

problems: low automation, requiring a large amount of labor; poor sanitary conditions, cross-contamination; being difficult to guarantee fermentation conditions; no large-scale and continuous production, if not controlled correctly, it's likely to be counterproductive in the fermentation process (infected with bacteria and go moldy, produce toxins, etc.). However, the intelligent fermentation equipment has the following characteristics: continuous and scale production; automatic and intelligent operation; the fermentation environment is controllable to ensure the fermentation conditions; good sanitary conditions without cross-contamination and well-cleaned equipment; energy-efficient running which will reduce fermentation costs; fermentation and drying equipment is environmentally friendly.

### 3. Intelligent Fermentation Equipment

#### 3.1 Automated rectangular fermentation bed (facultative aerobic)

The materials are fed into the distributing machine by air, and then inoculated in the inoculation mixer, and finally be distributed; the fermentation bed has the auxiliary heating function, which is generally used for facultative or anaerobic fermentation; the bed thickness is usually 700~1000 mm and it can be appropriately adjusted according to the actual production conditions; automatic feeding and material tumbling is realizable in the production process; after fermentation, the discharging is automatic, continuous, quantitative, uniform and stable discharging, and the back end can be seamlessly connected with the drying system.



#### 3.2 Round fermentation tower

It's generally adopted for facultative or anaerobic fermentation, and is specially for high bed fermentation; the maximum bed thickness is 2000 mm and it can be appropriately adjusted according to the actual production conditions; automatic feeding and discharging is realizable in the production process, and the discharging is continuous, quantitative, uniform and stable discharging, and the back end can be seamlessly connected with the drying system. Good anaerobic fermentation environment and excellent fermentation effects generate stable products. The capacity is 50~100T/batch.



#### 3.3 Rectangular aerobic fermentation bed

The fermentation machine can automatically adjust the temperature, humidity and ventilation quantity to control the fermentation process. The inoculated materials are fed into the fermentation machine, the bed thickness is usually 300~450 mm and it can be appropriately adjusted according to the actual production conditions; the machine is specially designed for shallow bed fermentation; automatic feeding and material tumbling is realizable in the production process; after fermentation, the discharging is automatic;



#### 3.4 Round fermentation machine (aerobiotic)

The fermentation machine can automatically adjust the temperature, humidity and ventilation quantity to control the fermentation process. The inoculated materials are fed into the fermentation machine, the bed thickness is usually 300~500 mm and it can be appropriately adjusted according to the actual production conditions; the machine is specially designed for shallow bed fermentation; automatic feeding and material tumbling is realizable in the production process; after fermentation, the discharging is automatic;

### 4. Drying Equipment

#### 4.1 Shell and tube dryer

Steam is in the tube pass and materials contact with the shell pass, and the materials are scattered by the shovelling plate, transported and dried in the dryer. The dryer has the following advantages: single equipment has large capacity; high efficiency and energy saving, low steam and electricity consumption for per ton of materials, continuous production.

#### 4.2 Live drying tower

The bed thickness is adjustable; the materials inside are in fluidized state and fully contact with hot air, which will generate flash evaporation effect; the materials can be dried in the low temperature, continuous production and energy-saving is realizable.

#### 4.3 Combined drying

Combining the pipe bundle dryer with the live drying tower: most water are removed from the materials in the pipe bundle dryer, and then the materials are fed into the live drying tower for secondary drying, which fully takes advantage of the two machines, resulting in energy-saving and low-temperature drying.

#### 4.4 Circulation drying at low temperature

It has low air temperature, large air volume and quick flash evaporation, and the low temperature drying will ensure the material activity to the most extent, and it can realize the drying of viscous materials and meet the need for large capacity of single equipment. (Translated by Wu Yunzhu)

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# Glimpse of Myande

An English Version of

迈安德之窗



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MYANDE GROUP

Oils&Fats Equipment and Technology  
Solid-state Fermentation Equipment and Technology

Starch&Derivatives Equipment and Technology  
Evaporation Crystallization Equipment and Technology

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## Myande's Values Camp Activity

On September 6th to 7th, 2019, senior and middle-level management teams of Myande Group gathered to hold a "Myande Value Camp" event.

This value camp took the oils & fats engineer division as the model department to create a frank and open communication environment. Participant reviewed the company's mission, vision and values, discussed the values, ways and means of its implementation. By learning from professional management experience of excellent companies, this event was aimed to enhance the management staff's professional awareness and management ability, to enhance the cohesion force and combat inefficiency.

When talking about the Myande's corporate mission, Mr. Xu Bin, the chairman of Myande and Mr. Rong Zhen, the president of Myande, shared their respective moods during the start-up period and led the whole team to the present. From the beginning of the business to realize the dream, achieve the team, service the customers, to create the double-wheel as the high-quality machinery and system integration drive, they create the values for customers and create bright future with customers together, to make Myande to be a conscience enterprise with cultural heritage and technical accumulation.

