

Alcohol (Ethanol) Plant



Allbest Creative Development Ltd. (ALLBEST)

Preface:

We provide the total solution and complete plant for alcohol industry in China, through our continuous development and effort over many years.

Except for over hundreds projects in China, we provided the plant and services to the clients in Mali, Iran, Mongolia, Russia, Kazakhstan, Bangladesh, Thailand and other countries.

Technology Portfolio

No.	Complete Plant and Technology	Process	Annual Capacity (Tons, per Line)	Raw Materials (as input)	Finished Product (as output)
I	Alcohol (Ethanol)			Starchy materials (from corn, potato, sweet potato, wheat, cassava, etc)	
A	Alcohol (based on starchy materials)	Atmospheric distillation			
		Two-tower	1000-150000		General Grade, GB10343-2002 Standard
		Three-tower	1000-150000		Top Grade, GB10343-2002 Standard
		Four-tower	1000-150000		Higher than Top Grade, GB10343-2002 Standard
		Differ-pressure distillation			
		Three-tower	1000-150000		General Grade, GB10343-2002 Standard
		Five-tower	1000-150000		Top Grade, GB10343-2002 Standard

B	Alcohol (based on sugary materials)	Atmospheric distillation		Sugary materials (from molasses or syrups etc.)	
		Three-tower	1000-150000		General Grade, GB10343-2002 Standard
		Four-tower	1000-150000		Top Grade, GB10343-2002 Standard
		Differ-pressure distillation			
		Three-tower	1000-150000		General Grade, GB10343-2002 Standard
		Five-tower	1000-150000		Top Grade, GB10343-2002 Standard

II	Absolute Alcohol				
		Dehydration with benzene	1000-50000	95% alcohol	Over 99.95% absolute alcohol
		Absorption and dehydration (Molecular sieve)	30000-200000	95% alcohol	Over 99.9% absolute alcohol
		Dehydration with glycol	1000-50000	95% alcohol	Over 99.9% absolute alcohol
	Gas oil mix				

III	Utilization and Treatment of Lees				
	DDGS (DDG) Feed	Evaporation by waste steam	100000	Lees of corn and other materials	Feeds with 30% protein
	Treatment of exhausted Liquid of lees	Anaerobic and aerobic	Equipped for 1000-500000	Exhausted Liquid of lees	About COD1000
	Recovery of heat energy of lees	vacuuming	Equipped for the line		Save 0.6 ton steam for producing one ton alcohol
	Recovery of waste alcohol	Distillation	1000-200000	Waste liquid with content of alcohol	95% alcohol
	CO2 Recovery				
V	Refined corn oil from corn germinal bud	Water soaking	Equipped for producing corn alcohol	Corn	Second grade edible oil
VI	Furfural	Two-tower processing	500-10000	Corn cob	Furfural
V II	Fruit wine	Various		Various fruit	Fruit wines

Key technology for alcohol production with the feature of energy-saving

- Purification of raw material
- Cycled smash
- Double-enzyme continuous saccharification
- Stirring through airflow
- Application of modern biological technology (High-temp. liquefaction fermentation; high efficiency saccharifying enzyme; active dry yeast)
- Circulation application of separated liquid from stillage
- Outdoor big fermentation pot in high temperature
- Multi-tower distilling with high efficiency and energy saving
- Full automatic control of the whole process



