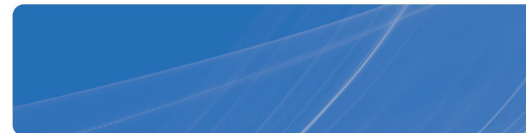




TIANLI
MACHINERY || 
山东天利机械制造有限公司



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- 山东天利机械制造有限公司，专业生产造纸净化系统制浆与网前使用的高浓、中浓、低浓除渣器。
- 公司成立于2002年6月，位于山东省安丘市南工业园区，目前拥有13项国家发明专利、21项实用新型专利、36种不同规格型号的除渣器。
- 与理文纸业、玖龙纸业、山鹰纸业、APP亚洲浆纸、山东太阳纸业、山东世纪阳光、金东纸业、山东晨鸣集团、华泰纸业等建立了长期合作关系，并出口到美国、日本、芬兰、印度、巴西、越南、印度尼西亚等30多个国家和地区。
- 公司2013年开始与日本相川铁工株式会社合作，共同研发制造出特种纸用新型除渣器，解决了长期困扰造纸业特别是高档纸除渣的技术难题。2019年相川铁工株式会社社长梶山宗助先生亲自来到公司与我们签订了长期战略合作协议。
- 同时我们也和美国凯登（KBC）、德国福伊特（Voith）等国外知名品牌合作过很多制浆线。如烟台大展、舟山和泓、江西五星、辽宁兴东、甘肃恒达、河北冀滦等。无论是净化效率还是节能降耗，均得到了用户首肯。

- Shandong Tianli Machinery Manufacture Co.,Ltd is a professional manufacturer of H.D & L.D centricleaners for approach flow system and stock preparation system.
- Shandong Tianli Machinery Manufacture Co.,Ltd , was established in June 2002, which located in Anqiu City, Shandong Province, now has acquired 13 national invention patents, 21 utility model patents and invented as many as 36 different kinds of centricleaners.
- Shandong Tianli has developed long-term cooperation relationships with Lee&Man Paper, Nine Dragons Paper, Shanying International Holding Corporation, Asia Pulp & Paper Co.,Ltd, Shandong Sun Paper Group, Shandong Century Sunshine Paper Group,Gold East Paper, Shandong Chenming Group, Huatai Paper. Tianli centricleaners have been exported to more than 30 countries and regions, such as America, Japan, Finland, India, Brazil, Vietnam, Indonesia.
- In 2013, Tianli Machinery began to cooperate with Aikawa Iron Works Co.,Ltd.(Japan) to jointly develop and manufacture a new type centrifugal cleaner for special paper , which solved the technical problems of purification that have plagued the paper industry for a long time, especially for the high-grade paper. In 2019, Mr. Kajiyama, President of Aikawa Iron Works Co.,Ltd.(Japan),came to Tianli Machinery in person and signed a long-term strategic cooperation agreement with us.
- At the same time, we have also cooperated with some well-known foreign brands such as Kadant (USA) and Voith (Germany)to develop and modify many pulping lines, such as Yantai Dazhan Paper, Zhoushan Hehong Paper, Jiangxi Wuxing Paper, Liaoning Xingdong Paper, Gansu Hengda Paper, Hebei Jiluan Paper, etc. Our centricleaners have been highly evaluated by our clients in terms of purification efficiency, energy conservation and consumption reduction.

企业文化 CORPORATE CULTURE



企业荣誉 ENTERPRISE HONOR



II TLG连续式及TJG间歇式高中浓除渣器

产品概述

TLG连续式与TJG间歇式高浓除渣器能有效的去除纸浆中的渣滓，防止后续设备出现磨损。由于特殊优化的进浆口，因此这种除渣器能有效的去除沙子、玻璃片、订书钉等重杂质。采用内衬陶瓷锥体，可大大增强除渣器的耐磨性。独特设计的冲洗水装置可通过冲洗水最大限度减少纤维流失。一段到二段的无泵式运行能大大降低维护成本。经过两段除渣器的处理，能将浆料中的砂子等重杂质提早分离出来。更改产量只需更换进浆头，设备其它部件无需更换。

TLG Continuous and TJG Intermittent High & Medium Density Cleaner

TLG continuous type and TJG intermittent type high consistency centricleaner can remove the reject and prevent the subsequent equipment from abrasion effectively. Due to the specially optimized pulp inlet, the centricleaner can remove the heavy rejects such as sand, glass chips, staples, etc. The wear resistance of centricleaner can be greatly enhanced by using ceramic cone. The unique design of flushing water device can minimize fiber loss through flushing water. The TLG and TJG high consistency centricleaner can operate from one to two stage without pump, which can reduce the initial investment and the maintenance cost greatly. After the treatment of two-stage centricleaner, the heavy reject such as sand in the pulp can be separated early. For changing the output, only the feed head needs to be replaced, and other parts of the equipment do not need to be replaced.



