



# 山东鑫海矿业集团股份有限公司

Shandong Xinhai Mining Group Co., Ltd.

一站式、定制化矿山全产业链服务 EPC+M+O 供应商  
One-Stop, Customized Mine EPC+M+O Service Supplier

您需要的正是我们能做到的  
What you need is exactly what we can do!



**2500+**  
服务过的矿山  
Served Mines



**600+**  
矿山EPC+M+O工程项目  
EPC+M+O Projects



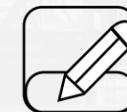
**700+**  
技术专家  
Technical Experts



**100+**  
产品出口国家  
Export Destinations



**70+**  
矿石采选技术及经验  
Types of Ore



**30+**  
矿山经验  
Years of Experience

# 公司介绍 / Company Profile



山东鑫海矿业集团股份有限公司(简称“鑫海矿业”)创立于1997年,是一家深耕矿业领域近三十载,以“矿业投资开发”与“矿业全产业链服务”双轮驱动为核心的国际化企业。

Shandong Xinhai Mining Group Co., Ltd. (“Xinhai Mining”), founded in 1997, is an international mining enterprise with nearly 30 years of industry expertise. Driven by a dual-engine strategy of mining investment & development and integrated mining services, Xinhai is committed to delivering sustainable value across the global mining sector.

集团致力于通过矿业全产业链服务(EPC+M+O),为全球客户提供涵盖选矿试验研究、矿山设计、设备制造与配套、采选尾矿库施工、设备安装、矿山建设管理及生产运营的一站式解决方案和全流程服务,助力客户实现矿产资源价值的全面提升。

Through its EPC+M+O model, Xinhai provides end-to-end solutions covering mineral processing test, mine design, equipment manufacturing, construction, installation, project management, and operations. The Company enables efficient, cost-effective, and fully integrated project delivery worldwide.





## 张云龙 / Elon Zhang

鑫海集团创始人，现任鑫海集团董事长，是国际矿业咨询师，教授级高级选矿工程师，澳大利亚矿业与冶金学会院士（FAusIMM）级会员，东北大学第五届校董会董事，山东科技大学、山东理工大学、黑龙江科技大学、武汉理工大学兼职教授、东北大学的兼职教授。

Elon Zhang, Xinhai's founder and Chairman, serves as an international mining consultant and professor-level senior mineral processing engineer, holding FAusIMM fellowship, sitting on the 5th School Board of Northeastern University, and teaching as an adjunct professor at Shandong University of Science and Technology, Shandong University of Technology, Heilongjiang University of Science and Technology, Wuhan University of Technology, and Northeastern University.

- ◆ 中国智能制造优秀企业家 / Outstanding Entrepreneur of Intelligent Manufacturing in China
- ◆ 经济发展先进个人 / Advanced Individual for Economic Development
- ◆ 山东省企业技术创新奖 / 2024 Enterprise Technology Innovation Award in Shandong Province
- ◆ 2024 年度烟台市创新先锋企业家 / Yantai Innovation Pioneer Entrepreneur
- ◆ 2022 年度烟台市长质量奖 / 2022 Yantai Mayor Quality Award
- ◆ 山东省和烟台市好人 / Good Samaritans of Shandong Province and Yantai



# 700+ 技术专家, 6 大技术机构

## 700+ Technical Experts, 6 Technical Institutions

### 01 矿山研究院 Mine Research Institute

专注 70+ 种矿石性质研究与工艺创新，为矿山项目提供科学选矿方案与技术支持。  
Expert in 70+ ore studies and innovative processing to deliver smart, reliable beneficiation solutions.



### 02 矿山设计院 Mine Design Institute

整合地质、采矿、选矿等 17 个专业力量，深入评估矿山特性，为每一项目量身打造高效、安全、绿色的定制化设计方案。  
Seamlessly integrates 17 disciplines to craft safe, green, and efficient custom mine designs.



### 03 智能装备研究院 Intelligent Equipment Research Institute

厂区占地面积 11 万 m<sup>2</sup>，具备成套大型选矿设备制造能力（如球磨机 / 浮选机 / 浸出搅拌槽 / 浓密机等）。能为 50000 吨 / 日规模以下的矿山生产提供全套主辅设备，可生产直径 7 米以下的球磨机等大型矿山机械。

Covers 110,000 m<sup>2</sup> for manufacturing complete mineral processing equipment sets—supporting plants up to 50,000 t/d and large-scale machinery such as ball mills (up to 7 m), flotation cells, leaching tanks and thickeners.



