Chief Sales Officer, Mr. McCarty, testified that Sizewise is the [[ ]] company in the therapeutic support rental market. McCarty Tr. at 1042:23-1043:20. Sizewise estimates its market share at somewhere between [[ ]]. *Id.* at 1044:3-8.

Therapeutic support surfaces like the Platinum 6000 bed, for which the Platinum 6000 air controller is designed, are sold to hospitals through GPOs. RX-0847C (McCarty WS) at Q/A 37-40. [[ ]] GPOs have awarded Sizewise contracts. *Id.* at Q/A 38. The record shows that these GPOs provide products to hospitals and that qualifying products for inclusion in a GPO is a

[19] *See* Public Interest Submissions of U.S. Senators Moran and Roberts, U.S. Congressman Yoder, and Lutheran Medical Center, Wheat Ridge, CO (December 19, 2016).

lengthy process. *Id.* at Q/A 38-39; RX-0846C (Seth WS) at Q/A 194-199. GPOs also require gaining and maintaining a number of certifications and accreditations for the products, which can also be lengthy processes. RX-0847C (McCarty WS) at Q/A 34-35 and 38. The bidding process can take between seven and fifteen months. RX-0846C (Seth WS) at Q/A 197.

The GPOs require Sizewise to deliver or replace products on a tight schedule. For example, SizeWise's contract with the GPO [[ ]] requires deliveries and pickups to be made within [[ ]] of receiving an order and requires that "Sizewise shall make every effort to make deliveries and pickups within [[ ]]" RX-0750C-0042 ([[ ]], Standard Group Purchasing Agreement).

Sizewise has a rental pool of approximately [[ ]] units and a little [[ ]] of those are currently being used for patient care. *Id.* at 1053:9-18. The rest of the units are ready to meet new demand. *Id.* at 1053:19-24.

The evidence shows that as part of the rental market, Sizewise has built the infrastructure of 65 distribution centers to provide products within an average time of [[ ]] after an order is received. RX-0847C (McCarty WS) at Q/A 34, 38; McCarty Tr. at 1045:4-15. The evidence does not indicate that another provider could quickly assume Sizewise's market share and contractual obligations. *See* Seth Tr. at 1143:25-1144:19; IAOpenNotice at 57.

We also note that the '172 patent expires on July 28, 2017, less than three months after the issuance of any potential remedy in this investigation, which creates a disincentive for competitors to fill any shortfalls caused by removal of the Platinum 6000 from the market. RX-0846C (Seth WS) at Q/A 56; Seth Tr. at 1141:22-1143:3. The record indicates that the relatively short remaining life of the '172 patent could lead potential competitors to stay out of

the market until the '172 patent expires. *Id.*

The evidence also indicates that a CDO that prevents Sizewise from using the inventory of the Platinum 6000 in the United States would create supply chain complications. RX-0846C (Seth WS) at Q/A 260. As noted above, hospitals generally obtain a Platinum 6000 through a GPO. RX-0847C (McCarty WS) at Q/A 37-40. If the Platinum 6000 inventory could not be accessed, alternative suppliers would have to obtain contracts with the GPOs that currently supply healthcare institutions. *Id.* at Q/A 55. As noted above, obtaining these contracts and the certifications required by GPOs is a lengthy process, and if the Platinum 6000 inventory could not be accessed, hospitals would feel an immediate disruption. *Id.* at Q/A 54. We further note that Complainants fail to sufficiently rebut the public interest concerns raised by Respondents and the IA with respect to an immediate CDO. *See* IAOpenNotice at 55-58; RespOpenNotice at 73-88; ComplOpenNotice at 89-105; ComplRespNotice at 70-74.

Based on the foregoing, we find that due to the nature of the rental market for therapeutic support surface systems, the requirements for certification and acceptance into a GPO program, and the logistics required to satisfy GPO requirements, the evidence shows that there is a lack of readily available alternatives to Sizewise's products and that the lack of alternatives could harm the health and welfare of the U.S. public if a CDO directed against Sizewise is issued because replacement products are unlikely to become available within the remaining life of the patent, which expires on July 28, 2017.

We therefore find, based on the record evidence and in light of public health and welfare concerns (and regardless of the commercial significance of Sizewise's inventory), that a CDO should not issue against Sizewise due to the lack of alternatives, the time needed for GPOs to

seek alternatives to Sizewise, and the remaining life of the patent. *See Certain Personal Data and Mobile Communications Devices and Related Software*, Inv. No. 337-TA-710, Comm'n Op. at 75 (Dec. 29, 2011). *See also* IAOpenNotice at 58; IARespNotice at 32. We note that this determination is consistent with the previous decisions of the Commission not to issue a remedy where it was precluded by public interest considerations. *See, e.g., Certain Fluidized Supporting Apparatus and Components*, Inv. No. 337-TA-182/188 (Oct. 1984) (declining relief because the accused beds were sold, rented and leased to hospitals for the treatment of burn patients); *Certain Inclined Field Acceleration Tubes*, Inv. No. 337-TA-67 (Dec. 1980) (declining relief because of likely effects on important scientific research); *Certain Automatic Crankpin Grinders*, Inv. No. 337-TA-60 (Dec. 1979) (declining relief due to countervailing national energy policies). *See* RespOpenNotice at 73. [20]

As to the LEO, we agree with the ALJ and find that the public interest factors do not require that the Platinum 6000 be exempted. Any LEO in this investigation would be in effect for less than three months, because the Commission is issuing its decision on May 17, 2017, and the '172 patent will expire on July 28, 2017. Mr. McCarty testified that as of the date of his testimony (August 12, 2016), Sizewise had approximately [[ ]] P6000 units in its "rental pool"

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[20] Chairman Schmidtlein agrees with the Commission that a CDO should not issue against Sizewise due to the nature of the market for therapeutic support surfaces, the lack of immediately available alternatives to Sizewise's therapeutic P6000 bed, and the fact that replacement products are unlikely to become available within the short remaining life of the '172 patent. Any CDO against Sizewise would need to have a delayed entry in order to allow sufficient time for GPOs to seek alternatives to the P6000 bed. The record, however, demonstrates that a reasonable delay period would extend beyond the expiration date of the patent, making issuance of any CDO against Sizewise, which might otherwise be warranted, unnecessary. *See, e.g.*, RX-0846C (Seth WS) at Q/A 196-197.

in the United States. Of those approximately [[ ]] units, approximately [[ ]] units were "under patients," which averaged out to a [[ ]] utility rate, resulting in approximately [[ ]] of units available to meet additional demand. ID/RD at 106-107. Mr. McCarty testified that around [[ ]] is ". . . the ideal balance in the rental market . . ." McCarty, Tr. at 1053:6-24. Therefore, the record indicates that even without considering other sources of rental units, Sizewise itself would have a sufficient rental inventory to meet its customers' needs. ID/RD at 107; *see* discussion *supra* (declining to issue CDOs).

Thus, based on the foregoing, we find that the first public interest factor, *i.e.*, public health and welfare, does not preclude issuance of an LEO covering, *inter alia*, the P6000 products. With respect to other products covered by the LEO, there is no evidence of any public health and welfare concerns that would weigh against a remedy. With respect to other products covered by the LEO, there is no evidence of any public health and welfare concerns that would weigh against a remedy.

Second, there is no evidence that issuance of the remedial orders will have any effect on competitive conditions in the U.S. economy. The record indicates that the LEO will not have a negative effect on competitive conditions because Complainants have numerous competitors in the consumer beds market, both within and outside of the traditional mattress industry. Schwantes Hr. at 72:9-14; ComplOpenNotice at 103. See also ID/RD at 107; IARespNotice at 32.

Third, U.S. production of articles that are like or directly competitive with those which are the subject of the investigation will not be negatively affected. The record shows that Complainants manufacture and sell consumer air mattress systems in the United States that

directly compete with the products infringing the '172 patent. *See e.g.* CX- 0456C, Abraham WS at Q257, 260; CX-0439.[21] Complainants have the manufacturing capacity to replace the products infringing the '172 patent. CX-0445C, Schwantes WS at Q27-54. ComplOpenNotice at 103.

Fourth, the record indicates that U.S. customers will not be adversely affected by an LEO because the LEO is unlikely to cause an increase in customer cost sufficient to warrant preclusion of a remedial order, and the exclusion of the products at issue would not cause an unfilled void for consumers because Complainants have the manufacturing capacity to fill any such void. ComplOpenNotice at 103-104; ID/RD at 107; IARespNotice at 32.

Based on the foregoing, we find that entry of the Commission's LEO would not be contrary to the public interest.

3. Bond During Presidential Review

Pursuant to section 337(j)(3), the Commission must determine the amount of bond to be required of a respondent during the 60-day Presidential review period following the issuance of permanent relief, in the event that the Commission determines to issue a remedy. 19 U.S.C. § 1337(j)(3). The purpose of the bond is to protect the complainant from any injury. 19 C.F.R. § 210.42(a)(1)(ii), § 210.50(a)(3). The amount of bond must "be sufficient to protect the complainant from any injury." 19 U.S.C. § 1337(j)(3); *see also* 19 C.F.R. § 210.50(a)(3). The Commission may set the bond based on the price differential between the imported or infringing product, or based on a reasonable royalty. *See, e.g., Certain Microsphere Adhesives, Processes*

[21] Complainants acknowledge that they do not "make or sell any product that is comparable to or competes with the accused medical consumer air controllers." ID/RD at 100.

for Making Same, and Products Containing Same, Including Self- Stick Repositionable Notes, Inv. No. 337-TA-366, Comm'n Op. at 24, USITC Pub. 2949 (Jan. 1996) (setting bond based on price differentials); *Certain Plastic Encapsulated Integrated Circuits*, Inv. No. 337-TA-315, Comm'n Op. at 45, USITC Pub. 2574 (Nov. 1992) (setting the bond based on a reasonable royalty). Complainant bears the burden of establishing the need for a bond. *Certain Rubber Antidegradants, Components Thereof, and Prods. Containing Same*, Inv. No. 337-TA-533, Comm'n Op. at 39, 40 (July 21, 2006); *see also Certain Laser Imageable Printing Plates*, Inv. No. 337-TA-636, Comm'n Op. at 9 (November 30, 2009).

Complainants request a bond rate based on price differentials. ComplOpenNotice at 87-90; CIB at 99-100. In particular, Complainants argue that the bond rate be set at 34% for the air controllers covered by the '172 patent. ComplOpenNotice at 89; CIB at 99-100. Complainants argue that if the Commission finds the price differential to be unreliable, the bond should be set at 100%. ComplRespNotice at 66; CRB at 41.

Respondents argue that Complainants did not meet their burden to show that a bond is necessary to prevent injury. RespOpenNotice at 66; RIB at 96. Respondents contend that because they are not one of Complainants' competitors in the consumer mattress market, a sale by Respondents would not take away potential sales from Complainants. *Id.* at 96-97. Respondents also point out that Complainants expressly acknowledged that they do not make or sell any product that is comparable to or competes with the accused medical control units (*i.e.*, the P5000 and P6000). *Id.* at 96-97 (citing Complainants' Pre-Hr'g Br. at 478, 482; RX-0548C at .0014-19; RX-0542C at .0044-45). Respondents assert that, therefore, Complainants did not establish the need for a bond. RespOpenNotice at 66-67. Respondents contend that, in addition

to failing to establish the need for a bond, Complainants proposed price differential that is flawed because it is based on "wildly incomparable prices." RIB at 97-98; RRB at 40; RespOpenNotice at 67-69. Respondents suggest that any bond rate set by the Commission be based on a reasonable royalty rate and propose a [[ ]] rate for consumer (not medical) control units found to infringe the '172 patent. RIB at 98-99; RespOpenNotice at 69-70.

The ALJ found that Complainants failed to show that a bond is necessary to prevent injury. ID/RD at 100. We find that the record supports the ALJ's finding. It is undisputed that to set a bond based on price differential, there must be "reliable" price information. The record shows that Complainants did not provide such evidence. Specifically, as the ALJ found, Complainants compared manufacturer suggested retail prices ("MSRP") found in their own price guides to a one-day snapshot of advertised prices on Respondents' website. ID/RD at 100 (citing CX-0439, CX-0440-CX-0444; JX-0238C; Schwantes, Tr. at 68:12-17, 70:18-24; Karr, Tr. at 305:7-20). The price guides show the MSRPs before any discounts, whereas Respondents' website shows the advertised price to consumers. *Id.* (citing Schwantes, Tr. at 68:12-21, 75:14-76:2). The record also shows that this snapshot was taken during a time when Respondents' products were substantially discounted for a Memorial Day sale. *Id.* (citing Schwantes, Tr. at 67:1-17, 70:2-71:17, 74:10-75:5, Seth, Tr. at 1146:19-25). The record also shows that Complainants admitted that they do not make or sell a product that is comparable to or competes with the accused medical consumer air controllers, and therefore, as the ALJ found, there is no basis for a bond for the P5000 or P6000. ID/RD at 100 (citing CPHB at 478 (". . . Complainants do not sell a comparable product.")).

Furthermore, the record shows that Complainants were not diligent in collecting reliable

pricing information. SIB at 84 ("Although the witness who sponsored the printouts had visited the site previously, Complainants chose to present website pricing information from a Memorial Day sale, which do not appear to represent regular prices for the accused products.") (citing Schwantes Tr. at 74:10-75:5).[22] Therefore, there is no basis for setting bond at 100% in this investigation.

Finally, Respondents suggest a bond rate based on a royalty rate of [[ ]] for air controllers covered by the '172 patent. RespOpenNotice at 69. The royalty rates they rely on, however, were derived from a draft document and there is no evidence that these royalty rates were ever offered. Seth Tr. at 1078:1- 1079:21. Therefore, Respondents' proposed royalty rate likewise does not appear to be based on reliable information. *See also* SIB at 84.

Based on the foregoing, we find that Complainants did not sustain their burden to show a need for a bond for the Respondents infringing products covered by the '172 patent during the Presidential review period, and determine that the amount of a bond during the period of Presidential review in this investigation will be set at zero (0) percent of entered value.

V. CONCLUSION

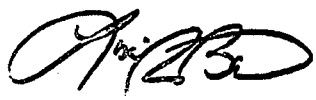
Having considered the ALJ's Initial Determination and Recommended Determination, the parties' submissions filed in response to the Commission's Notice, and the evidentiary record, the Commission has determined to issue an LEO prohibiting the unlicensed entry of infringing air mattress systems, components thereof, and methods of using the same that are

[22] *See also* SIB at 84 ("Complainants' evidence for a price differential bond rate is a comparison of website printouts showing consumer prices for the accused products to Select Comfort's "National Pricing Guide." Compare CX-0439, CX-0440, CX-0441, CX-0442, CX-0443, and CX-0444 (website printouts) with JX-0238C (National Pricing Guide.)").

covered by claims 12 or 16 of the '172 patent and that are manufactured abroad by or on behalf of, or imported by or on behalf of Respondents, or their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns.

The Commission has further determined that the public interest factors enumerated in subsection (d)(l) (19 U.S.C. § 1337(d)(l)) do not preclude issuance of this remedial order. Finally, the Commission has determined that the amount of a bond should be set to zero (0) percent of entered value during the period of Presidential review (19 U.S.C. § 1337(j)).

By order of the Commission.



Lisa R. Barton
Secretary to the Commission

Issued: June 20, 2017

CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME **Inv. No. 337-TA-971**

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **OPINION** has been served by hand upon the Commission Investigative Attorney, **Andrew Beverina, Esq.**, and the following parties as indicated, on **June 20, 2017.**

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Select Comfort Corporation and Select Comfort SC Corporation:

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On Behalf of Respondents Sizewise Rentals, LLC, American National Manufacturing, Inc., and Dires, LLC, d/b/a Personal Comfort Bed:

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of	
CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME	Investigation No. 337-TA-971

NOTICE OF A COMMISSION DETERMINATION TO REVIEW IN PART A FINAL INITIAL DETERMINATION; SCHEDULE FOR FILING WRITTEN SUBMISSIONS ON THE ISSUES UNDER REVIEW AND ON REMEDY, THE PUBLIC INTEREST, AND BONDING

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission ("the Commission") has determined to review in part the final initial determination ("ID") issued by the presiding administrative law judge ("ALJ") finding no violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337) ("section 337"), in the above-referenced investigation on November 18, 2016.

FOR FURTHER INFORMATION CONTACT: Michael Liberman, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, SW, Washington, D.C. 20436, telephone (202) 205-3115. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, SW, Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at *https://www.usitc.gov*. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *https://edis.usitc.gov*. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on November 20, 2015, based on a complaint filed by Select Comfort Corporation of Minneapolis, Minnesota and Select Comfort SC Corporation of Greenville, South Carolina (collectively, "Select Comfort," or "Complainants"). 80 FR 72738 (Nov. 20, 2015). The complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain air mattress systems, components thereof, and methods of using the

same by reason of infringement of certain claims of U.S. Patent Nos. 5,904,172 ("the '172 patent") and 7,389,554 ("the '554 patent"). *Id.* The notice of investigation names as respondents Sizewise Rentals LLC of Kansas City, Missouri; American National Manufacturing Inc. of Corona, California; and Dires LLC and Dires LLC d/b/a Personal Comfort Beds of Orlando, Florida (collectively, "Respondents"). *Id.* The Office of Unfair Import Investigations ("OUII") was also named as a party to the investigation. *Id.*

Pursuant to Commission Rule 210.50(b)(1), 19 CFR 210.50(b)(1), the Commission ordered that the presiding ALJ:

> [S]hall take evidence or other information and hear arguments from the parties and other interested persons with respect to the public interest in this investigation, as appropriate, and provide the Commission with findings of fact and a recommended determination on this issue, which shall be limited to the statutory public interest factors set forth in 19 U.S.C. 1337(d)(1), (f)(1), (g)(1).

80 FR 72738 (Nov. 20, 2015).

The evidentiary hearing on the question of violation of section 337 was held August 8-12, 2016. The final ID on violation was issued on November 18, 2016. The ALJ issued his recommended determination on remedy, the public interest and bonding on the same day. The ALJ found no violation of section 337 in this investigation. The ALJ recommended that if the Commission finds a violation of section 337 in the present investigation, the Commission issue a limited exclusion order ("LEO") prohibiting the importation of Respondents' air controllers and air mattress systems found to infringe the asserted patents. The ALJ also recommended the inclusion of a provision for the '554 patent, whereby Respondents certify that certain imports are not covered by the LEO because they contain components for use in non-infringing products. The ALJ did not recommend that the Commission issue a cease and desist order in this investigation. The ALJ further recommended a zero bond during the period of Presidential review.

All parties to this investigation filed timely petitions for review of various portions of the final ID, as well as timely responses to the petitions.

On December 19, 2016, both Complainants and Respondents filed their respective Public Interest Statement pursuant to 19 CFR 210.50(a)(4). Responses from public were likewise received by the Commission pursuant to notice. *See* Notice of Request for Statements on the Public Interest (Nov. 29, 2016).

Having examined the record in this investigation, including the final ID, the petitions for review, and the responses thereto, the Commission has determined to review the final ID in part. In particular, the Commission has determined as follows:

(1) to review the ID's findings that the P5000, P6000, and Arco products do not meet "guides and stops" limitation in claim 2 of the '172 patent, and that these products do not meet the same claim limitation in claim 12 of the '172 patent and for that reason do not infringe that claim;

(2) to review the ID's finding that the '172 Accused Products do not meet claim limitation "pressure monitor means being operably coupled to the processor and being in fluid communications with the at least one bladder for continuously monitoring the pressure in the at least one bladder" in claims 2, 6, 20, 22, and 24 of the '172 patent;

(3) to review the ID's finding that the '172 Accused Products do not infringe claim 9 of the '172 patent;

(4) to review, in part, the ID's analysis regarding whether the '172 Accused Products infringe claim 2 of the '172 patent for the limited purpose of taking no position on the ALJ's discussion in the last paragraph of page 20 and in the first paragraph of page 21 of the ID;

(5) to review the ID's finding that claim 16 of the '554 patent is not infringed because Complainants did not establish that the accused products practice the "air posturizing sleep surface" limitation;

(6) to review the ID's finding that the '554 Domestic Industry Products do not practice the '554 patent;

(7) to review the ID's finding that Complainants did not satisfy the economic prong of the domestic industry requirement with respect to both the '172 and '554 patents.

The Commission has determined not to review the remainder of the ID.

The parties are requested to brief their positions on only the following issues, with reference to the applicable law and the evidentiary record:

1. The ID finds that: "Because Select Comfort asserts that guides and stops of the P5000, P6000, and Arco products are screws and screw bores, the undersigned finds that Select Comfort has failed to establish that these products meet this limitation." ID at 27.

a. Does the record support a finding that "Select Comfort asserts that guides and stops of the P5000, P6000, and Arco products are screws and screw bores?"

b. Does the record show that P5000, P6000, and Arco products meet the guides and stops limitation in claims 2 and 12 of the '172 patent?

2. The ID finds that because Complainants did not establish that the '172 Accused Products continuously monitor pressure using a processor in conjunction with the transducer, the '172 Accused Products do not meet claim limitation "and pressure monitor means being operably coupled to the processor and being in fluid communications with the at least one bladder for continuously monitoring the pressure in the at least one bladder." ID at 32; *see id.* at 29-32.

a. To the extent not already briefed to the Commission, please discuss whether the record supports the ID's finding (with supporting citations to the record evidence).

3. The ID finds that: "Claim 9, like claim 2, includes the term 'continuously monitoring.' For the reasons stated above in the discussion of claim 2, claim 9 is not infringed because Select Comfort did not establish that the '172 Accused Products 'continuously monitor' pressure." ID at 32.

a. Does the record show that claim 9 of the '172 patent is not infringed because Select Comfort did not establish that the '172 Accused Products "continuously monitor" pressure?

4. The ID finds that: "Claim 16, like claim 1, includes the term 'air posturizing sleep surface.' For the reasons stated above in the discussion of claim 1, claim 16 is not infringed because Select Comfort did not establish that the accused products practice the 'air posturizing sleep surface' limitation." ID at 70.

a. Does the record show that the accused products infringe the "air posturizing sleep surface" limitation of claim 16 of the '554 patent?

5. Does the record show that the '554 Domestic Industry Products practice the '554 patent?

6. The ID finds that: "Claim 16, like claim 1, includes the term 'air posturizing sleep surface.' For the reasons stated above in the discussion of claim 1, the '554 DI products do not practice claim 16 because they do not meet the 'air posturizing sleep surface' limitation." ID at 75.

a. Does the record show that the '554 DI products practice the "air posturizing sleep surface" limitation of claim 16 of the '554 patent?

7. With respect to Complainants' investment in plant and equipment alleged under 19 U.S.C. § 1337(a)(3)(A) the ID finds that:

> While the Commission has stated that a precise allocation of expenses among various DI products is not necessary, that precedent cannot mean that Select Comfort's proposed allocation

is acceptable; *i.e.* allocating 100 % of the rental expenses to the '172 patent, and then a portion of those same expenses to the '554 patent DI products. Accordingly, Select Comfort has not shown a domestic industry for either the '172 patent or the '554 patent based upon 19 U.S.C. 1337(a)(3)(A).

ID at 89-90.

a. Do Commission and judicial precedents and the record in the present investigation support the ID's finding?

b. Please explain with citation to the record what portion of the asserted domestic investment in plant and equipment, in terms of the dollar amount and percentage, can be allocated to the articles that practice the '172 patent.

c. Does the record show that Complainants' investment in plant and equipment under 19 U.S.C. § 1337(a)(3)(A) is significant with respect to the articles that practice the '172 patent?

d. Please explain with citation to the record what portion of the asserted domestic investment in plant and equipment, in terms of the dollar amount and percentage, can be allocated to the articles that practice the '554 patent.

e. Does the record show that Complainants' investment in plant and equipment under 19 U.S.C. § 1337(a)(3)(A) is significant with respect to the articles that practice the '554 patent?

8. With respect to Complainants' employment of labor or capital alleged under 19 U.S.C. § 1337(a)(3)(B) the ID finds that:

As with the plant and equipment issue in the previous section, Select Comfort has again allocated 100% of the relevant expense (in this section, employee compensation) to the '172 patent DI products and then allocated a portion of those same expenses to the '554 DI products. (CX-0445 at Q/A 59, 62; CX-0449C at Q/A 52; CIB at 92-93.) For the reasons set forth in the previous section, this argument is not persuasive. Accordingly, Select Comfort has not shown a domestic industry for either the '172 patent or the '554 patent based upon 19 U.S.C. 1337(a)(3)(B).

ID at 91.

a. Do Commission and judicial precedents and the record in the present investigation support the ID's finding?

b. Please explain with citation to the record what portion of the asserted domestic employment of labor or capital, in terms of the dollar amount and percentage, can be allocated to the articles that practice the '172 patent.

c. Does the record show that Complainants' employment of labor or capital under 19 U.S.C. § 1337(a)(3)(B) is significant with respect to the articles that practice the '172 patent?

d. Please explain with citation to the record what portion of the asserted domestic employment of labor or capital, in terms of the dollar amount and percentage, can be allocated to the articles that practice the '554 patent.

e. Does the record show that Complainants' employment of labor or capital under 19 U.S.C. § 1337(a)(3)(B) is significant with respect to the articles that practice the '554 patent?

In connection with the final disposition of this investigation, the Commission may (1) issue an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) issue one or more cease and desist orders that could result in the respondent being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or are likely to do so. For background, see *Certain Devices for Connecting Computers via Telephone Lines*, Inv. No. 337-TA-360, USITC Pub. No. 2843, Comm'n Op. at 7-10 (Dec. 1994).

If the Commission contemplates some form of remedy, it must consider the effects of that remedy upon the public interest. The factors the Commission will consider include the effect that an exclusion order and/or cease and desist orders would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission's action. *See* Presidential Memorandum of July 21, 2005, 70 FR 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury.

WRITTEN SUBMISSIONS: The parties to the investigation are requested to file written submissions on the issues under review. The submissions should be concise and thoroughly referenced to the record in this investigation. Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest and bonding. Such submissions should address the recommended determination on remedy, the public interest and bonding issued on December 1, 2016, by the ALJ. Complainants and the Commission investigative attorney ("IA") are also requested to submit proposed remedial orders for the Commission's consideration.

Complainants are further requested to provide the expiration date of the '172 and '554 patents, the HTSUS numbers under which the accused articles are imported, and any known importers of the accused products. The written submissions and proposed remedial orders must be filed no later than the close of business on February 6, 2017. Reply submissions must be filed no later than the close of business on February 13, 2017. No further submissions on these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above and submit 8 true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-971") in a prominent place on the cover page and/or the first page. (*See* Handbook for Electronic Filing Procedures, http://www.usitc.gov/secretary/fed_reg_notices/rules/handbook_on_electronicfiling.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000).

