



# SIKA AT WORK

## CEMENT PLANT

### LAFARGEHOLCIM, BARROSO, BRAZIL

SikaGrind®-750 VRM

BUILDING TRUST



# CEMENT PLANT LAFARGEHOLCIM BARROSO, BRAZIL



## COMPANY DESCRIPTION

Since 1951 LafargeHolcim (LH) has been one of the leaders in the production of cement, concrete and aggregates in Brazil with operations in the Southeast region of the country.

In order to increase its production capacity, fulfill the expected demand for cement in the Brazilian market (especially in the states of São Paulo, Minas Gerais and Rio de Janeiro) and maintain its technology leadership, LH made a large investment to expand its plant located in Barroso (Minas Gerais-Brazil).

The project included the installation of a vertical roller mill (VRM) with a capacity of 450t per hour, increasing the annual cement production from 1.3 million to 3.6 million tons per year, becoming one of the most modern plants in the world. Some of the reasons to install this type of mill were to reduce the energy consumption, as well the level of dust and noise in the plant. The challenge was to get the most out of the mill, maintaining or increasing the quality of the cement.

## VERTICAL ROLLER MILL

The vertical roller mill (VRM) is a fine grinding equipment containing a vertical installation with a mixing system. It is an advanced type of mill. Basically, this type of mill uses large inclined rollers that are pressed by a pneumatic system against the material on a rotating table to perform the grinding work. The grinding takes place between the rollers and the track. Considering the operating of the equipment with high levels of vibration, it is necessary to have grinding aids which can reduce vibration, while raising the strength of the cement and maintaining the quality of the final product

## SIKA SOLUTION

With the SikaGrind® Range, Sika has an extensive line of products for the grinding in the cement production. For each process, the compatibility of our products is verified, making it possible to develop new products according to each specific requirement. Together with tests carried out in our laboratories and directly in the VRM, it is possible to determine the improvements in the production by including SikaGrind® VRM.

Through a long-term partnership, Sika developed and is supplying grinding aids to all the LH group's plants in Brazil. The main products supplied are: SikaGrind®-362 (for production increasing) and SikaGrind®-210 BR (for increase of the initial strength).

Sika was present throughout the expansion phase of the Barroso plant, working on a new product adapted to the requirements of the VRM. During this period, the SikaGrind® VRM technology was developed. The final objective was to improve the strength of the cement, optimizing the granulometric curves and maintaining the characteristics according to the company's control charts.

As a result of development, the SikaGrind®-750 VRM product has been supplied continuously. This product gives LafargeHolcim cements a resistance gain greater than 10% and increased the production up to 12%, apart from the reduction of the vibration in the mill.

## PROJECT PARTICIPANTS

**Owner:** LafargeHolcim Brazil

**Plant:** Cement Factory Barroso

**Supplier:** Sika Brazil

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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