

Slurry Pump

Patent Landscape Report

This sample report showcases a landscape of advancements in Slurry Pump technology by analyzing 3821 patent from 2005 to 2025.

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Sample

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Executive Summary

This sample report showcases a landscape of advancements in Slurry Pump technology by analyzing 3821 patent from 2005 to 2025. The analysis reveals:

Explosive Growth

Patent filings in slurry pump technology soared from under 300 in 2005 to over 600 in 2022, with 76% of the 3,821 total patents registered since 2015, reflecting a thirteenfold increase over 19 years.

Geographic Dominance

China dominates the landscape with approximately 91% of global slurry pump patents, far outpacing the United States and Europe, which together hold the remaining 9%.

Technology Focus

Key innovations center on pump components and accessories (F04D29) and pumps tailored for abrasive or viscous slurries (F04D7), prioritizing wear-resistant materials, advanced impeller designs, and durability.

Market Potential

The global slurry pump market was valued at USD 1.2 billion in 2023 and is projected to reach USD 1.3 billion by 2030 at a 1.5% CAGR, driven by robust demand in mining, wastewater treatment, and infrastructure projects.

Methodology

The methodology employed in this report integrates AI-driven data analytics, machine learning algorithms, and expert human analysis, thereby ensuring a thorough and precise assessment of patent trends within this technology sector.

Data Collection

The analysis initiates with the collection of patent metadata from reputable global patent databases, including:

- WIPO PATENTSCOPE (World Intellectual Property Organization)
- Lens.org
- USPTO (United States Patent and Trademark Office)
- EPO (European Patent Office)
- National Patent Offices

These datasets encompass structured metadata, including patent titles, abstracts, claims, classifications (e.g., IPC, CPC), applicants, publication dates, citations, and legal status.

AI & Machine Learning Analysis

Using proprietary artificial intelligence (AI) and machine learning models developed by STIMAnalytics, the acquired patent data undergoes the following processing stages:

- Text Mining and Natural Language Processing (NLP): Extracting critical technical terms, concepts, and innovation themes from patent documents.
- Clustering and Classification: Categorizing patents into relevant technological groups and subgroups.
- Trend Analysis: Identifying growth trajectories, emerging technologies, and shifts in innovation focus over time.
- Network Analysis: Mapping interrelationships among applicants, technologies, and jurisdictions.
- Predictive Insights: Forecasting future technological advancements and market trends based on historical and contemporary patenting activities.

Reporting Infrastructure

The analytical results are subsequently integrated into a robust reporting infrastructure, which autonomously generates structured reports and interactive dashboards. These outputs are further enriched with:

- Visual Analytics (charts, graphs, maps)
- Strategic Insights
- Technology Roadmaps
- Company and Academic Profiles

Expert Review

Finally, all reports undergo a rigorous quality assurance process conducted by domain experts and technical editors to ensure:

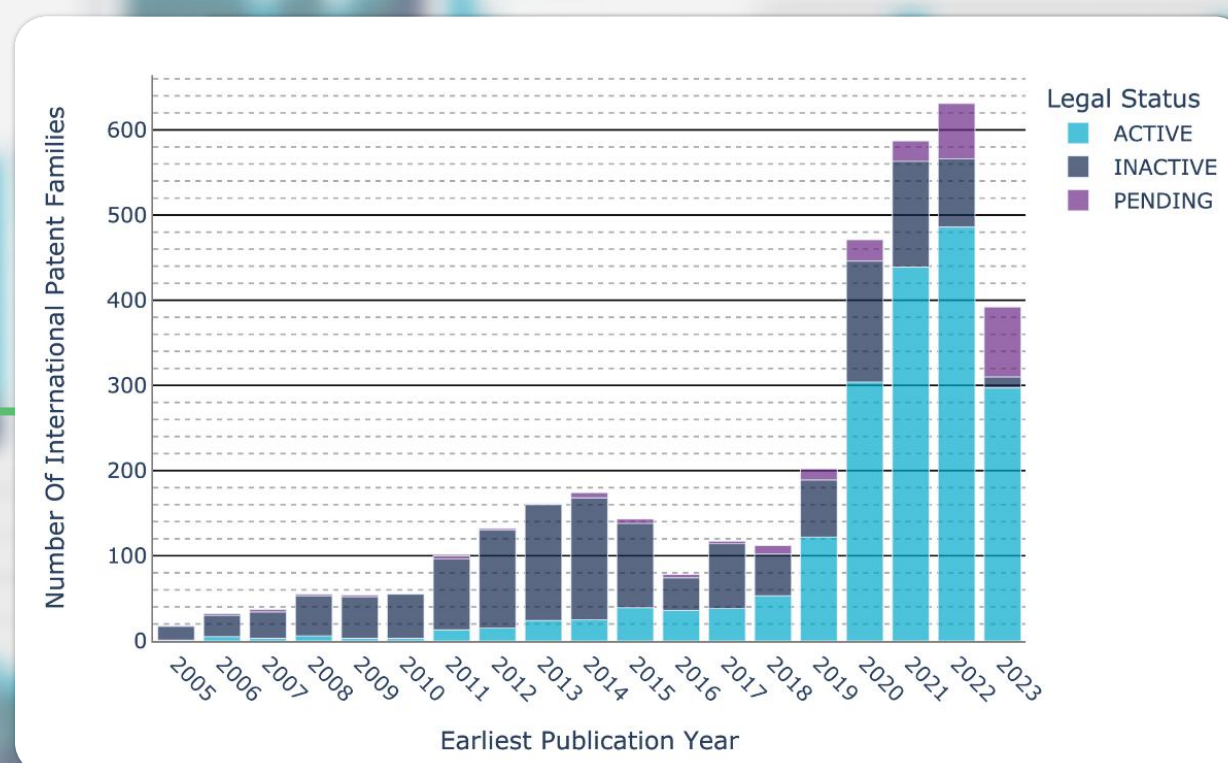
- Accuracy of technical interpretation
- Consistency in terminology and classification
- Relevance of strategic insights
- Professional formatting and readability

