

引持环保气力输送

CITED ENVIRONMENTAL PNEUMATIC CONVEYING

一起携手 共进未来

山东引持环保设备有限公司

SHANDONG CITED ENVIRONMENTAL PROTECTION EQUIPMENT CO.,LTD.



引持

企业简介

COMPANY BRIEF INTRODUCTION

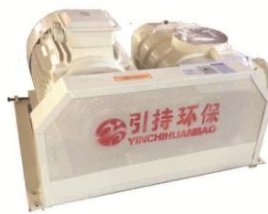
山东引持环保设备有限公司位于山东济南章丘，注册资本 1000 万，致力于为各大、中、小型企业提供整套气力输送系统解决方案。

引持环保拥有专业的技术设计开发团队与设备生产团队。主要生产：旋转供料器，罗茨风机、离心风机、布袋除尘器、卸料器，料仓，仓泵等气力输送相关设备！

引持环保在高速成长的过程中本着敬业、诚信、和谐、创新的企业理念，坚持只做精品，不制造不良品，不放行不良品。勇于直面行业痛点，坚守自己产品特点，不断推陈出新，优化产品。通过自己优良的设计、生产与服务，为诸多公司解决了气力输送方面的脱硫脱硝、除尘除灰等难题，获得了广大新老客户的一致好评！



旋转供料器
Rotate feeder



罗茨鼓风机
Roots blower



压力释放阀
Pressure release valve



小型布袋除尘器
Small cloth bag dust collector



加速室
Acceleration room



抽气室
Exhaust chamber

国内最大的吸压混合综合性能气力输送试中心

- 进行各种物料在不同浓度,不同输送速度下的输送试验
- 进行各种物料长距离单压输送试验研究
- 进行各种物料长距离单吸输送试验研究
- 吸压混合综合性能测试
- 进行沿程压力分布测定及分析计算
- 系统管道放大与缩小计算技术
- 进行单机产品供料能力、供料压力、漏气量测试与研究

The biggest positive and negative pressure colligation performance testing facility in domestic

- Pneumatic conveying experiment with different loading ratio,conveying velocity for various matemol
- Long distance pressure pneumatic conveying test
- Long distance vaccum pneumatic conveying test
- Positive and negative pressure colligation performance test
- Stress distributing mensurate and analysis calculation
- The pipe magnifying and shrunken calculation technology
- Testing and researching of the feeding ability, feeding pressure and air leakage for single machine

功能齐全的高,低压气力输送试验中心

- 输送试验现长度超过 1300 米
- DN80、DN125、DN200 等多种管径试验线
- 进行高压密相气力输送试验研究
- 脉冲气刀式气力输送试验与研究
- 长距离管道增压防堵技术测试
- 沿程压力分布测定
- 多种型式仓泵的组合气力输送试验研究
- 特殊物料的输送试验
- 自动控制技术开发系统研究

High and low pressure pneumatic conveying testing center

- Pipe line length exceed 1300 meters
- DN80, DN125, DN200 and mere pipe test line
- High pressure dense phase test research
- Pulse gas falchion test research
- Pressure increasing and anti pipe jam test for long distance pipe
- Pressure distribution mensurating
- Muti type transport colligation pneumatic conveying test research
- Conveying tast for special material
- Automatic control technic development and system technology research



性能测试试验装置

Performance testing facility

吸压混合气力输送试验台

Positive and negative pressure pneumatic conveying testing facility



气力输送试验中心局部

Local lab of pneumatic conveying



气力输送试验中心

Pneumatic conveying test center



气力输送是一种利用空气（或气体）流作为输送动力，在管道中输送散状固体物料的技术集成系统。

Pneumatic conveying means using air(or gas) as transportation power and convey dispersed solid material in the pipe

气力输送优点:

- 输送管道配置灵活，使工厂生产工艺流程更合理。
- 输送系统完全密闭，粉尘飞扬少，可实现环保要求。
- 运动零部件少，维修保养方便，易于实现自动化。
- 散料输送效率高，降低了包装和装卸运输费用。
- 能避免被输送物料的受潮，污损和混入其他杂物，保证了输送质量。
- 在输送过程中可同时实现多种工艺操作过程，如混合、粉随、分级、干燥、冷却、除尘等。
- 可将由数点集中的物料送往一 处或由一 处送往分散的数点，并实现远距离操作。
- 对于化学物质不稳定的物料，可以采用惰性气力输送。

Feature:

- Variable arrangement of the pipe makes the production craft process more reasonable
- The system is sealed and lead to few flying dust, it benefit for environment protection
- Few movement parts, convenient maintenance, automatic control can be realized easily
- High efficiency of transportation reduce the cost of packing,loading and unloading
- Make the matedal avoid being damped, polluted, damaged, and mixed with other material, the quality of conveying is assured
- Vadous operation process can be realized meanwhile for the conveying,such as mixture, crush, grade, dryness cooling, and dust collection
- Send the material from couple place to one place and from one place to couple place, realize far distance operation
- For the material with erratic chemical character, can adopt inertia gas conveying

可用气力输送的粉粒料品种繁多，每种物料的料性对气力输送装置的适合性和效率都有很大的影响。因此在选定输送装置前要先对物料进行性能测定。常见适合气力输送物料如下：

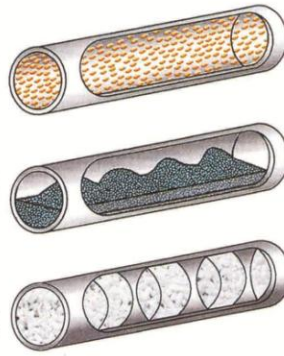
面粉	豆饼	调味粉	鱼粉	小麦	可可	盐	谷物	大豆	马铃薯粉	豆皮
干酵母	棉籽	纤维素	淀粉	粒糖	饲料	烟叶	滑石粉	白云石	葡萄糖粉	味精
石灰石	氧化镁	二氧化硅	钛白粉	高岭土	萤石粉	膨润土	粘土	铁矾土	钛矿粉	稻壳
白土	长石	洗涤剂粉	化肥	芒硝	尿素粒	氧化锌	消石灰	碳酸钠	水泥	石墨
硅胶	硝酸钠	氢氧化铝	氯酸钠	碳酸钠	碳酸氢钠	硼砂（酸）	石膏粉	锌粉	矿粉	硅铝球
	碳黑	氧化铁粉	HDPE	PTA	PET	ABS	SBS	PVA	PVC	EPS
煤粉	粉煤灰	尼龙切片	碳素	焦炭粒	砂光粉	铁丸	橡胶粒	木屑	生物酶	PPS
触媒	重钙	生石膏粉	玻璃纤维	赖氨酸	麸皮	铸造黏土	干细盐	蛋白粉	MOCA	CPE
胚芽	果渣	豆粕	明胶	刚玉	Z型硅胶	石灰粉	白石粉	BHT	皂粉	钴粉
硅酸膏	玉米芯粉	薄膜	玉米纤维	PVC改性剂	碱纤维素	氧化镁	氯化铝	草酸钴粉	氧化铝颗粒	PS
PP	石油焦	钢渣粉	PE	电煅煤	冶金焦					

The points available working-fault variety aggregates of performance each material conveying equipment for performance and efficiency has very big effect. Thereore in the selected device before/the performance measurement. Suitable for conveying material as common:

Flour	Bean cake	Season powder	Fishmeal	Wheat	Coca	Salt	Com	Soybean	Potato powder	hull
dry leavening	Cottonseed	Fibrin	Amylum	Granule	Fodder	Tobacco leaf	French chalk	Dolomite	Powdered glucose	Monosodium glutamate
Limestone	Magnesia	Aluminum dioxide	Titanium whitening	Kaolin	Flourite powder	Boric moist soil	Clay	Laterite	Limenite powder	Rice hull
White dust	Feldspar	Scour powder	Fertilize	Glauber's	Carbamide	Zinc oxide	Calcium hydroxide	Sodium carbonate	Cement	Graphite
Silica gel	Sodium nitrate	Hydroxid aluminium	Chlorate	Phosphate	Phosphatic	Borax	Land plaster	Zinc powder	Mine powder	Silicon aluminium ball
Nickel powder	Carbon black	Ferric	HDPE	PTA	PET	ABS	SBS	PVA	PVC	EPS
Coal powder	Flyash	Nylon slices	Carbon element	Coke granule	Cement	Lron pellet	Rubber granule	Sawdust	Biology enzyme	PPS
Accelerant	Heavy calcium	Land plaster	Fiberglass	Lusine	Bran	Found clay	Dry salt	Protein	MOCA	CPE
Germ	Fruit dreg	Soybean	Gelatin	Corundum	Z silica gel	Lime powder	White stone powder	BHT	Soap grain	Cobalt powder
Sour cream	Cotncob powder	Thin film	Com fibers	PVC modifier	Alkaline cellulose	Magnesium	Alumina	Lxalic acid cobalt powder	Aluminum particles	PS
PP	Petroleum coke	Slag powder	PE	Electrically calcined coal	Smelter coke					

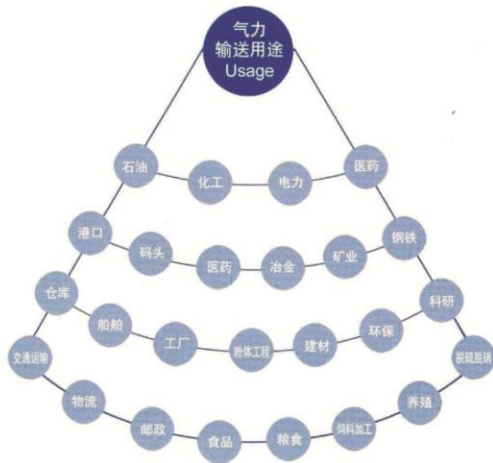
气力输送系统的三种输送方式

- A: 悬浮流输送
- 物料输送速度高于悬浮速度，物料在管道中成悬浮状态流动。浓度比小，此输送方式适合于低压稀相短距离输送。
- B: 集团流输送
- 物料输送速度约等于悬浮速度，物料在管道中成集团状态移动。浓度比适中，此输送方式适合于中压较长距离输送。
- C: 栓流输送
- 物料输送速度低于悬浮速度物料在管道中被脉冲气阀、气力、气压力切割成栓状，依靠料栓前后的空气静压差作为推动力前进。浓度比高，此输送方式适合于高压密相长距离低速输送。



Three conveying modes

- A: Suspend flow
- Material's conveying velocity is higher than the suspend velocity, the material become suspend state in the pipe, this way suit low pressure, this way suit dilute phase short distance.
- B: Group flow
- Material's conveying velocity equal to the suspend velocity, the material become group state, this way suit middle pressure longer distance.
- C: Bolt flow
- Material's conveying velocity is lower than the suspend velocity, the material is cut into bolt by pulse gas valve in the pipe, then go on depending on the air quiet pressure difference. It is suitable for high stress, dense phase, long distance, and low velocity

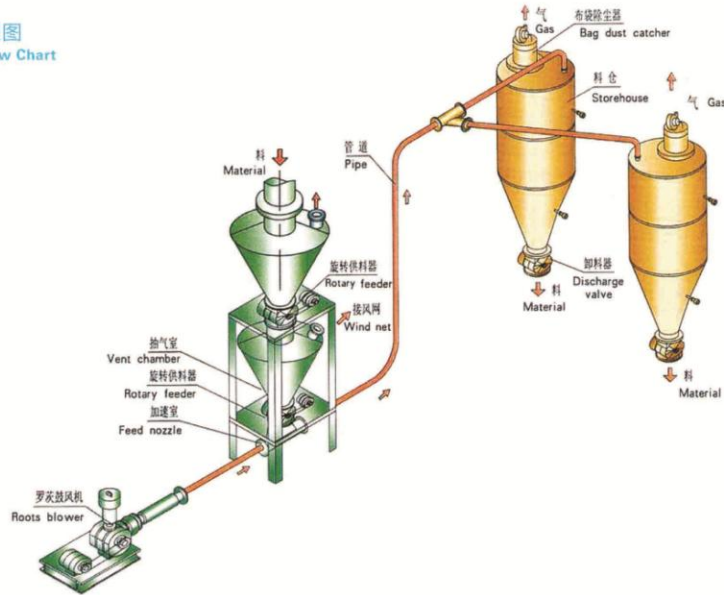


Pneumatic conveying system
气力输送系统



系统流程图
System Flow Chart

稀相中、低压气力输送系统
Middle and low pressure dilute pneumatic conveying system



布袋除尘器 Cloth bag dust collector



低压输送系统 Low pressure conveying system

工作原理

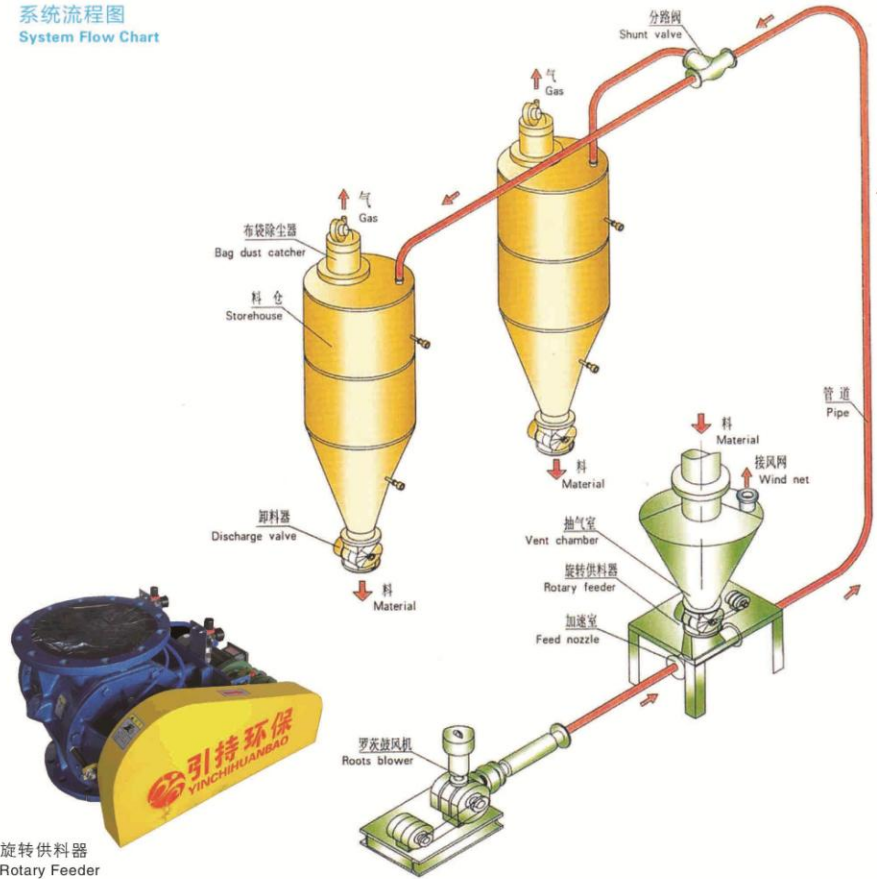
利用安装在输送系统起点的风机将高于大气压的正压空气通入供料器装置中，物料从料斗中加入，在重力作用下进入供料器进行定量供料，料和气一气经输送管道送到终点的分离器或贮仓内。料气分离后，空气经过滤后排入大气。