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the Commission for purposes of this Investigation may be disclosed to and used: (i) by the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel, solely for cybersecurity purposes. All contract personnel will sign appropriate nondisclosure agreements. All non-confidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, and in Part 210 of the Commission's Rules of Practice and Procedure, 19 CFR Part 210.

By Order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: January 23, 2017

CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME **Inv. No. 337-TA-971**

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **Andrew Beverina, Esq.**, and the following parties as indicated, on **January 23, 2017.**

Lisa R. Barton, Secretary
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- ☒ Via First Class Mail
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PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of **CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME**	**Inv. No. 337-TA-971**

INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND RECOMMENDED DETERMINATION ON REMEDY AND BOND

Chief Administrative Law Judge Charles E. Bullock

(November 18, 2016)

Appearances:

For the Complainants Select Comfort SC Corporation and Select Comfort Corporation

Kecia J. Reynolds, Esq. and Victoria L. Draper, Esq. of Pillsbury Winthrop Shaw Pittman, LLP from Washington, DC

Barry K. Shelton, Esq. of Pillsbury Winthrop Shaw Pittman, LLP of Austin, TX

Nicole S. Cunningham, Esq.; Steven A. Moore, Esq.; and Kirsten F. Gallacher, Esq. of Pillsbury Winthrop Shaw Pittman, LLP from San Diego, CA

Rene E. Mai, Esq. of Pillsbury Winthrop Shaw Pittman, LLP from Houston, TX

Michael K. Heins, Esq. of Pillsbury Winthrop Shaw Pittman, LLP from McLean, VA

For Respondents Sizewise Rentals LLC, American National Manufacturing, Inc., and Dires LLC

Kyle L. Elliott, Esq.; Brian Bear, Esq.; Kevin S. Tuttle, Esq.; and Mark Thornhill, Esq. of Spencer Fane from Kansas City, MO

Michael R. Doman, Jr., Esq. and Beau Jackson, Esq. of Adduci, Mastriani & Schaumberg, LLP from Washington, DC

For the Commission Investigative Staff

Margaret Macdonald, Esq., Director; Jeffrey Hsu, Esq., Supervisory Attorney; and Andrew Beverina, Esq., Investigative Attorney of the Office of Unfair Import Investigations, U.S. International Trade Commission from Washington, DC

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

The following abbreviations may be used in this Initial Determination:

CDX	Complainants' demonstrative exhibit
CPX	Complainants' physical exhibit
CX	Complainants' exhibit
CIB	Complainants' initial post-hearing brief
CRB	Complainants' reply post-hearing brief
CPHB	Complainants' pre-hearing brief
Dep	Deposition
JX	Joint Exhibit
RDX	Respondents' demonstrative exhibit
RPX	Respondents' physical exhibit
RX	Respondents' exhibit
RIB	Respondents' initial post-hearing brief
RRB	Respondents' reply post-hearing brief
RPHB	Respondents' pre-hearing brief
RX	Respondents' exhibit
RIB	Respondents' initial post-hearing brief
RRB	Respondents' reply post-hearing brief
SIB	Staff's initial post-hearing brief
SRB	Staff's reply post-hearing brief
SPHB	Staff's pre-hearing brief
Tr.	Transcript

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of	
CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME	**Inv. No. 337-TA-971**

INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND RECOMMENDED DETERMINATION ON REMEDY AND BOND

Chief Administrative Law Judge Charles E. Bullock

(November 18, 2016)

Pursuant to the Notice of Investigation, this is the Initial Determination in the matter of Certain Air Mattress Systems, Components Thereof, and Methods of Using the Same, Investigation No. 337-TA-971.

For the reasons stated herein, the undersigned has determined that no violation of section 337 of the Tariff Act of 1930, as amended, has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain air mattress systems, components thereof, and methods of using the same with respect to U.S. Patent Nos. 5,904,172 and 7,389,554.

I. INTRODUCTION

A. Procedural History

On October 16, 2015, Complainants Select Comfort Corporation and Select Comfort SC Corporation (collectively, "Select Comfort") filed a Complaint alleging violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain air mattress systems, components thereof, and methods of using the same. *See* 80 Fed. Reg. 72,738 (Nov. 20, 2015). Select Comfort supplemented the Complaint on October 28th and November 5th. *Id.*

On November 20, 2015, the Commission instituted this Investigation. *Id.* Specifically, the Commission instituted this Investigation to determine:

> [W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain air mattress systems, components thereof, and methods of using the same by reason of infringement of one or more of claims 2, 6, 9, 12, 16, 20 and 22–24[1] of the '172 patent and claims 1, 5, 6, 16, 22[2], and 26 of the '554 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

Id.

The named respondents are Sizewise Rentals LLC, American National Manufacturing Inc., and Dires LLC (d/b/a Personal Comfort Bed) (collectively, "Respondents"). The Commission Investigative Staff ("Staff") participated in the Investigation.

The evidentiary hearing was held August 8–12, 2016.

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[1] Claim 23 of the '172 patent has been terminated from this Investigation. (*See* Order No. 54 (Sept. 6, 2016); Notice of Comm'n Determination Not to Review an Initial Determination Granting an Unopposed Mot. for Partial Termination of the Investigation Based on Withdrawal of an Asserted Patent Claim (Sept. 30, 2016).)

[2] Claim 22 has been terminated from this Investigation. (*See* Order No. 29 (June 13, 2016); *see also* Notice of Comm'n Determination Not to Review an Initial Determination Granting an Unopposed Mot. for Partial Termination of the Investigation Based on Withdrawal of an Asserted Patent Claim (June 30, 2016).)

B. The Parties

1. Select Comfort

Select Comfort Corporation is a Minnesota corporation with its principal place of business in North Minneapolis, Minnesota. (Compl. at ¶ 10.) Select Comfort Corporation is in the business of designing, manufacturing, and selling adjustable air mattress systems and components thereof. (*Id.*) Its most notable air mattress system is the Sleep Number® bed. (*Id.*)

Select Comfort SC Corporation, doing business as Comfortaire, is a wholly-owned subsidiary of Select Comfort Corporation located in Greenville, South Carolina. (*Id.* at ¶ 11.) Comfortaire designs, manufactures, and sells adjustable air mattress systems and components thereof. (*Id.*)

2. Respondents

a) Sizewise Rentals LLC

Sizewise Rentals LLC ("Sizewise") is a Nevada limited liability company with its principal place of business in Kansas. (SIB at 4.) Sizewise sells consumer and medical beds.

b) American National Manufacturing Inc.

American National Manufacturing Inc. ("ANM") is a California corporation with its principal place of business in Corona, California. ANM manufactures and sells medical air bed systems. (SIB at 4.)

c) Dires LLC

Dires LLC ("Dires") is a Delaware limited liability company with its principal place of business in Orlando, Florida. Dires is an online marketer and seller of air mattresses. The air mattresses sold by Dires are manufactured by ANM.

C. Overview of the Technology

The technology at issue relates to adjustable air mattress systems and components thereof. (Compl. at ¶ 18.)

D. Patents at Issue

1. U.S. Patent No. 5,904,172

The '172 patent, entitled "Valve Enclosure Assembly," issued on May 18, 1999. The '172 patent is assigned on its face to Select Comfort Corporation. It generally relates to an improved valve enclosure assembly. (Compl. at ¶ 27.)

As initially issued, the '172 Patent had 18 claims. In January 2014, the United States Patent and Trademark Office issued an *ex parte* reexamination certificate. The patentability of claims 2, 4-6, 11, 12, and 14-18 was confirmed, while Claims 1 and 10 were cancelled. Claim 9 was determined to be patentable as amended. Claims 19-25 were added and determined to be patentable.

2. U.S. Patent No. 7,389,554

The '554 patent, entitled "Air Sleep System With Dual Elevating Air Posturizing Sleep Surfaces," issued on June 24, 2000. The '554 patent is assigned on its face to Comfortaire Corporation. It generally relates to an air sleep system with a pair of air posturizing sleep surfaces, which may be individually inclined and air adjusted. ('554 patent at Abstract.)

II. JURISDICTION AND IMPORTATION

A. Subject Matter Jurisdiction

Section 337 confers subject matter jurisdiction on the Commission to investigate, and if appropriate, to provide a remedy for, unfair acts and unfair methods of competition in the importation, the sale for importation, or the sale after importation of articles into the United

States. *See* 19 U.S.C. §§ 1337(a)(1)(B) and (a)(2). Select Comfort filed a complaint alleging a violation of this subsection. Accordingly, the Commission has subject matter jurisdiction over this Investigation under section 337 of the Tariff Act of 1930. *Amgen, Inc. v. U.S. Int'l Trade Comm'n*, 902 F.2d 1532, 1536 (Fed. Cir. 1990).

B. Personal Jurisdiction

Respondents have appeared and participated in this Investigation. The Commission therefore has personal jurisdiction over Respondents. *See, e.g., Certain Optical Disk Controller Chips & Chipsets & Prods. Containing Same, Including DVD Players & PC Optical Storage Devices*, Inv. No. 337-TA-506, Initial Determination at 4-5 (May 16, 2005) (unreviewed in relevant part).

C. *In Rem* Jurisdiction

Respondents do not dispute that the Commission has *in rem* jurisdiction for the '172 patent. (RPHB at 24.) Respondents concede that ANM and Sizewise, [redacted], have imported fully assembled air controllers, *i.e*, Gen 3 Arco, Gen 3 Koge, and Platinum 5000/6000. (McCarty, Tr. at 1024:24-1025:1; Miller, Tr. at 352:11-19; CX-0162C at .00118, CX-0178C at 89:15-90:19.)

Respondents do contest *in rem* jurisdiction for the '554 patent. (RIB at 2-3; RRB at 2.) They explain that the accused mattresses are manufactured by ANM in California and Texas and that that only imported component is the air chambers[3], which is not specifically alleged to infringe the '554 patent. (*Id.*) Thus, Respondents assert that their sales of the accused mattresses are not "sale[s] within the United States after importation" within the meaning of the statute. (RIB at 3 ("The evidence has shown no direct nexus between the importation of this one component and the asserted claims of the '554 Patent.").) Both Select Comfort and Staff assert

[3] The parties also refer to the "air chambers" as "air bladders."

that jurisdiction for the '554 patent is proper. (CIB at 3-6 (arguing that the importation documents and designated deposition testimony show that ANM imports [redacted]; SIB at 5-6.)

The Notice of Investigation governs the scope of the investigation. 19 C.F.R. § 210.10(b). The Notice reads: "Certain Air Mattress Systems, Components Thereof, and Methods of Using the Same." 80 Fed. Reg. 72,738 (Nov. 20, 2015). Respondents concede that they import one of the main components of the accused beds – the air chambers. (RIB at 2 ("the air chambers are the only imported component for these products"); *see also* Miller, Tr. at 390:12-392:23 (admitting ANM imports components of the accused air mattresses – *e.g.*, [redacted], 402:14-23; CX-0178C at 116:16-24; JX-0024; JX-0047C; JX-0048C; JX-0049C; JX-0050C; JX-0052C.) Respondents also cannot dispute that the air chambers are specifically recited in the asserted claims of the '554 patent. (JX-0002.) Thus, based on the scope of this Investigation, which expressly includes components of air mattress systems, the undersigned finds that that the Commission has jurisdiction over the beds alleged to infringe the '554 patent.

III. ORDINARY SKILL IN THE ART

The undersigned has previously determined that one of ordinary skill in the art with respect to the '172 patent would have had at least a Bachelor of Science degree in Mechanical Engineering, or equivalent, about 1-2 years of relevant experience working with pneumatic and inflatable devices, and be familiar with published literature in the field as of July 1997. As for the '554 patent, the undersigned determined that one of ordinary skill in the art would have at least a Bachelor of Science degree in Mechanical Engineering, or equivalent, and about 1-2 years of relevant industry experience. (*See* Order No. 19 at 5-6 (May 11, 2016).)

IV. RELEVANT LAW

A. Infringement

In a section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1349 (Fed. Cir. 2010). This standard "requires proving that infringement was more likely than not to have occurred." *Warner-Lambert Co. v. Teva Pharm. USA, Inc.*, 418 F.3d 1326, 1341 n.15 (Fed. Cir. 2005).

1. Literal Infringement

Literal infringement is a question of fact. *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008). Literal infringement requires the patentee to prove that the accused device contains each limitation of the asserted claim(s). If any claim limitation is absent, there is no literal infringement of that claim as a matter of law. *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000).

2. Doctrine of Equivalents

An accused product that does not literally infringe may infringe under the doctrine of equivalents if the differences between the accused product and the claim are insubstantial. *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 608 (1950). One way of proving infringement under the doctrine is to show, for each claim limitation, "that the accused product performs substantially the same function in substantially the same way with substantially the same result as each claim limitation of the patented product." *Crown Packaging Tech., Inc., v. Rexam Beverage Can Co.*, 559 F.3d 1308, 1312 (Fed. Cir. 2009); *see also Brilliant Instruments, Inc. v. GuideTech LLC*, 707 F.3d 1342,1346-47 (Fed. Cir. 2013). Infringement under the doctrine of equivalents is a question of fact. *Graver Tank*, 339 U.S. at 609-10.

3. Indirect Infringement

Indirect infringement may be either induced or contributory. Direct infringement must first be established in order for a claim of indirect infringement to prevail. *BMC Res. v. Paymentech,* 498 F.3d 1373, 1379 (Fed. Cir. 2007).

a) Induced Infringement

Section 271(b) of the Patent Act provides: "Whoever actively induces infringement of a patent shall be liable as an infringer." 35 U.S.C. §271(b) (2008). To establish liability, the patent holder must prove that "once the defendants knew of the patent, they 'actively and knowingly aid[ed] and abett[ed] another's direct infringement.'" *DSU Med. Corp. v. JMS Co., Ltd.* 471 F.3d 1293,1305 (Fed. Cir. 2006) (en banc) (citations omitted). A finding of induced infringement requires "evidence of culpable conduct, directed to encouraging another's infringement, not merely that the inducer had knowledge of the direct infringer's activities." *Id.* at 1306. Although §271(b) requires knowledge that the induced acts constitute patent infringement, the Supreme Court has held that liability will also attach when the defendant is willfully blind. *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068-2069 (2011). The burden is on the complainant to prove that the respondent had the specific intent and took action to induce infringement. *DSU*, 471 F.3d at 1305-06. Intent may be proven by circumstantial evidence. *Lucent Tech., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1322 (Fed. Cir. 2009).

B. Validity

A patent is presumed valid. 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238, 2242 (2011). A respondent who has raised patent invalidity as an affirmative defense has the burden of overcoming this presumption by clear and convincing evidence. *Microsoft,* 131 S. Ct. at 2242. As with an infringement analysis, an analysis of invalidity involves two steps:

determining the scope of the claim and comparing the properly construed claim with the prior art to determine whether the claimed invention is anticipated and/or rendered obvious.

1. Anticipation (35 U.S.C. § 102)

Under 35 U.S.C. § 102, a claim is anticipated and therefore invalid when "the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation." *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000), *cert. denied*, 532 U.S. 904 (2001). To be considered anticipatory, the prior art reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000).

2. Obviousness (35 U.S.C. § 103)

Under 35 U.S.C. §103, a patent may be found invalid for obviousness if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. §103(a). Because obviousness is determined at the time of invention, rather than the date of application or litigation, "[t]he great challenge of the obviousness judgment is proceeding without any hint of hindsight." *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1375 (Fed. Cir. 2011) ("*Star II*").

When a patent is challenged as obvious, the critical inquiry in determining the differences between the claimed invention and the prior art is whether there is an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *KSR Int'l Co. v. Teleflex, Inc.*,

550 U.S. 398, 417-418 (2007). The Federal Circuit has since held that when a patent is challenged as obvious, based on a combination of several prior art references, "the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so." *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007) (citations omitted).

Obviousness is a determination of law based on underlying determinations of fact. *Star II*, 655 F.3d at 1374. The factual determinations behind a finding of obviousness include: (1) the scope and content of the prior art, (2) the level and content of the prior art, (3) the differences between the claimed invention and the prior art, and (4) secondary considerations of non-obviousness. *KSR,* 550 U.S. at 399 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)). These factual determinations are referred to collectively as the "*Graham* factors." Secondary considerations of non-obviousness include commercial success, long felt but unresolved need, and the failure of others. *Id.* When present, secondary considerations "give light to the circumstances surrounding the origin of the subject matter sought to be patented," but they are not dispositive on the issue of obviousness. *Geo. M. Martin Co. v. Alliance Mach. Sys. Int'l.*, 618 F.3d 1294, 1304-06 (Fed. Cir. 2010). A court must consider all of the evidence from the *Graham* factors before reaching a decision on obviousness. For evidence of secondary considerations to be given substantial weight in the obviousness determination, its proponent must establish a nexus between the evidence and the merits of the claimed invention. *W. Union Co. v. MoneyGram Payment Sys. Inc.*, 626 F.3d 1361, 1372-73 (Fed. Cir. 2010) (citing *In re GPAC Inc.,* 57 F.3d 1573, 1580 (Fed. Cir. 1995)).

3. Indefiniteness (35 U.S.C. § 112(b))

A claim must also be definite. Pursuant to 35 U.S.C. § 112(b): "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or joint inventor regards as the invention." 35 U.S.C. § 112(b). In *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014), the Supreme Court held that § 112(b) requires "that a patent's claims, viewed in light of the specification and prosecution history inform those skilled in the art about the scope of the invention with reasonable certainty." (*Id.* at 2129.) A patent claim that is indefinite is invalid. 35 U.S.C. § 282(b)(3)(A).

4. Broadening During Reexamination

Section 305 provides: "No proposed amended or new claim enlarging the scope of a claim of the patent will be permitted in a reexamination proceeding under this chapter." 35 U.S.C. § 305. "A claim is enlarged if it includes within its scope any subject matter that would not have infringed the original patent." *In re Freeman*, 30 F.3d 1459, 1464 (Fed. Cir. 1994.)

C. Domestic Industry

In a patent-based complaint, a violation of section 337 can be found "only if an industry in the United States, relating to the articles protected by the patent . . . concerned, exists or is in the process of being established." 19 U.S.C. § 1337(a)(2). Under Commission precedent, this "domestic industry requirement" of section 337 consists of an economic prong and a technical prong. *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 12-14, 2009 WL 5134139 (U.S.I.T.C. Dec. 2009). The complainant bears the burden of establishing that the domestic industry requirement is satisfied. *See Certain Set-Top Boxes and Components Thereof*, Inv. No. 337-TA-454, Final Initial Determination at 294, 2002 WL 31556392 (U.S.I.T.C. June 21, 2002) (unreviewed by Commission in relevant part).

1. Economic Prong

Section 337(a)(3) sets forth the following economic criteria for determining the existence of a domestic industry in such investigations:

> (3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned –
>
> (A) significant investment in plant and equipment;
> (B) significant employment of labor or capital; or
> (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

Given that these criteria are listed in the disjunctive, satisfaction of any one of them will be sufficient to meet the economic prong of the domestic industry requirement. *Certain Integrated Circuit Chipsets and Prods. Containing Same*, Inv. No. 337-TA-428, Order No. 10, Initial Determination (unreviewed) (May 4, 2000).

2. Technical Prong

The technical prong of the domestic industry requirement is satisfied when the complainant in a patent-based section 337 investigation establishes that it is practicing or exploiting the patents at issue. *See* 19 U.S.C. § 1337(a)(2) and (3); *Certain Microsphere Adhesives, Process for Making Same and Prods. Containing Same, Including Self-Stick Repositionable Notes,* Inv. No. 337-TA-366, Comm'n Op. at 8, 1996 WL 1056095 (U.S.I.T.C. Jan. 16, 1996). "The test for satisfying the 'technical prong' of the industry requirement is essentially [the] same as that for infringement, i.e., a comparison of domestic products to the asserted claims." *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). To prevail, the patentee must establish by a preponderance of the evidence that the domestic product practices one or more claims of the patent, either literally or under the doctrine of equivalents.

Bayer, 212 F.3d at 1247. It is sufficient to show that the products practice any claim of that patent, not necessarily an asserted claim of that patent. *Certain Microsphere Adhesives*, Comm'n Op. at 7-16.

D. Unenforceability

A patent is unenforceable on grounds of inequitable conduct if the patentee withheld material information from the PTO with intent to mislead or deceive the PTO into allowing the claims. *LaBounty Mfr. Inc. v. U.S. Int'l Trade Comm'n,* 958 F.2d 1066, 1070 (Fed. Cir. 1992). "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." *Therasense v. Becton, Dickinson and Co.*, 649 F.3d 1276, 1290 (Fed. Cir. 2011).

Information that is withheld or misrepresented to the PTO is considered material if it satisfies a "but for" test:

> 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 a claim had it been aware of the undisclosed prior art. Hence, in assessing the materiality of a withheld reference, the court must determine whether the PTO would have allowed the claim if it had been aware of the undisclosed reference. In making this patentability determination, the court should apply the preponderance of the evidence standard and give claims their broadest reasonable construction.

Id. at 1291-92.

To satisfy 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." *Therasense*, 649 F.3d at 1290 (citing *Star Scientific, Inc., v. R.J. Reynolds Tobacco Co.,* 537 F.3d 1357, 1366 (Fed. Cir. 2008)). When there are multiple reasonable inferences that can be drawn as reasons for withholding a reference, deceptive intent cannot be found. *Id.* at 1290-91. A finding that a patentee was negligent or grossly negligent regarding an omission or misrepresentation to the

PTO does not satisfy the intent requirement. *Id.* Specific intent to deceive can be inferred from indirect or circumstantial evidence; it cannot, however, be inferred from the materiality of the omitted or misrepresented reference. *Id.*; *see also Larson Mfg. Co. of S.D., Inc. v. Aluminart Prods. Ltd.,* 559 F.3d 1317, 1340 (Fed. Cir. 2009). Additionally, the absence of a good faith explanation for withholding a material reference does not, by itself, prove intent to deceive. *Star Scientific*, 537 F.3d at 1368.

V. U.S. PATENT NO. 5,904,172

A. Overview

1. Asserted Claims

Select Comfort is asserting claims 2, 6, 9, 12, 16, 20, 22, and 24, which read as follows:

2. An improved valve enclosure assembly for use with an air inflatable mattress having at least one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve enclosure assembly being fluidly coupled intermediate the pump and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising: an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, a plurality of guides and stops being disposed within the enclosure for correctly positioning components within the enclosure; and pressure monitor means being operably coupled to the processor and being in fluid communications with the at least one bladder for continuously monitoring the pressure in the at least one bladder.

6. An improved valve enclosure assembly for use with an air inflatable mattress having at least one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve enclosure assembly being fluidly coupled intermediate the pump and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising: an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, the enclosure being formed of an enclosure portion and a rear cover portion, a flexible seal being compressively interposed between the enclosure portion and a rear cover portion to effect a substantially fluid tight seal therebetween; and pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one bladder for continuously monitoring the pressured in the at least one bladder.

9. A method of effecting a desired pressure in a bladder of an air inflatable mattress, comprising the steps of: providing a commanded desired pressure of the bladder; opening a valve fluidly coupled to the bladder, wherein the valve is one of a plurality of valves at least partially contained within, or formed integral to, a substantially fluidly sealed air chamber of a valve enclosure assembly; continuously monitoring the existing pressure in the bladder at a tap on the valve enclosure assembly, the tap defining an opening through the valve enclosure assembly and into an interior of the air chamber; determining the differential between the existing pressure in the bladder and the desired pressure in the bladder; exhausting air from the bladder through the valve when the differential indicates that the existing pressure in the bladder is greater than the desired pressure; energizing a pump fluidly coupled to the valve for providing compressed air to the bladder when the differential indicates that the desired pressure in the bladder is greater than the existing pressure in the bladder to inflate the bladder; and closing said valve when the existing pressure in the bladder substantially equals the desired pressure in the bladder.

12. An improved valve enclosure assembly for use with an air inflatable mattress having at least one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve enclosure assembly being fluidly coupled intermediate the pump and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising: an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, a plurality of guides and stops being disposed within the enclosure for correctly positioning components within the enclosure; at least one valve operably coupled to the enclosure being in selective fluid communication with the air chamber and being in fluid communication with the at least one air bladder for selectively fluidly coupling the air chamber to at least one air bladder; and pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one valve for monitoring the pressure in the at least one bladder.

16. An improved valve enclosure assembly for use with an air inflatable mattress having at least one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve enclosure assembly being fluidly coupled intermediate the pump and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising: an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, the enclosure being formed of an enclosure portion and a rear cover portion, a flexible seal being compressively interposed between the enclosure portion and a rear cover portion to effect a substantially fluid tight seal therebetween; at least one valve operably coupled to the enclosure being in selective fluid communication with the air chamber and being in fluid communication with the at least one air bladder for selectively fluidly coupling the air chamber to at least one air bladder; and pressure monitor means operably coupled to the

processor and being in fluid communication with the at least one valve for monitoring the pressure in the at least one bladder.

20. An improved valve enclosure assembly for use with an air inflatable mattress having at least one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve enclosure assembly being fluidly coupled intermediate the pump and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising: an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, the enclosure being formed of an enclosure portion and a rear cover portion, a flexible seal being compressively interposed between the enclosure portion and the rear cover portion to effect a substantially fluid tight seal therebetween; two or more valves being in fluid communication with both the exterior of the enclosure and with the air chamber; and pressure monitor means including a sensor being operably coupled to the processor and being in fluid communication with the at least on bladder through a pressure monitoring port defining an opening through the enclosure and into an interior of the air chamber, the pressure sensor configured for continuously monitoring the pressure in the at least one bladder during an inflate/deflate cycle.

22. The improved valve enclosure assembly of claim 2 further including at least one solenoid configured to operate a valve, wherein the at least one solenoid is at least partially received within the air chamber of the enclosure.

24. The improved valve enclosure assembly of claim 2 wherein the enclosure is formed of an enclosure portion and a rear cover portion.

2. Claim Construction

On May 11, 2016, Order No. 19 issued construing certain claim limitations of the '172 patent. (*See* Order No. 19 (May 11, 2016).) Order No. 19 adopted the parties' agreed-upon constructions for the following terms:

TERM	CLAIM(S)	CLAIM CONSTRUCTION
Preamble	2, 6, 12, 16, and 20	The preamble is limiting.
"pressure monitor means"	2, 6, 20	Means-plus-function limitation subject to 35 U.S.C. §112, ¶ 6 Function: "continuously monitoring the pressure in the at least one bladder"

TERM	CLAIM(S)	CLAIM CONSTRUCTION
		Structure: "A port in fluid communication with the interior of the valve enclosure assembly designed to receive a tube, a tube connected to the port and to a pressure sensor for conveying the bladder pressure from the valve enclosure assembly to the pressure sensor, and the pressure sensor operatively coupled to a processor"
"pressure monitor means"	12 and 16	Means-plus-function limitation subject to 35 U.S.C. §112, ¶ 6 Function: "monitoring the pressure in the at least one bladder" Structure: "A port in fluid communication with the interior of the valve enclosure assembly designed to receive a tube, a tube connected to the port and to a pressure sensor for conveying the bladder pressure from the valve enclosure assembly to the pressure sensor, and the pressure sensor operatively coupled to a processor"
"continuously monitoring"	2, 6, 9, and 20	No construction necessary.
Order of steps are restrictive	9	No construction necessary.

