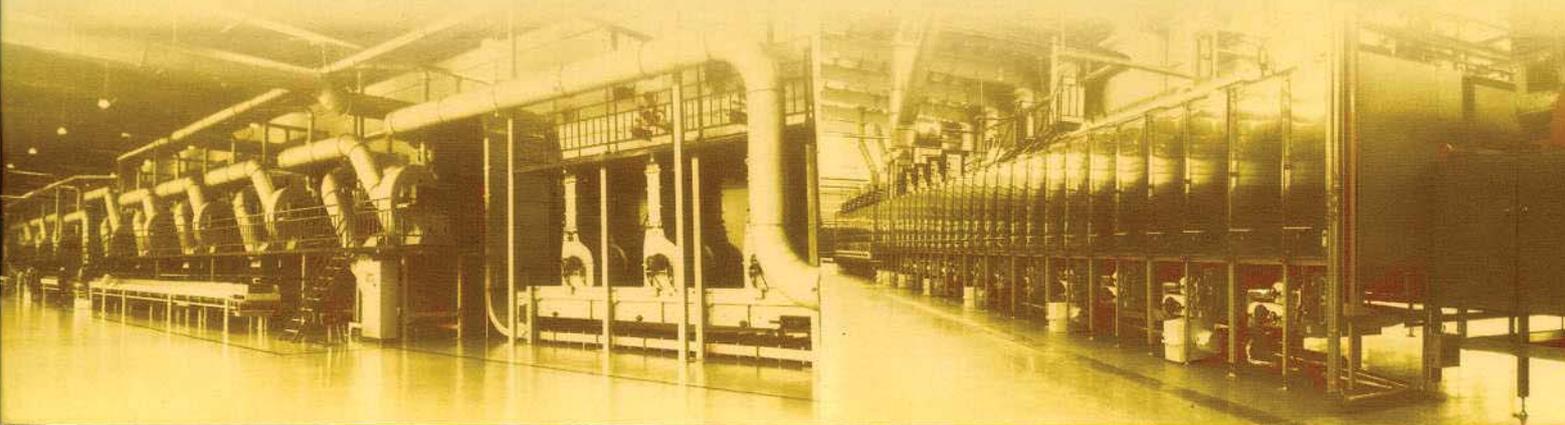
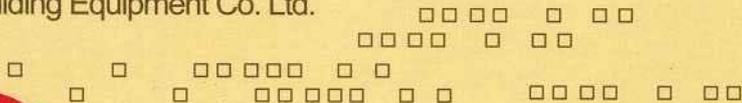


