

JOHN FINLAY ENG.
& TECH.GROUP OF COMPANIES





ABOUT JOHN FINLAY

John Finlay Engineering & Technology Group of companies ("JFE") is a renowned mining services company headquartered in Brisbane, Australia. With over 50 years of experience and a workforce of more than 5000 employees, JFE has built a substantial presence and a strong customer base in Australia, China, and other Asian countries.

JFE is a leader in providing comprehensive services to coal preparation facilities in its operating regions. The company has been instrumental in the design, construction, equipment supply, and maintenance of over 125 mineral beneficiation plants of various scales.

Leveraging its extensive expertise in mining services, JFE aims to expand its reach to India, with a focus on:

- Enhancing the quality of mineral outputs
- Refining existing mineral preparation processes to reduce waste
- Boosting the overall competitiveness of the domestic mineral industry

This expansion strategy underscores JFE's commitment to advancing mining technologies and supporting the mineral industries in the regions it serves.



MANUFACTURING FACILITY

At John Finlay, our 35,000-square-meter landholding grants us exclusive property rights for our state-of-the-art equipment manufacturing facilities. This space allows us to house the largest laser cutting machine in the industry, significantly enhancing our production capabilities and enabling faster, more precise fabrication.

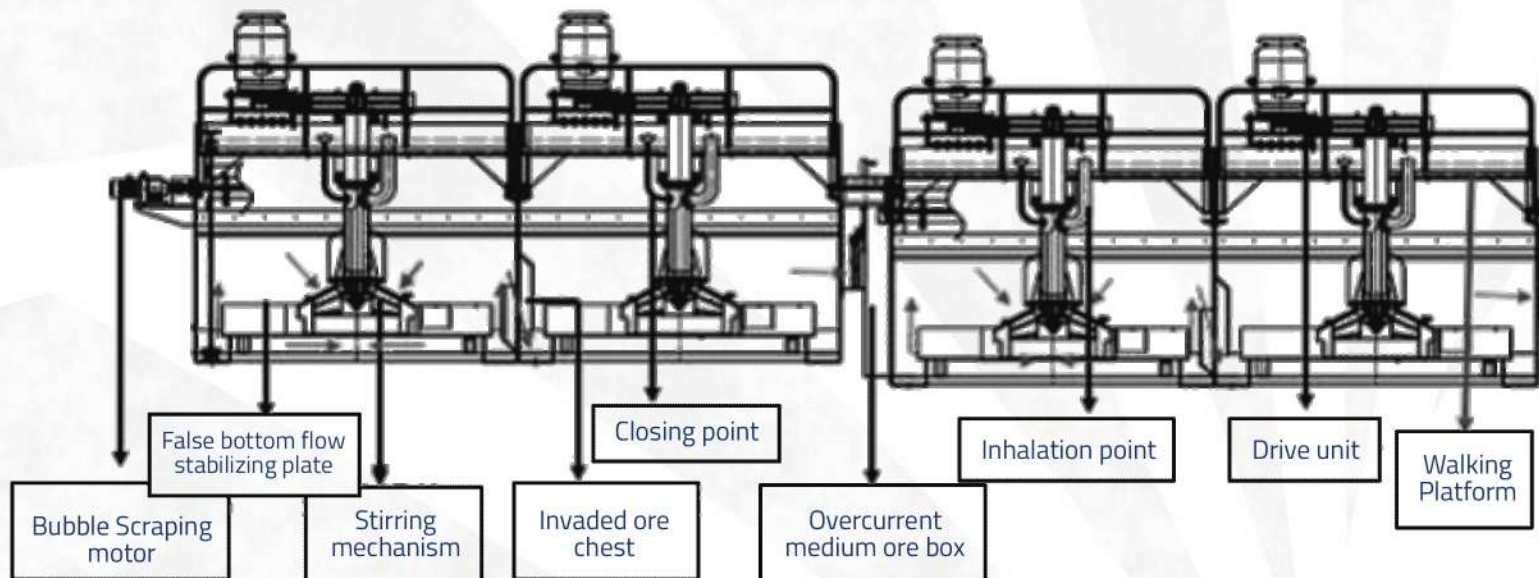
Our unwavering dedication to innovation drives our operations. Our process equipment results from rigorous independent research and development, consistently pushing industry standards. We seamlessly integrate advanced manufacturing technologies sourced from the forefront of innovation in Australia.