主要技术参数 Main Technical Parameters

规格型 Specification	400-10	400-12	400-15	400-18
进浆浓度 Feeding Density (%)	0-4.5	0-4.5	0-4.5	0-4.5
通过量 Feeding Flow (L/min)	2800-3200	3000-3600	3800-4500	5000-6000

规格型 Specification	600-15	600-18	600-21	600-25
进浆浓度 Feeding Density (%)	0-4.5	0-4.5	0-4.5	0-4.5
通过量 Feeding Flow (L/min)	6000-8500	8600-11000	10000-12700	12000-13700

II TGC高中浓除渣器



产品概述

TGC 高中浓除渣器是纸浆净化先进设备，尤其是净化废纸纸浆效果更佳，是废纸再生利用不可缺少的关键设备之一。它利用纤维与杂质比重不同，利用离心原理使重杂质从纸浆中分离出来，达到净化纸浆的目的。该除渣器占地面积小，生产能力大，自动化可调式排渣操作简单，不易堵塞排渣口，净化效率高，纤维流失小。既可以一级一段，也可以一级二段处理。锥体耐磨，使用寿命长；没有传动，无需较多维护。有全自动和手动两种形式。

TGC High & Medium Density Cleaner

TGC high and medium consistency centricleaner is an advanced equipment for pulp purification, especially for the purification of waste paper pulp, which is one of the most indispensable key equipment for waste paper recycling. It uses the different proportion of fiber and impurity, and the centrifugal principle to separate the heavy impurity from the pulp, so as to purify the pulp. The centricleaner has the advantages of small covered floor area, large production capacity, simple automatic and adjustable reject discharge operation, free blockage in the reject discharge port, high purification efficiency and small fiber loss. It can be processed by one level with one stage, or one level with two stages. The cone is wear-resistant, which means a long service life; there is no transmission within the centricleaners, which means maintenance cost can be greatly reduced. There are two forms of reject discharging: automatic and manual.



高浓除渣器主要技术参数 Main Technical Parameters of High-Density Cleaners

型号 Specification	TGC1	TGC2	TGC3	TGC4	TGC5	TGC6	TGC7	TGC8	TGC9	TGC10
流量 Feeding Flow (L/min)	250-550	500-950	750-1600	1000-3000	2000-3500	3500-5000	5000-6000	6000-7500	7500-10000	10000-11500
进浆浓度 Feeding Density (%)	0-6									
进浆压力 Feeding Pressure (MPa)	0.25-0.4									
冲洗水压力 Flush Water Pressure (MPa)	0.05 MPa ≥ 进浆压力 0.05 MPa ≥ Feeding Pressure									

中浓除渣器主要技术参数 Main Technical Parameters of Medium-Density Cleaners

型号 Specification	TGC1	TGC2	TGC3	TGC4	TGC5	TGC6	TGC7	TGC8	TGC9	TGC10
流量 Feeding Flow (L/min)	600-1000	1200-1800	1700-3200	2500-4500	4500-5000	5000-6000	6000-7500	7500-8500	8500-10000	10000-12000
进浆浓度 Feeding Density (%)	0-2.5									
进浆压力 Feeding Pressure (MPa)	0.25-0.4									
冲洗水压力 Flush Water Pressure (MPa)	0.05 MPa ≥ 进浆压力 0.05 MPa ≥ Feeding Pressure									

TFY系列重质除渣器



产品概述

TFY系列多功能低浓重质除渣器通过轴向冲洗水单独控制粗渣的浓缩，可有效的控制纤维流失。纤维流失少，需要的除渣器段数和个数相应减少。分离效率更高，运行浓度最高可达 2%，等静压机成型陶瓷锥体，外壁经数控车床加工，尺寸精度高，内表面非常光滑。粗渣中杂质含量高，纤维损失更小。通过对粗渣的稀释以及在所有各段连续排渣使得运行过程中不会出现堵塞现象。主要特点降低纤维损失，提高能力，减少了除渣器的段数及个数。客户亦可使用原有的除渣器；用新的轴向冲洗水装置升级原来的排渣部件，在改造期间检查并优化您的除渣器，而我们仅对您的系统进行必要的管道改造。底部轴向冲洗水的优化使之除渣器受原料变化的影响降低。

TFY Series Heavy Weight Cleaner

TFY series multifunctional centricleaner can control the density of coarse slag by axial washing water, which can control the loss of fiber effectively. With less fiber loss, the required number of centricleaners and stages are reduced correspondingly. The separation efficiency is higher, and the operation density is up to 2%. The ceramic cone is made under isostatic press, and the outer wall is processed by CNC lathe, the size accuracy is high, and the inner surface is very smooth. The reject content in the coarse pulp is high and the fiber loss is smaller. Through the dilution of the coarse and continuous pulp removal in all sections, the blocking phenomenon will not occur during the operation. The main features are reducing fiber loss, improving capacity and reducing the number of stages and centricleaner. Customers can also use the original centricleaner with the new axial flushing water device to upgrade the original pulp cleaning system. After checking and optimizing your centricleaners, while we carry out the necessary pipeline modification for your system only. The optimization of bottom axial flushing water can significantly reduce the influence of raw material changing on centricleaners.

