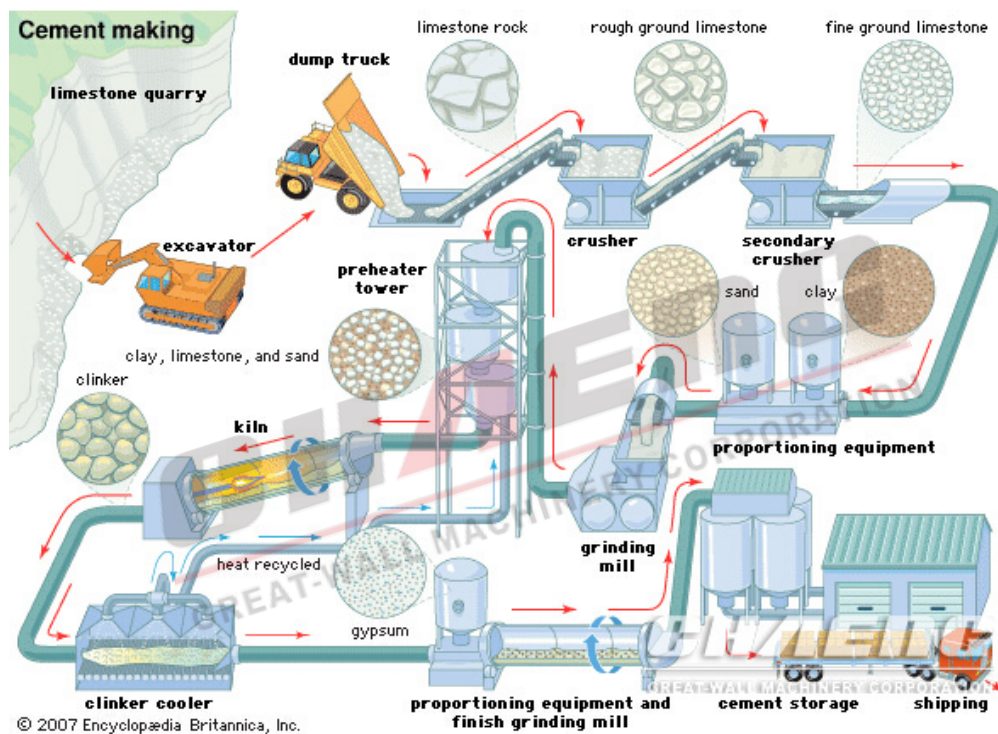


Process Description

CHAENG have advanced technology production equipment and a professional technical team. CHAENG holds deep domain knowledge of the industry and hence, is equipped to offer customized service that are directed to meet the needs of clients from cement plants.

Cement production line includes crushing and pre-homogenization, raw material preparation & homogenization, preheating & decomposition, cement clinker sintering, cement grinding and packaging etc. CHAENG have the ability to built 300t / d ~ 10000 t / d cement production line independently, And has extensive experience in the design and construction, built many large cement production line



1. Crushing and Preblending

limestone, clay, iron ore, coal, etc. Limestone is the largest amount of raw materials in cement production. After mining, the size of limestone is large with high hardness, so the limestone crushing plays a more important role in cement plant.

2. Raw material preparation

In the cement production line, producing 1 ton of Cement need grind at least 3 tons of materials (including raw materials, fuel, clinker, mixed materials, gypsum). Grinding operation consumes about 60% of total power in cement plants, raw material grinding more than 30%, while coal mill used in cement plant consumes 3%, cement grinding about 40%. So choosing the right grinding mills in cement plant is very important. chaeng can provide cement vertical mill, chaeng cement vertical roller mill in the production of cement specific surface area up to $3800 \text{ cm}^2/\text{g}$ with stable and reliable quality, it can be saving electricity above 30% use of vertical

roller mill production per ton cement clinker than traditional tube mill, and the power saving effect is very remarkable.

3. Raw materials homogenization

Adopting the technology of homogenization could rationally get the best homo-effect and afford an eligible production to the demand.

4. Preheating and precalcining

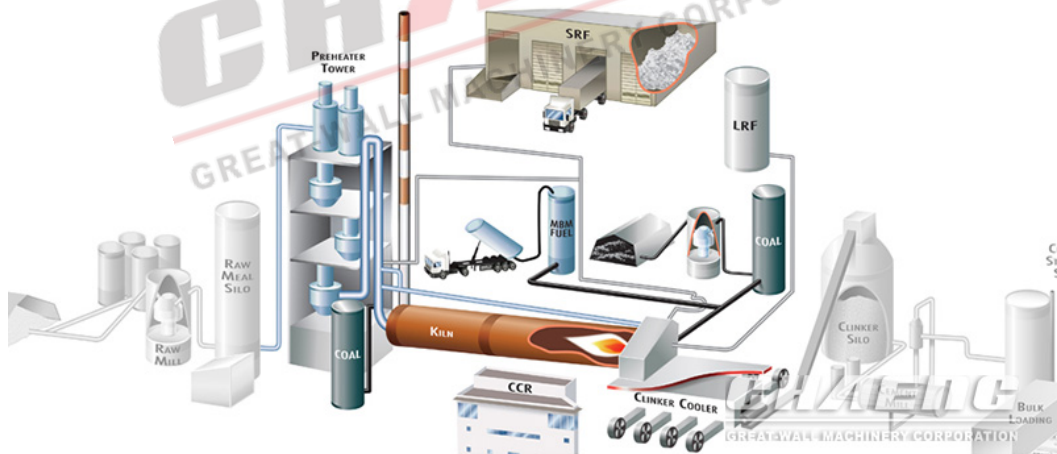
Preheater and calciner are key equipment for precalcining production technique.