Purification of raw materials & cycled smash



Low-temp. Double-enzyme continuous saccharification



Big-pot & high-temp ferment multi-tower distillation



Automatic control of the production

Integrated Alcohol (Ethanol) Plant



Wulianye Distillery, Sichuan



Xinyi Huating Distillery, Jiangsu





Annual 100,000 t alcohol project, Chongqing

Annual 60,000 t alcohol project
Wulianye Co, Sichuan



Annual 60,000 t alcohol project
Wujiang, China





Six-tower differ-pressure distillation,
Dukang Distillery, Henan



Absolute alcohol device, Mali



Xiayi Distillery, Henan



Production Line for 60,000 t alcohol and 60,000 t DDGS

Wuliangye Distillery, Yibing, Sichuan



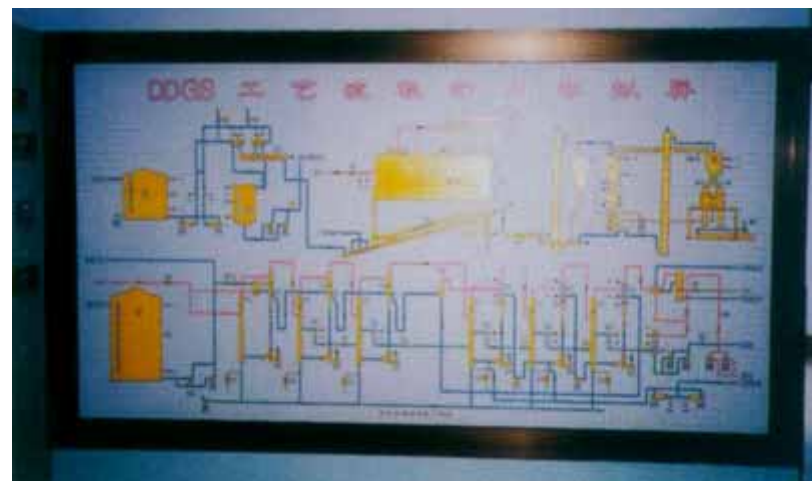
Separation of solid and liquid from stillage



Dry of filter dregs

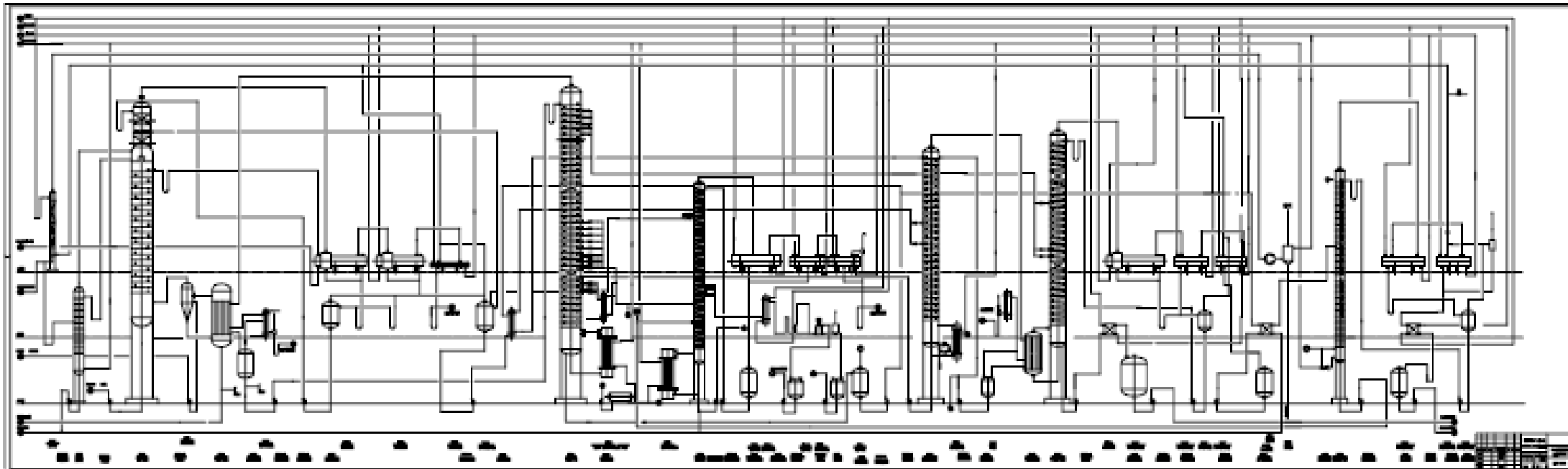


Six-effect evaporate and concentrate

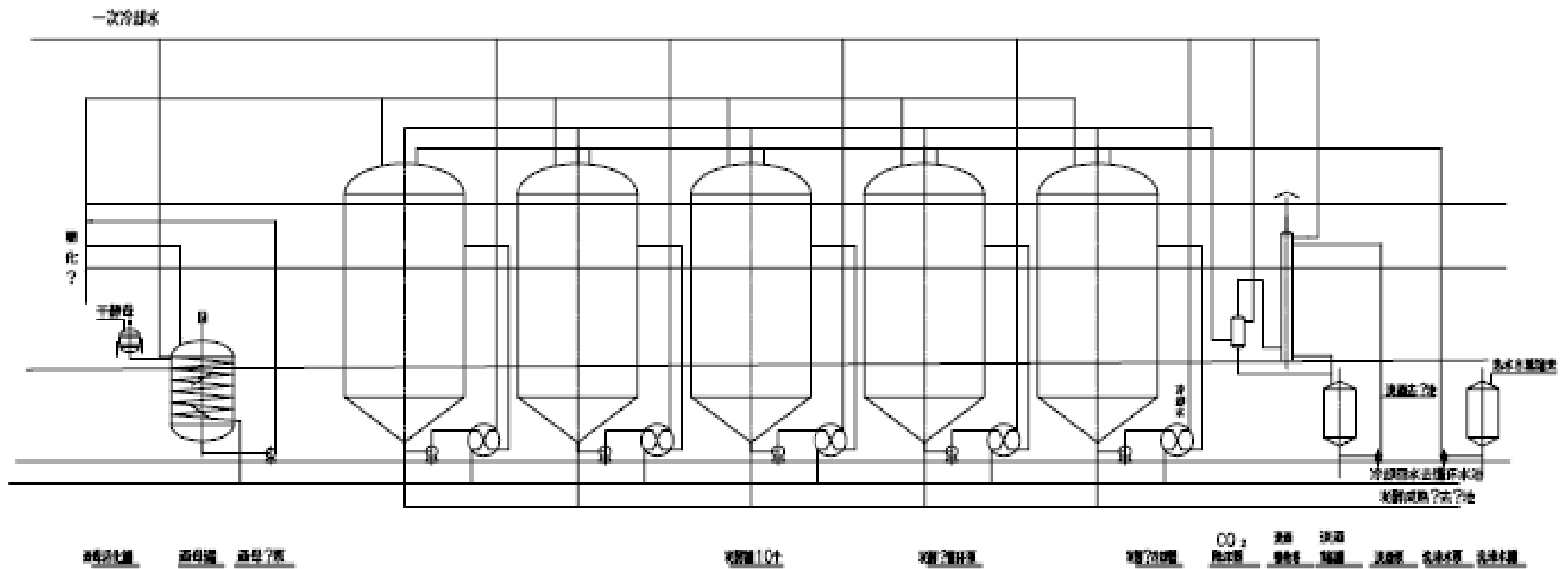


Simulated control of the process

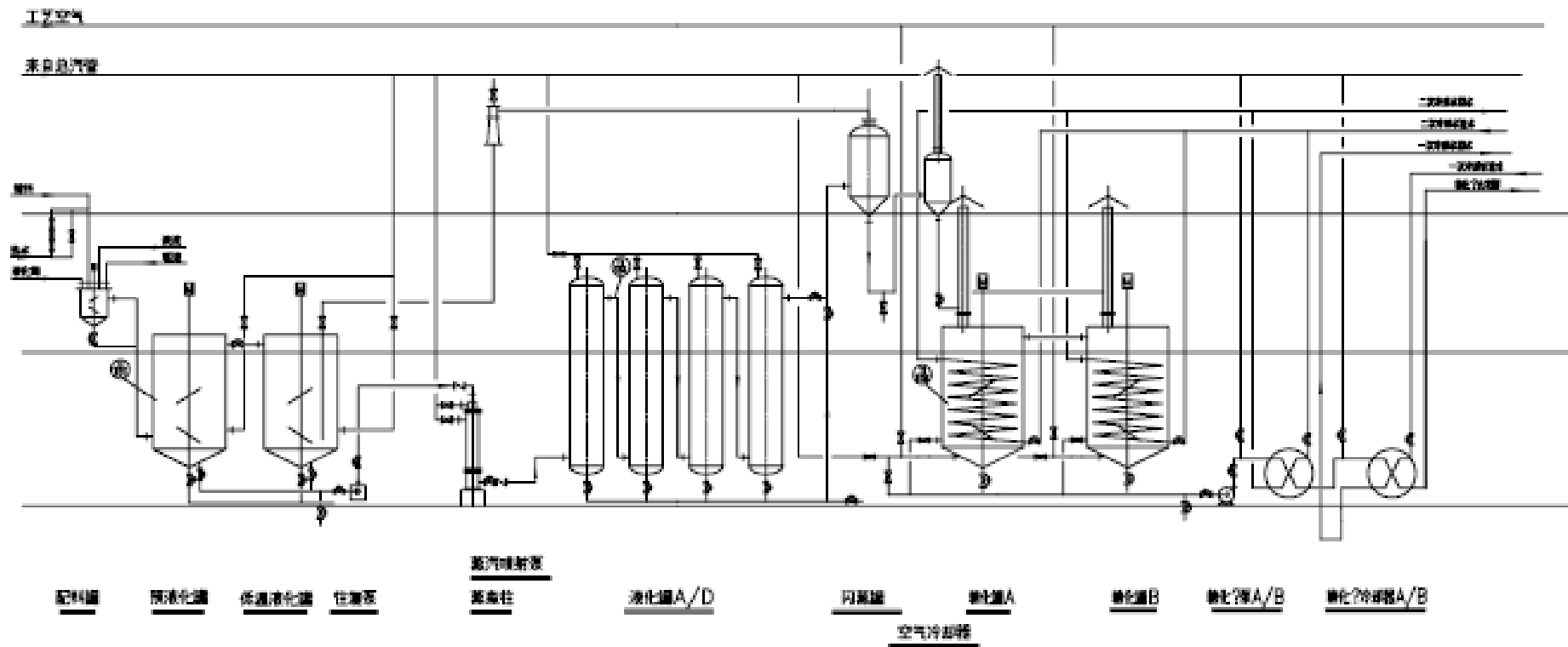
Typical Process of 6-tower Differ-Pressure Distillation