### Mission

With professionalism, we manufacture high quality mechanical products and supply complete solutions that enable our clients to succeed. We are dedicated to create a bright future for us as well as for our clients.

### Vision

We aim to grow into a globally respectable leading company in our well-defined industries.

### Values

#### Passion



- curiosity
- sense of mission and responsibility
- clear vision
- creativity
- initiative
- team spirit
- fast action

#### Precision

- attention to details
- workmanship
- professionalism
- accuracy
- seeking excellence

#### Honesty

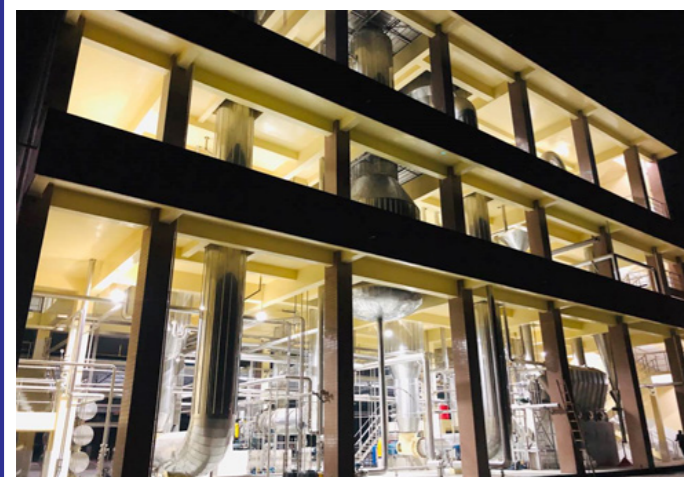
- kindness to people
- positive view of the world
- frankness in communication
- completeness in expression
- faithfulness to commitments
- enabling clients to succeed
- empowerment of employee development
- respect to shareholders
- social responsibility

At the end of the activity, all participants used one word to summarize their gains from the two-day event. Words that are used include collaboration, affinity, self-discipline, passion, sentiment, encouragement, reflection, persistence, change, frankness, mentality, breakthrough, forgiveness, consensus, communication, open, grow, transform, warm etc. We believed that these fine words would penetrated into everyone's heart and mind and become a guide for future work!

(Translated by Chen Ting)

## Win-win Co-operation to Create New Development in Pickle Industry

By August 2019, the Chuannan 500m<sup>3</sup>/d pickle brine MVR evaporation project undertaken by Myande Evaporation Equipment Co. has been running stably for 4 months. Both capacity and operating flexibility have met the design requirements, and the water content in the dried salt is less than 1%, which is up to the second industrial standard. The final product can be immediately adopted for pickling



production, and the dried salt can be stored after packaging with small bags. The smooth implementation of this project has successfully solved the resource utilization problem of pickle brine for the customer.

The pickle brine has the characteristics of high salt and high COD, and the concentration of organic matter is as high as 30000ppm, which has been the difficulty of pickle brine treatment and has troubled the pickle industry for many years. For the disposal of this type of wastewater, Myande has selected the pretreatment system +MVR evaporation after repeated tests, which greatly reduced project investment, improved the system reliability and stability, and finally realized the salt production that could be packaged and stored.

This system has excellent processing performance, remarkable energy saving effects, high automation and easy operation, achieving the resource utilization of high salt and high COD wastewater, as a result, reducing the wastewater discharge of the industrial park, protecting the environment, and contributing to the maintenance of blue sky and white clouds. (Translated by Lu Le)

## 2019 New Employee of Orientation

On the 16th anniversary of the establishment of Myande in 2019, a group of young and energetic partners joined. They were confident and full of passion. During the one-week induction training, they understood and integrated into Myande actively and strived to complete the role change as soon as possible.

### Experiential outward-bound to build a high effective team

At 8 o'clock on the morning of July 4th, more than 20 new employees went to Yizheng outward-bound base to start a two-day and one-night training activity. Through a series of items to full play personal potential abilities and enhance team cohesion and centripetal force. During the training process, the new employees met, knew and helped each other. Even though they soaked with sweat, they never gave up themselves or teammates. We can believe that when they face difficulties in their work in the future they won't be afraid and can overcome it.

### Inherit corporate culture and lay the theoretical foundation

Myande arranged more than 10 senior engineers in various fields to serve as teachers of theoretical courses, introduced the company's development history, corporate culture, business etiquette, product knowledge, management software application, financial basic knowledge, company daily system, safety education etc.. Through the training, help the new employees to understand Myande more deeply, to

understand the professional quality and technical skills more thoroughly, and lay a solid foundation for the new journey of Myande in the future.