5. Burning cement clinker in a rotary kiln

The calcination of rotary kiln is a key step of cement production, which makes directly influence on the quality of cement clinker.

6. Cement grinding

Grinding cement clinker (and gelling agent, performance tuning materials, etc) is used to grind the cement to the appropriate size (in fineness, specific surface area, etc.), optimize cement grain grading, increase the hydration area and accelerate the hydration rate to meet the requirements of cement paste setting and hardening.



CHAENG delivers reliable cement project execution for cement plants using advance cement machinery. With the manufacturing of individual components of cement plants and with fabrication, installation & commissioning of entire cement plant, CHAENG has supplied & commissioned more than 150 Cement Plants. We execute turnkey cement projects for Cement Plants, Rotary Kiln Cement Plants, Shaft Kiln Cement Plants, Clinker Grinding Units, Slag Cement Grinding Units and Slag Grinding Project. For successful implementation of our turnkey cement projects, we conduct various types of project development studies, feasibility studies etc. These are followed by engineering, procurement & construction management (EPCM) services. We supervise the construction, commissioning along with offering start-up and post start-up services.

Specifications

CHAENG provide capacity of 5500t/d cement production line configuration table

System	Raw material grinding	Coal grinding	Cement grinding
Specification	GRMR53.41 3800kW	GRMC36.4 1250kW	GRMK46.41 4550kW
Separator	200kW	132kW	315kW
Fan	900000m3/h 11500Pa 4000kW	245000m3/h 9900Pa 1000kW	50000m3/h 8000Pa 1600kW
Capacity and Fineness	≥430 t/h R80um=12%	45 t/h R80um=3%	150 t/h 3300cm2/g
Feeding	95% < 80mm	95% < 50mm	95% < 40mm

Features

1. EPC advantage

The company can provide clients with 8 services including raw material test, project design, equipment manufacturing, installation, debugging, technical training, reaching the standard and reaching the capacity and EPC service. The company has many advanced technologies, rich operational experience and the ability to quickly analyze, judge and solve the problems when the problems occur.

2. Have the fastest delivery speed, and the delivery of the whole production line only needs 6-8 months.

3. Long time cooperation with well-known designing institute and cement plants worldwide

4. Have built more than 100 sets of cement lines at home and abroad.

Investment return

Power consumption for raw material grinding accounted for 30%, that for coal grinding accounted for 3%, and for cement grinding accounted for 40%. Reasonably selecting grinding equipment is of great significance to ensure product quality and reduce energy consumption

Cement final grinding program recommended:

Program recommended		Circle ball mill system	Joint grinding system	Vertical final grinding mill system
Cement types		P·O42.5	P·O42.5	P·O42.5
Cement ratio(%)	Clinker	90	90	90
	Limestone	5	5	5

	Gypsum	5	5	5
Cement specific surface area (cm ² /g)		3500	3500	3500
Capacity (t/h)		170	160	160
System power consumption (KWh/t)		41	33	28
Annual electricity savings (×10,000 Yuan)		—	400	700
Metal wear (g/t)		50 (Steel ball)	30 (Steel ball+Roll surface)	5 (grinding roller+grinding table)
Dry capacity		Weak	medium	Strong
Investment (×10,000 Yuan)	Construction fees	417.76	545.07	447.02
	Equipment fees	2977.72	3360.08	4224.26
	Installation fees	352.22	500.88	318.89
	Total investment	3747.70	4406.04	4990.18
Vertical roller mill for finish grinding has become the mainstream of cement production equipment, compared with the other two programs, it can save more than 7 million yuan of power cost only in one year .				

Customer stories

1. Uzbekistan customer officially signed a cement production line of 1000TPD with CHAENG on March 16, 2016. From the customer inspection to the final cooperation, it took less than 10 days, because CHAENG's strong strength and 60 years' experience, which make customers so trust.

Type	New type cement production line
Capacity	1000TPD
Main equipment	GRMR22.21 raw material vertical mill, GRMC16.21 coal vertical mill, GRMK33.31 vertical cement mill, φ3.2x50m cement rotary kiln
Characteristics	Energy saving, environmental protection

2. **Meng Electric Group: 1,500,000 T/A cement plant**, The production line using new dry process cement

technology, can reduce power consumption by 20% to 30%, greatly reduce production costs, improve the overall efficiency of enterprises.



3. Lafarge Group 2000t/d Line



About chaeng

Founded in 1958 and located in Xinxiang, Henan province, CHAENG with 60-year experience in equipment manufacturing covers an area of 330,000 m² and its annual production value is 1 billion yuan. The company specializes in manufacturing tube mills, rotary kilns, vertical mills and large steel casting and can undertake the EPC projects of cement production lines, active lime production lines, blast furnace slag/ steel slag/ nickel slag grinding plants, and its products are sold to more than 50 countries and regions in Southeast Asia, Central Asia, South Asia, North America, South America and Europe.

Our long-term strategic partners: Arcelor Mittal, Tata Group, Pohang Iron and Steel Company, Germany CCE, Japan Chiba , Shanghai Baosteel , Voestalpine and ASGT.