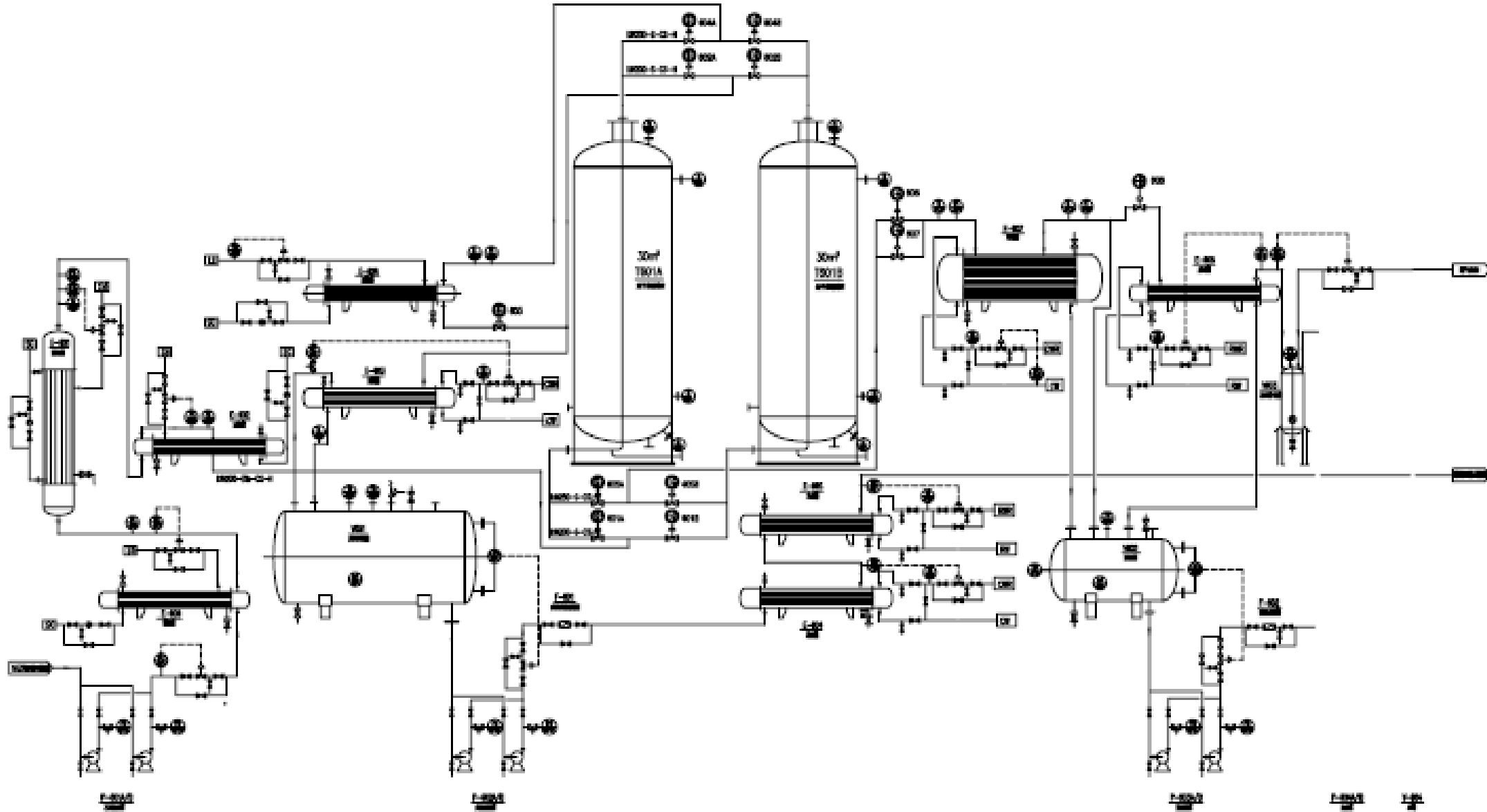
Typical Process of Fermentation

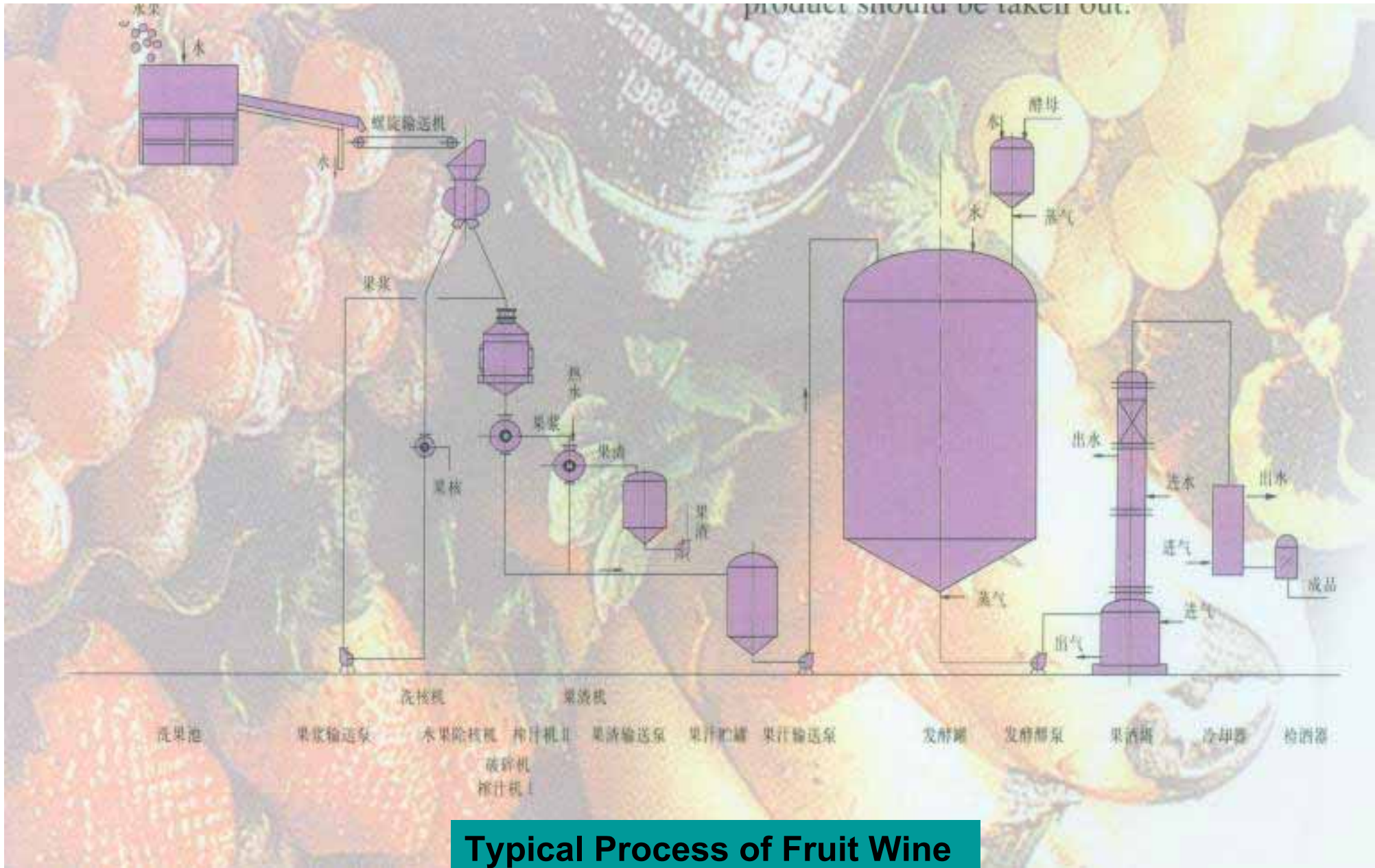


Typical Process of Saccharification



Typical Process of Alcohol for Gas Oil Mix





Typical Process of Fruit Wine

Typical Process of Refined Corn Oil (from corn germinal bud)

