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刻苦造求 创工程机械名品

Work PainStakingly to Serve Infrastructure

Pursue Unremittingly to Create Famous Engineering Machinery Brand



公司简介 Company Introduction

三川德青工程机械有限公司（原黑旋风工程机械开发有限公司）是中国冶金地质总局三川德青科技有限公司的全资子公司，坐落在风景秀丽的三峡明珠城宜昌市高新技术开发区，拥有60余年的历史。公司以“责任央企，绿色央企”为使命，是国家高新技术企业，具备省级技术中心资质，与中科院，中国地质大学，河海大学，西南石油大学，三峡大学等科研院所长期保持合作并建有产学研基地，是工程泥浆处理、城市管网污泥处置、河道疏浚、湖泊清淤、大气除尘、压力注浆等基础施工设备的专业制造企业。公司按ISO9001、ISO14001、OHSAS18001整合管理体系要求对产品的设计、生产、服务实施全过程控制。在工程泥浆处理方面，拥有自主品牌和多项专利技术，经过二十多年的不断创新和积累，技术达到国际先进水平，成为目前中国规模最大，技术最成熟，市场占有率最高的“泥浆处理专家”企业，产品销往世界各地在多项国内外重点工程中得到成功的应用。

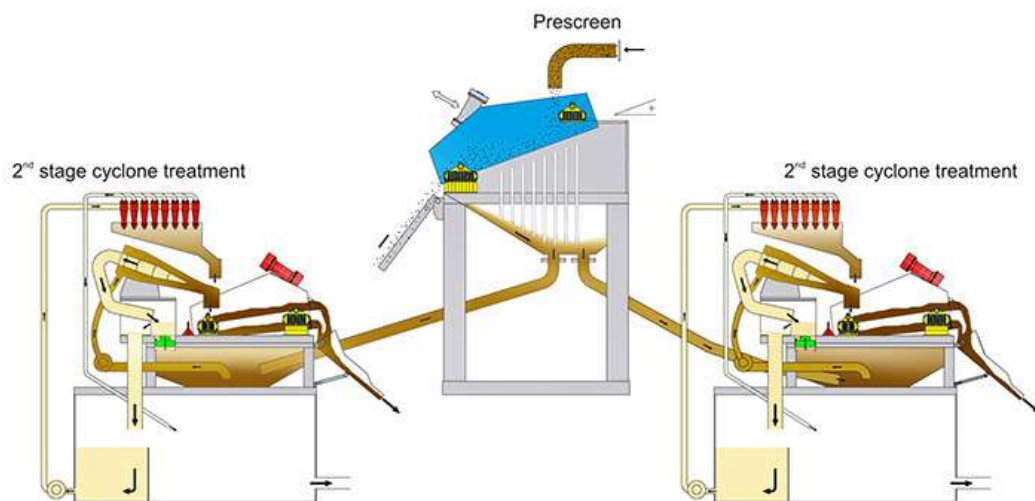
公司总经理张沛强率全体员工热忱欢迎国内外客商前来洽谈业务和观光，并愿与之建立真诚的合作！

The Safecleen Engineering Machinery Co., Ltd (Originated from Black Whirlwind Engineering Machinery Development Co., Ltd) is a wholly owned subsidiary of China Metallurgical Geology Bureau SANCHUANDEQING TECHNOLOGY LIMITED COMPANY, is located in the beautiful Yichang City Hi-tech Development Zone in Three Gorges Pearl City. The Safecleen owns over 60 years historical evolution which uses "Responsible state-owned enterprises, green state-owned enterprises" as a mission. It's a National high-tech enterprise. The research and development center of this company is Hubei provincial technology center. Moreover, it establishes long-term cooperation and production base with Chinese Academy of Sciences, China University of Geosciences, Hohai University, Southwest Petroleum University, China Three Gorges University and so on. The Safecleen is professional manufacturing enterprise for some foundation construction equipment, such as engineering slurry treatment, urban pipeline sludge disposal, river dredging, lake desilting, atmospheric dusting, pressure grouting, etc. The Safecleen control product design, production and service process in accordance with the ISO9001, ISO14001, OHSAS18001 integration management system requirements. It's a pride that Safecleen owns independent brands and technology patents in engineering mud treatment. After 20 years of continuous innovation and accumulation, the technology of mud treatment in Safecleen has reached the international advanced level. At present, Safecleen becomes a "Slurry treatment expert" enterprise which is the greatest, the most mature and owns the most high market share in China. What's more, its products are exported to all over the world, and it makes successful application in a number of key projects both at home and abroad.

The General Manager Mr.Zhang Peiqiang with all staff in Safecleen warmly welcome domestic and foreign customers to visit Safecleen, and would like to establish sincere cooperation with them.



