

## 600,000 t/a GGBS production program

### 1. Development Status:



1. In 1995, granulated blast furnace slag is mainly used for cement admixture. Slag is difficult to grinding, so it is less in cement admixture, generally not more than 30%.

2. 1995-2000, foreign powdered slag impact on the durability of high performance concrete, which causes the attention of scholars and emulate. Slag powder as a high admixture

concrete gradually promotes the use in construction.

3. After 2000, energy-saving technologies and economic studies slag powder application technology grinding equipment development, the majority of cement and concrete mixing stations companies recognize that the grinding fineness slag powder should be controlled  $450\text{m}^2/\text{kg}$ . Various grinding devices are able to produce slag powder for different needs market, and obtain the corresponding economic benefits.

Xinxiang Great Wall machinery independent D&R manufacture and launch the first slag vertical mill in 2004. After 10 years of continuous innovation and development and practice of summary, the current production of slag vertical mill has caught up with the international level, becoming true slag powder business areas.

### 2. Main program:



(1) Construction scale: [600,000 t/a GGBS production line](#). Blast furnace gas as drying heat source: Slag powder is mainly used in cement and various commercial concrete mixing station for mixing materials, and export cement plant or the surrounding area to commercial concrete mixing station.

(2) Production Method: GGBS production line using Great Wall Machinery GRMS46.41 vertical slag grinding mill, we determine the work system according to

market demand, 10 months, working 28 days per month, annual Production powdered slag 600,000 tons.

### 3. Main equipment

Vertical mill is mainly equipment for Slag grinding; Great Wall produces [slag vertical mill GRMS46.41](#). Vertical mill has the following technology advantages when slag powder quality has reached GB / T18046-2000:



- (1) Vertical mill power consumption to save more than 50%;
- (2) Resistant materials consumption of vertical mill is lower 130 times than the ball milling system;
- (3) Using drying and grinding technology process, which reduce construction investment, simplifying the process, reducing the fuel consumption, has significant energy-efficient effect, it is a new environmentally friendly green technology policies meeting global environmental accord.

Currently, the project has been successfully completed, [GGBS production line](#) not only bring huge economic benefits to the company, but also has a double significance of energy conservation.

#### Specifications

Model	Grinding table diameter	Roller diameter	Roller number	Motor	Output
	D (mm)	D (mm)	(n)	P (kW)	Q (t/h)
GRMS33.31	3200	1700	3	1600	50
GRMS35.41	3500	1800	4	1800	60
GRMS40.41	4000	1900	4	2240	70
GRMS43.41	4300	2120	4	2800	90
GRMS46.41	4600	2240	4	3150	105
GRMS48.41	4800	2240	4	3550	125
GRMS50.41	5000	2360	4	3800	140
GRMS53.41	5300	2500	4	4200	160
GRMS56.61	5600	2500	6	5000	180

Note: mill spectral pattern benchmark

- (1) Material medium friction (MFs)=0.9~1.0;
- (2) Material moisture max 15%;
- (3) Refined powder granularity 4200~4500 cm<sup>2</sup>/g;
- (4) Refined powder moisture 0.5~1.0%;
- (5) The concrete mill installed power and technology parameter will be adjusted appropriately basing on the actual material property and requirements of owner;

Great wall Slag Vertical mill pic:

