



20 a 22 de Junho de 2016 - São Paulo/SP

Espaço para a
Logomarca
Expositor

SINOMA-TCDRI Alternative Solution in Cement Industry

Realização



Associação
Brasileira de
Cimento Portland



CONTENT

- 1. Who we are**
- 2. Equipment Manufactured by Ourselves**
- 3. R&D Center**
- 4. Engineering Design Center**
- 5. Project Management Center**
- 6. Operation and Maintenance Center**
- 7. Reference Plants**
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1 Who We Are?

- Cement Production Solution Provider

SINOMA TCDRI

- ☆ **Founded in 1953**
- ☆ **Biggest Design Institute in China**
- ☆ **Major engineering company around the world engaged in cement industry.**
- ☆ **Major mechanical equipment manufacture in China with 10 workshops**
- ☆ **Human resources:**
 - **Total employees: about 6,000**
 - **Technical staff: about 2,000**

MAIN BUSINESS

Solution for Cement Manufacture

- R&D for New Technology and New Equipment
- Engineering Design
- Equipment Manufacture and Procurement
- Civil Construction and Installation
- Plant Commissioning
- Turn-key Project (EPC)
- After Sale Services
 - Operation and Maintenance
 - Spare Parts Supply

Over 90% revenue from EPC contract!

MAJOR OVERSEAS CLIENTS



**Votorantim : Brasil, US, Canada, Argentina,
Bolivia, Turkey, India**



Holcim : Morocco, Tanzania, Hungary



**Lafarge : China, South Africa, India, Zambia,
Uganda, Ecuador, Vietnam,**

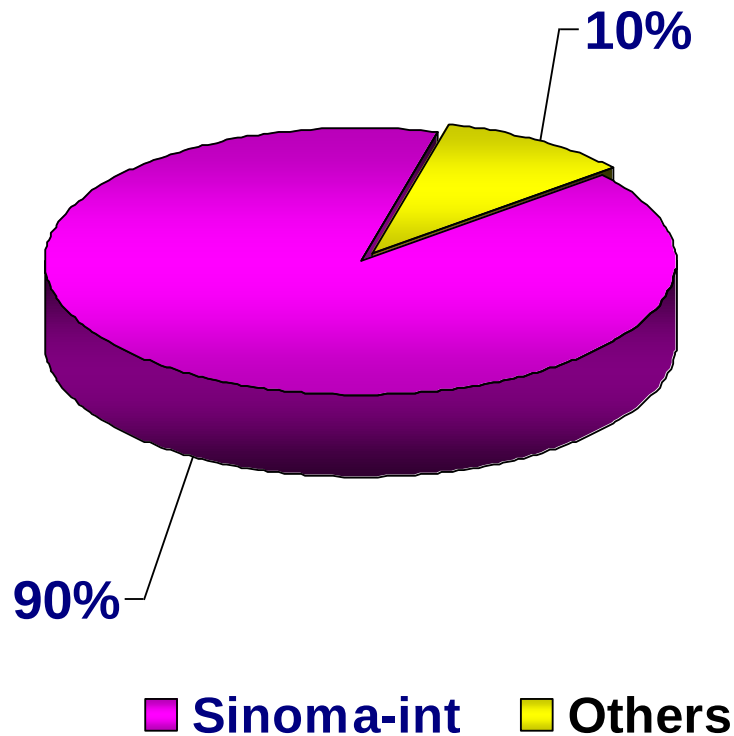


**Heidelbergcement: Russia, Tanzania, China,
Burkina Faso, Ghana, Indonesia, Congo**



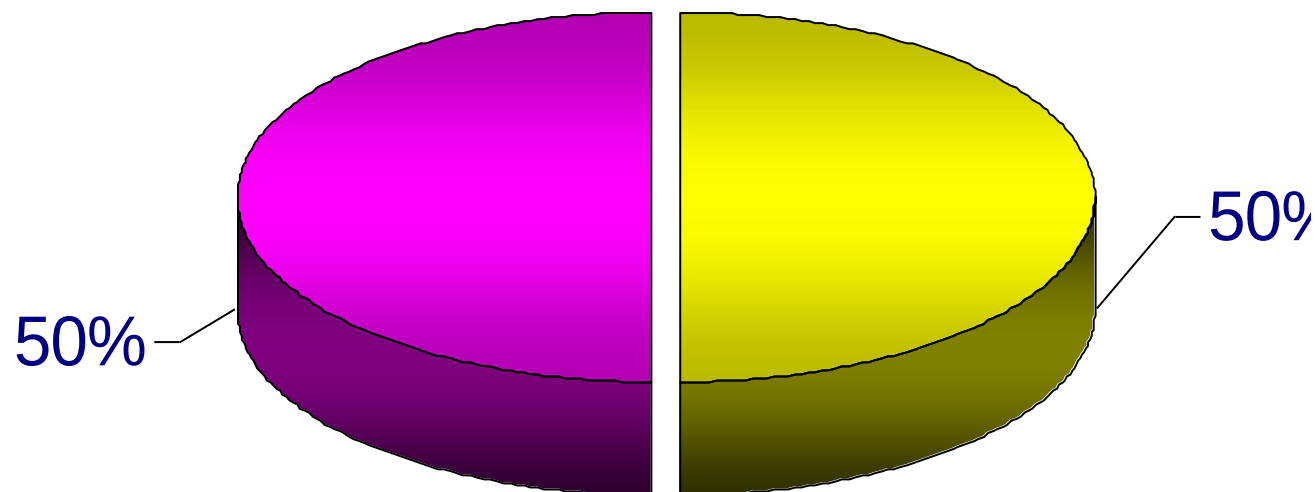
Market Share -- China

Domestic market share



Sinoma-Int has a domestic market share of over 90% in China both in supply as well as in installation.

Market Share – Outside China



- Overseas Project by Sinoma-int
- Project by Others

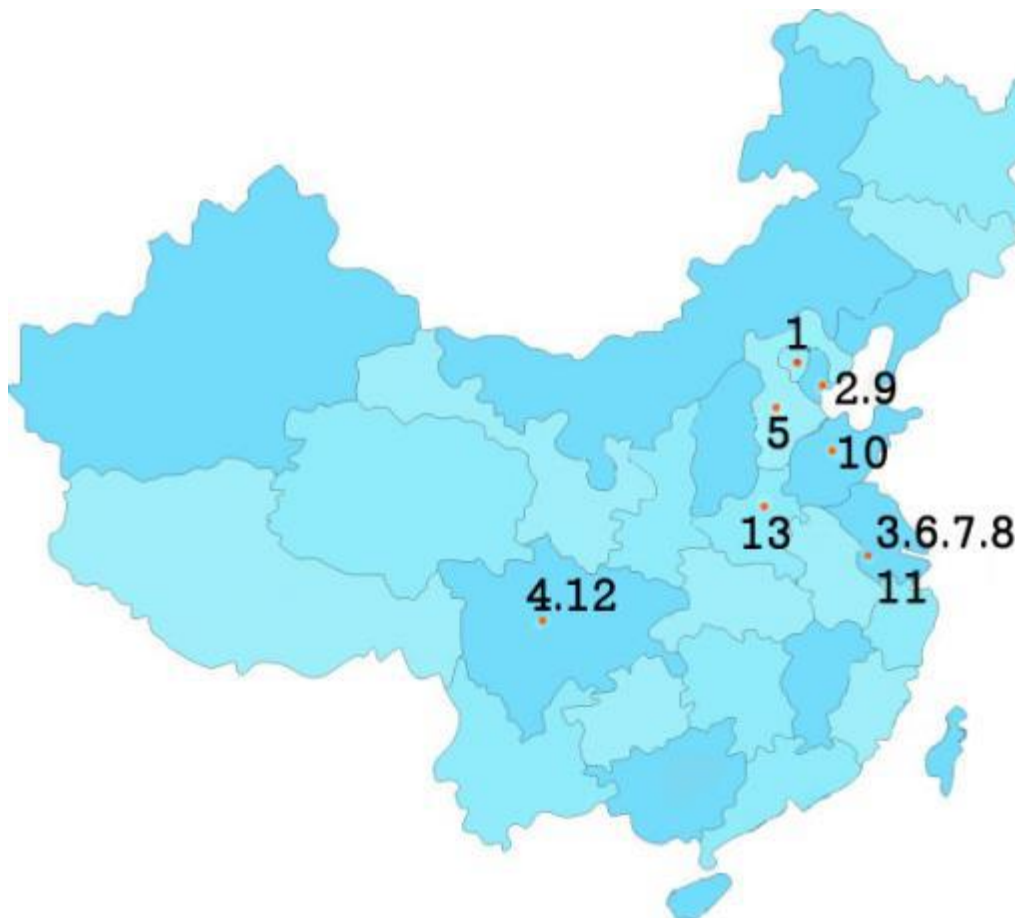
2 Equipment Manufactured by Ourselves

Workshop Distribution - Overseas

HAZEMAG
MINERALS

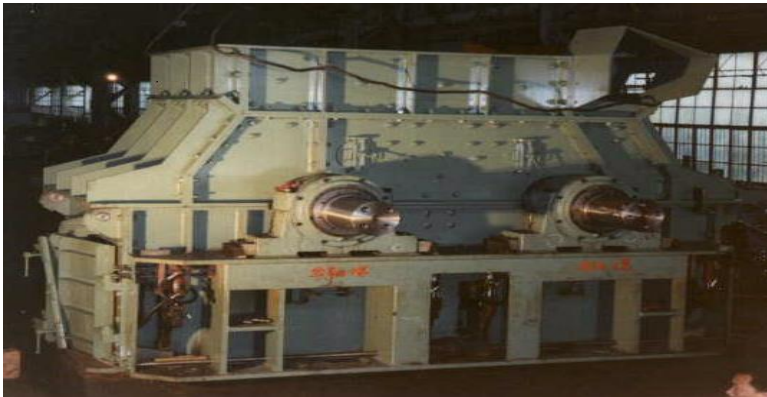
HAZEMAG
G R O U P

Workshop Distribution - China



1. Head Quarter
2. Operation Center
3. Nanjing Branch
4. Chengdu Branch
5. Sinoma Tangshan Machinery
6. Sinoma Liyang Machinery
7. Xuzhou Machinery
8. Yangzhou Machinery
9. Tianjin Machinery
10. Zibo Machinery
11. Changshu
12. Manufacture Base, Chengdu
13. Sinoma Environment Protection
14. Sinoma Shangrao Machinery