### Metamorphosing to fly and lighting youthful dreams

On the afternoon of July 9th, the 5th new staff speech contest with the theme of "metamorphosis fly with glorious youth" was kicked off. During the competition, the players expressed their thoughts on youth, metamorphosis and growth in different expressions and speech styles. The speech won the applause of the judges continuously. Just because of the youth and fearlessness, it became the most active phrase in the youth dictionary; Just because never forget the intimal ideal, it became the clearest goal in the youth times; Just because of the passion and glory, it became the most memorable memory of youth years. (Translated by Chen Ting)



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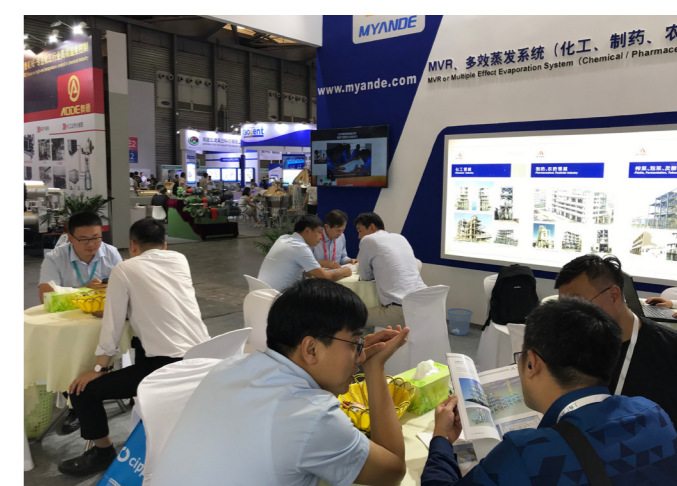
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## New Evaporation Technology and Wastewater Treatment

From August 28th to 30th, 2019, 11th Shanghai International Chemical Environmental Technology & Equipment Exhibition was held in Shanghai New International Expo Centre. The exhibition has covered hot topics in the environmental protection industry, such as wastewater treatment, exhaust air treatment and solid waste treatment. As a leader in the evaporation crystallization industry, Myande was invited to participate in this exhibition.

Nowadays, the concept of green environmental protection is deeply rooted in people's hearts, and every enterprise pursues the co-development of economy and environment. The diversity of chemical products and the difficulty in controlling chemical reaction process lead to the complex composition of chemical industry wastewater, which is difficult to be disposed of. Due to the characteristics of high salt, high COD and multi-component, biological treatment and chemical treatment are useless in the treatment of chemical wastewater while evaporative crystallization method offers a new solution to this chronic problem faced by many chemical companies. As the wastewater contains high COD, which will be gathered constantly in the evaporation process, resulting in various problems such as scaling of the heat exchange tube, high concentration of mother liquor and decreased evaporation efficiency, bringing more difficulty in evaporation. The complexity of chemical process will make the wastewater components complex and difficult to test, and cause great pollution. The above problems are bothering chemical enterprises, so they came to the exhibition to seek



solutions.

In the field of high salt wastewater treatment, Myande has perfect experimental equipment, advanced technology and rich engineering experience. To deal with the wastewater which is difficult to be disposed of, Myande conducts water quality analysis and evaporation experiment firstly, combining with pre-treatment scheme, to provide customers with a complete and systematic solution.

In the exhibition, Myande exhibited evaporation project cases in many industries, such as chemical industry, pharmaceutical industry, metallurgy, printing and dyeing and pickle industry, etc., which attracted many visitors, and the communication with Myande technicians was unanimously recognized by everyone. (Translated by Lu Le)

## Soybean Meal Solid State Fermentation & Drying Technology and Equipment

With the increasing popularity of feedstuff fermentation technology in China, the feed industry and breeding industry have put forward new requirements on the output and quality of fermented raw materials. The reliability of the fermentation raw materials production technology and equipment plays a decisive role in the quality.

The moisture content of feedstuff after solid state fermentation is normally about 40%, and it's easy to deteriorate if improperly preserved. In addition, in industrial production of feedstuff, it's difficult to add wet materials to the feed production stage automatically. Therefore, most manufacturers of fermentation feedstuff need to adopt drying equipment to reduce the moisture content of feedstuff to be less than 13% for storage and transportation while ensuring its stability and quality.

### 1. Soybean Meal Fermentation Process

The process of soybean meal solid fermentation can be briefly described as follows. Feed the strain to the raw materials and then add water for mixing until the moisture content of the fermentation materials is about 40%. Then,

feed the material into fermentation equipment for solid state fermentation, which generally lasts 2 to 4 days. After fermentation, drying the materials until the final product moisture content is not higher than 10%, grinded and pass through a 20-40 mesh sieve, and finally packaged. Traditional solid-state fermentation equipment tends to require a large amount of labor. With low level of automation, it was not suitable for continuous production. Current intelligent solid-state fermentation equipment can automatically feed and discharge. The discharge is uniform and stable, and the back end can be connected with the drying system seamlessly, bringing products with excellent and stable quality and good fermentation effects.

### 2. Current Situation of Solid State Fermentation Equipment

At present, solid fermentation equipment in the industry mainly includes ground stacking fermentation, ton bag fermentation, above-ground tank fermentation, box fermentation, plastic bag fermentation and underground pool fermentation. Most such equipment has the following