

CRH:EHS
F. #2022R000061

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK
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UNITED STATES OF AMERICA

COMPLAINT

- against -

(18 U.S.C. § 1832(a)(5))

KLAUS PFLUGBEIL and
YILONG SHAO,

24 MJ 226

Defendants.

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EASTERN DISTRICT OF NEW YORK, SS:

Thomas McNulty, being duly sworn, deposes and states that he is a Special Agent with the Federal Bureau of Investigation, duly appointed according to law and acting as such.

On or about and between October 22, 2019 and the present, both dates being approximate and inclusive, within the Eastern District of New York and elsewhere, the defendants KLAUS PFLUGBEIL and YILONG SHAO, together with others, with intent to convert a trade secret that is related to a product and service used in and intended for use in interstate and foreign commerce, to wit: technology for continuous motion battery assembly (the “Battery Assembly Trade Secret”) belonging to an entity whose identity is known to the affiant (“Victim Company-1”), to the economic benefit of anyone other than the owner thereof, and intending and knowing that the offense would injure the owner of that trade secret, did knowingly and intentionally conspire to, without authorization, transmit, deliver, send and convey the Battery Assembly Trade Secret to an individual located in the Eastern District of New York in violation of Title 18, United States Code, Section 1832(a)(2).

(Title 18, United States Code, Section 1832(a)(5))

The source of your deponent's information and the grounds for his belief are as follows:¹

1. I am a Special Agent with the Federal Bureau of Investigation ("FBI") and have been involved in the investigation of numerous cases involving violations of criminal law. I am familiar with the facts and circumstances set forth below from my participation in the investigation, and my review of the investigative file, and reports of other law enforcement officers involved in the investigation.

A. Victim Company-1 and the Trade Secret Technology

2. Victim Company-1 is a U.S.-based leading manufacturer of battery-powered electric vehicles and battery energy systems. In 2019, Victim Company-1 acquired a Canada-based manufacturer of automated, precision dispensing pumps and filling systems for use in many different industrial processes (the "Canadian Manufacturer"). These pumps are often incorporated into another product manufactured by Victim Company-1 referred to as a "battery assembly line." Companies that purchased battery assembly lines from Victim Company-1 used them to manufacture alkaline and lithium-ion batteries for consumer use. Victim Company-1's battery assembly lines were notable in the industry because of the Battery Assembly Trade Secret, which is known in the industry as "continuous motion assembly." Continuous motion assembly, a proprietary technology developed over many years by the Canadian Manufacturer, and currently owned by Victim Company-1, allows manufacturers to run battery production lines at high speed, without pausing. With the Battery

¹ Because the purpose of this Complaint is to set forth only those facts necessary to establish probable cause to arrest, I have not described all the relevant facts and circumstances of which I am aware.

Assembly Trade Secret, a battery manufacturer can produce five to ten times more parts per minute than a competitor who does not have access to the Battery Assembly Trade Secret.²

Victim Company-1 spent millions of dollars on research and development for the Battery Assembly Trade Secret. Between 2004 and 2017 alone, Victim Company-1 spent approximately \$13 million dollars on research and development for the Battery Assembly Trade Secret.

3. The precision dispensing pumps and the Battery Assembly Trade Secret, are valuable and proprietary information belonging to Victim Company-1. As detailed further below, Victim Company-1 took reasonable measures to keep its designs and other information about the technology secret, including by storing the data on servers controlled by its IT department, limiting access only to certain approved employees, and maintaining agreements with customers that make clear the technology is secret and cannot be disseminated or used without Victim Company-1's authorization.

4. After acquiring the Canadian Manufacturer, Victim Company-1 stopped selling the pumps and battery assembly lines directly to customers. Beginning in or around 2021, Victim Company-1 signed licensing agreements with a Japanese company (the "Licensee") that authorized the Licensee to manufacture and sell the precision dispensing pumps. Only the Licensee is permitted to legally make and sell the precision dispensing pumps. No one is authorized to sell the Battery Assembly Trade Secret.

² Although some of the conduct described herein occurred before the Canadian Manufacturer was acquired by Victim Company-1, the Battery Assembly Trade Secret belongs to, and is the proprietary information of, Victim Company-1. Accordingly, unless otherwise indicated, the government uses "Victim Company-1" to refer to both the Canadian Manufacturer and Victim Company-1 even where relevant conduct occurred when the Canadian Manufacturer was an independent entity.

