

# MESNAC

## Small Chemical Batching System

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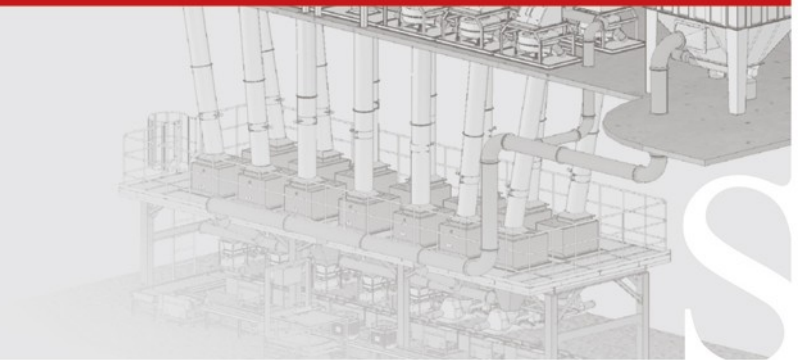
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## General Introduction

### Rubber & Tire Machinery Manufacturer



#### Reliable with Low Price

- high quality level
- most economic success
- system with just enough essential parts and designed with ergonomics
- perfect design for operation in 24 hours per day, 365 days per year

#### One-stop Service

- understanding customers' requirements correctly
- optimized complete solutions to various situations
- designed suitable for your measurement
- powerful project management (turn-key ability)
- strong ability to modify and upgrade your existing systems
- short delivery period, cut time waste
- in-time, long-term and closest customer service (Europe service center, India service center.....)

#### Full of Experience

- more than 90% domestic market share
- provide systems (including turn-key project) or service to our customers all over the world. (UK, Italy, Romania, Hungary, Poland, Russia, Thailand, India, Iran, Japan, Brazil.....)
- team with experienced specialists and skilled technicians
- specialized in handling various materials (including sulphur)
- own two R&D centers: Powder Handling Technology Centers, Mixing Rubber Test Center

#### GREEN Workshop

- maximum energy saving
- dust free and enjoyable clean environment
- complied with European emission regulations



With thousands of systems' manufacturing experience, QINGDAO MESNAC CO., LTD. is known as today worldwide: the technology leader of rubber handlings, especially in mixing shop. We've gained more than 90% domestic market share and reached the top 20 tire equipment manufacturers of the world.