Delivery Formats

The final outputs are delivered in two formats:

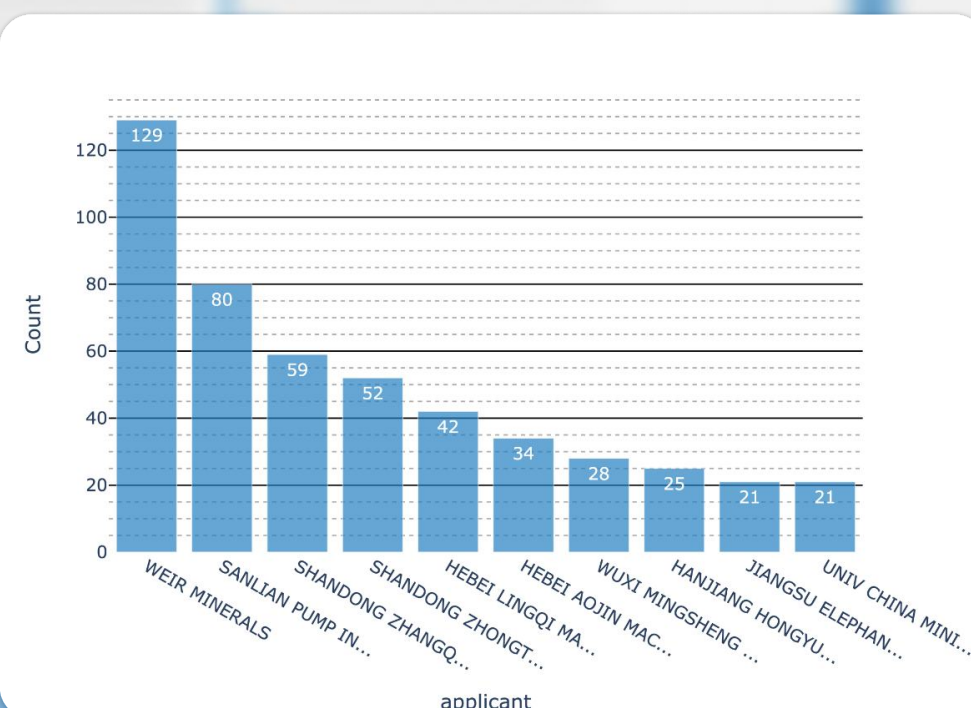
- Written Report (PDF): A comprehensive, publication-ready document featuring executive summaries, technology breakdowns, market insights, and key player profiles.
- Interactive Dashboard: A web-based platform enabling users to explore patent trends, filter by technology, applicant, jurisdiction, and time period, and generate customized reports.

Patent Landscape Overview



Patent filings grew gradually from 2005 to 2018, then surged sharply—tripling from 2019 to 2021—driven by pending applications, indicating a recent innovation boom with significant ongoing activity yet to be granted.

