

川泰机械螺旋压榨机技术参数

Technical Parameters of Chuantai Machinery Screw Press

一、设备介绍

1. Equipment introduction

螺旋压榨机是一种利用物理挤压方式进行脱水的设备，该设备由驱动系统、进料箱、螺旋绞龙、筛网、气动阻料装置、集水槽、机架等部分构成，物料从进料箱进入设备，在螺旋绞龙的输送下受到逐级递进压力挤压，多余水分经过筛网由出液口排出，去水分物料在螺旋绞龙的继续输送下，顶开阻料装置由出料口排出设备。我公司所生产螺旋压榨机经过数百次精确理论推导计算和实验检验，总结众多用户在多年使用过程中的真实效果反馈，全面升级为一系列成熟设备，对客户不同待脱水物料精确分析，采用不同技术参数，真正做到低能耗、高产出、低水分，为物料进行二次循环利用节省大量加工成本。

The screw press is a kind of equipment that uses physical extrusion to dewater. The material box enters the equipment and is squeezed by the progressive pressure under the conveying of the screw auger. The excess water is discharged from the liquid outlet through the screen. Under the continuous conveying of the screw auger, the top-opening resistance material device is discharged from the liquid outlet. The discharge port discharges the equipment. The screw press produced by our company has undergone hundreds of accurate theoretical derivation calculations and experimental tests, summed up the real effect feedback of many users in the course of many years of use, and has been fully upgraded to a series

of mature equipment. Different technical parameters can truly achieve low energy consumption, high output, and low moisture, saving a lot of processing costs for the secondary recycling of materials.

二、工作原理

2. Working principle

螺旋压榨脱水机的脱水过程分两个阶段。第一阶段利用螺旋绞龙脱水，螺旋绞龙分传输段、压缩段和出料段三段，传输段保证物料平稳进入设备，脱水段螺旋叶片螺距和螺旋内径逐级变小，从而传输空间逐级变小，由于传输空间的逐级变小对物料形成逐级增大的压力，强制物料体积缩小压榨出水分；第二阶段利用阻料装置脱水，当物料进入螺旋绞龙出料段，螺旋绞龙会对物料施加轴向推力将其推出出料口，同时由气压装置加压的阻料装置会对即将被推出的物料施加反向作用力，从而形成挤压力对物料进行二阶段脱水。

The dehydration process of the screw press dehydrator is divided into two stages. In the first stage, the screw auger is used for dehydration. The screw auger is divided into three sections: the transmission section, the compression section and the discharge section. The transmission section ensures that the material enters the equipment smoothly. The stage becomes smaller, due to the gradual reduction of the transmission space, the pressure is gradually increased on the material, forcing the volume of the material to shrink to squeeze out the water; the second stage uses the material blocking device to dehydrate, when the material enters the spiral auger discharge section, the spiral The auger will

apply axial thrust to the material to push it out of the discharge port, and at the same time, the material blocking device pressurized by the air pressure device will exert a reverse force on the material to be pushed out, thereby forming a squeezing force for two-stage dehydration of the material.

三、设备特点

3. Equipment Features

1、运行成本低

1. Low operating cost

螺旋压榨机采用物理挤压脱水原理，脱水过程中无需额外提供热源，相比同类烘干设备耗能极低。

The screw press adopts the principle of physical extrusion dehydration, no additional heat source is required during the dehydration process, and the energy consumption is extremely low compared with similar drying equipment.

2、持续工作处理量大

2. Large amount of continuous work processing

螺旋绞龙的参数经过力学计算分析，利用特殊工艺来增大轴向推力，彻底解决打滑、架桥、返料、报轴等原因导致无法持续工作的问题，单位时间内处理量大大增加。

The parameters of the screw auger are analyzed by mechanical calculation, and the axial thrust is increased by using a special

process.