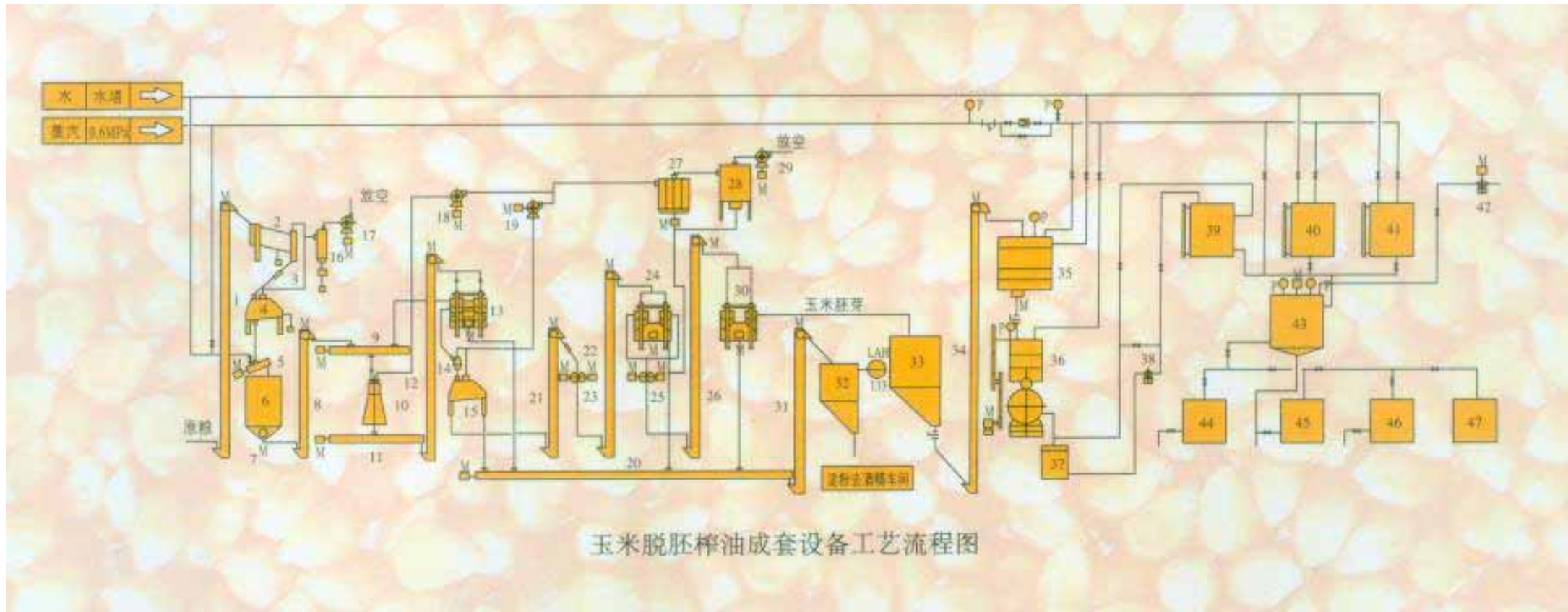


Photo Gallery of Equipment



Alcohol tower



Telescoping heater



Calandria cold condenser



Angling hole tower



Vacuum injector



Pre-heater



Screw plate type exchanger



Valve tower



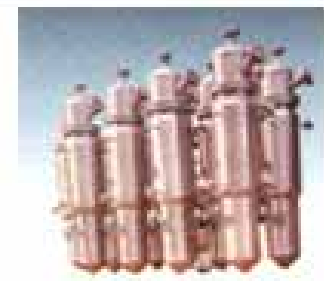
Cross-type valve tower



Crusher



S-type primary tower



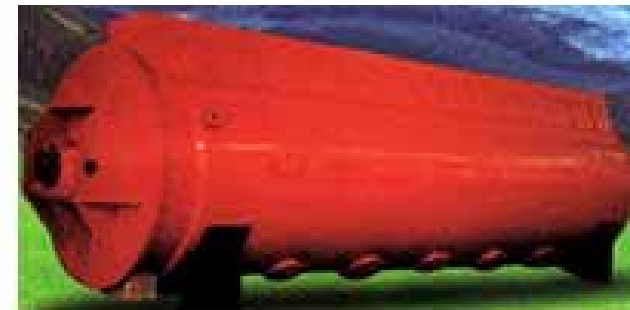
Purification device



Calandria dryer



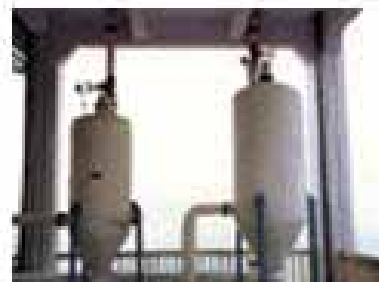
Rotary dryer



Disc-type dryer



Furfural equipment



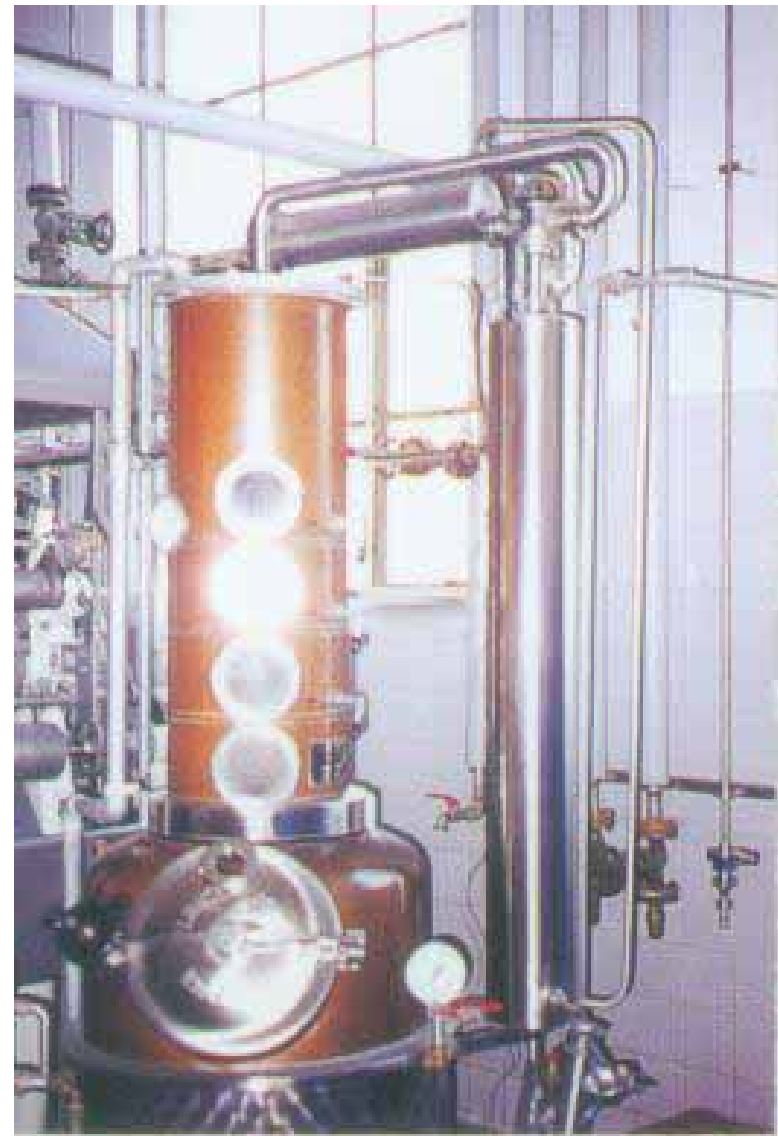
**Equipment of
recovering heat of
lees**



**Evaporating and
condensing
equipment for liquid
of lees**



Floating distiller's grains separator



Device for fruit wine

Service

- **Advanced and reliable technology & engineering**
- **Procurement, manufacture, and delivery of the goods**
- **Project management**
- **Construction, installation, and commissioning**
- **Technical service**
- **Training program**
- **Service after completion of the project**
- **Financing assistance and export credit**
- **Other services and functions upon request**

CREATE THE FUTURE



Allbest Creative Development Ltd. (ALLBEST)

Beijing, China

allbest@china.com