系统特点

本系统是以罗茨鼓风机为气源，旋转供料器为供料装置，连续压送物料的一种气力输送系统，该系统具有输送压力低，输送距离短，输送可靠地特点，适用于从一处向多处进行分散输送，对物料起到烘干和分级的作用；由于系统为正压，所以即使在管系的组成部分某联接处存在缝隙，外界空气或雨水也不会侵入；物料易从卸料口排出。

项目 Item	输送方式 Trans mode	输送量 (t/h) Trans quantity	输送压力 (kPa) Trans pressure	输送管径 (mm) Trans pipe diameter	输送高度 (m)Trans height	输送距离 (m)Trans distance
参数 Parameter	连续中低压压送 Continuous middle-low pressure conveying	0.1-100	29.4-196	50-250	5-35	10-300

系统流程图
System Flow Chart



旋转供料器
Rotary Feeder



Work principle

Material enter the rotary feeder from entrance, then be supplied quantitatively by the gravity, and be sent to the appointed storehouse at a velocity by the pressure air produced by the Roots blower. After the separation, air mixture gas filtered the atmosphere.

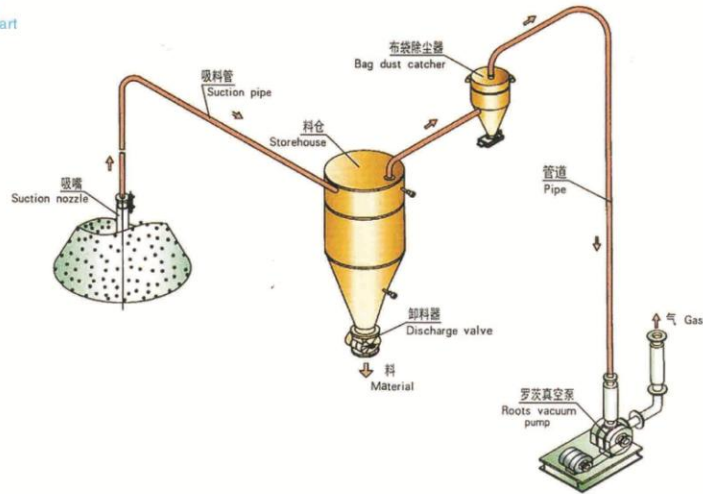
System characteristic

This system adopts Roots blower as air supply machine, inedia air as the conveying medium, and can be running continuously and circularly. It is applicable to many places from one place to play for conveying materials scattered, drying and grading. Due to the system for positive pressure, so external air or water invasion, nor from the unloading port is boring. The feature of this system is, low pressure, reliable transport, and recycle inertia air,

气力输送系统
Pneumatic conveying system



系统流程图
System Flow Chart



工作原理

利用安装在输送系统终点的真空泵抽吸系统内的空气，输送管内形成低于大气压的负压气流，物料同大气一起从起点吸嘴进入管道，随着气流输送到终点分离器内，物料颗粒受到重力或离心力作用从气流中分离出来，气体除尘后经离心风机或真空泵排入大气。

系统特点

本系统是以罗茨真空泵为气源，连续吸送物料的一种气力输送系统。该系统具有把物料从数处向一处集中输送；输送压力低、输送可靠、设备简单等特点。由于系统内压力低于大气压力，被输送物料不会从系统中逸出；由于吸嘴吸料，可避免取料点的粉尘飞扬，生产效率高。

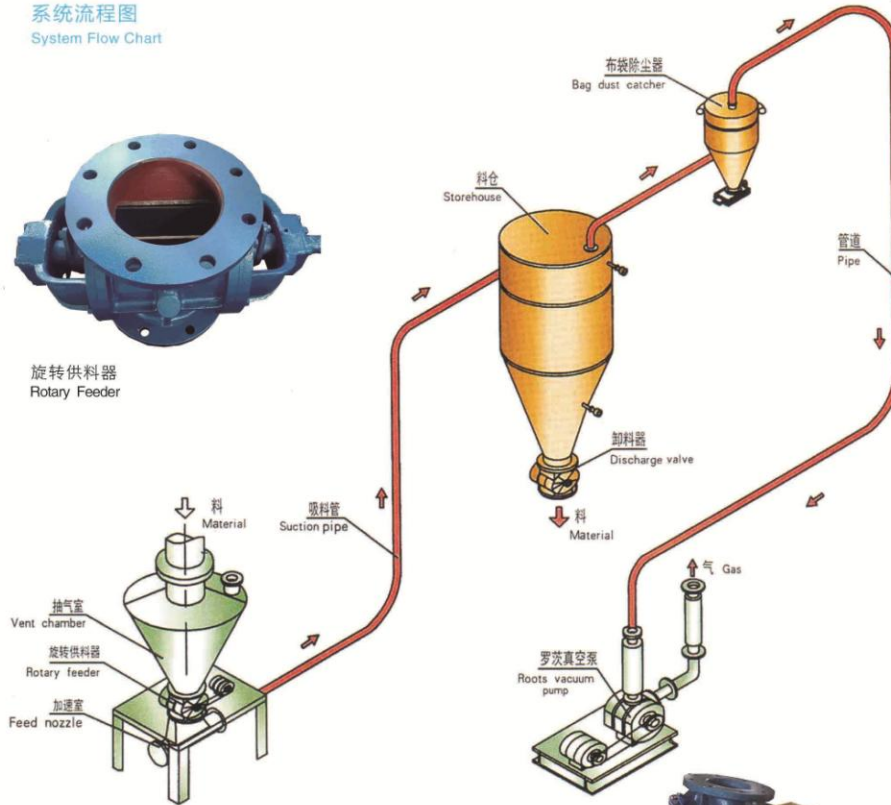


码头吸粮机
Suck grain machine in dock

项目 Item	输送方式 Trans mode	输送量 (t/h) Trans quantity	输送压力 (kPa) Trans pressure	输送管径 (mm) Trans pipe diameter	输送高度 (m) Trans height	输送距离 (m) Trans distance
参数 Parameter	连续中低压压送 Continuous middle-low pressure conveying	0.1-150	-29.4-196	50-300	5-35	10-150



系统流程图
System Flow Chart



Work principle

Using the vacuum pump at the end-point of the system, which can pump the system's air, the pipe become negative pressure flow, material and air are sucked into the pipe from the front inlet, then be sent to the endpoint separator, the granule is separated from the air flow by the gravity and the centrifugal pressure, filtrated air enter the sky through the centrifugal blower or the vacuum.

System characteristic

Roots Vacuum pump is the air generator, the system send material continuously Low pressure, thtransport credibility, simple facility is the feature of the system. It can be suitable to carry material concentrically from multi place to one place; because the system is negative, material can not escape from the system; because of the suction nozzle, so dust flying can be avoided and the efficiency of transportation is high.