ZX系列泥浆净化装置 ZX-Desanding Plant



工作原理

需要处理的污浆被输送到泥浆处理系统的预筛经过两层的粗筛, 3mm以上大粒径的砾石、粘土团分离出来; 粗筛后的泥浆进入两台泥浆净化装置的储浆槽, 由渣浆泵从储浆槽内抽吸泥浆, 泵出泥浆从一级旋流器进浆口切向射入, 经过一级旋流器分选, 泥砂由旋流器下端排出落入振动筛, 经筛板脱水筛选后, 干燥的渣料被分离出来。一级旋流器从上端分选出分离粒度 $d_{50} \leq 60 \mu\text{m}$ 的泥浆进入泥浆箱; 再由渣浆泵从泥浆箱抽吸泥浆, 泵出泥浆进入二级旋流器, 通过二级旋流器组的旋流分选, 粒径微细的泥砂由旋流器下端落入细筛。经细筛脱水筛选后, 干燥的细渣料筛被分出来, 二级旋流器从上端分选出分离粒度 $d_{50} \leq 20 \mu\text{m}$ 的泥浆进入泥浆箱的另一侧, 此浆液为最终处理后的干净浆液。

Working Principle

Slurry which needed to deal with is transported to the prescreen of slurry treatment system, and through two layers screening, particle size is greater than 3mm of gravel, clay is separated out; and then the slurry get into the slurry storage tank of two sets desander, slurry pump pumping the slurry from storage tank, and the slurry from the inlet of 1st stage hydro-cyclone tangential enter into hydro-cyclone, after hydro-cyclone separation, fine particle size of mud discharged by the bottom of cyclone fall into the vibrating screen, after dewatering and separating by screening, dry slag is separated out. 1st stage of hydro-cyclone separate the slurry which cut point is $d_{50} \leq 60 \mu\text{m}$ from upper get into the slurry tank; slurry pump pumping the slurry from slurry tank, the slurry fall into the 2nd stage hydro-cyclone, after 2nd stage hydro-cyclone separation, fine particle size of mud discharged by the bottom of cyclone fall into the vibrating screen, after dewatering and separating by screen, dry slag is separated out. 2nd stage of hydro-cyclone separate the slurry which cut point is $d_{50} \leq 20 \mu\text{m}$ from upper get into the other side of slurry tank. This is the clean slurry which we final need.

ZX系列泥浆净化装置 ZX-Desanding Plant

适用于水电、城建、桥梁桩基等正反循环成孔(槽)及泥水平衡盾构施工中的泥浆净化回收,即能降低施工成本,提高成孔效率,也能减少泥浆排放量和卡钻事故,是基础文明施工的必备设备之一。

It is mainly used in hydroelectric power, civil engineering, bridge pile foundation work, direct & reverse circulation piling and also used in TBM to purify slurry recycling slurry. It can cut down construction cost, reduce environmental pollution and increase efficiency. It is one of the necessary equipment for foundation construction.

主要技术参数 Main technical parameters

参数Parameters	型号Type	ZX-20/30	ZX-50/30	ZX-100/30	ZX-200/60	ZX-250/60-20	ZX-500/60-20
液体处理能力 Capacity(m ³ /h)		20	50	100	200	250	500
分离粒度d50 Cut point(μm)		30	30	30	60	60-20	60-20
渣料筛分能力 Separation capacity(t/h)		10	10-26	25-50	25-80	25-80	75-240
总功率 Power(kW)		9.7	17.2	24.2	48	58-60.8	127-255
外形尺寸 Dimension(m)		2.2×1.26×2.35	2.30×1.25×2.46	3.0×1.9×2.30	3.54×2.25×2.83	3.54-4.62×2.25 ×2.64-3.40	11.7-13.3×5.9 ×5.4
重量 Total weight(kg)		1700	2100	2700	4800	4900-7600	21020-40000

ZX-20(50)/30



ZX-100/30



ZX-200(250)/60



ZX-250/45



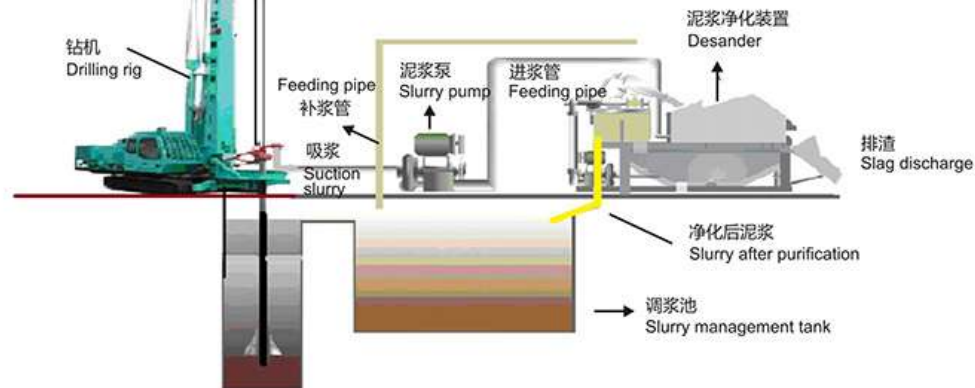
ZX-250/30



ZX-500/60



工艺流程示意 Working Flow



◀ ZX-500型泥浆净化系统
用于香港湾仔隧道地下连续墙工程

ZX-500 desanding plant used in the underground diaphragm wall project of Wanchai, Hong Kong

▶ ZX-500型泥浆净化系统
用于武汉阳逻大桥地下连续墙工程

ZX-500 desanding plant used in the underground diaphragm wall project of Wuhan Yangluo bridge



◀ ZX-500型泥浆净化系统
用于深圳福田车站地下连续墙工程

ZX-500 desanding plant used in the underground diaphragm wall project of Shenzhen Futian station

▶ ZX-250型泥浆净化装置
用于浙江杭州湾大桥桩基工程

ZX - 250 desander used for Zhejiang Hangzhou bay bridge pile foundation project





▲ ZX-200型泥浆净化装置用于中国大剧院桩基工程

ZX-200 desander used for China National Grand Theatre pile foundation project



▲ ZX-200型泥浆净化装置用于长江三峡二期围堰防渗墙工程

ZX-200 desander used in the Yangtze river Three Gorges second stage cofferdam diaphragm wall project



▲ ZX-200型泥浆净化装置用于越南河内城建桩基工程

ZX-200 desander used in pile foundation project, Hanoi, Vietnam



▲ 韩国公司使用我公司ZX-100型泥浆净化装置在非开挖工程中施工

ZX-100 desander used in the No dig project, Korea



▲ ZX-200型泥浆净化装置用于广州市政顶管工程

ZX-200 desander used in municipal pipe jacking project, Guangzhou, China



▲ ZX-200B型泥浆净化装置用于云南金安桥石粉回收工程

ZX-200B desander used in Jin An bridge stone powder recycling project, Yunnan, China

泥浆净化装置使用于桩基、非开挖工程案例 The Project Reference

泥浆处理专家
Slurry Treatment Expert

三川德青工程机械有限公司
Safeclean Engineering Machinery Co., Ltd

工程泥浆零污染排放处理系统 Engineering slurry zero pollution treatment system

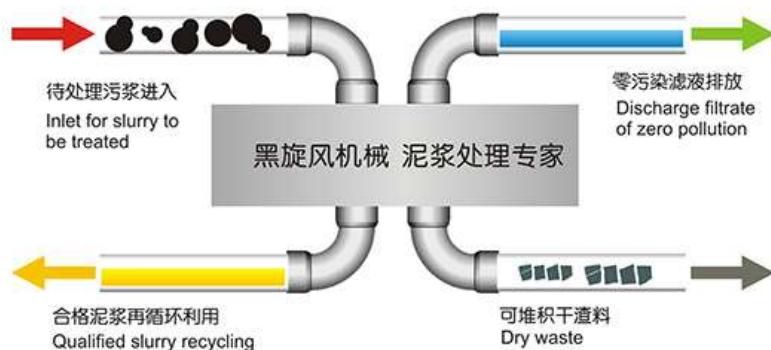
在城建、桥梁桩基、非开挖、泥水盾构等基础工程施工过程中，泥浆的循环使用起着重要的作用，但不能继续利用的废浆的处理一直是困扰工程施工的难题，直接排放将会给环境造成严重的污染并承受较大的排污成本。

本系统将工程废浆集中处理为可堆积的渣土与可达标排放的滤液。系统在旋流筛分、进料、压滤、排水、卸料过程可采用自动控制及监测。具有应用范围广、自动化程度高，检修及维护方便的特点。

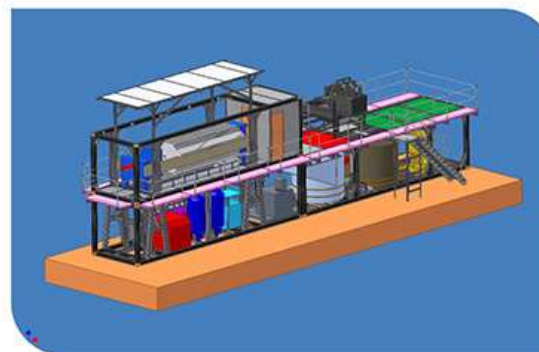
In urban construction, bridge pile foundation, No dig, slurry TBM etc, foundation construction process, slurry recycling play an important role, but we can not continue to use the waste sludge has been a problem in engineering construction, direct discharge will cause serious pollution to the environment and high costs.

This system can make the construction waste sludge processed into central station, and meet the discharge standard of filtrate. In the hydro-cyclone separation, feeding, filter press, drainage, discharge process, the system can be used automatic control and monitoring. Has a wide application range, high degree of automation, convenient repair and maintenance.