B. The Defendants' Conversion of the Battery Assembly Trade Secret

5. From approximately January 1997 until June 2009, PFLUGBEIL was an employee of the Canadian Manufacturer. From at least 2007 to 2009, PFLUGBEIL was the head of the Canadian Manufacturer's office in the People's Republic of China (the "PRC" or "China") and was responsible for leading the company's business activity in Asia. While at the Canadian Manufacturer, PFLUGBEIL had access to drawings and diagrams related to the Battery Assembly Trade Secret.

6. SHAO worked for the Canadian Manufacturer from approximately January 2010 to August 1, 2020. His title was Sales and Service Technician. For at least some of the time that SHAO worked for the Canadian Manufacturer, he worked for the Canadian Manufacturer in China.

7. While PFLUGBEIL worked for the company, and continuing thereafter, the Canadian Manufacturer stored its proprietary information about the Battery Assembly Trade Secret on a server on the Canadian Manufacturer's property. The server was under the direct control of a dedicated in-house IT department. The server was separated into several drives divided by relevant business purpose. Information about the Battery Assembly Trade Secret, including drawings and diagrams related to the technology, were stored on one particular drive. Only certain approved employees were provided with access to the server containing the Battery Assembly Trade Secret. At the time that PFLUGBEIL was employed by the Canadian Manufacturer, he had access to the server containing the Battery Assembly Trade Secret.

8. The Canadian Manufacturer maintained non-disclosure agreements with customers regarding information related to the Battery Assembly Trade Secret. Employees of the Canadian Manufacturer during the time when PFLUGBEIL worked for the company knew

that certain drawings and materials they handled, such as the information related to the Battery Assembly Trade Secret, were the company's intellectual property.

9. On or about October 22, 2019, the same month that Victim Company-1 purchased the Canadian Manufacturer, SHAO sent PFLUGBEIL an email titled "Proposal- From Shao" with an attachment labeled "Proposal." The attachment appears to be a business proposal about setting up a business together.

10. Also on or about October 22, 2019, PFLUGBEIL responded via email to SHAO regarding "set[ting]-up" a "company" in Canada and China. PFLUGBEIL asked SHAO, "do you have the full quote from the Canada company?" I interpret "Canada company" to be a reference to the Canadian Manufacturer, and "full quote" to be a request for information about Victim Company-1's business with its customer. PFLUGBEIL attached an Excel document related to planning a joint venture with SHAO.

11. On or about October 23, 2019, SHAO responded via email to PFLUGBEIL. Attached to SHAO's email was a proposal from Victim Company-1 to a Chinese customer of Victim Company-1, as PFLUGBEIL appears to have requested when he asked for the "full quote" one day earlier. This proposal was dated July 3, 2019 and contained a drawing of a "Cathode Process System" that is part of a battery assembly line. Also attached to the email was a business plan for setting up a business to sell battery assembly products. The business plan lists PFLUGBEIL as the president of the new business and indicates that he used to be a president at the Canadian Manufacturer. SHAO is listed as the "Operations Manager" for the new business, and that he worked for the Canadian Manufacturer for sixteen years.

12. Approximately one week later, or about October 29, 2019, PFLUGBEIL messaged an individual ("Individual-1") on LinkedIn: "Hey [Individual-1] anything new on

[Victim Company-1]?” Individual-1 responded, “They stop selling [battery assembly] line in 1-2 years. So think about setting up your own company. No lines available around the world. No Korean. No Japanese.” Individual-1 then sent PFLUGBEIL his WeChat handle. WeChat is an instant messaging application that is based in the People’s Republic of China.