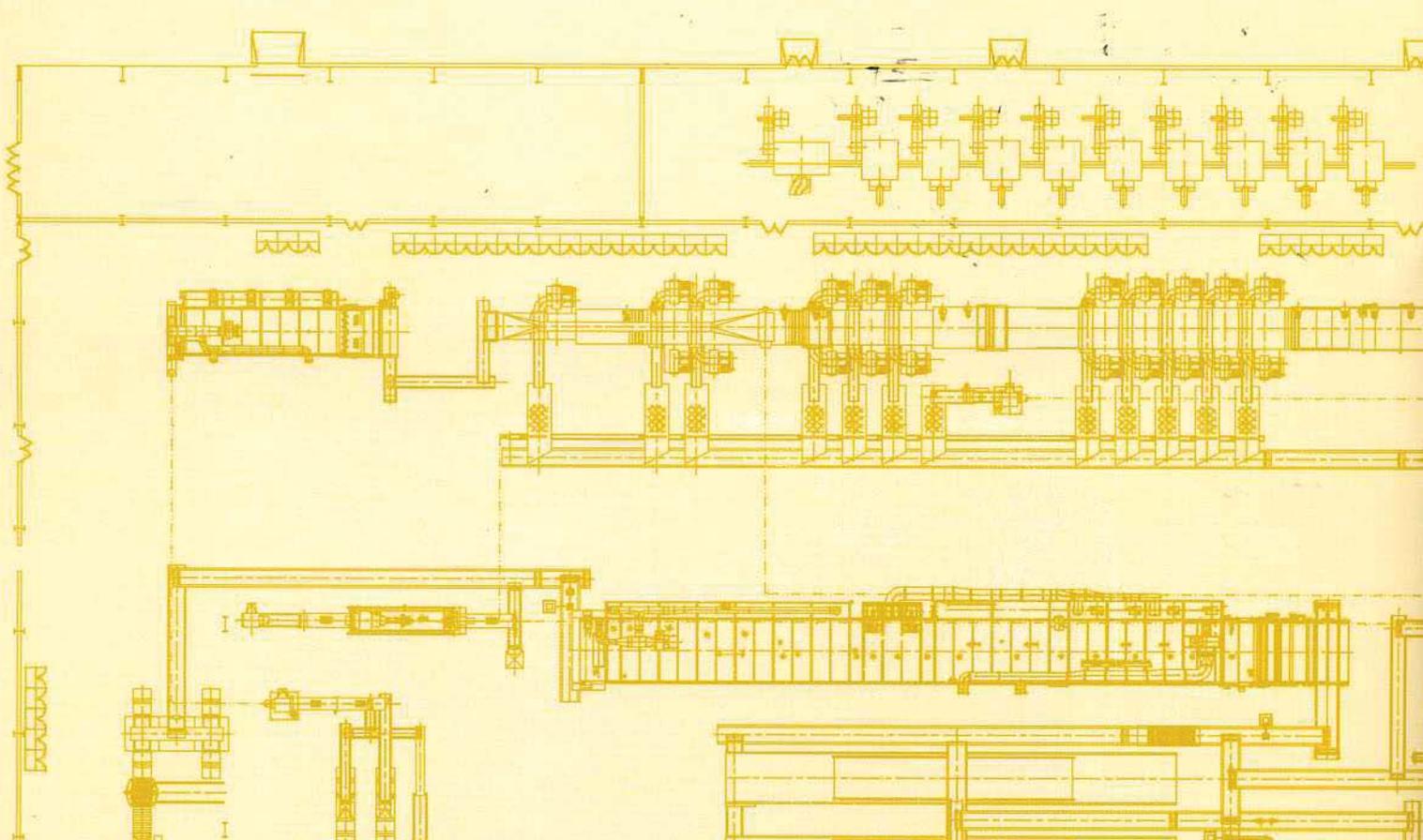
KSEC



COMPLETE TOBACCO THRESHING & REDRYING PLANT

Kunming Shipbuilding Equipment Co. Ltd.





The threshing and redrying line is a whole processing line starting from vacuum conditioning to respective packing of lamina, stem and scraps. It includes some main equipments of vacuum conditioning plant, hot-air conditioning cylinder, threshing unit, lamina redryer, stem redryer, hydraulic press, some auxiliary and conveying equipments of blending table with tipping device & tie-leaf cutters, pick-up table, foreign matter sorter, sand sieving plant, wiper feeder, storage feeder, scrap drier, silo, automatic strapping machine and others of metering, controlling, inspecting equipments of electronic weighing conveyor, PLC control cabinet, metal detector, moisture meter and so on.

It includes four sections: raw tobacco pre-processing section, lamina and stem separating section, lamina, stem and scraps redrying section, finished product packing section. It also includes electrical control system, raw tobacco storing area, finished products storing area, pneumatic conveying and dust collecting system, etc.

1. Raw tobacco pre-processing section: It includes the procedure of vacuum conditioning, blending, tipping and tie-leaf cutting, primary conditioning, sand sieving, constant flow rate control, secondary conditioning, foreign matter removing to increase moisture content and temperature thus to meet the requirement of subsequent tobacco threshing.

Purpose: suitable for different variety and grade tobacco and improve tobacco process durability, ensure stable and even moisture content and temperature to meet the requirement of subsequent tobacco threshing.

2. Lamina and stem separating section: It adopts the technology of soft threshing and precise classifying, and high efficiency pneumatic classifying with lower energy consumption to separate stem from lamina and sieve out scraps with suitable size.

Purpose: Ensure optimized quality indexes such as percentage of large-and-medium-sized lamina, percentage of stem content in lamina, percentage of lamina content in stem, percentage of scraps, long stem percentage, etc. and improve tobacco quality and yield.

3. Lamina, stem and scrap redrying section: It adopts the technology of slow drying at low temperature and auto water adding and conditioning technology to achieve proper moisture content and temperature and suitable for long-term storing and alcoholization.

Purpose: To remove greenish odor and ammonia and make tobacco with rich aroma and flavor. To achieve suitable moisture content and temperature, low curling effect, improve tobacco quality, decrease degradation and reduce the loss of aroma and flavor.

4. Finished product packing section: It includes the procedures of pre-press, hold-down press, weight checking to pack threshed and redried lamina, stem and scrap as per stipulated size and weight.

Purpose: to pack finished product into required size and convenient for storage and transportation.



Kunming Shipbuilding Equipment Co. Ltd.



WZ1 Jet-type Vacuum Conditioning Plant

Application:

This product is used in primary processing line or tobacco threshing and redrying line for vacuum conditioning tobacco leaves. It can increase moisture and temperature of tobacco leaves to suitable extent, so as to improve the tenacity and anti-breakage property and change the physical characteristics of tobacco leaves to meet the requirements of subsequent procedure. Besides, it can remove greenish odor from tobacco leaves and kill insects to some extent.

Features:

- It is mainly consists of vacuum chamber, hydraulic lifting mechanism, evacuation system, humidifying system, steam distributing system, compressed air and instrument system, protective hood assembly, wiring system, electrical control system and outdoor cooling system.
- Adoption of steam jet pump for improving vacuum evacuation efficiency.
- Controllable heating and humidifying system
- Friendly human-machine interface rich in functions and malfunction self-diagnostic function.

Technical Specifications:

- Rated capacity: 1500~6000kg/h
- Material input/output mode: manually or by trolley
- Final vacuum: $\leq 666\text{Pa}$
- Working vacuum: $\leq 1066\text{Pa}$
- Temperature of tobacco leaves after conditioning: $55\sim 80^{\circ}\text{C}$
- Increase of moisture content after conditioning: 2~4%
- Conditioning efficiency: $\geq 98\%$
- Batch processing time: $\leq 30\text{min}$



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Subject to technical alterations . Oct.2007



Kunming Shipbuilding Equipment Co. Ltd.



