



LEADING FILTER 核盛过滤 | 引领过滤科技 TECHNOLOGY

青岛核盛智能环保设备有限公司
QINGDAO HESHENG INTELLIGENT ENVIRONMENTAL PROTECTION EQUIPMENT CO., LTD.

烟台核盛过滤机械有限公司
YANTAI HESHENG FILTRATION MACHINERY CO., LTD.

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官方网站

尾矿干排及综合利用

MINE TAILINGS DEWATERING & COMPREHENSIVE UTILIZATION





COMPANY PROFILE

企业简介

青岛核盛智能环保设备有限公司是专业从事智能过滤设备的生产、研发和销售的高科技企业。公司聚集了中国从事过滤行业的顶尖人才，积累了二十多年的研发、生产、销售和服务经验，拥有先进的智能机加工设备。严格的质量控制、优质的售后服务、超前的创新意识和能力，使公司始终走在过滤行业的技术前沿。

公司的主要产品有：水平带式真空过滤机、陶瓷真空过滤机、叠式压滤机、智能压榨过滤机、水

平带式加压过滤机、加压叠盘过滤机、带式真空震筛过滤机、离心机、管式过滤器等产品。广泛应用于化工、矿山、冶金、化肥、医药、食品、造纸、环保、污水处理、尾矿处理等行业。

公司秉承“为客户创造价值，让员工实现梦想，为社会创造财富”的经营理念，为用户提供高质量的产品和科学的过滤解决方案。

核盛环保，为您创造价值！

Qingdao Hesheng Intelligent Environmental Protection Equipment Co., Ltd. is a high-tech enterprise in production, R & D and sales for intelligent filters. We gathered the top talents in Chinese filtration field, they have more than 20 years' experience in R & D, production, sales and services. We have advanced intelligent machining equipment, the rigorous quality control system and high-class after-sales service system, the advanced innovation consciousness and ability to make us always walk at the forefront of the filter industry.

Our main products as follows: Horizontal Vacuum Belt Filter, Ceramic Disc Filter, Stacked Filter Press, Intelligent Horizontal Press Filter, Horizontal belt press filter, disc press filter, vacuum belt shaking filter, Centrifuge, Disc press filter, Belt vacuum vibrating stage dewatering machine, tubular filter, high efficiency thickener and so on. They are widely used in chemical industry, mining,

metallurgy, fertilizer, medicine, food, paper-making, environmental protection, waste water treatment and tailings dewatering industries.

We adhering to the "Creating value for clients, Realizing dreams for employees, Creating wealth for society" business philosophy, to provide high-quality equipment and scientific filtration proposal for users.

Hesheng Environmental Protection, Great Value for You.

COHESION
VIRTUE 厚德 聚力
创新 共赢
WIN-WIN
INNOVATION

核心价值观 / CORE VALUE

厚德，聚力，创新，共赢。
VIRTUE, COHESION, INNOVATION, WIN-WIN.

企业精神 / ENTERPRISE SPIRIT

仁爱，坚韧，诚信，担当。
Benevolence, Tenacity, Honesty, Responsibility.

经营理念 / BUSINESS PHILOSOPHY

为客户创造价值，为员工实现梦想，为社会创造财富。
Creating Value for Clients, Realizing Dreams for Employees,
Creating Wealth for Society.

企业使命 / ENTERPRISE MISSION

使过滤机更加智能高效，让核盛过滤走向世界。
To Make the Filter More Intelligent and Efficient, to
Make Hesheng Brand Filter to All Over the World.

管理理念 / MANAGEMENT PHILOSOPHY

尊重融合，开放包容，科学决策，高效务实。
Respect Integration, Openness and Inclusiveness, Scientific Decision-making,
Efficiency and Pragmatism.

质量方针 / QUALITY POLICY

精益求精，用户满意，持续改进，追求卓越。
Make Perfection More Perfect, Customer Satisfaction, Continuous Improvement,
Pursuit of Excellence.

核心竞争力 / CORE COMPETITIVENESS

团队协作，持续创新。
Team Work, Continuous Innovation.

企业愿景 / ENTERPRISE VISION

员工幸福，团队一流，科技领先，全球品牌。
Happy Employees, First-class Team, Leading Technology,
Global Brand.

安全理念 / SAFETY CONCEPT

岗位安全，环境安全，生产安全，出入安全。
Post Safety, Environment Safety, Production Safety,
Access Safety



CE证书



CE证书



CE证书



安全生产标准化



知识产权管理体系
认证证书



计算机软件著作权



计算机软件著作权



职业健康安全管理体系
认证证书



环境管理体系
认证证书



质量管理体系
认证证书



橡胶生产车间 / Rubber belt workshop

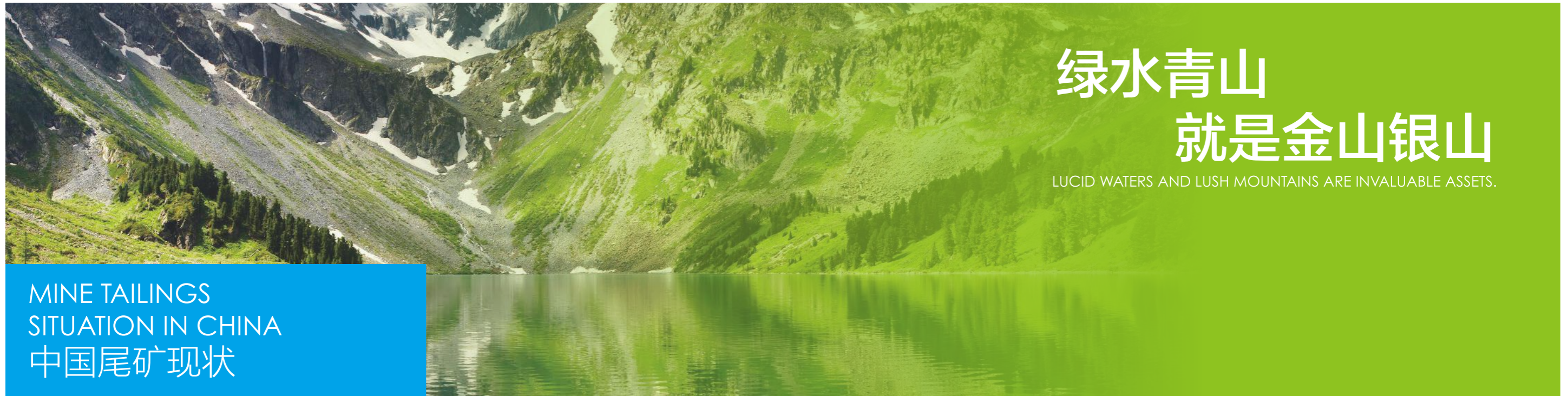


滤布生产车间 / Filter cloth workshop



真空泵生产车间 / Vacuum pump workshop





绿水青山 就是金山银山

LUCID WATERS AND LUSH MOUNTAINS ARE INVALUABLE ASSETS.

MINE TAILINGS SITUATION IN CHINA 中国尾矿现状

我国目前累计堆存各种尾矿约600亿吨以上，年产出量达到了约16亿吨，而尾矿综合利用率仅为18.9%，绝大多数尾矿尚未被综合利用。近年来尾矿综合利用处理日益受到国家重视，随着我国矿产资源开采力度的不断加大，尾矿排出量会每年不断递增，加快尾矿处理的综合利用已经迫在眉睫。

At present, China has accumulated more than 60 billion tons of various mine tailings, and the annual output has reached about 1.6 billion tons. However, the comprehensive utilization rate of tailings is only 18.9%. Most of them aren't utilized comprehensively. In recent years, China values the comprehensive utilization of tailings increasingly. With increased exploitation of mineral resources, the discharge of tailings will increase every year. It has become an urgent task that the comprehensive utilization of tailings.

青岛核盛智能环保设备有限公司经过多年在尾矿综合处理行业的积累和发展，拥有经验丰富的研发团队和先进的自动化生产设备，在尾矿干排方向拥有多项核心技术，具有较强的市场竞争力。我公司独创的尾矿干排工艺综合成本低，简单稳定易操作。公司凭借卓越的技术工艺，优良的产品质量，齐全的产品种类，根据客户需求专业定制不同设备满足现场要求。

Qingdao Hesheng Intelligent Environmental Protection Equipment Co., Ltd. has accumulated and developed rich experience in tailings comprehensive treatment industry for many years, we have strong market competitiveness with experienced R&D team, advanced automated production equipments and many core technologies in tailings dewatering process. Our company's original tailings dewatering process has a low comprehensive cost, simple, stable and easy to operate. With excellent technical technology, excellent product quality, and complete product categories, the company customizes different equipments according to customer requirements to meet site requirements.

