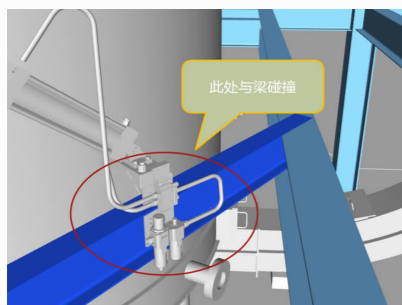


The Application of 3-D Design in Oils & Fats Engineering

As the scale of oils & fats project is becoming larger and larger, traditional 2D drawings can no longer fully meet the needs for efficient and effective engineering process, 3-D design is rapidly gaining increasing importance nowadays. In this circumstance, Myande, in collaboration with one professional software company, has developed a 3-D design software package especially for oils & fats engineering projects. This 3-D software, while enabling designing work to be conducted in a virtue 3-D space, enables the designer and customers to visualize spatial relationship among each design unit, and thus improves accuracy of equipment layout, piping layout and material statistics. Another feature of this 3-D design software is that it allows for dynamic, modeling, simulation, and accurate calculation for most optimal design efficiency.

1. Equipment and civil engineering modeling

Myande 3-D design software has a large database, which, in combination with Myande's standardization process, effectively shortens the design cycle as all standard modules of the equipment are obtained from the database. According to the civil building structure drawing, civil work model can be drawn at 1:1 scale directly so that interference between equipment items and between equipment and civil works can be effectively eliminated in the designing stage. As shown in dwg1, interference between the equipment and the structure can be detected visually.



Dwg1 Collision of Equipment and Structure

2. Pipeline Modeling

Pipeline modeling is conducted after collision check. Components database and classification database are the core of the pipeline modeling. The class database contains full range of standards for components commonly used internationally. The components database, including tee joints, reducers, elbows, and valves, enables the designer to rapidly and accurately choose the needed components at any time.

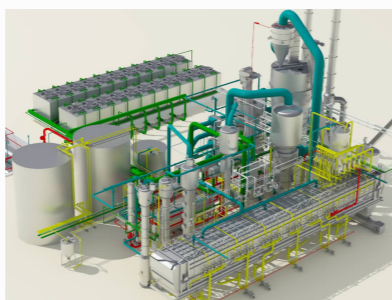


Figure 2 Pipeline and Equipment Modelling

3. Material Statistics

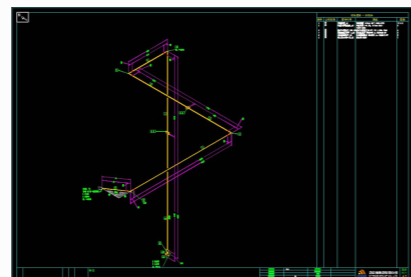
After the design, verification and modifications of civil work, equipment and pipeline, we can proceed to make material statistics. The 3-D design software can automatically generate bill of material from a series of pipes and pipe segments involved in the design, which is easy for statistics and check. Figure 3 is an example of bill of materials generated by the software. If the fluid medium is different, the pipe materials will be different considering the requirements like anti-corrosion, high temperature resistance and anti-explosion. The automatic generation can not only bring convenience to the actual design and production, but also improve the accuracy.

管道材料清单									
序号	规格	材质	长度	重量	数量	重量	规格	材质	重量
1	DN150	304	100	100	1	100	DN150	304	100
2	DN150	304	200	200	2	200	DN150	304	200
3	DN150	304	300	300	3	300	DN150	304	300
4	DN150	304	400	400	4	400	DN150	304	400
5	DN150	304	500	500	5	500	DN150	304	500
6	DN150	304	600	600	6	600	DN150	304	600
7	DN150	304	700	700	7	700	DN150	304	700
8	DN150	304	800	800	8	800	DN150	304	800
9	DN150	304	900	900	9	900	DN150	304	900
10	DN150	304	1000	1000	10	1000	DN150	304	1000

Figure 3 Bill of material

4. Generating Drawings

After completing the above work, we can transform the 3-D drawing into 2-D drawings. The 3-D design software can generate 2-D piping layout, equipment layout and equipment opening and holes drawings automatically from the plant models. We can select one of the pipelines or all the pipelines to transform into corresponding SLD (single line drawing). As shown in Figure, the SLD can clearly identify the specific direction, length and installation location of each pipe. It can also select corresponding equipment and then automatically generate principal three views and sectional views, or manually generate the view of certain angle.