### 04 选矿中试研究中心 Mineral Processing Pilot Center

面积约 2000 m<sup>2</sup>，能为 70+ 种矿石提供从探索性小试到半工业化中试的全流程试验服务，是山东省重点实验室及烟台市重点实验室。

A 2,000 m<sup>2</sup> facility providing full-process testing from lab-pilot scale tests for over 70 ore types, recognized as a key laboratory in Shandong and Yantai.



### 05 耐磨橡胶研发测试中心 Wear-Resistant Rubber R&D Center

掌握湿法耐磨橡胶核心生产技术，产品性能达到国际先进水平，可自主研发和制造渣浆泵护、叶轮、旋流器、橡胶衬板等全系列耐磨橡胶制品，广泛应用于矿山及多行业，并提供完善的技术支持与售后服务。

Advanced wet-process rubber technology for pumps, cyclones, and linings with global performance.



### 06 自动化研发测试中心 Automation R&D Center

专注矿山自动化、智能化与信息化技术研发，核心团队拥有十年以上项目经验，多项成果获国家专利。可提供从智能控制系统、数字孪生到大数据、AI 分析等整体规划与 EPC 实施，助力矿山建设绿色智能化。

Delivers full-process automation systems and equipment for mining, beneficiation, and tailings management—advancing toward green, intelligent mining with smart control, digital twins, and AI.





## 矿山工程施工总承包壹级资质 矿山采选尾施工必备资质 Class-A Qualification for General Contracting of Mine Construction Projects

公司可承接不限矿种、不限规模、不限工程类型的矿山项目，全国仅55家民营企业持有，占整个行业总量不到2%。

No restrictions on mineral types, project scale, or mine types—from metal mines to non-metallic mines and coal mines. It is held by only 55 private enterprises nationwide, accounting for less than 2% of the total industry.

## 资质证书 Qualification Certificates

工程施工专业承包资质 / Professional Construction Contracting Qualification

工程设计资质 / Certificate of Engineering Design Qualification

CNAS 实验室认证 / Laboratory Accreditation Certificate of the China National Accreditation Service for Conformity /Assessment (CNAS)

欧盟 CE / EU CE Certification

加拿大 CSA / CSA Certification

ISO9001/14001/45001/9712 国际认证 / ISO 9001/14001/45001/9712 International Certifications



## 企业荣誉 Comany Honor

国家级“专精特新”重点小巨人企业 / National "Small Giant" Enterprises

专精特新“小巨人”企业 / "Small Giant" Enterprises

国家高新技术企业 / National High-Tech Enterprise

国家科技型中小企业 / National Small and Medium-Sized Sci-Tech Enterprises

烟台市市长质量奖企业 / Yantai Mayor Quality Award



## 创新专利 Innovative Patents



球磨机  
Ball Mill

浮选机  
Flotation Cell

浓密机  
Thickener

渣浆泵  
Slurry Pump

解吸电解  
Desorption Electrolysis

## 国内外矿业项目开发普遍存在 3 大痛点

### Three major problems of mine development

- 01** 几乎都投资超预算  
Over investment budget
- 02** 几乎都没有按期投产或达标达产  
Production is not on schedule or up to standard.
- 03** 几乎投产之日就是改造或者“折腾”开始之日，而且这种“改造”要经历相当长的一段时间  
Almost as soon as it is put into production, the transformation or technological upgrade starts and lasts for quite a long time.

## 一站式采选尾 EPC+M+O 方案破解矿山建设“3 大困境”！

### One-Stop Mining & Processing EPC+M+O Solution Solves Three Major Challenges!

常见问题 Common Challenges	鑫海 EPC+M+O 系统解决方案 Xinhai EPC+M+O Integrated Solution
<b>01</b> 投资超预算 Budget Overruns	<b>01</b> 设计与预算同步规划，EPC 过程可控，精准把控每一分 Synchronized design and budget planning ensures full control over EPC processes, maximizing cost efficiency.
<b>02</b> 项目延期 Project Delays	<b>02</b> 工程全流程统筹管理，设计、设备、施工各方位协调，确保按时达标达产。 Comprehensive project management coordinates design, equipment, and construction to guarantee on-time delivery and production targets.
<b>03</b> 投产即改造 Project Post-Commissioning Modifications	<b>03</b> 源头设计即考虑矿石与工艺的匹配性，实现“建设即达产” Ore-specific process design from the outset ensures immediate production readiness upon completion.