Our expansive manufacturing facilities embody precision engineering. With independent property rights, we ensure that every aspect of our production process meets the highest standards of quality and efficiency. The largest laser cutting machine in our facility enables unparalleled precision and speed, reducing lead times and enhancing product quality.

Experience the transformative difference with John Finlay as we reshape the future of equipment manufacturing, combining innovation, commitment, and state-of-the-art technology. Continue our legacy of excellence.



**XJM-S SERIES
FLOTATION**



FLOATATION CELL:

Advancing Flotation Technology: John Finlay and Our Partner

John Finlay, in collaboration with our esteemed partner, has been at the forefront of coal slime flotation technology. Our partner's Flotation Research Institute has been dedicated to the research and development of flotation equipment and technology. With a team of over 706 research members holding master's degrees or higher, we leverage extensive design and usage experience from advanced foreign flotation machines to create equipment tailored to Chinese coal properties.

Through persistent efforts and market validation, our researchers have developed the XJM-S series flotation machine, known for its adaptability and compliance with China's coal characteristics, and a preferred choice for over 2,000 users worldwide. Under the guidance and innovation of our scientific team, large-scale flotation machines have rapidly evolved, setting new standards in coal slime flotation.

Key milestones include the development and application of the 20m³ flotation machine in 2005, the 28m³ flotation machine in 2009, and the 45m³ and 60m³ flotation machines, which entered industrial production in 2011 and 2013, respectively, all achieving excellent results. In 2014, the 90m³ flotation machine was successfully developed and applied at the Shanxi China Coal Dongpo Coal Industry Co., Ltd. Shuozhong Coal Preparation Plant, with a pulp processing capacity of 2,400-3,000 m³/h. This breakthrough meets the coal slime flotation needs of 10 million-ton coal preparation plants, ending reliance on imported large flotation machines and pioneering new advancements in thermal coal slime flotation.

Building on our R&D expertise in flotation equipment, John Finlay and our partner have actively explored and penetrated the market. We have formed long-term partnerships with major coal mining groups and strategic alliances with professional design enterprises both domestically and internationally. Our commitment to innovation and quality has propelled us into the global market, with our flotation equipment now being sold in countries such as Colombia, India, and Australia, achieving cumulative sales of over 3,000 units.

Over the years, our products have earned universal acclaim and established a trusted national brand reputation. Known for the high reliability of our equipment, unique technical advantages, and exceptional technical service, John Finlay's flotation solutions have become the top choice for major coal preparation plants. Our sincere and responsible industrial image has made our products preferred and recommended by numerous design companies, including many domestic and international coal dressing design firms.

FEATURES

Material Mode: Operates under a false suction, surrounding flow mechanism, ensuring optimal material handling and processing efficiency.

Impeller Structure: Equipped with a double umbrella impeller, cover plate, stator, suction, and adjustable suction volume, the XJM-S series ensures effective agitation and mixing for superior flotation performance.

Trough Structure: The rectangular section groove body with a large section area eliminates dead zones, enhancing the flotation process and improving recovery rates.

Vacuum Atomization: Utilizes vacuum atomization to improve the utilization efficiency of flotation agents, maximizing the effectiveness of the process and reducing operational costs.

ADVANTAGES

Self-Aeration Mechanical Agitation: Designed specifically for the flotation of -0.5mm coal, the XJM-S series utilizes self-aeration mechanical agitation, ensuring efficient and effective processing.

Uniform Bubble Distribution: The machine provides uniform distribution of bubbles, resulting in excellent flotation selectivity and reliable operation, making it ideal for precise coal separation.