工艺流程示意 Working Flow



设备结构 Equipment structure





▲ 设备工作现场。排出的滤饼，含水率 $\leq 25\%$
The filter cake on job site, water content $\leq 25\%$



▲ ZXYL-3型泥浆零排放系统用于武汉绿地广场桩基工程
ZXYL-3 Zero pollution treatment system used in pile foundation project of Wuhan green square



◀ 自动控制及检测系统
Automatic control and detection system



◀ 现场采集的滤液水，固含率 $\leq 2\text{g/L}$
The filtrate from the site, solid content rate $\leq 2\text{ g/L}$

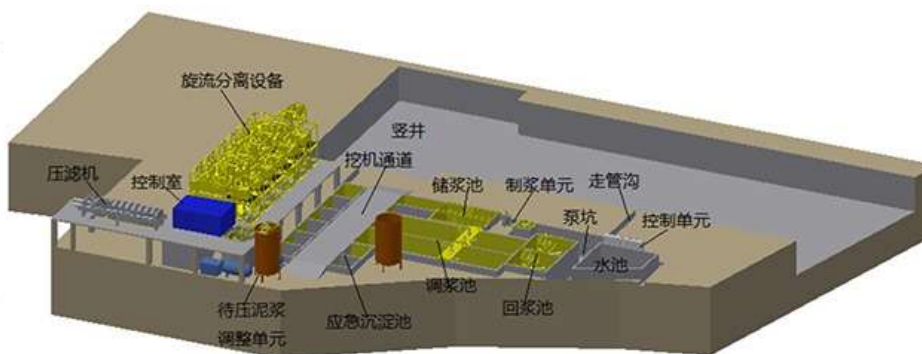


▲ ZXYL-6型泥浆零排放系统用于黄孝河清淤泥浆处理工程
ZXYL-6 Zero pollution treatment system used in Huang Xiaohes desilting project

盾构泥水处理系统 TBM Slurry Treatment System

- 自主研发的ZX系列泥水处理系统。全面支持隧道掘进机施工。能满足500-6000m³/h盾构泥浆处理并循环利用要求。
- 采用国际最先进技术。模块化设计，产品个性化定制。
- 整体结构合理，占地面积小，设备噪音低、工作效率高、工程适用性强、使用寿命长。
- 系统采用PLC集中远程控制方式。各点位均有故障自动诊断和显示功能。
- 压滤技术获得国家实用新型专利，工艺流程获得国家发明专利。独有的压滤处理设计理念。采用降粘、助滤等化学改良手段结合分段压滤方式，实现压滤液水达标排放，滤渣含水率低至23%以下。

- Independent research and development of ZX series Slurry Treatment System to fully support construction of the tunnel boring machine. Can meet the 500-6000m³/h TBM slurry treatment and recycling requirements.
- Adopt the international most advanced technology. Modular design, product customization.
- The overall structure is reasonable, cover an small area, low noise, high efficiency equipment, engineering applicability, long service life.
- The method of centralized remote control system adopts PLC. Each point has the automatic fault diagnosis and display function.
- Filter Press technique obtains the national utility model patents, technological process to obtain national invention patent. The unique filter processing design concept. Use the chemical modified such as lower viscosity, filtration combined with piecwise filter pressing way, to realize the filter pressing water to achieve the discharge standard, filter cake water content is below 23%.





泥浆处理专家
Slurry Treatment Expert

三川德青工程机械有限公司
Safeclean Engineering Machinery Co., Ltd

东莞地铁隧道工程

地层为中粗砂、淤泥质粘土、砂质粘性土、微风化粉砂。隧道直径6.98m，隧道全长1185m泥水分离设备的处理能力为2000m³/h，掘进速度8cm/min，环长1500mm。掘进设备采用泥水平衡式盾构机。采用一套ZX-2000二级泥浆处理系统，分离粒度 $d_{90}=20\mu\text{m}$ 。

TBM PROJECT OF DONGGUAN METRO LINE

TBM project of DONGGUAN Metro Line: Formation for the coarse sand, silt clay, silty sand clayey soil, TBM diameter is 6.98m, total length is 1185m, STP capacity is 2000m³/h and driving speed is 8cm/min. Ring length is 1500mm. The tunneling equipment adopt the slurry balance TBM, slurry treatment system adopts one set of ZX - 2000, cut point $d_{90}=20\mu\text{m}$.



南京纬三路过江通道工程

直径 $\phi 14.96$ 米，隧道为南北两线布置，北线隧道长3600m，南线隧道长4755m，地层岩性主要为淤泥质粉质粘土、粉质粘土、粉砂、细砂、中粗砾砂、卵石及部分中风化粉砂岩。循环泥浆量为3000m³/h，进尺效率3~5cm/min。隧道掘进工期为500天，掘进设备采用泥水平衡式盾构机，采用了2套ZX-3000E泥浆除砂系统，分离粒度 $d_{90}=20\mu\text{m}$ 。



南京地铁十号线过江通道

直径 $\phi 11.96$ 米，隧道全长3600米，施工时的最大埋深位于长江江面以下58米，隧道全线以粉细砂、中粗砾砂、及卵石混合土为主，循环泥浆量为2000 m³/h，进尺效率4~6cm/min。掘进设备采用泥水平衡式盾构机。采用了1套ZX-2000B二次泥浆处理系统，分离粒度 $d_{90}=20\mu\text{m}$ 。

NANJING WEISAN ROAD RIVER-CROSSING TUNNEL PROJECT

Nanjing Weisan Road river-crossing tunnel project with diameter 14.96m, Tunnel for the north-south line two bound arrangement, North line is 3600m, the South line is 4755m, Geological condition is mainly of sludge silty clay, silty clay, silt and fine sand, coarse gravel sand, gravel, and parts of moderately weathered silty sandstone. Circulating slurry volume is 3000m³/h and driving speed is 3~5cm/min. Tunneling construction period for 500 days, The tunneling equipment adopt the slurry balance TBM, slurry treatment system adopts two sets of ZX-3000E, cut point $d_{90}=20\mu\text{m}$.