双机串联旋转供料器
Two-machine tandem rotating feeder





工作原理

物料从料斗中进入旋转供料器，物料在重力作用下由供料器进行定量供料，罗茨鼓风机产生压力气体，以一定的速度物料输送到指定料库，料气分离后，气体除尘后进入进气管由风机进气口吸入进行下一次输送循环。



旋转供料器
Rotate feeder

系统特点

本系统是以罗茨鼓风机为气源，惰性气体为输送介质连续输送物料的一种循环式气力输送系统。该系统适宜输送化学性质不稳定的片状、粉状与粒状物料。具有压力低，输送可靠、惰性气体能够循环利用的特点。罗茨鼓风机在系统中起到压送鼓风机和吸送真空泵的作用。



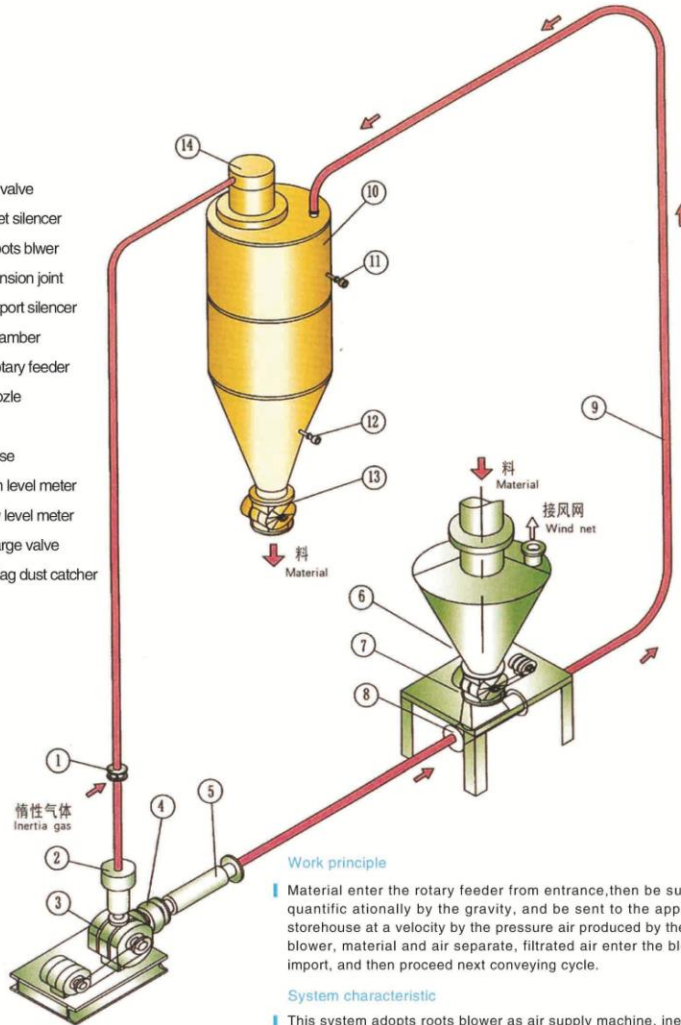
三叶罗茨风机
3-Lobe roots blower

项目 Item	输送方式 Trans mode	输送量 (t/h) Trans quantity	输送压力 (kPa) Trans pressure	输送管径 (mm) Trans pipe diameter	输送高度 (m) Trans height	输送距离 (m) Trans distance
参数 Parameter	连续中低压力送 Continuous middle-low pressure conveying	0.1~50	29.4~196	50~150	5~30	30~200



惰性气体循环气力输送系统
Inertia air circle pneumatic conveying system

1. 截止阀 Cut-off valve
2. 进口消声器 Inlet silencer
3. 罗茨鼓风机 Roots blower
4. 弹性接头 Expansion joint
5. 出口消声器 Export silencer
6. 抽气室 Vent chamber
7. 旋转供料器 Rotary feeder
8. 加速室 Feed nozzle
9. 管道 Pipe
10. 料仓 Storehouse
11. 高料位计 High level meter
12. 低料位计 Low level meter
13. 卸料器 Discharge valve
14. 布袋除尘器 Bag dust catcher



Work principle

Material enter the rotary feeder from entrance, then be supplied quantitatively by the gravity, and be sent to the appointed storehouse at a velocity by the pressure air produced by the roots blower, material and air separate, filtrated air enter the blower's import, and then proceed next conveying cycle.

System characteristic

This system adopts roots blower as air supply machine, inertia air as the conveying medium, and can be running continuously and circularly. It is suitable for transporting unstable chemical materials. The feature of this system is low pressure, reliable transport, and recycle inertia air. Roots blower played pressure blowers and vacuum pump, to send the role of in the system.





工作原理

物料从料斗中由进料阀控制加入发送罐（仓泵），空压机产生高压气体，以一定的速度把物料输送到制定料库，料气分离后，气体经除尘后排入大气或接入除尘风网。

Work principle

Under the control of the flasboard valve, material enter the storehouse pump transpod,the compressor engender high pressure gas, which convey material to the appointed storehouse, after material and air is separated, filtrated air enter the sky or dust meshwork.

系统特点

本系统是以空压机为气源，仓泵输送物料的一种密相高压气力输送系统。该系统具有流速低，耗气量小，适宜长距离，大容量的输送，对于透气性好的物料，便于实现流态化输送。具有噪声低、破碎少的特点。适宜输送水泥、粉煤灰、矿粉、铸造型砂、化工

System characteristic

It is a kind of dense phase high pressure pneumatic conveying system which adopts air compressor as gas generator, use storehouse pump to convey material, its feature is low conveying velocity, less air consumption, low noise, less crash, and long distance and large conveying capacity. For ventilative material, fluidized conveying can be realized. It is suitable for conveying cement, ore powder, flyash, foundry mould sand, chemical material.

项目 Item	输送方式 Trans mode	输送量 (t/h) Trans quantity	输送压力 (kPa) Trans pressure	输送管径 (mm) Trans pipe diameter	输送高度 (m) Trans height	输送距离 (m) Trans distance
参数 Parameter	连续中低压力送 Continuous middle-low pressure conveying	0.1~100	100~600	40~200	40	< 1000



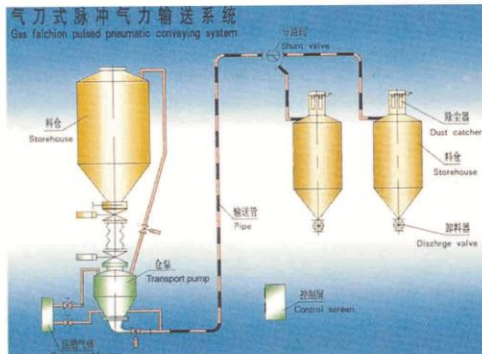
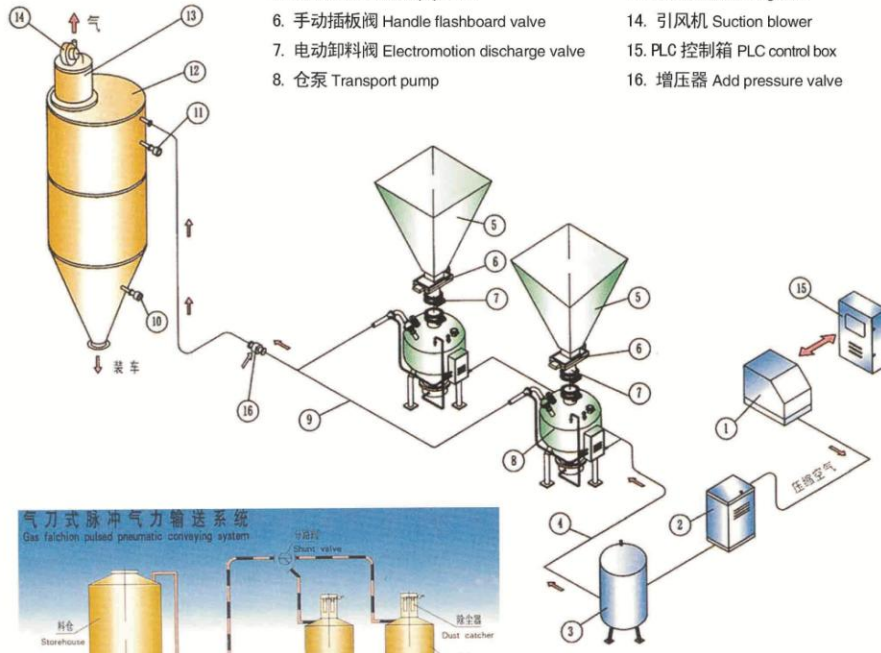
高压仓泵输送系统
High pressure transport conveying system



