

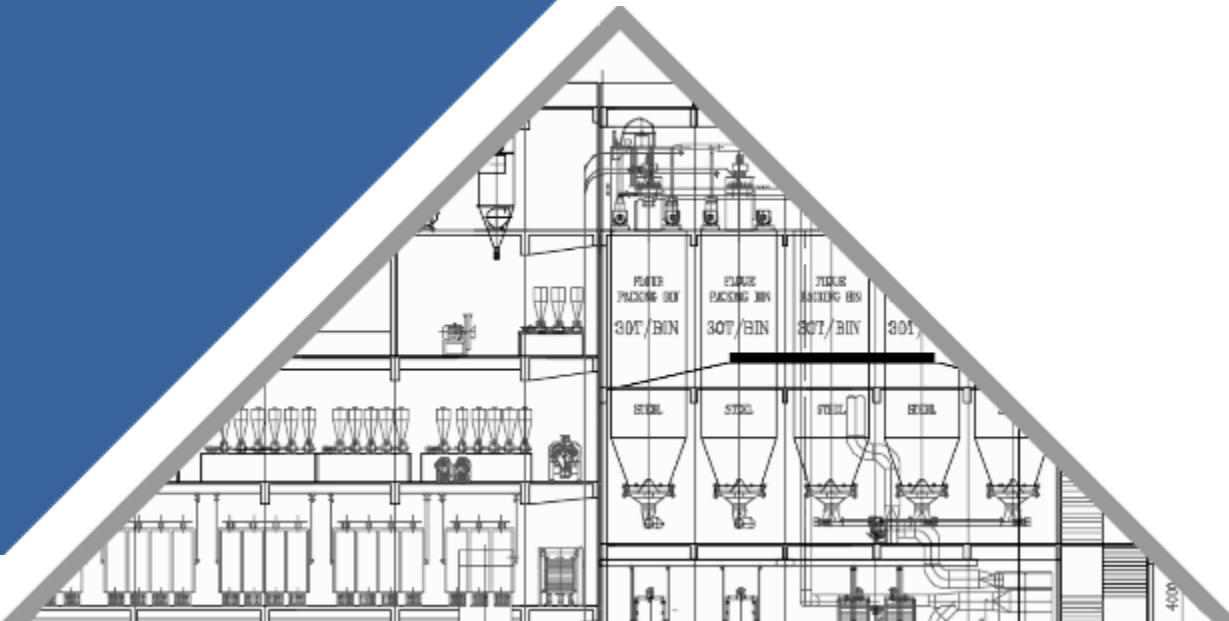


GGI MILLING TECHNOLOGY CHINA - ASIA MARKET

IAOM Mexico 2024

Mark. W. Lyons

Professor Li Dongsen



目录

CONTENTS



**CHINA FLOUR INDUSTRY
And MARKET OVERVIEW**



**GGI MILLING TECHNOLOGY
FEATURES AND FLOUR QUALITY**



ABOUT GGI

01

CHINA FLOUR INDUSTRY OVERVIEW

ANNUAL WHEAT PRODUCTION

120 Million Tons



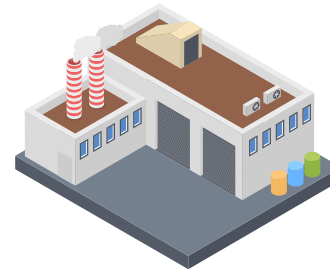
WHEAT FOR MILLING USAGE

86 Million Tons



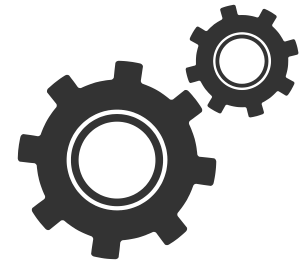
FLOUR MILLS QUANTITY

1,500 Sites



CHINA FLOUR MILLING LINES

3,000 Lines



TOP 3 FLOUR MILLS IN CHINA

WUDELI

85,000 Tons/Day



YIHAI (WILMAR CHINA)