Low Energy Consumption: Among similar products, the XJM-S series stands out for its low energy consumption and high aeration rate, contributing to cost-effective and sustainable operations.

Proven Performance: With over 2,000 units promoted and in operation, the XJM-S series is recognized as an ideal upgrade and replacement for older flotation machines, delivering enhanced performance and reliability.



XJM-KS SERIES FLOTATION MACHINE

TECHNICAL FEATURES & ADVANTAGES:

Mineralizing Device: A mineralizing device is added to the feeding end of the XJM-KS series flotation machine, enhancing the mineralization rate and improving overall flotation efficiency.

Simplified Flotation Process: The elimination of the pre-processing device simplifies the flotation process, strengthens the separation effect, and reduces operational complexity.

Design Efficiency: The streamlined design reduces the plant design area, lowers plant height, and leads to significant investment savings.

Improved Mineralization: Pre-mineralization of the pulp is completed by the mineralizing device, resulting in a higher mineralization rate and more efficient flotation process.

Key Components of the XJM-KS Series Flotation Machine:

1. **Split-Type Stator:** Enhances the flotation process by providing better agitation and mixing of the slurry, leading to improved separation efficiency.
2. **Umbrella Impeller:** The umbrella impeller creates a "W" type flow state, optimizing the flow dynamics within the flotation cell and ensuring uniform distribution of bubbles and particles.

IMPORTANT TECHNICAL PARAMETERS OF XJM-KS SERIES FLOATATION MACHINE

Equipment Model	Single cell volume m ³	Unit Processing capacity t/m ³ · h	Pulp Processing capacity m ³ /m ³ · h	Power of Agitating Mechanism kW	Power of Bubble scraping Device kW	Overall Dimension		
						L (mm)	w (mm)	H (mm)
XJM-(K)S8	8	0.6~1	6~10	22	1.5	10500	2750	2956
XJM-(K)S12	12	0.6~1	6~10	30	1.5	12196	3120	3250
XJM-(K)S14	14	0.6~1	6~10	30	1.5	13200	3270	3290
XJM-(K)S16	16	0.6~1	6~10	37	2.2	14175	3450	3433
XJM-(K)S20	20	0.6~1	6~10	45	2.2	15175	3700	3503
XJM-(K)S24	24	0.6~1	6~10	55	4	16722	3950	3566
XJM-(K)S28	28	0.6~1	6~10	55	4	17271	4200	3607
XJM-(K)S36	36	0.6~1	6~10	75	4	18870	4600	4728
XJM-(K)S45	45	0.6~1	6~10	75	4	21555	4870	4805
XJM-(K)S60	60	0.6~1	6~10	110	3	22315	5374	5207
XJM-(K)S90	90	0.6~1	6~10	160	3	26206	6278	5338



TECHNICAL FEATURES & ADVANTAGES:

Innovative Arrangement:

The XJM-KS (3+2) series features an arrangement where units are connected by an intermediate box, enabling seamless integration and flexibility in the flotation process.

Dual Flotation Capability: A single unit of equipment can perform both first and second stage flotation, allowing for process flexibility and efficiency.

Power Efficiency: Concentrates from the first three cells flow into the subsequent two cells, optimising power usage and reducing operational costs.

Proven Performance: The XJM-KS (3+2) series has been successfully implemented in dozens of units across various models, receiving high acclaim from users for its reliability and performance.