(*Id.* at 9.) Order No. 19 also construed the following disputed claim terms:

TERM	CLAIM(S)	CLAIM CONSTRUCTION
"guide[s]" and "stop[s]"	2 and 12	Plain and ordinary meaning
"valve enclosure assembly"	2, 6, 9, 12, 16, 20, 22, and 24	Plain and ordinary meaning

(*Id.* at 10-17.)

3. Accused Products

Select Comfort accuses the following controllers of infringement of the '172 patent: (1) Gen 3 Arco; (2) Gen 3 Koge; and (3) the Platinum 5000 and Platinum 6000[4] (collectively, "the '172 Accused Products"). (CIB at 13.) The Gen 3 Arco and Gen 3 Koge products are found in the consumer products of Respondents ANM and Dires. (RIB at 4; SIB at 17.) The Platinum 5000 and Platinum 6000 are medical air controllers used in medical mattress systems. (RIB at 5.) The Platinum 5000 and Platinum 6000 controllers are used by Sizewise. (SIB at 17-18.)

The parties agree that, generally, there are only "small differences" in the manifolds of these products. (CIB at 13.) Respondents admit that "[t]he Arco and Koge air controllers [redacted]" (RIB at 5 (citing RX-0848C at Q/A 38-39).) Respondents further admit that "[t]he Platinum 5000 and Platinum 6000 use the same [redacted] and [redacted] (*Id.* (citing RX-0845C at Q/A 19).)

[4] These products are alternatively referred to as the P5000/P6000 or "Platinum" products.

B. Infringement[5]

Select Comfort asserts that the '172 Accused Products infringe claims 2, 6, 12, 16, 20, 22, and 24 of the '172 patent.

1. Claim 2

a) "An improved valve enclosure assembly for use with an air inflatable mattress having at last one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve enclosure assembly being fluidly coupled intermediate the pump and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising"

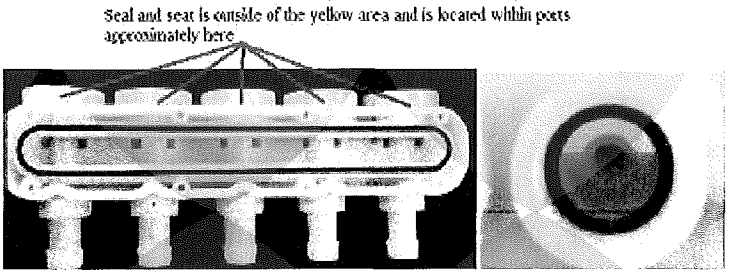
The evidence shows that the '172 Accused Products are used with an air inflatable mattress having at least one air bladder inflated by compressed air. (CX-0456 at Q/A 45-52; JX-0137C (Platinum); JX-0133C (Gen 3 Arco); JX-0135C (Gen 3 Koge); CDX-0001-CDX-0004.) The '172 Accused Products also have a pump fluidly coupled to "the at least one air bladder for providing compressed air thereto, and a processor for providing commands . . . during an inflate/deflate cycle." (*Id.*; *see also* Friis, Tr. at 722:11-22, 739:12-741:8, 745:13-748:2.) The evidence further shows that each of the '172 Accused Products has a pump fluidly coupled to the manifold which is also fluidly coupled to the air bladder. (CX-0456 at Q/A 45-52; JX-0137C (Platinum); JX-0133C (Gen 3 Arco); JX-0135C (Gen 3 Koge); CDX-0001-CDX-0004; Friis, Tr. at 726:22-727:4, 738:24-739:4.)

Respondents do not contest that the above limitations are met but dispute that the '172 Accused Products contain a "valve enclosure assembly." Specifically, Respondents argue: (1) the '172 Accused Products do not utilize a "valve enclosure assembly" and (2) the '172 Accused Products lack the "improved" assembly of the '172 patent, *i.e.*, a biased-closed valve.

[5] Except where specifically noted, Respondents do not oppose Select Comfort's contentions in this section.

i. "Valve Enclosure Assembly"

Respondents assert that a "valve enclosure assembly" must "place the valves inside the air chamber of the enclosure." (RIB at 7 (citing RX-844C at Q/A 40).) Respondents explain that "a 'valve' is defined as a seat and a seal," but in the '172 Accused Products, "the seat and the seal of each device are located in the ports coming off the manifolds and are not in the manifolds themselves." (*Id.* (citing Friis, Tr. at 744:11-15).) According to Respondents, because the valves are not located inside the air chamber of the manifold, there cannot be a valve enclosure. (*Id.*) Respondents include a picture of the Gen 3 Arco to illustrate their point:



(*Id.* at 8 (citing JX-140; JX-141).) Because "[t]he tip of the port extends beyond the limit of the manifold air chamber wall" in this product, Respondents contend that "the seat and seal are not in the manifold air chamber." (*Id.* at 8-9.) Respondents assert that "the same is true for the Koge product and the P5000 [and] P6000 products." (*Id.* at 8; *see also id.* at 9-10 (citing JX-202, RX-844 at Q/A 41, RDX-15).)

Select Comfort argues that Respondents' position was previously rejected by the undersigned in the *Markman* Order. (CIB at 15.) Select Comfort explains that Order No. 19 stated "the valve does not have to be contained within the air chamber, but instead can be 'partially contained.'" (CRB at 5 (quoting Order No. 19 at 16).) Thus, the fact that the ports

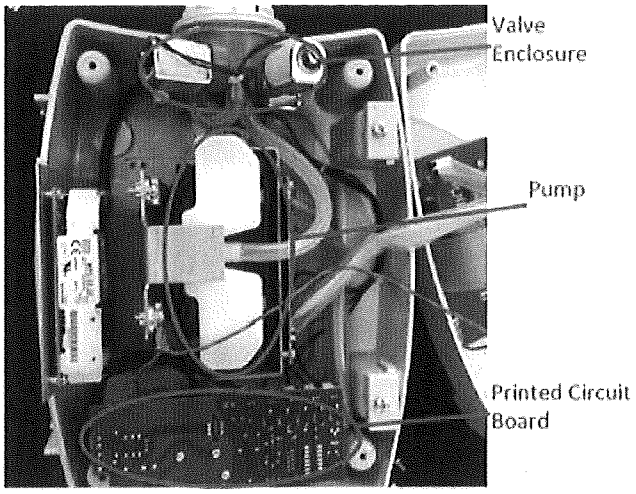
containing the valves extend from the manifold is no moment – the manifold and valves can still constitute a valve enclosure assembly. (*Id.*)

Select Comfort also asserts that "Respondents' argument . . . requires a piecemeal analysis of [the '172 Accused] products." (*Id.*). It explains that "Respondents' expert admits each manifold is molded as a single piece" and that the evidence shows that "the manifold and ports are one contiguous component." (*Id.* (citing Friis, Tr. at 733:13-734:2, 738:7-742:10; RDX-0015C).) Thus, it is reasonable to view the manifold and valves as one unit – the valve enclosure assembly. (*Id.*)

Staff agrees with Select Comfort that "[t]he evidence shows that the accused products have the claimed 'valve enclosure assembly.'" (SIB at 24.) Staff disagrees, however, that Respondents' non-infringement position is precluded by Order No. 19. (*Id.*) Rather, Staff contends: "The issue comes down to whether the 'valve enclosure assembly' is a larger unit including the valve enclosure, pump, and printed circuit board (as [Select Comfort] allege[s]), or if it is an enclosure for the valves only (as Respondents allege)." (*Id.*) Staff believes that Select Comfort is correct in its view. (*Id.* at 24-25.)

As an initial matter, there appears to be some confusion among the parties as to whether Select Comfort includes the pump and printed circuit board in its definition of "valve enclosure assembly," as Staff contends.[6] In his witness statement, Select Comfort's expert, Dr. Abraham, includes pictures of the '172 Accused Products and identifies these three components.

[6] In her direct witness statement, Dr. Friis also notes this confusion. (RX-0844C at Q/A 36.)



(CX-0456C at Q/A 45; *see also id.* at Q/A 51.) As seen in the picture, Dr. Abraham uses the term "valve enclosure" rather than "valve enclosure assembly," thus implying that the "valve enclosure" might be a component of the larger "valve enclosure assembly." (*Id.*) This understanding does not appear to be correct, however. Despite the label, Dr. Abraham later refers to the "valve enclosure" as a "valve enclosure assembly" and indicates that the "valve enclosure assembly" is separate from the pump and circuit board. (*Id.* at Q/A 51 (explaining that "[t]he Gen 3 Arco's valve enclosure assembly is coupled intermediate the pump and the air bladder(s) for controlling the inflation" and noting that the picture depicts "a pump, a printed circuit board with a processor, and a valve enclosure assembly"). Additionally, in its brief, Select Comfort notes: "The valve enclosure assembly is used with a pump and air inflatable mattress; it does not include them." (CIB at 39 (emphasis added).) The undersigned therefore understands Select Comfort to assert that the component labeled "valve enclosure" in the above picture is the asserted "valve enclosure assembly."

The undersigned finds that the evidence establishes that the '172 Accused Products meet the limitation of "valve enclosure assembly." First, to the extent that Respondents argue that the '172 Accused Products do not contain a "valve enclosure assembly" because the valves are not

fully contained within the manifold,[7] this argument has already been rejected. In Order No. 19, the undersigned found that an "attempt to limit valve enclosure assembly" to those products "in which the air chamber encloses the valve" was inconsistent with the intrinsic evidence. (Order No. 19 at 16.) Instead, a valve can be "partially contained." (*Id.*) Accordingly, the fact that the valves are only partially contained in the '172 Accused Products does not prevent them from meeting the limitation of "valve enclosure assembly."

Respondents' argument that the limitation is not met because the valves are not enclosed at all must also be rejected. The evidence shows that the products contain a single plastic molded piece with contiguous ports and manifold. (RPX-0014 (Gen 3 Arco); RPX-0015 (Platinum); RPX-0017 (Gen 3 Koge); JX-0202C (Platinum); JX-0140C (Gen 3 Arco); RDX-0015C (Gen 3 Koge); Friis, Tr. at 733:13-734:2, 740:14-741:1, 748:3-22.) Accordingly, Select Comfort has introduced sufficient evidence that one of ordinary skill in the art would understand the manifold and ports to constitute one structure. Respondents, on the other hand, have not introduced sufficient evidence to rebut this point. Respondents' expert, Dr. Friis, offered her opinion that the ports should not be considered part of the manifold, but attempts to support her opinion by looking to Select Comfort's domestic industry products (RX-0844C at Q/A 40.) A product-to-product comparison is improper in an infringement analysis. *Zenith Labs. v. Bristol-Myers Squibb Co.*, 19 F.3d 1418, 1423 (Fed. Cir. 1994) ("As we have repeatedly said, it is error for a court to compare in its infringement analysis the accused product or process with the patentee's commercial embodiment or other version of the product or process; the only proper comparison is with the claims of the patent.") Notably, Dr. Friis does not cite to evidence from

[7] The undersigned agrees with Staff that Respondents appear to argue that the valves are not contained within the manifold at all, but certain of Respondents' statements in their brief indicate that they are also pursuing an argument that the valves are not fully contained. (*See, e.g.*, RRB at 12 ("For Complainants, the plain meaning of the term is stretched to encompass valves (defined as a seat and a seal) both partially and fully contained within a manifold and the ports coming off the manifold.).)

the '172 patent itself or any extrinsic evidence demonstrating whether one of ordinary skill in the art would view the manifold and ports as one component or separate ones. Thus, Respondents have failed to rebut the evidence that the valves contained within the port are part of a "valve enclosure assembly."

ii. Biased-Closed Valve

Respondents argue that the "improved" assembly in the '172 patent requires a biased-closed valve. (RIB at 6.) Respondents state: "The '172 Patent specification makes clear, as does the evidence adduced at the hearing, that the Patent's improvement over prior art valve enclosure assemblies was the use of a valve that would be biased in the closed position by air from an air bladder." (*Id.* at 10 (citing JX-1 at 2:36-38).) In support of their argument, Respondents point to the testimony of "many witnesses" who "discussed the importance of the 'biased close' valve to the overall patentability of the '172 Patent." (*Id.* at 11.)

Select Comfort argues that Respondents "cannot identify a limitation in any asserted claim that actually requires a biased-closed valve." (CRB at 6.) Select Comfort therefore contends that "[w]hether the accused products have biased-closed valves is irrelevant to infringement." (*Id.*)

Staff agrees and notes: "The term 'biased-closed valve' does not appear as a limitation in the asserted claims." (SIB at 27.) Staff explains that Respondents' argument is therefore irrelevant and asserts that a decision as to "[w]hether the accused products infringe should be made by analyzing the limitations of the claim against the accused products, rather than skipping that analysis and merely claiming the products are not what results from the limitations of the claim." (*Id.*)

The undersigned finds that whether the '172 Accused Products contain a biased-closed valve is irrelevant. An infringement analysis compares the claims of the patent to the accused products. *Elbex Video Ltd. v. Sensormatic Elecs. Corp.*, 508 F.3d 1366, 1370 (Fed. Cir. 2007) (explaining that "the properly construed claims are applied to the accused devices"). It is undisputed that the claims do not require a "biased-closed valve."

For the reasons set forth above, the '172 Accused Products meet the limitations of the preamble.

b) "an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, a plurality of guides and stops being disposed within the enclosure for correctly positioning components within the enclosure"

The evidence shows that the '172 Accused Products include an enclosure defining a substantially fluidly sealed air chamber. (CX-0456 C at Q/A 53-56; JX-0140C, JX-0148C, JX-0150C, CDX-0007, CDX-0010 (Gen 3 Arco); JX-0151C, CDX-0009 (Gen 3 Koge); JX-0154C, JX-0159C, CDX-0005 – CDX-0006 (Platinum).) The evidence further shows that the '172 Accused Products have at least one air inlet to the air chamber fluidly coupled to the pump. (*Id.*)

With respect to the P5000, P6000, and Arco products, Select Comfort alleges that the threaded bore holes are guides. (CIB at 15-16; JX-0202C; JX-0208C; CX-456C at Q/A 54.) According to Respondents, the "black o-ring sitting on a ledge within the bore hole" is a stop. (CIB at 15-16; *see also* CX-456C at Q/A 54 ("The solenoid will stop against both the raised rim pointed to as a stop and the black o-ring.").) As for the Koge Gen 3, Select Comfort alleges that "the modular manifold has a male and female portion, where the female portion has a black o-ring inside and the male portion has raised fittings to guide and lock it into place inside the

female portion stopped against the black o-ring on the ledge inside the female portion." (CIB at 16.)

Respondents dispute that the '172 Accused Products contain "guides and stops" and that the elements in the '172 Accused Products are "disposed within the enclosure" as required by the claims. (RIB at 12.)

i. "Guides and Stops"

Respondents first assert that the threaded bores and o-rings of the '172 Accused Products cannot meet the limitation of "guides and stops" as understood in the '172 patent. Respondents explain: "The specification makes it clear that 'guides and stops' are actually a series of structures that protrude from the interior surface of the enclosure to hold the solenoid bodies in place." (RIB at 12 (citing JX-1 at 6:39-43; Abraham, Tr. at 240:22-24).) In contrast, Respondents explain that the "threaded bores in the P6000 and Gen 3 Arco product . . . must be torqued into place like a screw," rather than "simply by dropping them into the enclosure." (*Id.* at 13.) The Gen 3 Koge product likewise does not contain "structures formed at all within the body of the manifold," and instead "the internal chamber is a smooth corridor with nothing to position components." (*Id.* at 14.) Respondents contend that, if "guides and stops" were construed to cover such elements, the terms "would have an almost unlimited meaning.'" (*Id.* at 13.)

Select Comfort contends that "Respondents reargue claim construction while paying lip service to the *Markman* Order." (CRB at 9.) Select Comfort also asserts that Dr. Friis admitted that there are multiple guides and stops in the '172 Accused Products. (CIB at 16-17 (citing Friis, Tr. at 736:12-737:6, 741:20-742:4, 744:5-10, 750:12-751:24).)

Staff agrees with Select Comfort that "[t]he evidence shows that the accused products satisfy the 'guide[s]' and 'stop[s]' limitation." (SIB at 25.) Staff further agrees that Respondents' argument was "rejected by the claim construction order." (*Id.* at 26.)

The undersigned disagrees with Respondents that the features in the '172 Accused Products cannot be guides and/or stops. The undersigned has already considered – and rejected – similar arguments from Respondents during claim construction. At that time, Respondents proposed that "guides" be construed as "structures formed on the inner surface of the bottom of the enclosure to laterally position internal components," while "stops" be construed as "structures formed on the inner surface of the bottom of the enclosure to limit the travel of internal components." Respondents reasoned that this construction was necessary in order to comport with an embodiment in the specification and statements made during reexamination. (RMIB at 12-15.) The undersigned rejected Respondents' proposal on the grounds that "it is improper to read limitations from a preferred embodiment described in the specification – even if it is the only embodiment – into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." (Order No. 19 at 12 (quoting *GE Lighting Sols., Inc. v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014).) Because there was no clear disavowal in the prosecution history of the '172 patent, the undersigned found that the meaning of "guides" and "stops" should not be limited in the manner proposed by Respondents. (*Id.*)

The undersigned is, however, persuaded that Select Comfort disavowed screw bores and screws as guides and stops. During reexamination of the '172 patent, Select Comfort wrote:

> Patent Owner respectfully asserts that screw bores and screws are not "guides and stops" as discussed above with reference to the figures and specification of the '172 patent. In fact, as discussed above, the '172 patent also discloses screw bores (200) configured for receiving screws to hold the solenoids (210) in place within the valve enclosure (130). However, the screw bores (200) and corresponding screws are described in the '172 patent as separate and distinct features from the

> plurality and guides (196) and stops (198) that are provided for properly positioning components (i.e., solenoids) within the valve enclosure (130) prior to fastening the components with screws inserted through the screw bores (200).

(JX-0004 at 73.) Thus, from the face of this document it appears that Select Comfort disavowed screw bores and screws as "guides and stops" being disposed within the enclosure.

Select Comfort does not address this statement in its post-hearing briefs. Staff argues that this is the same theory rejected during claim construction. (SIB at 26.) This particular argument was not raised at the *Markman* proceeding, however. Additionally, the undersigned views this as a noninfringement argument (i.e., that the '172 patent indicates that screws and bores cannot be guides and stops), rather than a claim construction argument. Thus, the fact that it was not raised during the claim construction phase of this Investigation does not result in a waiver. Because Select Comfort asserts that guides and stops of the P5000, P6000, and Arco products are screws and screw bores, the undersigned finds that Select Comfort has failed to establish that these products meet this limitation.

The undersigned finds, however, that the evidence shows that the Gen 3 Koge product meets this limitation. The evidence shows that the Gen 3 Koge product has guides and stops. (CX-0456C at Q/A 56; JX-0151C; JX-0202C; JX-0208C; CDX-0009; RDX-0015; RPX-0017.) Indeed, Dr. Friis does not dispute that that the male portion of the Koge Gen 3 has raised fittings to guide and lock the solenoid into place and that the black o-ring on the ledge inside the female portion stops the solenoid. (Friis, Tr. at 750:12-751:24, 752:7-753:21.) While Respondents argue that a screw plate is necessary to avoid having the solenoid valves spin in relationship to each other, this argument is not persuasive. Respondents do not point to anything in the claims that restricts the solenoid valves from rotating, instead citing only to a figure in the patent without

any explanation as to how this figure indicates such a limitation. (RIB at 14 (citing Abraham, Tr. at 244:3-21).)

Accordingly, the undersigned finds that the Gen 3 Koge meets this limitation, but the remaining products do not.

ii. "Within the enclosure"

Respondents next argue that, even if the screw bores are considered guides and stops, they are not "disposed within the enclosure" as required by the '172 patent. Respondents contend that "[a]ffixing a component *to* an object is not the same thing as 'disposing' a component 'within' the object." (RIB at 15 (citing RX-844C at Q/A 44-45).) Respondents explain that Dr. Abraham testified that the "guides and stops" of the '172 patent are inside the "pressurized chamber" of the enclosure. (*Id.* at 15-16 (citing Abraham, Tr. at 240:11-241:7).) Respondents assert, however, that the "threaded wall of the bore in the manifold" – the "guide" – is not "within the pressurized chamber of the enclosure when the manifold is in operation." (*Id.*)

Select Comfort asserts that the guides and stops are, in fact, within the manifold. They explain: "Both the blue and elongated white manifolds [of the P5/6000 and Arco Gen 3] are made from a single injection molded plastic and the plastic defines an air chamber insider. (CIB at 17 (citing Friis, Tr. at 733:24-734:2, 740:23-741:1; JX-0140C; JX-202C).) Similarly, "[i]n the Koge product . . . the air chamber is also defined by a single plastic molding." (*Id.* (citing Friis, Tr. at 748:19-22, 749:20-23).)

Staff asserts that Respondents' argument that the guides and stops are not "within the enclosure" should be rejected for the same reasons as its argument related to "valve enclosure assembly." (SIB at 26.)

The undersigned agrees with Select Comfort and Staff that these features are within the enclosure. The manifolds of the '172 Accused Products are made from a single piece of plastic. (Friis, Tr. at 733:13-734:2, 740:14-741:1, 748:3-22; RPX-0014 (Gen 3 Arco); RPX-0015 (Platinum); RPX-0017 (Gen 3 Koge); JX-0202C (Platinum); JX-0140C (Gen 3 Arco); RDX-0015C (Gen 3 Koge); As with the valve enclosure assembly, Respondents have not presented sufficient evidence that the features located in ports would not be considered "within the enclosure."

c) "and pressure monitor means being operably coupled to the processor and being in fluid communications with the at least one bladder for continuously monitoring the pressure in the at least one bladder"

Select Comfort argues that the '172 Accused Products meet the limitation of "continuously monitoring" "because each accused product has a pressure sensor/transducer that continuously monitors the pressure in the respective bladder that is in fluid communication with the pressure sensor through the tube connected to the port." (CIB at 18 (citing CX-0456C at Q/A 57-61; Abraham, Tr. at 276:23-282:24; CDX-0011-CDC-0019).) Select Comforts asserts that "the pressure sensor in each accused product is operatively coupled to the processor." (*Id.*)

Respondents argue that the transducer alone cannot monitor pressure. Respondents explain that, under Select Comfort's infringement theory "because a pressure transducer is constantly exposed to air pressure, it is assertedly, 'continuously monitoring' air pressure regardless of whether the processor is receiving, interpreting, or processing data." (RIB at 23.) Respondents call Select Comfort's position "baseless" and argue that it is not supported by the intrinsic record, which states: "the processor of the pump 112 must be able to continuously monitor pressure in the respective left bladder or right bladder 122, 124 as desired." (*Id.* (citing JX-0001 at 7:62-8:3).)

Respondents also explain that, as a practical matter, a pressure transducer alone cannot monitor pressure. They write:

> A pressure transducer is a simple membrane with printed resistive elements. When the membrane stretches or reacts to changes in air pressure, the resistive elements create a fluctuation in an electrical signal that can be read by computers. Thus, a transducer merely creates an analog electric signal that can be read or monitored by another device.

(*Id.* at 26.) Given this, "[i]n both the Accused Controllers and Complainant's products, a pressure transducer alone would have no function whatsoever." (*Id.*) Because "a claimed invention [which] has no utility or enablement . . . fails as a matter of law," Respondents assert that it cannot be correct that the pressure transducer alone performs the function of "continuously monitoring." (*Id.* (citing *Classified Cosmetics, Inc. v. Del Labs., Inc.*, 208 F. App'x 939, 941 (Fed. Cir. 2006).)

Staff agrees with Respondents that the processor must perform the function of continuously monitoring. (SIB at 20.) Staff likewise agrees that this view is supported by the specification. (*Id.* (citing JX-0001 at 7:67-8:3).) According to Staff, "[t]his portion of the specification clarifies any potential ambiguity about what continuously monitors – it is the processor of the pump." (*Id.*)

Select Comfort disagrees that it is the processor that continuously monitors air pressure. (CIB at 19.) Select Comfort argues that this view is inconsistent with the claim language itself. (*Id.*; *see also* CRB at 12.) It notes: "The claim language itself clearly delineates between the 'pressure monitor means' and the 'processor,' describing the 'pressure monitor means being operatively coupled to a processor.'" (CIB at 19 (emphasis in original).) Select Comfort also argues that this view is inconsistent with the agreed-upon claim construction of "pressure monitor means," which does not include a processor as part of the construed structure. (*Id.*)

The undersigned agrees with Respondents and Staff that a processor is required to perform the function of "continuously monitoring."[8] The evidence shows that a pressure transducer alone cannot monitor pressure. As Dr. Abraham acknowledged, a computer is needed to interpret the output of the pressure transducer. (Abraham, Tr. at 298:17-299:18.) Unless "something" gathers information from the pressure transducer, the computer does not know the pressure." (*Id.*) Dr. Weiman also testified that "[t]he fact that transducers are exposed to pressure is meaningless until a processor directed by software reads and interprets the output from the transducers." (RX-845C at Q/A 66; *see also* Weiman, Tr. at 890:21-891:16 (testimony from Dr. Weiman indicating that the voltage from a transducer "has no meaning to pressure unless a processor can read it, process it . . . It's not a pressure until a processor performs calculations on it and converts it into . . . a pressure.").) Thus, although the pressure transducer may receive data regarding air pressure, it cannot perform the function of *monitoring* the air pressure without the processor.

Select Comfort's argument that a processor cannot be the structure for monitoring pressure pursuant to the claim construction is also unavailing. During claim construction, the parties agreed that the structure of "pressure monitor means" was "a port in fluid communication with the interior of the valve enclosure assembly designed to receive a tube, a tube connected to the port and to a pressure sensor for conveying the bladder pressure from the valve enclosure

[8] The parties spent a significant portion of the hearing and their briefs arguing about whether the source code establishes that the '172 Accused Products continuously monitor pressure. This issue is irrelevant to this Investigation. Select Comfort's infringement contention with respect to "continuously monitoring" does not involve the processor. (*See, e.g.*, CIB at 18 ("each accused product has a pressure sensor/transducer that continuously monitors the pressure in the respective bladder . . .).) Indeed, Select Comfort continuously states that it "contend[s], and ha[s] contended since the filing of the Complaint, that the transducer on the accused products 'continuously monitors' pressure." (CRB at 9.) As such, Select Comfort did not introduce testimony from its expert with respect to whether the processors of the '172 Accused Products continuously monitor pressure. (Abraham, Tr. at 205:19-206:16 (testimony from Dr. Abraham that he was offering no opinion on whether the processor continuously monitors pressure).) It is Select Comfort's burden to establish infringement. Because they did not meet their burden in establishing that the processor continuously monitors pressure, Respondents did not need to rebut this argument. The undersigned therefore need not consider arguments with respect to whether the source code of the '172 Accused Products indicates that the processor performs the function of "continuously monitoring."

assembly to the pressure sensor, and the pressure sensor operatively coupled to a processor." Thus, the construction specifically identifies processor as one of the elements necessary to monitor pressure. Select Comfort agreed to this construction and it was incorporated into Order No. 19.