上引式仓泵
Ascending suction transport

粉尘处理 · 气力输送系统
POWDER HANDLING & PNEUMATIC CONVEYING SYSTEM

- | | |
|--|-----------------------------|
| 1. 螺杆式空气压缩机 Screw air compressor | 9. 管道 Pipe |
| 2. 冷冻干燥机 Freeze drier | 10. 低料位计 Low level meter |
| 3. 储气罐 Gas storage | 11. 高料位计 High level meter |
| 4. 输气管道 Transport gas pipe | 12. 料仓 Storehouse |
| 5. 排料装置 Feed equipment | 13. 袋式过滤器 Bag filter |
| 6. 手动插板阀 Handle flashboard valve | 14. 引风机 Suction blower |
| 7. 电动卸料阀 Electromotion discharge valve | 15. PLC 控制箱 PLC control box |
| 8. 仓泵 Transport pump | 16. 增压器 Add pressure valve |



系统流程图
System Flow Chart

Pneumatic conveying system
气力输送系统



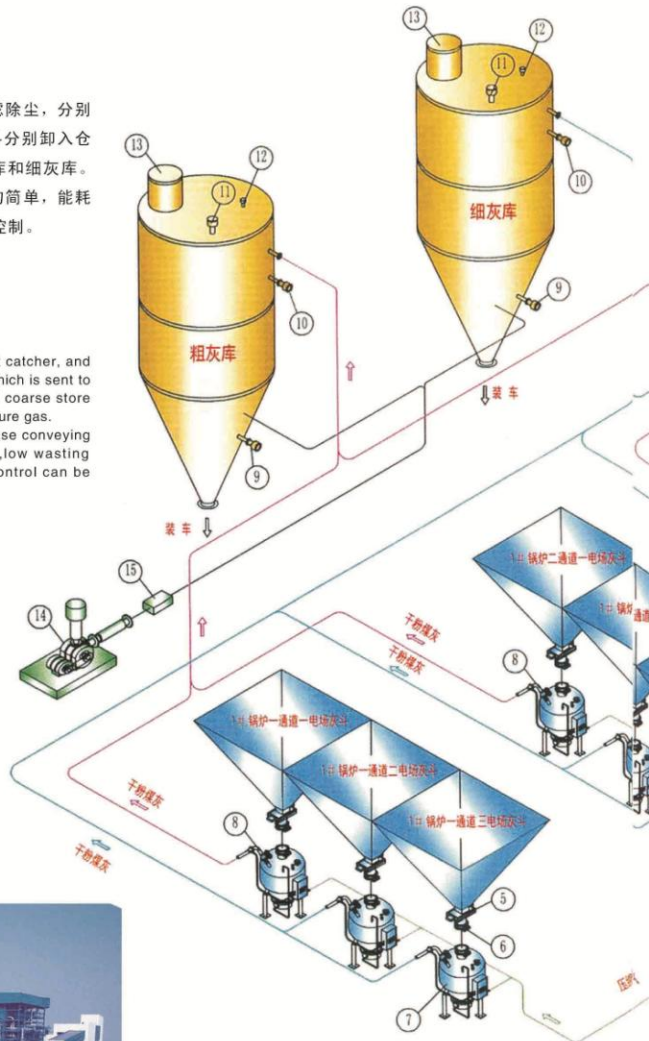


工艺流程

- 锅炉燃烧产生的烟气，经电除尘器过滤除尘，分别产生粗粉煤灰和细粉煤灰，由电场灰斗分别卸入仓泵，在高压气体的作用下，输送到粗灰库和细灰库。
- 本系统采用高压密相输送粉煤灰，结构简单，能耗低，便于维护和管理，能够实现自动化控制。

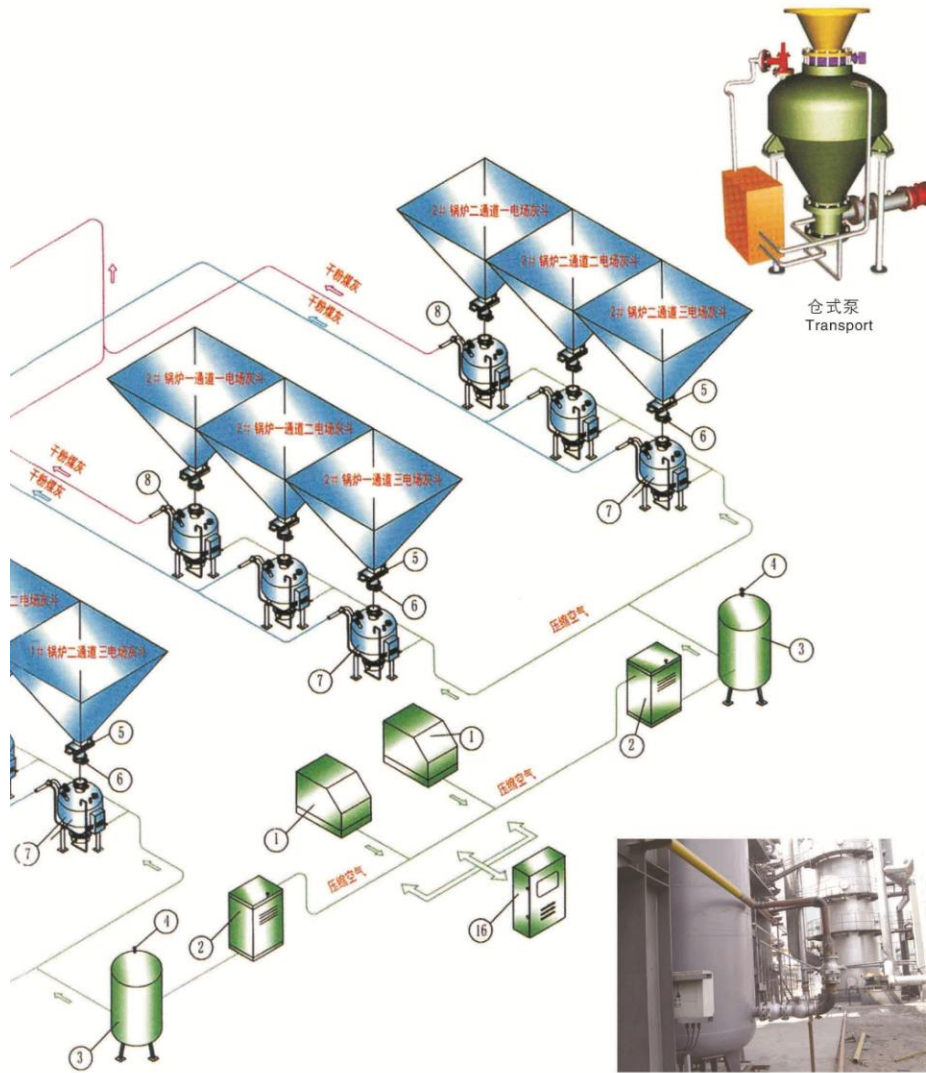
Process flow

- Fume out from the boiler is filtrated by dust catcher, and be divided into coarse dust and tiny dust, which is sent to transport respectively, then be transported coarse store house and tiny storehouse by the high pressure gas.
- The system adopt high pressure dense phase conveying way with the feature of simple structure, low wasting energy, convenient managing, automatic control can be realized easily.