FA Series of Double-row Blending Table with Tipping Device & Tie-leaf Cutter

Application:

This product is used in the pre-processing sub-line of tobacco threshing and redrying line for blending, tipping or cutting off (by single knife or double knives) and tie-leaf cutting of conditioned tobacco, so as to meet the process requirement of production.

Features:

- Consisting of two individual parts of material conveyor and machine head.
- Machine head assembly is of frame structure without top, cover and side wall which combines high technologies of mechanics, electronics and pneumatics and is core of machine.
- Tipping knife equips with knife grinding mechanism and with knife advance compensation structure.
- With features of novel structure, stable performance, high working efficiency, safe and reliable operation, high automation, and convenient for installation, commissioning and maintenance.

Technical Specifications:

- Rated capacity: 3000kg/h~6000kg/h
- Tie-leaf cutting rate: 90%~95%



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Kunming Shipbuilding Equipment Co. Ltd.



WF355B ~ WF3524A Series of Hot Air Conditioning Cylinder

Application:

This product is mainly used in tobacco threshing and redrying line for loosening, increasing temperature and moisture content of tobacco leaves, so as to meet the required temperature and moisture content.

Features:

- Cylinder and discharging chamber with insulating cover to decrease heat loss.
- Auto control over temperature and moisture content.
- High level of safety and maintainability, there set limit switch and isolating switch at unmindful places to ensure safe, convenient and quick operation and repair.
- Adoption of multiple-point and less-quantity humidifying technology for gentle processing and even humidifying.

Technical Specifications:

- Rated capacity: 6000kg/h~12000kg/h
- Inclined angle of cylinder: 3°
- Output temperature: 50°C ~70°C , deviation: $\pm 5^{\circ}\text{C}$
- Increase of moisture content: 2%~6%



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Kunming Shipbuilding Equipment Co. Ltd.



KF1 series of Tobacco Leaves Pick-up Table

Application:

This product is used in the pre-processing sub-line of the threshing and redrying line for manually picking-up the unqualified and mould tobacco leaves and foreign matters, so as to improve the quality of tobacco leaves.

Features:

- With both inclined material feeding and horizontal material feeding.
- Flow rate in each working position adjustable manually.
- Quantity of working position can be determined as per user's demand, normally one group pick-up table does not exceed 10 working positions.

Technical Specifications:

- Rated capacity: 6000 kg/h~12000 kg/h



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Kunming Shipbuilding Equipment Co. Ltd.



FS1 Series Live Roller Desander

Application:

This product is used after primary conditioning cylinder in tobacco threshing and redrying line for classifying conditioned tobacco leaves via roller part in the 2-layer mixture conveyor then sieving out sand, soil and scraps from tobacco leaves via vibratory sieving conveyor under the bottom.

Process-specific screen meshes can be fabricated in a series to sieve mud, sand, scraps in different sizes. Mesh size and roller space can be adjusted as per customer's demand.

Features:

- Diameter of sieving hole and spacing between rollers is varied as per user's demand for sieving sands and scraps with different size.
- Less degradation and good sieving result.
- It can classify materials into several specification .
- Classifying materials into multiple specifications once for subsequent treatment.
- Enclosure design of the whole machine, dust powder collected by dust collector and sucked through ambient dust removing system ensuring clean environment.

Technical Specifications:

- Rated capacity: 3000~12000kg/h
- Sieving efficiency: $\geq 90\%$



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Kunming Shipbuilding Equipment Co. Ltd.



FS2 Series Sand Sieving Cylinder

Application:

This product is used after primary conditioning cylinder in the threshing and redrying line for sieving out sand, soil, short stems and scraps less than 1/2' from tobacco leaves, making the leaves clean and reducing the degradation loss during threshing.

Features:

- With multiple mesh size for option.
- Plexiglass window at either side of the machine frame for checking running status.
- Plexiglass window can be turned out for easy cleaning and maintenance.
- With cylinder jacking-up device to facilitate maintenance.

Technical Specifications:

- Rated capacity: 3000~12000kg/h
- Mesh size: 10×10, Φ12.5mm, Φ9.5mm, Φ6.5mm, Φ3mm



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AW9 Series of Horizontal Threshing Unit

Application:

The product is used in the tobacco threshing and redrying line for separating lamina from stem of tobacco leaf by means of multi-stage mechanical threshing and multi-stage classifying, ensuring all indexes of separated lamina and stem meet certain technological requirements and the need for subsequent processing. The whole process is continuous and automatic.