13. On or about November 2, 2019, PFLUGBEIL emailed SHAO:

Attached find the quote proposal, in a different format, so it looks very original and not like a copy. . . . Also, we need a line layout and cathode system layout, it can not look like a copy, can you modify this? . . . I wanted to mentioned that I do have a lot of original documents, but of course only from before 2009, including a lot. What is our plan, do we have access to some original drawings . . . If yes, list which ones, so we can see where we have a lower risk. On this we should talk in person.³

(Emphasis added). The attachment to this email contained a proposal for the same customer for which SHAO had previously sent PFLUGBEIL Victim Company-1’s proposal, as described above, supra ¶ 11. Based on my training and experience and knowledge of this investigation, I believe that this email reflects PFLUGBEIL’s explicit acknowledgment that he took original documents with proprietary information from Victim Company-1 before he left the company in 2009. I also assess that it reflects that PFLUGBEIL and SHAO were trying to cover up the fact that they had stolen Victim Company-1’s trade secret by making their documents look “very original and not like a copy.”

14. On November 3, 2019, SHAO responded to PFLUGBEIL, stating, “we have all of original assembly drawings by PDF, we have some original parts drawing now, we have to make others by ourselves and get some from outside. We have all of original BOM.” Based on my training and experience and knowledge of this investigation, I believe “BOM” to mean “bill of materials,” which is a list of the raw materials, sub-assemblies, intermediate

³ Typographical errors are in the original message.

assemblies, sub-components, parts, and the quantities of each material needed to manufacture an end product. I further understand that when SHAO references “original assembly drawings” and “original parts drawing,” he is stating that he has Victim Company-1’s proprietary information related to the Battery Assembly Technology.

15. In or about July 2020, PFLUGBEIL and SHAO opened a business entity that has locations in China, Canada, Germany, and Brazil (“Business-1”). Business-1 makes the same precision dispensing pumps and battery assembly lines that Victim Company-1 manufactured. The battery assembly lines contain or utilize the Battery Assembly Trade Secret information. As noted above, only the Licensee has been authorized to sell the precision dispensing pump technology developed by Victim Company-1, and no party is authorized to sell the Battery Assembly Trade Secret.

16. On or about September 8, 2020, PFLUGBEIL sent an email (the “September 2020 Email”) to a Toronto-based manufacturer of gears (the “Gear Manufacturer”) that previously manufactured some of the parts utilized by Victim Company-1 in its production of battery assembly lines. The September 2020 Email requested that the Gear Manufacturer produce several parts and included attachments of the specifications for a number of gears. The September 2020 Email noted, “please keep the attached information confidential.”

17. The attachments contained in the September 2020 Email were drawings of Victim Company-1 technology that are a part of the Battery Assembly Trade Secret. The drawings provided by PFLUGBEIL in the September 2020 Email are nearly identical to drawings belonging to Victim Company-1, except the name of the company was changed from the Canadian Manufacturer’s name to Business-1’s name, the date of the drawing was changed, and the drawing identifying number was written in reverse (i.e. the original Canadian

Manufacturer drawing number was “92034” while the drawing attached to the September 2020 Email was drawing number “43029.”).

18. PFLUGBEIL sent several additional drawings and information attached to the September 2020 Email that, based on their near-identical nature to Victim Company-1 drawings, appear to have been taken from Victim Company-1. For example, one of the attachments in the September 2020 Email is a spreadsheet that listed the part numbers that PFLUGBEIL was seeking to have manufactured by the Gear Manufacturer. The part numbers were the Victim Company-1 part numbers with the digits in reverse order.

19. Employees of Victim Company-1 identified the information contained in the September 2020 Email as, in fact, the intellectual property of Victim Company-1 and reflected proprietary information. Additionally, PFLUGBEIL had access to this type of information when he worked for Victim Company-1. Finally, according to an employee of Victim Company-1 who is knowledgeable in this field, it is my understanding that it is not technically feasible for a competitor, like Business-1, to reverse engineer the Battery Assembly Trade Secret technology without direct access to Victim Company-1’s drawings and other information related to that technology.

C. Additional Evidence that the Defendants Conspired to Convert Trade Secret Information for Their Own Economic Benefit

20. PFLUGBEIL sought to obtain economic benefits from Victim Company-1’s proprietary information, in part by marketing Business-1 as an alternative source for the sale of products that use Victim Company-1’s trade secrets.

21. For example, PFLUGBEIL created a LinkedIn profile for Business-1 on or about April 8, 2022. Four days later, on or about April 12, 2022, the LinkedIn profile for Business-1 published a post that reads, in relevant part, “Are you looking for [Victim Company-

1] Metering pumps and spare parts? Look no further” and “In many cases we have improved on the original design [...]” That same month, Business-1 also posted: “Due to the closure of [Victim Company-1] in Canada, we are now producing the complete series of dispensing pumps, valves, [...]”