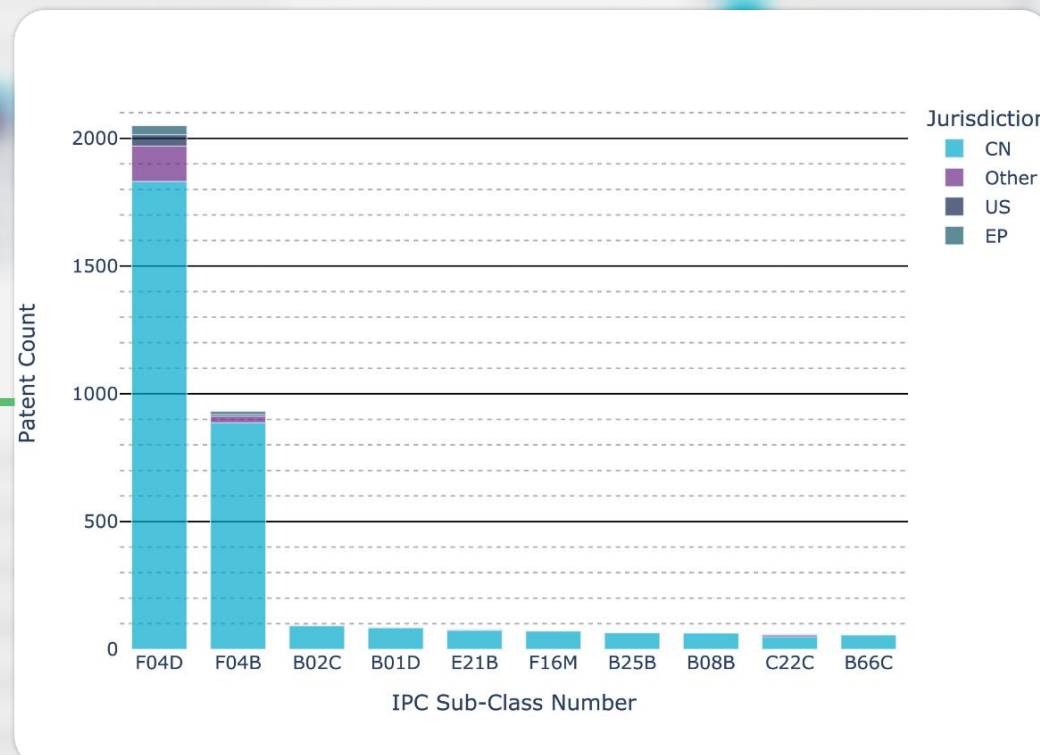
Top Patent Applicants



Weir Minerals leads with 129 patents, significantly ahead of domestic Chinese firms, indicating strong international innovation in mining equipment and slurry handling technologies; local applicants show fragmented contributions across pump and mechanical machinery sectors.