Big Bag Discharge Station



Paper Bag Discharge Station



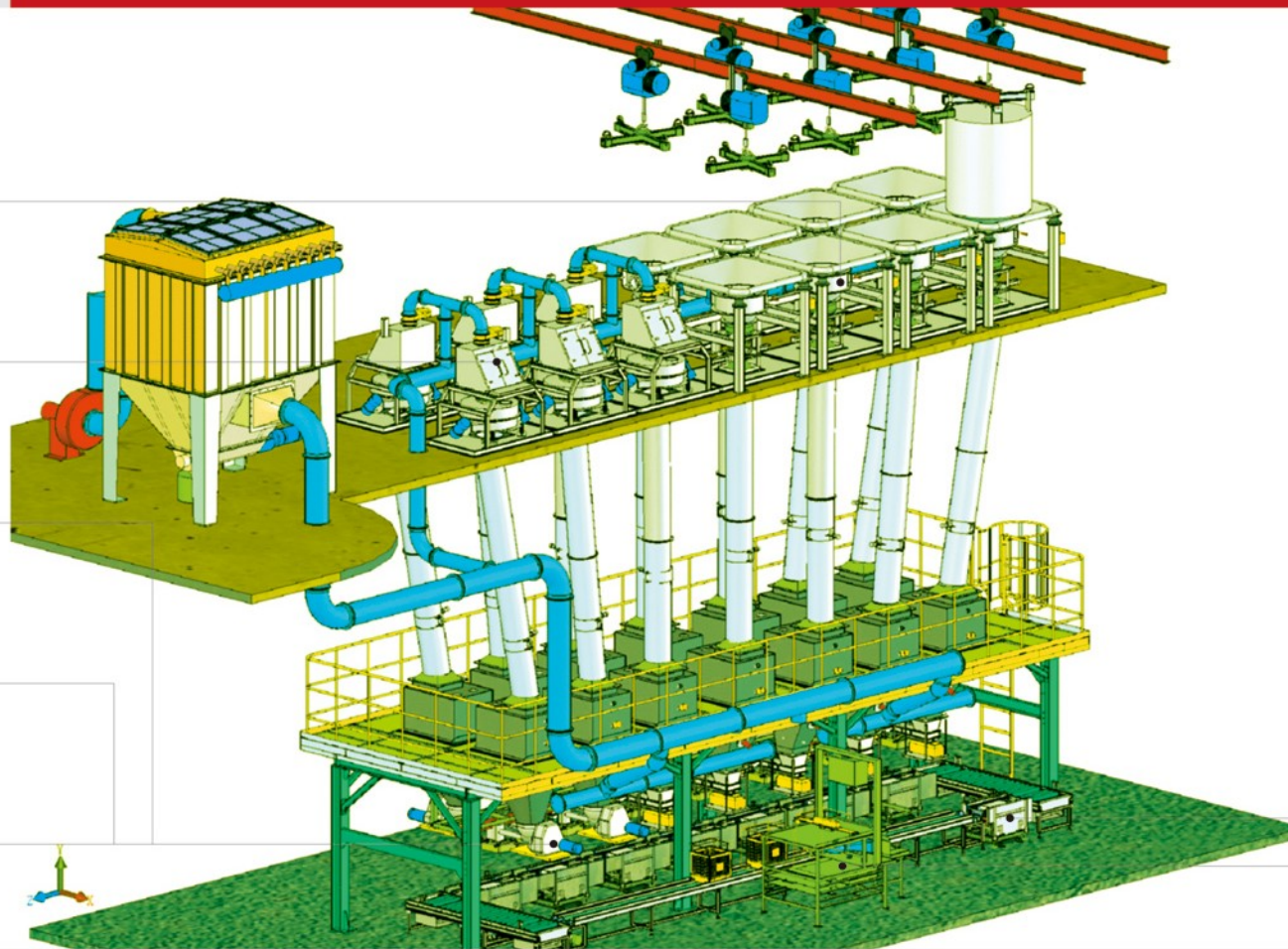
Vibratory Feeder



Screw Feeder

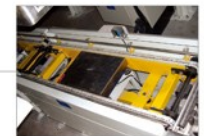


Disk Feeder



MESNAC is devoted to researching and developing small chemical batching system with characteristics of accuracy, stability and efficiency, which to supply equipments and solutions with economic, high-quality and Green production

- To realize mixing quality control and record by barcode and RFID
- To ensure high accuracy, high efficiency and uniformity batching by RIP-MES control system
- Complied with CE and ATEX directive, the dangerous chemicals can be handled (such as sulphur)
- Complied with European emission regulations
- Energy saving and environment friendly



Weighing Unit



Bag Preparation Unit

## Automatic Small Chemical Batching System

According to material properties, we adopt different feeders such as vibrating, screw, disk, belt types, equipped with intelligent and stepless speed regulating control systems to achieve the high accuracy and speed batching.

The electric hoists controlled by wireless barcode system associated with automatic cylinder lockers ensure fill materials into the right bins.

The RFID scanner can record the relationship of buckets and recipes and the production information would be printed on the plastic bags, which includes raw material, the operator codes, recipes, date etc., to realize the quality control and retrace.

### Typical study case I Rectangle Type Auto-batching System

- Bins face to face arrangement, one scale shared with two feeders and the cost reduced
- Big bag discharge station, vacuum lifter designed based on ergonomics to make discharging quickly and reduce labor intensity
- Unique weighing unit with lift-down structure can realize the scale with high precision and long life
- Individual weighing unit and accumulation conveyor line can make the operation more flexible and comfortable



### Typical study case II Loop Type Auto-batching System

- The individual dust collector for each material not only reclaim material but also improve environment
- Conveying line in the loop type driven by reducing-motor or cylinder, simple configuration, reliable operation and convenient maintenance
- Whole system is under single-storied to save space



## Manual Small Chemical Batching System

- Suitable for the rubber article industry with many kinds of materials batched
- Adopting the auto-positioning and manual weighing mode to realize the communication management of batching process
- Door locker and barcode system to avoid discharging the wrong material to the bins
- Simple structure and comfortable operation