22. In or about May 2023, PFLUGBEIL posted on his own LinkedIn account that, it was “great to see that the [Victim Company-1]-style pumps are getting the full attention they deserve in South America! The [Business-1] team is ready to supply spare parts and the completely new [Business-1] precision pumps.”

23. In addition to publicly marketing that he was selling products based upon Victim Company-1’s Battery Assembly Trade Secret information, PFLUGBEIL sent dozens of direct messages advertising that he was selling such products. For example, in February 2022, PFLUGBEIL wrote in a LinkedIn direct message, in relevant part: “We are a manufacturer of pumps in Canada, the same as the previous [Victim Company-1] brand.” As another example, in June 2022, PFLUGBEIL wrote in a LinkedIn message, in relevant part: “We already have supplied [Customer-1] in the UK with spare parts for some of their existing equipment. In particular equipment and pumps that were supplied by [Victim Company-1].” PFLUGBEIL also repeatedly sent LinkedIn messages that said, “Hello [name], I used to work at [Canadian Manufacturer], and after [Victim Company-1] purchased and closed the company, I am now part of a company providing similar products and services.”

24. The background that PFLUGBEIL chose for his LinkedIn profile page is pictured below.



25. PFLUGBEIL also created a YouTube account for Business-1 (the “Business-1 YouTube Account”). A video posted on the Business-1 YouTube Account on or about December 16, 2022, titled, “[Business-1] Canada Intro” was posted with the following caption: “[Business-1] Systems Canada produces precision metering pumps. These used to be sold by a company called [Canadian Manufacturer] (no longer in business). We are introducing [Business-1] Canada in this video.” A commenter on this video wrote, “I thought that this pump assembly business was taken over by [the Licensee], Japan.” The Business-1 YouTube Account controlled by PFLUGBEIL responded to the comment, indicating his awareness of the Licensee:

Thanks for your question. [The Licensee] was a previous pump distributor from [Victim Company-1], after the [Victim Company-1] closure to the public they decided to pursue the business of manufacturing also. We are a manufacturer of battery manufacturing equipment, and due to high demand we added the pumps to our existing product lines. We now provide direct sales and technical support world wide, for the previous pumps and new pumps.

26. On or about August 31, 2022, PFLUGBEIL wrote in an email to another person who pointed out that that the Licensee was manufacturing Victim Company-1 pumps: “I appreciate your thoughts on [Victim Company-1], [the Licensee] and the current situation. . . . [A] monopoly is never good, now the previous customers have options, which is always good for innovation and costs.” I understand PFLUGBEIL’s response to mean that he knew the Licensee

was the only authorized manufacturer of the technology, but intended to sell competing products regardless of this knowledge. As the evidence discussed herein indicates, PFLUGBEIL intended to engage in this competition based on his knowledge and use of the Battery Assembly Trade Secret information.

27. Email records reflect that between on or about November 25, 2022, and at least on or about January 18, 2024, PFLUGBEIL purchased ads on Google for Business-1. These ads read, for example, “[Business-1] | Replacing [Victim Company-1] Pumps & Parts | [Victim Company-1] Identical Spare Parts. We manufacture precision metering pumps and fill tubes. | Contact Us for your [Victim Company-1] replacement pumps and parts.” In any given week, this ad was shown tens of thousands of times.

D. The Transmission of Battery Assembly Trade Secret Information to the Eastern District of New York

28. On or about September 11, 2023, several undercover agents (hereafter “UC-1,” “UC-2,” and “UC-3”) attended a trade show for the packaging and processing industries (the “Trade Show”) in Las Vegas, Nevada. UC-1, UC-2, and UC-3 posed as businesspeople who were interested in purchasing a battery assembly line from Business-1 in order to manufacture batteries at a facility in Long Island, New York. UC-1, UC-2, and UC-3 met SHAO at the trade show. PFLUGBEIL was not in attendance at the Trade Show. While at the Trade Show, UC-1, UC-2, and UC-3 spoke with four representatives of Business-1, including SHAO. In sum and substance and relevant part, the Business-1 representatives indicated that they were interested in doing business with the undercover agents they believed to be businesspeople. Following the

Trade Show, one of the Business-1 representatives introduced the undercover agents to PFLUGBEIL via email.