Dwg4 Single Line Drawing

激情豪迈 Enthusiasm
精细为豆 Precision
诚信是德 Honesty

Http://www.myandegroup.com
E-mail: myande@gmail.com

迈安德之窗

Glimpse of Myande

迈安德集团 主办
MYANDE GROUP

Oils&fats equipment and engineering
Starch equipment and engineering
Syrup equipment and engineering
Fermentation equipment and engineering

Bi-monthly Newsletter No. 29 March 2018

Myande's Meal Sweeping Systems Put into Operation in AUSCA Plant

As market economy steps into a "new normal" phase, rising resource and environmental constraints and increasingly fierce competitions have led more and more crushing plants to vigorously improve their meal storage facilities by eliminating some chronic problems such as excessive space occupation, loss of moisture, uneven meal protein content, labor-intensiveness and negative impact on the environment.

To relieve the pressure of sales and production and solve the problem of space shortage in its factory, AUSCA Grain and Oils Co., ltd decided to add 2 more silos for bulk meals storage with capacity of 5,000 ton each. After comparing and discussing the technologies for many times, they selected Myande to provide solutions for meals sweeping. This deal symbolizes Myande's breakthrough and upgrade in meal sweeping system. The smooth and successful start-up of the meal sweeping system has solved a pressing problem for AUSCA.

The core equipment of meal sweeping system is vertical meal sweeper. The CCJL series sweeper developed by Myande is a kind of efficient and modern equipment which is suitable for the storage and discharge of varieties of bulk materials such as soybean and rapeseed meals, with advantages of safety and stability, high efficiency, low loss and flexible discharging, etc. Thus, since its successful launch, about 20 units are functioning on the market across China. The meal sweeping system has brought maximum benefits to the customers and has proved to be an ideal solution.

1. Small space requirement and large storage space. Reliable empirical analysis and detailed calculation show that vertical silo will save about 70% of the floor area compared with the traditional storage method.

2. Eliminating classification of materials and homogenizing protein content of soybean meals. Vertical

silo can easily avoid bad fluidity of materials and caking by breaking down cakes through stirring function. Thus, it can effectively eliminate classification of materials, precisely control the protein content and avoid loss on the sales caused by uneven protein content of finished meals.

3. Airtight storage reducing weight loss of meals. Airtight silo can effectively control moisture loss and prevent mildew in wet weather, thus reducing weight loss of meals and bringing more benefits to customer.

4. Safer storage and maximum benefits: materials feeding and discharging firstly can ensure the product quality. No need to clean the silo manually, which will reduce labor costs. It not only ensures the safe production but also brings maximum benefits to the customer.

5. Improving the control plan for carefree production and operation: the whole materials discharge and recycle system adopt comprehensive control system, realizing one-key start and automatic recycle, avoiding the dependence of materials storage and discharge on the operators, also, equipment maintenance reminder system ensures the safe and stable operation of equipment.

(Continued on Page 2)





6. Closed materials storage reducing environment pollution: bulk materials contain large amounts of dust and small particles, resulting in the pollution of the whole factory, while in the meal sweeping system, materials are stored on the airtight space without leakage of any dust or small particles, thus we can have a clean and tidy storage area.

7. Self-adjusting drive unit: high load-bearing middle rotary support and specially designed gearbox ensure the stable operation of equipment, also, reliable walking rails and special blades are the guarantee of safety production.

(Translated by Wu Yunzhu)

Myande to Undertake a Salt-Water MVR Evaporation Concentration Project

Recently, Myande signed contract with Chongqing Fuling Mustard Group, by which Myande will supply a 6t/h mustard salt-water MVR evaporation & concentration

system. MVR evaporation method is used to evaporate and condense mustard brine, and the concentrated solution is reused in mustard production process to achieve energy saving, environment protection, and resource utilization.

Marinating, an important process for the production of mustard, typically generates a large amount of high-salt-content waste water. Features of this waste water include high COD, high hardness, and large concentration changes of mustard brine. It thus has always presented a tough problem in the mustard-making factories. Myande conducted a number of evaporation experiments, third-party tests and data analysis for the water samples of Fuling mustard. Eventually, relying on many years of experience in evaporation industry, Myande designed the technical program accordingly and received high recognition from Fuling mustard project team.

(Translated by Lu Le)



Myande Complete Fermentation Equipment Won CCOA Outstanding Science and Technology Prize

On January 30, China Cereals and Oils Association (CCOA) released the "Decision on Awarding 2017 CCOA Science and Technology Prize" on its official website (www.ccoaonline.com). With highly innovative fermentation & protein engineering process and equipment, Myande Group was awarded first prize of "2017 Outstanding Science and Technology Achievement".

Myande's prize winning equipment include multi-layers fermentation tower, rectangular fermentation bed and disc anaerobic fermentation machine. These highly innovative and automatic machines have proved to be effective in helping users to solve some chronic problems such as non-uniform solid-state fermentation effect, difficulty in controlling fermentation environment, and high

viscosity of oil cakes after fermentation. In addition, Myande launched low-temperature drying system to avoid loss of activeness in the fermentation process. With new intelligent, advanced technology and complete set of equipment, the entire fermentation process environment is controllable. Reliability and stability of fermentation products have been greatly improved through innovation of processes and technologies.