For these reasons, Select Comfort's infringement theory cannot be correct. Because Select Comfort did not establish that the '172 Accused Products continuously monitor pressure using a processor in conjunction with the transducer, the '172 Accused Products do not meet this limitation. Accordingly, the '172 Accused Products do not infringe claim 2 of the '172 patent.

2. Claim 6

Select Comfort argues that the '172 Accused Products infringe claim 6. (CIB at 21-22.) Respondents and Staff disagree. (RIB at 33; SIB at 27-28.)

Claim 6, like claim 2, includes the term "continuously monitoring." For the reasons stated above in the discussion of claim 2, claim 6 is not infringed because Select Comfort did not establish that the '172 Accused Products "continuously monitor" pressure.

3. Claim 9

Select Comfort argues that the '172 Accused Products infringe claim 9. (CIB at 22-27.) Respondents and Staff disagree. (RIB at 33-34; SIB at 28-30.)

Claim 9, like claim 2, includes the term "continuously monitoring." For the reasons stated above in the discussion of claim 2, claim 9 is not infringed because Select Comfort did not establish that the '172 Accused Products "continuously monitor" pressure.

a) Indirect Infringement

Select Comfort alleges that Respondents induce infringement by the end users and testers of the '172 Accused Products "by instructing users to connect and operate the accused air controllers according to the instructions in the user manual with an air mattress in a manner that directly infringes." (CIB at 26.) However, the undersigned has found hereinabove that the accused products do not infringe claim 9. Select Comfort therefore cannot, as a matter of law, prove induced infringement. *See BMC Res.*, 498 F.3d at 1379 (direct infringement must first be established in order for a claim of direct infringement to prevail); *see also Novartis Pharm. Corp. v. Eon Labs Mfg. Inc.*, 363 F.3d 1306, 1308 (Fed. Cir. 2004) ("When indirect infringement is at issue, it is well settled that there can be no inducement or contributory infringement absent an underlying direct infringement.").

4. Claim 12

a) "An improved valve enclosure assembly for use with an air inflatable mattress having at least one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve assembly being fluidly coupled intermediate the pump at and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising: . . ."

The preamble of claim 12 is identical to claim 2. Accordingly, for the reasons set forth above with respect to the preamble of claim 2, the '172 Accused Products meet the limitations of the preamble of claim 12.

b) **"an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, a plurality of guides and stops being disposed within the enclosure for correctly positioning components within the enclosure"**

This limitation of claim 12 is identical to the "an enclosure . . ." limitation of claim 2. Accordingly, for the reasons set forth above, the Gen 3 Koge controller meets this limitation, but the Gen 3 Arco and Platinum 5000/6000 controllers do not.

c) **At least one valve operably coupled to the enclosure being in selective fluid communication with the air chamber and being in fluid communication with the at least one air bladder for selectively fluidly coupling the air chamber to at least one air bladder;**

The evidence shows that each of the '172 Accused Products has a valve operably coupled to the enclosure in fluid communication with the air bladder for selectively fluidly coupling the air chamber to the air bladder. (CX-0456C at Q/A 130-132; JX-0154C (Platinum); JX-0192C (Gen 3 Arco); JX-0158C (Gen 3 Koge); Friis, Tr. at 737:17-738:16, 743:14-23, 753:9-21.) Respondents do not dispute this limitation other than to argue that because the preamble of claim 12 is limiting and the '172 Products do not meet the preamble, they do not meet this limitation. (RX-0844C at Q/A 75-77; RIB at 34.)

The undersigned previously found that the '172 Accused Products meet the limitations of the preamble. Accordingly, for the reasons set forth above, the '172 Accused Products meet this limitation.

d) **"pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one valve for monitoring the pressure in the at least one bladder"**

Respondents argue that "[a]lthough claims 12 and 16 do not expressly recite the word 'continuously,' it is clear that the claims still must be so limited." (RIB at 18.) However, the

undersigned finds that Respondents waived this argument for failing to raise it in the pre-hearing briefs. (Ground Rule 8.2.)

Claim 12 does, however, require that the pressure monitor means monitors the pressure. Respondents do not dispute that the '172 Accused Products have pressure monitor means for monitoring pressure in the at least one air bladder. Indeed, Dr. Friis admits that this occurs within the '172 Accused Products. During the hearing, she confirmed that "in each of the accused products . . . there is monitoring of pressure." (Friis, Tr. at 758:4-7.) Because Respondents have admitted that the '172 Accused Products monitor air pressure, the undersigned finds that this limitation is met.

Despite this admission, Respondents still attempt to argue that the '172 Accused Products do not monitor pressure. Specifically, Respondents contend that the claims require that the air pressure be monitored during the inflate/deflate cycle. (RIB at 28.) Respondents reason that the preamble of claim 12 requires "a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle." According to Respondents, the only commands that can be sent during the inflate/deflate cycles are commands to monitor pressure. (*Id.* at 28-29.) Thus, Respondents conclude that commands to monitor pressure must be sent during the inflate/deflate cycle in order for claim 12 to be infringed. Because the '172 Accused Products "engage in a sequence of monitoring intervals that cannot operate at the same time as the inflate/deflate cycle," Respondents assert that this limitation cannot be met. (*Id.* at 29.)

Staff disagrees that the claims require that monitoring occur during the inflate/deflate cycle. (SIB at 23.) Staff explains that this limitation "relates to a processor for providing commands during the inflate/deflate cycle" and does not relate to monitoring of air pressure. (*Id.*) Staff notes that "Respondents do not challenge whether the processor sends commands during

the inflate/deflate cycle." (*Id.*) Thus, "[t]he evidence shows that the accused products have processors for providing commands during the inflate/deflate cycle." (*Id.* (citing CX-0456C at Q/A 49-52).)

Select Comfort disagrees that only commands to monitor pressure can be sent during the inflate/deflate cycles. (CRB at 7.) Select Comfort notes that "commands to open and close valves and [to] turn the pump on and off" can also be provided by the processor during the inflate/deflate cycle. (*Id.*) Select Comfort further asserts that Respondents have previously admitted that the '172 Accused Products send such commands. (*Id.* (citing RPHB at 44).)

The undersigned agrees with Select Comfort and Staff that the claims do not require that the processor send commands specifically related to air pressure during an inflate/deflate cycle. Respondents cannot point to anything in the claims that indicates the commands must relate to pressure. Nor have Respondents rebutted Select Comfort's evidence that commands to open and close valves and/or to turn the pump on and off are sent during the inflate/deflate cycles. (CX-0456C at Q/A 49-52.)

For the reasons set forth above, the '172 Accused Products meet this limitation.

e) Conclusion

Accordingly, for the reasons set forth above, the undersigned finds the Gen 3 Koge controller infringes claim 12 of the '172 patent, but the Gen 3 Arco and Platinum 5000/6000 controllers do not.

5. Claim 16

a) "An improved valve enclosure assembly for use with an air inflatable mattress having at least one air bladder inflated by compressed air, a pump fluidly coupled to the at least one air bladder for providing compressed air thereto, and a processor for providing commands to the improved valve enclosure assembly during an inflate/deflate cycle, the improved valve assembly being fluidly coupled intermediate the pump and the at least one air bladder for controlling the inflation of the at least one air bladder, comprising: . . ."

The preamble of claim 16 is identical to claim 2. Accordingly, for the reasons set forth above with respect to the preamble of claim 2, the '172 Accused Products meet the limitations of the preamble of claim 16.

b) "an enclosure defining a substantially fluidly sealed air chamber and having at least one air inlet to the air chamber being fluidly coupled to the pump, the enclosure being formed of an enclosure portion and a rear cover portion, a flexible seal being compressively interposed between the enclosed portion and a rear cover portion to effect a substantially fluid tight seal therebetween"

The evidence shows that each of the '172 Accused Products has an o-ring to create a fluidly sealed air chamber, that the manifold or valve enclosure is fluidly coupled to the pump, and that the manifold of each has an enclosure portion and a rear cover portion. (CX-0456C at Q/A 144; *see also id.* at Q/A 68-70; JX-0159C, CDX-0020 (Platinum); JX-0150C, CDX-0010, CDX-0018 (Gen 3 Arco); JX-0144C-JX-0145C, CDX-0021-CDX-0022 (Gen 3 Koge).) Respondents do not dispute this limitation other than to argue that because the preamble of claim 16 is limiting and the '172 Products do not meet the preamble, they do not meet this limitation. (RX-0844C at Q/A 57-59, 84-86; RIB at 34.)

The undersigned previously found that the '172 Accused Products meet the limitations of the preamble. Accordingly, for the reasons set forth above, the '172 Accused Products meet this limitation.

c) "at least one valve operably coupled to the enclosure being in selective fluid communication with the air chamber and being in fluid communication with the at least one air bladder for selectively fluidly coupling the air chamber to at least one air bladder;

This limitation of claim 16 is identical to the "at least one valve . . ." limitation of claim 12. Accordingly, for the reasons set forth above, the '172 Accused Products meet this limitation.

d) "pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one valve for monitoring the pressure in the at least one bladder"

This limitation of claim 16 is identical to the "pressure monitor means . . ." limitation of claim 12. Accordingly, for the reasons set forth above, the '172 Accused Products meet this limitation.

e) Conclusion

Accordingly, for the reasons set forth above, the undersigned finds the '172 Accused Products infringe claim 16 of the '172 patent.

6. Claim 20

Select Comfort argues that the '172 Accused Products infringe claim 20. (CIB at 30-32.) Respondents and Staff disagree. (RIB at 34; SIB at 33-34.)

Claim 20, like claim 2, includes the term "continuously monitoring." For the reasons stated above in the discussion of claim 2, claim 20 is not infringed because Select Comfort did not establish that the '172 Accused Products "continuously monitor" pressure.

7. Claim 22

Since claim 22 depends from claim 2, claim 22 is not infringed. *See Muniauction Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328-29 n.5 (Fed. Cir. 2008) ("A conclusion of noninfringement as to the independent claims requires a conclusion of noninfringement as to the dependent claims.").

8. Claim 24

Since claim 24 depends from claim 2, claim 24 is not infringed. *See Muniauction*, 532 F.3d at 1328-29 n.5 ("A conclusion of noninfringement as to the independent claims requires a conclusion of noninfringement as to the dependent claims.").

C. Domestic Industry – Technical Prong

Select Comfort asserts that the SC Advanced Dual Air Technology (ADAT) Firmness Control System, the SleepIQ Firmness Control System, and the Comfortaire Q10 ("the '172 DI Products") practice claims 12, 16, and 20 of the '172 patent. (CIB at 33-38; CRB at 16.) Staff agrees. (SIB at 36.) Respondents do not dispute that technical prong is met. (*See, e.g.*, RX-0844C at Q/A 113; Friis, Tr. at 753:22-754:6 (testimony from Dr. Friis agreeing that the '172 DI products practice the '172 patent.)

The evidence shows that the '172 DI Products practice claims 12, 16, and 20 of the '172 patent. (CX-0456C at Q/A 256-259, 265-271, 282-284, 326-362.)

Accordingly, it is the undersigned's determination that Select Comfort satisfies the technical prong of the domestic industry requirement.

D. Validity

1. Written Description & Indefiniteness

Respondents assert that all of the asserted claims of the '172 patent are invalid pursuant to 35 U.S.C. § 112. (RIB at 35-38; RRB at 18-19.) Specifically, Respondents allege that the preamble and the terms "valve enclosure assembly," "inflate/deflate cycle," "continuously monitoring"/"for monitoring," "pressure monitor means," "partially claimed within"/"formed integral to," and the solenoid "at least partially received within the air chamber" are invalid as either indefinite under 112(b), or lacking written description under 112(a). (*Id.*)

Select Comfort explains that there is no evidence to support any of Respondents' § 112 arguments. (CIB at 39-41.) Select Comfort also notes that Respondents' expert was able to understand and apply the claim terms. (*Id.*)

Staff agrees that Respondents have not established that the '172 patent is invalid pursuant to 35 U.S.C. § 112. (SIB at 37-39; SRB at 4-5.) Staff notes that the Respondents did not produce any evidence supporting their position. (SIB at 37-39.)

"Written description is a question of fact, judged from the perspective of one of ordinary skill in the art as of the relevant filing date." *Falkner v. Inglis*, 448 F.3d 1357, 1363 (Fed. Cir. 2006.) Similarly, to determine whether a patent is indefinite, a court must find that "its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014.) Respondents have not produced any evidence as to the perspective of one of ordinary skill in the art. Additionally, their analysis is conclusory and mostly consists of a single paragraph for each term. As Staff notes, Respondents "do not even attempt to explain how a person of ordinary skill would understand

the challenged terms [for the written description challenges] or, for the indefiniteness challenges, how the intrinsic record fails to inform a person of ordinary skill in the art about the scope of the invention." (SRB at 5.) Indeed, for some of these terms – the preamble, "inflate/deflate cycle," and "continuously monitoring"/"for monitoring," Respondents do not even cite to the '172 patent itself. (RIB at 35-38; RRB at 18-19.) This falls far short of "clear and convincing" evidence. *See, e.g.*, *Certain Semiconductor Chips with Minimized Chip Package Size & Prods. Containing Same (III)*, Inv. 337-TA-630, Initial Determination, 2009 WL 3092628, at *82 (U.S.I.T.C. Aug. 28, 2009) ("The ALJ finds that, by simply making cursory assertions and conclusory arguments comprised of two paragraphs, Respondents have blatantly failed to meet the clear and convincing standard necessary to invalidate [the patent]."). Respondents have therefore failed to establish that the '172 patent is invalid pursuant to 35 U.S.C. § 112.

2. Broadening During Reexamination

Respondents argue that claims 2, 9, 20, and 22 are invalid under 35 U.S.C. § 305.

Claim 9 contains the limitation that "the valve is one of a plurality of valves at least partially contained within, or formed integral to, a substantially fluidly sealed air chamber of a valve enclosure assembly." Respondents take issue with the language "formed integral to." (RIB at 39.) Respondents explain that "the claim language in question was added during reexamination to overcome prior art and no support for this amendment is found in the specification." (*Id* at 38-39.) Respondents also assert that "claim 9 now covers one of two alternatives, 'partially contained' or 'integral,' which were not covered by any previous claim." (*Id.* at 39.)

Respondents assert that claim 2 is invalid due to the addition of claims 22 and 23. (*Id.*) They assert that, due to the doctrine of claim differentiation, "[b]ecause claim 22 recites the

'partial' limitation, claim 2 now covers partially enclosed, fully enclosed, integral, and other variations." (*Id.*) Respondents also contend that claim 2 "does not discriminate as to the position or location of a solenoid" and therefore the scope of claim 2 is now "beyond what it originally encompassed." (*Id.*)

Select Comfort asserts that Respondents previously made this argument during claim construction and it was rejected by Order No. 19. (CIB at 41.) It also argues that there is uncontroverted expert testimony establishing that claims 9, 20, and 22 add new limitations. (*Id.* at 41-42 (citing CX-0457C at Q/A 11).)

Staff agrees that the claims are not invalid under § 305. (SIB at 40-41.) Staff asserts that claims 22 and 23 "add a solenoid limitation not present in claim 2" and therefore "restrict, rather than broaden, claim 2." (*Id.* at 41.) Staff also contends that Respondents' argument as to claim 9 "instead relates to a written description argument because a limitation was added that further limited claim 9." (*Id.*)

The evidence shows that claims 9 and 22 narrow the scope of the invention, rather than broaden it. Claim 9 adds a new limitation of requiring the tap for continuously monitoring be through the valve enclosure assembly and into the interior of the air chamber. (CX-0457C at Q/A 11.) Claim 22 adds the limitation that the improved valve enclosure assembly includes "at least one solenoid configured to operate a valve, wherein the at least one solenoid is at least partially received within the air chamber of the enclosure." (*Id.*) While it is true that a claim can be considered "broader than the original claims even though it may be narrower in [some] respects," *see In re Freeman*, 30 F.3d at 1464, Respondents' conclusory arguments do not constitute clear and convincing evidence that the claims 9 and 22 are broader than claim 2.

Accordingly, the undersigned finds that claims 2, 9, 20[9] and 22 are not invalid under 35 U.S.C. § 305.

3. Anticipation

Respondents assert that claims 2, 6, 9, 12, 16, 20, 22, and 24 are invalid under 35 U.S.C. § 102 in view of U.S. Patent No. 5,044,029 ("Vrzalik").

a) "Pressure monitor means" - Claim 2, 6, 12, 16, 20, 22, and 24[10]

Respondents assert that Vrzalik discloses "pressure monitor means." The structure of "pressure monitor means" was identified as "a port in fluid communication with the interior of the valve enclosure assembly designed to receive a tube, a tube connected to the port and to a pressure sensor for conveying the bladder pressure from the valve enclosure assembly to the pressure sensor, and the pressure sensor operatively coupled to a processor." (Order No. 19 at 9.) Respondents identify the valve enclosure assembly as the air box 124 of Vrzalik and the port as air chuck 212. (RIB at 40; RX-0843C at Q/A 32, 40.) Respondents argue that Vrzalik "discloses how the air chucks 212 are operably coupled to the processor and in fluid communication with the air bags 58 (air bladders) and the interior of the air box 124 enclosing the valves (valve enclosure assembly) for continuously monitoring and control of the pressure in the air bags 58." (RIB at 40 (citing RX-0843C at Q/A 41; RX-50 at 13:36-52).)

Select Comfort disagrees that Vrzalik discloses "pressure monitor means." Select Comfort argues that "Vrzalik does not disclose a port in fluid communication with the interior of the valve enclosure assembly." (CIB at 43.) Select Comfort explains that Figure 9B – the only

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[9] Although Respondents assert that claim 20 is invalid pursuant to section 305, they do not include any specific arguments in their brief. Issues not addressed in post-hearing briefs are deemed waived. (Ground Rule 11.1.)

[10] The term "pressure monitor means" is found in claims 2, 6, 12, 16, and 20 of the '172 patent. Claims 22 and 24 are dependent on claim 2. The parties agree that, although the function of "pressure monitor means" is different for claims 12 and 16, the structure for "pressure monitor means" is the same for all the claims with this term. (Order No. 19 at 9.)

figure disclosing the air chuck 212 – "shows barriers between the air chuck 212 and the air box 214," which include "at least a closed valve and coupler." (*Id.* at 43-44 (citing Friis, Tr. at 433:9-434:23, 438:19-23; CX-0457C at Q/A 33).)

Staff agrees that Vrzalik does not disclose "pressure monitor means." (SIB at 42.) Staff explains: "Vrazlik's Figure 9B shows air chuck 212, but it is not fluidly coupled to air box 124. The figure shows several barriers between the air chuck and the air box, including a full inflate plate 144, the manifold plate 145, and hose wall 176." (*Id.*)

Respondents assert that Select Comfort "elicit[s] strange arguments from representations in the drawings, [while] ignoring the clear written disclosure of the specification." (RIB at 41.) Respondents argue that "Vrzalik clearly states that the pressure measured by air chuck 212 at the associated valve is at or close to the air pressure in the corresponding air bag 58 connected thereto. . . . Thus the structural features associated with the air box 124 of Vrzalik do not prevent airflow into the air box 124 or measurement of the air pressure of an air bag 58 within the air box 124 by air chuck 212." (*Id.* (citing Friis, Tr. at 517:5-518:3, 530:15-531:15).) According to Respondents, if Select Comfort was correct that the air chuck 212 was blocked, "the device would not function." (RRB at 23 (citing Friis, Tr. at 515:2-518:3, 542:23-546:8).)

The undersigned finds that Respondents failed to establish, by clear and convincing evidence, that the air chuck 212 of Vrzalik is in fluid communication with the air box 124. Figure 9B is the only figure depicting the air chuck 212.[11] (Friis, Tr. at 432:23-433:8.) Figure 9B, however, shows several barriers between the air chuck and the air box. The evidence shows that the "air chuck 212 appears to be blocked by a section of plastic, which is part of the coupler 153." (CX-0457C at Q/A 33.) It also shows that valve 132 is closed which prevents fluid

[11] Although Dr. Friis testified that Figures 9A and 9B are cross-sections of the same item, she confirmed that the air chuck 212 is not labeled in Figure 9A. (Friis, Tr. at 531:1-15.)

communication. (*Id.*) Dr. Friis confirms that if the valve is seated and closed, then the air chuck is not in fluid communication with the interior of the air chuck. (Friis, Tr. at 438:19-23.)

Respondents and their expert, Dr. Friis do not dispute that Vrazlik's figures depict barriers between air chuck 212 and air box 124, but assert that the figures must be incorrect. (Friis, Tr. at 438:19-23, 435:5-14.) When asked about these barriers, Dr. Friis testified that Figure 9B was "misleading" and contained "mistakes." (*Id.* at 433:9-14.) During re-direct, Respondents attempted to establish that the hash marks in Figure 9B are meant to convey a penetration through the sidewall of the coupler 153, thus showing that there are not, in fact, any barriers. Dr. Friis, however, would not confirm that one of the thicker hash marks of Figure 9B indicated an opening in 153 for the air chuck 212. (*Id.* at 543:6-544:21.) Instead, Dr. Friis explained that it "could easily be interpreted as such," but hedged that it was not clear from the drawing. (*Id.* 544:17-21.) As for another thicker hash mark, Dr. Friis testified that it "could be" the illustrator was attempting to show entry into the tube. (*Id.* at 544:22-545:25.) Thus, although one must agree that the figures contain mistakes in order for Respondents to prevail in this invalidity argument, even Dr. Friis was reluctant to interpret the figure in the way Respondents wanted. Additionally, the record contains evidence that perhaps Vrzalik did not contain mistakes, but instead is a "clever" patent disclosing a method of inflating and deflating multiple parts of a bed at the same time. (*Id.* at 716:2-15.)

Dr. Friis attempts to justify her belief that Figure 9B is "strange" and contains mistakes because, in her opinion, the figure is in conflict with the specification. Dr. Friis does not produce sufficient evidence that one of skill in the art would understand that the air box 124 is in communication with the air chuck 212. (*See* CX-0457C at Q/A 33 ("Dr. Friis also fails to point to any disclosure in Vrzalik that would elaborate upon whether the air chuck 212 is in fluid

communication with the interior of air box 124.").) Instead, she simply quotes from the specification without any analysis or explanation.

First, she cites to Vrzalik at 19:7-18 of the specification. (RX-0843C at Q/A 40; RX-50 at 19:7-18.) This section states:

> An actual pressure is obtained by sensing the air pressure in the air chuck 212 (see FIGS. 8, 9A, and 9B) corresponding to the particular valve 128, 130*a* and 130*b*, 132*a* and 132*b*, or 134*a* and 134*b*, which is at, or close enough to the air pressure in the air bags 58 which are inflated or deflated by opening or closing that valve to provide an air pressure measurement that can be compared to the theoretical pressure to allow any necessary adjustment as described below. The pressure from air chucks 212 is transmitted by air pressure lines 213 to pressure transducers (not shown) mounted in control box 198.

(RX-50 at 19:7-18.) Thus, this portion of the specification does not explicitly state that the air chuck 212 is in fluid communication with the air box 124 and there is no explanation for why one of ordinary skill in the art would understand it this way. (*See* RX-0843C at Q/A 40.)

In their brief, Respondents' attorneys attempt to provide an explanation. They state that "the structural features associated with the air box 124 of Vrzalik do not prevent airflow into the air box 124 or measurement of the air pressure of an air bag 58 within the air box 124 or air chuck 212." (RIB at 41 (citing Friis, Tr. at 517:5-518:3, 530:15-531:15).) Respondents rest only on attorney argument, however, without testimony from Dr. Friis or other evidence to support it. Respondents' first citation is to the transcript at 517:5-518:3, which indicates that if the gasket 147 blocked the valves, the invention would be inoperative. (Friis, Tr. at 517:5-518:3.) This citation does not address the other barriers, such as the coupler 153, the full inflate plate 144, the manifold plate 145, or the hose wall 176. The second citation is to testimony indicating that Figures 8, 9A, and 9B are cross-sections of the same item. (*Id.* at 530:15-531:15.) Neither citation – either taken alone or together – supports the proposition that the multiple barriers depicted in Figure 9B do not prevent airflow or measurement of the air pressure.

Respondents further argue that the invention would not function if the air chuck was not in fluid communication with the air box. This argument is not supported by sufficient expert testimony, however. Although Dr. Friis testified that the air chuck would not function without an opening in 153, she merely provides a conclusory "yes," in response to a question from counsel. (Friis, Tr. at 546:6-8.) Without more, this does not amount to clear and convincing evidence.

Dr. Friis also cites to 13:36-54 of Vrzalik in support of her opinion that the air box 124 is in fluid communication with the port. (RX-0843C at Q/A 41.) This part of the specification reads:

> After all the digital inputs have been scanned, inflation control routine 292 (FIG. 16) is executed. Inflation control routine 292 determines whether valves 128, 130*a* and 130*b*, 132*a* and 132*b*, or 134*a* and 134*b* need to be opened, closed, or maintained in their present position to maintain or increase or decrease the pressure in the first or second set of air bags 58. To make that decision, inflation control routine 292 relies on analog data from the pressure transducers, baseline pressure valves, timer values and status flags which tell the routine which baseline pressure valves to use. Inflation control routine 292 sets status flags which are then read by motor valve routine 316 (FIG. 17). Motor valve routine 316 actually controls the valve motors 138 according to the decisions made by inflation control routine 292. Those decisions are communicated to motor valve routine 316 by status flags.

(RX-50 at 13:36-54.) Dr. Friis does not testify as to how this portion of the specification shows that the air box 124 is in fluid communication with the air chuck 212. (*See* RX-0843C at Q/A 41.) In fact, in her witness statement, Dr. Friis merely includes this quote from the '172 patent without any accompanying analysis or explanation. (RX-0843C at Q/A 41; *see also id.* at Q/A 40.)

For the above reasons, the undersigned finds that Respondents have not introduced clear and convincing evidence that Vrzalik discloses "pressure monitor means" and thus, does not anticipate claims 2, 6, 12, 16, 20, 22, and 24 of the '172 patent.

b) Claim 9

Claim 9 is a method claim and requires, among other things, "continuously monitoring the existing pressure in the bladder at a tap on the valve enclosure assembly, the tap defining an opening through the valve enclosure assembly and into an interior of the air chamber." Respondents assert that "Vrzalik continuously monitors the pressure in the air bag 58 (bladder) by an air chuck 212 fluidly connected to the air box 124 and a pressure transducer connected to the microprocessor 240. . ." (RIB at 43.)