55,000 Tons/Day



COFCO

40,500 Tons/Day



These three groups total capacity is 55.5 MT Wheat / Year; approx. 65%



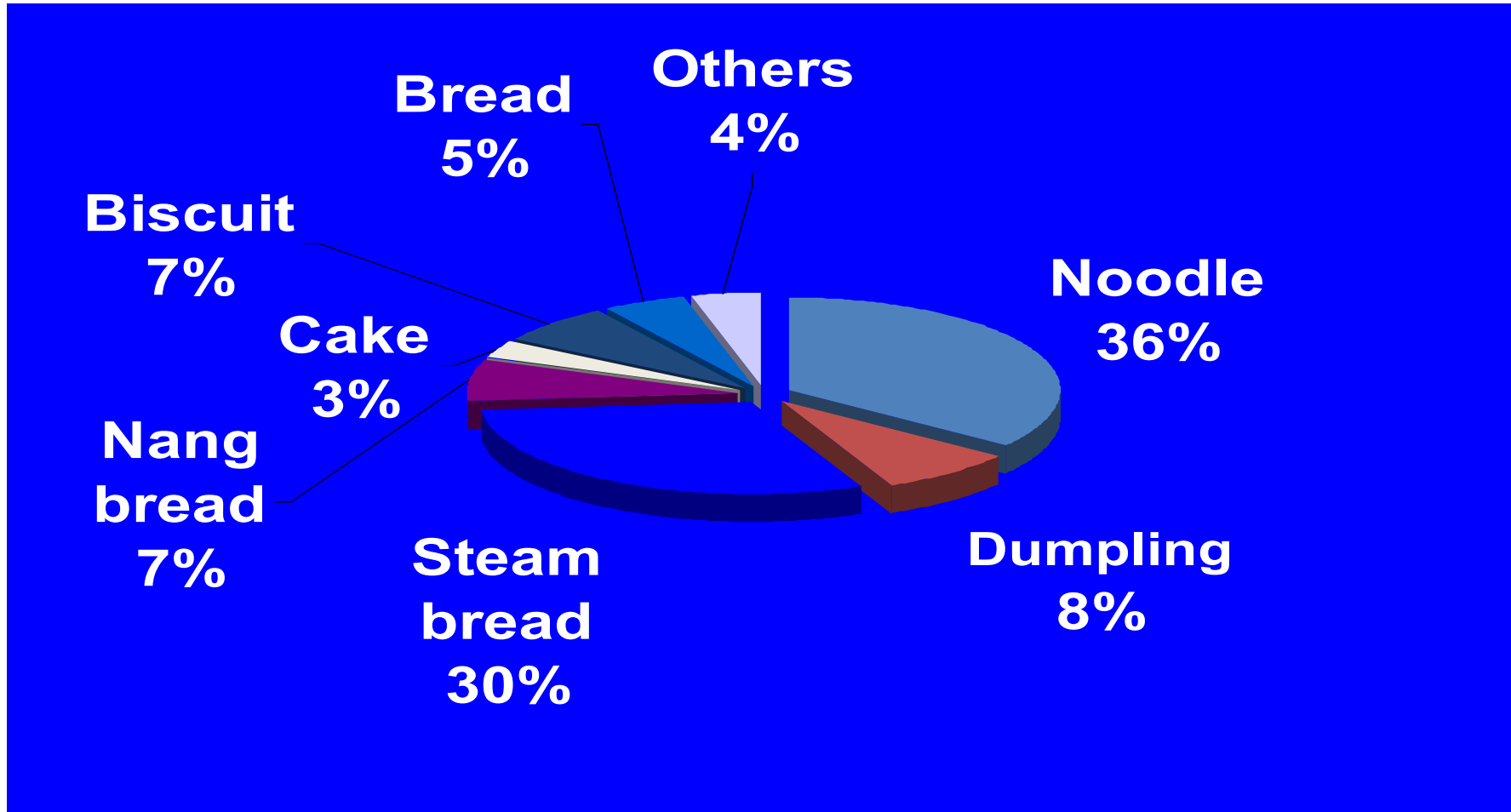
FLOUR FEATURES IN CHINA

75% of wheat flour utilized for steamed, boiled foods and frozen flour foods.

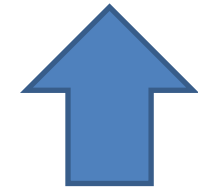
Flour quality requirement :

- *Low ash, low damaged starch.*
- *White & bright color.*
- *Prevent discoloration, cracking and aging.*
- *Control bacterial content for frozen flour food.*

FLOUR MARKET IN CHINA



30 MT
WHEAT FOR NOODLE





BASIC STEAM BREAD

Consumption in China: 30% : Steamed bread





BASIC STEAM BREAD

Consumption: 30% :
Steamed bread



Stuffed Steam bread





FLOUR MARKET IN CHINA

MORE AND MORE WET NOODLE MARKET SHARE,
LESS INSTANT NOODLE.



High Quality Chinese Noodles:

- Fresh appearance
- Bright color
- Proper bite - feeling
- Smooth and solid / tight surface
- Lower water absorbing ability

of cooked noodles

- Boil proof don't mix soup
- non sticky
- Specific taste



DRY NOODLE



SLIM NOODLE





FLOUR MARKET IN CHINA

Consumption: 35% for all the noodle



FRESH DUMPLINGS



FROZEN DUMPLINGS





FRESH & FROZEN STEAM STUFFED BREAD/BUN





FLOUR FEATURES IN CHINA

- **More and more traditional Chinese flour products are transitioning to large-scale industrial production.**
- **Frozen flour food: Noodle, boiled dumpling, stuffed bun. Raw pasted food, market share increasing.**
- **China's cold chain logistics, storage and market management have been highly developed.**
- **Many new challenges are being posed to flour mills.**

