

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ARKEMA INC. AND ARKEMA FRANCE
Petitioner,

v.

HONEYWELL INTERNATIONAL INC.,
Patent Owner.

PGR2016-00011
Patent No. 9,157,017

PATENT OWNER'S SIXTH AMENDED APPENDIX OF EXHIBITS

| Exhibit No. | Description |
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| Exhibit 2001 | Declaration of Donald Bivens |
| Exhibit 2002 | Curriculum Vitae of Donald Bivens |
| Exhibit 2003 | U.S. Patent No. 5,182,040 to Bartlett et al. |
| Exhibit 2004 | U.S. Patent No. 5,516,446 to Bivens and Yokozeki |
| Exhibit 2005 | U.S. Patent No. 5,648,017 to Bartlett et al. |
| Exhibit 2006 | U.S. Patent No. 5,725,791 to Bivens et al. |
| Exhibit 2007 | U.S. Patent No. 5,968,406 to Bartlett et al. |
| Exhibit 2008 | U.S. Patent No. 7,914,968 to Minor et al. |
| Exhibit 2009 | U.S. Patent No. 7,959,825 to Minor et al. |
| Exhibit 2010 | Wilson, C. L. et al., Abstract: <i>Man's Impact on the Global Environment: Assessment and Recommendation for Action. Report of the Study of Critical Environmental Problems (SCEP)</i> , MIT Press, Cambridge, Mass. (1970), available at: http://hdl.handle.net/1969.3/26655 |
| Exhibit 2011 | A. Hammond, Book Review of W. Matthews et al., <i>Study of Man's Impact on Climate (SMIC) Report, Inadvertent Climate Modification</i> , MIT Press, Cambridge, Mass. (1971), SCIENCE Vol. 176, available at: http://science.sciencemag.org/content/176/4030/38.2 |
| Exhibit 2012 | V. Ramanathan, <i>Greenhouse Effect Due to Chlorofluorocarbons: Climate Implications</i> , SCIENCE: American Association for the Advancement of Science, Vol. 190 (1975), available at: http://science.sciencemag.org |
| Exhibit 2013 | J. Calm and D. Didion., <i>Trade-Offs in Refrigerant Selections: Past, Present, and Future</i> , ASHRAE/NIST Refrigerants Conference (October 1997) |

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| Exhibit 2014 | B. Newell and T. Newell, <i>In Situ, Real Time Oil Concentration in a Mobile Air Conditioning System</i> , NI Tech Bulletin 001, Newell Instruments, Inc. |
| Exhibit 2015 | ACURA Service Bulletin, <i>R-134a Refrigerant A/C System</i> , Sept. 29, 1992 for model NSX Legend, year 1993 |
| Exhibit 2016 | 2013 ASHRAE Handbook Fundamentals, SI Ed., Chapter 29: Refrigerants, Table 3 |
| Exhibit 2017 | Dometic, Material Safety Data Sheet, March 25, 2015 |
| Exhibit 2018 | ICI Americas, Inc., PAG-46, Material Safety Data Sheet (Feb. 9, 1999) |
| Exhibit 2019 | Presentation, <i>Exposure Limits: TLVs, BEIs, PELs, RELs, WEELs, ERPGs and OELs</i> , available online at: http://isites.harvard.edu/fs/docs/icb.topic156420.files/Exposure_Limits |
| Exhibit 2020 | U.S. Patent No. 6,516,837 to Thomas et al. |
| Exhibit 2021 | Pate, Michael, et al., <i>Miscibility Of Lubricants With Refrigerants, Final Report</i> , Iowa State University of Science and Technology Department of Mechanical Engineering (July 1993) |
| Exhibit 2022 | Crown, S.W., et al., <i>A Comparison Study of the Thermal Performance of R12 and R134a</i> , International Refrigeration and Air Conditioning Conference (1992) |
| Exhibit 2023 | Uemura, S., et al., <i>Characteristics of HFC Refrigerants</i> , International Refrigeration and Air Conditioning Conference (1992) |
| Exhibit 2024 | Brown, J. Steven, et al., <i>The fluorinated olefin R-1234ze(Z) as a high-temperature heat pumping refrigerant</i> , International Journal of Refrigeration 32, 1412-1422 (2009) |
| Exhibit 2025 | Case Law of the Board of Appeal of the European Patent Office (Seventh Edition, Sept. 2013) |