主要技术参数 Main Technical Parameters

除渣器型号 Specification	TFY-450	TFY-900
单支通过量 Feeding Flow (L/min)	450	900
最大进浆压力 Max Feeding Pressure (MPa)	0.4	0.4
进出浆压力差 Pressure Drop (MPa)	0.15	0.15
进浆浓度 Feeding Density (%)	0-2.0	0-2.0
最小良浆压力 Mini Accepts Pressure (MPa)	0.01	0.01
最大操作温度: Max Tempt of Operating (°C)	70	70
冲洗水流量 Flush Water Flow Rate (L/min)	20-60	20-60

TFK-500多功能除渣器

产品概述

TFK500多功能除渣器是我公司在广泛吸收国外先进技术基础上最新研制开发的新一代高效多功能除渣器，该产品采用专业入口设计，表面光洁度高，使排渣率在高除渣效率下趋向最低，彻底减少纤维流失。特别适用于去除浆料中砂砾、尘埃、铁锈等细小的重杂质。TFK500多功能除渣器专业的进出浆及锥角设计，确保了在一定的入口压力下便可形成稳定的涡旋，这与传统的除渣器相比具有明显的节能效果，减少系统维护费用。

TFK-500 Multifunctional Heavy Weight Cleaner

TFK-500 centricleaner is a new generation of high-efficiency multifunctional item developed by Tianli Machinery on the basis of widely absorbing abroad advanced purification technology. The product adopts a professional entrance design with high surface finish, so that the discharging rate tends to be the lowest under high impurity removal efficiency, and the fiber loss is completely reduced. It is especially suitable for removing sand, dust, rust and other small heavy impurities in the pulp. TFK-500 multifunctional centricleaner has a professional design of inlet and outlet as well as the cone angle, which ensures that a stable vortex can be formed under a certain inlet pressure. Compared with the traditional decleaners, it has obvious energy-saving effect and reduces the purification system maintenance costs.



主要技术参数

进浆能力	550-600 L/min
进浆压力	0.2-0.4 MPa
标称进出浆压力差	0.14 MPa
体积排率	10-15% (相对进浆流量)

Main Technical Parameters

Feeding Flow	550-600 L/min
Feeding Pressure	0.2-0.4 MPa
Press Drop	0.14 MPa
Volume Reject Removal Rate	10-15% (relative to feeding flow)

TMLC-700双向除渣器

产品概述

TMLC-700 型多功能除渣器是天利机械结合国内外先进技术的基础上开发研制而成的具有多种功能的新型除渣器，它利用离心原理去除浆料中的各种轻、重杂质。该除渣器具有全新的进浆设计，通过形成的加速流和较长的停留时间结合在一起，这种设计特点赋予了除渣器很高的分离作用，它可用在纸浆净化系统中，除去浆料中的混合废弃物、石蜡、粘着物、塑料片、泡沫、气体、沙石、铁屑等轻、重杂质。

TMLC-700 Bi-directional Cleaner

TMLC-700 multifunctional centricleaner is a modern type of multifunctional pulp cleaning equipment, which is designed by Tianli Machinery based on the domestic and abroad advanced technology. It uses centrifugal principle to remove various light and heavy impurities in pulp. It has a new feeding design, which is combined by the accelerated flow and long residence time. This design featured the centricleaner a high cleaning effect. It can be used in the pulp purification system to remove light and heavy impurities such as mixed waste, paraffin, adhesive, plastic sheet, foam, gas, sand and iron chips in the pulp.

主要技术参数		Main Technical Parameters	
单支通过量	500-700 L/min	Nominal Feeding Flow	500-700 L/min
进浆压力	0.25-0.35 MPa	Nominal Feeding Pressure	0.25-0.35 MPa
进浆浓度	0-2.0%	Feeding Density	0-2.0%
重杂质体积排渣率	6-8% (相对进浆流量)	Volume Heavy Reject Removal Rate	6-8% (relative to feeding flow)
轻杂质体积排渣率	10-12% (相对进浆流量)	Volume Light Reject Removal Rate	10-12% (relative to feeding flow)