Important Technical Parameters of XJM-KS Series Flotation Machine:

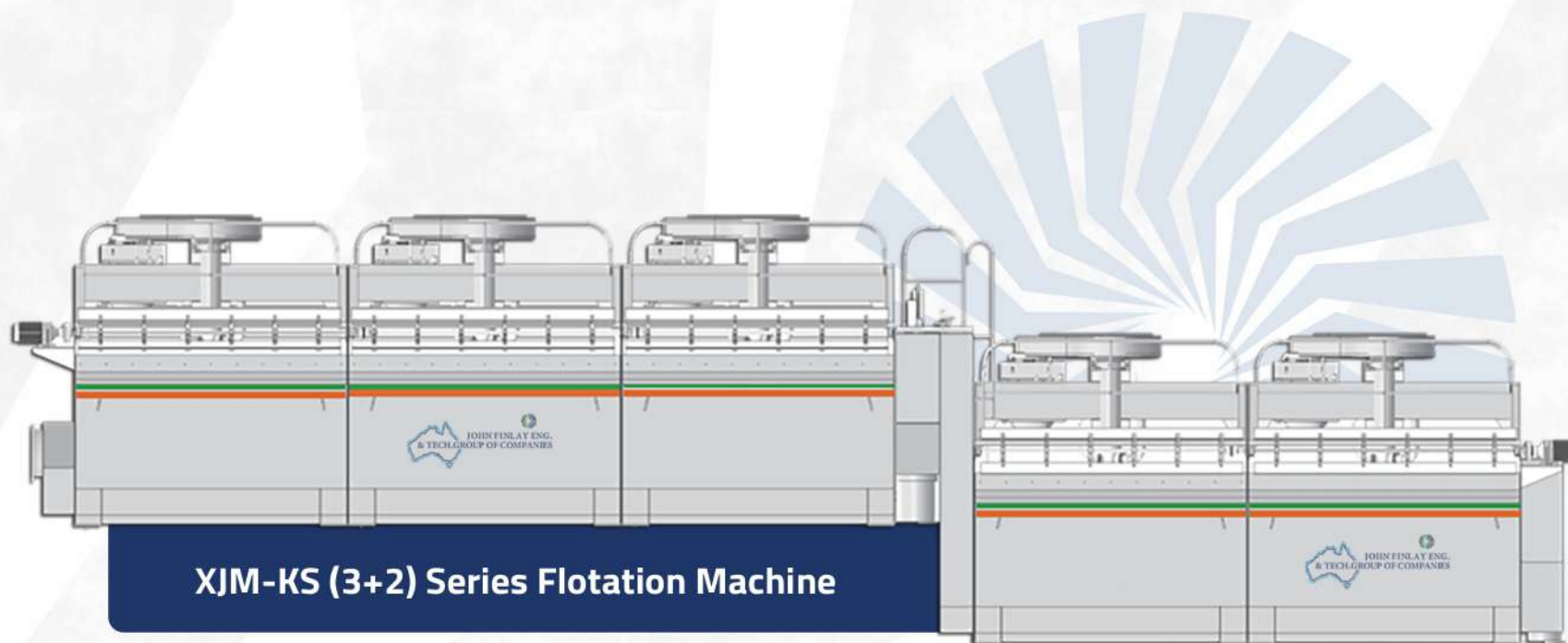
Arrangement: Connected by the intermediate box in between, allowing for flexible process adjustments.

Dual Flotation Switching: Realises once and twice flotation switching within a single unit, providing enhanced process control.

Energy Saving: The innovative flow design where the first three cells' concentrates flow into the next two cells results in significant power savings.

User Acclaim: Successfully promoted and highly acclaimed by users for its efficiency, reliability, and superior performance.