Features:

- It can process both the Virginia and Burley tobaccos while meet the desired quality indexes.
- Design and combination of threshing and pneumatic classifier in accordance with technology of gentle threshing and fine classifying. Feature multi-stage threshing, gentle threshing, less threshing and multi-stage classifying and fine classifying, which can ensure good quality indexes.
- Its wiper feeder adopts double wiper structure which feature good balance and stable running. With dust suction port in the delivery end of wiper feeder which can reduce dust arisen from the falling of materials.
- Its storage feeder adopts the structure with reversed doffer which can ensure more uniform of material flow into subsequent equipment, adopts side chain drive structure to avoid belt off-tracking.
- Its tobacco splitter adopts structure of reversed doffer plus conveying belt (or doffer only), which can evenly divide tobacco leaves into equal parts. Its adjustment device adopts worm gear and worm for convenient and quick adjustment.
- Horizontal threshers in each stage adopts the latest gentle threshing technique and with rational and optimized threshing knife array, shape and size of baskets, rotating speed of threshing rotors as per different character of each stage. Shape and size of baskets and threshing knife spacing different from stage to stage to ensure large and medium size lamina ratio and threshing efficiency. Adoption of double-side threshing structure to enhance threshing utilization and reduce threshing rotor weight. More convenient for operation and repair with hand-operated device for opening the gate.



- Support rollers of belt conveyor and tobacco splitter with structure of spiral stretching roller for preventing belt off-tracking, and belt tensioning device adopts slide and slice rail structure for simple operation
- Pneumatic classifier is counter-flow with the structure of air blowing from the bottom, double thrower, large separating chamber, two-time inertia classifying plus one-time gravity classifying, which can ensure efficient and precise pneumatic classifying.
- Materials conveying between different stages is by pneumatic. With air stream distributing device for air duct and airlock to ensure uniform material conveying.
- Adoption of circulating air in pneumatic classifying and conveying system which can effectively reduce degradation and energy consumption.

Technical Specifications:

- Rated capacity: 300~1200kg/h
- Configurations: 3-stage threshing and 8-stage classifying, 4-stage threshing and 8-stage classifying, 4-stage threshing and 11-stage classifying, or tailor-made.
- Percentage of large-size lamina ($\geq 25.4\text{mm}$): $\geq 56\%$
- Percentage of large and medium size lamina ($\geq 12.7\text{mm}$): $\geq 87\%$
- Percentage of stem in lamina (stem diameter $\geq \phi 1.5\text{mm}$): $< 2.5\%$
- Percentage of lamina in stem: $\leq 1.5\%$
- Percentage of long stem (stem length $\geq 20\text{mm}$): $\geq 75\%$
- Percentage of scraps (lamina $< 1/8''$): $\leq 2\%$
- Percentage of thick stem in lamina (stem diameter $\geq \phi 2.38\text{mm}$): $\leq 0.5\%$





Kunming Shipbuilding Equipment Co. Ltd.



AL13/AL14 Vertical Thresher

Application:

This product is mainly used for tearing lamina apart from stem.

Features:

- The threshing rotor is vertically mounted, pneumatic classifying and threshing are integrated together. This product has advantages of small floor occupancy, low energy consumption, easy operation and maintenance, safe and reliable control, and good threshing performance.

Technical Specifications:

- Rated capacity: 2500kg/h
- Required input moisture content: $19\% \pm 1\%$
- Percentage of stem content in lamina (diameter of stems $\geq \Phi 1.5\text{mm}$): $\leq 4\%$
- Percentage of lamina in stem: $\leq 1.5\%$
- Percentage of large-sized lamina ($\geq 25.4\text{mm}$): $\geq 32\%$
- Percentage of large-and-medium-sized lamina ($\geq 12.5\text{mm}$): $\geq 70\%$
- Percentage of scraps ($< 3\text{mm}$): $\leq 5\%$
- Long stem ratio (stem length $\geq 20\text{mm}$): $\geq 80\%$
- Noise level: $\leq 85\text{dB(A)}$



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KG2C Series of Lamina Redrier

Application:

The product is used in threshing & redrying line for removing excessive moisture in lamina. After the processes of drying, cooling and conditioning, the moisture content and temperature of the lamina is suitable for storage for a long period for alcoholization or fermentation in bales. After redrying, the greenish odor and ammonia in the lamina is evaporated to some extent with moisture. As the result, the taste of the tobacco becomes mild and rich in aroma and flavor.

Features:

- This product consists of conveying section, drying section, cooling section, sampling room, conditioning section, damp exhaust system, material feeding end, materials delivery end and electrical control system.
- All inner surfaces of all chambers and all circulating fans in chambers made of stainless steel.
- The conveying mesh adopts side-chain driven structure and hinged with stainless steel perforated plate with kidney-shaped holes.
- Capable for controlling ambient temperature, moisture and dehydration amount in each drying section.
- Adoption of slow-drying at low-temperature technology which can reduce shrinkage ratio during drying process.
- Automatic alarming devices at drying, cooling and conditioning section respectively.
- The motors of main drive, high-pressure water pumps, and the first and last chamber of the conditioning zone adopt frequency conversion speed regulation.