3、出渣水分低

3. Low slag moisture

由于待脱水物料种类繁多，不同物料的含水率、分子水比例、粘度、纤维含量、吸水性、韧性、有机物或无机物等等数据各有不同，我公司工程师会根据每一位客户提供的待脱水的物料进行分析，计算出适用于该物料的参数，制作出适合的设备，将物理压榨作用利用到极致，降低挤出物料含水率。

Due to the wide variety of materials to be dehydrated, the moisture content, molecular water ratio, viscosity, fiber content, water absorption, toughness, organic or inorganic materials of different materials are different. The dehydrated material is analyzed, the parameters suitable for the material are calculated, and suitable equipment is made to make the best use of the physical pressing effect and reduce the moisture content of the extruded material.

4、耐磨耐腐蚀

4. Wear and corrosion resistance

螺旋压榨机关键部位喷涂耐磨层，螺旋绞龙叶片表面加焊一层合金刀头，增加耐磨性；核心部件采用 304 不锈钢制作，耐酸耐碱耐腐蚀，从而大大延长设备使用寿命。

The key parts of the screw press are sprayed with a wear-resistant layer, and a layer of alloy cutter head is welded on the surface of the spiral auger blade to increase the wear resistance; the core components

are made of 304 stainless steel, which is resistant to acid, alkali and corrosion, thus greatly extending the service life of the equipment.

5、无需添加药剂

5. No need to add drugs

可根据待脱水物料性质选择 0.3mm-1.0mm 间隙的筛网，脱水过程无需添加絮凝剂等药剂，故无需额外增加成本，同时不会因加入化学成分影响物料二次利用。

Screens with a gap of 0.3mm-1.0mm can be selected according to the properties of the materials to be dehydrated. There is no need to add flocculants and other agents during the dehydration process, so there is no additional cost, and the addition of chemical components will not affect the secondary utilization of materials.

四、技术参数

4. Technical parameters

| 型号 Model | CTYZ-200 | CTYZ-300 | CTYZ-400 | CTYZ-600 |
|--------------------|-----------------|-----------------|-----------------|------------------|
| 电源 Power supply | 380V | 380V | 380V | 380V |
| 功率 Power | 5.5kw | 15kw | 18.5kw | 22kw |
| 外形尺寸 Dimensions | 2800*900*1400mm | 3500*700*1200mm | 4500*900*1980mm | 5400*1300*1900mm |
| 重量 Weight | 780kg | 1500kg | 2240kg | 7500kg |
| 处理量 Throughput | 3 t/h | 5 t/h | 10 t/h | 15-20t/h |

| | | | | |
|----------------------------------|---|-------|-------|-------|
| 滤网内径 Filter inner diameter | 200mm | 300mm | 400mm | 600mm |
| 材质 Material | 接触物料部分304不锈钢(标配) Contact material part 304 stainless steel (standard) | | | |
| | 整机304不锈钢(高配) The whole machine is made of 304 stainless steel (high configuration) | | | |

五、应用范围

5. Scope of application

| | |
|---|--|
| <p>水果蔬菜榨汁 Fruit and Vegetable juice</p> | <p>山楂、樱桃、石榴、荔枝、青果、木瓜、白果、红毛丹、榴 莲、金橘、水蜜桃、李子、芒果、温州蜜柑、红桔、南丰蜜 桔、槟榔、西瓜、甜瓜、梨、柑、桔香蕉、桑椹、柿子火 龙果 杨桃、山竹、草莓、枇杷、圣女果、奇异果、猕猴桃、 甜瓜、柚子、葡萄、苹果、杏、菠萝、龙眼、甘蔗、乌梅、 百香果、柠檬、石榴等</p> <p>Hawthorn, Cherry, Pomegranate, Lychee, Green Fruit, Papaya, Ginkgo, Rambutan, Durian, Kumquat, Peach, Plum, Mango, Wenzhou Tangerine, Tangerine, Nanfeng Tangerine, Betel Nut, Watermelon, Melon, Pear, Tangerine , orange banana, mulberry, persimmon, dragon fruit, star fruit, mangosteen, strawberry, loquat, fruit, kiwi, kiwi, melon, grapefruit, grape, apple, apricot, pineapple, longan, sugar cane, ebony, passion fruit, lemon, pomegranate, etc.</p> |
| <p>中药提取物脱水 Dehydration of Chinese herbal extracts</p> | <p>丁香、马齿笕、刺五加、冬凌草、栀子、槐花、白芨、人参、 苦参、五味子、决明子、紫锥菊、青蒿素、黄芩、板蓝根、 花青素、双黄连、紫花地丁、葡萄籽、玉竹、怀山药、党参、 灵芝、铃兰草、金银花、柴胡、石榴皮、白头翁、金丝桃、 穿心莲、大青叶、板蓝根、连翘、双黄连</p> |