29. UC-1 subsequently arranged to have a call with PFLUGBEIL, among other representatives of Business-1, to discuss purchasing a battery assembly line from Business-1. On or about October 6, 2023, PFLUGBEIL failed to attend the call. UC-1 and UC-2 spoke with other Business-1 employees, who apologized for PFLUGBEIL's absence and attributed it to the fact that it was a Chinese Holiday. They advised, in sum and substance, that PFLUGBEIL was essential for the call.

30. Between October 6 and November 17, 2023, UC-1 and representatives from Business-1, including PFLUGBEIL, exchanged approximately eight emails regarding UC-1 purchasing a battery assembly line from Business-1 for use on Long Island, New York.

31. On or about November 17, 2023, PFLUGBEIL sent, via email, a detailed 66-page technical documentation proposal (the "Proposal") to UC-1 while UC-1 was in the Eastern District of New York. The Proposal notes, "this technical documentation package contains [Business-1] proprietary information which must be kept confidential."

32. In fact, rather than consisting of Business-1 proprietary information, the Proposal contained Battery Assembly Trade Secret information belonging to Victim Company-1. At least half a dozen drawings PFLUGBEIL used in the Proposal and sent to UC-1 were Victim Company-1's information related to the Battery Assembly Trade Secret.

33. One of the drawings contained in the Proposal sent to UC-1 was a "Cathode System." The drawing is materially identical to drawing of a "Cathode System" that belongs to Victim Company-1. As discussed above, see supra ¶ 13, PFLUGBEIL previously wrote to SHAO in 2019 that they needed to copy this information from Victim Company-1. The

original Victim Company-1 drawing of the “Cathode System” was labeled “COMMERCIAL CONFIDENTIAL DO NOT COPY.”

34. Another drawing contained in the Proposal sent to UC-1 was for an “AAA Combi Module.” This drawing is also materially identical to a drawing belonging to Victim Company-1. The Victim Company-1 drawing was labeled “COMMERCIAL CONFIDENTIAL DO NOT COPY.” The drawing in the Proposal has the exact same part numbers and description as the original Victim Company-1 drawing, except that the second digit of each part number is obscured in the Proposal version.

E. PFLUGBEIL Travels to the Eastern District of New York to Meet About the Battery Assembly Trade Secret

35. On or about February 6, 2024, PFLUGBEIL agreed to come to the Eastern District of New York and meet with the undercover agents under the pretense that they were negotiating a business deal. Based on his communications, I assess that PFLUGBEIL believed the purpose of the meeting was to finalize negotiations about the sale of a battery assembly line to be used by a business on Long Island.

36. On or about February 26, 2024, PFLUGBEIL noted that, due to unforeseen circumstances he could not travel in the near term and offered to have SHAO travel for the meeting to New York. PFLUGBEIL wrote that “[SHAO’s] background on Alkaline Production is +15 years and often him and I would visit potential customers together. So he is more than qualified to go through your requirements and our proposal.” I understand the reference to “proposal” to be the Proposal that contained the Battery Assembly Technology.

37. On or about March 18, 2024, PFLUGBEIL boarded a flight from Hong Kong to John F. Kennedy International Airport in Queens, New York, to attend the purported

business meeting, which in reality, is a meeting with undercover law enforcement agents on March 19, 2024.

WHEREFORE, your deponent respectfully requests that the defendants KLAUS PFLUGBEIL and YILONG SHAO be dealt with according to law. I request that the Court issue an order sealing, until further order of the Court, all papers submitted in support of this application, including the affidavit and arrest warrants. Based upon my training and experience, premature disclosure of the contents of this affidavit and related documents will seriously jeopardize the investigation, including by giving the defendants an opportunity to flee from prosecution, destroy or tamper with evidence and change patterns of behavior.



Thomas McNulty
Special Agent, Federal Bureau of Investigation

Sworn to telephonically this
18th day of March, 2024



THE HONORABLE PEGGY KUO
UNITED STATES MAGISTRATE JUDGE
EASTERN DISTRICT OF NEW YORK