



**Diamond Cutter Patent Invalidations Open Door
for Foreign Oil and Gas Drilling Tool Imports**
Emily Stellman

The recent invalidation of three patents for diamond cutters suggests a loosening of import restrictions for foreign-made oil and gas drilling tools. On October 3, 2022, the US International Trade Commission (USITC) invalidated three of US Synthetic Corporation's patents for polycrystalline diamond products.¹ Only one USITC commissioner dissented from the majority opinion.² The diamond products claimed by the patents are used prominently in the

¹ Certain Polycrystalline Diamond Compacts and Articles Containing Same, Inv. No. 337-TA-1236, USITC Pub. 3509 (Oct. 3, 2022) (Final); Kelcee Griffis, *ChampionX Diamond Cutter Patents Cancelled in US Import Dispute*, BLOOMBERG LAW (Oct. 4, 2022, 12:53 PM), https://www.bloomberglaw.com/product/trade/bloomberglawnews/international-trade/X437RFNO000000?bc=W1siU2VhcmNoICYgOnJvd3NlIiwiaHR0cHM6Ly93d3cuYmxvb2IjZXJnbGF3LmNybS9wcm9kdWN0L3RyYWRL3NIYXJjaC9yZXN1bHRzLzc1NWU1Mjc4MDAxODRIMWVmMGlyN2M4OGVIMDcwY2U0I1d--33c9274128a0b0b08fbdda86028f0926c2b4fbc1&bna_news_filter=international-trade&criteria_id=755e527800184e1ef0b27c88ee070ce4.

² *Id.*

manufacture of drill bits and bearings for oil and gas drilling.³ Such tools are frequently imported from foreign countries.⁴ The patents, which were filed in 2012, 2016, and 2019, were recommended for invalidation because they were found to seek protection for abstract ideas⁵ as opposed to specific designs or products protectable by US patent law.⁶ While the integration of abstract ideas into designs or products is patentable in the US,⁷ the abstract ideas themselves are not.⁸ This distinction arises in the interest of preventing monopolies over innovation in up-and-coming technological fields and from the fear that allowing such protection would stunt scientific progress.⁹

The USITC agreed to hear the case back in December 2020 following the filing of US Synthetic Corporation's complaint alleging patent infringement by companies from China, South Korea, and the UK.¹⁰ Specifically, US Synthetic Corporation alleged that the companies—which include SF Diamond, Iljin Diamond, and Element Six Abrasives—manufactured and imported diamond cutters which infringed on the American company's patents.¹¹ The types of products

³ *Id.*; ChampionX Corporation, *US Synthetic Considering Challenge to Patent Ruling but Expects it to Have Limited Impact on Financial Results*, GLOBE NEWSWIRE (Oct. 5, 2022, 6:00 AM), <https://www.globenewswire.com/en/news-release/2022/10/05/2528471/0/en/US-Synthetic-Considering-Challenge-to-Patent-Ruling-but-Expects-it-to-Have-Limited-Impact-on-Financial-Results.html>.

⁴ *See Ukraine Has Launched a Special Investigation into the Import of Drill Bits at the Request of Universal Drilling*, EXPRO CONSULTING (Oct. 20, 2021, 5:50 PM), <https://expro.com.ua/en/tidings/ukraine-has-launched-a-special-investigation-into-the-import-of-drill-bits-at-the-request-of-universal-drilling> (showing drill bits are largely produced by and exported from countries such as Germany, China, Russia, United Arab Emirates, and India).

⁵ Griffis, *supra* note 1.

⁶ *Intellectual Property Law*, GEORGETOWN LAW, <https://www.law.georgetown.edu/your-life-career/career-exploration-professional-development/for-jd-students/explore-legal-careers/practice-areas/intellectual-property-law/#:~:text=Patent%20law%20grants%20protection%20for%20others%20to%20foster%20innovation> (last visited Oct. 30, 2022) (“Patent law grants protection for new inventions which can be products, processes or designs”); United States Patent and Trademark Office, *2106 Patent Subject Matter Eligibility [R-10.2019]*, USPTO.GOV (June 25, 2020, 6:21 PM), <https://www.uspto.gov/web/offices/pac/mpep/s2106.html> (explaining that while “integration of an abstract idea, law of nature or natural phenomenon into a practical application may be eligible for patent protection,” an abstract idea itself may not be patented).

⁷ United States Patent and Trademark Office, *supra* note 6.

⁸ *Id.*

⁹ *Id.* (“[T]he Supreme Court has expressed concern that monopolizing these tools by granting patent rights may impede innovation rather than promote it”).

¹⁰ Griffis, *supra* note 1.

¹¹ *Id.*

over which the patents claimed protectable rights were first introduced commercially to the oil and gas drilling industries in 1976 and have become crucial components of the industry since technological advancements for oil and gas drill bits in the 1990s.¹²

ChampionX, the parent company of US Synthetic Corporation, expects limited impacts on its own revenues despite the USITC decision.¹³ The company expects that the impact to its annual drilling technologies revenues will not breach 3%,¹⁴ and yet the decision could have a much broader financial impact on the oil and gas drilling industries. The invalidation of these three patents suggests an open door for foreign-made imports of diamond cutters, in which a rapidly expanding market could see a compound annual growth rate of up to 10% through 2027.¹⁵ In light of the fact that diamond cutters are one of the two leading types of drill bits which dominate the oil and gas drilling industry,¹⁶ it is foreseeable that the patent invalidations' impact on the market will far exceed that which is estimated by ChampionX. Other industry leaders such as Halliburton Energy Services, Baker Hughes Company, and NOV Inc. would do well to take heed of the USITC's decision considering their own large stakes in the oil and gas drill bit market.¹⁷

ChampionX has announced that they are considering appealing the USITC's decision regarding the patent invalidations.¹⁸ The company claims that the decision was "unprecedented

¹² D. E. Scott, *The History and Impact of Synthetic Diamond Cutters and Diamond Enhanced Inserts on the Oil and Gas Industry*, 66 INDUSTRIAL DIAMOND REVIEW 48, 48-55 (2006).

¹³ ChampionX Corporation, *supra* note 3.

¹⁴ *Id.*

¹⁵ *Oil and Gas Drill Bit Market*, EXPERT MARKET RESEARCH: INDUSTRY REPORTS, <https://www.expertmarketresearch.com/reports/oil-and-gas-drill-bit-market> (last visited Oct. 30, 2022).

¹⁶ *Id.* ("The leading types of oil and gas drill bit in the market are roller cone (milled-tooth and tungsten carbide) and fixed cutter (polycrystalline diamond cutters (PDC) and natural or synthetic diamond cutters)").

¹⁷ *Id.* (listing Halliburton Energy Services Inc., Baker Hughes Company, and NOV Inc. as some of the industry's key players).

¹⁸ ChampionX Corporation, *supra* note 3.

and improper” in light of Federal case law and statutory law pertaining to intellectual property.¹⁹

As of October 30, 2022, no appeal has been filed.

¹⁹ *Id.*