| | |
|--|---|
| | <p>Cloves, purslane, Acanthopanax senticosus, Rubescensica, Gardenia, Sophora japonica, Bletilla striata, Ginseng, Sophora Radix, Schisandra, Cassia, Echinacea, Artemisinin, Scutellaria, Banlangen, Anthocyanin, Shuanghuanglian, Zihuadi Ding, Grape Seed, Polygonatum, Huai Yam, Codonopsis, Ganoderma Lucidum, Lily of the Valley, Honeysuckle, Bupleurum, Pomegranate Bark, Pulsatilla, Hypericum, Andrographis paniculata, Daqingye, Banlangen, Forsythia, Shuanghuanglian</p> |
| <p>纸浆脱水 Pulp dewatering</p> | <p>木浆、草浆、麻浆、苇浆、蔗浆、竹浆、破布浆等 Wood pulp, straw pulp, hemp pulp, reed pulp, sugarcane pulp, bamboo pulp, rag pulp, etc.</p> |
| <p>有机质脱水 Dehydration of organic matter</p> | <p>酒糟、醋糟、蘑菇渣、木薯渣、胡萝卜、洋葱、冬瓜、甜菜、水葫芦、甘蔗渣、鸡毛、玉米皮、小麦秸秆、鱼糜、大豆蛋白等 Distiller's grains, vinegar grains, mushroom residue, cassava residue, carrot, onion, wax gourd, beet, water hyacinth, bagasse, chicken feather, corn husk, wheat straw, surimi, soybean protein, etc.</p> |
| <p>餐厨垃圾脱水</p> | <p>餐厨垃圾</p> |

| | |
|---------------------------|---|
| Food waste dehydration | kitchen waste |
| 其它 Other | 尿不湿下脚料、纤维素、橡胶、医疗废物等 Diaper waste, cellulose, rubber, medical waste, etc. |