尾矿综合利用的途径有：

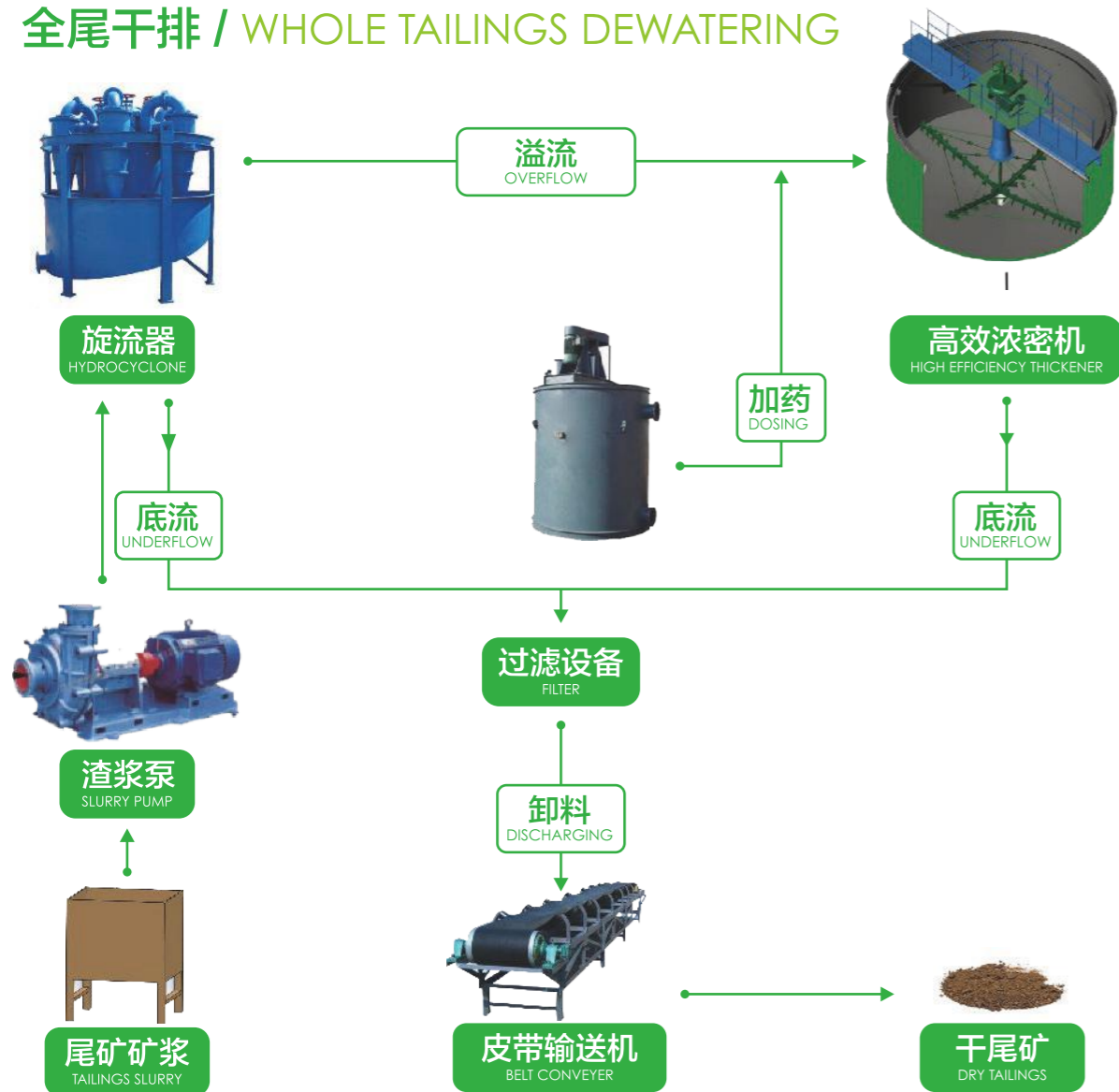
The ways of comprehensive utilization of tailings as following:

- ① 针对尾矿处理问题，我们可以采用先进的技术和合理工艺对尾矿进行再选，以便可以最大限度的回收尾矿中的有用成分，这样可以进一步减少尾矿数量；
- ② 尾矿可以用作建筑材料的原料，如制作水泥、铸石、陶粒、混凝土集料、瓷砖、玻璃等等；
- ③ 尾矿可以应用于矿山地下采空区的填充料，即水砂填充料或者胶结填充的集料。选矿厂的尾矿排出后，需送尾矿制备工段进行分级，把粗砂部分送井下采空区，而细粒部分进入尾矿库堆存；
- ④ 尾矿物料可以用于覆土造田，用来种植农作物或者植树造林；
- ⑤ 尾矿物料用于修建公路、路面材料、防滑材料等。

- ① for tailings treatment problem, we can use advanced technology and reasonable process to re-select tailings so as to maximize the recovery of useful components in tailings, which can reduce the volume of tailings;
- ② tailings can be used as raw materials of building materials, such as making cement, cast stone, ceramsite, concrete aggregate, ceramic tile, glass, etc.;
- ③ tailings can be applied as filling materials of underground mine goaf, such as water sand filling materials or cemented filling aggregates. After tailings of ore-dressing plant is discharged, it is necessary to send the tailings preparation section for classification, and coarse sand is sent to the gob area, and fine stuff is stored in tailings storage;
- ④ tailings materials can be used to cover soil and land for planting crops or planting trees;
- ⑤ tailings materials can also be used to build roads, pavement materials and non-slip materials, etc.

PROCESS FLOW DIAGRAM / 工艺流程图

全尾干排 / WHOLE TAILINGS DEWATERING



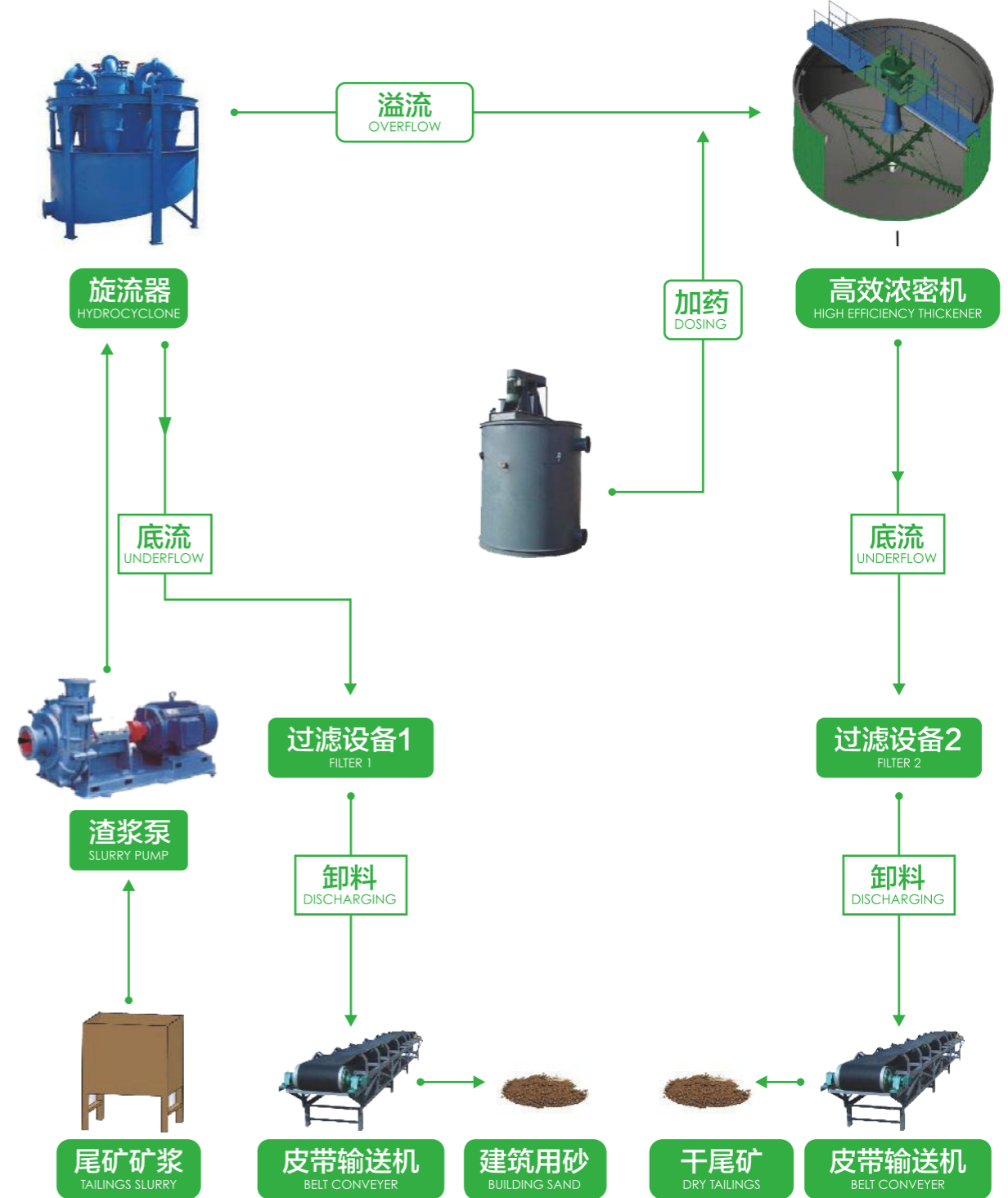
各种过滤设备 / ALL KINDS OF FILTERS



根据实际情况，调整不同的工艺组合，以达到最佳处理效果。
according to real situation, adjust different process groups to achieve the best treatment effect.

PROCESS FLOW DIAGRAM / 工艺流程图

分级干排 / CLASSIFIED TAILINGS DEWATERING





给料料浆在压力作用下沿线方向进入旋流器，在离心力场作用下，大颗粒被抛向器壁，随外旋流向下运动，从下部沉砂口排出，得到粒度粗的沉砂产物，细颗粒随内旋流向上运动，从上部溢流管得到粒度细的溢流产物。

一般选用小角度锥体或多锥体结构旋流器，可以增加底流浓度和底流产率。

Slurry flows along the line into hydrocyclone under pressure. Under centrifugal force, large particles are thrown to the wall, move downward with external swirling flow and are discharged from the lower grit chamber to get coarse-grained grit products. Fine particles move upward with the internal swirling flow from the upper overflow pipe to get fine-grained overflow products.