TSC系列高效重质除渣器



TSC-252

产品概述

TSC 高效重质除渣器是一种高效经济的小直径除渣器。该产品具有小的直径和延长的除渣器主体，能产生更高的离心力，小的锥角使外涡旋向内涡旋的流动有更好的逐步过渡，与此同时减少了除渣器内的阻力，产生更高的净化效果。特别设计用于除去要求更高的纸机流送、废纸制浆、化学制浆、纤维回收以及特别浆种等系统中细小的重杂质，如：泥污、松香颗粒、沙砾、颜料、垢垢、尘埃、油墨颗粒等杂质。处理后的浆料可以得到理想的净化效果。

TSC-252 Series Efficient Heavy Weight Cleaner

TSC high efficiency heavy centricleaner is a kind of high efficiency and economic one with small diameter. The product has a small diameter and an extended main body, which can produce a higher centrifugal force. The small cone angle makes the flow of the outer vortex to the inner vortex have a better gradual transition, at the same time, it reduces the resistance in the cleaner and produces a higher purification effect. It is specially designed to remove the small heavy impurities such as: mud, rosin particles, gravel, pigment, rust, dust, ink particles and other impurities in the approaching flow system, waste paper pulping, chemical pulping, fiber recovery and special pulp systems with higher requirements. The processed pulp can get ideal purification effect.



TSC-400/600/800/1000/1200

产品概述

TSC系列高效重质除渣器是一种利用离心原理去除浆料中杂质的正向除渣器，可用在各种浆料净化系统中除去浆料中的砂石、铁屑、尘埃及较大的油墨粒子等重杂质。TSC重质除渣器可根据浆料的不同与轻质除渣器相结合，以达到理想的净化效果。

主要特点

分体式结构:TSC除渣器为分体式结构，整个除渣器可分为3-4节，便于拆装和更换。

不同的排渣方式:TSC重质除渣器可根据用户不同的需求选择不同的排渣方式:压力排渣和开放式排渣，以适应您的工作环境。

TSC Series Efficient Heavy Weight Cleaner

TSC series high efficiency high weight centricleaner is a kind of forward item which uses centrifugal principle to remove reject from the pulp. It can be used in various pulp cleaning systems to remove heavy rejects such as sand, iron chips, dust and large ink particles. It can be combined with light weight cleaner according to different kinds of pulp to achieve ideal cleaning effect.

Key Features

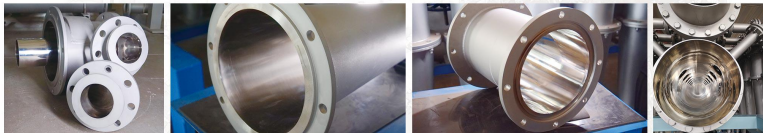
Parted structure: TSC centricleaner is designed to be a parted structure. The whole centricleaner can be divided into 3-4 sections, which is convenient for disassembly and replacement.

Different ways of residue discharge: This centricleaner can be chosen different residue discharge ways: pressure residue discharge and open residue discharge, to adapt to their working environment according to different needs

主要技术参数 Main Technical Parameters

除渣器型号 Specification	TSC-252	TSC-400	TSC-600	TSC-800	TSC-1000	TSC-1200
单支通过量 Feeding Flow (L/min)	252	400	600	800	1000	1200
进浆压力 Feeding Pressure (MPa)	0.3-0.4	0.3-0.4	0.3-0.4	0.3-0.4	0.3-0.4	0.3-0.4
进出浆压力差 Pressure Drop (MPa)	0.14-0.18	0.14-0.18	0.14-0.18	0.14-0.18	0.14-0.18	0.14-0.18
进浆浓度 Feeding Density (%)	0-1.5	0-1.5	0-1.5	0-1.5	0-1.5	0-1.5
最小良浆压力 Mini Accept Pressure (MPa)	0.1	0.1	0.1	0.1	0.1	0.1
最大操作温度 Max Tempt of Operating (°C)	80	80	80	80	80	80

TMZC系列螺旋重质除渣器

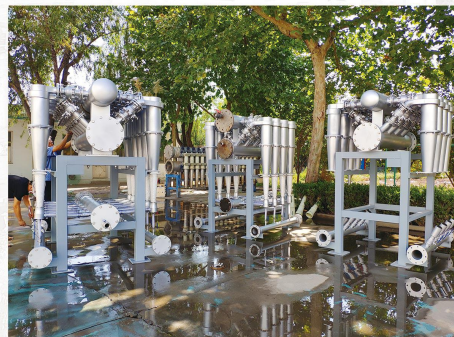


产品概述

TMZC 除渣器是在第一代产品的使用基础上，根据国内外用户的意见反馈，专为解决纸厂的除渣难题而设计的专利产品。该产品可根据用户需要调整结构，使其分别达到单独分离重杂质和轻、重杂质一起分离的目的，从而使用户的一次性投资额大大降低。该产品可分离的重杂质有砂石、铁屑、涂料及其他重质混合物。轻杂质有塑料片、泡沫、气体、油墨、粉尘等。底部的反冲水装置使除渣器可以在较高浓度下运行，降低了投资成本。

TMZC Series Helix Heavy Weight Cleaner

TMZC centricleaner is a patented product, which is designed by Tianli Machinery to solve impurity removal difficulties for paper mills based on the first generation product and the feedback from abroad and domestic customers. The configuration of this product is adjustable, according to user requirement, to separate heavy impurity solely or separate light and heavy impurity jointly, reducing user resources investment consequently. It is capable of separating heavy reject such as gravel, scrap iron, dope and other heavy mixtures, as well as light rejects such as plastic piece, bubble, air, printing ink, powder and etc. The flush water device installed at the bottom can make the centricleaner operate in the higher density pulp, thus reduce the investment.