电厂输送粉煤灰系统
Power station flyash conveying system

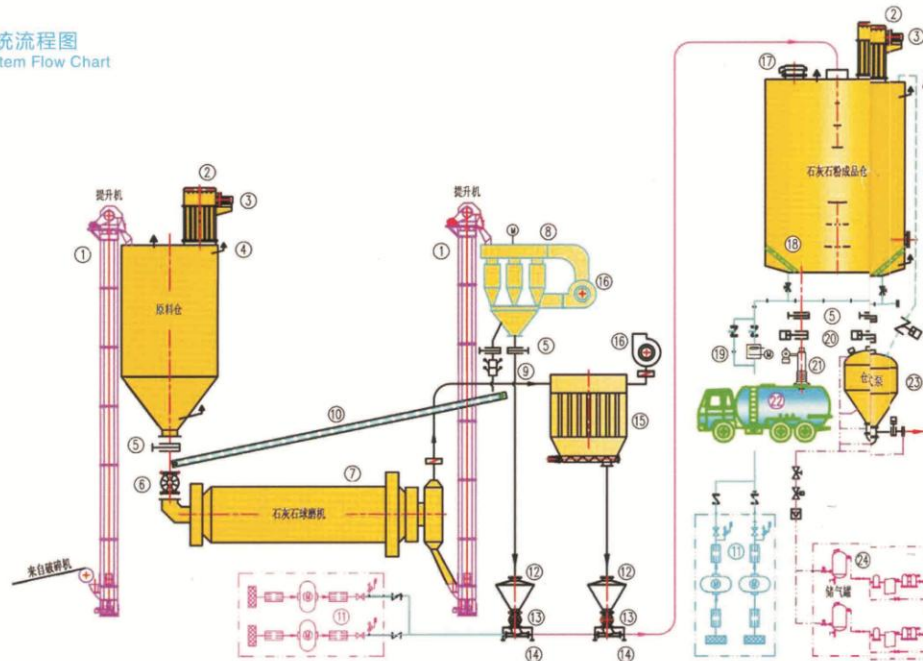
1. 螺杆式空气压缩机 Screw air compressor
2. 冷冻干燥机 Freeze drier
3. 储气罐 Gas storage
4. 电接点压力表 Electricity join pressure gauge
5. 手动插板阀 Handle flashboard valve
6. 电动卸料阀 Electromotion discharge valve



- | | | |
|--------------------------------------|----------------------------------|--------------|
| 7. 上引式仓泵 Ascending suction transport | 12. 连续料位计 Continuous level meter | 储气罐 Gas tank |
| 8. 出料阀 Discharge valve | 13. 袋式过滤器 Bag filter | |
| 9. 低料位计 Low level meter | 14. 罗茨鼓风机 Roots blower | |
| 10. 高料位计 High level meter | 15. 电加热器 Electricity heater | |
| 11. 真空释放阀 Vacuum release valve | 16. PLC 控制箱 PLC control box | |



系统流程图
System Flow Chart

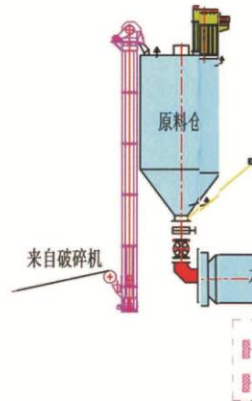


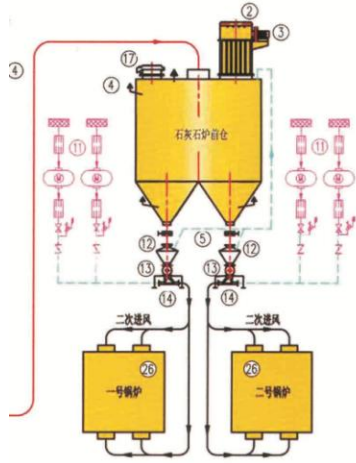
工艺流程

来自破碎机破碎后的石灰石颗粒经提升至原料仓中，经下方的给料机定量的将石灰石颗粒加入到石灰石球磨机内，给料量即可通过变频器变频调速，也可以通过螺旋称给料机进一步实现给料量的调节。经球磨机粉碎后的物料一部分细的粉尘直接进入除尘器进行收集，一部分经提升机提升后进入选粉机进行筛选，达到细度的石灰石与经除尘器收集的石灰石粉经气力输送的方式送至石灰石粉成品仓尾气经仓顶除尘器过滤后净空气直接排入大气。经选粉机过滤后较粗粉粒料经皮带输送机送至磨头。对于成品库中的石灰石粉一部分通过气力输送的方式直接送至附近的石灰石炉前仓，进一步通过气力输送的方式送至锅炉进行烟气脱硫，另一部分可以通过散装罐车进行外运综合利用。

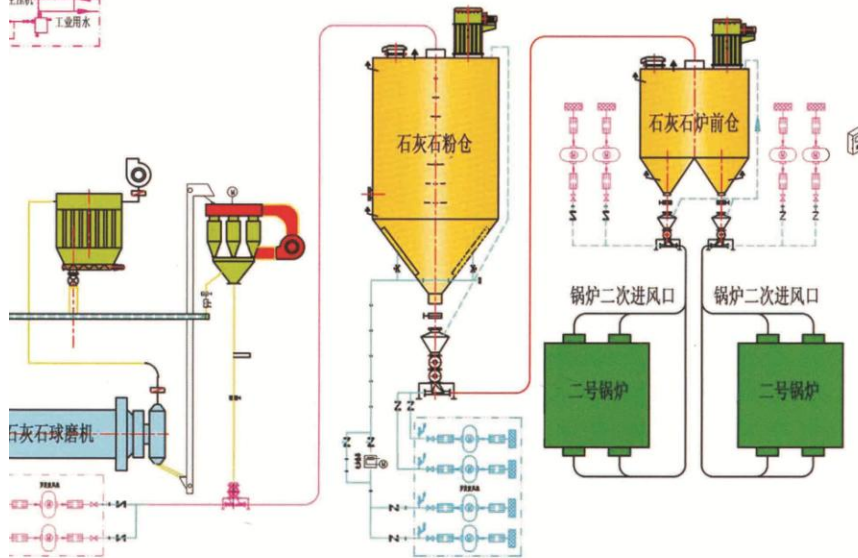
Process flow

The limestone granule is lifted into raw material storage by elevating conveyor after breaking, and is quantitative conveyed into ball mill by the rotary feeder at bottom. The conveying capacity can be realized by the adjustment of converter or screw weigh conveyor. After breaking by ball mill, some fine powder is directly collected by dust catcher, and another is lifted into bolting mill by elevating conveyor to screen. The limestone powder with adequate fineness and collected by dust catcher is conveyed into warehouse using pneumatic conveying system. Exhaust tail gas directly after filtering by roof scrubber. The thicker powder is conveyed to grinding head after filtering by bolting mill. Some of limestone powder in warehouse is conveyed to the storage bin before furnace with pneumatic conveying mode, and further conveyed into boiler fumace with pneumatic conveying system to carry out flue gas desulfurization. Another can be complex utilized through outbound bulk tank car.