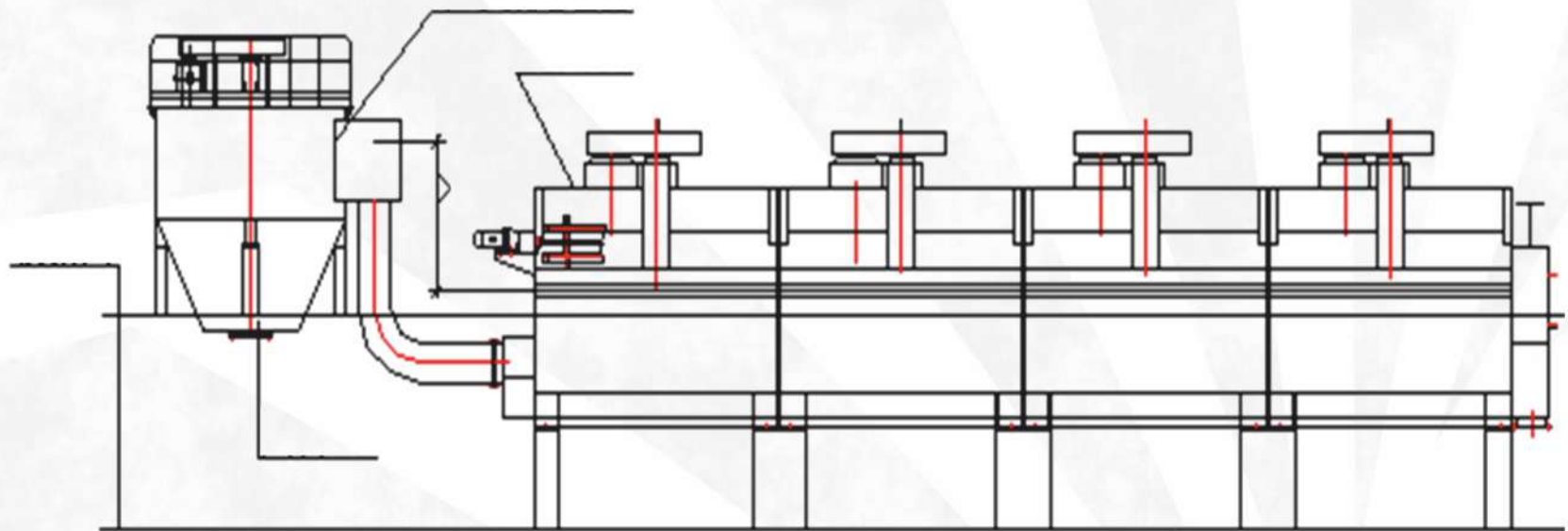




XJM-KS (3+2) Series Flotation Machine

IMPORTANT TECHNICAL PARAMETERS OF XJM-KS (3+2) SERIES FLOATATION MACHINE:

Equipment Model	Single cell volume m ³	Unit Processing capacity t/m ³ · h	Pulp Processing capacity m ³ /m ³ · h	Power of Agitating Mechanism kW	Power of Bubble scraping Device kW	Overall Dimension		
						L (mm)	w (mm)	H (mm)
XJM-KS12 3+2	12	0.6~1	6~10	30	1.5	15805	3120	4200
XJM-KS16 3+2	16	0.6~1	6~10	37	2.2	18312	3450	4713
XJM-KS20 3+2	20	0.6~1	6~10	45	2.2	19605	3700	4803
XJM-KS24 3+2	24	0.6~1	6~10	55	4	20972	3950	5066
XJM-KS28 3+2	28	0.6~1	6~10	55	4	22328	4200	5107
XJM-KS36 3+2	36	0.6~1	6~10	75	4	24475	4600	6330
XJM-KS45 3+2	45	0.6~1	6~10	75	4	27805	4870	6405



Slurry Pretreatment Equipment: Enhancing Flotation Efficiency

Slurry pretreatment equipment is essential for boosting the processing capacity of flotation machines and refining the coal slurry separation process. Integrated with flotation machines, this equipment is a crucial part of coal slurry flotation in domestic coal preparation plants.