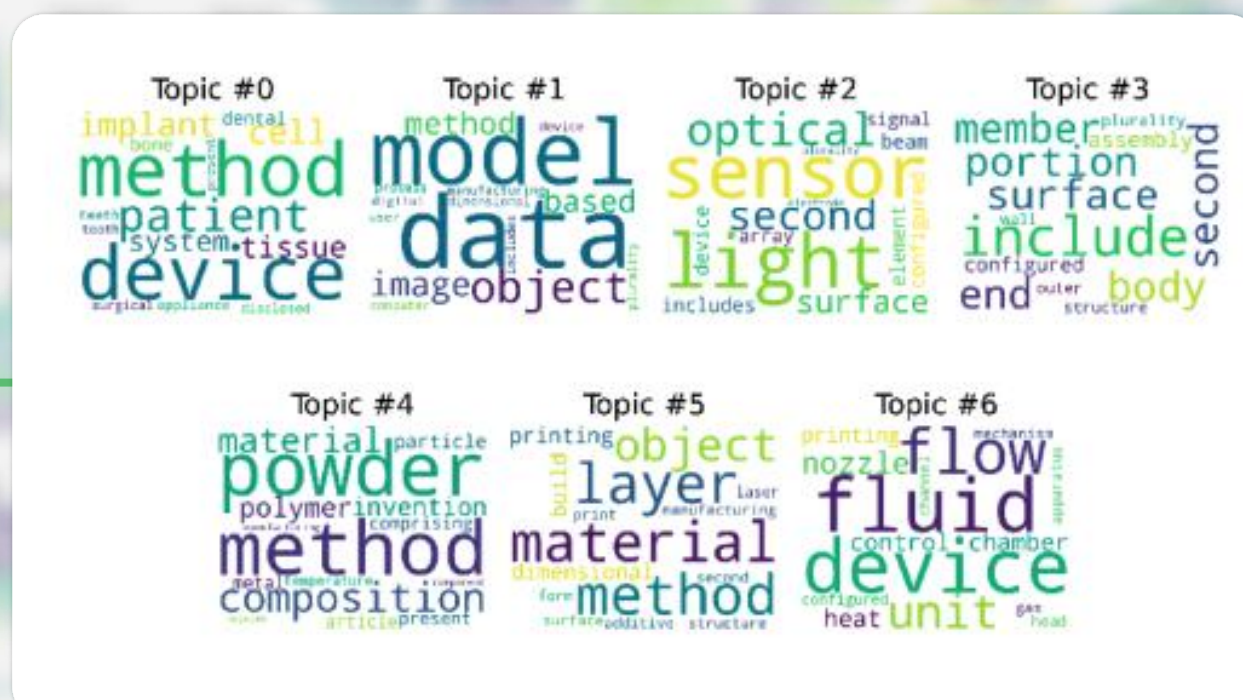
Technology Trends

Top Technologies by Sub-Class



F04D and F04B dominate with over 3,000 patents combined, primarily from China, indicating concentrated innovation in fluid and rotary pump technologies, essential for energy, mining, and industrial fluid handling systems globally.

Key Patent Themes



Strategic Recommendations:



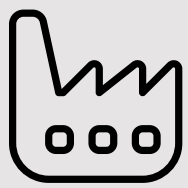
Policy Makers

1. Focus on fostering innovation in high-growth sectors.
2. Encourage investments in sustainable technologies.
3. Support industry-specific research and development initiatives.



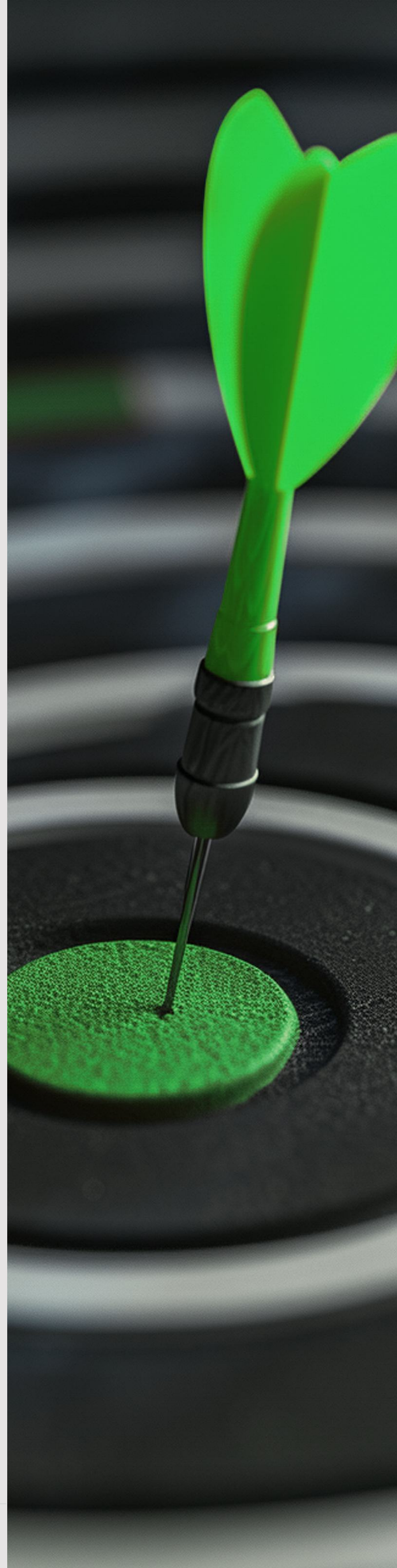
Investors

1. Prioritize companies with strong intellectual property in emerging technologies.
2. Monitor the latest advancements in new industrial applications and sectors.



Manufacturers

1. Embrace new technology adoption to improve operational efficiency.
2. Invest in scalable solutions for long-term growth.
3. Focus on sustainability and circular economy practices.

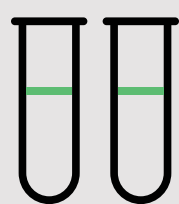


Our Industrial Expertise



Energy

Exploring innovations in the oil, gas, electricity, and renewable energy sectors.



Chemical

Advancing chemical processes, products, and catalysts for industrial applications.



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Analyzing new pharmaceutical products, health services, and medical technologies.



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