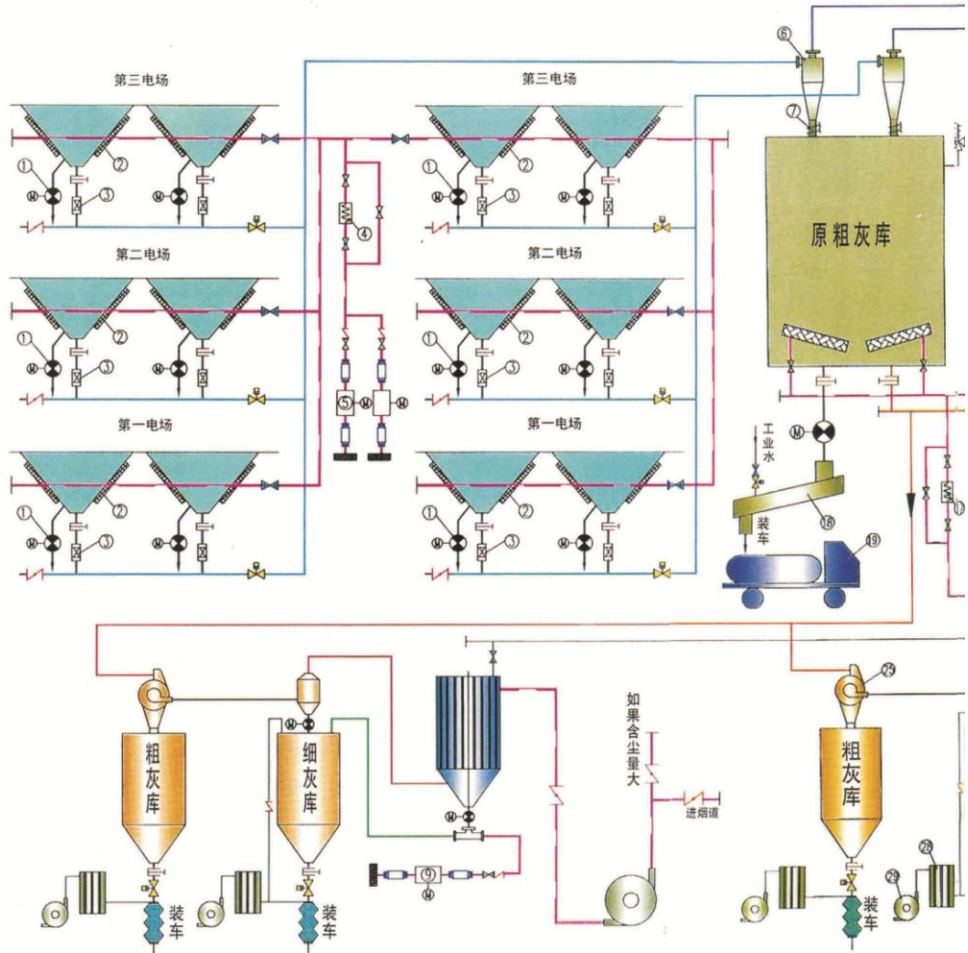


1. 提升机 Elevator
2. 仓顶除尘器 Warehouse top filter
3. 引风机 Suction blower
4. 料位计 Level meter
5. 手动插板阀 Handle flashboard valve
6. 给料机 Feeder
7. 球磨机 Mill
8. 选粉机 Classifier
9. 翻板阀 Flap valve
10. 皮带给料机 Belt feeding machine
11. 罗茨鼓风机 Roots blower
12. 抽气室 Vent chamber
13. 旋转给料机 Rotary feeder
14. 加速室 Feed nozzle
15. 布袋除尘器 Bag dust catcher
16. 高压离心风机 High pressure centrifugal blower
17. 压力真空释放阀 Vacuum pressure release valve
18. 气化槽 Gasification slot
19. 电加热器 Electric heater
20. 气动插板阀 Pneumatic plug valve
21. 散装机 Bulk machine
22. 散装罐车 Bulk tanker
23. 仓式泵 Transport
24. 储气罐 Gas storage pot
25. 空压机 Air compressor
26. 锅炉 Boiler





电厂负压除灰系统
Power station negative pressure dust eliminating system



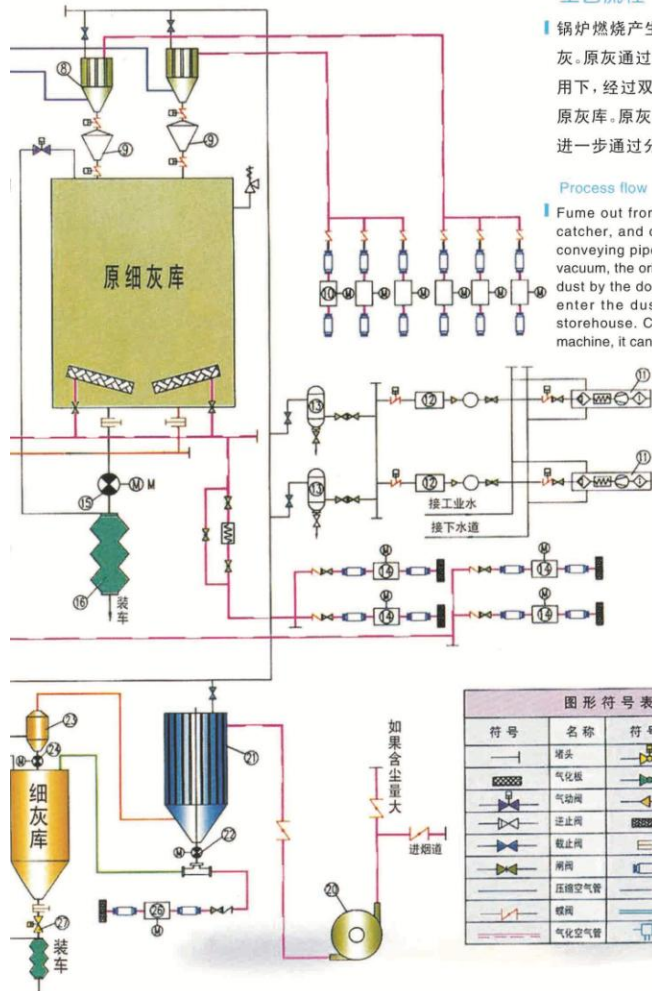
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|--------------------------------|---|---------------------------|
| 1. 电动锁气器 Electric airlock | 8. 组合式布袋除尘器 Assembled bag dust catcher | 15. 旋转卸料器 Rotary feeder |
| 2. 气化板 Gasify board | 9. 电动锁气器 Electric airlock | 16. 干灰散装机 Dry ash bulk ma |
| 3. 排料阀 Discharge valve | 10. 罗茨真空泵 Roots vacuum pump | 17. 电加热器 Electric heater |
| 4. 电加热器 Electric heater | 11. 螺杆空气压缩机 Screw air compressor | 18. 湿式搅拌器 Wettest beater |
| 5. 灰斗气化风机 Ash gasify blower | 12. 冷冻干燥器 Freeze dryer | 19. 粉煤灰罐车 Flyash tank car |
| 6. 旋风分离器 Cyclone separator | 13. 储气罐 Gas storage pot | 20. 高压离心风机 High pressure |
| 7. 重锤式锁气器 Heavy sinker airlock | 14. 原灰库气化风机 Original ash storehouse gasity blower | 21. 脉冲布袋除尘器 Pulsed bag |