主要技术参数 Main Technical Parameters

除渣器型号 Specification	TMZC-500	TMZC-600	TMZC-800	TMZC-1000	TMZC-1200	TMZC-1800
单支通过量 Feeding Flow (L/min)	500	600	800	1000	1200	1800
进浆压力 Feeding Pressure (MPa)	0.3-0.4	0.3-0.4	0.3-0.4	0.3-0.4	0.3-0.4	0.3-0.4
进出浆压力差 Pressure Drop (MPa)	0.13-0.15	0.13-0.15	0.13-0.15	0.13-0.15	0.13-0.15	0.13-0.15
进浆浓度 Feeding Density (%)	0-2.0	0-2.0	0-2.0	0-2.0	0-2.0	0-2.0
最小良浆压力 Mini Accept Pressure (MPa)	0.1	0.1	0.1	0.1	0.1	0.1
最大操作温度 Max Tempt of Operating (°C)	80	80	80	80	80	80

|| TZC系列节浆器

产品概述

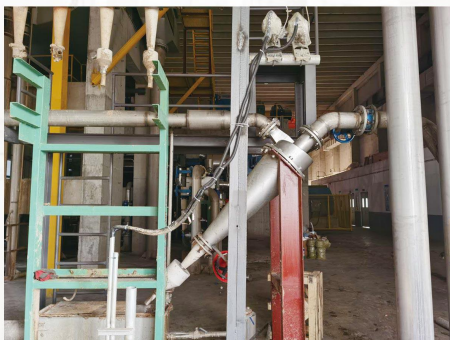
TZC系列除渣器是天利公司根据纸厂原料和纸种的变化,为满足客户提高除渣器效率,同时降低投资成本的要求,而最新研制的新型产品。该除渣器占地面积小,生产能力大,自动化可调式排渣操作简单,不易堵塞排渣口,净化效率高,纤维流失小。锥体耐磨,使用寿命长;没有传动,无需较多维护。有全自动和手动两种形式。

TZC Series Fiber Mizer

TZC series centricleaner is a new product designed by Tianli Machinery, which is based on the requirement of increasing the purification efficiency and decreasing the resource investment for customers, according to the variation of the raw material and the kind of end paper. It has the advantages of small covered floor area, large production capacity, simple automatic and adjustable reject discharge operation, free blockage in the reject discharge port, high cleaning efficiency and small fiber loss. The cone is very wear-resistant, so it has a long service life; there is no transmission within the centricleaners, so the maintenance cost can be reduced greatly. There are two forms for reject discharging: full automatic and manual form.

主要技术参数 Main Technical Parameters

除渣器型号 Specification	TZC-1500	TZC-2000	TZC-2500
单支通过量 Feeding Flow (L/min)	1500	2000	2500
进浆压力 Feeding Pressure (MPa)	0.1-0.25	0.1-0.25	0.1-0.25
进出浆压力差 Pressure Drop (MPa)	0.05-0.15	0.05-0.15	0.05-0.15
进浆浓度 Feeding Density (%)	0-1.5	0-1.5	0-1.5
最小良浆压力 Mini Accept Pressure (MPa)	0.01-0.05	0.01-0.05	0.01-0.05
冲洗水压力 Flush Water Pressure (MPa)	0.05 MPa ≥ 进浆压力 0.05 MPa ≥ Feeding pressure		



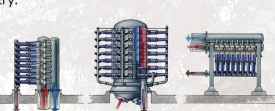
|| TCC-350高效重质除渣器

TCC-350高效高质量双壁除渣器在制浆造纸工业中仍有广泛的应用。

TCC-350 Efficient High Weight Centricleaner featured with the Twin-Wall design, still have wide applications in the pulp and paper industry.