BAKERY FOOD: 15% MARKET SHARE



PANCAKE/NANG BREAD/OTHERS: ABOUT 10% MARKET SHARE



02

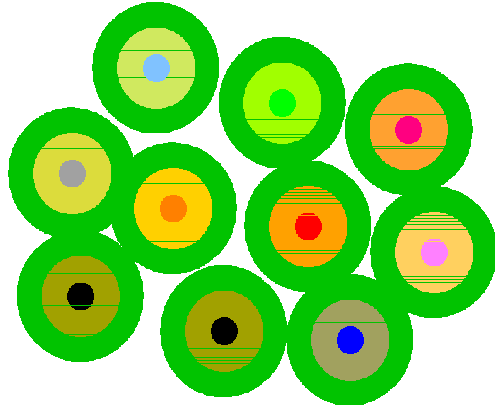
GGI MILLING TECHNOLOGY FEATURES AND FLOUR QUALITY



CONTAMINATION GROUPS

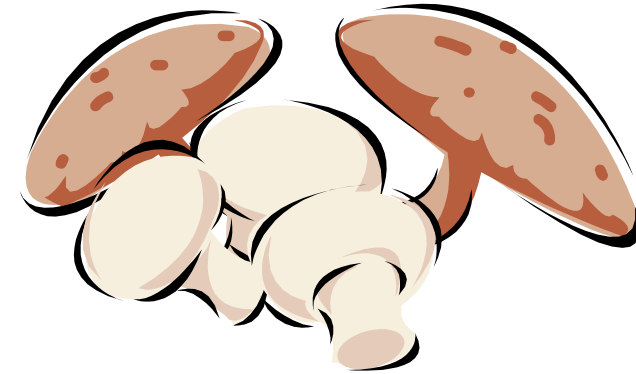
For frozen flour food requirement

Micro-organisms

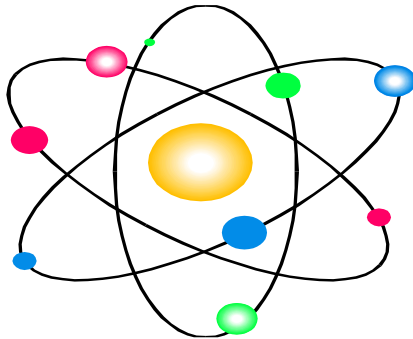


Bacteria

Mycotoxins



Toxic heavy metals



Filth content





GGI MILLING TECHNOLOGY FEATURES

Poor quality wheat and discolored wheat, easily turns flour color, high bacterial content.





GGI MILLING TECHNOLOGY FEATURES

Strengthen the surface cleaning, friction scourer.

Lower ash and bacterial content.