NANJING SUBWAY LINE NO.10 RIVER-CROSSING TUNNEL PROJECT

Nanjing subway line No.10 river-crossing tunnel project with diameter 11.96m, Total length is 3600m, the maximum buried depth is located in the Yangtze river during the construction of 58m below river surface, circulating slurry volume is 2000m³/h and driving speed is 4~6cm/min. The tunneling equipment adopt the slurry balance TBM, slurry treatment system adopts one set of ZX-2000B, cut point $d_{90}=20\mu\text{m}$.

广州地铁9号线盾构工程

粉细砂，中粗砂，砾砂，粉质粘土，淤泥质土，残积土，泥质粉砂岩，全风化灰岩，全风化泥质粉砂岩，强风化灰岩，中风化灰岩，微风化灰岩。直径 ϕ 6.26米，左右线隧道全长共7256m。循环泥浆量为550 m³/h，进尺效率8cm/min，排量550方/小时，掘进设备采用泥水平衡盾构机两台，采用ZX-600二次泥浆处理系统，分离粒度 $d_{50}=20\mu\text{m}$ 。

GUANGZHOU METRO LINE NO.9 TBM PROJECT (CONTRACTOR: CTC CO., LTD.GUANGDONG)

Guangzhou metro line No. 9 TBM project, Formation is: the silty sand, coarse sand, gravel sand, silty clay, silt soil, residual soil, argillaceous siltstone, completely weathered limestone, completely weathered argillaceous siltstone, highly weathered limestone, moderately weathered of limestone, limestone and so on. With tunnel diameter 6.26m, total length is 7256m, circulating slurry volume is 550m³/h and driving speed is 8cm/min. The tunneling equipment adopt the slurry balance TBM, slurry treatment system adopts one set of ZX-600, cut point $d_{50}=20\mu\text{m}$.



京津城际延伸线盾构工程

盾构直径11.97米，隧道总长2200m，泥浆流量2200方每小时，掘进速度6cm/min，环长1500mm，掘进设备泥水平衡式盾构机。地质情况以粉细砂和淤泥质粉质粘土为主，选用ZXSII-2200处理系统一套。本系统是泥浆零排放处理系统，配备4台500平米板框式压滤机，保证整个盾构掘进过程中的物质分离平衡。

THE BEIJING-TIANJIN INTER-CITY LINE EXTENSION PROJECT

The Beijing-Tianjin inter-city line extension project. With tunnel diameter of 11.97m, total length of 2220m. Slurry volume is 2200m³/h, driving speed is 6cm/min, Ring length is 1500mm. The tunneling equipment adopt the slurry balance TBM, slurry treatment system adopts one set of ZXSII-2200. This system is Zero discharge slurry treatment system. Equipped with 4 units of 500m² of plate and frame type filter press, Ensure the material separating balance in the process of TBM boring.

工程案例 The Project Reference

泥浆处理专家
Slurry Treatment Expert

三川德青工程机械有限公司
Safeclean Engineering Machinery Co., Ltd

全自动集中制浆系统

Fully Automatic Batching Plant

- 自主研发的全自动制浆系统，制浆量20-160m³/h。
- 应用于隧道泥水盾构地面制浆系统工程、水电施工集中制浆等工程。
- 系统采用上位机电脑（或触摸屏）和PLC集成控制方式。制浆过程自动化，浆液配置密度精确。
- 系统在上料、配料、制浆、输浆、清洗、故障监测、故障报警全部采用自动控制。对运行数据进行自动处理，具统计、打印功能。
- 全自动制浆监控软件获计算机软件著作权登记证书。
- Self-developed fully automatic batching plant, Capacity is 20-160m³/h.
- Used in slurry TBM ground slurry separation system, hydropower construction and other projects.
- System adopts IPC [or touch screen] and PLC integrated control mode. All process automation, slurry density accurately.
- System in the load material, dosing, slurry separation, conveying, cleaning, monitoring, fault alarm all adopt the automatic control. The operation data automatic processing, statistics, print function.
- Automatic slurry separation and monitoring software for computer software copyright registration certificate.

制浆系统用于武汉公路过江隧道盾构工程
Batching plant used in Wuhan
river- crossing TBM project



制浆系统用于官地水电站
Batching plant is used in
Guandi hydropower station



制浆系统用于南京公路过江隧道盾构工程
Batching plant used in Nanjing river- crossing TBM
project



YJ系列搅拌机 YJ series mixer



YJ-150-340

该双层搅拌桶为SNS系列注浆泵配套设备，用于水泥浆、砂浆等的搅拌。

They are supporting equipment for SNS grout injection pump. They are used to agitate cement grout and mortar.