Equipment Designed and Manufactured by TCDRI



Hammer Crusher



Roller Crusher

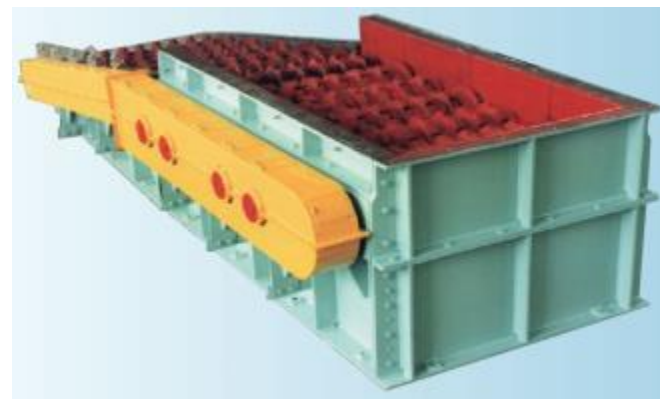


Stacker and reclaimer

Equipment Designed and Manufactured by TCDRI



Apron Feeder



Wrobbler Feeder

Equipment Designed and Manufactured by TCDRI

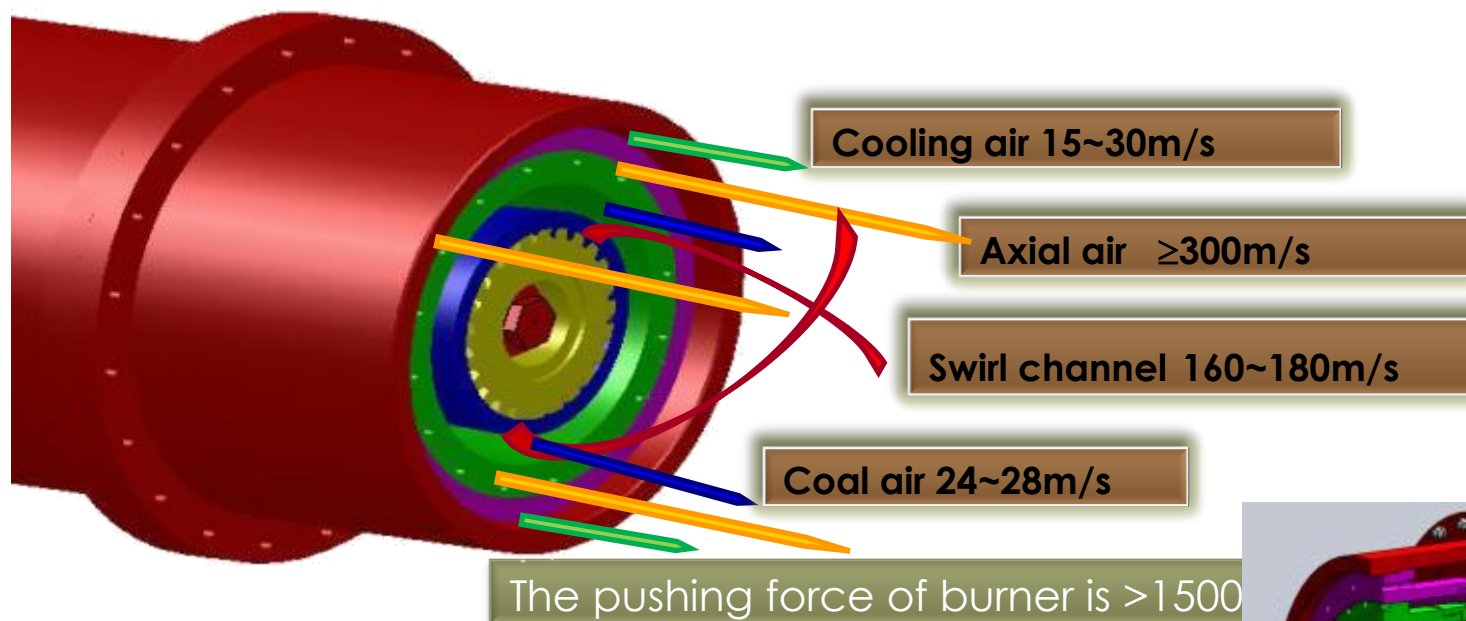


Bag Filter

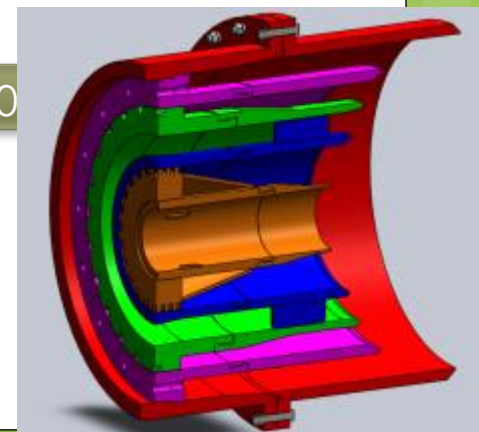


Burner

Equipment Designed and Manufactured by TCDRI



- 6~8% Primary air
- Convenient to adjust the shape of flame
- long-lasting



Equipment Designed and Manufactured by TCDRI



Vertical Roller Mill

Raw Meal Grinding

Coal Grinding

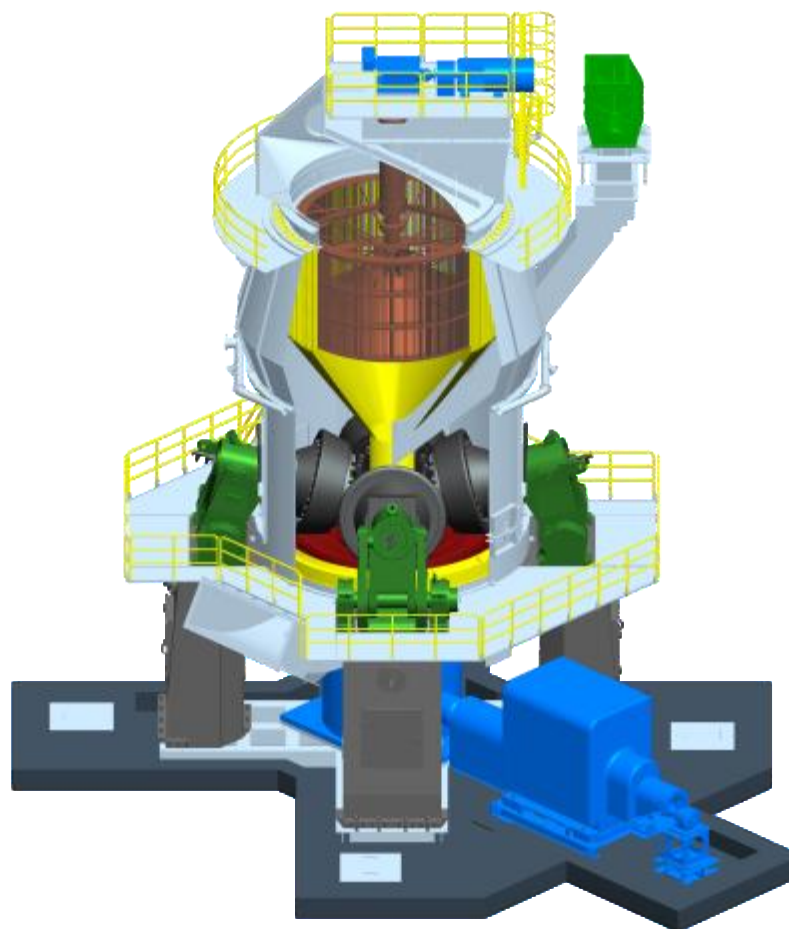
Cement Grinding

Slag Grinding

Fly Ash Grinding

Equipment Designed and Manufactured by TCDRI

Main motor
Separator
Railing
Roller
Rocker Arm
Mill body
Table
Ring Duct
Gear box
Bridge
Mill Stand
Foundation
Frame
Civil
foundation



Equipment Designed and Manufactured by TCDRI

Type	Number
Raw Mill	164
Coal Mill	29
Cement Mill	39
Slag Mill	150
Limestone Mill	13
Other Mill	7
Total	402

Equipment Designed and Manufactured by TCDRI



Roller Press
Semi Finish Grinding
Raw Meal Grinding



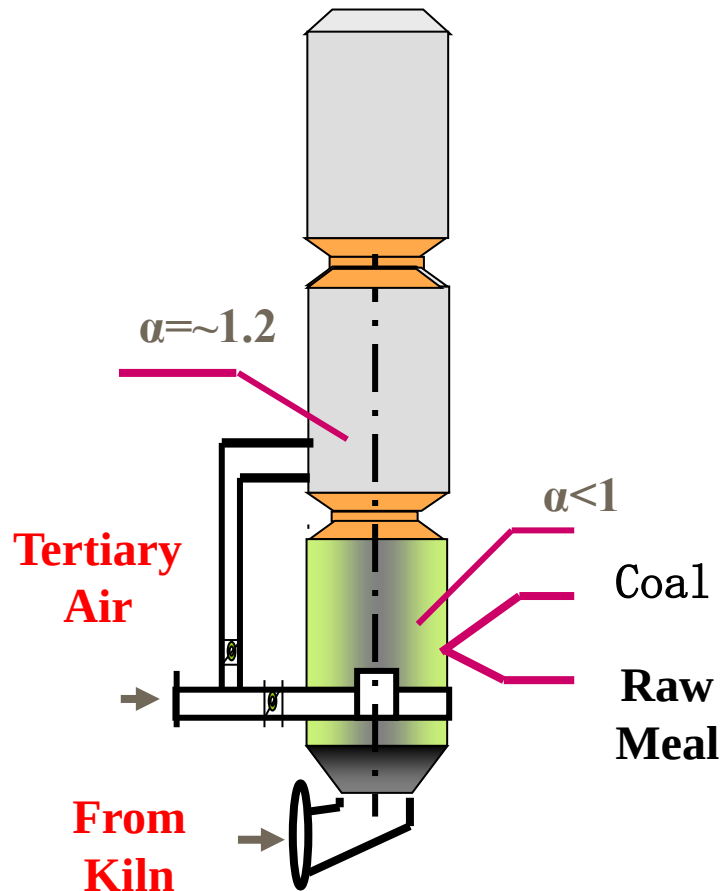
Tube Ball Mill

Equipment Designed and Manufactured by TCDRI



**Preheater System
with
TTF Precalciner**

Equipment Designed and Manufactured by TCDRI



TTF Calciner

Low NOx Design

For 5500 t/d line , the total gas residence time is 7.7 s, including 1.6 s in the deoxidizing zone and 6.1 s in the oxidizing zone.