简易判断方法：用手抓住带脱水物料，用力挤压，若手心留下渣，指缝流出水，则适用于本设备，若含水物料从指缝中滑出，则不适用于本设备。

建议客户在购买本设备前将物料邮寄到本公司，使用后可更准确选择型号。

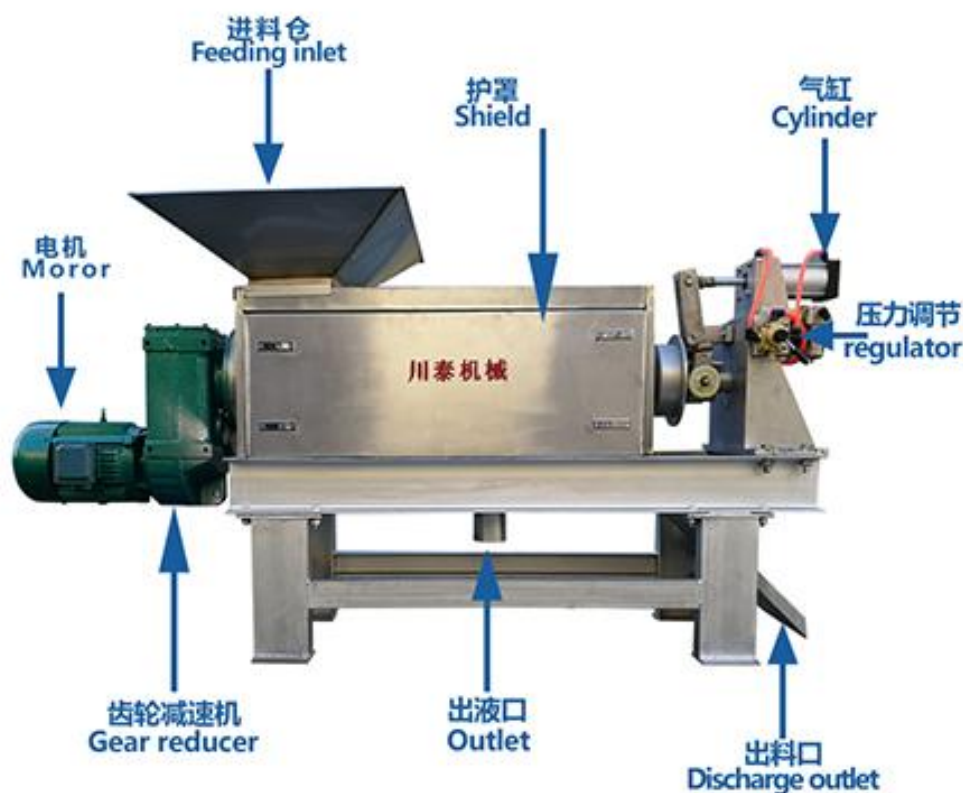
Simple judgment method: grab the dehydrated material by hand and squeeze it hard. If there is slag left in the palm of the hand and water flows out of the finger seam, it is suitable for this equipment. If the water-containing material slips out of the finger seam, it is not suitable for this equipment.

It is recommended that customers mail the materials to our company before purchasing the equipment, so that the model can be more accurately selected after use.

六、结构图

6. Structure diagram

结构图 Structure diagram



七、设计依据

7. Design basis

《钢制对焊无缝管件》GB/T 12459-2017

《Steel butt welded seamless pipe fittings》GB/T 12459-2017

《输送流体用无缝钢管》GB/T 8163-2018

《Seamless steel pipes for conveying fluids》GB/T 8163-2018

《锻钢制螺纹管件》GB/T 14626 — 93

《Forged Steel Threaded Fittings》GB/T 14626 — 93

《钢结构设计标准》GB50017-2017

《Steel Structure Design Standards》GB50017-2017

《钢结构工程施工质量验收标准》 GB50205-2020

《Acceptance standard for construction quality of steel structure engineering》 GB50205-2020

《现场设备、工业管道焊接工程施工规范》 GB50236-2011

《Construction specification for field equipment and industrial pipeline welding engineering》 GB50236-2011