Myande fermentation engineering covers manufacture and supply of complete equipment for industrial-scale fermentation plants, consultation, integrated package solutions and turnkey engineering services.

(Translated by Lu Le)

Mr. LI Hujun Global Sales
Starch Engineering and Equipment
Email: myandehj@gmail.com, LHJ@myande.com
Mobile: 0086-187 6230 5339

Mr. LIU Wenwen Global Sales
Oils & Fats Engineering and Equipment
Email: myandelw@gmail.com, LWW@myande.com
Mobile: 0086-187 6230 5251

Mr. LI Xudong Director of Global Business Dept
Global Business Development
Email: myande@myande.com, LXD@myande.com
Tel: 0086-514-8784 9111 Mobile: 0086-138 1318 9222

MYANDE GROUP CO., LTD.
Add: No.198, Jijian Road, Yangzhou, Jiangsu, China
Tel: 0086-514-8784 9111 Fax: 0086-514-8784 8883
Web: www.myande.com



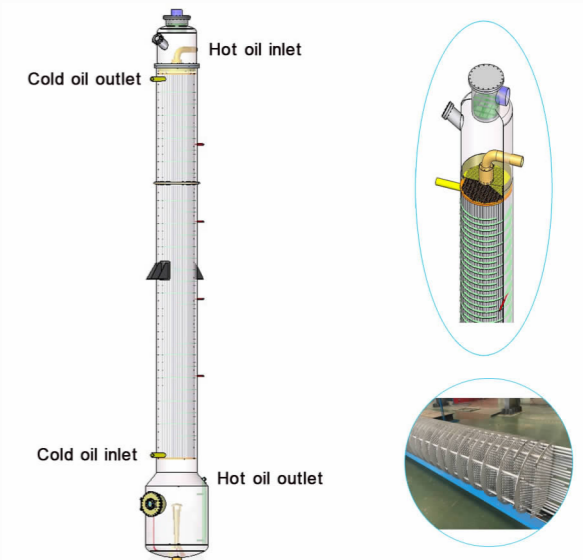
Application of High Efficiency Vacuum Economizer in Oils & Fats Engineering

In oil refinery, the economizer used for the heat recovery of the deodorization section is key equipment. Economizer with good performance is characterized by high efficiency of heat recovery, long service life and minimized requirement for maintenance.

At present, deodorization economizer applied in oil refinery plants can be roughly divided into two types. One type is heat exchanger with forced heat exchange, including tube type heat exchanger, screw plate type heat exchanger and welded plate type heat exchanger, etc. The other is vacuum heat exchanger, including vertical vacuum heat exchanger and horizontal vacuum heat exchanger.

Myande recently developed a new type vacuum economizer based on falling film heat exchanger for heat recovery in the deodorization process. Liquid in the falling film evaporator has the advantages of thin film, fast flow rate, large heat transfer coefficient inside tubes, and minimized pressure drop in tubes. In recent years, this equipment has been widely used in oil refinery projects of soybean oil, rapeseed oil, corn germ oil and peanut oil. Through actual operation, it has been proved that this type of economizer has excellent process performance and remarkable energy saving effect. Compared with other types, it has obvious technical advantages.

(Translated by Hu Tingting)



Comparison of Process Performance of Vacuum Economizer

No.	Falling Film Vacuum Economizer	Horizontal Vacuum Economizer	Tube Type Heat Exchange Economizer	Screw Plate Type Heat Exchange Economizer
1	Bleached cold oil temperature: 110°C, Oil discharging temperature: 230°C	Bleached cold oil temperature: 110°C, Oil discharging temperature: 220°C	Bleached cold oil temperature: 110°C, Oil discharging temperature: 225°C	Bleached cold oil temperature: 110°C, Oil discharging temperature: 225°C
2	Heat recovery rate: 80%	Heat recovery rate: 73%	Heat recovery rate: 76%	Heat recovery rate: 75%
3	In vacuum protection, not easy for scaling	In vacuum protection, not easy for scaling	Heat exchange tube wall is easy to scale and needs to be cleaned regularly.	Equipment internal wall is easy to scale and needs to be cleaned regularly.
4	Heat recovery efficiency is stable.	Extra steam is used, and the efficiency of heat recovery is reduced quickly.	The efficiency of heat recovery is reduced quickly.	The efficiency of heat recovery is reduced quickly.
5	Small area, easy to install	Large area, high construction cost	The equipment is easy to leak, and the cost of later maintenance is high.	The equipment is easy to leak, and the cost of later maintenance is high.