Technical Specifications:

- Rated capacity: 2000kg/h~9600kg/h
- Moisture content of input lamina: 18%~20%
- Hot air temperature in drying section (before passing lamina): 65°C~100°C (adjustable)
- Moisture content of lamina after drying: 8%~10%
- Hot air temperature in cooling section: 35°C~45°C
- Conditioning and moisturizing capacity: 4.5%
- Moisture content of output lamina: 11%~13.5% (adjustable)
- Standard deviation of output lamina moisture: SD ≤ 0.5%
- Temperature of output lamina: 50°C~65°C (adjustable)
- Laying thickness of lamina: 80mm~120mm





Kunming Shipbuilding Equipment Co. Ltd.



KG4 Scrap Drying Cylinder

Application:

This product is used in tobacco threshing and redrying line for quickly drying and removing moisture of scraps.

Features:

- Adoption of cylinder with heat exchange thermal plate.
- Adoption of advanced combined drying technology: combination of heat conduction, thermal radiation and compulsory hot air convection methods for quickly drying scraps and ensure even output moisture content.
- Cylinder rotating speed, hot air temperature, hot air volume, and thermal plate temperature are adjustable.

Technical Specifications:

- Rated capacity: 300 kg/h ~600 kg/h



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KG4 Series of Scrap Screw Drier

Application:

This product is used in the scrap processing sub-line of tobacco threshing and redrying line for drying scraps with different moisture and making the moisture of output scraps meet the technological requirements of subsequent procedures.

Features:

- Spiral conveyance of material.
- The novel design of series connection of drying cylinders with transit belt conveyor in the middle for making lamina be dried more sufficiently.

Technical Specifications:

- Rated capacity: 350~600kg/h
- Moisture of discharged material: 11%~13%
- Temperature of discharged material: $\geq 55^{\circ}\text{C}$



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KY1 Series of Hydraulic Press

Application:

This product is used in the tobacco threshing and redrying line for weighing and pre-pressing redried loose lamina into lamina bale with certain specification and weight, so as to facilitate the storage and transportation.

Features:

- Suitable for packing cartons with 100kg, 200kg and 180kg (for Burely tobacco and reconstitute tobacco) and wooden board with 150kg, 200kg and 400kg.
- With single-ram, double-ram, triple ram for option.
- Main oil cylinder adopts hydraulic differential motion loop with supplementary oil tank, which can make the descending speed of the press head quick and stable running, for high working efficiency and less energy consumption.
- With hydraulic-oil cooling and precise filtering system for high reliability.
- Adoption of superior sealing unit and special structural design for ensuring non-leakage of hydraulic system.
- With hydraulic oil cooling and electric heating system in oil tank for wide adaptability to climate.
- Adoption of static weighing for precise weighing.
- With label printing system for option.
- PLC With two control modes: fully automatic control and manual control.
- Friendly human-machine interface and malfunction self-diagnostic function. With the functions of preset and adjustment of running parameters in operator terminal.



Technical Specifications:

- Rated capacity:
- For 40kg/bale: 25 bales/h.
- For 20kg/bale: 24-43 bales/h.
- For 130kg/bale: 12-24 bales/h (for Burely tobacco and reconstitute tobacco).
- For 150kg/bale: 10-55 bales/h.
- For 100kg/bale: 43-55 bales/h.
- Packing specifications: 100kg/bale (jute bag or cotton), 150kg/bale (cotton or wooden board), 130kg/bale (cotton), 20kg/bale (cotton or wooden board) or 40kg/bale (wooden board).
- Weighing error: ± 0.3%.
- Density deviation in the bale: ≤ 10%.



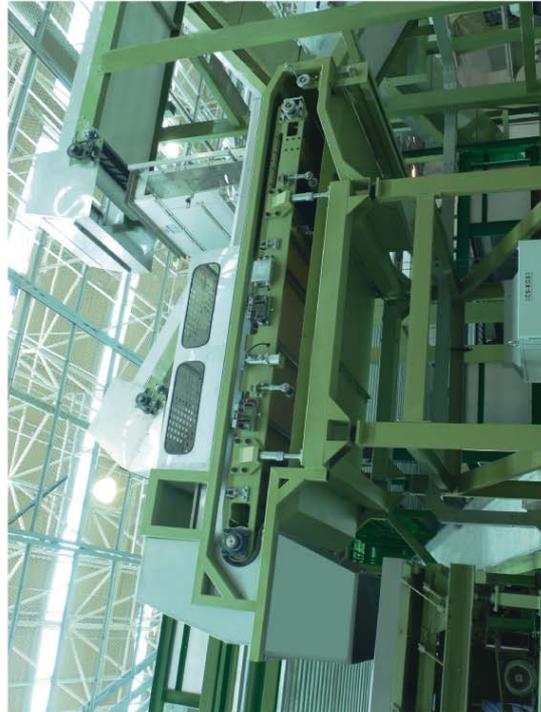
C (J , K , P) 6E Series of Electronic weighing conveyor

Application:

This product is a dynamic weighing machine. It is used in the tobacco primary processing line and threshing and redrying line for achieving accumulating metering, flow rate control, material blending and quantitative control.