《低压配电设计规范》 GB50054—2011

《Low-voltage power distribution design code》 GB50054—2011

《自动化仪表选型设计规范》 HG/T 20507-2014

《Design specification for automatic instrument selection》 HG/T 20507-2014

《仪表配管配线设计规范》 HG/T20512-2014

《 Design specification for instrument piping and wiring 》
HG/T20512-2014

《仪表供电设计规范》 HG/T20509-2014

《Instrument Power Supply Design Specification》 HG/T20509-2014

《信号报警及联锁系统设计规范》 HG/T20511-2014

《Design specification for signal alarm and interlock system》
HG/T20511-2014

《仪表接地系统设计规范替》 HG/T 20513-2014

《Instrument Grounding System Design Specification Replacement》
HG/T 20513-2014

八、设备展示

8. Equipment display



CT200 型螺旋压榨脱水机

CT200 screw press dehydrator



CT300 型螺旋压榨脱水机

CT300 screw press dehydrator



CT400 型螺旋压榨脱水机

CT400 screw press dehydrator



CT600 型螺旋压榨机

CT600 screw press

九、公司其他设备

9. Other equipment of the company



双轴撕碎机



固液分离机



油水分离器



尾菜脱水减量一体机

Double Shaft Shredder

Solid-liquid separator

Oil-water separator

Vegetable dehydration and weight reduction machine

十 公司介绍

10. Company Introduction

1、公司简介

1. Company Profile

潍坊川泰机械有限公司成立于 2011 年，是一家致力于环境污染治理产业的企业，专业从事有机废弃物（餐厨和厨余、污泥、畜禽粪污、中药等）的全套处理工艺，包括规划、核心设备研发、设计、工程建设 EPC 总包和运营维保，同时主要生产设备有螺旋压榨脱水机、固液分离机、双轴撕碎机、叠螺脱水机、