## 鑫海 EPC+M+O 的系统性矿山解决方案

### Xinhai EPC+M+O Systematic Mine Solution

- E** 矿山设计和研究  
Engineering  
根据矿石性质量量身定制工艺方案，确保回收率和经济性。  
Customized process solutions based on ore characteristics to optimize recovery and economics.
- P** 成套设备制造与物资采购  
Procurement  
自产核心设备、精选辅件，全生产流程精准匹配。  
Core equipment produced in-house, auxiliary components carefully selected for seamless process integration.
- C** 采选尾工程施工与设备调试  
Construction  
选厂+尾矿系统协同建设，杜绝“前快后慢”；自有团队安装调试一条路完成，保障施工精度、缩短试车周期、快速达标达产。  
Coordinated construction of processing plant and tailings system to prevent delays; in-house installation and commissioning team ensures precision, shortens commissioning time, and accelerates production ramp-up.
- M** 矿山建设管理  
Mine Management  
设计、生产、采购、施工、人员及质量全流程管理。  
End-to-end management covering design, production, procurement, construction, personnel, and quality control.
- O** 矿山生产运营管理  
Mine Operation  
投产后续技术支持，实现产能持续稳定。  
Post-commissioning technical support for sustained and stable production capacity.

## 01 选矿试验 METALLURGIC TEST

鑫海可为金、银、铜、铅、锌、锂、石英、石墨、铁、铬、钛、锆、钒、钨、钼、锰、锑、锡、稀有金属、长石、萤石、红柱石、重晶石、磷矿等七十余种矿石提供个性化试验与工艺研究。公司拥有通过 CNAS 国际认证的实验室和工业级中试试验基地，年均完成约 180 项试验研究，试验能力达到国际先进水平。

Xinhai provides customized testing and process research services for over 70 types of ores, including gold, silver, copper, lead, zinc, lithium, quartz, graphite, iron, chromium, titanium, zirconium, vanadium, tungsten, molybdenum, manganese, antimony, tin, rare metals, feldspar, fluorite, andalusite, barite, and phosphate. The company operates a CNAS internationally accredited laboratory and an industrial-scale pilot test base, completing approximately 180 test studies annually with testing capabilities at an internationally advanced level.

<b>260+</b> 年均试验数量 Annual Test Projects	<b>80+</b> 试验矿种类型 Types of Tested Ores	<b>40+</b> 试验研究人员 Research Staff	<b>30+</b> 平均经验年限 Average Years of Experience
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CNAS 认证  
CNAS Accredited

试验室  
Laboratory

## 02 可行性研究 FEASIBILITY STUDY

鑫海依托矿山研究院、设计院及全球项目经验，提供涵盖资源评估、工艺方案、投资预算、经济效益及环境影响的全方位可行性研究。通过详实的选矿试验数据、工艺比选与成本分析，帮助客户科学判断项目投资价值，为矿山设计、融资决策和后续建设提供可靠依据。

Xinhai leverages its Mining Research Institute, Design Institute, and global project experience to deliver comprehensive feasibility studies covering resource evaluation, process design, investment budgeting, economic analysis, and environmental impact assessment. Supported by extensive beneficiation test data, process comparisons, and cost analysis, we provide clients with scientifically grounded assessments of project investment value, offering reliable foundations for mine design, financing decisions, and subsequent construction.



## 03 矿山设计 DETAILED ENGINEERING DESIGN

鑫海矿山设计团队涵盖地质、采矿、选矿、冶炼、机械、土建、电力等近 20 个专业，可提供全面技术支持。我们会进行详细实地考察，针对每一座矿山定制设计方案，依据矿山试验结果和基础数据，遵循生产便利、管理高效、生产安全、节省占地和投资的原则，配置设备和流程，提供专业可靠的方案。

Xinhai's multidisciplinary design team covers approximately 20 specialties including geology, mining, mineral processing, metallurgy, mechanical, civil and electrical engineering. We conduct thorough site investigations to deliver customized designs based on experimental data and operational requirements, ensuring operational efficiency, safety, space optimization and cost-effectiveness.