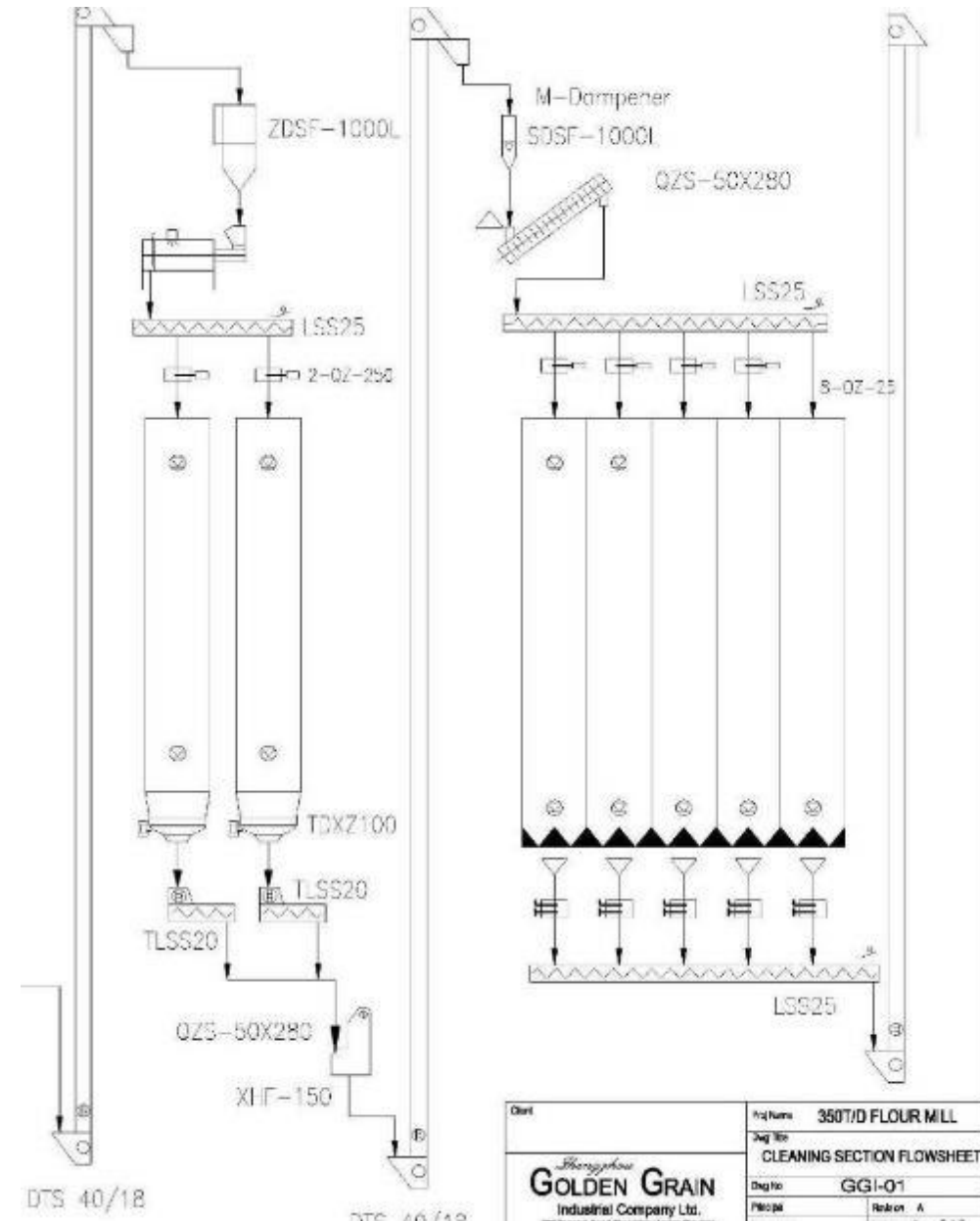
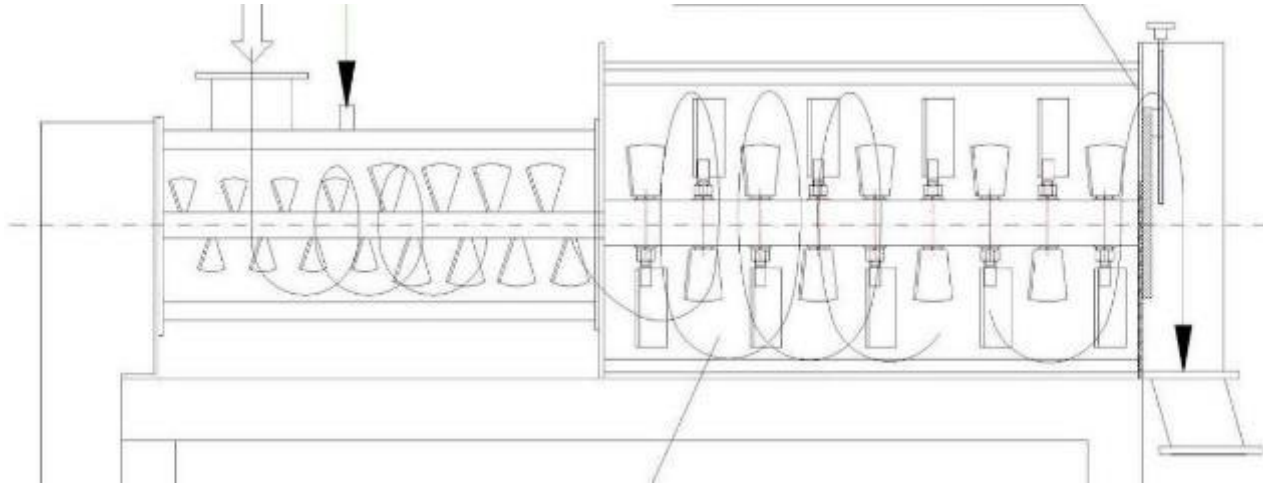
GGI NEW Strengthen the surface cleaning Scourer





GGI MILLING TECHNOLOGY FEATURES

Strengthen surface cleaning: Using semi-wet cleaning technology. **Lower ash and bacterial content.**





GGI MILLING TECHNOLOGY FEATURES

- **Roll length longer and more purifiers; lighter grinding, strengthened classification and purification process.**
- **Roller length $\geq 16\text{mm}/100\text{kg}$ wheat/24 hours; 16-17 mm now normal;**
 - *More open Break roll release to produce higher semolina yield;*
 - *Separate grinding of coarse, medium, fine semolina and “Dunst” (125 μ - 180 μ produce dark flour)*
 - *Middling smooth rolls: More open C1/C2/C3 passage roller surface to reduce the grinding temperature and starch damage*
- **Plansifter sifting area 0.1-0.12 m²/100 kg wheat/24 hours;**
- **Purifier, 3.5-4 purifiers/100 tons of wheat, sieve width 3.22-3.68mm/100kg/24h.**
- **Milling section with 7 floor of the mill building, easy to arrange more purifiers;**



GGI MILLING TECHNOLOGY FEATURES

Pay attention to the control of flour particle size and damaged starch.

For any flour food, not only in China.

➤ **Flour particle size control:**

The particle size of flour should not be too coarse or too fine.

➤ **Damaged starch control:**

Higher damaged starch is not always better, depending on the quality of wheat and flour quality requirements.