Select Comfort argues that "[c]laim 9 requires that the pressure monitoring port is on the valve enclosure assembly and opens into the interior of the air chamber in the valve enclosure assembly. (CIB at 45 (emphasis in original).) It argues that "[n]one of Figs. 8-9B shows the air chuck on the air box or opening into the air box." (*Id.* (citing CX-0457C at Q/A 32-33).)

Staff does not separate the analysis of Vrzalik by claim but agrees that Vrzalik does not anticipate claim 9. (SIB at 43.)

The evidence shows that Claim 9 also requires the pressure tap to be in fluid communication with the interior of the valve enclosure assembly. (CX-0457C at Q/A 34.) As explained above, Figure 9B shows that the air chuck 212 is not on the air box 124. (*Id.*) Thus, for the reasons set forth above with respect to "pressure monitor means," Vrzalik does not anticipate claim 9.

4. Obviousness

Respondents assert seven combinations for obviousness. (RIB at 45-54.) Each of these combinations includes Vrzalik as a reference. Thus, in order to prevail on its claim that the references invalidate the '172 patent, Respondents must show that a reference other than Vrzalik discloses the "pressure monitor means" or, for claim 9, that it "continuously monitor[s] the

existing pressure in the bladder at a tap on the valve enclosure assembly, the tap defining an opening through the valve enclosure assembly and into an interior of the air chamber."

a) Vrzalik and Shafer

Respondents assert that claims 2 and 24 are invalid in view of Vrzalik in combination with U.S. Patent No. 5,652,484 ("Shafer"). (RIB at 45-46, 53; JX-0005.) Respondents assert that Shafer discloses a pump and control unit for adjusting the firmness of an air mattress, as well as guides and stops. (RIB at 46.) Additionally, Respondents assert Shafer "discloses a pressure monitor means . . . for continuously monitoring the air pressure in an air bladder." (*Id.*)

Select Comfort asserts that "Vrzalik fails to disclose multiple elements" of the asserted claim and that Shafer fails to disclose the missing elements. (CIB at 47-48; *see also* CRB at 18 (asserting that Shafer fails to disclose pressure monitor means).) Staff agrees. (SIB at 43 (explaining that "Respondents' obviousness argument is premised on the faulty basis that 'Vrzalik discloses a pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one bladder for continuously monitoring the pressure to the at least one bladder.").)

The undersigned finds that Respondents have not established that Shafer teaches the elements missing from Vrzalik. Although Respondents assert in their brief that Shafer teaches "pressure monitor means," they did not introduce any expert testimony in support of this proposition. (*See* RX-0843C at Q/A 46-51, 179-182 (opining that Shafer discloses a pump and valve enclosure assembly but offering no opinion on whether it discloses pressure monitor means).) Attorney argument with unexplained string citations to the patent does not amount to clear and convincing evidence of invalidity. *Enzo Biochem, Inc. v. Gen-Probe, Inc.*, 424 F.3d 1276, 1284 (Fed. Cir. 2005) ("Attorney argument is no substitute for evidence.")

Additionally, Respondents have not demonstrated that one of ordinary skill in the art would have motivation to combine the references. To successfully invalidate the asserted claims, Respondents must provide "an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007); *see also InTouch Techs. v. VGO Commcn's*, 751 F.3d 1327, 1351 (Fed. Cir. 2014) ("A reason for combining disparate prior art references is a critical component of an obviousness analysis.") For this combination, Respondents merely noted that one of ordinary skill in the art "would readily understand the disclosures and teachings" and "recognize the features could be combined to successfully develop" the invention of the '172 patent. (RIB at 46, 53.) Respondents did not cite to any testimony from their expert and indeed Dr. Friis did not provide anything more than conclusory statements. (RX-0843C at Q/A 22.) In contrast, Select Comfort introduced testimony explaining why one of ordinary skill in the art would not be motivated to combine the references. (CX-0457C at Q/A 40, 86).

For the above reasons, the undersigned finds that the '172 patent is not invalid due to Vrzalik in view of Shafer.

b) Vrzalik in combination with Shafer and Kery

Respondents assert that claim 6 is invalid in view of Vrzalik in combination with Shafer and U.S. Patent No. 3,784,994 ("Kery"). (RIB at 47; RX-0059.) Respondents assert that "Kery discloses an air bed with an enclosure and rear cover defining a fluidly sealed air chamber with a seal compressively interposed between the enclosure and cover." (*Id.*)

Select Comfort asserts that "Vrzalik fails to disclose multiple elements" of the asserted claim and that Shafer and Kery fail to disclose the missing elements. (CIB at 48; *see also* CRB at 18 (asserting that the combination of Vrzalik, Shafer, and Kery fails to disclose pressure monitor

means).) Staff agrees. (SIB at 44 (explaining that "Respondents' obviousness position is premised on the faulty argument that 'Vrzalik discloses a pressure monitor means being operably coupled to the processor and being in fluid communication with the at least one bladder for continuously monitoring the pressure to the at least one bladder.").)

Respondents do not assert that Kery discloses "pressure monitor means." (*See* RIB at 47; *see also* RX-0843C at Q/A 74-85, 215-222, 242-250 (Dr. Friis' testimony regarding Kery); CX-0457C at Q/A 103 (testimony from Dr. Abraham that neither Vrzalik nor Kery teach a pressure monitor means).) Because the undersigned found that Respondents did not establish that either Vrzalik or Shafer disclose "pressure monitor means," Respondents' argument that Vrzalik in view of Shafer of Kery renders the patent invalid must fail.

Additionally, Respondents have not demonstrated that one of ordinary skill in the art would have motivation to combine the references. To successfully invalidate the asserted claims, Respondents must provide "an apparent reason to combine the known elements in the fashion claimed by the patents at issue." *KSR Int'l*, 550 U.S. at 418. For this combination, Respondents merely noted that one of ordinary skill in the art "would readily understand the disclosures and teachings" and "recognize the features could be combined to successfully develop" the invention of the '172 patent. (RIB at 47.) Respondents did not cite to any testimony from their expert and indeed Dr. Friis did not provide anything more than conclusory statements. (RX-0843C at Q/A 22.) In contrast, Select Comfort introduced testimony explaining why one of ordinary skill in the art would not be motivated to combine the references. (CX-0457C at Q/A 104-106.)

For the above reasons, the undersigned finds that the patent is not invalid due to Vrzalik in view of Shafer and Kery.

c) Vrzalik and Peeler

Respondents assert that claim 9 is invalid in view of Vrzalik in combination with U.S. Patent No. 5,575,762 ("Peeler"). (RIB at 47-48; RX-0052.) Respondents assert that "Peeler regulates the pressure in inflatable air chambers at specific pressure levels by a microprocessor 42 inflation control means 40." (*Id.* at 48.)

Select Comfort asserts that "Vrzalik fails to disclose multiple steps" of the asserted claim and that Peeler fails to disclose the missing steps. (CIB at 48-49.) Staff agrees. (SIB at 45.)

The undersigned agrees that Respondents have failed to show that Peeler discloses "the tap defining an opening through the valve enclosure assembly and into an interior of the air chamber." Dr. Friis offers only a conclusory yes when asked whether Peeler discloses the limitation. (RX-0843C at Q/A 136.) She does not cite to the specification or otherwise provide any support for her opinion. (*Id.*) Additionally, on cross-examination, Dr. Friis confirmed that Figure 4 of Peeler did not show a pressure tap. (Friis, Tr. at 450:7-13.)

Additionally, Respondents have not demonstrated that one of ordinary skill in the art would have motivation to combine the references. To successfully invalidate the asserted claims, Respondents must provide "an apparent reason to combine the known elements in the fashion claimed by the patents at issue." *KSR Int'l*, 550 U.S. at 418. For this combination, Respondents merely noted that one of ordinary skill in the art "would readily understand the disclosures and teachings" and "recognize the features could be combined to successfully develop" the invention of the '172 patent. (RIB at 48.) Respondents did not cite to any testimony from their expert and indeed Dr. Friis did not provide anything more than conclusory statements. (RX-0843C at Q/A 22.).

For the above reasons, the undersigned finds that the patent is not invalid due to Vrzalik in view of Peeler.

d) Vrzalik and Cone

Respondents assert that claim 9 is invalid in view of Vrzalik in combination with U.S. Patent No. 5,591,200 ("Cone"). (RIB at 48-49; RX-0060.) Respondents assert that "Cone continuously monitors the pressure within the manifold 94 by a pressure transducer 102 in fluid communication with the manifold 94." (*Id.* at 48.)

Select Comfort asserts that "Vrzalik fails to disclose multiple steps" of the asserted claim and that Cone fails to disclose the missing steps. (CIB at 49.) Staff agrees. (SIB at 46.)

The undersigned agrees that Respondents have failed to show that Cone discloses "the tap defining an opening through the valve enclosure assembly and into an interior of the air chamber." When asked whether the tap defines an opening through the valve enclosure assembly and into the interior of the air chamber, Dr. Friis offers only a conclusory "yes." (RX-0843C at Q/A 155.) She does not cite to the specification or otherwise provide any support for her opinion. Without more, this cannot constitute "clear and convincing evidence" of invalidity.

Additionally, Respondents have not demonstrated that one of ordinary skill in the art would have motivation to combine the references. To successfully invalidate the asserted claims, Respondents must provide "an apparent reason to combine the known elements in the fashion claimed by the patents at issue." *KSR Int'l*, 550 U.S. at 418. For this combination, Respondents merely noted that one of ordinary skill in the art "would readily understand the disclosures and teachings" and "recognize the features could be combined to successfully develop" the invention of the '172 patent. (RIB at 49.) Respondents did not cite to any testimony from their expert and indeed Dr. Friis did not provide anything more than conclusory statements. (RX-0843C at Q/A

22.) Furthermore, on cross-examination, Dr. Friis confirmed Cone concerns a method of applying pressure through an air bladder to a body limb, indicating that the invention is different than an air mattress. (Friis, Tr. at 479:5-13.) Select Comfort also introduced testimony explaining why one of ordinary skill in the art would not be motivated to combine the references. (CX-0457C at Q/A 72, 76.)

For the above reasons, the undersigned finds that the patent is not invalid due to Vrzalik in view of Cone.

e) Vrzalik, Shafer, and Oexman

Respondents assert that claim 12 is invalid in view of Vrzalik in combination with Shafer and U.S. Patent No. 5,848,450 ("Oexman"). (RIB at 49-50; RX-0057.) Respondents assert that "Oexman fully discloses the pressure monitor means clause of claim 12, including pressure sensors 55-58 which generates signals in response to pressure in the lines between the valves air mattress 20." (*Id.* at 49; *see also* RRB at 23-24.)

Select Comfort asserts that the portion of the specification cited by Dr. Friis "does not describe pressure sensors in fluid communication with an interior of an enclosure." (CIB at 50 (citing CX-0457C at Q/A 115).)

Staff agrees with Select Comfort that Dr. Friis "does not show that the pressure sensors in Oexman that she contends are the pressure monitoring means of the '172 patent are inside the enclosure as required by the '172 patent claims." (SIB at 47-48.)

The undersigned agrees that Respondents have failed to show that Oexman discloses "pressure monitor means." Dr. Friis identifies Oexman at 4:54-5:8[12] as disclosing that the pressure monitor means is in fluid communication with the valve. (RX-0843C at Q/A 190.) Dr.

[12] In their reply brief, Respondents assert that the specification at 3:55-5:8 supports their position. (RRB at 23.) Dr. Friis does not testify that the specification at 3:55-4:53 discloses this, however.

Friis merely quotes the specification, however, and fails to provide any analysis or explanation as to how the cited portion supports her opinion. (*Id.*) Without more, this cannot constitute "clear and convincing evidence" of invalidity.

Additionally, Respondents have not demonstrated that one of ordinary skill in the art would have motivation to combine the references. To successfully invalidate the asserted claims, Respondents must provide "an apparent reason to combine the known elements in the fashion claimed by the patents at issue." *KSR Int'l*, 550 U.S. at 418. For this combination, Respondents merely noted that one of skill "would readily understand the disclosures and teachings" and "recognize the features could be combined to successfully develop" the invention of the '172 patent. (RIB at 49-50.) Respondents did not cite to any testimony from their expert and indeed Dr. Friis did not provide anything more than conclusory statements. (RX-0843C at Q/A 22.) In contrast, Select Comfort introduced testimony explaining why one of ordinary skill in the art would not be motivated to combine the references. (CX-0457C at Q/A 116.)

For the above reasons, the undersigned finds that the patent is not invalid due to Vrzalik in view of Shafer and Oexman.

f) Vrzalik and Kery

Respondents assert that claims 16 and 20 are invalid in view of Vrzalik in combination with Kery. (RIB at 50-51.)

Select Comfort asserts that "Vrzalik fails to disclose multiple elements" of the asserted claim and that Kery fails to disclose the missing elements. (CIB at 50-51; *see also* CRB at 19 (asserting that Vrzalik and Kery fail to disclose pressure monitor means.) Staff agrees. (SIB at 47.)

As discussed above, Respondents do not assert that Kery discloses "pressure monitor means." Because the undersigned also found that Vrzalik does not disclose "pressure monitor means," Respondents' argument that Vrzalik in view of Kery renders the patent invalid must fail.

Additionally, Respondents have not demonstrated that one of ordinary skill in the art would have motivation to combine the references. To successfully invalidate the asserted claims, Respondents must provide "an apparent reason to combine the known elements in the fashion claimed by the patents at issue." *KSR Int'l*, 550 U.S. at 418. For this combination, Respondents merely noted that one of ordinary skill in the art "would readily understand the disclosures and teachings" and "recognize the features could be combined to successfully develop" the invention of the '172 patent. (RIB at 50, 51.) Respondents did not cite to any testimony from their expert and indeed Dr. Friis did not provide anything more than conclusory statements. (RX-0843C at Q/A 22.) In contrast, Select Comfort introduced testimony explaining why one of ordinary skill in the art would not be motivated to combine the references. (CX-0457C at Q/A 97-100.)

For the above reasons, the undersigned finds that the patent is not invalid due to Vrzalik in view of Kery.

g) Vrzalik, Shafer, and Weinberg

Respondents assert that claim 22 is invalid in view of Vrzalik in combination with Shafer and U.S. Patent No. 3,379,214 ("Weinberg"). (RIB at 51-52; RX-0056.) Respondents assert that "Weinberg is an electromagnet valve 12 for fluid control operated by a solenoid (electromagnet coil 14"). . . .The valve plunger 30 includes an insert 48 that seals against a valve seat 46 (FIGS. 1-3) within the valve body 10." (*Id.* at 51.)

Select Comfort asserts that "Vrzalik fails to disclose multiple elements" of the asserted claim and that Shafer and Weinberg fail to disclose the missing elements. (CIB at 51; *see also*

CRB at 20 (asserting that the combination fails to disclose pressure monitor means).)) Staff agrees. (SIB at 47.)

Respondents do not assert that Weinberg discloses "pressure monitor means." (*See* RIB at 50-51; *see also* RX-0843C at Q/A 253-260 (Dr. Friis' testimony regarding Weinberg).) Because the undersigned found that neither Vrzalik nor Shafer disclose "pressure monitor means," Respondents' argument that Vrzalik in view of Shafer of Weinberg renders the patent invalid must fail.

Additionally, Respondents have not demonstrated that one of ordinary skill in the art would have motivation to combine the references. To successfully invalidate the asserted claims, Respondents must provide "an apparent reason to combine the known elements in the fashion claimed by the patents at issue." *KSR Int'l*, 550 U.S. at 418. For this combination, Respondents merely noted that one of ordinary skill in the art "would readily understand the disclosures and teachings" and "recognize the features could be combined to successfully develop" the invention of the '172 patent. (RIB at 52.) Respondents did not cite to any testimony from their expert and indeed Dr. Friis did not provide anything more than conclusory statements. (RX-0843C at Q/A 22.) In contrast, Select Comfort introduced testimony explaining why one of skill would not be motivated to combine the references. (CX-0457C at Q/A 86, 123.)

For the above reasons, the undersigned finds that the patent is not invalid due to Vrzalik in view of Shafer and Weinberg.

VI. U.S. PATENT NO. 7,389,554

A. Overview

1. Asserted Claims

Select Comfort is asserting claims 1, 5, 6, 16, and 26, which read as follows:

1. An air sleep system having an upper air posturizing sleep surface comprising: (a) an upper mattress air posturizing module having a pair of adjustable air posturizing sleep surfaces, said module including; first and second individually adjustable air chambers arranged side-by-side, a first moveable posturizing section which includes said first air chamber, a second moveable posturizing section which includes said second air chamber, a first mattress case encasing said air first and second air chambers, (b) a split mattress base module supporting said air posturizing module including; first and second individually moveable base sections supporting and corresponding to said first and second posturing sections, a split second mattress case encasing said first and second base sections, and (c) an operator for raising and lowering said first and second posturing sections and said first and second base sections individually to desired inclined positions.

5. The system of claim 1 wherein said first split mattress case includes a medial split defining first and second case sections in which said first and second air chambers are received.

6. The system of claim 5 wherein said second mattress case includes a medial split defining first and second case sections in which foam supports are received.

16. An air sleep system having an upper air posturizing module, and a lower base module supporting said posturizing module, said posturizing module comprising: a pair of adjustable air posturizing sleep surfaces; first and second individually adjustable air chambers arranged side-by-side in said air posturizing module; a first individually elevatable posturing section which includes a length of said first air chamber; a second individually elevatable posturing section which includes a length of said second air chamber; a third non-elevatable posturing section including a length of each said first and second air chambers; an operator for moving said first and second posturizing sections individually to a desired inclined position; whereby individual air posturizing sleep surfaces are provided by first and second upper individually incline adjustable and air adjustable posturizing sections, and a stationary, air adjustable lower posturizing surface.

26. A high-profile air sleep system having an upper air posturizing sleep surface comprising: (a) an upper mattress air posturizing module having an adjustable air posturizing sleep surface, said module including: an air posturizing assembly having first and second individual adjustable air chambers arranged generally side-by-side providing individual adjustable air posturizing sleep surfaces, and a first mattress case encasing said air posturizing assembly; (b) a mattress base module supporting said air posturizing module which includes: a resilient foam foundation assembly for providing mattress cushioning,

and a second mattress case encasing said foam foundation assembly; and (c) a fastener securing said first and second mattress cases together so that said mattress posturizing module and said mattress base module form and integral mattress structure; whereby said mattress air posturizing module and said mattress base module provide an overall high-profile mattress design with an upper adjustable air posturizing sleep surface.

2. Claim Construction

Order No. 19 adopted the parties' agreed-upon construction for the following terms:

TERM	CLAIM(S)	CLAIM CONSTRUCTION
"air posturizing sleep surface[s]"	1, 16, and 26	"the topmost surface of the upper air posturizing module"
"air posturizing module"	1, 16, and 26	"a module which includes an air posturizing sleep surface, and an air posturizing assembly which has air chambers"
"air posturizing assembly"	26	"an assembly in the air posturizing module that includes air chambers"
Preamble	16	The preamble is limiting

(*Id.* at 19.) Order No. 19 also construed the following disputed claim terms:

TERM	CLAIM(S)	CLAIM CONSTRUCTION
"non-elevatable posturing section"	16	"a length of both the first and second air chambers that cannot be elevate."
"adjustable lower posturizing section"	16	Plain and ordinary meaning
Preamble	1 and 26	The preamble is limiting

(*Id.* at 19-29.)

Although none of the parties identified "first case" or "second case" as terms requiring construction, Select Comfort now argues that Respondents and Staff "want to replace the claim language 'first mattress case' by defining it as an 'upper mattress case,' which is improper and not supported by the specification. (CIB at 53-54; CRB at 20-28.) Select Comfort states: "The language of claim 1 is clear, the mattress must include a first case (as in case 1) and the first case (not a top cover, but a first case) must only encase the first and second air chambers. The claims

do not require that the first case is the cover. Claim 1 is also clear that the second case (as in case 2) must encase the first and second base sections." (CIB at 53-54; *see also* CRB at 20-28.)

The undersigned does not believe an actual claim construction dispute exists with respect to "first case" or "second case." As the Federal Circuit has stated, "[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *See Phillips*, 415 F.3d at 1314. This is one of those cases. Rather, the dispute centers on whether claim 1 covers the accused products and therefore is a question of infringement, not claim construction.

As discussed in detail *infra*, the accused products do not infringe claim 1 (or the other asserted claims) of the '554 patent. (*See* Section VI.B.1.a.) In reaching this determination, the undersigned considered Select Comfort's argument that "the claim language . . . only requires that the first mattress case 'encas[e] said air first and second air chambers'" and found it unpersuasive. The reason is simple – Select Comfort's argument ignores the entirety of the claim language. (JX-0002 at 7:25-40 ("What is claimed is" 1. An air sleep system having an ***upper air posturizing sleep surface*** comprising: (a) an ***upper mattress air posturizing module*** having a pair of adjustable air posturizing sleep surfaces, said module including; first and second individually adjustable air chambers arranged side-by-side, a first moveable posturizing section which includes said first air chamber, a second moveable posturizing section which includes said second air chamber, a first mattress case encasing said air first and second air chambers.") (emphasis added).) The "first mattress case" is listed as one of the subcomponents of the "upper mattress air posturizing module." (*Id.*) Thus, while it is true that the "first mattress case" must contain the "air chambers," the air chambers must also be within the "upper posturizing module"

as the claim was drafted. (*Id.*) In addition, the undersigned agrees with Staff that the illustrations Select Comfort relies on to support its argument are "unmoored from the language of the claim, specification, and drawings of the '554 patent." (SIB at 56.) The claims, specification, and drawings of the '554 patent disclose two mattress cases, but they never refer to the second case as part of the first case. (*See generally* JX-0002; s*ee also* Abraham, Tr. at 264:15-265:19.)

3. Accused Products

Select Comfort alleges that the following products manufactured and sold by Respondents infringe the '554 patent: the PC Flexhead models A4 (claim 16 only), A5, A6, A7, A8, A10, H9 and H11 and the corresponding Instant Comfort FlexHead models 4500, 5500, 6500, 7500, 8500, 9500, 10k3, Hybrid 3000 and Hybrid 4000. (CIB at 55-56.) Select Comfort also alleges that the Sizewise Harmonize models infringe claim 26. (*Id.* at 55, 57.)

While the Instant Comfort FlexHead models 4500 and 10k3 are alleged to infringe the '554 patent, Select Comfort never discusses these models in the infringement section of its post-hearing briefs. (*See* CIB at 57-72.) Dr. Abraham's testimony similarly fails to address these models. (*See, e.g.*, CX-0456C at Q/A 184.) The undersigned therefore finds that Select Comfort has not shown by a preponderance of the evidence that the Instant Comfort FlexHead models 4500 and 10k3 infringe the asserted claims of the '554 patent.

In addition, the undersigned notes that Select Comfort did not accuse the Sizewise Harmonize models of infringing claim 26 in its pre-hearing brief. (*Compare* CPHB at 8-9, 322 (stating "[t]he evidence presented at trial will conclusively show that each of the A10, A8, A7, A6, A5, H11, and H9, Instant Comfort model number 9500, 8500, 7500, 6500, 5500, and Hybrid 3000 and Hybrid 4000 accused products infringe, literally or under the doctrine of equivalents, each limitation of claim 26 of the '554 Patent") *with* CIB at 55, 57.) Ground Rule 8.2 provides

that "[a]ny contentions not set forth in detail" in the pre-hearing brief "shall be deemed abandoned or withdrawn." (Ground Rule 8.2.) Consequently, Select Comfort has abandoned its allegation that the Sizewise Harmonize models infringe claim 26.

B. Infringement

1. Direct Infringement

a) Claim 1

Select Comfort submits that each of the PC FlexHead A10, A8, A7, A6, A5, H11, and H9 models, the corresponding Instant Comfort FlexHead models 9500, 8500, 7500, 6500, 5500, and Hybrid 3000 and Hybrid 4000 infringe claim 1. (CIB at 57.) With the exception of the "air posturizing sleep surface" (for all accused products) and "a split second mattress case encasing said first and second base sections" (for the H9 and H11 mattresses), Respondents do not challenge Select Comfort's allegations as to the limitations of claim 1. (RIB at 56-63.) Staff believes "the evidence shows that the accused products practice the unchallenged limitations of the asserted claim[]," but not the "air posturizing sleep surface." (SIB at 51.)

For the reasons discussed *infra*, the undersigned agrees with Staff and Respondents that the accused products do not practice the "air posturizing sleep surface" limitation. As for the undisputed limitations of claim 1, the undersigned finds that the evidence confirms the accused products practice these limitations. (CX-0456C at Q/A 191-196, 200-203, 207-208.)

i. "air posturizing sleep surface"

Select Comfort asserts that the accused split top mattresses meet this limitation for each mattress has a pair of adjustable air posturizing sleep surfaces. (CIB at 66-67; CRB at 29-30.) Select Comfort contends that the posturizing effect on the sleep surface is provided by the air chambers regardless of their relative placement within the construction of the mattress. (CIB at

67.) Respondents argue that the claims require the air bladders to be in the upper posturizing module. (RIB at 56-63; RRB at 25-29.) They explain that the accused products cannot infringe as a matter of law because the air chambers are within the base or lower compartment of the mattress, not the upper most compartment. (RIB at 56-58; RRB at 28.) Staff agrees that the '554 patent requires the air bladders to be in the upper case. Staff therefore submits that the "evidence . . . does not show that the accused products have an 'air posturizing sleep surface'." (SIB at 51; *see also* SRB at 8-11.)

One of several objects of the '554 invention is to provide both an air support sleep system with an upper mattress case enclosing an air posturizing assembly and a lower mattress case supporting the air posturizing assembly. (RX-0844C at Q/A 126; JX-0002 at 2:17-23). Select Comfort appears to argue that any posturizing function contributed by an air bladder, no matter where located, falls within the '554 patent. The undersigned disagrees. To the contrary, it is the location of the air chambers that is dispositive of the issue of infringement and the '554 patent requires the air chambers to be in the upper posturizing module.

The '554 specification describes Figures 1A and 1B as the best illustration of the claimed air support sleep system.[13] (JX-0002 at 3:51-52 ("As can best be seen in FIG. 1, an air support sleep system is illustrated"). The upper air posturizing module is designated as B in Figures 1A and 1B. (*Id.* at 3:52-53.)

[13] While the specification makes reference to Fig. 1, the drawings are labeled Fig. 1A and Fig. 1B. (*See, e.g.,* JX-0002 at 3:51-52, Figs. 1A & 1B.)