<p><b>采矿工程设计</b> Mining Engineering Design</p> <p>可行性研究报告、采矿方案、初步设计及施工图设计 Feasibility studies, mining plans, detailed construction design.</p>	<p><b>选矿厂设计</b> Processing Plant Design</p> <p>总体布局设计、工艺流程设计、设备选型布置、土建施工设计、基础设施设计、安全环保设计、自动化设计 Overall layout, process flows, equipment selection, civil construction, infrastructure, safety &amp; environmental protection, automation systems.</p>	<p><b>采矿工程设计</b> Tailings Storage Facility Design</p> <p>选址分析、地质水文分析、库型结构设计、库容堆存设计、排水防渗设计、环保生态设计、施工组织设计 Site selection, hydrogeological assessment, dam structure design, storage capacity planning, drainage &amp; anti-seepage systems, environmental &amp; ecological design, construction management.</p>
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常规、移动式、3D、组合式钢结构等多种设计选择  
Multiple design options: conventional, mobile, 3D and modular

VR、AR、裸眼 3D、720 全景技术用于选厂展示  
Advanced visualization: VR, AR, glasses-free 3D and 720° panorama

具备符合中国、澳大利亚、芬兰、加拿大等全球标准能力  
Global standards compliance: China, Australia, Finland, Canada

已设计矿山 2000+ 座  
2000+ completed mine designs



## 矿山设计案例展示 Mine Design Cases

### 01 几内亚 6,000t/d 金矿选矿厂设计 Guinea 6,000t/d Gold Processing Plant Design

鑫海方案：原矿调浆 > 磨矿分级 > 重选 > 氰化浸出 > 解吸电解工艺流程

Xinhai Solution: ore pulp conditioning > grinding & classification > gravity separation > cyanide leaching > desorption & electrolysis



### 02 巴基斯坦 1,500t/d 铜矿选矿厂设计 Pakistan 1,500t/d Copper Processing Plant Design

鑫海方案：两段半闭路破碎 > 一段闭路磨矿 > 一次粗选、两次扫选、两次精选浮选 > 两段机械脱水工艺流程

Xinhai Solution: two-and-a-half-stage crushing with closed-circuit screening > single-stage closed-circuit grinding > one rougher, two scavengers, and two cleaners flotation > two-stage mechanical dewatering



### 03 坦桑尼亚 3,000t/d 石墨矿尾矿库设计 Tanzania 3,000t/d Graphite Tailings Storage Facility Design

鑫海方案：库址比选 > 湿式堆存 > 隔膜泵输送 > 山体管路敷设 > 初期坝 + 上游式尾矿堆积坝 > 排洪系统 > 防渗设施

Xinhai Solution: site comparison > wet stacking > diaphragm pump transportation > mountain pipeline installation > starter dam + upstream tailings embankment > drainage system > seepage control facilities



## 04 采矿工程施工 MINING INFRASTRUCTURE CONSTRUCTION

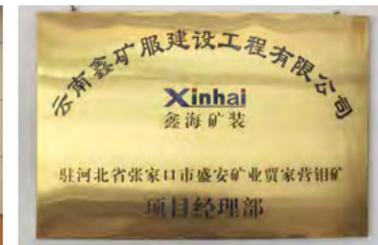
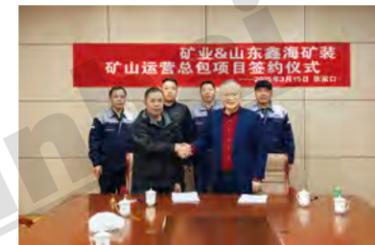
鑫海公司提供涵盖采矿全周期的综合服务，包括采矿工程基建及采矿承包运营。通过优化安全工艺与成本控制，确保矿山项目高效投产，平衡安全与效益。

Xinhai provides integrated services covering the entire mining cycle, including infrastructure construction and operations. By optimizing safety processes and cost control, we ensure efficient project commissioning while balancing safety and profitability.



## 采矿承包运营案例 Contract Mining Operation Cases

### 01 河北张家口 4,000t/d 钼矿采矿总包项目 Hebei Zhangjiakou 4,000t/d Molybdenum Mine EPC Project



### 02 江西省 50 万 t/a 硅灰石采矿总包项目 Jiangxi 500,000 t/a Wollastonite Mining EPC Project



# 05 选矿 EPC 服务 PROCESSING PLANT EPC

鑫海提供从方案设计、设备制造、施工安装到调试投产的一站式矿业全产业链服务。全流程紧密衔接、环环可控，确保项目从一纸图纸到稳定达产更快、更优、更可靠。

Xinhai offers integrated mine services from design and equipment manufacturing to construction and commissioning, ensuring seamless control for efficient project delivery.