主要优点

- 除渣效率高。
- 双壁设计。
- 锥体和头部结构范围广。
- 压力低能耗低。
- 整个压力系统使得高温下操作安全，并减少空气夹包。
- 水平或立式排列使安装灵活。
- 每台除渣器都有视镜以便观察。
- 出渣口塞子易拆除，密闭式设计用于清洁堵塞的除渣器以减少压力泄漏。



TCC-350 Efficient Heavy Weight Cleaner

- High cleaning efficiency
- Twin-Wall design
- Wide range of cone and head configurations
- Low pressure drop, resulting in low energy consumption
- Totally pressurized system that facilitates safe operation at high temperatures and eliminates air entrainment
- Flexible installation with horizontal and vertical configuration (a highly compact module system)
- Separate sight glasses for easy inspection
- Easy to remove, pressure-tight redesigned clean-out plug for clearing clogged cleaners. Virtually eliminates pressure leakage.



主要技术参数		Main Technical Parameters	
单支通过量	350 L/min	Pulp Inlet Capacity	350 L/min
进浆压力	0.25-0.35 MPa	Pulp Inlet Pressure	0.25-0.35 MPa
进浆浓度	0.3-1.2%	Pulp Inlet Concentration	0.3-1.2%
体积排渣率	6-8% (相对进浆流量)	Volume Reject Removal Rate	6-8% (relative to feeding flow)

|| TCC-270分流式除渣器



产品概述

TCC-270分流式除渣器形成了一个有效轻杂质净化系统，用于去除轻质污染物，如塑料、热熔胶、蜡和发泡胶。TCC-270分流式除渣器设计位置是在TCC重质除渣器系统之前或之后。事实上，这两种设计有相当多的共同部分。TCC-270分流式除渣器系统是一种纸浆增稠器，增稠系数在1.0-2.5倍之间。增稠系数越高，去除轻质废品的效率就越高。增稠效果可以最大限度地减少对其它脱水设备的需求。

TCC-270 Shunt Type Cleaner

TCC-270 Shunting Centricleaners form an efficient system for removing light-weight contaminants, such as plastics, hotmelts, waxes and styrofoams. The system also removes shives and pitch formations efficiently. It is designed to be located either before or after the TCC heavy reject centricleaner system. In fact, the two designs have a considerable number of common parts. TCC-270 Shunting Centricleaners system is a pulp thickener, with a thickening factor between 1.0-2.5 times. The higher the thickening factor, the higher the efficiency with which lightweight rejects can be removed. The thickening effect can minimize the need for other dewatering equipment.

主要技术参数		Main Technical Parameters	
单支通过量	270 L/min	Pulp Inlet Capacity	270 L/min
进浆压力	0.25-0.35 MPa	Pulp Inlet Pressure	0.25-0.35 MPa
进浆浓度	0.3-1.2%	Pulp Inlet Concentration	0.3-1.2%
体积排渣率	6-8% (相对进浆流量)	Volume Reject Removal Rate	6-8% (relative to feeding flow)

|| TAB-252重质除渣器

|| TKS-110重质除渣器

产品概述

处理淀粉，选用TAB-252锥形除渣器，TAB-252是一种高效而经济的小直径除渣器，单只额定通过量252L/min，利用离心原理去淀粉中细小重杂质，获取高效率的淀粉净化。

该产品具有较小的直径和较长的除渣器锥体，能产生较高的离心力，较小的锥角使外涡旋向内涡旋的流动有较好的逐步过渡，与此同时减少了除渣器内的拖力，产生较高的净化效果。对于小尺寸的杂质及碎片有较高的去除效率。特别设计用于除去淀粉中的沙砾、细小杂质，该除渣器能净化表面施胶液，延长施胶压辊及施胶计量棒的使用寿命，提高振动筛的使用效果。

TAB-252 Heavy Weight Cleaner

TAB-252 is an efficient and economical small-diameter centricleaner, with a single rated throughput of 252L/min. The small and heavy impurities in starch are removed by centrifugal principle to obtain high efficiency of starch purification.

The product has a smaller diameter and a longer cone of the centricleaner, which can produce a higher centrifugal force. A smaller cone angle makes the flow of the external vortex to the internal vortex have a better gradual transition. At the same time, it reduces the drag force in the centricleaner, produces a higher purification effect, and has a higher removal efficiency for small size impurities and fragments. It is specially designed to remove the sand and small impurities in starch. The centricleaner can purify the surface sizing liquid, extend the service life of sizing press roller and sizing metering rod, and improve the service effect of vibrating screen.



产品概述

TKS-110 高效重质除渣器是一种高效而经济的小直径除渣器，该产品具有小的直径和延长的除渣器主体以及底部增加的冲洗水装置，能产生更高的净化效果，尤其在废纸脱墨中对油墨的去除能达到更好的效果。主要特点在进行多级精细净化时，TKS-110 型低浓除渣器可通过底部冲洗水装置控制废渣的浓度。可以有效的去除油墨以及细小尘埃。系统采用了最少量的分段及除渣器数量使整体外形更紧凑。减少了占地面积，以较低的投资提高了生产能力。平滑的内表面不会产生湍流（如振荡和漩涡），因此能在 2.0% 的最大浓度下保持最高的分离效率，减少系统动力消耗。