气浮机、油水分离器、纯水处理、有机肥生产设备等等。

Weifang Chuantai Machinery Co., Ltd. was established in 2011. It is an enterprise dedicated to the environmental pollution control industry, specializing in the complete treatment process of organic waste (kitchen and kitchen waste, sludge, livestock and poultry manure, traditional Chinese medicine, etc.). Including planning, core equipment research and development, design, engineering construction EPC general contracting and operation and maintenance, and the main production equipment includes screw press dehydrator, solid-liquid separator, double-shaft shredder, screw dehydrator, air flotation machine, oil and water Separator, pure water treatment, organic fertilizer production equipment, etc.

川泰机械通过了 ISO9001 质量管理体系认证、ISO14001 环境管理体系认证、OHSAS18001 职业健康安全管理体系认证，拥有国家注册商标证书，是国家畜禽废弃物资源化利用联盟会员单位，山东农牧循环产业联盟副会长单位，国家信用等级评定 AAA 级企业，产品拥有潍坊市产品质量检验所检验合格报告，潍坊市爱心单位。川泰机械欢迎各级领导和专家莅临指导，在国家大力推广垃圾分类政策的背景下，川泰机械愿与各界同仁竭诚合作，为垃圾分类政策提供优良的方案和优质的设备。

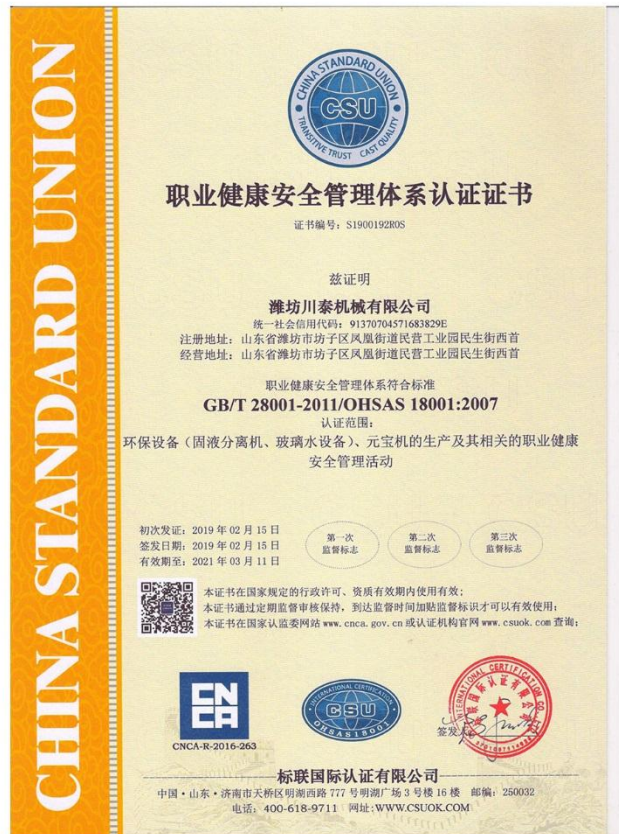
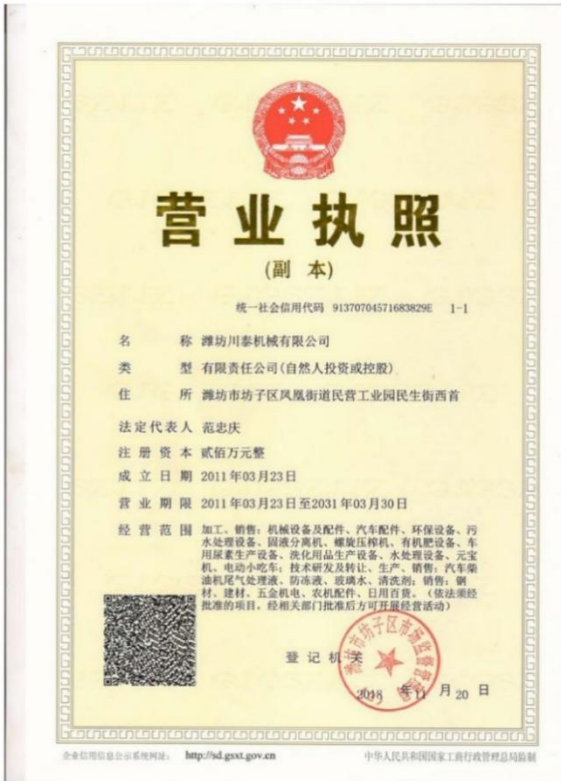
Chuantai Machinery has passed ISO9001 quality management system certification, ISO14001 environmental management system certification, OHSAS18001 occupational health and safety management system