Generally, using a small angle cone or a multi-cone structure hydrocyclone can increase underflow concentration and capacity.

规格 Model	内径 inner diameter [mm]	给料压力 slurry feeding pressure [Mpa]	处理能力 capacity [m ³ /h]	分离粒度 separation solid size [μm]
NMT-750	750	0.03-0.4	400-550	74-250
NMT-660	660	0.03-0.4	250-360	74-220
NMT-610	610	0.03-0.4	200-260	74-200
NMT-500	500	0.03-0.4	140-220	74-200 74-150
NMT-350	350	0.03-0.4	60-90	50-150 50-120
NMT-300	300	0.05-0.4	45-80	50-150 40-100
NMT-250	250	0.05-0.4	40-65	40-100 30-100
NMT-200	200	0.05-0.4	25-40	40-100 30-100
NMT-150	150	0.05-0.4	11-20	30-74 20-74
NMT-125	125	0.05-0.4	8-15	20-100 20-74
NMT-100	100	0.05-0.4	5-12	10-100 10-74



GNZ系列中心传动浓密机采用模块化设计，整机由槽体、支撑、驱动、受料、排料、耙架、提耙等模块组合而成，从进料、排料、溢流、控制方式等方面进行了多项优化，新式结构和控制方式更利于加速物料沉降，提高单位面积的处理能力，降低溢流浑浊度。

GNZ center drive high efficiency thickener adopts modular design, the whole machine consists of modules such as tank body, support, drive, receiving, discharging, rake, rake lifting part and so on. It has many optimizations in feeding, discharging, overflowing, controlling and other aspects. The new structure and control method are more conducive to accelerate material settlement, improve processing capacity of per unit area and reduce overflow turbidity.

应用范围 / APPLICATION FIELDS

- ① 湿式选矿作业中精矿的浓缩、洗涤、脱水作业，尾矿的浓缩、脱水作业；
 - ② 适用于煤炭、钢铁、化工、建材、水泥、污水处理等含固料浆的浓缩和净化，根据不同性质的物料和工艺条件；
 - ③ 广泛应用于金属、非金属浓缩作业以及金属、非金属尾矿高浓度输送系统浓缩作业。
- ① Concentrate concentrating, washing and dewatering of wet beneficiation operations, concentrating and dewatering of tailings;
 - ② Suitable for concentration and purification of solid slurry in coal, steel, chemical, building materials, cement, sewage treatment and other industries, according to different materials and process conditions;
 - ③ Widely used in concentration of metal & non-metal, and concentration of high concentration conveying system of metal & non-metal tailings.

FEATURES 特点

- ① 融合了高效浓缩机的沉降理论和设计思想，单位面积处理能力大，脱水效果好，可方便的实现高效化运行；
 - ② 模块化设计，实现机、电、液完美结合；
 - ③ 功能齐备的系列化控制系统，最大限度的提高浓缩机的处理能力，并有效防止压耙事故的发生；
 - ④ 全面的故障处理预案，确保浓密机无忧运行
- ① Combining sedimentation theory and design idea of high efficiency thickener, processing capacity of per unit area is large, dewatering effect is good and efficient operation can be realized conveniently;
 - ② Modular design, to achieve a perfect combination of machine, electricity and liquid;
 - ③ Full-featured serialized control system to maximize the processing capacity of thickener and prevent rake crushing accidents effectively;
 - ④ Comprehensive troubleshooting plan to ensure thickener runs without worry.

GNZ系列规格参数 TECHNICAL SPECIFICATION

基本参数 BASIC DATA	型号 / MODEL												
	GNZ -3	GNZ -6	GNZ -9	GNZ -12	GNZ -18	GNZ -20	GNZ -24	GNZ -30	GNZ -38	GNZ -45	GNZ -53	GNZ -60	GNZ -75
浓缩池内直径D INNER DIAMETER OF CONCENTRATION POOL (m)	3.6	6	9	12	18	20	24	30	38	45	53	60	75
浓缩池深度H DEPTH OF CONCENTRATION POOL (m)	2.7	3.4	3.7	3.95	4.4	4.5	4.9	5.3	6.15	7.2	8.0	8.9	8.9
沉淀面积 SETTLING AREA (m ²)	10	28	63	113	254	314	452	700	1134	1590	2205	2826	4416
提耙高度 RAKE LIFTING HEIGHT (m)	300	350	350	350	350	350	350	350	350	350	350	350	350
传动电机功率 DRIVE MOTOR POWER (kw)	1.1	1.1	3	3	5.5	5.5	7.5	7.5	15	15	18.5	18.5	18.5

说明：防腐型用于非中性介质，防腐型裸露面采用富锌底漆+氯化氯丁橡胶漆或舰船专用漆的重防腐涂装工艺，过流表面粘敷高性能耐磨损、耐酸碱橡胶层。裸露面和过流面均可根据您的要求，采用适合您工作介质的防护层。

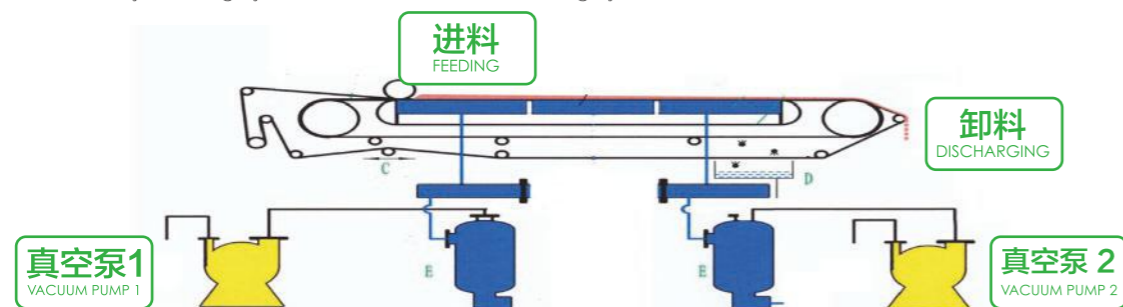
Note: Anti-corrosion type is used for non-neutral medium and its exposed surface adopts heavy anti-corrosion coating process of zinc-rich primer & chlorinated chloroprene rubber paint or specific ship paint. The overflow surface is coated with high performance, wear resistant, acid & alkali resistant rubber layer. Both exposed and overflow surfaces can use a protective layer suitable for your working medium, depending on your requirements.



工作原理 / OPERATING PRINCIPLE

该设备采用了固定真空盒，环形胶带由减速机拖动在真空盒上连续运行，滤布铺敷在胶带上与之同步运行，胶带与真空盒滑台上的摩擦带接触并形成水密封的结构。料浆由下料斗，均匀地布在滤布上。当真空室接通真空系统时，在胶带上形成真空抽滤区，滤液穿过滤布经胶带上的横沟槽汇总并由小孔进入真空室，固体颗粒被截留在滤布上形成滤饼。进入真空室的液体经排液罐排出，随着橡胶带的移动，已形成的滤饼依次进入滤饼洗涤区和洗干区，最后滤布与胶带分开，进入卸料区。卸除滤饼的滤布经清洗后获得再生，再经过一组支承辊和纠偏装置后重新进入过滤区，然后再进入下一个过滤周期。

This equipment adopts the fixed vacuum chamber, the rubber belt is driven by the gearbox and running continuously on the vacuum chamber, the cloth moving synchronously on the rubber belt. The friction belt on the slipway of vacuum chamber forming a water sealing structure with rubber belt. The slurry feeding on the cloth smoothly and evenly by feeding hopper. when the vacuum chamber connect with vacuum system, the filtering area with vacuum suction will be formed on the rubber belt, the filtrate pass through the cloth and flow to the grooves and holes of rubber belt to vacuum chamber, the solids formed a cake on the surface of cloth. The filtrate in the vacuum chamber discharged by the vacuum tank. Moving by the rubber belt, the cake moving to the cake washing area and drying area sequentially, then enter into cake discharging area. After discharging cake, the cloth washed by washing system and enter into next filtering cycle.