TKS-110 Heavy Weight Cleaner

TKS-110 high efficiency high weight centricleaner is a kind of high efficiency and economical item with small diameter. It has a small diameter and extended main body as well as a flushing water device added at the bottom, which can produce higher cleaning effect, especially in deinking process. The main feature is that TKS-110 type low density centricleaner can control the density of rejects through bottom washing water device during multistage fine purification, which can effectively remove ink and tiny dust. The system adopts the least number of stages and centricleaners to make the overall shape more compact. It reduces the covered floor area and improves the production capacity with lower investment. The smooth inner surface does not produce turbulence (such as oscillation and vortex), so it can maintain the highest separation and purification efficiency at the maximum density of 2.0%, which can reduce the system power consumption greatly.



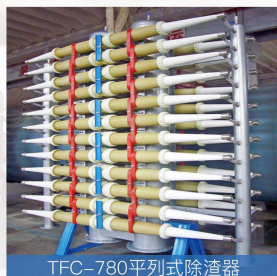
主要技术参数		Main Technical Parameters	
标称进浆流量	252 L/min	Nominal Feeding Flow	252 L/min
标称进浆压力	0.25~0.3 MPa	Nominal Feeding Pressure	0.25~0.3 MPa
标称进出浆压力差	0.12~0.18 MPa	Nominal Pressure Drop	0.12~0.18 MPa
体积排渣率	8~10% (相对进浆流量)	Volume Reject Removal Rate	8~10% (relative to feeding flow)
固含量浓度	10~14%	Solid Content Density	10~14%

主要技术参数		Main Technical Parameters	
单支通过量	110 L/min	Nominal Feeding flow	110 L/min
额定进出浆压差	0.15 MPa	Pressure Drop	0.15 MPa
进浆浓度	≤ 2.0%	Feeding Density	≤ 2.0%
冲洗水量	7~15 L/min	Flushing Water Flow Rate	7~15 L/min

TFC系列除渣器



TFC-350竖列式除渣器



TFC-780平行式除渣器

产品概述

TFC系列除渣器是在广泛吸收国内外先进技术的基础上开发研制而成的新型高效除渣器，可广泛用于各种纸浆中对细小重质残渣的清理与分离，是多种制浆设备配套和技术改造中不可缺少的首选除渣装置之一，特别适用于纸机流送系统。

TFC-350 Vertical Cleaner / TFC-780 Horizontal Cleaner

TFC centricleaner is a new type of high efficiency item, which is developed on the basis of widely absorbing the advanced technology domestic and abroad. It can be widely used for cleaning and separating the small and heavy residues in various pulps. It is one of the indispensable and first-choice centricleaner in various pulping equipment for matching and technical modification, especially suitable for approach flow system.

主要技术参数 Main Technical Parameters

除渣器型号 Specification	TFC-350	TFC-780
单支通过量 Feeding Flow (L/min)	350	780
进浆压力 Feeding Pressure (MPa)	0.25-0.35	0.25-0.35
进浆浓度 Feeding Density (%)	0-1.5	0-1.5
良浆压力 Accepts Pressure (MPa)	0.04-0.06	0.04-0.06
单段体积排渣率 (相对进浆流量) Volume Reject Removal Rate (relative to feeding flow)	8-12%	8-12%
最大操作温度 Max Tempt of Operating (°C)	≤60	≤60

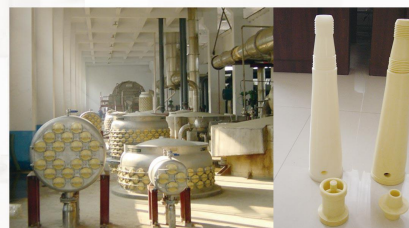
TSL-260双流式除渣器

产品概述

TSL系列双流式除渣器是由天利机械针对不断变化的国内市场对高档纸张的洁净度要求越来越高的趋势，研制开发的新型高品质除渣器，可有效去除草浆中的黄尘、草节、木浆中的树皮、树脂以及废纸浆中的粉尘、油墨点、细小纤维束等杂质。该产品有多种规格可供用户选择，其可靠的自动化操作系统，可显著降低运行成本和保养费用。

TSL-260 Double Flow Cleaner

TSL series double flow centricleaner is a new type of high-quality centricleaner developed by Tianli Machinery aiming at the ever-changing domestic market, which has higher and higher requirements on the cleanliness of high-grade paper. It can effectively remove the yellow dust, grass knots in straw pulp, bark and resin in wood pulp, dust, ink spots, small fiber bundles and other impurities in waste paper pulp. The product has a variety of specifications for users to choose from. Its reliable automatic operating system can significantly reduce operating costs and maintenance costs.