Fig. 1A

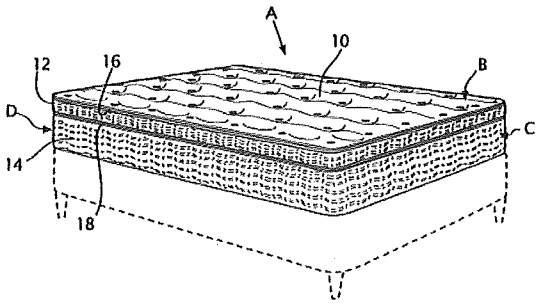
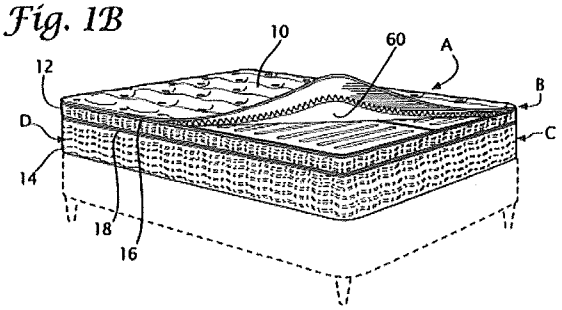


Fig. 1B



The specification further describes the upper air posturizing module as being encased by mattress case 12. (*Id.* at 3:57-59 ("A mattress case, designated generally as D, includes a upper self-contained fabric encasement 12.").) The lower mattress base module is labeled C in Fig. 1A. (*Id.* at 3:52-54.) The base module is encased by mattress case 14. (*Id.* at 3:57-59.) Each of the cases can be opened by a "releasable closure"— *e.g.*, 16 is the releasable closure for mattress case 12 and 18 is for mattress case 14. (*Id.* at 3:59-61.) Figure 1B shows mattress case 12 partially opened for "installation and removal of the air posturizing assembly." (*Id.* at 3:24-26.)

Order No. 19 construed an "air posturizing sleep surface" as "the topmost surface of the upper air posturizing module." Thus, based on this agreed-upon claim construction, the air chambers are in B because the "air posturizing module" has been defined as "a module which includes an air posturizing sleep surface, and an air posturizing assembly which has air chambers." (*See* Order No. 19 at 19.) The teachings of the '554 patent support this conclusion. (*See, e.g.,* JX-0002 at 2:17-23 ("Another object of the present invention is to provide an air

support sleep system having a multi-compartment mattress case which includes an upper low-profile fabric encasement and a lower base support encasement ***wherein an air posturizing assembly is enclosed in the upper encasement*** and a base foundation assembly enclosed in the lower fabric encasement to provide a high-profile mattress design.") (emphasis added), 2:37-45, 2:49-56.)

Figure 2, which is an exploded view of Figs. 1A and 1B confirms that air chambers 54 and 56 are in B and that B is encased in the first (or upper) mattress case. (*Id.* at 3:27-30, 3:57-59.)

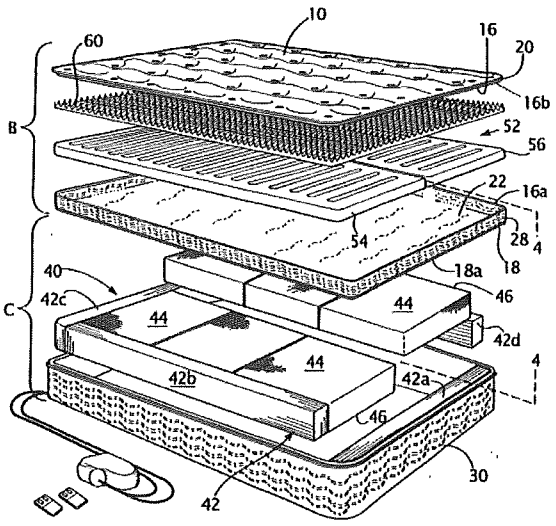


Fig. 2

As Staff correctly noted, "all of the embodiments of the '554 patent disclose a bed with an upper and lower encasement with the upper encasement housing the air chambers."[14] (SIB at 54.) For example, Fig. 5A discloses an embodiment "wherein an air posturizing sleep surface is provided which includes a pair of individually adjustable inclined sleep surfaces." (*Id.* at 3:34-39.)

[14] Conversely, none of the embodiments discloses a sleep system where the air chambers are within the base or lower compartment of the mattress. (*See generally* JX-0002.)

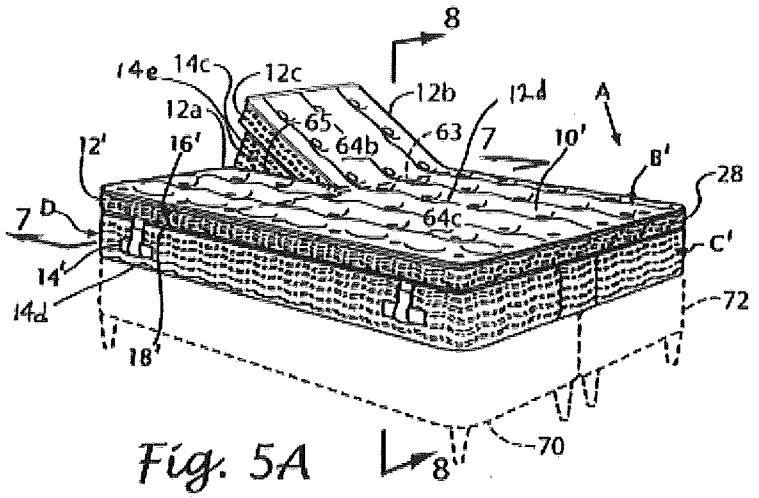


Fig. 5A

Figs. 7 and 8 are sectional views of Fig. 5A. (*Id.* at 3:42-44.) Like Figures 1A and 1B, Figs. 5A, 7, and 8 disclose a first (upper) mattress case 12' "in which first and second air chambers 54, 56 are received." (*Id.* at 6:17-20.) The second mattress case does not contain air chambers. (*Id.* at 6:20-24.) Figure 6 likewise shows that air chambers 54 and 56 are in B, which is in the first (or upper) mattress case 12. (*Id.* at 7:6-12.)

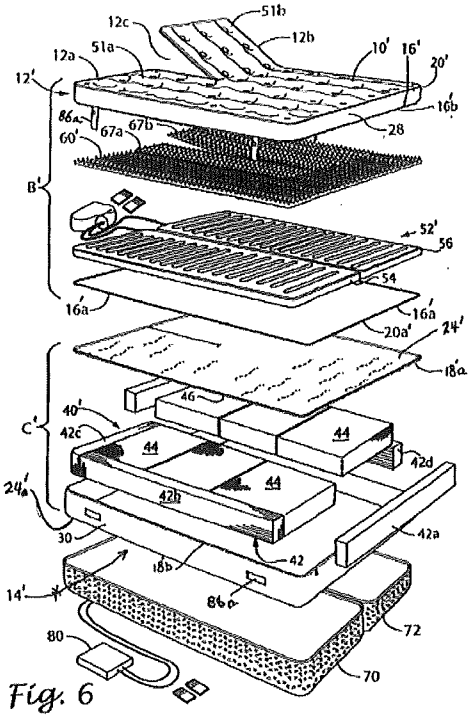


Fig. 6

The evidence establishes that the accused products do not include the claimed "air posturizing sleep surface" or "air posturizing module". (RX-0844C at Q/A 121; RPX-16.) This is because the air chambers in the accused products are in the lower or second mattress case. (*Id.*; *see also* Abraham, Tr. at 267:10-268:9; SPHB at 52 (noting that the accused products are the "polar opposite" of the '554 patent); RX-0856 at 2.) Set forth below is a side-by-side comparison of an accused product with Figure 1A from the '554 patent:

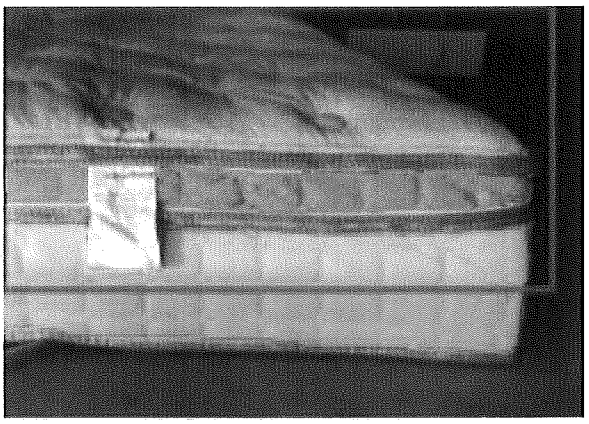
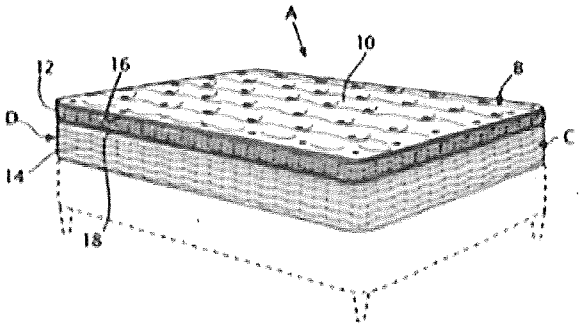
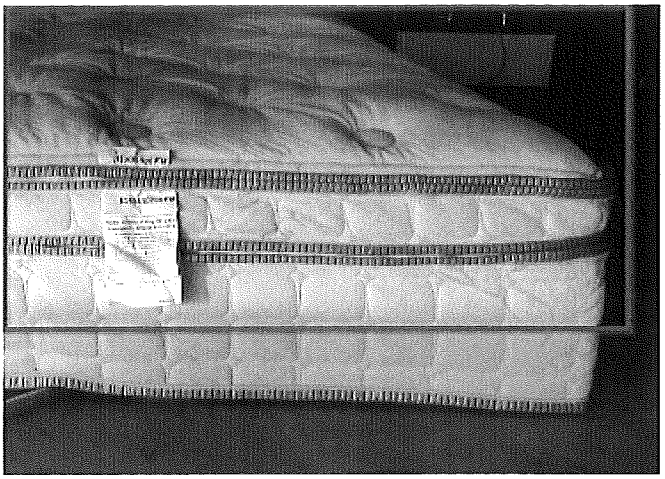


Fig. 1A



In the accused products, the blue area consists of *only* foam, whereas the '554 patent teaches that the blue area *must* contain the air chambers. (JX-0002 at Fig. 1A, 3:51-59, 7:27-39; RPX-16; RX-0844C at Q/A 121; Friis, Tr. at 855:6-19.) Likewise, while the '554 patent teaches that the yellow area should contain a base module of foam, in the accused products, the yellow area contains the air chambers. (RPX-16; JX-0002 at Fig. 1A, 3:51-59, 7:40-46; RX-0844C at Q/A 121.)

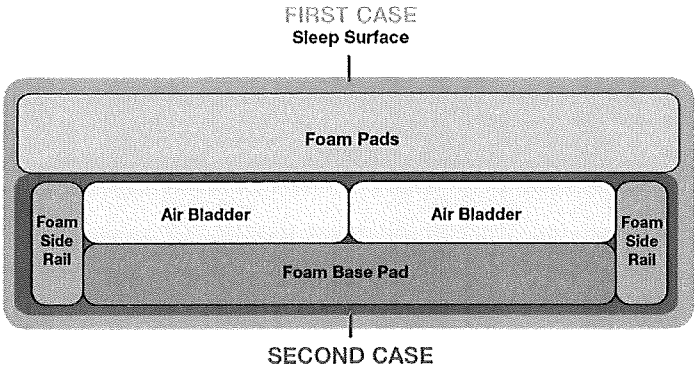
In an attempt to overcome the fact that the accused products are configured in the exact opposite manner from what is taught in the '554 patent, Select Comfort proffers a number of demonstratives to support its infringement theory. For example, CDX-0089 purports to show that the air chambers in the accused products are in the first mattress case.



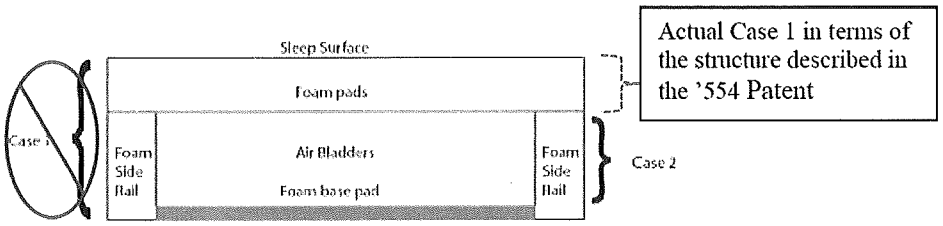
(CDX-0089.) The red box is what Select Comfort contends is the upper air posturizing module in the accused products. (*Id.*) On cross examination, however, Dr. Abraham admitted that the red line in CDX-0089 "cuts" through the air bladders. (Abraham, Tr. at 137:9-16; *see also* RX-0844C at Q/A 134 ("Dr. Abraham's diagram is a fictional reconstruction of Respondents' products that attempts to eliminate the separate encasements of Respondents' products in order to elevate the air bladder in Respondents' products into a fictional first or upper mattress case in order to find Respondents' products have a first mattress case encasing first and second air chambers.").) In fact, when Dr. Abraham examined one of the accused products at the hearing (RPX-16), he conceded that only by unzipping the lower zipper, he was able to access the air bladders and protective foam underneath the bladders. (*Id.* at 138:25-139:9; *see also* RPX-16.) Dr. Abraham also acknowledged that by opening the topmost zipper of RPX-16, he was only able to access the foam comfort layers and could not access the air bladders. (*Id.* at 139:21-140:13). In addition, Dr. Abraham admitted that after completely unzipping the lower zipper, the upper compartment with the foam layers would be removable as an intact single unit. (*Id.* at 139:10-18).

Select Comfort relied on CX-0274 to show that the accused products include "a first mattress case encasing said first and second air chambers" or in other words, that the air

chambers can be anywhere in the sleep system because anything can constitute the first case. (*See* CIB at 59.)



As previously discussed and as the diagram below illustrates, this is contrary to what the '554 patent discloses, as well as the express language of the asserted claims. (*See* Section V1.A.2.)



(RX-0884C at Q/A 134.) While the '554 patent does disclose two mattress cases, it never refers to the second case as part of the first case. (*See generally* JX-0002; *see also id.* at 3:61-63 (even when discussing a configuration in which the first and second cases are connected, the patent does not describe the second case as part of the first case); Abraham, Tr. at 264:15-265:19.) The evidence also shows that there is no double encasement of the accused products where a mattress cover or ticking envelops both the base module with air chambers and the upper foam module into a complete unit. (RX-0844C at Q/A 196; *see also* RPX-16.)

For the reasons set forth above, the undersigned finds that Select Comfort has failed to establish that the accused products practice the "air posturizing sleep surface" limitation. Accordingly, the accused products do not infringe claim 1 of the '554 patent.[15]

b) Claims 5 and 6

Since claims 5 and 6 depend from claim 1, claims 5 and 6 are not infringed. *See Muniauction*, 532 F.3d at 1328-29 n.5 ("A conclusion of noninfringement as to the independent claims requires a conclusion of noninfringement as to the dependent claims.").

c) Claim 16

Select Comfort argues that each of the PC Flexhead A10, A8, A7, A6, A5, A4, H11, and H9 split top models and the corresponding Instant Comfort split top models infringe claim 16. (CIB at 65-69.) Respondents and Staff disagree. (RIB at 64-67; SIB at 60-64.)

Claim 16, like claim 1, includes the term "air posturizing sleep surface." For the reasons stated above in the discussion of claim 1, claim 16 is not infringed because Select Comfort did not establish that the accused products practice the "air posturizing sleep surface" limitation.

i. "a third non-elevatable posturing section"

Claim 16 contains the additional limitation "a third non-elevatable posturing section." (JX-0002 at 8:61-62.) The parties dispute whether the accused products have this limitation. Select Comfort argues that the third non-elevatable posturing section is a "fulcrum." (CIB at 67-68; CRB at 30-31.) Both Respondents and Staff disagree and submit that the evidence unequivocally shows the accused products have third sections that elevate. (RIB at 64-67; RRB

[15] Although Select Comfort alleged that the accused products infringe claim 1 "literally or under DOE," it only discussed the doctrine with respect to the H9 and H11 mattresses and "a split second mattress case encasing said first and second base sections" limitation. (*See* CIB at 57, 61-62.) Since it has already been determined that all of the accused products lack an "air posturizing sleep surface," the undersigned need not decide whether the H9 and H11 mattresses meet the "a split second mattress case" limitation under the doctrine of equivalents.

at 29-30; SIB at 61-64; SRB at 11-14.) For the reasons discussed below, the undersigned is not persuaded by Select Comfort's "fulcrum" argument.

Select Comfort's position that the third non-elevatable posturing section is a "fulcrum" is contrary to the specification, drawings, and claims of the '554 patent. The specification describes the first, second, and third posturing sections as having a "length" of at least one air chamber:

> A first individually elevatable module section ***includes a length of the first air chamber***; and a second individually elevatable module section ***includes a length of the second air chamber***. A third non-elevatable module section ***includes a length of each of the first and second air chambers***.

(JX-0002 at 2:59-64 (emphasis added).) The specification and drawings further define the third posturing section as the area **below** the "fulcrum." (*Id.* at 6:28-31 ("A third module case section 12*d*, defined below the first and second sections, generally at line 63, commonly encases the remaining length of the first and second air chamber (FIG. 5A).").) In other words, the patent identifies the third posturing section as being below the area Select Comfort identifies as the third posturing section. Figure 5A confirms that the "non-elevatable posturing section" is indeed the section below the first and second posturing section and not merely the fulcrum (63), as Select Comfort alleges.[16]

[16] In Figure 5A, 12*d* is identified as the large section below line 63.

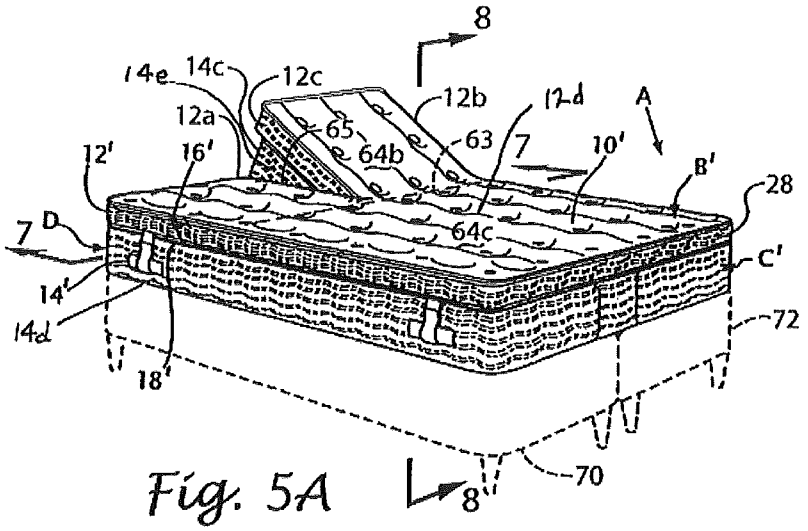


Fig. 5A

Dr. Abraham agrees.[17] (Abraham, Tr. at 271:2-24 (admitting that the patent describes all of section 12*d* as the third non-elevatable posturing section, not line 63).)

Furthermore, the evidence adduced at the hearing shows that the foot section of the accused beds is elevatable. (Abraham, Tr. at 178:5-180:8, 272:15-273:20; JX-0114 (brochure showing an accused bed with an elevated third section); RPX-16; RX-0848C at Q/A 1-3, 142, 143, 146 (referencing a third section that articulates).)

The undersigned therefore finds that the accused products do not infringe claim 16 for the additional reason that they lack "a third non-elevatable posturing section."

d) Claim 26

Select Comfort argues that the PC Flexhead A10, A8, A7, A6, A5, H11, and H9 split top models and the corresponding Instant Comfort split top models infringe claim 26. (CIB at 69-72.) Respondents and Staff disagree. (RIB at 68-69; SIB at 64-66.)

[17] On cross-examination, Dr. Abraham also admitted that a "fulcrum" is defined by a line in a three-dimensional object, and a line cannot define a surface. (Abraham, Tr. at 297:11-23.)

Claim 26, like claim 1, includes the term "air posturizing sleep surface." For the reasons stated above in the discussion of claim 1, claim 26 is not infringed because Select Comfort did not establish that the accused products practice the "air posturizing sleep surface" limitation.

i. "high-profile"

Claim 26 also contains a limitation of providing a "high-profile" air sleep system. Respondents argue that the A4, A5, A6, A7, and A8 accused products do not meet this limitation. (RIB at 68-69; RRB at 31.) Staff concurs. (SIB at 64-66.)

The "high-profile" limitation appears both in the preamble and in the body of claim 26. (JX-0002 at 10:9-10, 27-30.) The specification defines a high-profile mattress as "i.e., one that is about 15″ in height . . . ." (JX-0002 at 1:56-57.) Select Comfort nonetheless argues that 11 inches is considered high profile. (CIB at 72 (citing CX-0456C at Q/A 254 (Dr. Abraham stating that the A6 product measures 11 inches high "which [he] understand[s] to be a high profile mattress design").) As both Respondents and Staff correctly noted, it is Select Comfort who bears the burden of proving that the accused mattresses satisfy each limitation of an asserted claim. *Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co.*, 204 F.3d 1360, 1364 (Fed. Cir. 2000). Beyond a conclusory statement from Dr. Abraham, Select Comfort fails to provide any evidence explaining why a person of ordinary skill in the art would consider 11 inches to be "about 15" inches in height.[18] The undersigned therefore finds that Select Comfort has failed to establish that the accused products are "high-profile" mattresses.

2. Indirect Infringement

Select Comfort alleges that Respondents induce infringement by providing their customers with the components and instructions on how to assemble a bed. (CIB at 72-73.)

[18] Except for the A7 mattresses, Dr. Abraham admitted that he did not measure the height of any of the other accused products. (Abraham, Tr. at 163:18-166:15.)

However, the undersigned has found hereinabove that the accused products do not infringe any of the asserted claims. Select Comfort therefore cannot, as a matter of law, prove induced infringement. *See BMC Res.,* 498 F.3d at 1379 (direct infringement must first be established in order for a claim of indirect infringement to prevail); *see also Novartis Pharm. Corp. v. Eon Labs Mfg. Inc.,* 363 F.3d 1306, 1308 (Fed. Cir. 2004) ("When indirect infringement is at issue, it is well settled that there can be no inducement or contributory infringement absent an underlying direct infringement.").

Accordingly, the undersigned finds that Select Comfort has failed to show that Respondents indirectly infringe the asserted claims of the '554 patent.

C. Domestic Industry – Technical Prong

Select Comfort asserts that the following products practice the '554 patent: [1] the Sleep Number FlexTop Mattresses models i8, i10, iLE, x12, m6, m7; and [2] the Comfortaire Mattresses models U11 and U15. (CIB at 54.) According to Select Comfort, the Sleep Number i8 is representative of all of the '554 domestic industry ("DI") products. (*Id.*)

1. Claim 1

Select Comfort contends that the Sleep Number i8, i10, iLE, x12, m6, m7, and Comfortaire U15 practice each limitation of claim 1. (CIB at 74-77.) Respondents dispute that Select Comfort satisfies the technical prong. (RIB at 69.) They explain that Select Comfort's DI products do have an "air posturizing sleep surface" because the products "have no air chambers in the [*sic*] uppermost compartment of the mattresses—instead the air chambers are found in the base module of their products." (RIB at 69.) In Staff's view, the evidence does not show that Select Comfort's DI products practice claim 1. (SIB at 66-67.)

As detailed in Section VI.B.1.a, the '554 patent requires that the air bladders/chambers be housed in the upper most compartment of the mattress. Like with the accused products, Select Comfort's domestic industry argument is premised on its definition of a "first" mattress case that also includes the "second" mattress case. The undersigned has already rejected this "definition." (*See* Sections VI.A.2, VI.B.1.a.)

The evidence shows that air bladders in the i8[19] are in the lower mattress case and as such, do not practice the "air posturizing sleep surface" limitation. (RX-0844C at Q/A 121.) In particular, Dr. Friis conducted a teardown of the i8 and documented the teardown with photographs. (*Id.*) Those photographs establish that the air chambers are in the lower mattress case. On cross-examination, Dr. Abraham admitted that the i8 has two compartments and that the air bladders are in the lower compartment. (Abraham, Tr. at 254:19-256:23.)

Because Select Comfort has failed to establish that its DI products practice claim 1, it cannot satisfy the technical prong of the domestic industry requirement for the '554 patent.

2. Claim 16

Select Comfort argues that the Sleep Number i8, i10, iLE, x12, m6, m7, and Comfortaire U 11 and U15 practice each limitation of claim 16. (CIB at 77-79.) Respondents and Staff disagree. (RIB at 69-70; SIB at 68.)

Claim 16, like claim 1, includes the term "air posturizing sleep surface." For the reasons stated above in the discussion of claim 1, the '554 DI products do not practice claim 16 because they do not meet the "air posturizing sleep surface" limitation.

[19] Dr. Abraham has testified that the Sleep Number products have the same general mattress construction. (CX-0456C at Q/A 381.)

3. Conclusion

The undersigned has determined that the '554 domestic industry products do not practice either claim 1 or 16. Accordingly, Select Comfort has not satisfied the technical prong of the domestic industry requirement for the '554 patent.

D. Validity

1. Indefiniteness

a) "posturizing"

Respondents contend that the term "posturizing" in claims 1, 5-6, 16, and 26 is indefinite under 35 U.S.C. § 112(b) as the term is not readily understood when read in view of the specification. (RIB at 70-71.) Respondents claim that Mr. Rose, the named inventor, was not able to set forth an understanding of the word as used in his own patent and that "[t]his equivocation means either that the term is indefinite and the associated claims invalid, or that Mr. Rose is not the true inventor of the subject matter of the '554 Patent." (*Id.*) Select Comfort asserts that Respondents have not shown by clear and convincing evidence that the term "posturizing" is indefinite. (CIB at 79-80; CRB at 33.) Staff concurs. (SIB at 68-69.)

As the Supreme Court stated in Nautilus, "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus*, 134 S. Ct. at 2124. Patents are presumed valid, so indefiniteness, like all invalidity defenses, must be shown by clear and convincing evidence. *Microsoft Corp.*, 131 S.Ct. at 2242.

