



# NATIONAL ENERGY CONSERVATION AWARD - 2007

**CEMENT  
DIVISION -  
SOUTH**

**Grasim Industries Limited Perembalur**

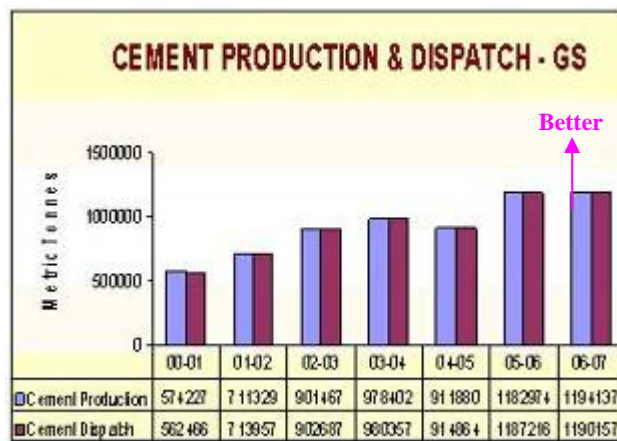
## ORGANISATION PROFILE

### A. ORGANIZATIONAL ENVIRONMENT

The Cement business of Grasim Industries Limited presently has an installed capacity of over 14 Million Tonnes per Annum (MTPA). With recent expansions, mergers and acquisitions, Grasim combined with UltraTech, has become the largest cement producer in the country and the 11<sup>th</sup> largest in the world, with a combined cement production capacity of over 31 MTPA.

**Grasim Industries Limited (Cement Division - South)** was commissioned in the year 2000 with an installed capacity of 2400 tonnes per day (TPD). Over a period of last few years it has optimized its capacity to 3250 TPD in the year 2005 by up-gradation and de-bottlenecking.

By the year 2003 itself, the Unit was certified for ISO 9001, ISO 14001 and OHSAS 18001.



As of now, the following brands are manufactured at **Grasim South**:

**Birla Plus** – PPC (Blended cement)

**Rajashree cement** - OPC 43 grade

**Birla Super** - OPC 53 grade

To meet the growing customer's expectations and demand, the Ready Mix Concrete plants were commissioned at strategic locations in Chennai & Bangalore. Leveraging the strong equity and goodwill of the house mark, the company brands are synonymous with the name of Aditya Birla Group i.e. brands such as Birla Plus, Birla Super.

In the year 2000 the cement business of Grasim has split into Manufacturing and Marketing divisions with Chief Manufacturing and marketing Officers heading both divisions reporting to the Business Head. This was done mainly to have clear focus in manufacturing as well as marketing



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and improve the standards of both so that the Grasim business as a whole meets the growing competition in the cement business in the country.

## B. ORGANIZATIONAL CULTURE

Grasim South has a team of employees with an average age group of around 35 years. This young team of personnel creates a very good working atmosphere with high degree of integrity, positive attitude, seamless working and very good communication across different disciplines. This good working culture of the employees has helped the Unit to stabilize the operation in a very short period of time and also bagged many awards and accolades in the field of productivity, quality, safety, environment, rural development etc. The relation between the management and workmen remains very conducive ensuring no industrial unrest so far. The workforce is very dedicated resulted into increased individual productivity.

### Unit Vision

“Be the best in the cluster for quality, cost and enhancing customer, employee and other stakeholder value by 2008.”

### Unit Mission

- Continual improvement of Quality and Cost through process optimization, process capability enhancement and technological up-gradation.
- Continual Improvement of services by eliminating / reducing Non Value Added activities.
- Continual improvement of employee competencies & quality of life.
- Active participation for social, economical and eco-friendly development of surrounding community.
- Continual improvement of relationship with stakeholders by mutual co-operation and trust.

**Values** - Grasim South was one of the first Units in the group which inculcated the group values to all its staff members in a shorter period of time. Commitment of the employees is evident from the start of their working where they have Morning Prayer emulating the group values and pledging for zero abnormalities, zero accident, zero breakdowns, zero complaints, zero pollution and zero losses. Grasim South has been practicing the 5 values wholeheartedly since long i.e. much before the stimulation of the same by our Chairman. Winning of the WCM Chairman's Bronze and Silver award for manufacturing excellence in consecutive years indicates the team work, commitment, seamless working etc., put up by the whole organization. Installation of waste fuel feeding system and continuous endeavor by the employees for the utilization of alternate fuel and the registration of CDM (Clean Development Mechanism) project for usage of alternate fuel talks about the speed & passion of the employees in the Unit because of which the Unit has become the first plant in the



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country to establish the usage of alternate fuel thereby reducing the cost of fuel substantially and also getting the same registered as CDM project.

**Health & safety requirements** - Visualizing the future environmental legislations, cleaner technology has been adopted right from the initial stage itself with technological measures to avoid the dust emission at the source itself. Due care is given in identifying, assessing & controlling occupational health by administering periodical health check for all employees including Audiometric tests for Mines workmen etc.

Grasim South has an excellent record with regard to safety measures. There is even no reportable accident for the last two consecutive years. The management is giving extra focus to accomplish Zero accident. Because of this excellent track record Grasim South has bagged many awards like:

- **GreenTech Safety Silver Award in Cement Sector – 2007.**
- **Global Cement Awards, London – 2006 (Lowest Injury Incidence Rate – First prize, 1000\$).**
- **GreenTech Environment Excellence Silver Award in Cement Sector – 2006 & 2007.**
- **GreenTech Safety Bronze Award in Cement Sector – 2006.**
- **Tamil Nadu & Kerala Mines Safety Association Safety Week Celebrations – 2006**

In order to ensure safe working, Personnel Protective Equipments (PPE) is provided to all employees. The PPE includes shoes, helmet, face shield, ear muff / plug, respirator, goggles, gloves, apron, safety belt etc. as per the job requirements. With the objective of zero accident and to inculcate safe work culture, regular class room and on-the-job safety training are organized, which include Industrial Safety training (monthly), First Aid training (twice in a year) and Fire fighting training (twice in a year).