➤ **Less heating, keeping more nature wheat flavor.**

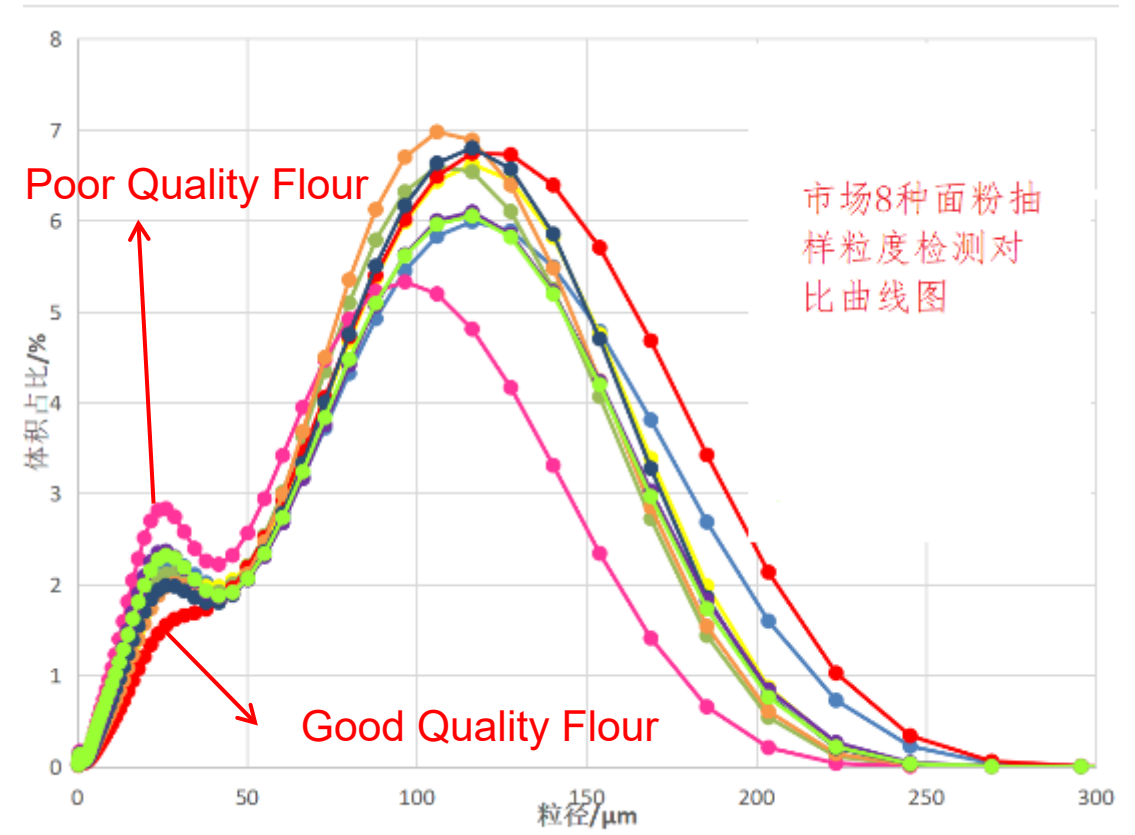
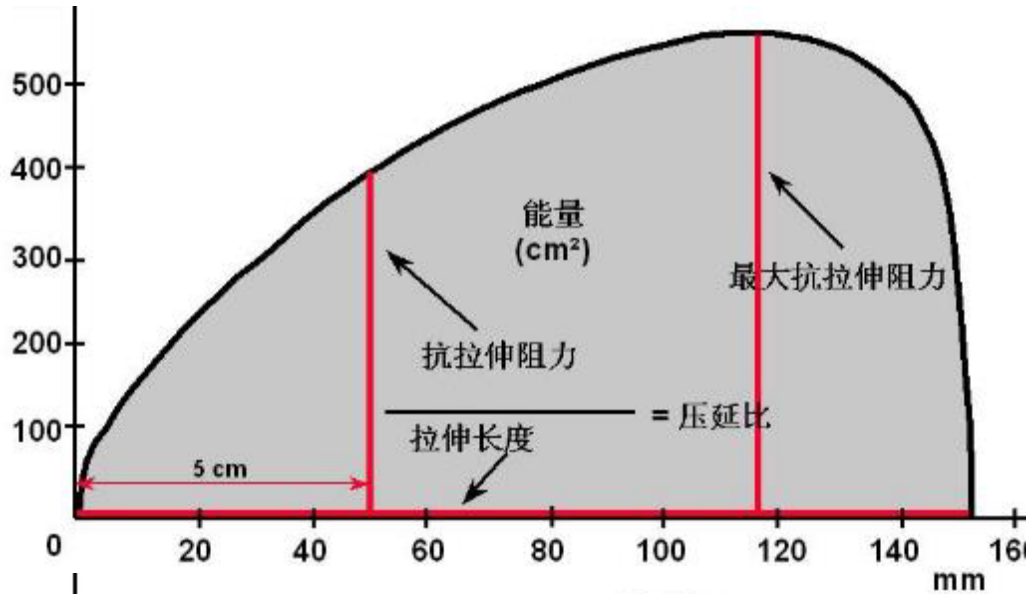