Features:

- Conveying and weighing frame adopting cantilever support, more convenient for belt replacement within 30 minutes.
- Adoption of direct stress transfer structure, featuring more direct and reliable stress transfer and good stability of whole machine.
- The sensor installed on the two sides of frame, more convenient for commissioning and replacement.
- Unique tension device. Advance-stroke and return-stroke tension rope in parallel to make the zero point stable, movable counter weight on the tension hammer to resolve the problem such as deflection load and off tracking of belt.
- Double carrier roller with strong anti-interference ability.
- High metering accuracy. Direct stress, double carrier roller and no-weighing frame structure for eliminating the influence on metering accuracy due to horizontal component force arise from the belt movement, the effective length of weighing parts is also favorable factor for increasing metering accuracy.
- Wide adjusting range for blending ratio.
- PLC control with touch screen and HMI for convenient operation and maintenance.



Automatic deflection

- Fault recording
- Modula fault detecting
- Wight signal fault detecting
- Speed signal fault detecting
- Frequency inverter fault detecting
- Electrical push rod position displaying
- Automatic coefficient calculation of weighing calibration
- Applicable for diversified communication and interface

Technical Specifications:

- Rated capacity: 300~12000kg/h
- Width of conveying belt: B=600mm, 800mm, 1000mm, 1200mm, 1400mm, 1600mm, 1800mm.
- Distance between the centre of drive rollers: L₀=2780mm; L₀=3000mm.
- Length of metering section: L=1000mm
- Sensor range: G=4×0kg; 4×10kg; 4×20kg; 4×30kg;
- Metering accuracy: ≤0.5%
- Control accuracy: ≤1%



Kunming Shipbuilding Equipment Co. Ltd.



WPLZA/WCLZA Series of Feeder

Application:

This product is used in primary processing line or tobacco threshing and redrying line for flow rate control, even and quantitative conveying material. It can work with electronic weighing conveyor and metering chute for constant flow rate.

Features:

- Chain of steep conveyor equipped with nylon guide pulley at the side, which features light weight and low noise.
- Frame of tobacco box is wholly welding structure.
- With scallop type photocell detecting window, with wide regulating range.
- Adoption of KA type direct-coupling gear motor, which features compact structure and convenient repair.
- Dust collecting box being floor drawer type for convenient cleaning.
- Bottom cover equipped with return material guide board for guiding the carried material during return into dust collecting box.
- Steep conveyor with lower and upper horizontal parts, which can reduce carried material during return and material leakage.
- With enlarged distance between steep conveyor driving roller and brush roller, and material guide board before brush roller so as to avoid material falling on the brush directly for reducing carried material during return. With whole brush roller for cleaning thoroughly.
- Sealing material to be of pyramidal shape formed by heat compression, with good sealing effect in each turn corner.

Technical Specifications:

- Rated capacity: 1000~11000kg/h
- Width of conveying belt: 600mm~1600mm
- Inclined angle of steep conveyor: 52°



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Silo

Application:

This product is used in primary processing line or tobacco threshing and redrying line for storing and blending evenly of various materials, such as tobacco leave, lamina, cut-lamina, stem and cut stem. It is also good for tobacco materials to absorb sufficiently casing liquid and can balance production rhythm of the whole processing line.

Features:

- With various structures for option: normal silo, nose to nose silo, double-deck nose to nose silo, silo discharging from both sides, silo feeding from both sides
- Two distributing mode: distributing line by line, distributing pile by pile
- Side walls, head section and rear section to be made of stainless steel with big size and mirror surface, which feature nice appearance, anti-rust and easy maintenance.
- Supporting and carrier bar of bottom belt is zinc coated, which feature nice appearance and anti-corrosion.
- The discharging port can be equipped with pneumatic flap, which is good for small batch blending and avoid error blending and leakage.
- Bottom belt to be equipped with double cleaning brush.
- Muster and driven rollers of reciprocating distributor and longitudinal distributor can be drawn out from the side, which is convenient for installation and maintenance.



-With detecting device for detecting balking volume of tobacco materials inside the silo, which is convenient for checking the balking volume of the whole processing line. Optional laser distant measuring device for precise detecting the balking volume and make it possible that the longitudinal distributor can feed materials into silo at any optional position along the guiding rail.

- Discharging speeding of bottom belt is variable via frequency inverter.
- The driving of doffer has timing belt or chain driven for option. Doffer can be equipped with optional detecting device for monitoring the rotation status of doffer to ensure the safe and reliable discharging.

Technical Specifications:

- Balking width: 800~3000mm
- Balking height: 800~1200mm





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ZBH(SBD、SBS) Vibratory (Sieving) Conveyor

Application:

This product is widely used in primary processing line and threshing and redrying line for loosening and conveying the tobacco material such as cut-tobacco, tobacco leaves, lamina, cut-lamina, stem, cut-stem. It is auxiliary linking equipment between main equipments.

Features:

- With good loosening effect and high sieving efficiency.
- Simple structure and convenient operation and maintenance.
- Flexible utilization, can be used for fixed-point material feeding and waste material rejecting.
- Reliable connection between sieving plate and trough body and easy for dismantling and replacement.
- With various sieving mesh size.

Technical Specifications:

- Rated capacity: $\leq 12000\text{kg/h}$
- Width of trough body: 400mm~1600mm
- Depth of trough body: 100mm~350mm



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DPH, DUC, DUL, DPM Type Belt Conveyor

Application:

This product is widely used in primary processing line and threshing and redrying line for conveying various tobacco material.