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| Exhibit 2026 | Bristol Compressors, Medium and Low Temperature Retrofit from R502 to R404A/R507, Application Bulletin 125 (Release date Oct. 20, 1995) |
| Exhibit 2027 | Wilson, C. L. et al., <i>Man's Impact on the Global Environment: Assessment and Recommendation for Action. Report of the Study of Critical Environmental Problems (SCEP)</i> , MIT Press, Cambridge, Mass. (1970) |
| Exhibit 2028 | Matthews, W., et al., <i>Study of Man's Impact on Climate (SMIC) Report, Inadvertent Climate Modification</i> , MIT Press, Cambridge, Mass. (1971) |
| Exhibit 2029 | Case Law of the Board of Appeal of the European Patent Office (Seventh Edition, Sept. 2013) |
| Exhibit 2030 | ASHRAE Standard, Designation and Safety Classification of Refrigerants, American Society of Heating, Refrigerating and Air-Conditioning, Inc.(Nov. 18, 2009) |
| Exhibit 2031 | United States Environmental Protection Agency's Office of Pesticide Programs, Summary of the IBT Review Program (July 1983) |
| Exhibit 2032 | Manual for Investigation of HPV Chemicals, Chapter 3: Data Evaluation |
| Exhibit 2033 | TSCA Filing, Refrigerant 1243zf; TNO Quality of Life Report: <i>A sub-acute (28-day) inhalation toxicity study with 3,3,3,-trifluoroprop-1-ene (HFO 1234zf) in rats</i> (Dec. 3, 2010) |
| Exhibit 2034 | Clayton Jr., J. Wesley, Chapter 9: The Mammalian Toxicology of Organic Compounds Containing Fluorine (1996) |
| Exhibit 2035 | U.S. Patent No. 5,569,797 to Fu et al. |
| Exhibit 2036 | U.S. Patent No. 5,001,287 to Fernandez et al. |
| Exhibit 2037 | ECETOC Technical Report No. 103: Toxicity of Possible Impurities and By-products in Fluorocarbon Products (December 2008) |

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| Exhibit 2038 | U.S. Patent Application No. 13/939,233 |
| Exhibit 2039 | Transcript of Mar. 29, 2016 telephone proceedings before the Board |
| Exhibit 2040 | Transcript of Nov. 28, 2016 teleconference with the Board |
| Exhibit 2041 | Transcript of Nov. 29, 2016 teleconference with the Board |
| Exhibit 2042 | US Patent Publication No. 2012/0292556 A1 |
| Exhibit 2043 | Brown, J. Steven, <i>HFOs: New, Low Global Warming Potential Refrigerants</i> , ASHRAE Journal (August 2009) |
| Exhibit 2044 | Brown, J. Steven, <i>Low Global Warming Potential Refrigerant Options for Unitary Equipment</i> , ASHRAE Winter Conference (2011) |
| Exhibit 2045 | Beattie, Roger J., et al., <i>Investigation of Low GWP Refrigerant Interaction with Various Lubricant Candidates</i> , Purdue University (2012), available at http://docs.lib.purdue.edu/iracc/1223 |
| Exhibit 2046 | Domanski, Piotr A., et al., NIST, <i>Transition to Low-GWP Refrigerants: Options and Tradeoffs</i> , Florida International University (April 1, 2016) |
| Exhibit 2047 | McLinden, Mark O., NIST, <i>Thermodynamic Analysis for Low-GWP Refrigerants</i> , ASHRAE Winter Conference (Jan. 19, 2014) |
| Exhibit 2048 | Deposition Transcript of Dr. William J. Brock (Dec. 1, 2016) |
| Exhibit 2049 | Deposition Transcript of Dr. J. Steven Brown (Dec. 8, 2016) |
| Exhibit 2050 | Brown, J. Steven et al., <i>Comparative analysis of an automotive air conditioning systems operating with CO₂ and R134a</i> , International Journal of Refrigeration (2002) |
| Exhibit 2051 | Brown, Steven J., <i>Potential R-114 Replacement Refrigerants</i> , ASHRAE Transactions, Vol. 114 (2008) |
| Exhibit 2052 | Brown, J. Steven, et al., <i>Thermodynamic properties of eight fluorinated olefins</i> , International Journal of Refrigeration, (2010) |
| Exhibit 2053 | Clodic, Denis, <i>Automobile Air-conditioning: Environmental Stakes and Future Technical Options</i> , Journal of Cold and Air- |

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