## MAJOR TECHNOLOGIES, EQUIPMENT AND FACILITIES

Grasim South being the millennium plant has been endowed with all the latest technologies available at that point of time. The original plant was supplied by Fuller (which is a part of FLS since last 2 years). It has 4 stage pre-heaters with pre-calciner and latest generation cooler for clinker cooling. For the control of cement and clinker quality the plant is outfitted with a variety of expert systems like:

- RoboLab – only cement plant in India till today.
- Raw Mix Package (RMP)
- Laboratory Information Management System (LIMS)
- Knowledge Manager - for the first time in India.
- Linkman optimization operation software
- Plant Control & Automation package – from M/s. ABB Switzerland
- Mechanised Alternate fuel feeding system installed supplied by



RoboLab



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The latest addition is the most articulate Process Information (P.I) software which is a unique software to facilitate accessibility to all the operational people as well as concerned people at distant location like other group units and corporate office to the operating parameters and other important information.

In addition to the above, the plant has adopted modern technology for raw meal grinding, cement grinding etc., such as Vertical Roller Mills (from Loesche, Germany) and Cement Mill with roller press and V-separator (from KHD, Germany).

## C. REGULATORY ENVIRONMENT

The Plant has been installed with all the most up-to-date technology available in the field of pollution control and considering future environmental regulations. For example ESPs (Electro Static Precipitator) are installed at all critical locations with latest EPIC controls supplied by ABB. All this has resulted into very low emission level from different stacks in the plant which is reproduced below.

### Emission Level:

Raw Mill ESP	=	34 mg/Nm <sup>3</sup>
Cooler ESP	=	30 mg/Nm <sup>3</sup>
Coal Mill ESP	=	28 mg/Nm <sup>3</sup>
Cement Mill Bag Filter	=	26 mg/Nm <sup>3</sup>

Better

As against statutory  
limit of 40 mg/ Nm<sup>3</sup>

Right from the inception, the Management was very particular about the plantation and meticulously designed the same to make the plant environmental friendly. In the mining area, Grasim South has totally eliminated the drilling and blasting technology which is a conventional system of mining involving unsafe condition to the workmen and surrounding inhabitants. Grasim South has obtained most modern scientifically made Ripper - Dozer from Komatsu, Japan, for mining operation. This is ecological friendly equipment which eliminates the air pollution, sound pollution, vibration etc as well. In addition to the above, Grasim South has been complying with all



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the statutory requirements of electrical, mines, ground water etc. Grasim South is also maintaining a congenial relation with the surrounding villages.

The Unit has also excellent regulating and controlling systems in the form of ISO 9001:2000 Quality Management System, ISO 14001:2004 Environmental Management System & OHSAS 18001:1999 Occupational Health & Safety Management System besides following strict Safety standards and World Class Manufacturing (WCM) practices.

#### D. PRINCIPAL FACTORS DETERMINING SUCCESS

The principal factors that determine success in market include:

**Cost** - Cement is a price sensitive market. In order to maintain the edge over competitors, pricing policy have to be designed as per the market forces. The only cost, which is in our control, is the production cost wherein energy constitutes more than 50 % (25% fuel & 25% energy) of the total cost.

**Capacity** - Market share is in direct correlation to capacity to produce. Grasim South's consistency in growth in volume. With the use of alternate fuels in phased manner, it is ensured that the productivity is maintained.

**Service Standards** - Since product differentiation is very low in the industry, service level enhancement at channel levels and experiential marketing, i.e. making the overall experience good at customer level, builds up distinct competitive advantage.

**Product Quality** - Grasim South is the Market leader: The Non-Trade sector of the customer, covering builders and contractors are now aware of the quality characteristics of cement and **not** even insists on testing the cement through external Labs periodically. Grasim South is able to cater to their requirements and enjoy the premium over the same. All the R&D efforts have proved that the use of alternate fuels has no impact on quality of product, with suitable changes in raw mix design.

To illustrate the above point, Grasim South's marketing efforts are totally based on relationship marketing, controlled logistics for channel partners, free mobile lab facilities and customer service centers for customer experience.

With major portion of cement usage is in the hands of untrained manpower, guidelines and training at all levels are essential for efficient use of world-class cement. Grasim South's Technical Assistance & Services to Customers (TASC) department, through its wide network of qualified and experienced Civil engineers help customers in producing the best concrete and mortar at site of use.



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**Our Unit has received various accolades in the last few years as follows:**

- **Global Cement Awards, London – 2006**
  - **Lowest Injury Incidence Rate – First prize [1000\$]**
  - **Most Innovative Scheme for environmental impact abatement - Second prize.**
  - **Lowest specific energy consumption, Clinker grinding**
  - **Lowest specific energy consumption, Raw Meal grinding**
- **The systematic trial run carried out for the hazards waste from other industries in the premises of CPCB / TNPCB officials and recently received the clearance for hazardous waste fuel**
- **Negative fuel cost 39 Lacks approximately for utilising the waste fuels from other industries**
- **The First Cement Company in the World who got the carbon credit. Rs. 1.6 Crs.**
- **Greentech Safety Bronze & Silver Awards in Cement Sector – 2006 & 2007 respectively**
- **Greentech Environment Excellence - Silver Award – 2006 & 2007**