Features:

- With mature technology and reliable performance.
- Stable running and low noise.
- Easy and convenient for maintenance and cleaning.
- Less leakage.

Technical Specifications:

- Maximum rated capacity: 12000kg/h
- Inclined angle of belt conveyor: 0~29°
- Center distance of master and driven roller: 2~40m
- Width of belt: 400~1600mm



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Control System of Tobacco Threshing and Redrying Line

Application:

The control system of Threshing and Redrying Line developed by KSECO is based on the design principle of advanced, practical, reliable and economical by utilizing world advanced industrial control technology. It can meet the requirement of low consumption, improving quality and integration of management and control. By adopting centralized-decentralized Industrial Bus control mode, it combines various technologies of detecting, PLC, computer graph, network and communication, adopts convenient and flexible design of hardware and software module, so as to meet the requirement of process control and management with different characteristics thus to achieve precise control over the automatic technological process and meet the requirement of management informatization.

Features:

- Openness, expansibility, distributed control, intelligence, information electronization and network.
- Adoption of totally integrated automation solution for meeting the requirements of technological process, quality control and production management of Threshing and Redrying Line.
- Can be operated individually or be one of sub-system to supply production control information for enterprise's grade information management system.
- Adopting three level control structures of on-site control, centralized monitoring and controlling and production management with reasonable structure and clear level.
- Adopting digital communication technologies such as industrial field bus and industrial Ethernet to perform distributed control thus to improve the control accuracy, response time and good performance/price ratio for the whole system.
- Simple and convenient design, mechanical and electrical integrated design, easy for reconfiguration, good adaptation to tobacco primary technological process.
- Integration of field LED display system to help operator checking actual status of the whole production line.
- Integration of visual centralized monitoring and controlling system to help operator to get first-hand on-site visual information.
- Electric protection grade of hardware up to IP54.
- The control system adopts overall safety design to ensure safe operation.
- Adoption of authorized management to ensure system safety and can record operating history.
- Convenient not only for centralized management, control and operation, but also for installation, commission and maintenance on site.
- Easy for operation and maintenance, friendly HMI, with advanced construction and combination of structural unit of program design and control system.



With perfect data acquisition function. Quality data of main process indexes can be recorded at real time.

-All main parts and components are world famous brand.

-The main parts and components include: master controller, distributed type I/O, motor controller, frequency inverter, soft starter, DC regulated power supply, control transformer, air breaker, contactor, master switch, button, indication lamp, control cabinet (box) frame, supervisory software, data base software, operation system software, development tools of management system, server, computer and display screen, etc.

-Power distribution adopts three-stage power supply method: workshop low-voltage distribution to each technological processing section, each technological processing section to control cabinet on site, control cabinet on site to motors of equipment. Each stage of power transmission adopts protection switch for protection of equipment of the next stage.

-Master switch adopts electricity start for power supply, wire inlet of switch cabinet can adopt both top and bottom inlet.

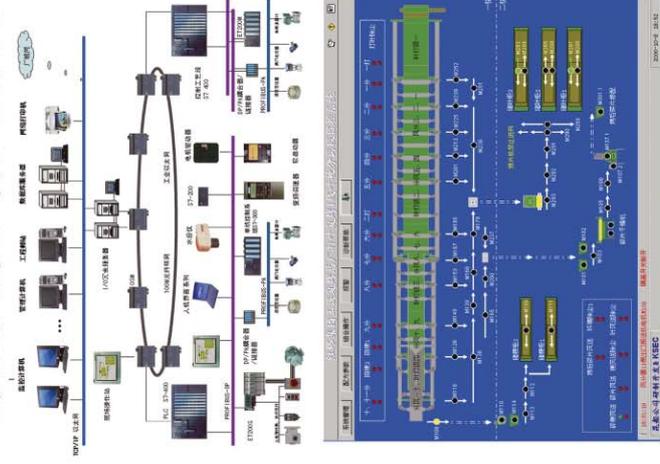
-Power distribution cabinet:

380V ± 38V AC for power supply of equipment.

220V AC and 24V DC for control power supply of detecting devices and actuating devices.

-Technological control sections: lamination processing section, pre-processing section, lamination and stem separation section, lamination redrying section, stem redrying section, lamination pressing and packing section, stem packing section, pneumatic conveying and dust removing section and centralized monitoring and controlling system.

-Composition of control system: main control cabinet, power distribution cabinet, distributed type control box, intelligent device, on-site operation inquiry terminal and centralized monitoring and controlling system.



AW9001~9008 Series Energy-saving Horizontal Threshing Unit

Application:

The product is used in the tobacco threshing and redrying line for separating lamina from stem of tobacco leaf by means of multi-stage mechanical threshing and multi-stage classifying, ensuring all indexes of separated lamina and stem meet certain technological requirements and the need for subsequent processing. The whole process is continuous and automatic.