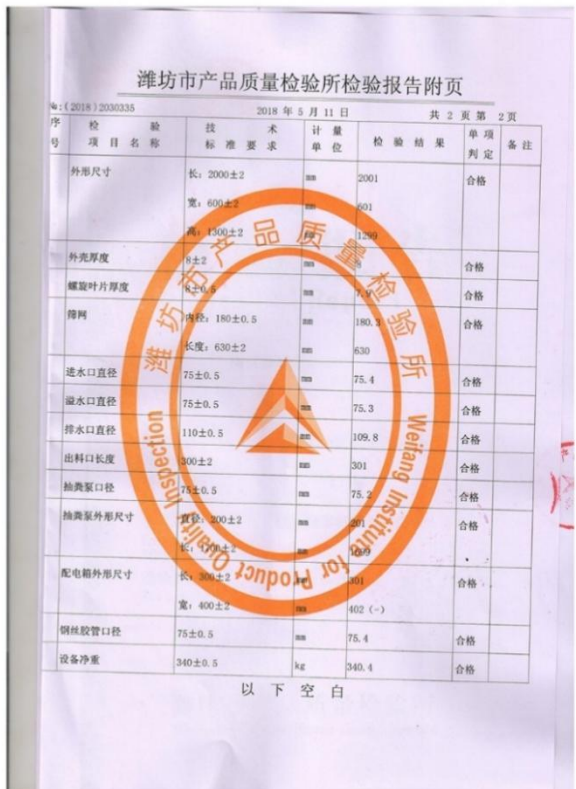
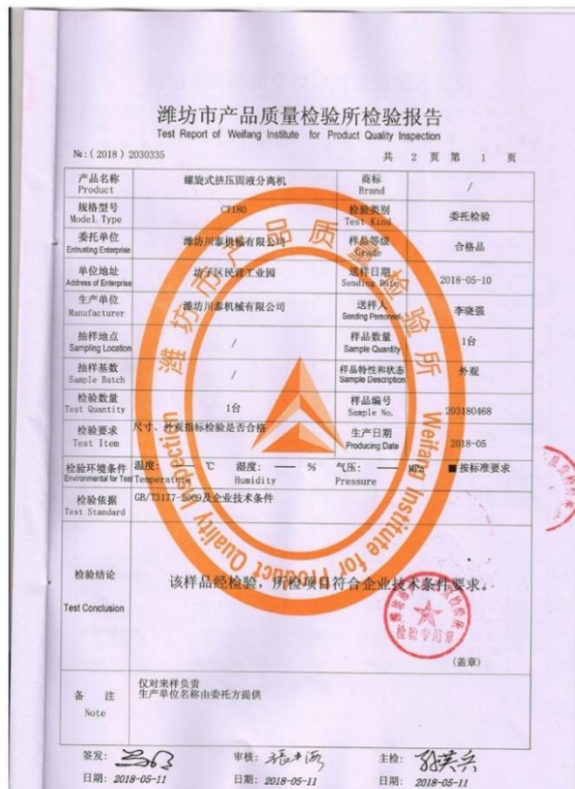
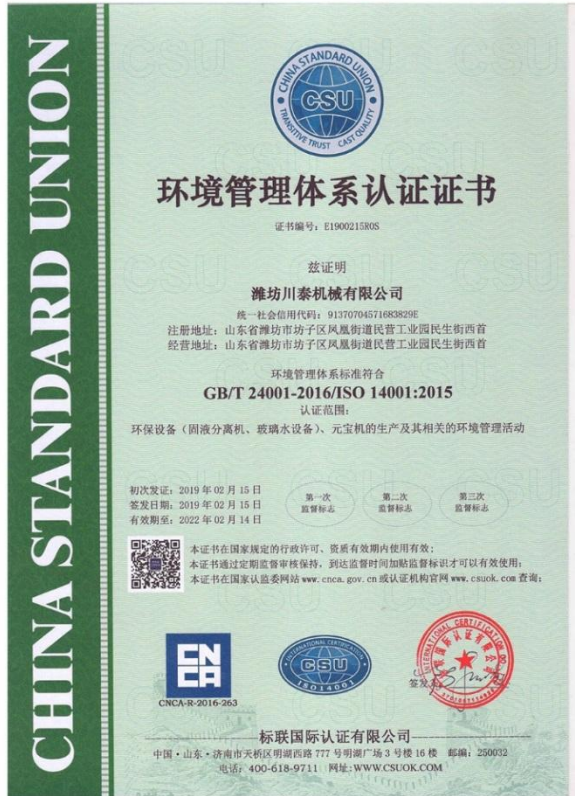
certification, and has a national registered trademark certificate. The vice chairman unit, the national credit rating AAA-level enterprise, the product has the inspection report of Weifang City Product Quality Inspection Institute, and the Weifang City Love Unit. Chuantai Machinery welcomes leaders and experts at all levels to visit and guide. Under the background of vigorously promoting the garbage classification policy, Chuantai Machinery is willing to cooperate wholeheartedly with colleagues from all walks of life to provide excellent solutions and high-quality equipment for the garbage classification policy.

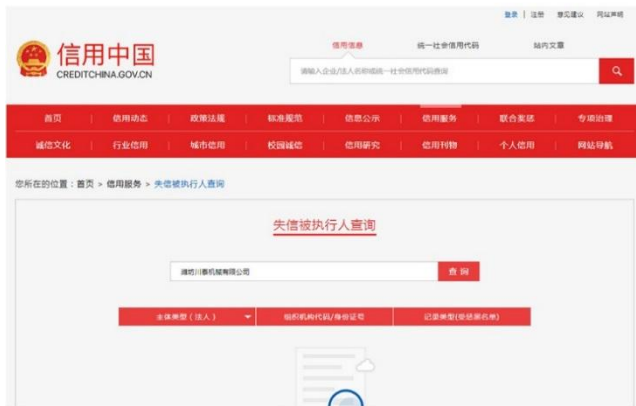
川泰机械欢迎各级领导和专家莅临指导，在国家大力推广垃圾分类政策的背景下，川泰机械愿与各界同仁竭诚合作，为垃圾分类政策提供优良的方案和优质的设备。

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2. Qualification and honor







11. Contact information

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