主要技术参数 Main technical parameters

参数名称	Name of parameters	单位	Unit	YJ-150	YJ-200A	YJ-340
公称容量	Nominal capacity	升	L	150	200	340
筒体直径	Cylinder diameter	毫米	mm		800	925
出浆口直径	Outlet diameter	毫米	mm	51	64	64
减速器减速比	Type of reducer			38	20	35
电机额定功率	Power of motor	千瓦	kW	1.5	3	3
重量（包括动力）	Gross weight	公斤	kg	340	410	460
外形尺寸	Dimension	毫米	mm	850×850×1900	910×910×1900	1035×1035×2100



YJ-400, 800

本机是灌浆泵和泥浆泵配套设备，用来搅拌泥浆、水泥浆或其它浆液。

It is supporting equipment for grouting pump; it is mainly used for agitating slurry, cement grout and other.

主要技术参数 Main technical parameters

参数名称	Name of parameters	单位	Unit	YJ-400	YJ-800
公称容量	Nominal capacity	升	L	400	800
筒体直径	Cylinder diameter	毫米	mm	800	1100
出浆口直径	Outlet diameter	毫米	mm	51	65
减速器减速比	Type of reducer			15	20
电机额定功率	Power of motor	千瓦	kW	1.5	4
重量（包括动力）	Gross weight	公斤	kg	210	310
外形尺寸	Dimension	毫米	mm	1000×900×1400	1468×1260×1464

ZJ-400W



ZJ-400



ZJ系列制浆机

ZJ series Mortar Mixer

制浆机是浆液配制的专用设备,主要用于水电、铁路、交通、建筑、矿山等行业的工程施工中,将水泥、膨润土等与水及其添加剂混合并快速制成浆液,该机采用涡流制浆,与一般叶片搅拌机相比,具有制浆速度快,浆液搅拌均匀等特点。

It is a special mortar mixer for mixing cement, bentonite with water or other additive. It is mainly used for the engineering construction of hydroelectricity, railway, highway, infrastructure, mining etc. Compared to ordinary blade agitator, it mix grout by adopting vortex technology, so it not only make grout rapidly, but also mix grout efficiently.

主要技术参数 Main technical parameters

参数名称	Name of parameters	单位	Unit	ZJ-250	ZJ-400	ZJ-800	ZJ-1500	ZJ-3000	ZJ-400W 7.5kW	ZJ-400W 11kW
公称容量	Nominal capability	升	L	250	400	800	1500	3000	400	400
最高许用水灰比	Allowed scale of water and ash			0.5:1	0.5:1	0.5:1	0.5:1	0.5:1	0.5:1	0.27:1
制浆时间	Time of grout making	分钟	min	5.5	3	3	22	37	3	3~5
额定功率	Power	千瓦	kW	3	7.5	15	4.5	4.5	7.5	11/1.5
重量 (包括动力)	Weight	公斤	kg	310	450	700	2350	2700	460	490
外形尺寸	Dimension	毫米	mm	1200×850×1300	1350×1150×1460	1725×1373×1848	2244×2244×3364	3310×1800×3665	1790×1036×1535	1790×1036×1575

本系列机型是采用皮带传动、悬臂支撑、平板多层叶片、搅拌叶片和送浆泵同轴的高速制浆机,浆液中没有密封和支撑件,零件磨损小,使用成本低。有送浆能力,制浆速度快而均匀,制一桶浆需时不到一分钟,不产生旋涡中空现象,不会有结块成团现象等没有鱼眼效应;对加料速度没有严格的要求,可制水泥浆、膨润土浆、水泥细沙浆等基础施工中压力注浆浆液。

It is a high-speed mortar mixer which is made up by conveyer belt, cantilever, mixing blade and grout pump. No sealing and strutting piece are needed inside this machine, so the machine parts are quite abrasion-resistible and the operating cost is low. Common working defect such as agglomeration can be totally avoided by using this machine. It can make grout so fast and evenly that only one minute is needed to produce one barrel of grout. There is no strict requirement for feeding rate, and most grout used in infrastructure construction can be produced by this machine, for instances: cement slurry, bentonite, sand slurry, etc.



GZJ600



GZSJ600

主要技术参数 Main technical parameters

参数名称	Name of parameters	单位	Unit	GZJ600	GZSJ600
桶容量	Capability	升	L	700	700
制浆速度	Speed	升/分钟	L/min	600	600
送浆速度	Feeding speed	升/分钟	L/min		150
电机功率	Power	千瓦	kW	7.5	7.5
外形尺寸	Dimension	毫米	mm	1400×1100×1600	1360×1000×1730
三角带规格	Triangular belt specification			B2085	
机重	Weight	公斤	kg	400	550

SNS系列工程注浆泵 SNS High-Pressure Grout Injection Pump Series

SNS系列注浆泵既可灌注水泥浆，也可注砂浆。其主要特点是压力大，流量稳定，结构合理，操作方便。主要用于坝基帷幕注浆、边坡锚固注浆、隧道注浆及相关注浆工程，并可代替泥浆泵用于地质岩心钻探。

The pump is used to grouting cement grout as well as mortar. It is high in pressure, stable in flow, reasonable in structure and easy for operation. It is applied to grout injection for dam foundation, slope, tunnel and foundations for other relative reinforcement projects. It can be used to replace slurry pump for geological rock core drilling.

