



# SIKA AT WORK

## CEMENT PLANT LENGFURT AND GRINDING PLANT MAINZ, GERMANY

CEMENT GRINDING AID: SikaGrind®-406

# CEMENT PLANT LENGFURT AND GRINDING PLANT MAINZ, GERMANY



Cement plant Mainz.

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## PROJECT DESCRIPTION

The integrated cement plant in Lengfurt, Germany, was founded in 1899 and acquired by HeidelbergCement in 1922. The plant was continuously modernized, e.g. with pre-heater, waste-heat utilization and electrostatic filter. At the moment the newest equipment, a NOx-catalyser, is being installed. In order to preserve the natural sources, reduce CO<sub>2</sub> emissions and save energy the clinker factor is reduced and secondary cementitious materials (SCM), especially slag (GGBFS), a by-product of the steel industry, are used.

The cement plant in Mainz, Germany, was founded in 1864 and integrated into HeidelbergCement in 1901. In 2004 the clinker production was discontinued, the grinding plant was completely renewed 4 years later. The river Rhine enables the plant to obtain clinker and slag by the most ecological way of transport.

## HIGH POWER CONSUMPTION FOR CEMENT GRINDING

The production of high grade cement, e.g. CEM II/A-S 52,5 N, is an energy intensive process. On the one hand the grinding of slag (GGBFS) is especially demanding due to the hardness of the material. Additionally, a very fine powder is needed to obtain the required reactivity and strength development, especially early strength. In general, grinding consumes around 30 - 40% of the electrical energy used in the cement production of an integrated cement plant. The power consumption of a high grade slag cement, ground in a modern ball mill with closed circuit, is in the range of 50 - 70 kWh/t.



Cement mill in Lengfurt.

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## SIKA SOLUTION

Grinding Aids reduce the attraction of fine particles and lower agglomeration and mill coating. They increase the productivity (t/h) at constant power (W) which results in considerable energy savings. HeidelbergCement Lengfurt evaluated the optimum dosage and type of Grinding Aid. Since two years SikaGrind®-406 is in use and proves an excellent reduction of grinding energy. Besides, SikaGrind®-406 increases the powder flowability and does not cause brown discoloration.

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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