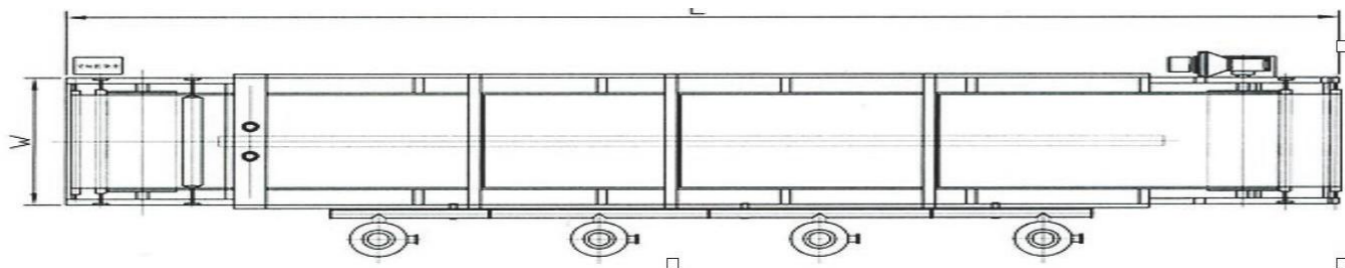


FEATURES

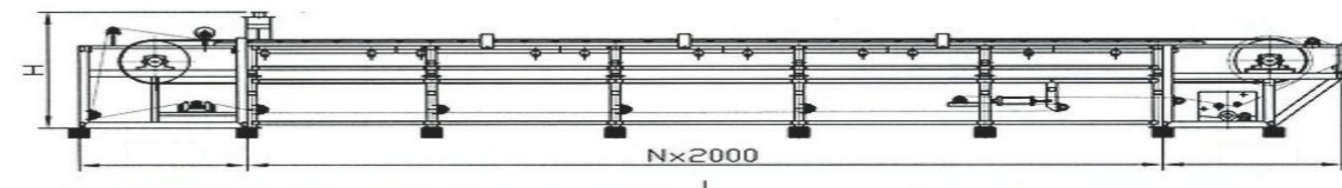
特点

- ◎ 喂料、过滤、滤饼洗涤、滤饼抽干、卸料、滤布再生、滤布纠偏连续自动完成，自动化程度极高。
- ◎ 过滤母液和滤饼洗涤液可分开收集，滤饼洗涤可实现多道平流和逆流洗涤，各段洗涤液可分开收集。
- ◎ 可实现远程与现场交互控制的方式，便于实施无人操作。
- ◎ 胶带运行速度可在一定范围内无极调速，可根据物料的过滤性能，调整滤饼的厚度，以达到最佳过滤效果，适应性强。
- ◎ 整机采用框架模块式设计，非常便于设备的运输、安装和维护。
- ◎ 滤布再生可选配高压清洗方式增加滤布的再生效果及寿命。
- ◎ 排液方式有零位排液、高位排液、辅助排液。
- ◎ 设备可增加气罩实现了半封闭或全封闭，用于含有挥发性气体或蒸汽的物料局部保温或集中收集，便于清洁生产。

- ◎ Feeding, filtration, cake washing, cake drying, discharging, cloth regeneration, cloth redirection automatically, the degree of automation is extremely high.
- ◎ The filter mother liquor and cake washing liquid can be collected separately, and cake washing can achieve multichannel advection and countercurrent washing, washing liquid of each section can be collected separately.
- ◎ The remote control and local control can be exchanged to achieve unmanned operations.
- ◎ The running speed of rubber belt can be regulated steplessly within a certain range, and the thickness of cake can be adjusted according to filtering performance of materials to achieve the best filtering effect and strong adaptability.
- ◎ The whole machine adopts frame modular design, which is very convenient for transportation, installation and maintenance of equipment.
- ◎ Use high pressure water for cloth washing to increase the cloth regenerative effect and the life span.
- ◎ Filtrate discharge types include automatic discharge, high level discharge and auxiliary discharge.
- ◎ Gas cover or aluminum plastic Windows can be designed partial closed or totally enclosed for partial insulation or the centralized collection for the volatile gas or steam of slurry, in order to have a clean production.



过滤面积 Filtrating area [m ²]	有效宽度 Effective width [m]	有效长度 Effective length [m]	整机总长 Frame length [m]	机架宽度 Frame width [m]	机身高度 Frame height [m]	重量 Weight [T]	真空耗量 Vacuum consumption [m ³ /min]
2	500	4000	8100	1100	2070	5.5	8
3		6000	10100			6	12
4		8000	12100			6.5	16
5		10000	14100			7	18
6		12000	16100			7.6	22
8		1000	8000			12100	1600
10	10000		14100	9.6	28		
12	12000		16100	10.4	30		
14	14000		18100	11.1	33		
10.4	1300	8000	12100	1900	2170	9.8	28
13		10000	14100			10.8	30
15.6		12000	16100			11.5	35
18.2		14000	18100			13.2	38
20.8		16000	20100			15.1	42
20	2000	10000	14100	2700	2170	14.2	40



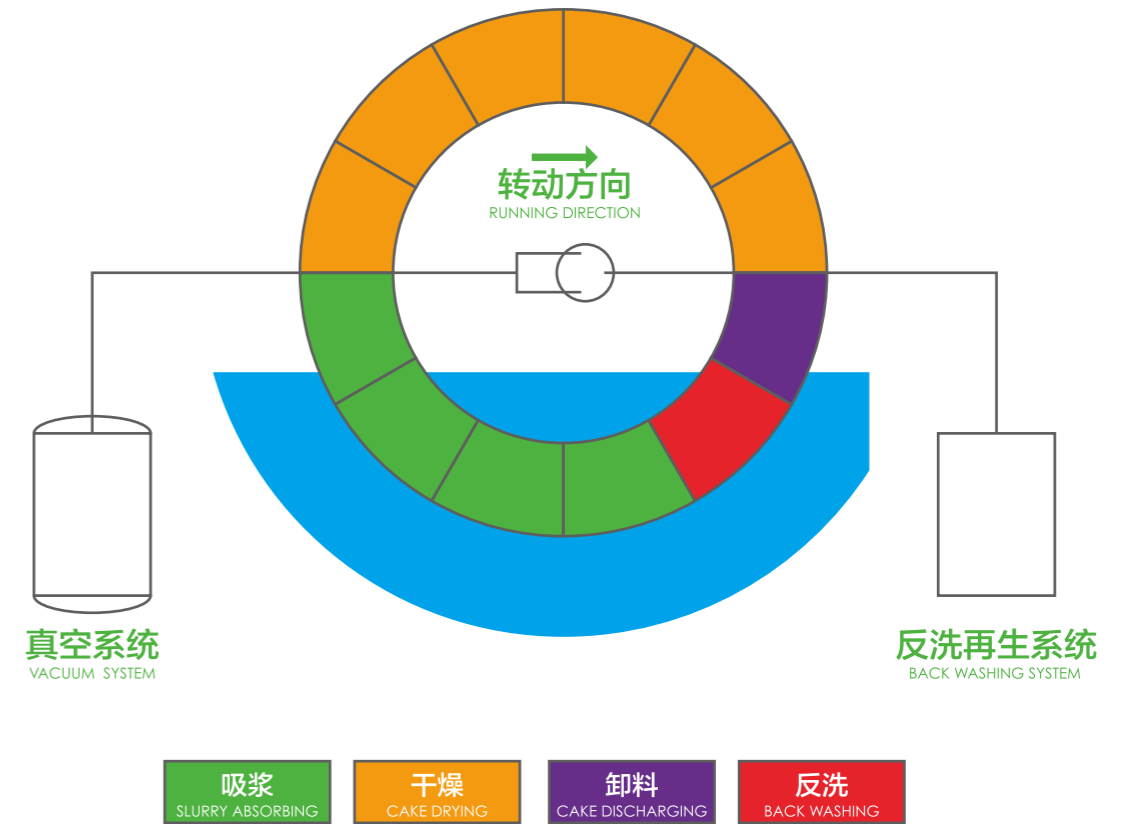
过滤面积 Filtrating area [m ²]	有效宽度 Effective width [m]	有效长度 Effective length [m]	整机总长 Frame length [m]	机架宽度 Frame width [m]	机身高度 Frame height [m]	重量 Weight [T]	真空耗量 Vacuum consumption [m ³ /min]
24	2000	12000	16100	2700	2170	17.8	48
28		14000	18100			20.2	52
32		16000	20100			23.6	65
20	2500	8000	12100	3200	2270	14.8	40
25		10000	14100			18.6	50
30		12000	16100			22.2	60
35		14000	18100			26	70
40		16000	20100			29.8	80
50		20000	24100			41	95
30	3000	10000	14100	3750	2270	22.8	60
36		12000	16100			27.5	72
42		14000	18100			32.5	85
54		18000	22100			45	105
60		20000	24100			50.5	120
48	4000	12000	16100	4800	2470	39.5	92
56		14000	18100			46.8	110
64		16000	20100			52.6	120
72		18000	22100			58.3	145
80		20000	24100			63	160
144		4500	32500			41200	7100



工作原理 / OPERATING PRINCIPLE

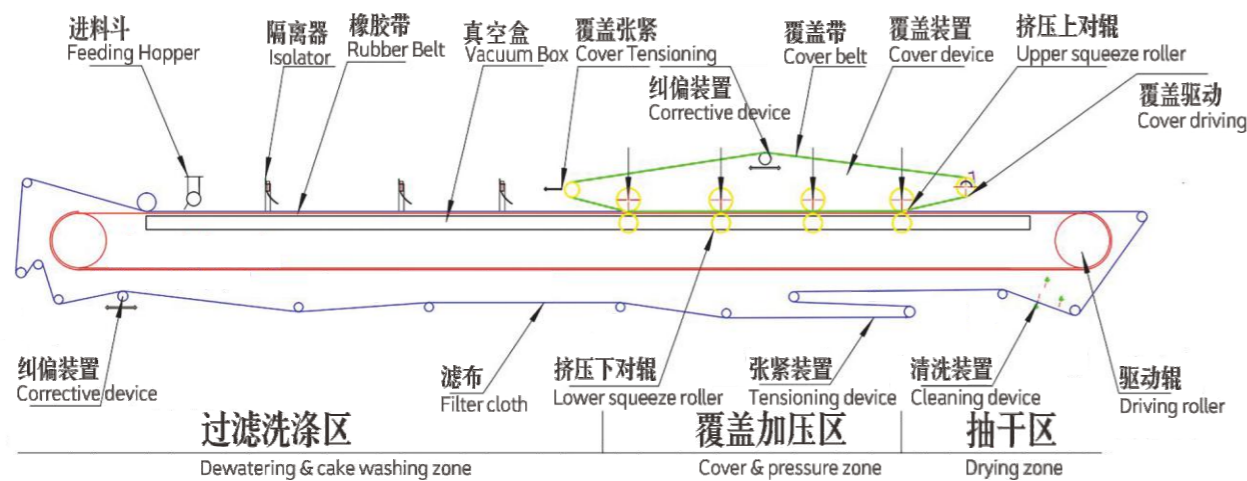
浸没在料浆槽的滤板在真空负压的作用下，通过滤板毛细孔吸附，表面形成物料滤饼层；滤液从滤板内部通过管道到达排液罐后排出。转子带动滤板和吸附在滤板上的滤饼转到干燥区，在真空的作用下滤饼继续脱水。滤饼干燥后，转子转动到卸料区（无真空），通过陶瓷刮刀卸料。卸料后的陶瓷板进入反冲洗区，工业水或压缩空气经过反冲洗管进入陶瓷板内腔，由内而外清洗陶瓷板内孔。陶瓷板工作一段时间后，采用超声波配合低浓度酸的联合清洗，保证陶瓷板的高效使用。