SNS130/20



3SNS



SNS150/3.5A



SNS65



SNS10/6

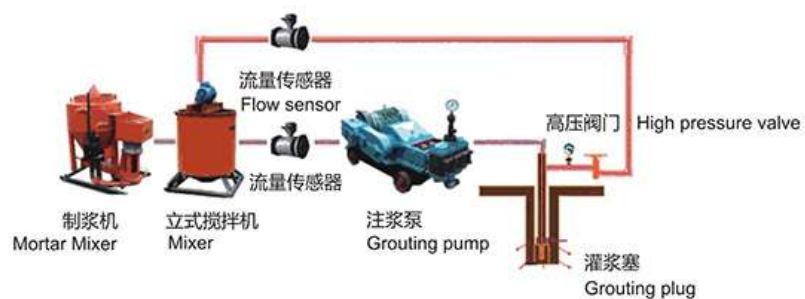


SNS-180/6



工艺流程示意

Working Flow



主要技术参数 Main technical parameters

参数 Parameters 型号Type	3SNS		3SNS-130/20		SNS-150/3.5A	SNS-110/UB4	SNS-65/1.5	SNS-65/3	SNS-65/3/T	SNS-10/6	SNS-180/6
理论排量 Theoretical Flux (l/min)	100	207	85	130	150	50~110 (无级可调 stepless adjustable)	65	65	25~56 (无级可调 stepless adjustable)	2.2~10	35~180
额定压力 Rated pressure (Mpa)	10	4	20	10	3.5	4	1.5	3	3	6	2.7~6
进道直径 Inlet diameter (mm)	64		64		64	64	38	38	38	13	50
排道直径 Outlet diameter(mm)	32		32		32	32	25	25	25	8	25
功率 Power(kW)	18.5		22		11	5.5	4	5.5	5.5	1.5	11
重量 (不含动力kg) Weight (excluding power kg)	730		750		400	630	165	193	350	95	294
外形尺寸 External dimension(mm)	1800X945X705		1800X945X705		1600X650X650	1600X950X800	1150X400X900	1400X400X720	1430X820X720	882X785X457	925X715X666

DZ系列盾尾注浆泵 DZ TBM Backfill Grouting Pump

DZ-XX系列盾尾同步注浆泵是我公司针对盾构同步注浆工艺的特点开发的电液比例控制液压泵,主要由注浆泵头、注浆管路、注浆检测、动力控制和远程控制五大部件组成,可实现本机操作控制、远程监测控制,能实现多台液压泵联机显示、控制。可双液任意体积比例注浆;可根据盾构机的大小配置合适参数的盾尾注浆泵;可实现无堵塞注浆,不需中途停机拆洗;注浆连续不间断,真正做到与盾构掘进同步注浆。

DZ-XX series TBM backfill grouting pump is an electric liquid proportion control hydraulic pump which is developed by our company and special designed for the tunnel synchro grouting technology. It's make-up by grouting head, grouting pipe, grouting detect, power control and long-rang control. It can control by itself and long-range equipment, it also can control and display by many hydraulic pump at the same time. It can grouting in any volume ratio with two liquid; It can match the different size of shield machine to use the suitable injection pump; It can be realized without blocking grouting, no need stop and washing in the halfway; grouting uninterrupted.



DZ100整机图片



DZ100远程控制柜

专利号Patent No.:2009 2 0273036.1

主要技术参数 Main technical parameters

盾构机参数	Parameters of TBM	3M 3米盾构	6M 6米盾构	Over 8M 8米以上盾构
盾尾注浆泵型号	Type of pump	DZ80	DZ100	DZ120
单双液可注性	single or double liquid	single liquid单液	single and double liquid单、双液	single and double liquid单、双液
功率	Power(kW)	15	30	37
电机防护等级	Grade of motor	IP55	IP55	IP55
泵头个数	No. of head of pump	1	2	2
吸排室个数	No. of suction room	2	4	4
柱塞直径	Plunger diameter	φ 80	φ 100	φ 120
输出流量	Output flow(L/min)	0-89.2	0-192.5	0-316
输出压力	Outlet pressure(bar)	0-76.9	0-56.8	0-50.5
每环注浆参数	Parameter of grouting	2.58m³/32.5bar/86L/min	6.48m³/33bar/172.8L/min	13.76m³/21.4bar/275.2L/min
注浆点个数	No. of grouting spot	1or 2	2or 4	2or 4
环片宽	Width of ring slice(M)	1.2	1.5	2
每环注浆时间	Time of every ring slice(min)	30	37.5	50