## 选矿 EPC 优势 Mineral Processing EPC Advantages

- A** 根据客户的矿种、成本、项目所在地自然条件，定制工艺流程。  
Customized flowsheets tailored to ore characteristics, cost requirements, and local conditions.
- B** 预先确定投资价格，减少不确定性。  
Fixed investment pricing to minimize uncertainties.
- C** EPC 各环节高效紧密衔接（安装调试、土建施工、钢结构等）。  
Tight coordination among installation, commissioning, civil works, and steel structures.
- D** 设计与施工同步进行，节省工期，早日达产。  
Parallel design and construction to accelerate timelines and achieve early production.

## 优质选矿厂案例 Notable Mineral Processing Plant Cases

### 01 津巴布韦 200 万 t/a 锂辉石浮选总包项目 Zimbabwe 2 Million t/a Spodumene Flotation EPC Project

一年建成，达标达产；中式设计，以人为本；智慧选厂，绿色矿山

Completed and operational within one year; People-oriented Chinese design philosophy; Intelligent plant, green mining practices



### 02 河南省 3,000t/d 银铅锌金多金属矿浮选扩建厂 EPC 项目 Henan 3000t/d Polymetallic Flotation Expansion EPC Project

优化设计布局；提前达标达产；贯彻环境保护

Optimized layout design; Early production achievement; Environmental compliance



### 03 几内亚 15,000t/d 金矿选矿总包项目 Guinea 15,000t/d Gold Processing EPC Project

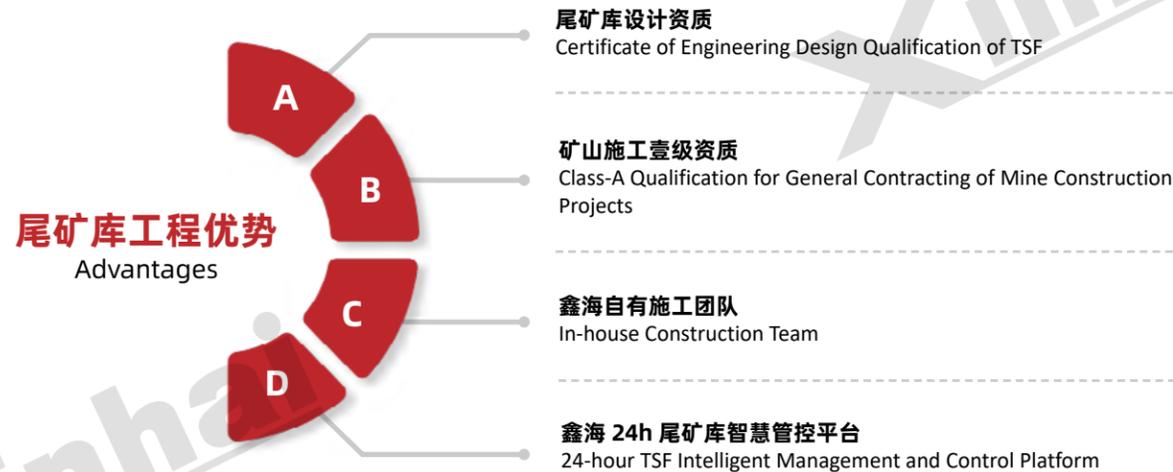
组合式钢结构，省投资，便安装；方案因地制宜，工艺先进合理；绿色环保，环境友好

Modular steel structure, cost efficiency, easy installation; Site-adapted solutions with advanced processes; Eco-friendly, sustainable practices



## 06 尾矿库工程服务 TSF ENGINEERING OPERATION SERVICE

鑫海为尾矿库提供设计 - 施工 - 监管一条龙服务，系统解决客户难题，确保项目安全、规范、可持续。  
Xinhai provides one-stop services of design, construction, and supervision solutions for tailings storage, ensuring the safety, standardization and sustainability of the projects.



### 尾矿库项目案例 TSF Cases



## 07 采选承包运营 CONTRACT MINING AND OPERATION SERVICE

鑫海矿业根据客户需求提供多种合作方式，包括总承包管理、分包管理、联合运营等。同时，鑫海采用多种合作方式提供采矿工程、选矿厂及尾矿库建成后的全方位运营管理服务，也可以针对现有矿山运营团队进行优化，提升其运营效率。

Xinhai provides various cooperation modes tailored to client needs, including general contracting management, subcontract management, and joint operations. For instance, Xinhai can offer comprehensive services covering mining, mineral processing, TSF construction, and daily operation management, or optimize existing mine operation teams to enhance their operational efficiency.