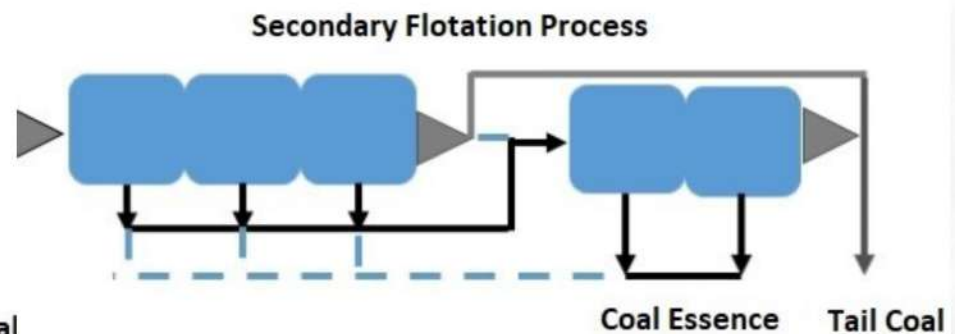
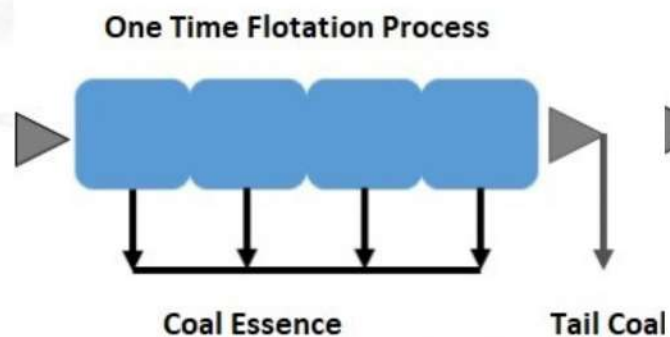
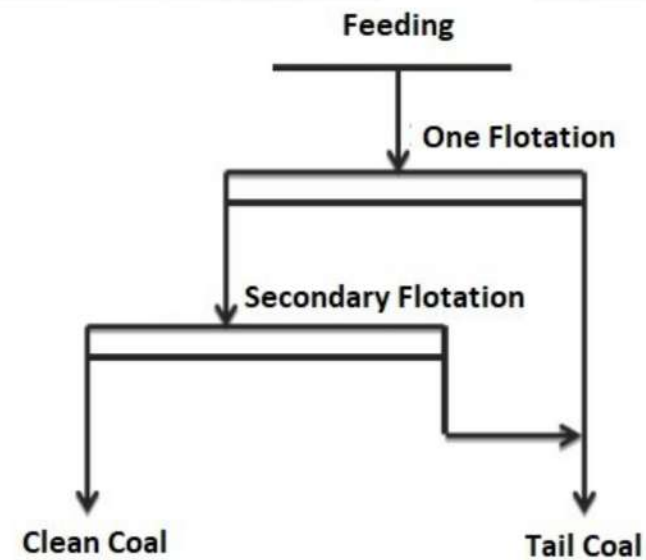
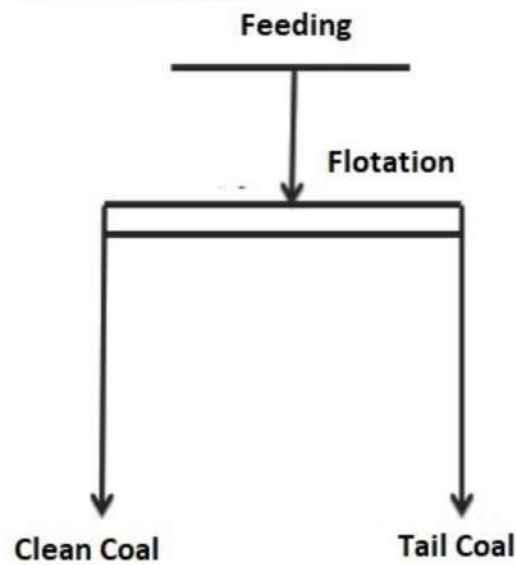
Key advantages of using slurry pretreatment include:

Operational Simplification: Streamlines operations, making the process more efficient.

Increased Capacity: Enhances the throughput of flotation machines, allowing for greater volumes of slurry to be processed.

Improved Mineralization: Optimizes slurry conditions, resulting in better separation of minerals and impurities, leading to higher quality outputs and more effective resource recovery.

Cost Savings: Reduces reagent consumption, a major cost in the flotation process, by optimizing slurry conditions before flotation, resulting in substantial cost savings and promoting sustainable operations.





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