图1 不同面粉的颗粒度曲线图

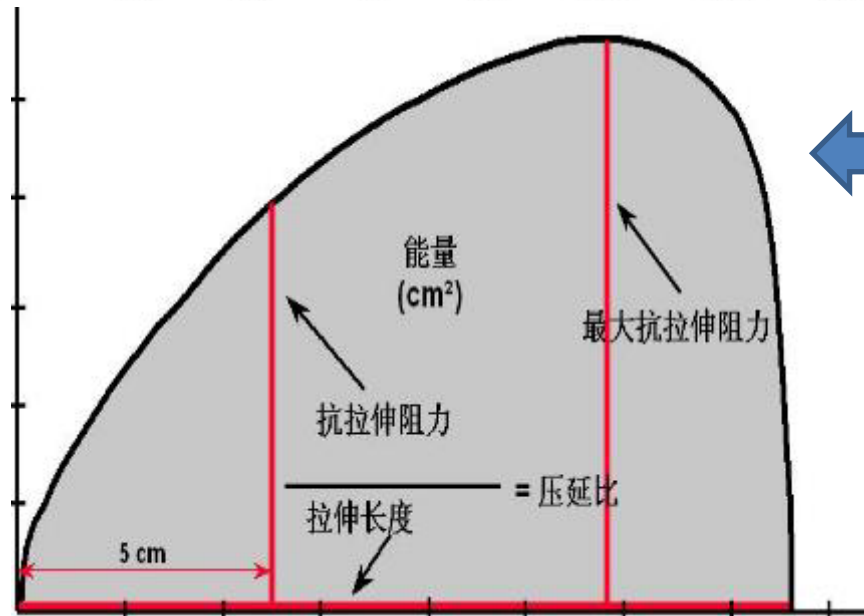
Excessive Rollermill grinding = High material temperature.



1. High damaged starch.

2. Protein denaturation.

← FRESH FLOUR



← 1 WEEK LATER FLOUR

Resistance increases

Extensibility dereases



GGI MILLING TECHNOLOGY FEATURES

Japanese Bread Flour sells at high price in China, Hong Kong, Thailand and other regions:

- Particle size of the flour is relatively uniform, not too fine or too coarse.
- Flour water absorption approx. 63%, damaged starch not very high. Flour water absorption mainly depends on protein and starch nature ability. Improving water absorption by increasing damage starch can make bread volume bigger, but quality deteriorates.
- Good quality wheat and longer roller surface & milling technology. The roller mill grinding temperature not too high.

03

ABOUT US



ABOUT US

200+ Employees

500+ Projects

- GG was established in the 1990's by Mr. Li Dongsen, professor of Henan University of Technology.
- Focus on grain handling & processing projects.
- Factory 70,000m².
- The Grain Processing Research Center has been now set up.





1. Zhengzhou, China
4. Manila, Philippines
7. Bogota, Colombia

2. Hongkong, China
5. Dubai, UAE

3. Jakarta, Indonesia
6. San Salvador, El Salvador



FACTORY

1. No. 1 factory Zhengzhou City, Henan, China. Total 30,000 M²





FACTORY

2. No.2 Zhengzhou, Henan, China. **Total 70,000 M²**

3. GGI Joint Venture Factory Yangzhou, Jiangsu, China





FACTORY





FACTORY



OPTIMIZED MAIN MACHINE

China flour mill request easiest maintenance, and optimized sifting surface

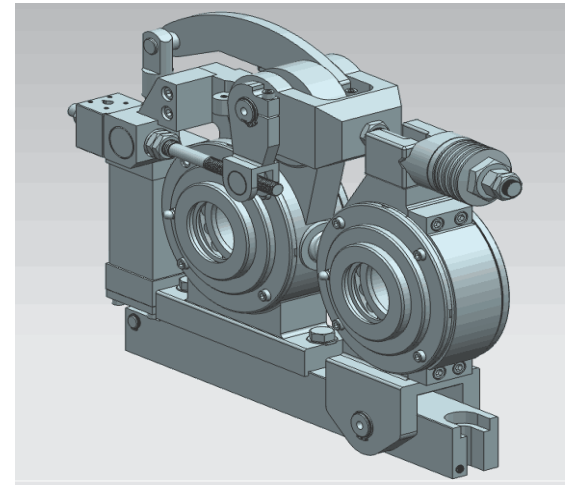
- **ROLLER MILL:** Stable with cast iron base, and the two rolls can be removed as a whole pack during maintenance.
- **PLANSIFTER:** Sieve frame with bigger net area.
- **PURIFIER:** Air is easy easy for adjusting.





EQUIPMENT





FEATURES

Fast-change Roll Pack.

The two rolls can be changed as a whole pack including the air cylinder. It greatly improves the maintenance efficiency.