As an initial matter, the undersigned notes that the agreed-upon construction for "air posturizing module" and "air posturizing assembly" include the term "posturizing." (Order No. 19 at 19.) In view of these agreed-upon constructions, Respondents cannot logically assert that

one of ordinary skill in the art would not understand what "posturizing" means. In fact, Respondents' own expert never opined that this term is ambiguous or would not be understood by a person of skill in the art. (*See* RX-0843C at Q/A 280 (only testifying as to obviousness).) To the contrary, the evidence adduced at trial shows that both experts clearly understood the meaning of "posturizing". (Friis, Tr. at 859:3-8; Abraham, Tr. at 123:20-124:3, 190:1-19.) Moreover, the '554 patent explicitly describes "posturizing" as "the support of the back in its proper position." (JX-0002 at 1:50-51.) The undersigned therefore finds that Respondents have not presented clear and convincing evidence that the term "posturizing" in claims 1, 5-6, 16 and 26 is indefinite.[20]

b) "lower" and "following"[21]

Respondents assert that if the accused products are found to infringe Claim 16 due to having a "non-elevatable section," then claim 16 is indefinite under 35 U.S.C. § 112(b). (RIB at 71 (arguing that the claimed "lower" of the "lower posturizing surface" fails to provide a clear indication of the scope the claim).) Both Select Comfort and Staff submit that Respondents have not shown by clear and convincing that the claim term "lower" and "following" are indefinite. (CIB at 80; CRB at 33; SIB at 69.)

The undersigned has previously found that the accused products do not infringe claim 16 and thus, Respondents' allegation is moot. (*See* Section VI.B.1.c.) Nevertheless, the undersigned notes that Dr. Friis failed to provide an opinion to support Respondents' argument, that Dr. Abraham testified as to the plain and ordinary meaning of "adjustable lower posturing section,"

[20] While Mr. Rose may have had "difficulty" articulating what "posturizing" means, inventor testimony is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Phillips,* 415 F.3d at 1318.

[21] Although Respondents allege that the term "following" is indefinite, they do not provide any argument or analysis to support this assertion in their post-hearing briefs. (*See* RIB at 71.)

and that the specification and figures of the '554 patent describe the "lower posturizing surface" in detail. (Abraham, Tr. at 187:9-16; JX-0002 at 2:59-3:2, Fig. 5A.)

c) "a mattress base module supporting said air posturing module which includes"

Respondents contend that claim 26 is indefinite under 35 U.S.C. § 112(b) in that the claimed "mattress base module supporting said air posturing module which includes. . ." is unclear because the patent "never clearly delineates whether the remaining elements of clause (b) are part of i) the mattress base module, or ii) the air posturing module." (RIB at 71-72.) Select Comfort and Staff both dispute that claim 26 is invalid as indefinite. (CIB at 80; CRB at 33; SIB at 69.)

As noted above, it is Respondents burden to prove by clear and convincing evidence that claim 26 is invalid as indefinite. *Microsoft Corp.*, 131 S.Ct at 2242. Here, Respondents make nothing more than a one-paragraph cursory argument. (RIB at 70-71.) They cite to no evidence or expert opinion to support their contention. (*Id.*) The undersigned therefore finds that simply making superficial assertions and conclusory arguments is insufficient for Respondents to meet the clear and convincing standard necessary to invalidate claim 26 of the '554 patent.[22]

2. Obviousness

a) Claim 1

Respondents assert that claim 1 is invalid as obvious in view of U.S. Patent No. 6,079,065 to Luff et al. ("Luff"), in combination with Kingsdown Passion Collection (collectively, "Kingsdown") and U.S. Patent No. 2,702,090 to Atkins ("Atkins"). (RIB at 72-74 (citing RX-0069; RX-0066C; RX-0067C; RX-0068C; RX-0080).) They contend that Luff, which

[22] The undersigned notes that Dr. Friis never opined that this phrase is ambiguous. Moreover, the undersigned finds that the specification adequately describes this phrase such that a person of skill in the art would have a clear indication of the scope of the subject matter of the claim. (*See* JX-0002 at Fig. 2, 5:8-17.)

is directed to a bed assembly with a movable frame supporting an air mattress, discloses all of the elements of the first clause of claim 1. (*Id.* at 72-73.) Respondents assert that the remaining elements of claim 1 are disclosed by Kingsdown and Atkins. They explain that Kingsdown is directed to a split-head adjustable bed having a split upper mattress, a split mattress base, and an operator" while Atkins is directed to "a bed with a split box spring 11 individually encased supporting a split mattress 12 individually encased, each with a pair of independently moveable head portions 15 and 16 similar to the claimed first and second moveable posturizing sections of claim 1." (*Id.* at 73.)

Respondents submit that Luff, Kingsdown, and Atkins are relevant and analogous prior art to the subject matter of claim 1 in that they pertain to adjustable beds with air bladders that provide an air posturizing sleep surface, beds with splits allowing each of two head sections of the upper mattress, and base mattress to be elevated using mechanical actuation or an operator. (*Id.* at 73-74.) According to Respondents, a person of ordinary skill in the art would therefore interpret the teachings of Luff, in view of Kingsdown, and in further view of Atkins to develop an air sleep system having an upper air posturizing sleep surface module with an upper mattress containing side-by-side air bladders providing first and second posturizing sections in a mattress case, a split base module with a split mattress case supporting the air posturizing module, and an operator for raising and lowering the posturing and base sections individually. (*Id.*)

Select Comfort disputes that Respondents have proven by clear and convincing evidence that claim 1 is invalid over the combination of Luff, Kingsdown, and Atkins. (CIB at 81-82; CRB at 33-34.) Select Comfort contends that there is no evidence that a person of ordinary skill in the art would be motivated to combine these references. (CIB at 81.) It points to Dr. Abraham's testimony describing significant differences in Luff, Kingsdown, and Atkins such

"that a POSITA would not be motivated to combine these references absent influence from the '554 Patent, an impermissible hindsight reconstruction." (*Id.*) Select Comfort insists that even if these references were combined, the combination would not disclose all elements of the claims. (CIB at 82; CRB at 34.) Specifically, Select Comfort argues that the box spring of Atkins cannot satisfy the lower base module limitation because the '554 patent distinguishes the lower base module from the equivalent of a box spring. (CIB at 82.) Select Comfort also does not believe the combination discloses a first case and a second case. (*Id.*)

Staff agrees with Select Comfort. (SIB at 69-70.) In Staff's view, the evidence does not show that Luff, in view of Kingsdown, in further view of Atkins render claim 1 of the '554 patent invalid as obvious. (*Id.*)

The undersigned finds that Respondents have not established that the combination of Luff, Kingsdown, and Atkins discloses all the elements of claim 1. As an initial matter, Respondents wrongly assert that Dr. Friis opined on this particular combination. (RIB at 72 ("Dr. Friis testified that the combination of Luff, Kingsdown, and Atkins discloses all elements of claim 1.).) In fact, Dr. Friis never addressed Luff, Kingsdown, and Atkins, but rather "the combination of Price, in view of Kingsdown, in further view of Luff, in further view of Cerulean, and in further view of Atkins." (*See* RX-0843C at Q/A 285.) Regardless, the asserted combination does not disclose a lower base module or the first and second cases as required by claim 1. (CX-0457C at Q/A 169.) Dr. Friis points to the box spring 11 of Atkins to satisfy the base module limitation. (CX-0843C at Q/A 316; RX-0080). As Dr. Abraham explained, the '554 patent distinguishes between the claimed lower base module and a "foundation" such as a box spring. (CX-0457C at Q/A 144, 162; JX-0002 at 5:47-57.) Thus, a box spring cannot be the lower base module of the '554 patent. (CX-0457C at Q/A 144.) Dr. Friis does not cite to

anything in any of the references as disclosing the first and second cases. (RX-0843C at Q/A 312-317; CX-0457C at Q/A 159.)

Respondents have also not demonstrated that one of ordinary skill in the art would have motivation to combine the references. To successfully invalidate the asserted claims, Respondents must provide "an apparent reason to combine the known elements in the fashion claimed by the patents at issue." *KSR Int'l*, 550 U.S. at 418. Dr. Friis failed to provide an explanation beyond a conclusory statement that one of ordinary skill in the art would "modify the prior art, or combine the prior art reference teachings, to arrive at the subject matter of Claim 1." (RX-0843 at Q/A 285.) In contrast, Select Comfort introduced testimony explaining why one of ordinary skill in the art would not be motivated to combine the references. (CX-0457C at Q/A 151-162, 169 (Dr. Abraham explaining that although Luff relates to an air mattress, Kingsdown is an adjustable but traditional coil and spring bed, and Atkins relates to raising and lowering a conventional mattress).)

The undersigned therefore finds that the combination of Luff, Kingsdown, and Atkins does not render claim 1 invalid as obvious.

b) Claim 5

Respondents allege that claim 5 is obvious under 35 U.S.C. § 103 in view of Luff, Kingsdown, and Atkins. Claim 5 depends from claim 1 and includes all of the limitations of claim 1. Thus, for the reasons stated above in the discussion of claim 1, the undersigned finds that Respondents have failed to show by clear and convincing evidence that the combination of Luff, Kingsdown, and Atkins renders claim 5 is invalid as obvious. *See, e.g., Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1344-1345 (Fed. Cir. 2009) (finding a dependent claim improperly held obvious when the independent claim is not obvious).

c) Claim 6

Respondents contend that claim 6 is obvious under 35 U.S.C. § 103 in view of Luff, Kingsdown, and Atkins. (RIB at 74-75.) Respondents, however, did not assert this specific combination in their pre-hearing brief. (*Compare* RPHB at 153-157 (addressing the combinations of [1] Price, Kingsdown, in further view of Price and Reeder; [2] Luff and Kingsdown in further view of Atkins and Reeder; and [3] Cerulean, Kingsdown, Atkins and Reeder) *with* RIB at 74-75.) Thus, pursuant to Ground Rule 8.2, Respondents have abandoned their allegation that Luff, Kingsdown, and Atkins render claim 6 invalid as obvious. (*See* Ground Rule 8.2 ("Any contentions not set forth in detail" in the pre-hearing brief "shall be deemed abandoned or withdrawn.").)

d) Claim 16

Respondents allege that claim 16 is obvious under 35 U.S.C. § 103 in view of Luff, Kingsdown, and Atkins. The parties reiterate essentially the same arguments they made with respect to claim 1 of the '554 patent. (*See* CIB at 81-82; RIB at 75-76; SIB at 72.)

The undersigned finds that Respondents have not proven by clear and convincing evidence that the combination of Luff, Kingsdown, and Atkins renders claim 16 obvious. First, like claim 1, Dr. Friis did not address this particular combination; rather, she testified about the "combination of Price, in view of Kingsdown, in further view of Luff, in further view of Cerulean, and in further view of Atkins." (RX-0843C at Q/A 288, 335-340.) Second, Respondents rely on nothing more than a conclusory statement by Dr. Friis to show that a person of ordinary skill in the art would be motivated to combine these references. (RX-0843C at Q/A 288.) Dr. Friis, in turn, cites to no evidence to support this proposition. (*Id.*; *see also* CX-0457C at Q/A 193 (Dr. Abraham testifying: "Dr. Friis again has not provided any motivation to

combination these references when addressing claim 16. She does not address the specific references in any form other than to name them, nor does it provide any reason to combine them.").) Lastly, for the reasons stated above in the discussion of claim 1, the asserted combination does not disclose the required lower base module. (CX-0457C at Q/A 162, 190, 193-194.)

e) Claim 26

Respondents argue that claim 26 is obvious under 35 U.S.C. § 103 in view of Luff in combination with U.S. Patent Application Publication No. 2002/0178503 A1 to Reeder ("Reeder"). (RIB at 76-77 (citing RX-0082).) Specifically, they contend that Luff discloses all the aspects of the split head mattress with separately adjustable air mattresses, while Reeder discloses a mattress structure with an upper mattress with an upper air posturizing sleep surface supported by a foam mattress base module, where the mattresses are secured together with a fastener. (*Id.*) Respondents submit that a person of ordinary skill in the art would therefore understand from the disclosure and teachings of Luff and Reeder "that foam and air bladders may be included within separate mattress cases, and such cases can be arranged to provide a sleep supporting structure to successfully develop the air sleep system of claim 26." (*Id.* at 77.)

Select Comfort asserts that Respondents have not shown by clear and convincing evidence that the combination of Luff and Reeder invalidates claim 26. (CIB at 82-83; CRB at 33-34.) Select Comfort insists there is no evidence to combine these references, noting that Respondents rely entirely on attorney argument and boilerplates statements by their expert. (CIB at 82.) In addition, Select Comfort claims that this combination would not disclose the lower base module. (*Id.* at 82-83.)

Staff, like Select Comfort, does not believe Respondents have shown that Luff and Reeder invalidate claim 26. (SIB at 72-73.) Staff contends that, contrary to Respondents' assertion, Dr. Friis did not specifically address the combination of Luff and Reeder. (*Id.* at 72.) Staff also notes that Dr. Friis failed to explain in any level of detail why a person of ordinary skill in the art would be motivated to combine these two references. (*Id.*)

The undersigned finds that Respondents have not established that Luff and Reeder disclose all the elements of claim 26. Like claims 1 and 16, Dr. Friis did not address this particular combination during her testimony. (RX-0843C at Q/A 289; *see also id.* at Q/A 350-358.) She testified as to "the combination of Price, in view of Luff, in further view of Cerulean, and in further view of Reeder." (*Id.*) Respondents therefore rely on attorney argument with citations to the prior art references to support their invalidity allegation. Attorney argument, however, does not amount to clear and convincing evidence of invalidity. *Enzo Biochem,* 424 F.3d at 1284 ("Attorney argument is no substitute for evidence.")

Respondents also did not demonstrate that one of ordinary skill in the art would have motivation to combine these references. Beyond a conclusory statement, Dr. Friis does not explain why one of ordinary skill in the art would be motivated to combine Luff with Reeder. (RX-0843 at Q/A 289.) On the other hand, Select Comfort introduced testimony explaining why one of ordinary skill in the art would not combine these references based on their significant differences. (CX-0457C at Q/A 208, 210, 214.) Moreover, the evidence shows that the asserted combination would not disclose the lower base module of claim 26. (CX-0457C at Q/A 201, 214; Friis, Tr. at 496:18-24 (admitting that Reeder is laid on a box spring or similar type of foundation).)

The undersigned therefore finds that the combination of Luff and Reeder does not render claim 26 invalid as obvious.

E. Unenforceability[23]

Respondents allege that the '554 patent is unenforceable due to the inequitable conduct of Eric Rose. (RIB at 77; RRB at 31.) Specifically, they contend that Dan Wall was the inventor of the mattress later patented by Eric Rose as the '554 invention and that Mr. Rose engaged in inequitable conduct in the procurement of the '554 patent. (*Id.* at 77-78.) Respondents explain that Dan Wall conceived of the "split top" mattress idea in 2001. (*Id.* at 78.) At the time of his idea, Mr. Wall was a dealer for Comfortaire. (*Id.*) According to Respondents, Mr. Wall approached Mr. Rose to see whether Comfortaire would make his mattress and shortly thereafter, a prototype of the mattress was assembled. (*Id.* at 78-79.) Sales of the mattress began in 2001. (*Id.* at 79.)

Respondents claim that Wall's mattress idea is copied in "almost all parts of the air posturizing module" of the '554 patent, yet Mr. Rose never disclosed Wall's conception during prosecution of the '554 patent. (*Id.* at 80-81.) They insist Mr. Rose's omissions were intentional and also material to the U.S. Patent and Trademark Office's ("PTO") decision to issue the '554 patent. (CIB at 81-82 (arguing that if the Dan Wall mattress had been disclosed the PTO would have denied at least one claim of the '554 patent); CRB at 31-35.)

In response, Select Comfort argues that "[t]here is neither evidence of materiality nor evidence (direct or circumstantial) of intent to deceive the PTO." (CIB at 84-85; CRB at 34-37.) Select Comfort contends that the Dan Wall bed was not material to patentability because it never

[23] In their prehearing brief, Respondents alleged that the '554 patent is unenforceable due to derivation of inventorship. (RPHB at 173.) In their post-hearing briefs, they make a passing reference that "Dan Wall was a co-inventor, or at least, the developer of prior art to the '554 patent." (RIB at 77.) Beyond that one sentence, they do not substantively address derivation of inventorship. Accordingly, Respondents are deemed to have abandoned this argument.

had a foam base module or a second case, which are both requirements on the claims. (CIB at 84-85; CRB at 36-37.) As to intent to deceive, Select Comfort submits that Respondents did not establish, on any level, that Mr. Rose or Comfortaire were trying to hide information from the PTO by not disclosing the Dan Wall mattress. (CIB at 85; CRB at 36-37.)

In Staff's view, "Respondents only state facts embellished with inferences, that do not amount to clear and convincing evidence, particularly because there are other plausible innocent interpretations of the key facts." (SIB at 74.)

To prove inequitable conduct, Respondents must show 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." *Therasense*, 649 F.3d at 1290.

First, Respondents have not proven that the Dan Wall mattress was material. While Respondents insist that Mr. Rose knew the Dan Wall's mattress idea was material, they cite to no evidence to substantiate their claim. (*See* RIB at 81.) Unlike the '554 patent's high-profile mattress, the Dan Wall mattress was a low-profile mattress and did not have a foam base module, second case, or a scrim for structure and stability. (CX-0452C at Q/A 29; Wall, Tr. at 827:9-11, 841:15-842:3; Rose, Tr. at 656:25-657:8, 658:6-13.) In fact, Mr. Wall testified that the only thing he believes is "his" in the '554 patent is the design of the split top cover and splitting the comfort layer. (Wall, Tr. at 834:14-835:2.) In addition, Respondents never even addressed whether the Dan Wall mattress was/was not cumulative of other art before the examiner. (*See* RIB at 77-83 (providing no analysis of the references cited during prosecution to determine if the Dan Wall mattress was in fact material).)

Respondents also have not clearly and convincingly proven that the Dan Wall mattress (DW660ST) was withheld with intent to deceive the PTO. Although Respondents assert that the

reference was knowingly withheld, the evidence does not support this assertion. In particular, the evidence shows that Mr. Rose (and Comfortaire) [redacted]. (CX-0452C at Q/A 30-32; *see also* Karr, Tr. at 324:3-10.) The undersigned agrees with Select Comfort that "[t]he most reasonable inference, if any, is that Mr. Flint was aware of the . . . Dan Wall bed[] but didn't think [it was] material to patentability needing to be submitted to the patent examiner." (CIB at 85.)

Accordingly, the undersigned finds that Respondents have failed to establish that the '554 patent is unenforceable due to inequitable conduct.

VII. DOMESTIC INDUSTRY – ECONOMIC PRONG

A. Significant Investment in Plant and Equipment (19 U.S.C. § 1337(a)(3)(A))

Select Comfort states that it currently leases seven facilities where activities related to the DI products occur. It alleges that it spent over [redacted] in rent from 2013 through 2015. Select Comfort states that 100% of the rent paid for all facilities should be allocated for the '172 patent because all products contain an air controller which practices the '172 patent. With respect to the '554 patent, Select Comfort alleges that the portion of rental payments allocated to its FlexTop mattresses and Comfortaire's U11/U15 mattresses, both of which are said to practice the '554 patent, should be based on the percentage of sales for those products in comparison to all other mattresses. Select Comfort argues that [redacted] Select Comfort's rents should be allocated to the Select Comfort FlexTop mattresses and [redacted] Comfortaire's rents should be allocated to the U11 and U15 products. Thus, Select Comfort states that [redacted] of Select Comfort's rent expenses [redacted] of Comfortaire's rent expenses [redacted] are attributable to Select Comfort's FlexTop and Split Top mattresses. Select Comfort states that Commission precedent holds that there is no need to allocate expenditures and activities among various products or models. Select Comfort argues

that its rental and equipment expenses are [redacted] each year and are for facilities where DI activities, including distribution, manufacturing, research, product development, and other services occur for the DI products. (CIB at 88-91.) Staff supports Select Comfort's position. (SIB at 78-79.)

Respondents assert that Select Comfort has not specified which costs are allocable to the '172 patent and which expenses are allocable to the '554 patent. Specifically, Respondents allege that Select Comfort has improperly combined the domestic industry articles when summarizing their purported investments and activities. It states that the products covered by the '172 patent are control units with air pumps while the products alleged to be covered by the '554 patent are split-top mattresses. Respondents note that Select Comfort is required to allocate investments and activities for each article.

Respondents' arguments are persuasive. Select Comfort currently leases seven facilities where activities related to DI products for both the '172 patent and the '554 patent occur. (CX-0445 at Q/A 27-47; CX-0449C at Q/A 38-48.) From 2013 through 2015, Select Comfort spent [redacted] in rent. (*Id.*) Each facility, its size (sq. ft.), the lease period, the rent paid from 2013 to 2016, and activities occurring in the facility, are summarized in the chart below:

Location	Lease Period	Sq. Ft.	Total Rent 2013-2015	Domestic Activities
9800 59th Ave. North Minneapolis, MN	[redacted]	[redacted]	[redacted]	SC Headquarters, corporate activities
6105 Trenton Lane North Plymouth, MN	[redacted]	[redacted]	[redacted]	SC R&D Dept., Customer Service Dept., Distribution Ctr.
630 Western Lane, Irmo, SC	[redacted]	[redacted]	[redacted]	SC Manufacturing, Assembly & Distribution Center
1020 Idlewild Blvd. Columbia, SC	[redacted]	[redacted]	[redacted]	Storage for Irmo Facility
675 N. Wright Brothers Salt Lake City, UT	[redacted]	[redacted]	[redacted]	SC Manufacturing, Assembly, and Distribution Center

Location	Lease Period	Sq. Ft.	Total Rent 2013-2015	Domestic Activities
103 Shaw Street, Greenville, SC	[redacted]	[redacted]	[redacted]	Comfortaire Headquarters - Finance, Customer Support, IT, Marketing, Supply Chain, Product Development, Inventory Control, and Sales
103 Shaw Street Greenville, SC	[redacted]	[redacted]	[redacted]	Comfortaire Factory - Manufacturing, R&D, Shipping, Receiving, Product Testing, Packaging, Inventory Storage
Total			[redacted]	

(CX-0445 at Q/A 8, 31, 35, 41, 47; CX-0449C at Q/A 13, 42, 48, 54.) Select Comfort states that all of the [redacted] of its rent paid for its facilities should be allocated to the '172 patent DI products because all products include an air controller which practices the '172 patent. (CX-0445 at Q/A 21; CX-0449C at Q/A 27; CIB at 89.) However, Select Comfort also argues that *these same* [redacted] in rental payments should be divided between the Select Comfort mattresses [redacted] and Comfortaire mattresses [redacted] Of Select Comfort's total rents of [redacted], Select Comfort argues that [redacted] should be allocated to the Select Comfort FlexTop mattresses which are alleged to practice the '554 patent. Of Comfortaire's total rents of [redacted] Select Comfort argues that [redacted] should be allocated to Comfortaire's U11 and U15 SplitTop mattresses which are alleged to practice the '554 patent. (CX-0445 at Q/A 75, 78; CX-0449C at Q/A 61-62; CIB at 90-91.) Thus, Select Comfort makes no attempt to allocate what portion of the [redacted] in rents is attributable to the '172 DI products and what portion of the [redacted] in rents is allocable to the '554 DI products. While the Commission has stated that a precise allocation of expenses among various DI products is not necessary, that precedent cannot mean that Select Comfort's proposed allocation is acceptable; *i.e.* allocating 100 % of the rental expenses to the '172 patent, and then a portion of those same expenses to the '554 patent DI products. Accordingly, Select Comfort has not shown

a domestic industry for either the '172 patent or the '554 patent based upon 19 U.S.C. ¶ 1337(a)(3)(A).

B. Significant Employment of Labor or Capital (19 U.S.C. § 1337(a)(3)(B))

Select Comfort argues that in 2015, it employed 3,483 persons and that as of September 2015, it had spent a total of $170,809,000 in employee compensation. Of the total employees employed as of September 2015, Select Comfort states that [redacted] employees worked on tasks related to the design, manufacturing, engineering, marketing, and distributing (excluding sales) of the DI products, and [redacted] employees worked exclusively on research and development, engineering, and technical projects related to the DI products. Select Comfort asserts that the total salaries for its [redacted] employees whose work related to DI products in 2013, 2014, and 2015 were [redacted] respectively. Select Comfort notes that the total salaries for the [redacted] employees whose work related to DI products in 2013, 2014, and 2015 were [redacted] respectively. (CIB at 91-92.)

Select Comfort states that from January 2013 to present, Comfortaire has employed approximately [redacted] persons. Select Comfort notes that in 2015, Comfortaire employed [redacted] persons whose work directly related to the DI products. Select Comfort asserts that the total compensation for these employees for 2013, 2014, and as of September 2015 was [redacted] respectively. Select Comfort notes that compensation for all 20 employees by the end of 2105 was [redacted] (*Id.* at 92.)

Select Comfort argues that its labor investments are both qualitatively and quantitatively significant. Select Comfort notes that it has invested a total of [redacted] in compensation for employees who do work related to the DI products. Select Comfort asserts that for the '172 patent, 100% of the salaries paid for Select Comfort's employees should be allocated, and 100%

of the salaries paid to Comfortaire's employees salaries should be allocated. For the '554 patent, Select Comfort states that [redacted] of the compensation for the [redacted] Select Comfort employees [redacted] and [redacted] of the expenses for the [redacted] Comfortaire employees [redacted] should be allocated. (*Id.* at 92-93.) Staff supports Select Comfort on this issue. (SIB at 79-80.)

Respondents argue that Select Comfort has failed to allocate employee compensation between the '172 patent DI products and the '554 patent DI products.

Respondents' arguments are persuasive. As with the plant and equipment issue in the previous section, Select Comfort has again allocated 100% of the relevant expense (in this section, employee compensation) to the '172 patent DI products and then allocated a portion of *those same* expenses to the '554 DI products. (CX-0445 at Q/A 59, 62; CX-0449C at Q/A 52; CIB at 92-93.) For the reasons set forth in the previous section, this argument is not persuasive. Accordingly, Select Comfort has not shown a domestic industry for either the '172 patent or the '554 patent based upon 19 U.S.C. ¶ 1337(a)(3)(B).

Therefore, Select Comfort has not shown that the economic prong of the domestic industry requirement has been met for either the '172 patent or the '554 patent.

VIII. CONCLUSIONS OF LAW

1. The Commission has personal jurisdiction over the parties, and subject-matter jurisdiction over the accused products.

2. The importation or sale requirement of section 337 is satisfied for U.S. Patent Nos. 5,904,172 and 7,389,554.

3. The Gen 3 Koge controller infringes claim 12 of U.S. Patent No. 5,904,172.

4. The Gen 3 Koge, Gen 3 Arco, and Platinum 5000/6000 controllers infringe claim 16 of U.S. Patent No. 5,904,172

5. The asserted claims of U.S. Patent No. 5,904,172 are not invalid under 35 U.S.C. § 112 for lack of written description.

6. The asserted claims of U.S. Patent No. 5,904,172 are not invalid under 35 U.S.C. § 112 as indefinite.

7. The asserted claims of U.S. Patent No. 5,904,172 are not invalid under 35 U.S.C. § 305 for impermissible broadening during reexamination.