主要技术参数

工作压力范围	0.1-0.15MPa
进浆浓度	0.4-1.0%

Main Technical Parameters

Working Pressure Scope	0.1-0.15MPa
Pulp Inlet Concentration	0.4-1.0%

技术参数 Technical Data

型号Type	TSL80-C	TSL80-D	H
(t/d)	(L/min)	(L/min)	(mm)
TSL80-600	15,850	20,600	3090
TSL80-450	11,890	15,450	2868
TSL80-400	10,570	13,740	2630
TSL80-350	9,250	10,300	2170
TSL80-250	6,600	8,590	1840
TSL80-200	5,280	6,870	1610
TSL80-175	4,620	6,010	1495
TSL80-150	3,960	5,150	1380
TSL80-125	3,300	3,290	1265
TSL80-100	2,640	3,430	1150
TSL80-75	1,980	2,580	1035
TSL80-50	1,320	1,720	920

TNC-100逆向轻质除渣器

产品概述

TNC-100型逆向轻质除渣器采用最新的反向净化技术，可清除蜡、泡沫塑料、热熔胶、乳胶、油脂等低密度材料中的轻量碎屑。TNC-100反向轻质除渣器在小直径内会有较长的停留时间，可以最大限度地分离接近纤维自身比重的非常小的污染物。进料浓度与传统轻质净化系统相同。

TNC-100 Reverse Light Weight Cleaner

TNC-100 reverse light-weight centricleaner adopts the latest reverse purification technology to remove lightweight debris from all types of pulp and paper stock, such as wax, styrofoam, hot melt glues, latex, grease, and other low-density materials. It is featured longer stay time within a small diameter to maximize the separation of very small contaminants, which is close to the specific gravity of the fiber itself. Feeding density is the same as in conventional lightweight cleaning system.



主要技术参数		Main Technical Data	
单支通过量	100~110 L/min	Feeding Flow	100~110 L/min
进浆浓度	0.6~1.0%	Feeding Density	0.6~1.0%
良浆浓度	0.8~0.9%	Accepts Density	0.8~0.9%
进浆压力	0.48~0.52 MPa	Feeding Pressure	0.48~0.52 MPa
良浆压力	0.06~0.10 MPa	Accepts Pressure	0.06~0.10 MPa
体积排渣率	40~45% (相对进浆流量)	Volume Reject Removal Rate	40~45% (relative to feeding flow)
浆料温度要求	≤ 60℃	Required Pulp Temperature	≤ 60℃

TXC-150三代轻质除渣器



产品概述

该产品利用涡流离心原理，能有效地去除废纸浆料中蜡、聚苯乙烯泡沫、热熔粘和物等各种轻质杂质，TXC 轻质除渣器是目前解决废纸制浆生产过程中轻质杂质干扰问题的一种经济有效的新型设备。

TXC-150 Third Generation Light Weight Cleaner

The product is based on the principle of vortex centrifugation, which can remove various kinds of light impurities effectively, such as wax, polystyrene foam, thermal soluble adhesive and so on. The TXC light weight cleaner is an economical and effective new equipment to solve the problem of light rejects interference in the process of waste paper pulping system.

主要技术参数		Main Technical Data	
单支通过量	150 L/min	Feeding flow	150 L/min
进浆浓度	0.4~0.9%	Feeding density	0.4~0.9%
良浆浓度	0.2~0.36 MPa	Accepts density	0.2~0.36 MPa
进浆压力	0.06~0.29 MPa	Feeding pressure	0.06~0.29 MPa
良浆压力	>0.07 MPa	Accepts pressure	>0.07 MPa
体积排渣率	8~12% (相对进浆流量)	Volume reject removal rate	8~12% (relative to feeding flow)
浆料温度要求	≤ 60℃	Required pulp temperature	≤ 60℃

TIANLI MACHINERY

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肇庆中盛纸业股份有限公司
广东蕉岭纸业股份有限公司
广东鼎丰纸业股份有限公司
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河南宏腾纸业股份有限公司
河南中锋纸业股份有限公司
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武汉金凤凰纸业股份有限公司

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湖北秦楚纸业股份有限公司
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江西三禾纸业股份有限公司
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四川金田纸业股份有限公司
四川什邡市仁亮纸制品厂
眉山市丰华纸业股份有限公司
云南建水春秋纸业股份有限公司
云南宜良荣和纸业股份有限公司
云南德宏州凤祥纸业股份有限公司
云南华宁县裕丰纸业股份有限公司
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云南禄丰永兴纸业
云南闻海纸业股份有限公司
广西金桂纸业股份有限公司
云南易门科发纸业股份有限公司
广西田东金荣纸业股份有限公司
广西林业荔浦纸业股份有限公司
广西农垦集团华成纸业股份有限公司
广西象州龙腾纸业股份有限公司
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广西金桂纸业股份有限公司
广西劲达纸业股份有限公司
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新疆白蜡纤维有限公司

新疆远大纸业股份有限公司
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