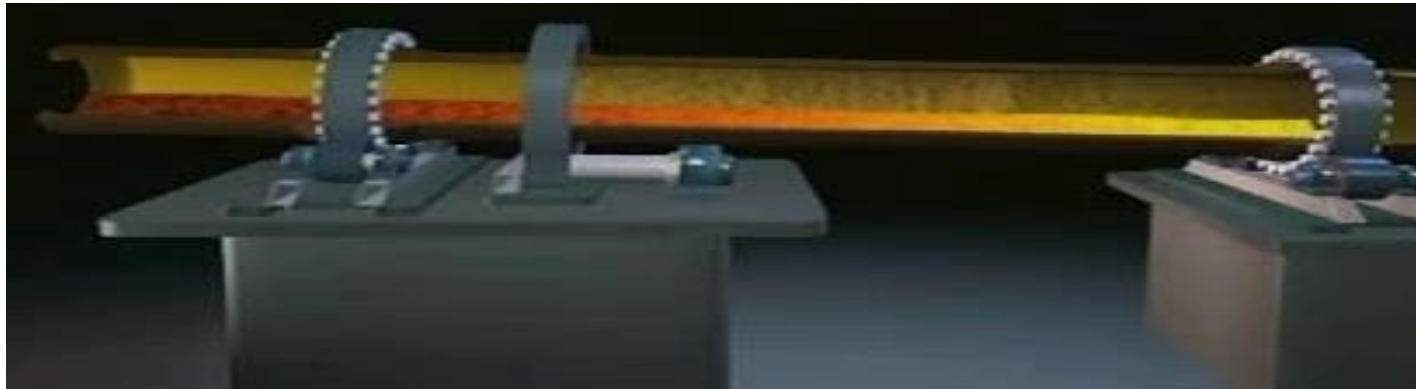
Adaptable to various fuel.

Equipment Designed and Manufactured by TCDRI



Three Pier Kiln

Equipment Designed and Manufactured by TCDRI



Two Pier kiln

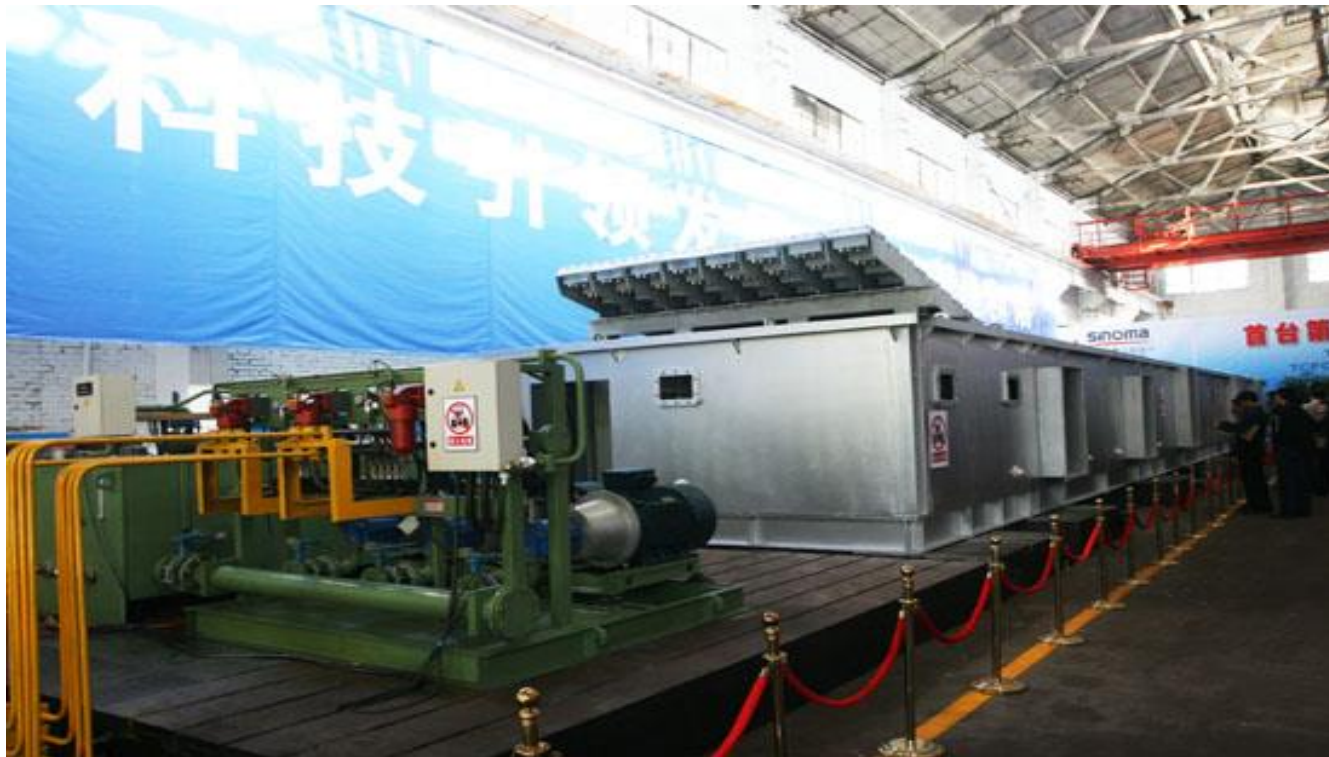
L/D = 10-12, rather than 8-10 (less fluctuation and more adaptability)

sintering zone : 5.2-5.5 D,

transition zone: 1.8-2.5 D,

calcining zone: 1-2D,

Equipment Designed and Manufactured by TCDRI



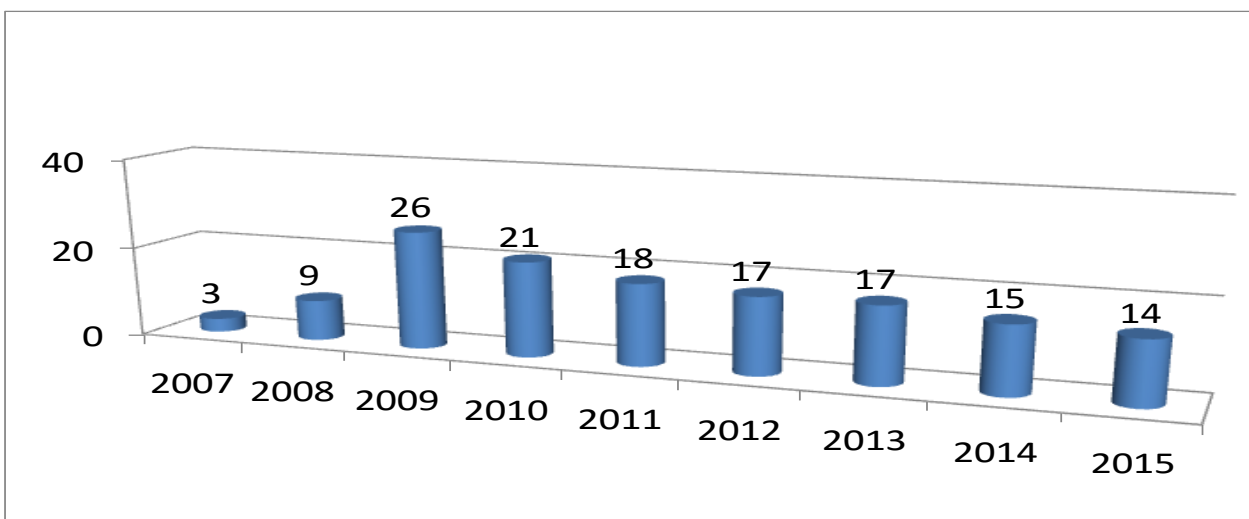
Forth Generation Cooler

Equipment Designed and Manufactured by TCDRI



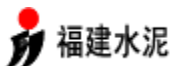
Workshop Preassembling

Equipment Designed and Manufactured by TCDRI



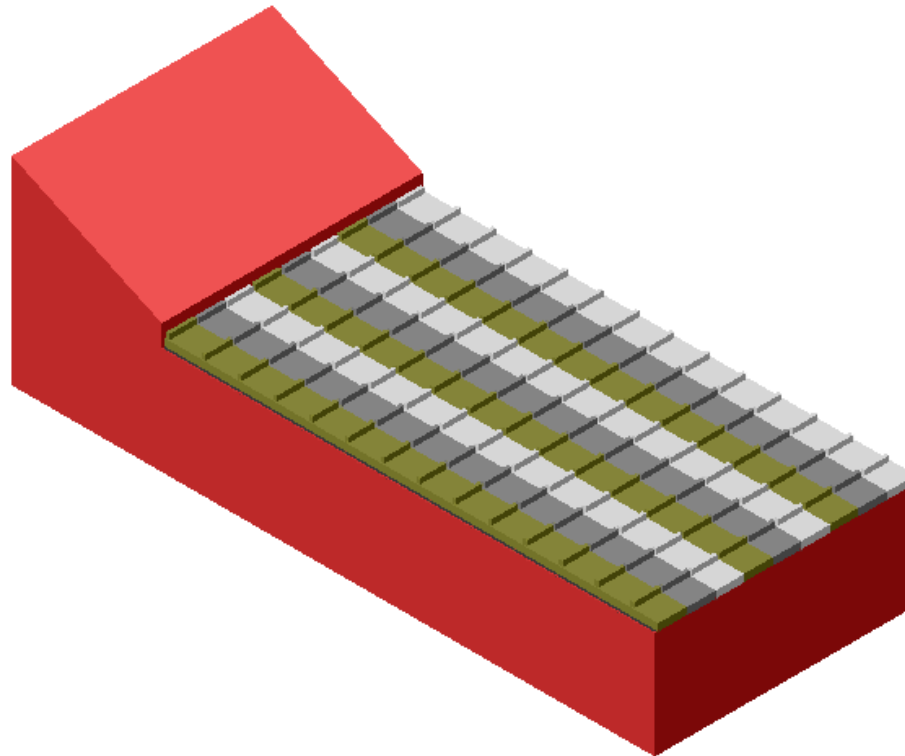
**Sales of Sinowalk cooler up 2015
reached 140 sets. 125 sets have been
put into operation.**