### Typical study case I Manipulator Type Manual-batching System

- Container with the modularizing configuration is good for expansibility
- Manipulator can take and return material automatically to ensure right recipe and material
- Compact arrangement, low floor area occupied, high plant utilization



### Typical study case II Double Disk Type Manual-batching System

- Specially designed structure to ensure correct material weighed
- Weighing sensors to detect the material quantity in store container is convenient for material management
- Weighing alternative mode to ensure high efficient production

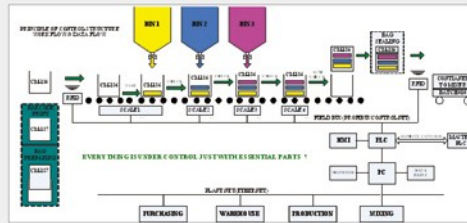


Everything is under control just with essential parts

CONTROL SYSTEM----RIP-MES:

- Rubber----focus on Rubber & Tyre Industry
- Individual----listen to your exact requirements
- Professional----guarantee both our quality

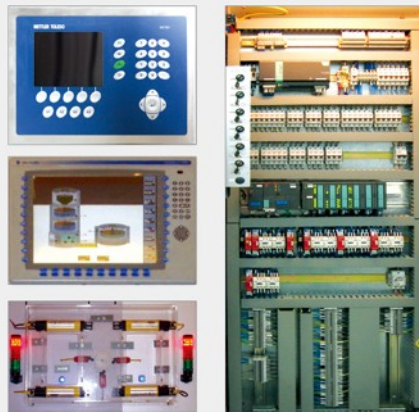
The principle of control structure as below:



Characteristics: Reliable stability

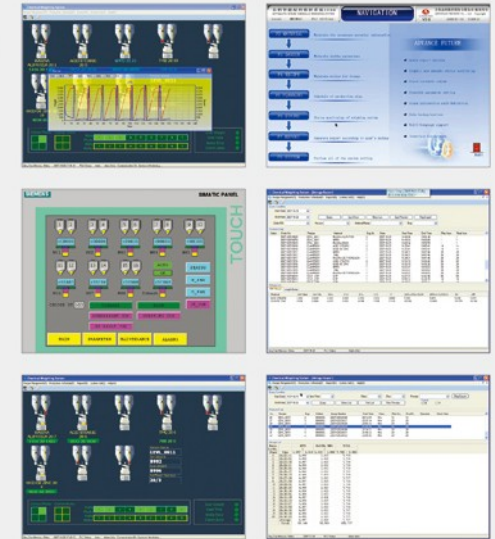
Based on experiences from hundreds of systems, RIP-MES will bring you optimal stability. Certificated control components, various notes, sufficient redundancy makes the system run with the lowest level of faults and maintenances throughout the years.

- **PLC**  
Siemens, AB, GE, Mitsubishi
- **Sensors & Meters**  
Toledo, Hardy, Siemens
- **Other components**  
Schneider, Pliz, Phoenix, Rittal, E+H, Festo, SMC



Characteristics: Ample functions

- **Production Management (PMF)**
- **Real-time Monitor and Information (RMI)**
- **Batch Report and Analysis (BRA)**  
Batch the production reports, calculate CP/CPK, and feedback the analysis.
- **Flexible Structure**  
Remain interfaces with various of systems and networks (Profibus, ControlNet, etc)
- **Quality Control**  
Avoid mistakes by process Barcode or RFID.
- **Intelligent Production Plan (IPP)**  
Receive plans from the Plant Net, adjust the chemical production by itself if authored.
- **Intelligent Situation Adapt (ISA)**  
Consider actual situation, adjust the parameters to the best by itself if authored.



Characteristics: Efficiency & Saving

- With optimized interface and function blocks, RIP-MES can help the workers to realize easy and efficient operation.
- Strictly according to the technics requests, RIP-MES will cut any waste during whole production process, which will also leading you a firm step on the way to make your factory GREEN.



Qingdao MESNAC Co.,Ltd maintained long term ties with many famous rubber & tire manufacturers. The products of our company have been selected by over 300 rubber & tire manufacturers in dozens of countries and regions. Till now, we have established 9 large regional service centers covering the whole world to guarantee your selection.