The ceramic plate immersed in the slurry tank, and the material cake layer formed on its surface under vacuum negative pressure and adsorbed by the plate capillary. The liquid passes through the inside of the plate and pipes to the vacuum tank and discharge out. The cake on the plates running by main roller to drying area, and continues to dehydrate under vacuum function. Then running to cake discharging area (without vacuum) to discharge the cake by ceramic scraper. After discharging, the ceramic plate running to the back washing area, the process water or compressed air will be enters to the ceramic plate inside by the back washing pipes, and washing the ceramic plate holes from inside to outside. After working for one shift, the ceramic plate should be washed by ultrasonic waves and combined with low concentration acid to ensure its efficiency.



规格参数 / TECHNICAL SPECIFICATION

型号面积 model & area [m ²]	滤盘圈数 filter disc/cycle	滤板数量/块 plate Qty./pcs	装机功率 Installed Power [kw]	运行功率 Operating power [kw]	主机 Main body [L×W×H][m]
CF-1	1	12	3.5	2	1.6×1.4×1.5
CF-6	2	24	7	6	2.4×2.9×2.5
CF-15	5	60	11.5	8	3.3×3.0×2.5
CF-30	10	120	17.5	11.5	5.5×3.0×2.6
CF-48	12	144	34	24	5.7×3.1×3.0
CF-60	12	144	45	33	6.0×3.3×3.1
CF-80	16	192	63	47	7.3×3.3×3.1
CF-120	20	240	77	57	8.5×3.7×3.3
CF-144	12	144	110	89	8.0×4.9×4.7



结构及工作原理 / STRUCTURE & WORKING PRINCIPLES

设备结构:

履带式真空压榨脱水机由履带覆盖装置、橡胶滤带、真空箱、驱动辊、胶带支承台、进料斗、滤布纠偏装置、驱动装置、滤布洗涤装置、对辊压榨、机架等部件组成。它是充分利用物料重力、真空吸力、双滤布挤压和对辊压榨实现固液分离的高效设备。

Structure:

Crawler belt vacuum pressure filter is made up of crawler belt cover device, rubber belt, vacuum box, driving roller, belt supports, feeding hopper, filter cloth corrective device, driving device, fabric cleaning device, roller squeeze, frameworks, etc. It is an efficient solid-liquid separation equipment that makes full use of slurry gravity, vacuum, coupled cloth pressing and roller squeeze.

环形过滤胶带由电机经减速驱动连续运行，滤布铺敷在胶带上与之同步运行。胶带与真空室滑台接触（真空室与胶带间有环形磨擦带并通入水形成水密封），当真空室接通真空系统时，在胶带上形成真空，料浆由布料器均匀地布在滤布上，在真空的作用下，滤液穿过滤布经胶带上的横沟槽汇集并由胶带中心小孔进入真空室，固体颗粒被截留而形成滤饼；进入真空的液体经气水分离器排出。

随着橡胶带移动已形成的滤饼依次进入滤饼抽滤区、覆盖区、抽干区；在上下滤布共同包裹下，形成高真空区域，最大限度抽出滤饼种的水分，同时在覆盖区有挤压辊与对辊，在气缸高压压力线接触作用下挤压滤饼，最大限度去除滤饼水份，经过抽干区进一步脱水，最后滤布与胶带分开，在卸滤饼辊处将滤饼卸出；卸除滤饼的滤布经清洗后获得再生，再经过一组支承辊和纠偏装置后重新进入过滤区。

Working principles:

The annular rubber belt is driven by a reducing motor run continuously, and the filter cloth which laid on the rubber belt run with it synchronously. The rubber belt contact with sliding table of vacuum box (There is an annular friction belt between the vacuum box and the rubber belt, and water is fed into it to form a water seal), when the vacuum box is connected to the vacuum system, vacuum area formed on the rubber belt, the slurry is evenly distributed on the filter cloth by the feeding hopper, as vacuum exist, the filtrate penetrates the filter cloth and is collected by the transverse grooves on the rubber belt and flows into the vacuum box through the holes in the center of rubber belt, while the solid part is intercepted and become filter cake on filter cloth. The filtrate in the vacuum box is discharged by air-liquid separator.

As the rubber belt moves, the cake enters the filter extraction area, cover area and drying area in turn. At the cover area, upper and lower filter cloth wrap together, forming a high vacuum area, while the rollers which in cover area and driven by air cylinders squeezing the cake with great linear pressure, maximum remove water from the cake. At the drying area, the cake is dewatered further, at last, the cake separate with the belt at the cake discharge roller. And the filter cloth renewed by cleaning device re-enter the filter area after passing through a set of support rollers and corrective unit.

型号说明与基本参数 / MODEL AND PARAMETERS

例(Example): LDZ20(6)/2000: L-代表履带覆盖加压Belt cover & squeezing; D-代表带式, Belt; Z-代表真空, Vacuum; 20-代表带滤机面积20㎡, filtration area 20㎡; (6)-代表覆盖加压面积6㎡, cover & squeezing area 6㎡; 2000-代表有效带宽2m, valid width 2m;

设备型号 Model	主机功率(KW) Drive Power	整机总长mm Frame length	机架宽度mm Frame width	机身高度mm Frame height	重量T Weight	真空耗量 Vacuum consumption m³/min
LDZ7.5(2.5)/1000	3.7	11500	1600	2000	8	20
LDZ10(2.5)/1000	3.7	14000			10	25
LDZ12.5(2.5)/1000	5.5	16500			11	28
LDZ15(2.5)/1000	7.5	19000	1900	2100	12	35
LDZ9.75(4)/1300	7.5	11500			12	25
LDZ13(4)/1300	7.5	14000			13	30
LDZ16.25(4)/1300	11	16500			14	35
LDZ19.5(4)/1300	11	19000			15	40
LDZ22.75(4)/1300	15	21500			16	45
LDZ20(6)/2000	11	14100	2700	2100	16	50
LDZ25(6)/2000	11	16600			18	60
LDZ30(6)/2000	15	19100			20	70
LDZ35(6)/2000	15	21600			22	80
LDZ40(6)/2000	18.5	24100			24	90
LDZ31.25(8)/2500	15	16600			22	70
LDZ37.5(8)/2500	15	19100			25	80
LDZ43.75(8)/2500	18.5	21600			28	90
LDZ50(10)/2500	22	24100			31	110
LDZ59.25(10)/2500	22	26600			34	120
LDZ45(10)/3000	18.5	19100	3700	2200	30	100
LDZ52.5(10)/3000	18.5	21600			34	110
LDZ60(10)/3000	22	24100			38	130
LDZ67.5(10)/3000	30	26600			42	140
LDZ75(10)/3000	37	29100			47	160
LDZ80(16)/4000	37	24100			55	170
LDZ90(16)/4000	37	26600			66	200
LDZ100(16)/4000	45	29100			76	210
LDZ110(16)/4000	45	31600			84	220
LDZ120(16)/4000	55	34100			90	250
LDZ108(16)/4500	55	28200	5300	2600	90	220
LDZ121.5(16)/4500	55	31200			100	250
LDZ135(18)/4500	75	34200			110	380
LDZ148.5(18)/4500	75	37200			120	320