Features:

- All materials conveying between different stages are by belt conveyors rather than air duct which can reduce degradation.
- Total length and area of energy saving horizontal threshing unit is much less than the traditional threshing unit.
- Total energy consumption of energy saving horizontal threshing unit is 30% less than the traditional threshing unit.
- It can process both the Virginia and Burley tobaccos while meet the desired quality indexes.
- Design and combination of threshing and pneumatic classifier in accordance with technology of gentle threshing and fine classifying, feature multi-stage threshing, gentle threshing, less threshing and multi-stage classifying and fine classifying, which can ensure good quality indexes.



- Its wiper feeder adopts double wiper structure which feature good balance and stable running. With dust suction port in the delivery end of wiper feeder which can reduce dust arisen from the falling of materials.

- Its storage feeder adopts the structure with reversed doffer which can ensure more uniform of material flow into subsequent equipment, adopts side chain drive structure to avoid belt off-tracking.

- Its tobacco splitter adopts structure of reversed doffer plus conveying belt (or doffer only), which can evenly divide tobacco leaves into equal parts. Its adjustment device adopts worm gear and worm for convenient and quick adjustment.

- Horizontal threshers in each stage adopts the latest gentle threshing technique and with rational and optimized threshing knife array, shape and size of baskets, rotating speed of threshing rotors as per different character of each stage. Shape and size of baskets and threshing knife spacing different from stage to stage to ensure large and medium size lamina ratio and threshing efficiency. Adoption of double-side threshing structure to enhance thresher utilization and reduce threshing rotor weight. More convenient for operation and repair with hand-operated device for opening the gate.

- Support rollers of belt conveyor and tobacco splitter with structure of spiral stretching roller for preventing belt off-tracking, and belt tensioning device adopts slide and slice rail structure for simple operation

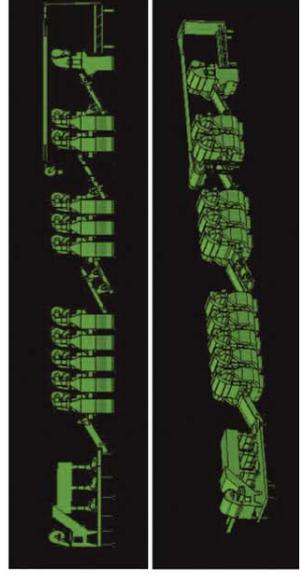
- Pneumatic classifier is counter-flow with the structure of air blowing from the bottom, single thrower, large separating chamber, materials throwing angle is adjustable, which can ensure efficient and precise pneumatic classifying. Its conveying screening apron is drawer type for convenient of maintenance. The whole pneumatic classifier is combined structure combining pneumatic classifier, airlock, discharging belt conveyor, air duct and fan together, which can shorten the total length.

- Materials conveying between different stages is by belt conveyors and no need fan for materials pneumatic conveying, which can reduce total energy consumption.

- Adoption of circulating air in pneumatic classifying and conveying system which can effectively reduce degradation and energy consumption.

Technical Specifications:

- Rated capacity: 3000~12000kg/h
- Configurations: 3-stage threshing and 8-stage classifying, 4-stage threshing and 8-stage classifying, 4-stage threshing and 11-stage classifying, or tailor-made.
- Percentage of large size lamina ($\geq 25.4\text{mm}$): $\geq 56\%$
- Percentage of large and medium size lamina ($\geq 12.7\text{mm}$): $\geq 87\%$
- Percentage of stem in lamina (stem diameter $\geq \Phi 1.5\text{mm}$): $\leq 2.5\%$
- Percentage of lamina in stem: $\leq 1.5\%$
- Percentage of long stem (stem length $\geq 20\text{mm}$): $\geq 75\%$
- Percentage of scraps (lamina $< 1/8''$): $\leq 2\%$
- Percentage of thick stem in lamina (stem diameter $\geq \Phi 2.38\text{mm}$): $\leq 0.5\%$



KG3C Series of Stem Redrier

Application:

The product is used in threshing & redrying line for removing excessive moisture in stem. After the processes of drying and cooling, the moisture content and temperature of the stem is suitable for storage for a long period for alcoholization or fermentation in package. After redrying, the greenish odor and ammonia in the stem is evaporated to some extent with moisture. As the result, the taste of the stem becomes mild and rich in aroma and flavor.

Features:

- All inner surfaces of all chambers and all circulating fans in chambers made of stainless steel.
- The conveying mesh adopts side-chain driven structure and hinged with stainless steel perforated plate with kidney-shaped holes.
- Cooling section for cooling down output temperature of stem suitable for packing.
- Wiper feeding for a even distribution of stems on conveying mesh.
- Adoption of slow-drying at low-temperature technology which can reduce shrinkage ratio during drying process.
- The motors of main drive adopts frequency conversion speed regulation.



Technical Specifications:

- Rated capacity: 850kg/h~3400kg/h
- Moisture content of Input stem: 18%~20%
- Hot air temperature in drying section(before passing stem): 75℃~110℃
- Moisture content of output stem: 10%~12%
- Deviation of output stem moisture: ± 1%
- Temperature of output stem: ≤ 45℃
- Laying thickness of stem: 30mm~60mm