Equipment Designed and Manufactured by TCDRI



Sinowalk cooler's Client-group

Equipment Designed and Manufactured by TCDRI



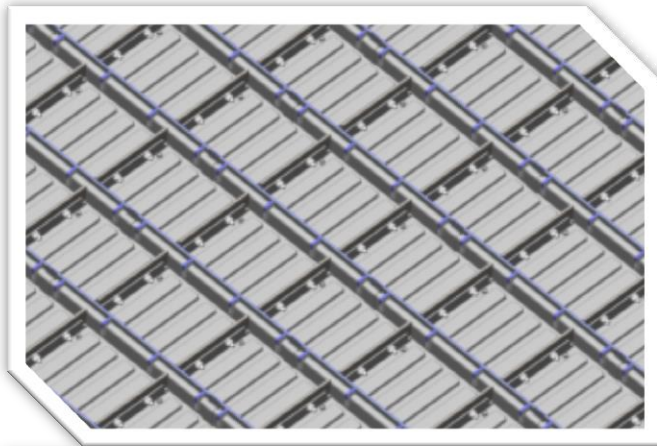
Walking Floor Design

Equipment Designed and Manufactured by TCDRI



Four-Joints Drive

Equipment Designed and Manufactured by TCDRI



Low Wear,
Maintenance Free



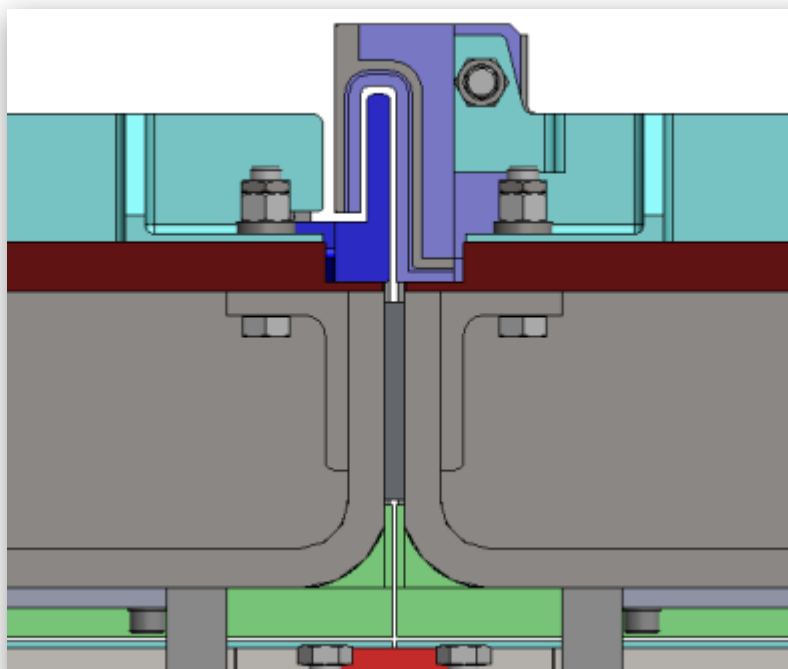
Seamless, No Leakage

Equipment Designed and Manufactured by TCDRI



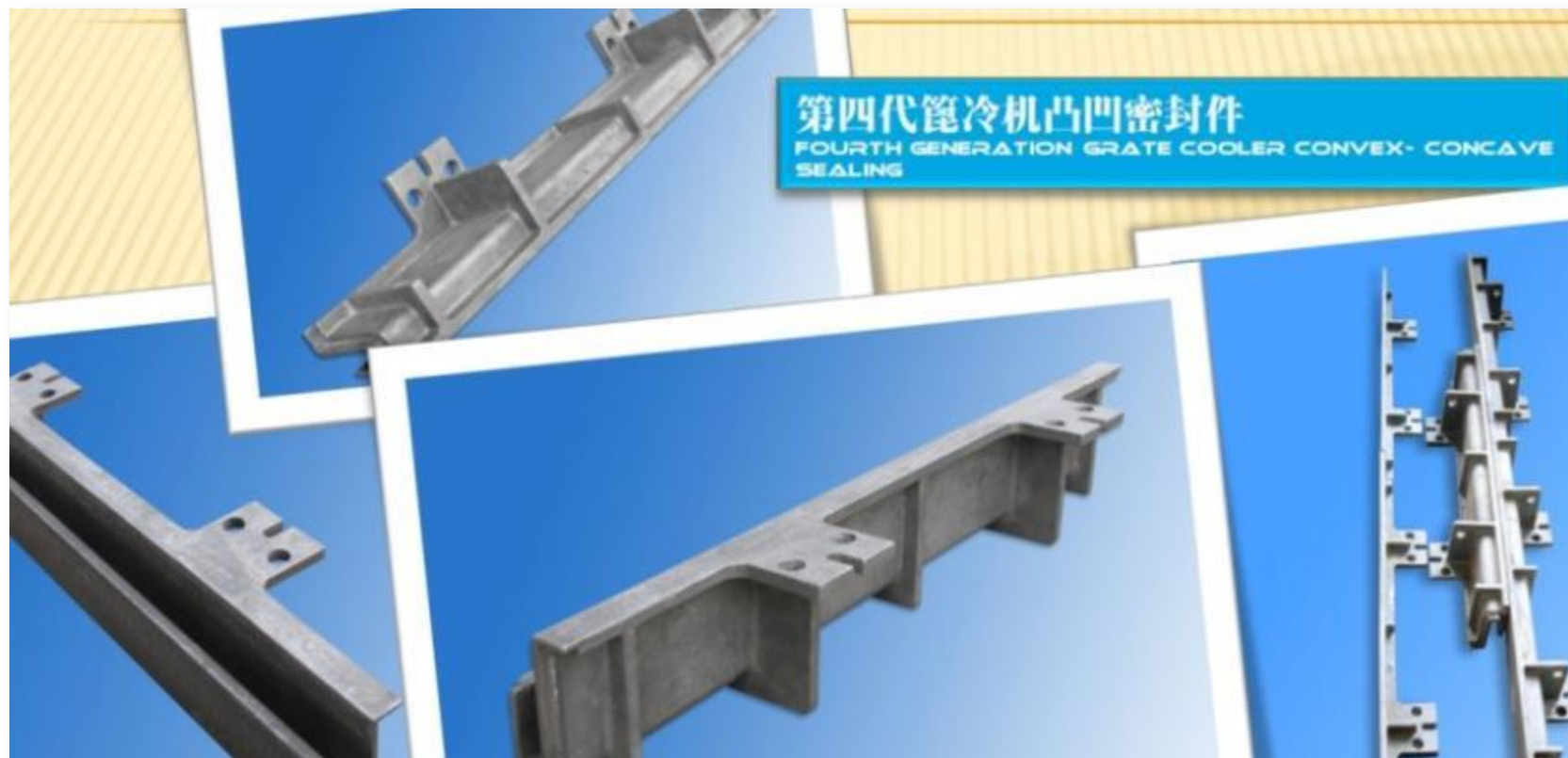
Grates After 32 Months Operation

Equipment Designed and Manufactured by TCDRI



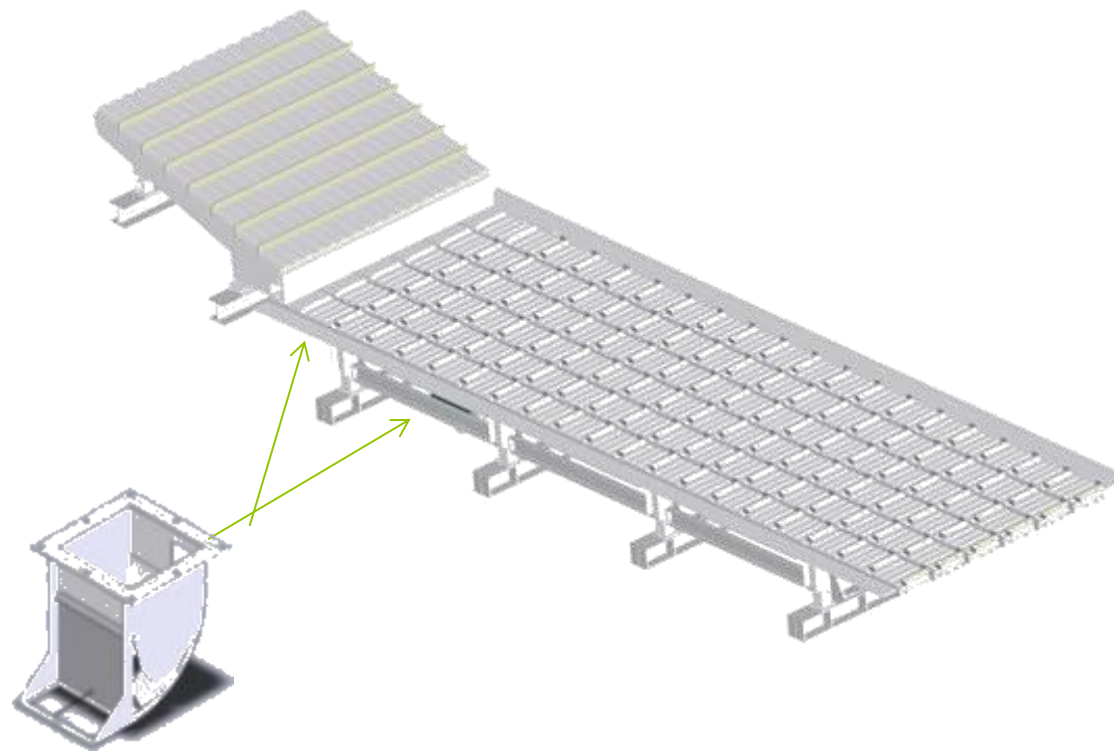