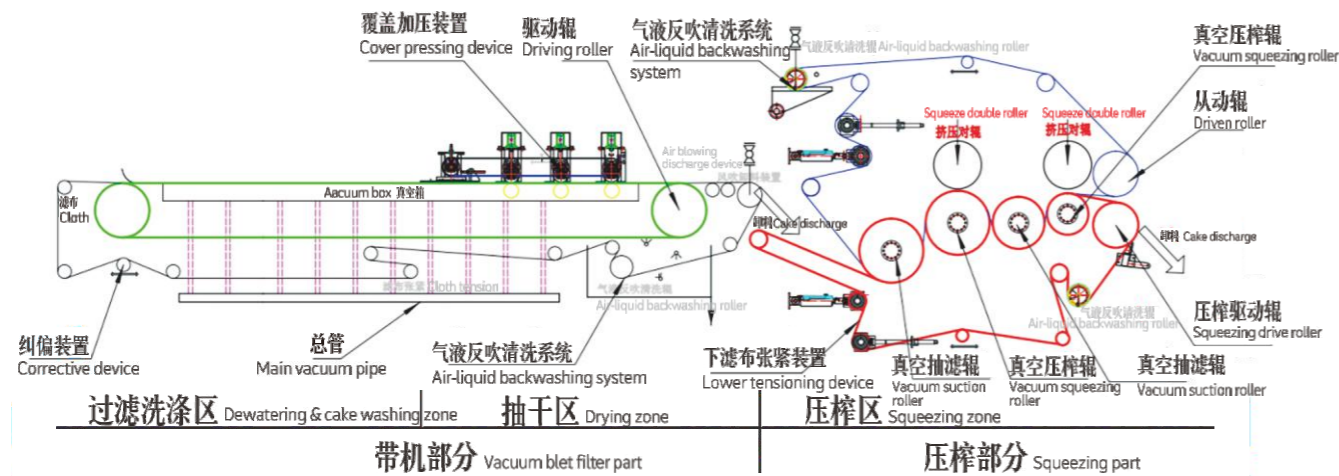
TECHNICAL FEATURES

- 1) 自动化程度高, 能连续完成布料、抽滤、挤压、滤布再生等功能, 生产效率极高。
High degree of automation, it can continuously complete the functions of slurry feeding, vacuum dewatering, squeezing, filter cloth washing, etc., with extremely high production efficiency.
- 2) 将带式真空过滤机、带式压机、压滤机三合一(可称为连续的板框压机), 最大限度去除水分。
Combining vacuum belt filter, belt press filter and press filter (it can be called a continuous plate and frame filter press) three in one, maximum to remove water.
- 3) 结构合理, 设备故障率低, 维护方便。
Reasonable structure, low equipment failure rate, easy to maintain.

APPLICATION

各种工业生产中的过滤洗涤, 固废脱水, 工业和生活污泥脱水。
Filtration and washing in various industrial production, such as solid waste dewatering, industrial and domestic sludge dewatering.





结构及工作原理 / STRUCTURE & WORKING PRINCIPLES

设备结构:

设备由带式真空过滤段、履带覆盖加压段和压榨段构成。由布料器、橡胶带、真空盒、淋洗装置、履带覆盖加压装置、真空压榨辊装置、滤布纠偏装置、驱动装置、滤布洗涤装置、机架等部件组成。它是以滤布为过滤介质充分利用物料重力和真空吸力实现固液分离的效果。

Structure:

The equipment consists of a belt vacuum dewatering section, a crawler belt covered pressurizing and a squeezing section. It is composed of feeding hopper, rubber belt, vacuum box, cake washing device, crawler belt cover pressing device, vacuum press roll device, Pter cloth correction device, driving device, Pter cloth cleaning device, frames and other components. It uses Pter cloth as Pter medium to make full use of slurry gravity and vacuum suction to achieve the effect of solid-liquid separation.

环形胶带由电机经减速机驱动在真空盒上连续运行，滤布铺敷在胶带上与之同步运行，料浆由布料器均匀地布在滤布上，当真空室接通真空系统时，在胶带上形成真空抽滤区，滤液穿过滤布，经胶带上的排水槽汇总并由中间排水孔进入真空室，固体颗粒被截留而形成滤饼；经洗涤后的滤饼随着滤布往前运动，进入履带覆盖加压区，经过加压辊挤压力与真空抽力双重作用下，继续脱水。

滤饼进入压榨区后，滤布由电机经减速机带动下，继续向前同步运行，滤饼在上下滤布包裹中进入压榨区，经过几个真空压榨辊和几个碾压辊，在挤压剪切力、真空吸力和碾压力三重作用下，最大限度去除滤饼水份，最后通过压榨驱动辊上下卸料装置将滤饼卸出；卸除滤饼的滤布经上下反吹清洗装置中清洗获得再生，再经过一组支承辊和纠偏装置后重新进入过滤区，然后进入下一个过滤循环周期。

Working principle:

The annular rubber belt is driven by a reducing motor run continuously on the vacuum box, and the Pter cloth which laid on the rubber belt run with it synchronously. The slurry is evenly distributed on the Pter cloth by the feeding hopper. When the vacuum box is connected to the vacuum system, vacuum area formed on the rubber belt, the Ptrate penetrates the Pter cloth and is collected by the transverse grooves on the rubber belt and flows into the vacuum box through the holes in the center of the rubber belt, while the solid part is intercepted and becomes cake on Pter cloth. The washed Pter cake moves forward with the Pter cloth and enters the pressurized area covered by the crawler belt, and continues to be dewatered under the double action of the pressing force of the pressure rollers and the vacuum suction force.

After the Pter cake enters the pressing area, the Pter cloth is driven by the reducing motor continues to run synchronously forward, the Pter cake is wrapped in the upper and lower Pter cloths. Under the triple action of pressing and shearing force, vacuum suction and rolling force, maximum removelwater is from the cake , Pnally the Pter cake is discharged through the upper and lower discharge devices of the pressing drive roller. After the cake has been removed, the Pter cloth is cleaned and renewed by the upper and lower flushing cleaning device, and then re-enters the Pteration area after passing through a set of support rollers and corrective device, and then enters the next Pteration cycle.

型号说明与基本参数 / MODEL AND PARAMETERS

例(Example): DUY20(6)-8/2000; D-代表带式, Belt; U-代表真空, Vacuum; Y-压榨, Squeezing; 20-代表带滤机面积20㎡, filtration area 20㎡; (6)-代表覆盖加压面积6㎡, cover & pressurization area 6㎡; 8-代表真空压榨面积8㎡, vacuum squeezing area 8㎡; 2000-代表有效带宽2m, valid width 2m;

设备型号 Model	主机功率(KW) Drive Power	整机总长mm Frame length	机架宽度mm Frame width	机身高度mm Frame height	重量T Weight	真空耗量 Vacuum consumption m ³ /min
DUY7.5(2.5)-4/1000	3.7+5.5	14500	1600	2600	16	20+12
DUY10(2.5)-4/1000	3.7+5.5	17000			18	25+12
DUY12.5(2.5)-4/1000	5.5+5.5	19500			19	28+12
DUY15(2.5)-4/1000	7.5+5.5	21000			20	35+15
DUY9.75(4)-5/1300	7.5+7.5	17500	1900	2600	20	25+15
DUY13(4)-5/1300	7.5+7.5	17000			21	30+15
DUY16.25(4)-5/1300	11+7.5	19500			22	35+15
DUY19.5(4)-5/1300	11+7.5	21000			23	40+15
DUY22.75(4)-5/1300	15+7.5	24500			24	45+15
DUY20(6)-8/2000	11+11	18100	2700	2600	31	50+20
DUY25(6)-8/2000	11+11	20600			32	60+20
DUY30(6)-8/2000	15+11	23100			33	70+20
DUY35(6)-8/2000	15+11	25600			36	80+20
DUY40(6)-8/2000	18.5+11	28100			38	90+20
DUY31.25(8)-12/2500	15+18.5	22600			42	70+30
DUY37.5(8)-12/2500	15+18.5	25100			45	80+30
DUY43.75(8)-12/2500	18.5+18.5	27600			48	90+30
DUY50(8)-12/2500	22+18.5+18.5	28100			51	110+30
DUY59.25(10)-12/2500	22+18.5	30600			54	120+30
DUY45(10)-15/3000	18.5+22	23100	3700	3600	55	100+40
DUY52.5(10)-15/3000	18.5+22	25600			58	110+40
DUY60(10)-15/3000	22+22	28100			61	130+40
DUY67.5(10)-15/3000	30+22	30600			64	140+40
DUY75(10)-15/3000	37+22	33100			67	160+40
DUY80(16)-25/4000	37+30	27100			100	170+65
DUY90(16)-25/4000	37+30	29600			105	200+65
DUY100(16)-25/4000	45+30	33100			110	210+65
DUY110(16)-25/4000	45+30	35600			115	220+65
DUY120(16)-25/4000	55+30	38100			120	250+65
DUY108(18)-30/4500	55+37	33200	5300	3800	145	220+75
DUY121.5(18)-30/4500	55+37	37200			150	250+75
DUY135(18)-30/4500	75+37	41200			155	380+75
DUY148.5(18)-30/4500	75+37	44200			160	320+75