### 承包运营案例 Contract Mining Operation Cases

- 江西 50 万 t/a 硅灰石采矿承包运营项目  
Jiangxi 500,000 t/a Wollastonite Mining Contracting and Operation Project

**固定“成本”模式 (含鑫海的管理费及收益)**  
Fixed "cost" model (including Xinhai's management fees and income)



- 津巴布韦 200 万 t/a 锂辉石浮选厂承包运营项目  
Zimbabwe 2 million t/a Spodumene Flotation Plant Contracting and Operation Project

**“成本 + 增量分成”模式**  
"Cost + incremental sharing" model



- 几内亚 3,000t/d 金矿承包运营项目  
Guinea 3,000t/d Gold Plant Contracting and Operation Project

**劳务输出模式**  
"Labor export" model



- 加纳金矿采选承包运营项目  
Ghana Gold Mining and Processing Contracting and Operation Project

**黄金产品分成模式**  
"Gold product profit-sharing" model



## 部分国内案例 Partial Domestic Cases



河北 300 万 t/a 铁矿选矿项目  
Hebei 3 Million t/a Iron Ore Processing Project



新疆 200 万 t/a 金矿改扩建选矿项目  
Xinjiang 2 Million t/a Gold Mine Expansion Project



河北 4,000t/d 钼矿采矿总包项目  
Hebei 4,000 t/d Molybdenum Mining Turnkey Project



山东 100 万 t/a 锆钛矿选矿项目  
Shandong 1 Million t/a Zirconite Processing Project



内蒙古 2,500t/d 锂云母浮选系统改造项目  
Inner Mongolia 2,500 t/d Lepidolite Flotation System Upgrade Project



湖北 90 万 t/a 石英砂选矿项目  
Hubei 900,000 t/a Quartz Sand Processing Project



河南 3,000t/d 银铅锌金多金属选矿项目  
Henan 3,000 t/d Silver-Lead-Zinc-Gold Polymetallic Processing Project



山东 2,000t/d 钼矿浮选厂改造项目  
Shandong 2,000 t/d Molybdenum Flotation Plant Upgrade Project



江西 50 万 t/a 硅灰石采矿项目  
Jiangxi 500,000 t/a Wollastonite Mining Project



江西 300t/d 萤石浮选总包项目  
Jiangxi 300 t/d Fluorite Flotation Processing Project



山东 10 万 t/a 超纯铁粉精选项目  
Shandong 100,000 t/a Ultra-Pure Iron Powder Concentration Project



甘肃 3,000kg 金矿解吸电解系统  
Gansu 3,000kg Gold Desorption Electrolysis System

## 部分海外案例 Partial Overseas Cases



几内亚 15,000t/d 金矿选矿项目  
Guinea 15,000 t/d Gold Processing Project



莫桑比克 10,000t/d 重砂矿湿选生产线  
Mozambique 10,000 t/d Heavy Sand Wet Separation Plant



尼日利亚 6,000t/d 锂辉石采选项目  
Nigeria 6,000 t/d Spodumene Mining & Processing Project



哈萨克斯坦 200 万 t/a 铜矿选矿项目  
Kazakhstan 2 Million t/a Copper Processing Project



津巴布韦 200 万 t/a 锂辉石选矿项目  
Zimbabwe 2 Million t/a Spodumene Processing Project



蒙古金矿 200 万 t/a 金矿堆浸项目  
Mongolia 2 Million t/a Gold Heap Leaching Project



南非 3,000t/d 铬铁矿浮选项目  
South Africa 3,000 t/d Chromite Flotation Project



巴基斯坦 1,500t/d 铜矿浮选项目  
Pakistan 1,500 t/d Copper Flotation Project



津巴布韦 1,200t/d 铯榴石选矿项目  
Zimbabwe 1,200 t/d Cesium Garnet Processing Project



意大利 1,200t/d 方铅萤石选矿项目  
Italy 1,200 t/d Galena-Fluorite Processing Project



秘鲁 1,000t/d 金银浮选项目  
Peru 1,000 t/d Gold-Silver Flotation Project



蒙古 800t/d 萤石浮选项目  
Mongolia 800 t/d Fluorite Flotation Processing Project



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