Sealing Structure

Equipment Designed and Manufactured by TCDRI



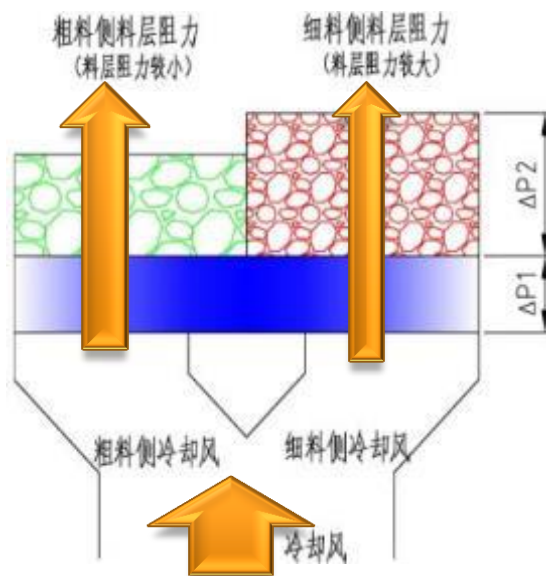
Sealing Structure

Equipment Designed and Manufactured by TCDRI

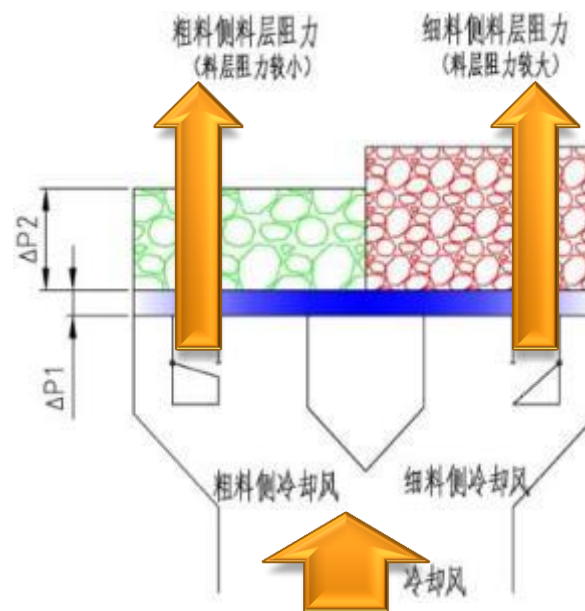


Grate Air Flow Regulator Valve

Equipment Designed and Manufactured by TCDRI



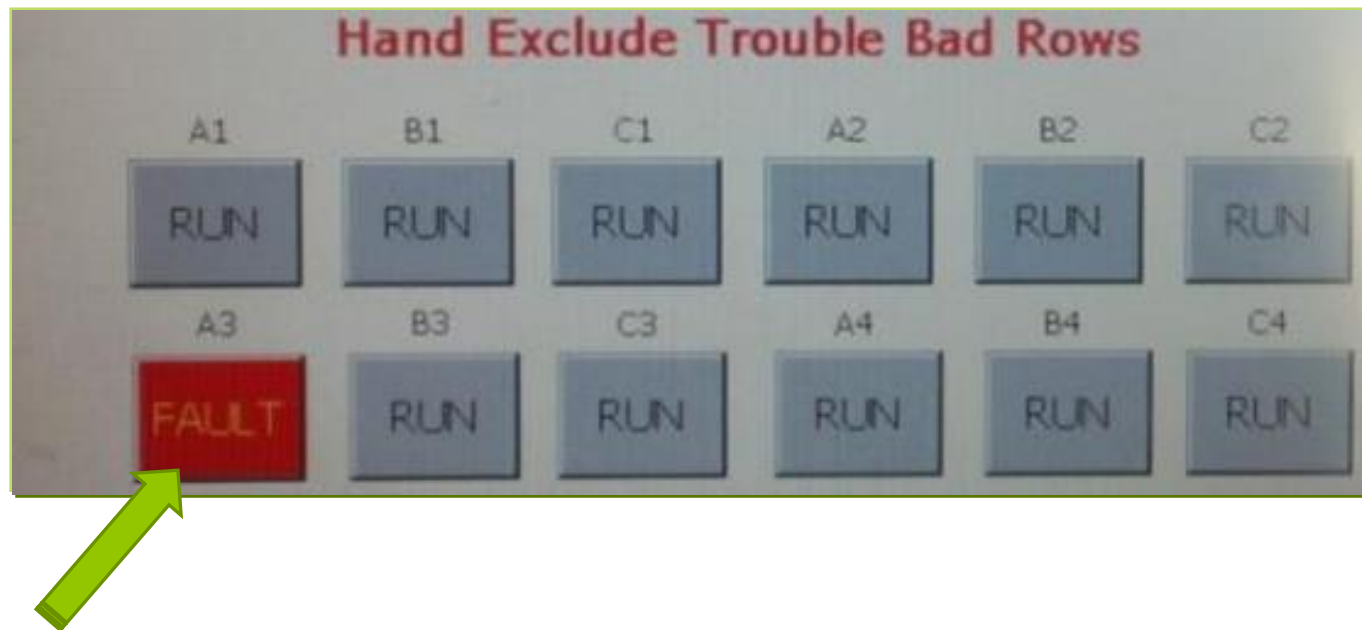
三代篦式冷却机



Sinowalk型冷却机

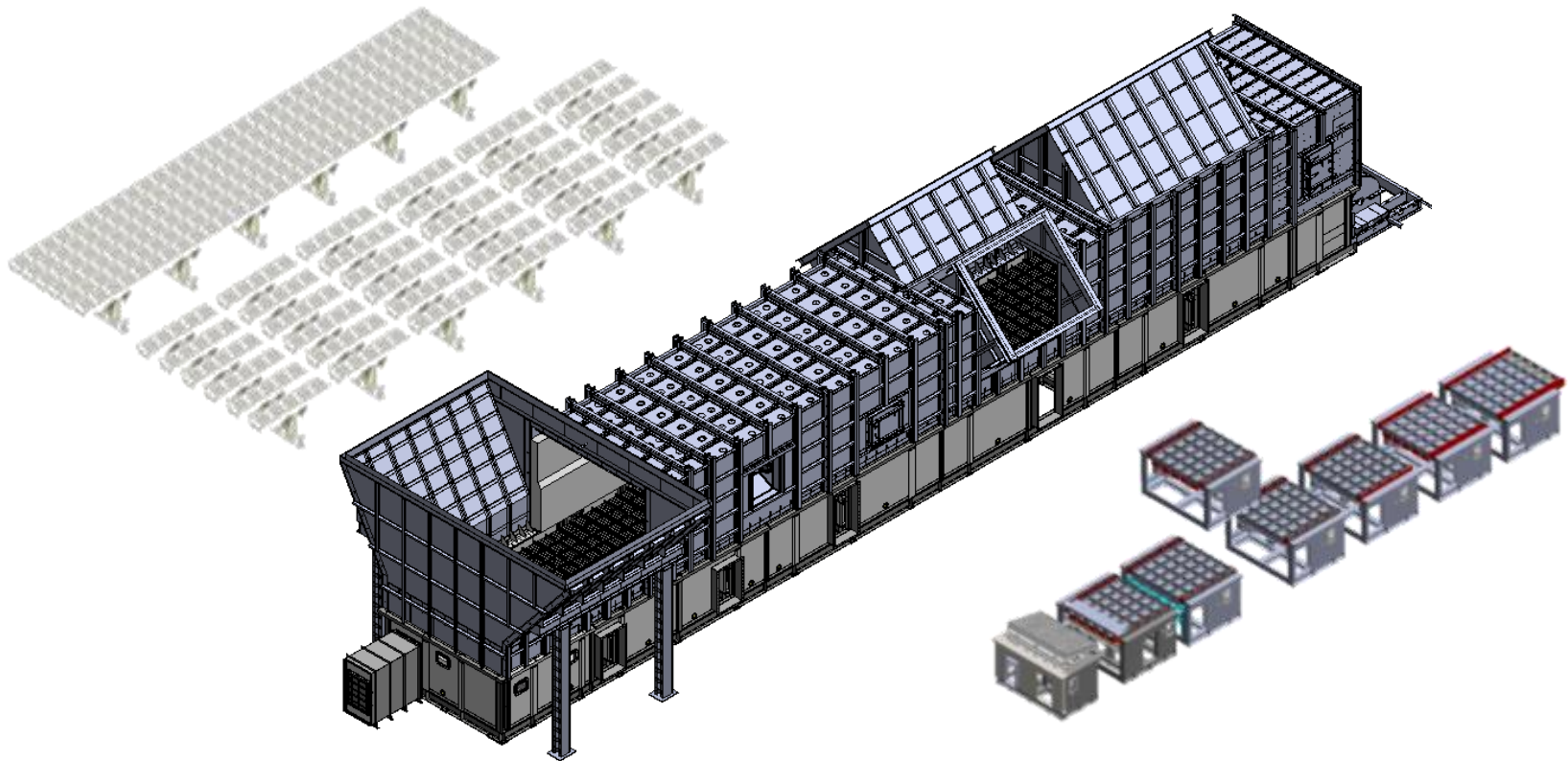
Grate Air Flow Regulator Valve

Equipment Designed and Manufactured by TCDRI



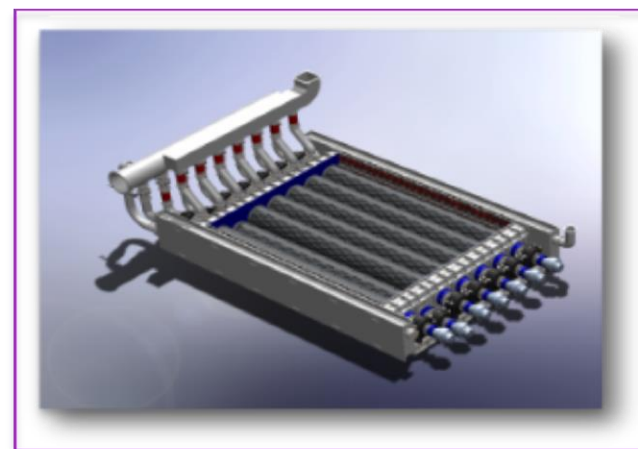
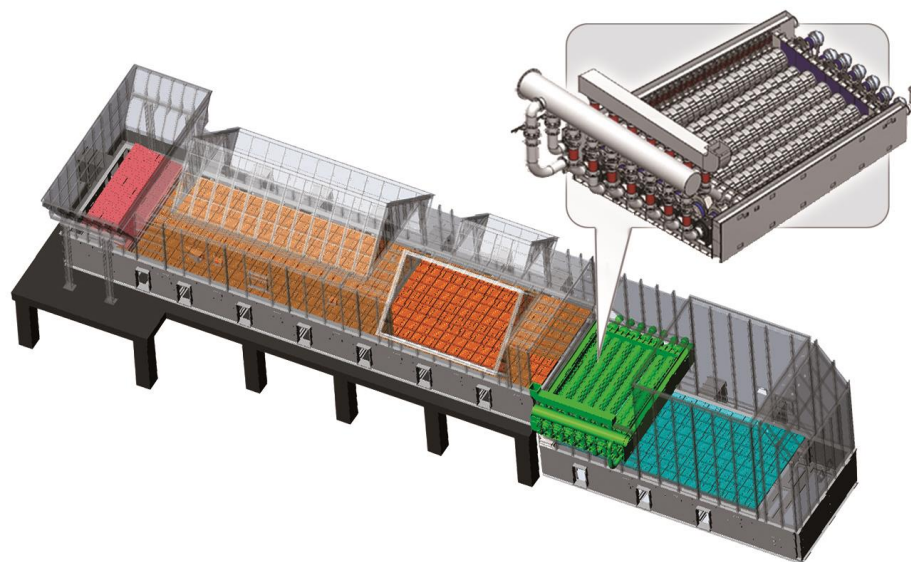
PLC control disconnect Fault lane online