8. The asserted claims of U.S. Patent No. 5,904,172 are not invalid under 35 U.S.C. § 102.

9. The asserted claims of U.S. Patent No. 5,904,172 are not invalid under 35 U.S.C. § 103 for obviousness.

10. The technical prong of the domestic industry requirement for U.S. Patent No. 5,904,172 has been satisfied.

11. The accused products do not infringe the asserted claims of U.S. Patent No. 7,389,554

12. The asserted claims of U.S. Patent No. 7,389,554 are not invalid under 35 U.S.C. § 103 for obviousness.

13. The asserted claims of U.S. Patent No. 7,389,554 are not invalid under 35 U.S.C. § 112 as indefinite.

14. U.S. Patent No. 7,389,554 is not unenforceable due to inequitable conduct.

15. The technical prong of the domestic industry requirement for U.S. Patent No. 7,389,554 has not been satisfied.

16. The economic prong of the domestic industry requirement has not been satisfied for U.S. Patent Nos. 5,904,172 and 7,389,554.

IX. RECOMMENDED DETERMINATION ON REMEDY AND BOND

The Commission's Rules provide that the administrative law judge shall issue a recommended determination concerning the appropriate remedy in the event that the Commission finds a violation of section 337, and the amount of bond to be posted by respondents during Presidential review of the Commission action under section 337(j). *See* 19 C.F.R. § 210.42(a)(1)(ii).

A. Limited Exclusion Order

Under section 337(d), the Commission may issue a limited exclusion order ("LEO") directed to a respondent's infringing products. 19 U.S.C. § 1337(d). A limited exclusion order instructs the U.S. Customs Service to exclude from entry all articles that are covered by the patent at issue that originate from a named respondent in the investigation. *Fuji Photo Film Co. Ltd. v. Int'l Trade Comm'n*, 474 F.3d 1281, 1286 (2007).

Select Comfort asserts that if a violation is found, the Commission should issue a limited exclusion order barring the entry of the infringing air controllers and components of those controllers, as well as all imported components used to induce infringement of the '554 patent. (CIB at 93-94.) Select Comfort submits that a certification provision is not necessary for the P5000/6000 and Gen 3 infringing air controllers and the components of those air controllers; however, as to the '554 patent, Select Comfort believes a certification provision is appropriate for components of non-infringing products. (CIB at 94; CRB at 39.)

Respondents concede that a limited exclusion order is appropriate, if the Commission finds that a violation has occurred. (RIB at 90.) They request that any exclusion order include a provision allowing Respondents to certify that certain imports are not covered by the terms of the order since some components are imported for use in non-accused products. (*Id.*) Respondents

explain that otherwise, it would be difficult for Customs to determine whether certain imports are covered by the order. (*Id.*)

Staff recommends a limited exclusion order barring the importation of infringing air controllers and air mattress systems. (SIB at 80.) Staff agrees with Respondents that a certification provision should be included in any limited exclusion order. (*Id.*) In view of the public interest concerns discussed *infra*, Staff further recommends that any limited exclusion order entered against the accused Platinum 6000 controllers be tailored to reduce or eliminate any adverse impact on the public health and welfare. (SIB at 85; SRB at 16 n.4.)

In the event the Commission finds a violation, the undersigned recommends that a limited exclusion order issue prohibiting the importation of Respondents' air controllers and air mattress systems found to infringe the asserted patents. The undersigned also recommends the inclusion of a provision for the '554 patent, whereby Respondents certify that certain imports are not covered by the LEO because they contain components for use in non-infringing products.

B. Cease and Desist Order

Under section 337(f)(1), the Commission may issue a cease and desist order ("CDO") in addition to, or instead of, an exclusion order. 19 U.S.C. § 1337(f)(1). The Commission generally issues a cease and desist order directed to a domestic respondent when there is a "commercially significant" amount of infringing, imported product in the United States that could be sold, thereby undercutting the remedy provided by an exclusion order. *See Certain Crystalline Cefadroxil Monohydrate*, Inv. No. 337-TA-293 USITC Pub. 2391, Comm'n Op. on Remedy, the Public Interest and Bonding at 37-42 (June 1991); *Certain Condensers, Parts Thereof and Prods. Containing Same, Including Air Conditioners for Automobiles*, Inv. No. 337-TA-334 (Remand), Comm'n Op. at 26-28, 1997 WL 817767, at *11-12 (U.S.I.T.C. Sept. 10, 1997).

In the event a violation of section 337 is found, Select Comfort requests that a cease and desist order issue against ANM, Sizewise, and Dires as each Respondent maintains commercially significant inventory. (CIB at 95-99; CRB at 39-41.) Select Comfort insists that a CDO is particularly necessary for ANM because a certification provision would allow ANM to import components used for non-infringing air mattresses, but those same components could also be used by ANM to undercut a LEO. (CIB at 98.)

Respondents argue that "[t]he evidence unequivocally shows that no Respondents maintains significant inventory of Accused Products, and Complainants have not demonstrated that, without CDOs, an exclusion order might be circumvented." (RIB at 91.) Respondents therefore insist that no CDOs are warranted. (RIB at 91; RRB at 37-40.)

Staff does not believe the evidence supports a cease and desist order against ANM relating to products alleged to practice the '172 patent. (SIB at 81-82.) While Staff believes the evidence shows that Sizewise maintains a significant inventory of controllers, Staff submits it may be appropriate to tailor any cease and desist order entered against the accused Platinum 6000 controllers to avoid harming the health and welfare of the U.S. public. (*Id.* at 82-83, 88.) With respect to the '554 patent, Staff states that "[i]n view of the [redacted] the evidence does not show that Complainants have carried their burden to prove that a cease and desist order is necessary." (*Id.* at 82.) Staff likewise does not believe the evidence justifies entering a cease and desist order against Dires. (*Id.* at 83.)

The undersigned does not recommend that cease and desist orders issue as to those Respondents found to infringe by the Commission.

1. Dires

Select Comfort did not establish that Dires has a commercially significant inventory. The evidence shows that Dires is an online retailer of mattresses manufactured by ANM. (RX-0849C at Q/A 19.) While Dires maintains a few samples at its call center in Florida, it does not maintain an actual inventory, but instead [redacted] as it receives orders. (RX-0846 at Q/A 62.)

2. ANM

Select Comfort did not establish that ANM has a commercially significant inventory of the '172 Accused Products. Select Comfort alleges that "ANM has imported thousands more Gen 3 controllers than it is expected to sell." (CIB at 95, 96.) Specifically, Select Comfort alleges that ANM imported more than [redacted] Gen 3 Koge controllers between December 2015 and April 2016, but sold only [redacted] air mattresses "leaving more than [redacted] air controllers in inventory." (*Id.*) As for the Gen 3 Arco, Select Comfort alleges that ANM imported only [redacted] Arco air controllers in 2015, which it alleges were fewer Arco controllers than it needed "indicating that air controllers from inventory were used to fulfill orders." (*Id.* at 96.) Select Comfort asserts that ANM [redacted] and therefore contends: "ANM's current sales to [its customer] must necessarily be from its inventory, which is thus commercially significant." (*Id.* at 96-97.)[24] Thus, Select Comfort's arguments rest on assumptions based on evidence, rather than evidence itself. The undersigned finds that such assumptions are not sufficient to establish that ANM has a commercially significant inventory. Additionally, the evidence that the Gen 3 Arco controllers are no longer for sale further undercuts an argument in favor of a CDO. (Miller, Tr. at 388:9-11.)

[24] Select Comfort agrees that ANM does not have a commercially significant inventory of the P6000. (CRB at 39.)

The undersigned further finds that Select Comfort did not establish that ANM has a commercially significant inventory of the '554 Accused Products. The evidence shows that the accused mattresses are [redacted] and so there is not commercially significant inventory of these mattresses. (Miller, Tr. at 406:3-10; RX-0846C at Q/A 63.) Although Select Comfort attempts to argue that ANM has a commercially significant inventory of components that make up the '554 Accused Products, it does not distinguish between the number of components used in the '554 Accused Products versus non-accused products. For example, Select Comfort relies on a PIERs Report showing that [redacted] cartons of rubber air chambers were imported in August 2015, but this report provides no indication as to which mattress in which ANM may use the air chambers. (JX-0024.) In fact, the evidence shows that over [redacted] percent of the rubber air chambers imported from China are used in non-split top mattresses. (Miller, Tr. at 402:3-8; RX-0848C at Q/A 5.) It also shows that other components used in the '554 Accused Products are also used in non-split top mattresses. (Miller, Tr. at 402:14.)

3. Sizewise

The undersigned finds that Select Comfort has not established that Sizewise has a commercially significant inventory. The evidence shows that Sizewise has approximately [redacted] P6000 systems in its rental pool, although approximately [redacted] units are currently being used by patients. (McCarty, Tr. at 1053:9-24.) The evidence does not show, however, that this rental pool constitutes inventory. The evidence shows that the P6000 control units are part of systems included in a [redacted] (RX-0847C at Q/A 57-58, RX-0846C at Q/A 69, McCarty Tr. at 1030:15-19, 1045:2-3.) Thus, rather than constituting products for a respondent to sell at a future date (and thus inventory), "much of Sizewise's P6000 inventory is [redacted]

[redacted] or is actively being in used at hospitals." (RX-0846C at Q/A 72; *see also* RX-0847C at Q/A 57-58; RX-0846C at Q/A 69, McCarty, Tr. at 1030:15-19, 1045:16-1046:15.) The evidence further shows that the rental pool does not currently [redacted] Rather, the evidence shows that the rental pool is currently [redacted] (McCarty, Tr. at 1045:16-1046:15, 1053:6-24; RX-0846C at Q/A 71.) Thus, the evidence does not show that available P6000 systems exceed the current [redacted]

C. Bond During Presidential Review

Pursuant to section 337(j)(3), the Administrative Law Judge and the Commission must determine the amount of bond to be required of a respondent during the 60-day Presidential review period following the issuance of permanent relief, in the event that the Commission determines to issue a remedy. 19 U.S.C. § 1337(j)(3). The purpose of the bond is to protect the complainant from any injury. 19 C.F.R. § 210.42(a)(1)(ii), § 210.50(a)(3).

When reliable price information is available, the Commission has often set the bond by eliminating the differential between the domestic product and the imported, infringing product. *See Microsphere Adhesives, Processes for Making Same, and Prods. Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, USITC Pub. 2949, Comm'n Op. at 24 (Dec. 8, 1995). In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could be ascertained. *See, e.g., Certain Integrated Circuit Telecomm. Chips and Prods. Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Comm'n Op. at 41, 1993 WL 13033517, at *24 (U.S.I.T.C. June 22, 1993). A 100 percent bond has been required when no effective alternative existed. *See, e.g., Certain Flash Memory Circuits and Prods. Containing Same*, Inv. No. 337-TA-382, USITC Pub.

No. 3046, Comm'n Op. at 26-27 (July 1997) (imposing a 100% bond when price comparison was not practical because the parties sold products at different levels of commerce, and the proposed royalty rate appeared to be *de minimus* and without adequate support in the record).

Select Comfort argues for a bond rate based on price differentials. (CIB at 99-100.) In particular, Select Comfort requests that the bond rate be set at 34% for the air controllers and 45% for the mattresses and components thereof. (CIB at 99-100.) To arrive at these figures, Select Comfort compared the prices of the accused products to Select Comfort's "National Pricing Guide." (*Id.*) If the Commission finds the price differential to be unreliable, Select Comfort submits that the bond be set at 100%. (CRB at 41.)

Respondents contend that Select Comfort has not met its burden to show that a bond is necessary to prevent injury. (RIB at 96.) Specifically, they argue that because Respondents are not one of Select Comfort's competitors in the consumer mattress market, a sale by Respondents would not take away potential sales from Select Comfort. (*Id.* at 96-97.) Respondents also note that Select Comfort has expressly acknowledged that it does not make or sell any product that is comparable to or competes with the accused medical control units (*e.g.*, P5000 and P6000). (*Id.* at 96-97.) In addition to failing to establish the need for a bond, they also argue that Select Comfort's proposed price differential is flawed because it is based on "wildly incomparable prices." (RIB at 97-98; RRB at 40.) Should the Commission determine there is a need for a bond, Respondents recommend it be based on a reasonable royalty rate and propose a [redacted] rate for mattresses found to infringe the '554 patent and a [redacted] rate for consumer (not medical) control units found to infringe the '172 patent. (RIB at 98-99.)

In Staff's view, Select Comfort has not met its burden to show that a bond on a price differential is warranted because the pricing information does not show an "apples to apples"

comparison of the products. (SIB at 84; SRB at 16.) In addition, Staff notes that it is not clear what bond Select Comfort seeks for the Platinum 5000 and Platinum 6000 controllers. (SIB at 84-85.) In its brief, Staff explains that Select Comfort has stated it does not have a competing product so no price differential information is available and that it does not license the patents. (*Id.* at 85.) For this reason, Staff believes Select Comfort has not carried its burden to show a need for a bond for the Platinum 5000 and Platinum 6000 controllers during the Presidential review period. (SIB at 84-85.)

The burden is on Select Comfort to demonstrate that a bond is necessary to prevent injury. *Certain Rubber Antidegradants, Components Thereof, and Prods. Containing Same*, Inv. No. 337-TA-533, Comm'n Op. at 39-40 (July 21, 2006). The undersigned agrees with Respondents and Staff that Select Comfort has failed to show that a bond is necessary. As noted *supra*, to set a bond based on price differential, there must be "reliable" price information. Select Comfort has not provided any such evidence. For example, Select Comfort compared manufacturer suggested retail prices ("MSRP") found in its own price guides to a one-day snapshot of advertised prices on Respondents' website. (*Compare* CX-0439, CX-0440–CX-0444 *with* JX-0238C; *see also* Schwantes, Tr. at 68:12-17, 70:18-24; Karr, Tr. at 305:7-20.) The price guides show the MSRPs before any discounts, whereas Respondents' website shows the advertised price to consumers. (Schwantes, Tr. at 68:12-21, 75:14-76:2). Furthermore, this snapshot was taken during a time when Respondents' products were substantially discounted for a Memorial Day sale. (*Id.* at 67:1-17, 70:2-71:17, 74:10-75:5, Seth, Tr. at 1146:19-25.) Additionally, given Select Comfort's admission that it does not make or sell any product that is comparable to or competes with the accused medical consumer air controllers, there is no basis

for a bond for the P5000 or P6000. (CPHB at 478 "Complainants do not sell a comparable product.").)

For the above reasons, the undersigned recommends no bond during the Presidential review period.

X. PUBLIC INTEREST

In connection with this Recommended Determination, and pursuant to Commission Rule 210.50(b)(1), 19 C.F.R. § 210.50(b)(1), the Commission ordered that the presiding administrative law judge:

> [S]hall take evidence or other information and hear arguments from the parties and other interested persons with respect to the public interest in this investigation, as appropriate, and provide the Commission with findings of fact and a recommended determination on this issue, which shall be limited to the statutory public interest factors set forth in 19 U.S.C. §§ 1337(d)(1), (f)(1), (g)(1).

79 Fed. Reg. 19,124 (Apr. 7, 2014).

Before issuing a remedy for a violation of section 337, the Commission must consider the effect of the remedy on the following public interest factors: (1) the public health and welfare; (2) competitive conditions in the U.S. economy; (3) the U.S. production of articles that are like or directly competitive with those that are the subject of the investigation; and (4) U.S. consumers. 19 U.S.C. §§ 1337(d)(1), (f)(1). The Commission begins this analysis with the understanding that the public interest favors the protection of intellectual property rights by excluding infringing products. *See, e.g.*, *Certain Two-Handle Centerset Faucets & Escutcheons & Components Thereof*, Inc. No. 337-TA-422, Comm'n Op. at 9 (July 21, 2000). It is rare for the Commission to determine that the public interest considerations outweigh the patent holder's rights. *See Spansion Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1360 (Fed. Cir. 2010). The Commission can, however, tailor the remedy to minimize the impact on the public interest. *See,*

e.g., *Certain Personal Data and Mobile Commc'ns Devices & Related Software*, Inv. No. 337-TA-710, Comm'n Op. at 83 (delaying the effective date of an exclusion order based on competitive conditions in the U.S. economy).

Respondents raise the public interest issue only with respect to one of Sizewise's products. It asserts that, if a violation is found as to the '172 patent, that the Commission should exempt the P6000 from any remedial order. Respondents argue that the request is eminently reasonable since U.S. hospitals and nursing homes should not be precluded from using this acute care medical product, any remedial order will be in effect for less than six months, and its request is adequately supported by the evidence, ITC precedent, and by applicable policy considerations. (RIB at 100.) Respondents note that Select Comfort makes no competing product and does not participate in the healthcare industry. (*Id.* at 103.)

Respondents state that the P6000 is a therapeutic support surface system consisting of the air control unit (accused of infringing the '172 patent) and accompanying mattress (not accused of any infringement.) Respondents assert that the P6000 is used in the acute care environment and is prescribed in serious and time-sensitive healthcare situations. They state that therapeutic support surfaces are most often used in wound management and the care of pressure ulcers, and are used as a replacement for standard hospital mattresses or as an overlay on top of standard hospital mattresses. (*Id.* at 104.)

Respondents argue that the P6000 provides a distinct combination of features and therapies which provides better patient care, that hospital clinicians specifically prescribe the P6000 for situations where its modalities are necessary to provide a certain level of treatment, that the P6000 is a low-cost, high quality therapeutic support surface relative to other options,

and that Sizewise is the [redacted] of the P6000 from [redacted] (*Id.* at 105.)

Respondents state that to enter and remain competitive in the market for therapeutic support surface systems, a supplier must obtain many certifications and accreditations. Respondents assert that U.S. health care providers largely use Group Purchasing Organizations (GPOs) to obtain products from manufacturers and distributers, especially in the rental context. Respondents argue that the various requirements that GPOs have of suppliers, plus the fact that a new entrant must wait until an open period to begin negotiations for a GPO contract, make it difficult for a new entrant to provide healthcare institutions with a product. (*Id.* at 105-106.)

Respondents assert that it has many active contracts with many GPOs. For certain supply arrangements offered by [redacted] Respondents state that it is the only provider of an acute care therapeutic support device system, meaning that hospitals in those programs have no choice but Sizewise. Respondents argue that due to the features of the P6000 and the strength of Sizewise's many GPO partners, the P6000 is one of the most widely used therapeutic support surface products. Respondents state that it is the second largest participant in the therapeutic support device rental market, accounting for [redacted] percent of this segment. Respondents also assert that it is the biggest player in the bariatric sub-segment of this market. Respondents allege that, at any given time, approximately [redacted] of Sizewise's rental inventory is in active use. (*Id.* at 106-108.)

Respondents state that because the '172 patent expires in July of 2017, just a few months after an ITC remedial order goes into effect, the order would be effective less than 6 months. Respondents argue that this would undermine the incentive for Sizewise's competitors to fill the

void caused by an ITC exclusion order. Respondents assert that the exclusion order would also extend to the P6000 mattresses which are not at issue in this investigation. (*Id.* at 110-111.)

Respondents assert that Select Comfort's arguments are without merit. Specifically, Respondents disagree with Select Comfort's "market share" arguments, and its arguments about the availability of other suppliers. Respondents also disagree with Select Comfort's attacks on the credibility of Dr. Seth's testimony. (*Id.* at 111-117.) Respondents argue that Select Comfort's case law is not persuasive. (*Id.* at 117-119.)

Staff supports Respondents' position. If a violation is found, Staff argues that the LEO should be modified to provide for a six-month delay in the effectiveness of the LEO. Staff notes that in light of the upcoming July 2017 expiration of the '172 patent, a six-month delay would have the same effect as not issuing an LEO. (SIB at 81-89.)

Select Comfort asserts that the public interest will not be adversely affected by excluding the P6000. Select Comfort states that the P6000 accounts for less than 1% of the therapeutic bed market, and that a direct substitute alternative product, the OnCare Quartet Range, is readily available for rent by Sizewise's competitor UHS. Select Comfort notes that since the remedy is prospective in nature, a remedial order will not remove any P6000s already in use in a medical setting. Thus, it is argued, no hospital or medical setting will have a bed removed from underneath a patient. (CIB at 101-102.)

Select Comfort argues that its position is consistent with Commission precedent. Select Comfort states that the demand for therapeutic beds is met by others, and that exclusion of the P6000 will not affect the price of therapeutic beds offered by Sizewise's competitors. (*Id.* at 107-109.)

Select Comfort states that Respondents' initial claim that Sizewise is the second largest supplier of therapeutic support surfaces in the United States was later modified to state that in the acute care rental market, Sizewise is the second largest supplier of support surfaces and bed frames. Select Comfort argues that while Mr. McCarty based the latter statement on a market analysis he claimed was based on a presentation he saw in 2015, the presentation is not in the record in this investigation. (*Id.* at 109.) Furthermore, Select Comfort states that none of the contracts to medical facilities requires that the P6000 be supplied. (CRB at 44.)

For the reasons set forth below, the public interest does not require that the P6000 be excluded from an LEO, should it be ordered. Mr. McCarty testified that in the acute care rental market, Sizewise is the second largest supplier of support surfaces and bed frames. (McCarty, Tr. at 1010:7-9) While Mr. McCarty based the latter statement on a market analysis he claimed was based on a presentation he saw in 2015, the presentation is not in the record in this investigation. (*Id.* at 1006:3-25.)

While Mr. McCarty testified that hospital clinicians specifically prescribe the P6000 for situations where its modalities are necessary to provide a certain level of treatment (*id.* at 1052:8-1053:5, 1153:6-19), his testimony is unsupported by other evidence in the record. For example, Dr. Seth admitted that, while some of the contracts with hospitals list the P6000 as an item that *may* be supplied, none of the contracts with hospitals require that the P6000 is the only item that must be supplied. (Seth, Tr. at 1112:3-1125:21.) Furthermore, while Dr. Seth testified that the P6000 is unique because it possesses six features (standard width, bariatric width, low air loss, alternating pressure, immersion, and transport mode), she does not say why those features were selected. (RX-0846C at Q/A 208; RX-0091C at RX-0091C-001, line (A).) Furthermore, Dr. Seth admits that there is another product listed in RX-0091C, the UHS OnCare Quartet Range, which

has the same features as the P6000. (Seth, Tr. at 1159:17-24 (discussing RX-0091 at RX-0091C-001, line (Z)).) Furthermore, Dr. Seth admits that the list of products in RX-0091C is not exhaustive. (RX-0846C at Q/A 214.)

None of the cases cited by Staff and Respondents are persuasive. In the one case where the Commission declined to issue an exclusion order for medical devices (which involved a request for temporary relief), the Commission found, among other things, that demand for alternative burn beds could not be met for new orders within a commercially reasonable length of time, patients may not have access to burn beds at all while temporary relief was in effect, and the requested relief would result in price competition. None of those facts is present in this investigation, as set forth above. *Certain Fluidized Supporting Apparatus & Components Thereof*, 337-TA-182/188, Comm'n Op. at 23-25 (Oct. 5, 1984).

As all parties agree, an LEO in this investigation would be in effect for less than six months. The present procedural schedule calls for the Commission to issue its decision on March 20, 2017. The '172 patent is scheduled to expire on July 28, 2017.[25] Mr. McCarty testified that as of August 12, 2016 (the date of his testimony), Sizewise had approximately [redacted] P6000 units in its "rental pool" in the United States. Of that approximately [redacted] units, approximately [redacted] to [redacted] units were "under patients," which averaged out to a [redacted] to [redacted] utility rate, resulting in another approximately [redacted] of units available to meet additional demand. Mr. McCarty testified that around 50% is ". . . the ideal balance in the rental market . . ." (McCarty, Tr. at 1053:6-24.) Thus in the event of an LEO and/or cease and desist order being issued for a few-month period,

[25] The '172 patent application was filed on July 28, 1997. (JX-0001.) Thus, the '172 patent will expire on July 28, 2017. 35 U.S.C. § 154(a)(2).

even without considering other sources of rental units, Sizewise itself would have a sufficient rental inventory to meet its customers' needs.[26]

For all of these reasons, it is recommended that Respondents' request that the P6000 be exempt from any LEO that may issue for the '172 patent be denied because Respondents have not shown that either of these remedial orders would have an adverse effect on public health and welfare in the United States, competitive conditions in the United States economy, the production of like or directly competitive products in the United States, or United States consumers.

XI. INITIAL DETERMINATION

Based on the foregoing, it is the Initial Determination of the undersigned that Respondents infringe claims 12 and 16 of U.S. Patent No. 5,904,172, but do not infringe any of the asserted claims of U.S. Patent No. 7,389,554. The undersigned further determines that the asserted patents are not invalid and that the domestic industry requirement has not been satisfied for either patent.[27]

The undersigned hereby CERTIFIES to the Commission this Initial Determination and the Recommended Determination. The parties' briefs, which include the final exhibits lists, are not certified as they are already in the Commission's possession in accordance with Commission rules. 19 C.F.R. § 210.38(a).

The Secretary shall serve the confidential version of this Initial Determination upon counsel who are signatories to the Protective Order (Order No. 1) issued in this Investigation. A public version will be served at a later date upon all parties of record.

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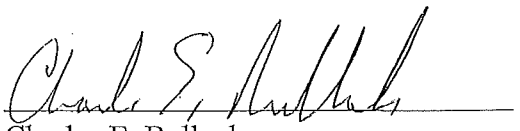
[26] Of course, the Commission may decide not to issue an LEO or cease and desist order for the sole reason that either remedial order would be in effect for such a short time.

[27] Any arguments from the parties' pre-hearing briefs incorporated by reference into the parties' post-hearing briefs are stricken, unless otherwise discussed herein, as an improper attempt to circumvent the page limits imposed for post-hearing briefing.

Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to 19 C.F.R. § 210.43(a) or the Commission, pursuant to 19 C.F.R. § 210.44, orders on its own motion a review of the Initial Determination or certain issues therein.

Within ten days of the date of this document, the parties shall submit to the Office of Administrative Law Judges a joint statement regarding whether or not they seek to have any portion of this document deleted from the public version. The parties' submission shall be made by hard copy and must include a copy of this Initial Determination with red brackets indicating any portion asserted to contain confidential business information to be deleted from the public version.[28] The parties' submission shall include an index identifying the pages of this document where proposed redactions are located. The parties' submission concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.



Charles E. Bullock
Chief Administrative Law Judge

[28] If the parties submit excessive redactions, they may be required to provide an additional written statement, supported by declarations from individuals with personal knowledge, justifying each proposed redaction and specifically explaining why the information sought to be redacted meets the definition for confidential business information set forth in Commission Rule 201.6(a). 19 C.F.R. § 201.6(a).

CERTAIN AIR MATTRESS SYSTEMS, COMPONENTS THEREOF, AND METHODS OF USING THE SAME **Inv. No. 337-TA-971**

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **PUBLIC VERSION INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND RECOMMENDED DETERMINATION ON REMEDY AND BOND** has been served by hand upon the Commission Investigative Attorney, **Andrew Bevernia, Esq.**, and the following parties as indicated, on **December 1, 2016.**

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U.S. International Trade Commission
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