

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AIR PRODUCTS AND CHEMICALS, INC.,

Petitioner,

v.

EVONIK OPERATIONS GMBH and EVONIK CORPORATION,

Patent Owner.

Case IPR2024-00611
Patent 10,471,380 B2

DECLARATION OF OLIVER WOLF

I, Oliver Wolf, pursuant to 37 C.F.R. § 42.62(b)(2), submit the following statements as supplemental evidence in response to the Objections to Evidence filed by Air Products and Chemicals, Inc. (“Petitioner”) on September 3, 2024:

1. I am European Patent Attorney and Head of Group IP Management for Evonik Industries AG, including its affiliates Evonik Operations GmbH and Evonik Corporation (“Evonik”).
2. I have served as patent attorney for Evonik for 21 years.
3. In my career as a patent attorney, I have experience conducting legal and academic research, as well as assessing the reliability of the materials that I come across in my research.
4. I also have specific experience and familiarity with academic materials and research related to Evonik’s industry.
5. Exhibit Nos. 2003¹ and 2004,² which are cited to within Evonik’s Preliminary Response to Petition for Inter Partes Review of United States Patent No. 10,471,380, were among the materials that I obtained on or around March 7, 2024 in support of the notion that “membrane capacity” is a standard term in Evonik’s industry.
6. Exhibit Nos. 2003 and 2004 were found via a Google search.
7. I have reviewed and am familiar with the content of Exhibit No. 2003.
8. Exhibit No. 2003 is a page on Linde Engineering’s website, and contains information pertaining to membrane plants and, more specifically, Evonik membranes.
9. Linde Engineering is customer of Evonik for gas separation membranes. Evonik and Linde Engineering had joined forces to develop an innovative membrane technology that enables

¹ Membrane Plants, LINDE ENGINEERING, <https://www.linde-engineering.com/products-and-services/process-plants/adsorption-and-membrane-plants/membrane-plants> (last visited September 17, 2024).

² Charles L. Anderson & Anggiat Siahaan, *Case Study: Membrane CO2 Removal From Natural Gas, Grissik Gas Plant, Sumatra, Indonesia*, https://catalysts.basf.com/files/pdf/Membrane-Protection_Medal-Article-Grissik.pdf.

even natural gases rich in carbon dioxide (CO₂) to be processed in an energy-efficient way without the need for solvents and with a smaller footprint, which is referred to in Exhibit No. 2003.

10. I have also reviewed and am familiar with the content of Exhibit No. 2004.

11. Exhibit No. 2004 is a case study that discusses membrane CO₂ removal from natural gas.

12. The case study is publicly available in the internet and can be found via Google search.

According to his LinkedIn account the first author Charles L. Anderson has over 30 years of experience developing energy solutions. Mr. Anderson served as Director of Gas Processing and co-founder of Archaea Energy LLC until combination with Rice Acquisition Corp. and Aria Energy LLC in September 2021. Before joining Archaea Energy LLC, Mr. Anderson managed the membrane gas separation processes at Air Liquide for 26 years. ConocoPhillips seems to be the membrane customer of Air Liquide in the project described in Exhibit No. 2004. The second author, Anggiat Siahaan worked, according to his LinkedIn account, as process engineer for ConocoPhillips.

I declare under penalty of perjury that the foregoing is true and correct. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: September 17, 2024