Equipment Designed and Manufactured by TCDRI



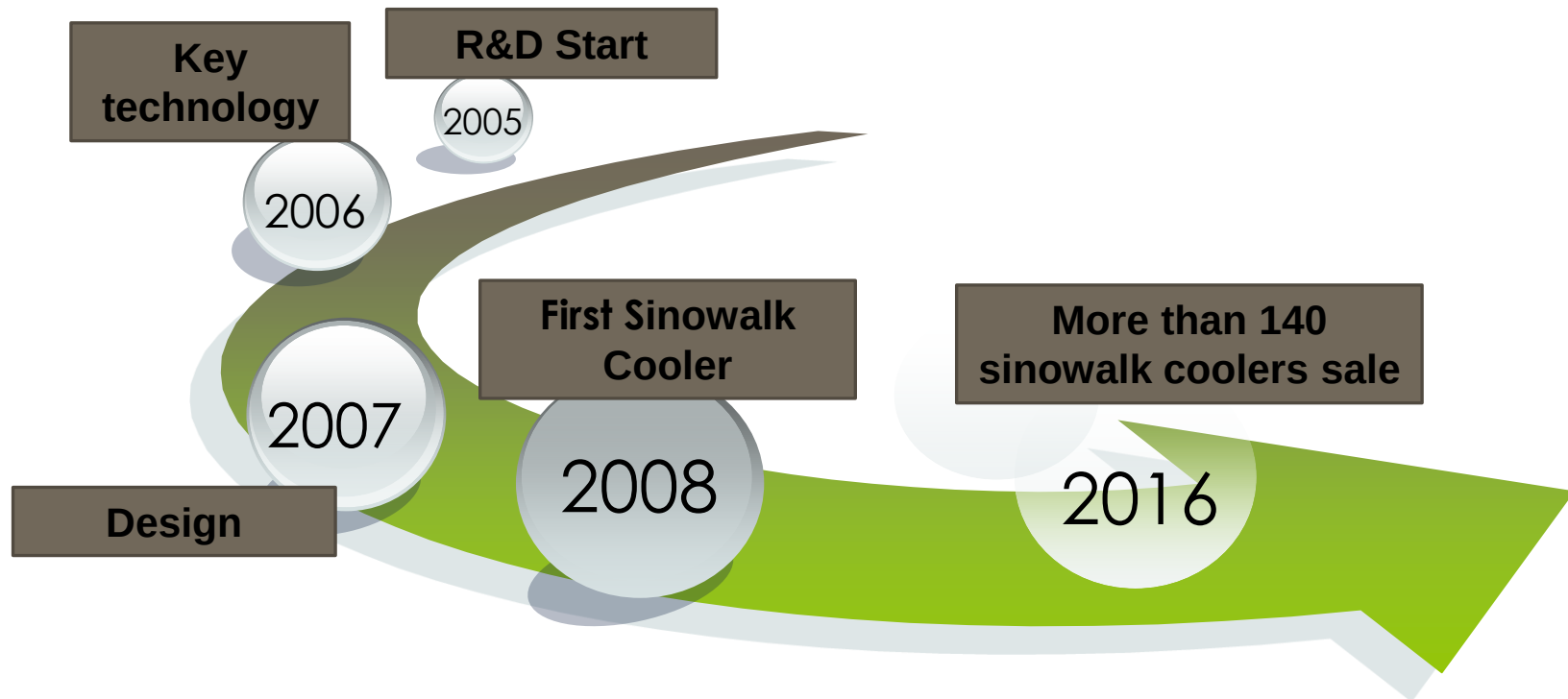
Standard Modular Design

Equipment Designed and Manufactured by TCDRI



Intermediate Roller Crusher

Equipment Designed and Manufactured by TCDRI



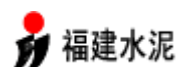
**Total sales Sinowalk cooler 140 sets sales, 125 sets
have been put into operation**

Old Cooler Upgrading Project for Heiderburgcement

Equipment Designed and Manufactured by TCDRI



paraguay tupi



泉头集团



春潭水泥

凯里瑞安



南雄彤置富水泥

赤峰鲁蒙

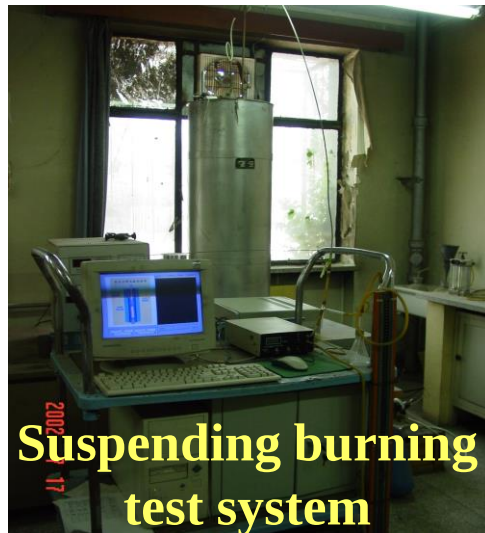
3 R & D Center

Human Resources and Main R&D Directions

8 Doctors and 36 Masters (Total 56
Persons)

- Pyro – System
- New Equipment
- New Technology
- Environment Protection
- Upgrading of Cement Plant
- Thermal Potash

Pyro Test Platform



Grinding Test Platform



Roller Mill Test System



Roller Press Test System



Ball Mill Test System

Sludge and Junk Pilot System



Sludge Spin Drier

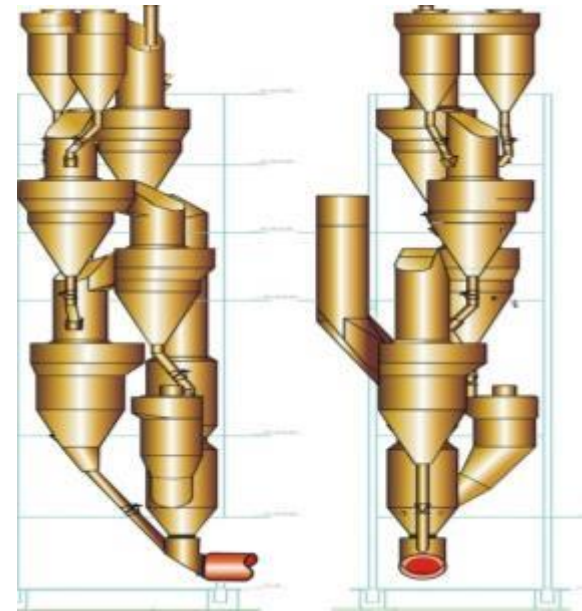
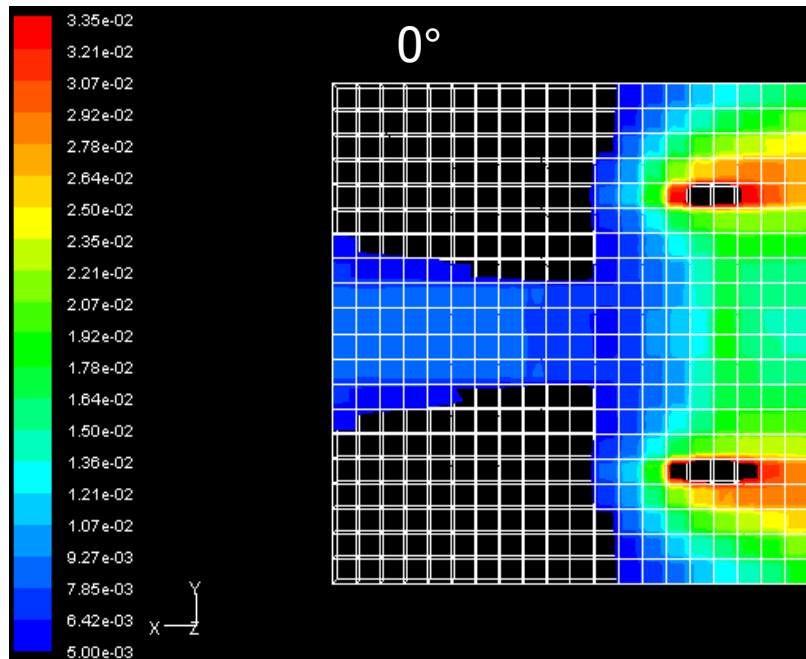