工艺流程

锅炉燃烧产生的烟气，经电除尘器过滤产生原粉煤灰。原灰通过排料阀进入输灰管道，在罗茨真空泵作用下，经过双级分离器分离，形成粗灰和细灰后落入原灰库。原灰库的粉煤灰可直接由卸料机装车，亦可进一步通过分选机分离成等级灰。

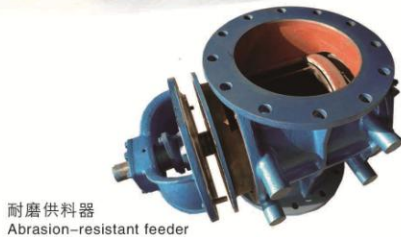
Process flow

Fume out from the boiler is filtrated by electricity dust catcher, and original dust is produced, which enter the conveying pipe by discharging valve, at the action of the vacuum, the original dust is divided into coarse dust and thin dust by the doublestage separator's separating, and then enter the dust storehouse. The dust of the original storehouse. Can be shipping directly through discharge machine, it can also be classified into grade by separator.



符号	名称	符号	名称
—	堵头		气动球阀
	气动阀		手动球阀
	逆止阀		大小头
	截止阀		过滤器
	闸阀		手动蝶阀
	蝶阀		消声器
	压缩空气管		水管
	干灰管		干灰管
	气动分路阀		气动分路阀

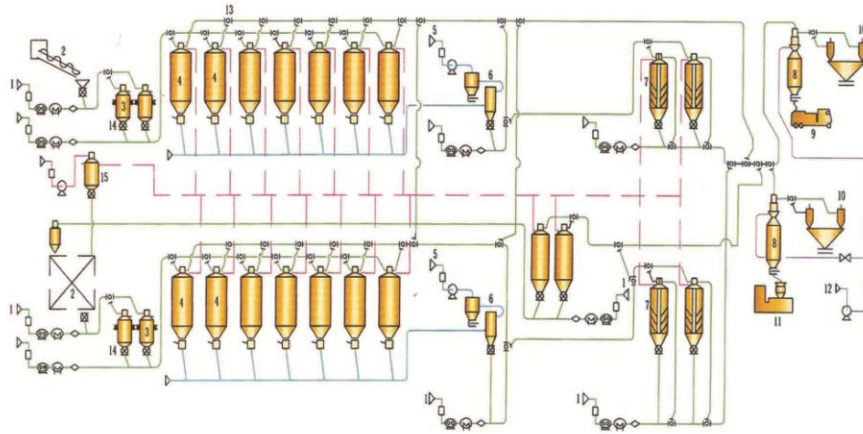
- chine
- 22. 旋转共料器 Rotary feeder
- 23. 多管收集器 Multi pipe collector
- 24. 电动锁气器 Electric airlock
- 25. 分选机 Separator choice machine
- 26. 罗茨鼓风机 Roots blower
- 27. 气动卸料阀 Pneumatic feeder
- 28. 袋式过滤器 Bag filter
- 29. 引风机 Suction blower
- centrifugal blower
- dust catcher



耐磨供料器
Abrasion-resistant feeder



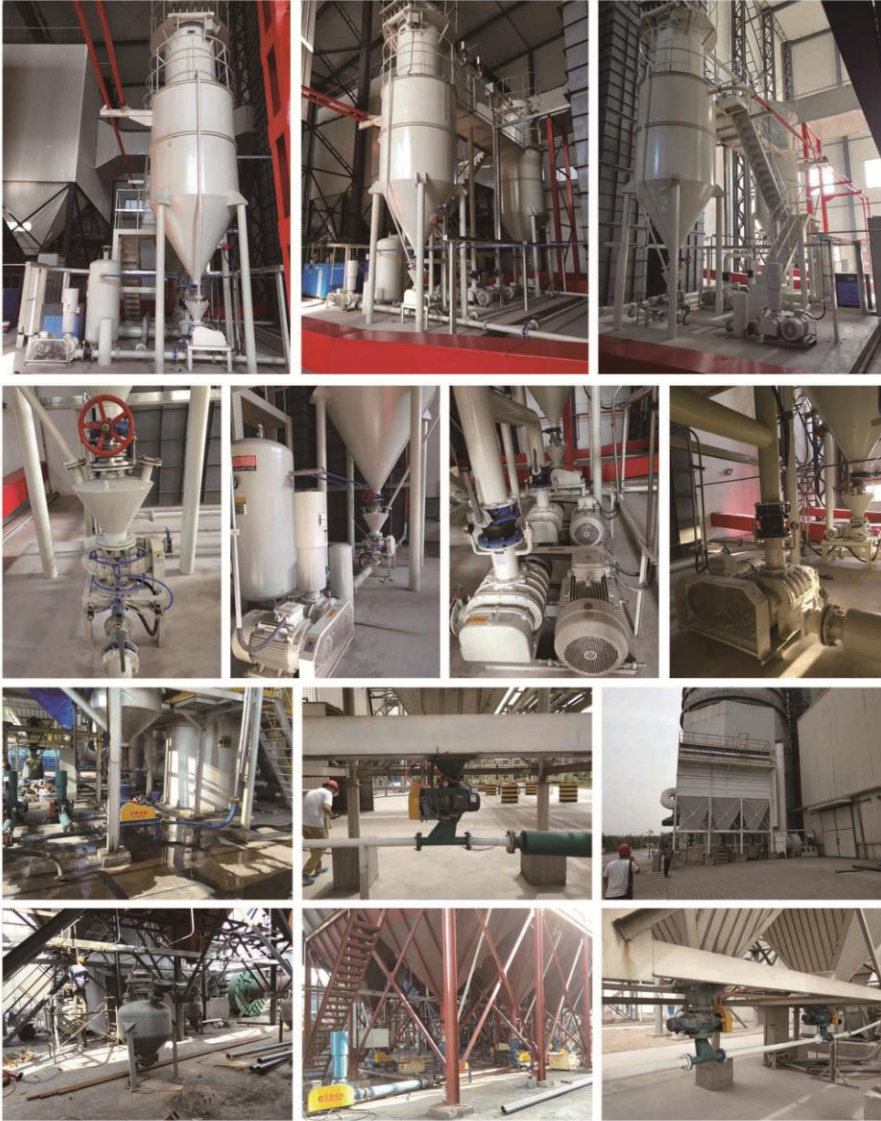
石化粉粒气力输送系统
Petrochemical powder aggregate pneumatic conveying system



- | | | | |
|-------------------------------------|--|---------------------------------|------------------------------------|
| 1. 罗茨鼓风机
Roots blower | 5. 真空泵
Vacuum pump | 9. 运输车辆
Transport vehicle | 13. 分路阀
Shunt valve |
| 2. 送料设备
Supply material facility | 6. 中间分离器、除尘器
Middle separator, dust catcher | 10. 贮存仓
Stockpile storehouse | 14. 旋转供料器
Rotary feeder |
| 3. 计量设备
Measure facility | 7. 均料装置
Equality equipment | 11. 包装机
Packaging machine | 15. 除尘系统
Collection dust system |
| 4. 料仓
Storehouse | 8. 分离器
Separator | 12. 引风机
Suction blower | |



案例展示



Case presentation
案例展示



YIN LING WEI LAI CHI XU FA ZHAN
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