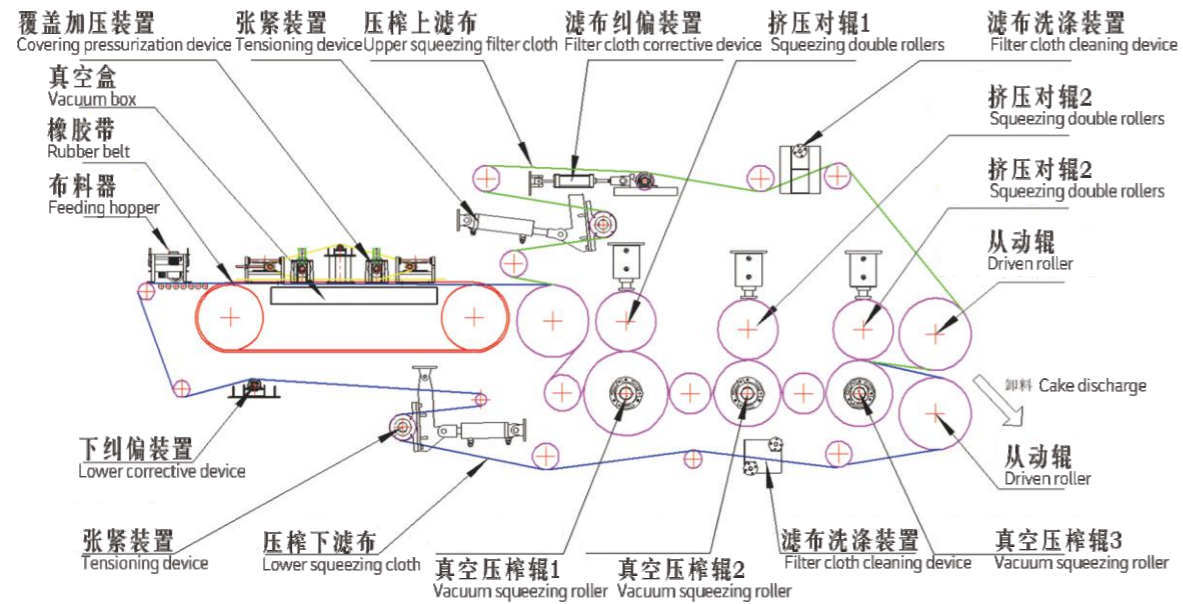
TECHNICAL FEATURES

- 1) 自动化程度高, 能连续完成进料、抽滤、滤饼洗涤、压榨、滤布再生等功能, 生产效率极高。
High degree of automation, it can continuously complete the functions of feeding, vacuum dewatering, filter cake washing, squeezing, filter cloth washing, etc. With extremely high production efficiency.
- 2) 将带式真空过滤机、带式压机、板框压滤机三合一(可称为连续的板框压机), 最大限度去除水分。
Combining vacuum belt filter, belt press filter and press filter (it can be called a continuous plate and frame filter press) three in one, maximum to remove water.
- 3) 结构合理, 设备故障率低, 维护方便。
Reasonable structure, low equipment failure rate, easy to maintain.

APPLICATION

用于各种工业过滤, 工业固废, 矿山尾渣, 石膏(磷石膏、柠檬酸石膏、钛石膏、脱硫石膏), 污泥等处理。
It is used for various industrial filtration, industrial solid waste, mine tailings, gypsum (phosphogypsum, citric acid gypsum, titanium gypsum, desulfurization gypsum), sludge, etc.





结构及工作原理 / STRUCTURE & WORKING PRINCIPLES

设备结构:

设备由真空覆盖加压脱水段和真空高压碾压脱水段构成。设备由布料器、橡胶带、真空盒、覆盖加压装置、真空高碾压装置、驱动从动辊、滤布、滤布纠偏装置、滤布再生装置、机架等部件组成。它是以滤布为过滤介质充分利用真空吸力和压榨脱水实现固液分离的设备。

Structure:

The machine consists of a vacuum-covered pressurized dehydration section and a vacuum high-pressure rolling dehydration section. The machine is composed of feeding hopper, rubber belt, vacuum box, covering pressurizing device, vacuum high rolling device, drive & driven rollers, filter cloth, filter cloth deviation correction device, filter cloth cleaning device, frame and other components. It uses filter cloth as the filter medium to make full use of vacuum suction and press dehydration to achieve solid-liquid separation.

OPERATING PRINCIPLE

工作原理

环形胶带由电机经减速机驱动在真空盒上连续运行，滤布铺敷在胶带上与之同步连续运行。工作时物料由布料器均匀地布在滤布上，当真空室接通真空系统时，在胶带上形成真空抽滤区，滤液穿过滤布经胶带上的排水槽汇总并由排水孔进入真空室，固体颗粒被截留而形成滤饼；滤饼随着滤布往前运动，进入履带覆盖加压区，在几组加压辊的压力下，滤饼水份进脱除后被真空抽到排液罐排出，随后滤饼由上下滤布包裹进入真空高压深度脱水段，经过几组真空压榨辊与对辊的碾压和真空抽力三重作用下继续脱水，最大限度脱除滤饼水份，最后滤饼由上下滤布卸料装置卸除，卸除滤饼后的滤布经上下清洗装置中清洗获得再生，再经过一组支承辊、改向辊、纠偏装置后重新进入下一个循环过滤脱水。

Working principles:

The annular rubber belt driven by a reducing motor run continuously on the vacuum box, the filter cloth which laid on the rubber belt run with the rubber belt synchronously. The slurry is evenly distributed on the filter cloth by the feeding hopper. When the vacuum box is connected to the vacuum system, vacuum area formed on the rubber belt, the filtrate penetrates the filter cloth and is collected by the transverse grooves on the rubber belt and flows into the vacuum box through the holes in the center of the rubber belt, while the solid part is intercepted and forms cake on filter cloth. The filter cake moves forward with the filter cloth and enters the pressurized area covered by the crawler belt. Under the pressure of several groups of pressure rollers, water is removed from the cake and then vacuumed to the filtrate tank for discharge, and then the cake wrapped up by upper and lower filter cloth enters vacuum & high pressure deep dehydration section, and continues to be dehydrated under the triple action of several sets of vacuum press rollers and coupled rollers and vacuum suction to maximum remove the moisture from the filter cake. Finally, the cake is discharged by the upper and lower filter cloth discharge devices, then the filter cloth renewed after passing through cleaning device, and then passes through support rollers, redirection rollers, corrective device and re-enters the next cycle.

型号说明与基本参数 / MODEL AND PARAMETERS

型号说明与基本参数/Model and parameters

例(Example): DZG20(8)-15/2000

D-代表履带覆盖加压, Crawler cover & pressurization; Z-代表真空, Vacuum; G-代表高压, High pressure;

10-代表带滤机面积10㎡, filtration area 10㎡; (8)-代表覆盖加压面积8㎡, cover & pressurization area 8㎡;

15-代表真空压榨面积15㎡, vacuum squeezing area 15㎡; 2000-代表有效带宽2m, valid width 2m;

设备型号 Model	主机功率(KW) Drive power	整机总长mm Frame length	机架宽度mm Frame width	机身高度mm Frame height	重量T Weight	真空耗量 Vacuum consumption m ³ /min
DZG5(4)-5/1000	5.5+11	13000	1600	2200	18	25
DZG7.5(4)-5/1000	5.5+11	15500			20	32
DZG10(4)-5/1000	5.5+11	18000			22	40
DZG7.5(6)-10/1500	7.5+15	13000	2100	2400	25	45
DZG11.25(6)-10/1500	7.5+15	15500			30	55
DZG15(6)-10/1500	7.5+15	18000			35	65
DZG10(8)-15/2000	11+22	14000	2700	2600	30	65
DZG15(8)-15/2000	11+22	16500			35	75
DZG20(8)-15/2000	11+22	19000			40	85
DZG12.5(10)-20/2500	15+30	14000	3200	3000	45	80
DZG18.75(10)-20/2500	15+30	15500			50	100
DZG25(10)-20/2500	15+30	19500			55	110
DZG15(12)-25/3000	18.5+30	14500	3700	3400	50	100
DZG22.5(12)-25/3000	18.5+30	17000			55	120
DZG30(12)-25/3000	18.5+30	19500			60	130
DZG20(16)-30/4000	22+45	15000	4800	3800	70	125
DZG30(16)-30/4000	22+45	17500			75	150
DZG40(18)-30/4000	22+45	20000			85	175

TECHNICAL FEATURES

1)自动化程度高,能连续完成布料、抽滤、加压,碾压、滤布再生等功能,生产效率极高。

High degree of automation, it can continuously complete the functions of feeding, vacuum dewatering,

pressurization, rolling, Filter cloth washing, etc., with extremely high production efficiency.

2)将带式真空过滤机、带式压机、高压板框压滤机三合一(可称为连续的高压板框压机),最大限度去除水分。

Combining vacuum Filter belt, belt press Filter and press Filter (it can be called a continuous plate and frame Filter press) three in one, maximum to remove water.

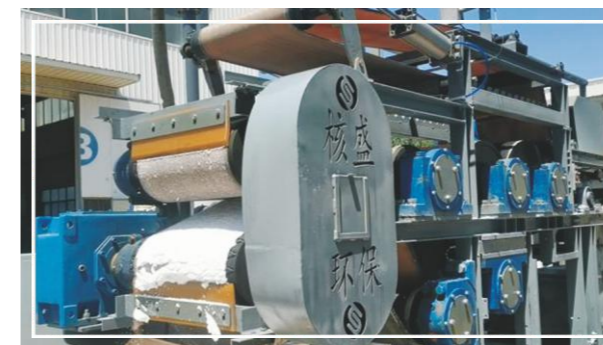
3)结构合理,设备故障率低,维护方便。

Reasonable structure, low equipment failure rate, easy to maintain.