Sludge Dryer

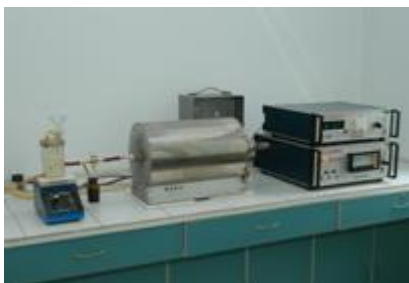


Junk Crusher

Computer Simulation



Material Test Lab



Sulfur Analyzer



CL Analyzer



Burning Feature Analyzer



Caloric Analyzer



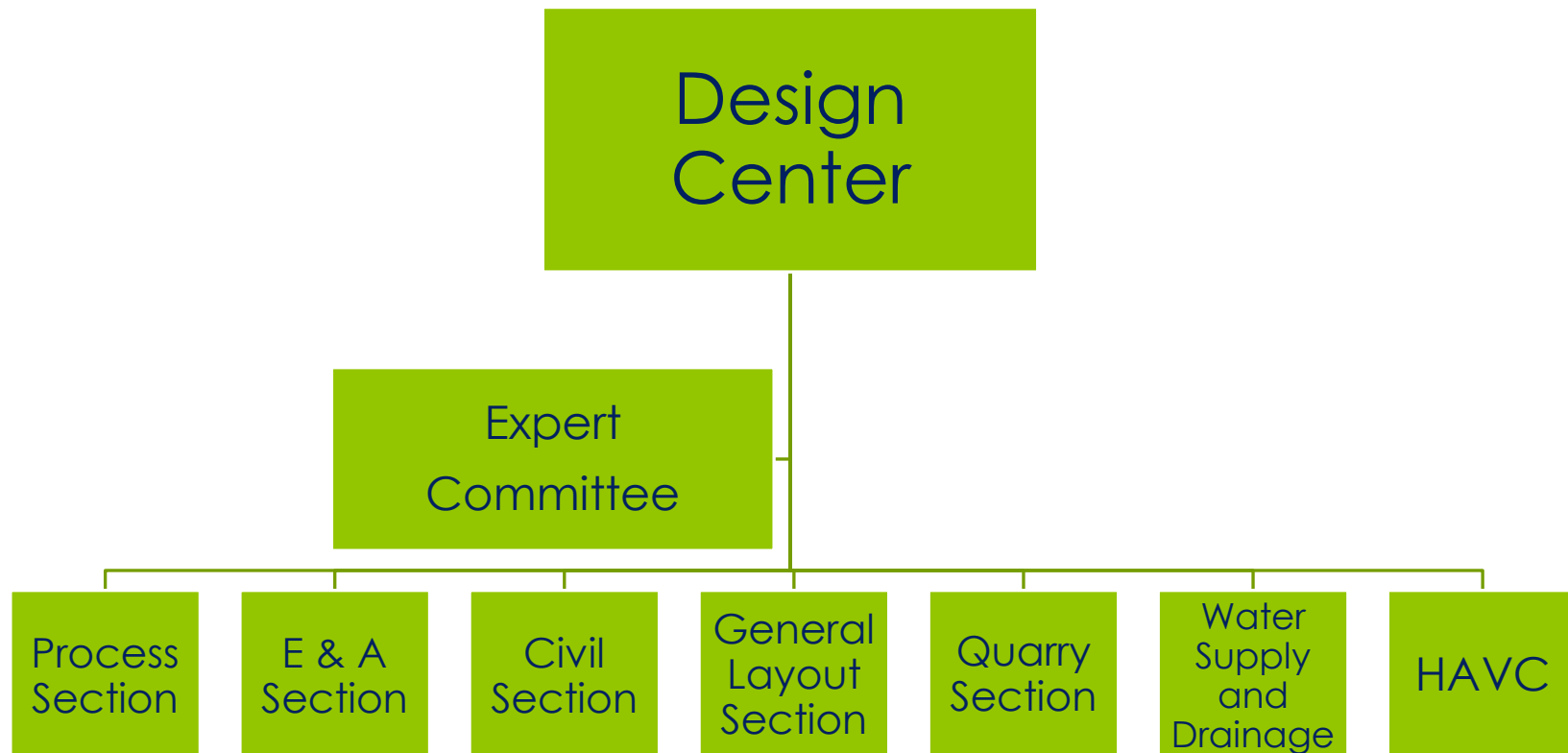
X diffraction analyzer



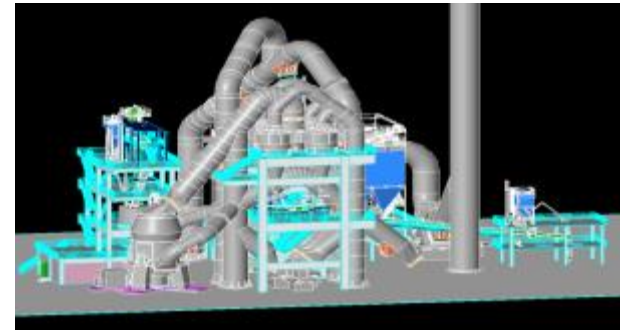
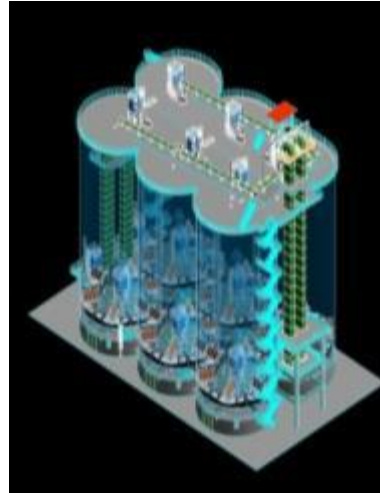
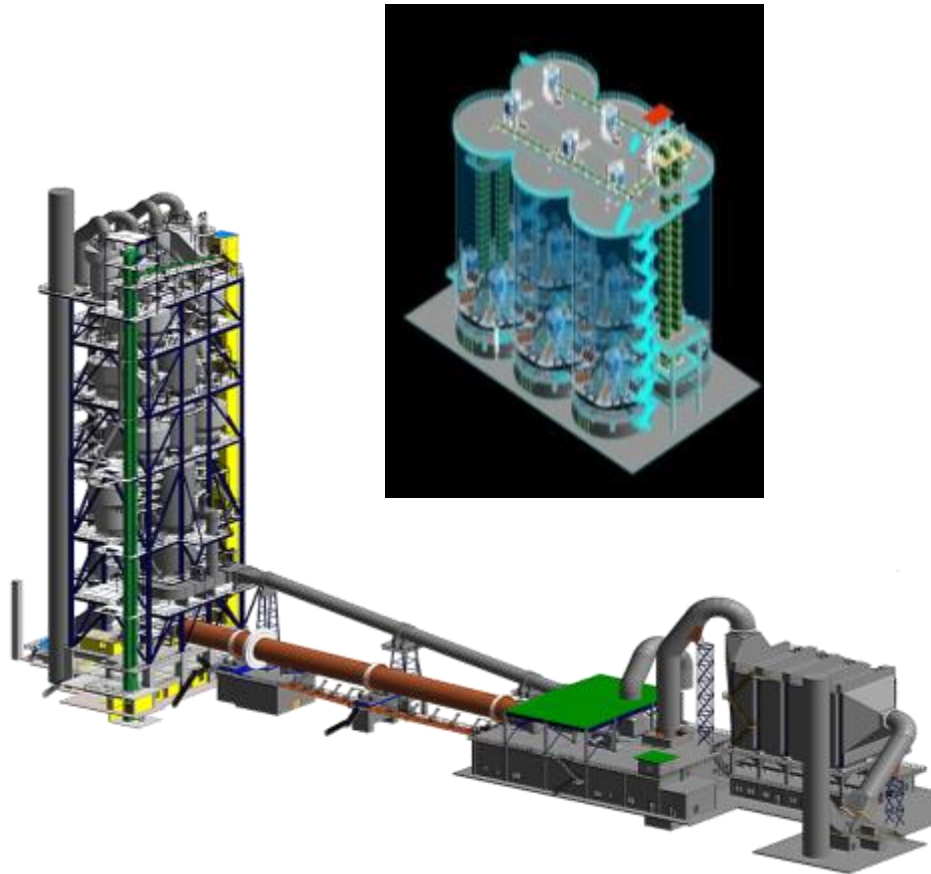
atomic absorbance spectrometer

4 Engineering Design Center

Design Center Structure



3-D Engineering



Civil Engineering with International Code and Standard

US Standard

International Building Code-2006
Minimum Design Loads for Buildings
and Other Structures
Building Code Requirements for
Structural Concrete and
Commentary
Specification for Structural
Steel Buildings
ASTM

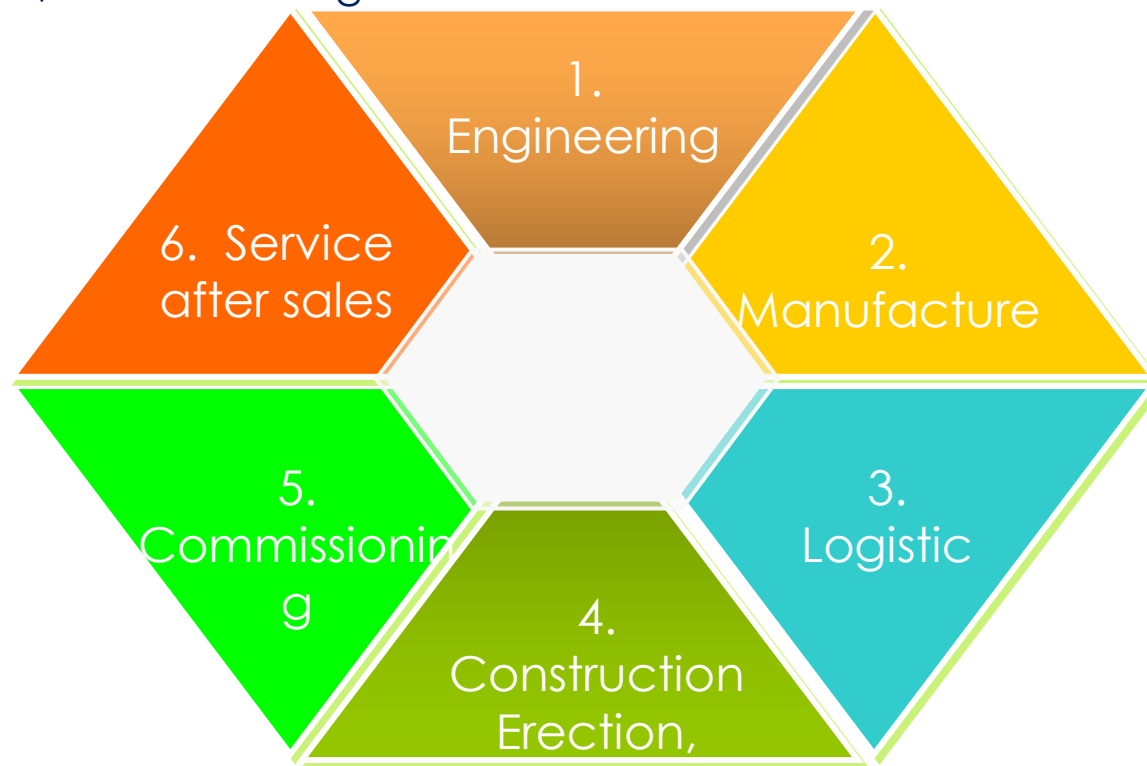
European Standard

EN 1991: Actions on structures
EN 1992: Design of concrete structures
EN 1993: Design of steel structures
EN 1994: Design of composite steel and
concrete structures
EN 1995: Design of timber structures
EN 1996: Design of masonry structures
EN 1997: Geotechnical design
EN 1998: Design of structures for
earthquake resistance
EN 1999: Design of aluminum structures

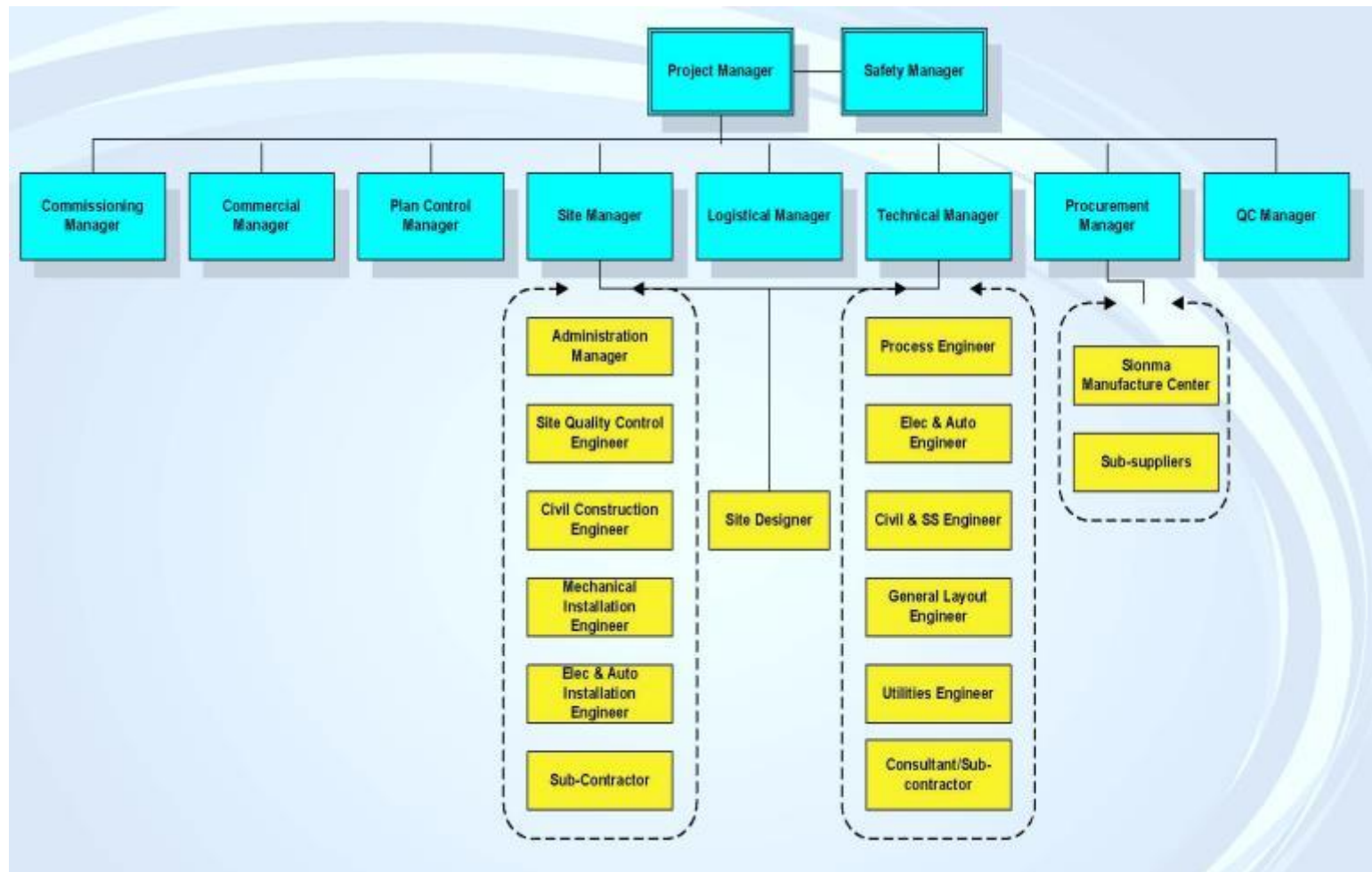
5 Project Management Center

Project Execution

Turn-key project should include engineering and design, purchasing equipments and structure steel manufacture, shipment and inland transport, civil construction, mechanical erection and electrical installation, commissioning and after sale services