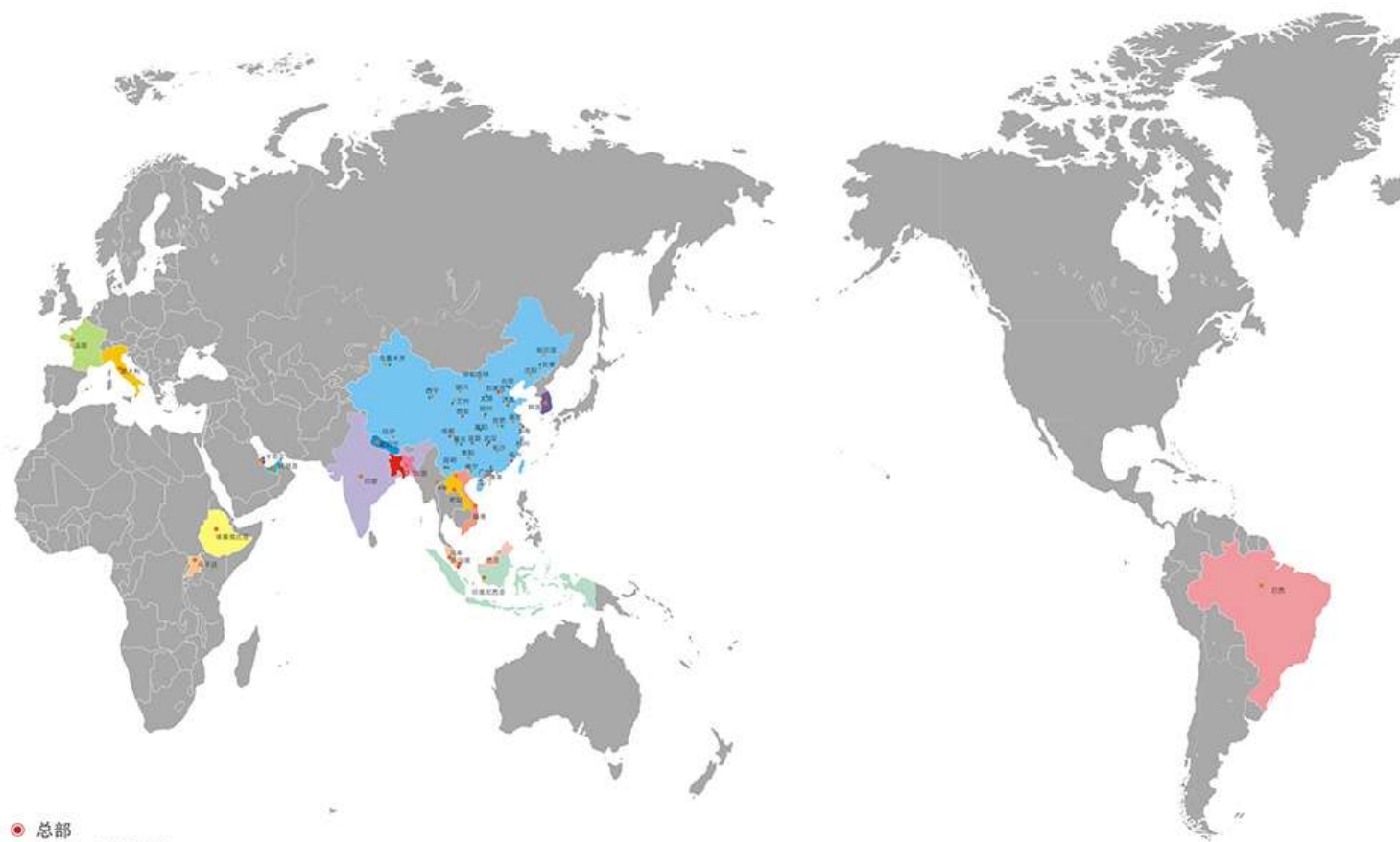
公司场景 Company scene

高精度数控加工设备及产品 High precision CNC processing equipment and products



花园式厂区 The garden type factory





- 总部
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- 设有代理点的城市
- 产品销往的城市和地区
- Headquarters
- Stands for the cities with office
- Stands for the cities with agent
- Stands for the cities with regions where our products are sold

本公司生产的工程设备及产品在中国除台湾地区外，其余地区都实现销售。

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Product are sold to all the provinces and administrative areas except Taiwan.
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Because we always renew our products, so the parameters of each product please refer to the product discription.

我们的承诺

- 满足顾客的工况要求，提供培训
- 满足顾客对现场安装调试的要求
- 承诺在主机寿命期内提供备件供应
- 提供产品升级、换代的服务
- 自接到顾客要求提供服务信息起，48小时内赶到现场或给予明确的文字（如：信函、电传、电报、电子邮件等）答复

Our promise

- Satisfy the work request of the customer, offering training
- Satisfy the customer to install, adjust the request that try to the spot
- Promise to provide the spare parts supply in host life span period
- Offering the service promotes to higher grade, changes the on behalf for the product
- From receive the customer request provide the service information rises, arrive to the spot in 48 hour, or gives clear and definite writing(such as: letter, fax, telegram, E-mail...etc.)Reply



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