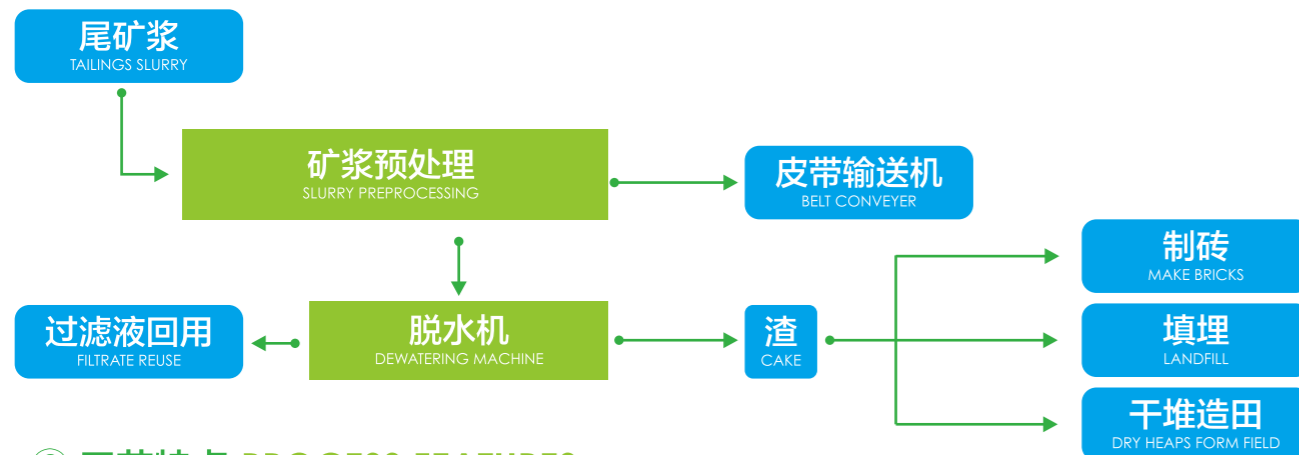
APPLICATION

用于各种工业过滤,工业固废,矿山尾渣,石膏(磷石膏、柠檬酸石膏、钛石膏、脱硫石膏),污泥,玉米芯、桔梗、中药渣,浒苔等脱水。

It can be used for various industrial Filtration, industrial solid waste, mine tailings, gypsum (phosphogypsum, citric acid gypsum, titanium gypsum, desulfurization gypsum), sludge, corncob, platycodon, traditional Chinese medicine slag, prolifera and other dehydration.



① 工艺路线/PROCESS FLOW DIAGRAM



② 工艺特点/PROCESS FEATURES

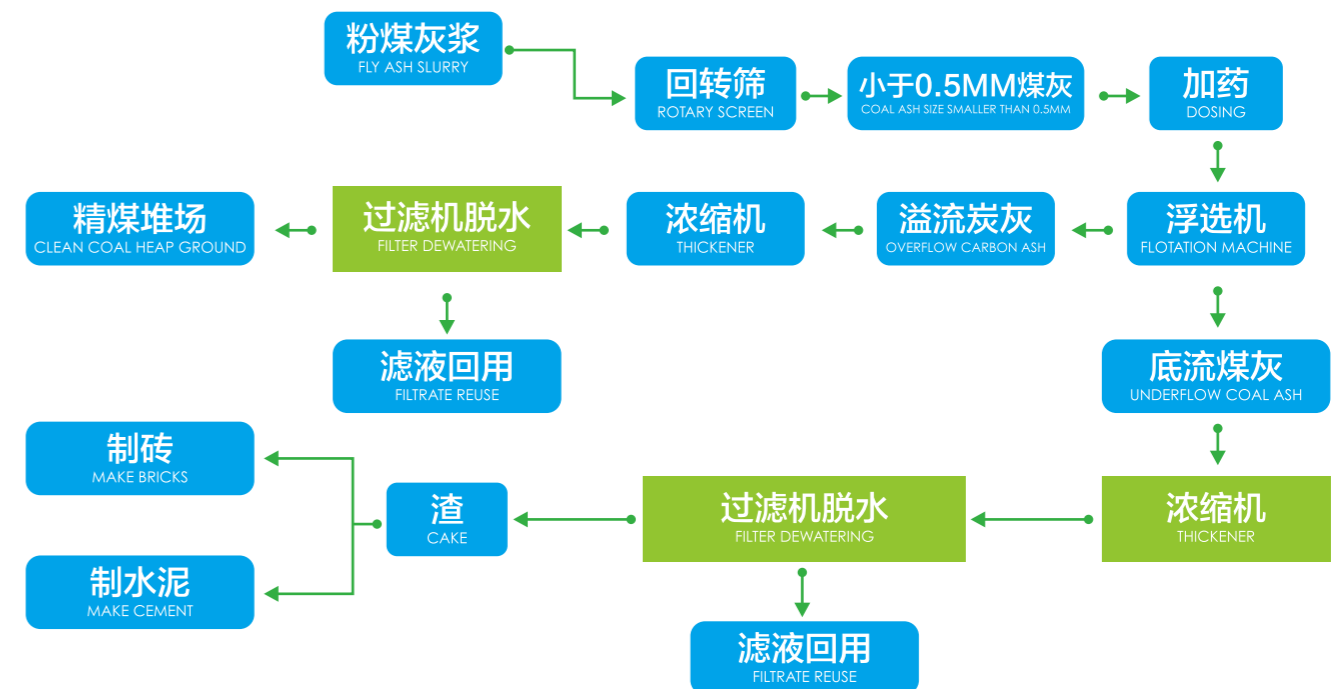
闭路循环，水资源回用，干尾矿易于运输和综合利用
closed loop, water reuse, easy to transport, comprehensive utilization

- ① 外排赤泥附碱可降至：6KG / T（干赤泥）；
 - ② 取消赤泥分离槽和洗涤槽，可节省大量工建投资且简化氧化铝流程，改善生产环境，大幅降低能耗，提高氧化铝收率。
- ① Discharged red mud with alkali can be reduced to: 6kg / t (dry red mud);
 - ② Without red mud separation tank and washing tank, it can save a lot of construction investment and simplify alumina process to improve production environment, reduce energy consumption greatly and increase alumina recovery efficiency.

NEW PROCESS FOR COMPREHENSIVE UTILIZATION OF ULTRA-FINED FLY ASH (COAL CHEMICAL FINE SLAG) DEASHING IN COAL-FIRED POWER PLANTS

燃煤电厂超标粉煤灰（煤化工细渣）脱灰综合利用新工艺

① 工艺路线/PROCESS FLOW DIAGRAM



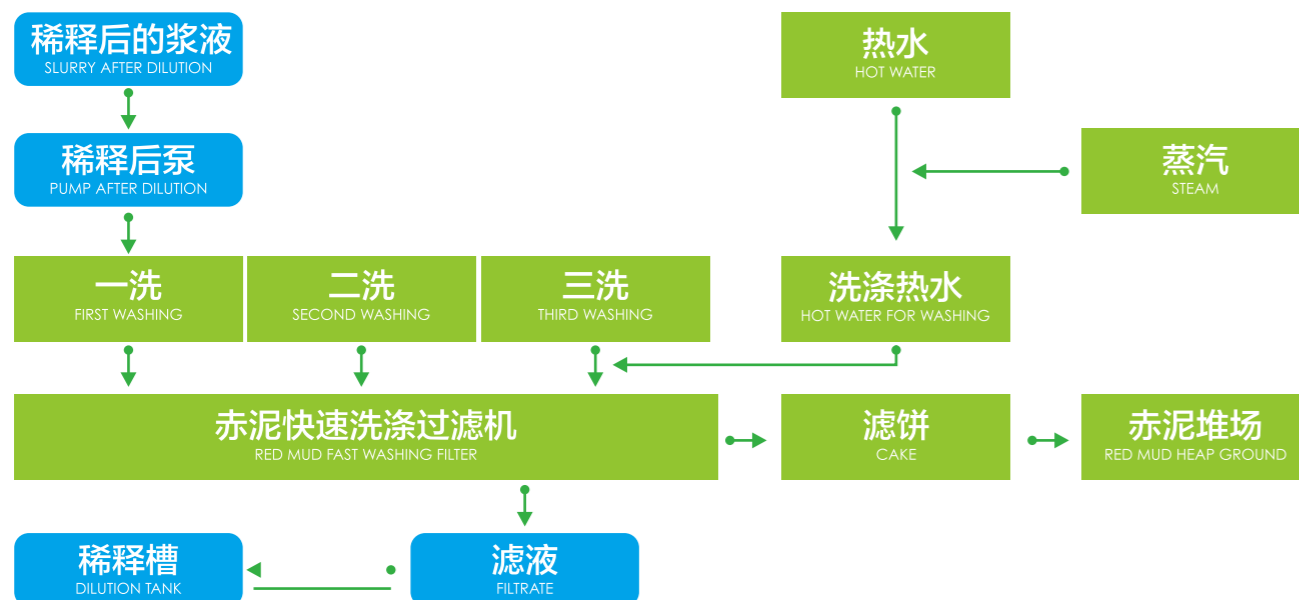
② 工艺特点/PROCESS FEATURES

- ① 湿法生产，无粉尘污染，水闭路循环，零排放。
 - ② 产品质量优良，有良好的经济和社会效益。
- ① Wet production, no dust pollution, closed water circulation, zero emissions.
 - ② The products have good quality, economic and social benefits.

NEW PROCESS OF SEPARATION AND WASHING RED MUD

赤泥分离与洗涤新工艺

① 工艺路线/PROCESS FLOW DIAGRAM





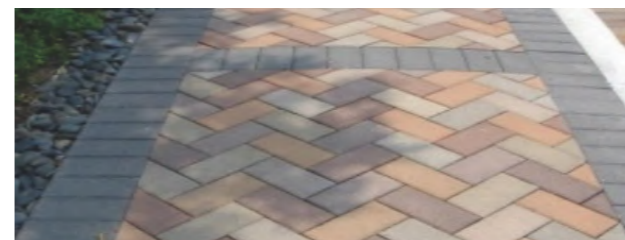
① 尾矿造粒复垦绿化 / TAILINGS GRANULATION, RECLAMATION AND PLANTING



② 尾矿制建筑轻质板 / CONSTRUCTION LIGHT BRICK MADE FROM MINING TAILINGS



③ 尾矿制透水砖 / WATER PERMEABLE BRICK MADE FROM MINING TAILINGS



④ 陶粒图片 / CERAMSITE PICTURES



⑤ 制砖图片 / BRICKMAKING PICTURES