EQUIPMENT





EQUIPMENT





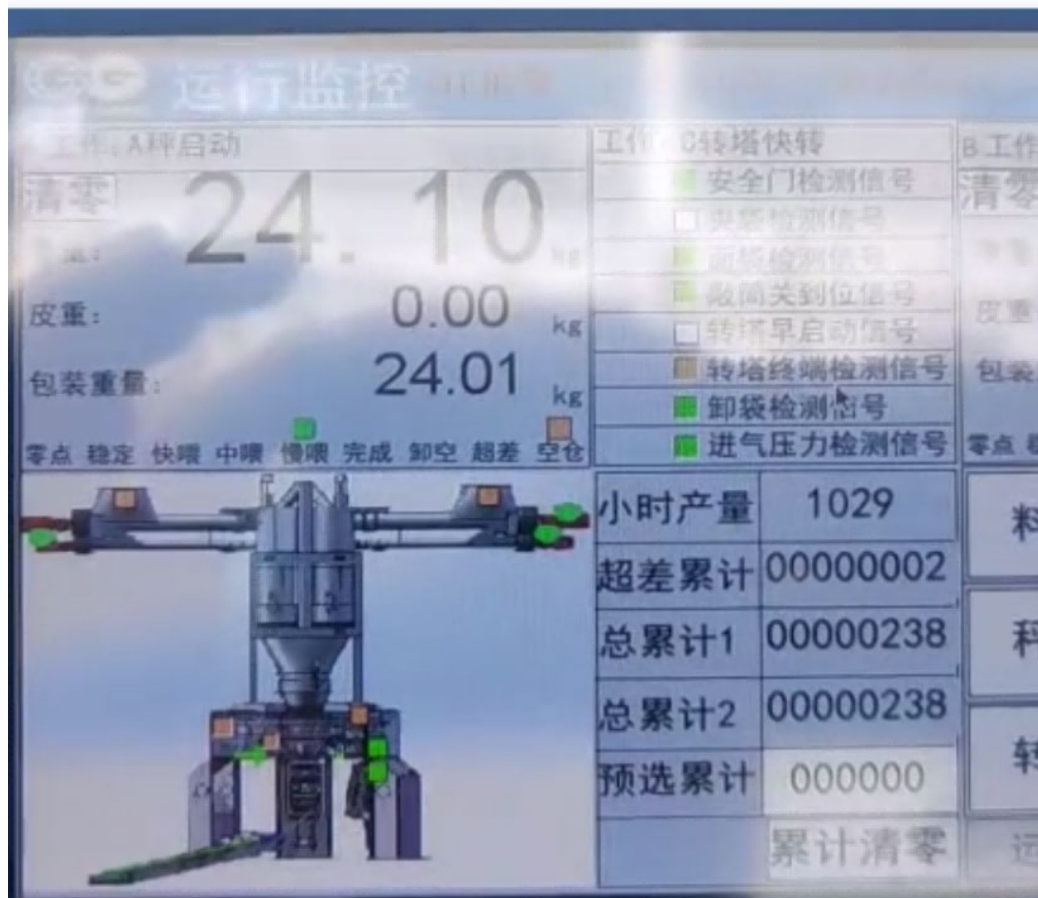
EQUIPMENT





EQUIPMENT

SEMI-AUTO PACKER





运行监控

15 04 06
0930220835.03

A 工作: A秤卸料完成

去皮: 0.28 kg
净重: 0.00 kg
包装重量: 25.03 kg

B 工作: B秤启动

去皮: 18.77 kg
净重: 0.00 kg
包装重量: 21.36 kg

报警: 安全门检测信号, 重量检测信号, 限位检测信号, 旋转启动信号, 料塔堵塞检测信号, 卸料检测信号, 出气压力检测信号

小时产量: 0257

超累累计: 00000000

总累计1: 00000265

总累计2: 00269778

预选累计: 00000000

累计清零

仓清空 | 工作停止

秤清空 | 故障恢复

转盘归位 | 工作暂停

运行模式: 本地 | 自动





EQUIPMENT

FULL AUTO PACKER

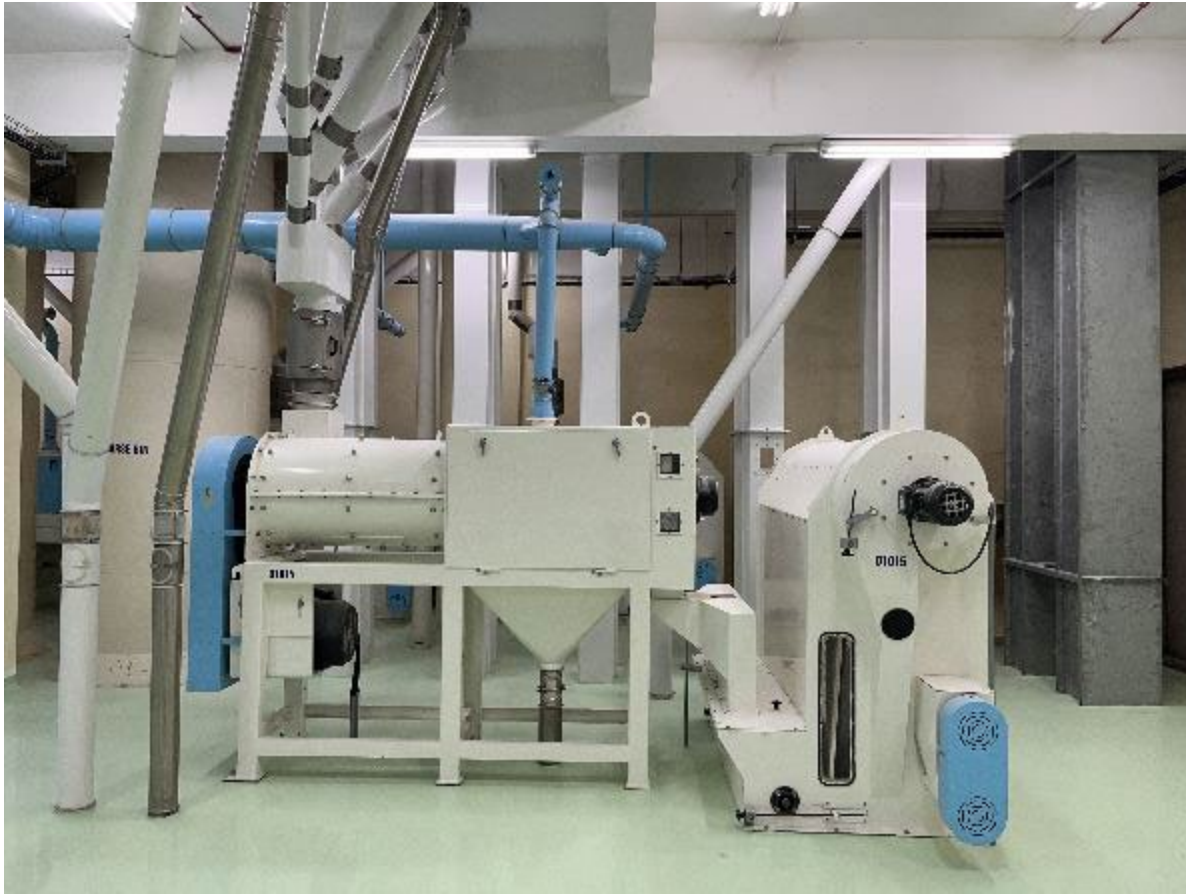






PROJECT







PROJECT



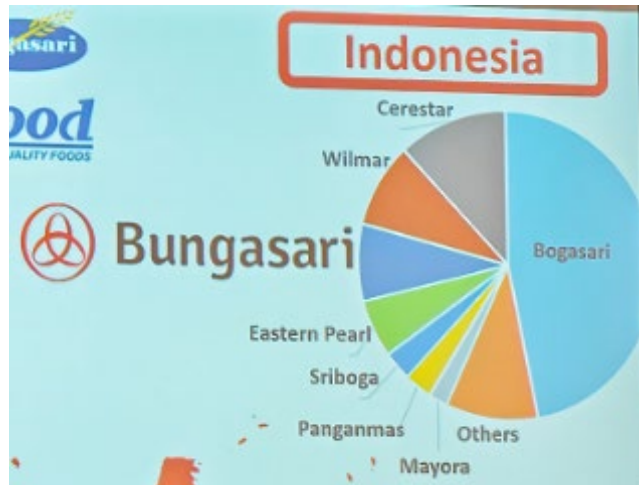


PROJECT



Indonesia Cilegon Project

6x500 MT complete flour processing line in Indonesia is one of the most modern flour factories in Indonesia, capable of producing a variety of customized and highly competitive flour products. The company has grown rapidly and is now one of the top 5 players in the Indonesian flour industry.



Indonesia Medan Project

Medan 3x500 MT + 2x150 MT
complete flour processing line in
Indonesia is highly automated, saving
labor costs and improving
competitiveness. The client is forward-
looking and is also the first flour factory
in Indonesia to use solar power.



Philippines Project

2x500 MT complete flour processing line in the Philippines was designed by GGI, starting from the overall planning stage, providing modern design concepts for customers. Currently, this flour factory has become a benchmark project in the Philippines.



COFCO Lihua Jinghai Project

Project covers an area of 140 acres, with 4 flour production lines, processing 600,000 tons of wheat annually (2,000 tons of wheat processed per day, producing 1,400 tons of flour per day).





COFCO Zhengzhou Project

Project capacity 2,000 MT wheat
processed per day,





COFCO Shenyang Project



Anyang Hualong Village Project



Jinan Mintian Project



Jiangsu Sanling Hai'an Project



Hebei Hualong Farmstead Project



Keming Flour Suiping Project



Shandong Luhua Flour Yanjin Project



Xinjiang Tianshan Flour Changji Project



COFCO Zhengzhou Project



Yihai Jiali Chaozhou Project



Qianwei Central Kitchen Xinxiang Project



COFCO Weinan Project

THANK YOU

www.g-grain.com