Project Execution Teaming



Project Execution Plan



Human Resource Plan

	Description	Specification	Unit	Qty	Legend
Main measuring equipment	Electric total station	GTS-711S	set	1	
	Laser theodolite	DJJ2-2	set	4	
	Common theodolite	J3-2	set	4	
	High-precision water level	AT-G2	set	2	
Earthwork machine	Grab	PC300	set	4	
	Loader	ZL50	set	5	
	Bulldozer	TY220	set	5	
	Dump truck	QD351-8t	set	20	

Construction Machine Proposal



Time Schedule



Site Construction Layout

Quality Control



QUALITY CONTROL				Date	
Item	Specification	Actual	Unit	Inspector	Reviewer
1. Material	1.1. Steel	1.1. Steel	1.1. Steel	1.1. Steel	1.1. Steel
2. Dimensions	2.1. 100mm	2.1. 100mm	2.1. 100mm	2.1. 100mm	2.1. 100mm
3. Surface finish	3.1. 0.8mm	3.1. 0.8mm	3.1. 0.8mm	3.1. 0.8mm	3.1. 0.8mm
4. Hardness	4.1. 200HV	4.1. 200HV	4.1. 200HV	4.1. 200HV	4.1. 200HV
5. Tensile strength	5.1. 1000MPa	5.1. 1000MPa	5.1. 1000MPa	5.1. 1000MPa	5.1. 1000MPa
6. Yield strength	6.1. 500MPa	6.1. 500MPa	6.1. 500MPa	6.1. 500MPa	6.1. 500MPa
7. Elongation	7.1. 10%	7.1. 10%	7.1. 10%	7.1. 10%	7.1. 10%
8. Impact	8.1. 10J	8.1. 10J	8.1. 10J	8.1. 10J	8.1. 10J
9. Fatigue	9.1. 1000 cycles	9.1. 1000 cycles	9.1. 1000 cycles	9.1. 1000 cycles	9.1. 1000 cycles
10. Corrosion	10.1. 100h	10.1. 100h	10.1. 100h	10.1. 100h	10.1. 100h
11. Welding	11.1. 100h	11.1. 100h	11.1. 100h	11.1. 100h	11.1. 100h
12. Painting	12.1. 100h	12.1. 100h	12.1. 100h	12.1. 100h	12.1. 100h
13. Packaging	13.1. 100h	13.1. 100h	13.1. 100h	13.1. 100h	13.1. 100h
14. Storage	14.1. 100h	14.1. 100h	14.1. 100h	14.1. 100h	14.1. 100h
15. Transportation	15.1. 100h	15.1. 100h	15.1. 100h	15.1. 100h	15.1. 100h
16. Installation	16.1. 100h	16.1. 100h	16.1. 100h	16.1. 100h	16.1. 100h
17. Maintenance	17.1. 100h	17.1. 100h	17.1. 100h	17.1. 100h	17.1. 100h
18. Decommissioning	18.1. 100h	18.1. 100h	18.1. 100h	18.1. 100h	18.1. 100h
19. Recycling	19.1. 100h	19.1. 100h	19.1. 100h	19.1. 100h	19.1. 100h
20. Disposal	20.1. 100h	20.1. 100h	20.1. 100h	20.1. 100h	20.1. 100h



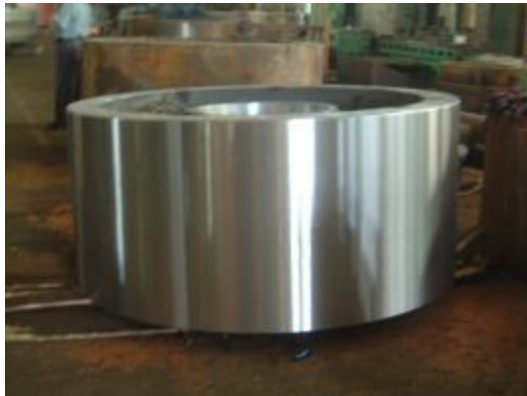
5 O & M Center

Spare Parts Services

- ◉ **Equipment Fabrication**
- ◉ **Storage and Distribution**
- ◉ **Production Support and Overhaul Service**
- ◉ **Spare Parts Lease**
- ◉ **Spare Parts Exchange Center**
- ◉ **24 X 7 Emergency Support**
- ◉ **On-line Service**



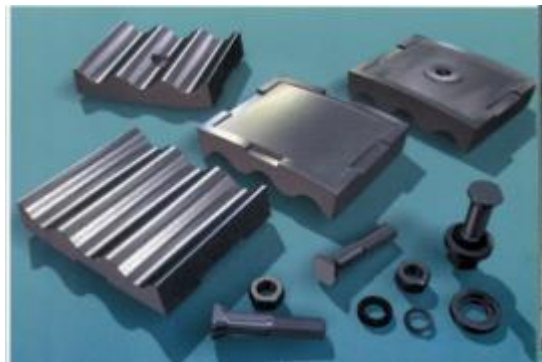
Spare Parts in Stock



Support Roller



Crusher Rotor



Mill Liner



Roller Mill Gear Box



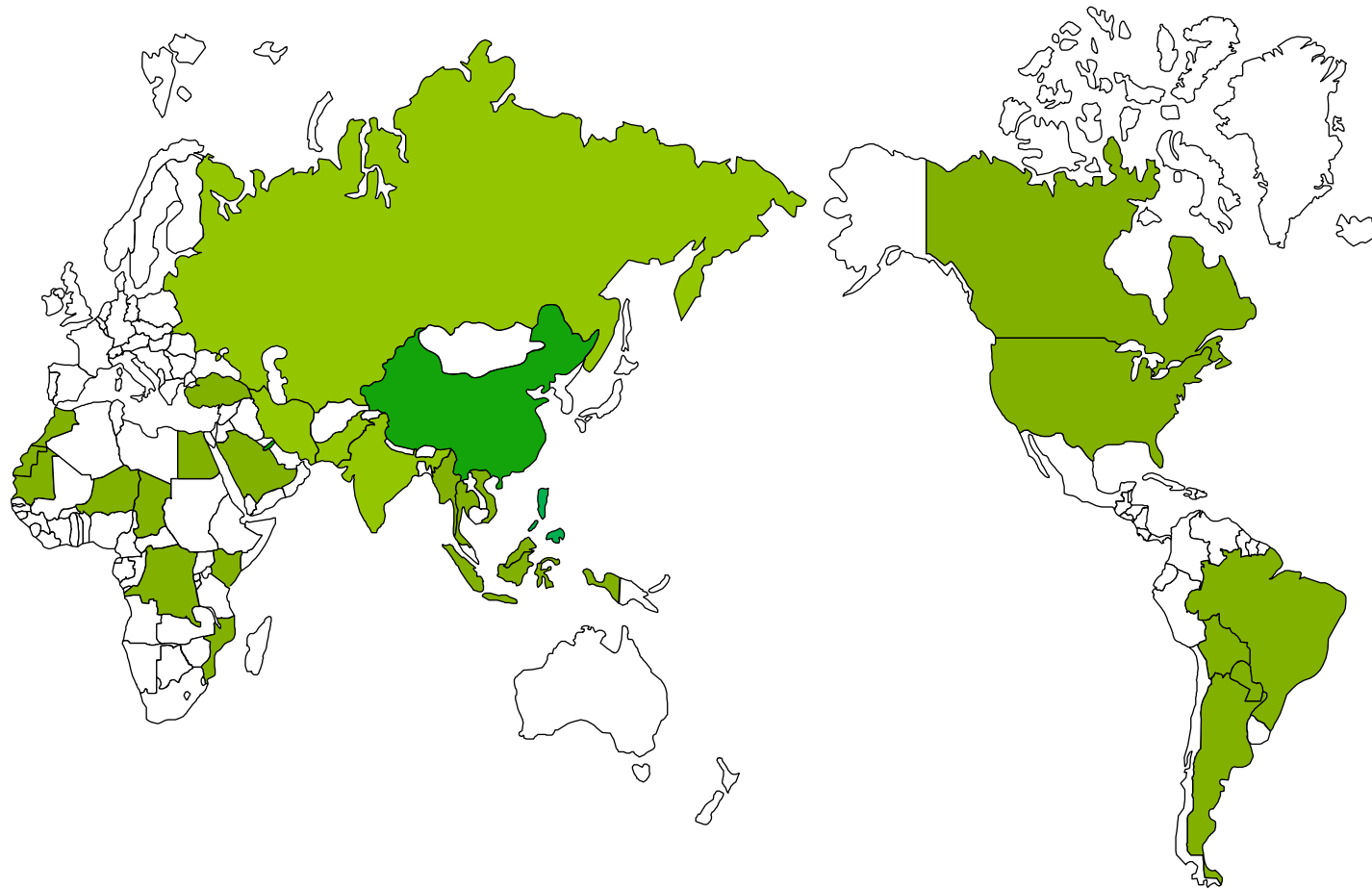
Girth Gear

O & M Services

Application condition	Contractor (in charge of)	Owner (in charge of)	Advantage	Remarks
The owner is lack of dry process cement production management and production personnel	● all management personnel; ● all production personnel; ● all production spare parts; ● all production wearing parts.	● procurement of raw material & fuel; ● water & power supply; ● sales of finished product; ● other external affairs.	Clear definition of responsibility and authority; easy for assessment , and easy management for the owner.	

7 Reference Plants

Our Footprint



Our Cooperation In Latin Amarica

- **Votorantim:**
 - **Brasil: Salto, Maraba, Petcock Mills and Cement mill, Stacker & Reclaimer**
 - **Turkey: Sivas**
 - **Bolivia: Yancuces**
 - **Argentina: Saint Luis**
 - **US: Charlevoix**
 - **Canada: Saint Mary**
 - **India: SDCCL**
- **Intercement**
 - **Paraguay: Tupi**

8 Offices in Latin-America

- **Brasil**
- **Panama**

Contact Information—Brazil



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Contact Information—Panama City

- ◉ Shared office with Hazemag in Panama City
- ◉ Same time zone
- ◉ Same Languages (Spanish, Portuguese, English)
- ◉ Mr. Carlos A. Pena
- ◉ e-mail: pena@allmineral.com
- ◉ Mobile: +507 6676 8558

Thank You!

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Mobile: 0086-13803077112