Customer case study

Cellar walls

A cellar wall is a specialized precast concrete element designed for subterranean applications, primarily used in building foundations and basements. Cellar walls are essential for creating stable and secure underground environments, offering enhanced strength and durability when reinforced with our Dramix® steel fiber technology.

The challenge

Precasters have been facing challenges in the precast cellar walls market due to increasing costs of raw materials, energy, and labor. The labor-intensive processes of working with rebar, mesh, and individual formwork pose profitability hurdles. To overcome these challenges, they have increasingly considered alternative reinforcement solutions that reduce labor requirements.

The solution

Bekaert's engineers conducted tests and calculated the optimum dosage of steel fibers required for precast cellar walls. After the success of these tests, automatic steel fiber dosing equipment were installed at the customer's different plants to ensure the automatic and accurate dosage of steel fibers for each concrete mix. No rebar or steel mesh has to be placed, tied, cut and bent. The whole process can now be operated with fewer employees, freeing other employees to perform other tasks in the plant. Structural design calculation of Bekaert's expert team resulted in using the highest performing Dramix® 5D fibers for this element to ensure structural performance and an aesthetic look thanks to the galvanized fibers, as galvanized steel fibers do not rust, nor discolor.

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Project Specifications

Project type: Cellar walls
Application: Residential buildings