



# Case Study

Raw Meal Silo  
Philippines

## DATA AT A GLANCE

<b>Silo Wall Height</b>	80.35m
<b>Silo Outer Diameter</b>	18.8m
<b>Silo Wall Thickness</b>	750mm - 400mm
<b>Reinforcement Steel</b>	1,164.28 Tons
<b>Volume of Concrete</b>	3,260.7m <sup>3</sup>

## Efficient Execution



Completed on schedule and within budget despite logistical challenges.

## Safety Excellence



Achieved zero lost-time incidents with a highly-trained and managed workforce.

## Engineering Innovation



Applied advanced slipform technique and concrete additives for superior quality.

## Project Overview

CEMEX Philippines demonstrated its commitment to a better future by expanding its Solid Cement Plant in Antipolo City, Rizal, with the addition of a new integrated cement production line. This expansion increased Solid Cement's annual capacity by 1.5 million tons, bringing the total output to 3.4 million tons, positioning CEMEX to better meet the growing demands for the nation's infrastructure programs and building needs. BEC was awarded the contract for the construction of the Raw Meal Silo, a critical component in the cement production process.

## Challenges

- Limited working areas complicated logistics, material handling, and construction sequencing.
- Meeting tight deadlines required meticulous planning and execution.
- The significant distance from the batching plant raised concerns over premature concrete setting, especially in hot weather conditions.
- Managing slipforming during tower crane mast extensions and tie-back installations without disrupting structural alignment or safety.



Placing reinforcement steel



Slipform construction



Completed outer wall

#### Owner

CEMEX Phil. / Solid Cement Corporation

#### Client

Betonbau Phil., Inc.

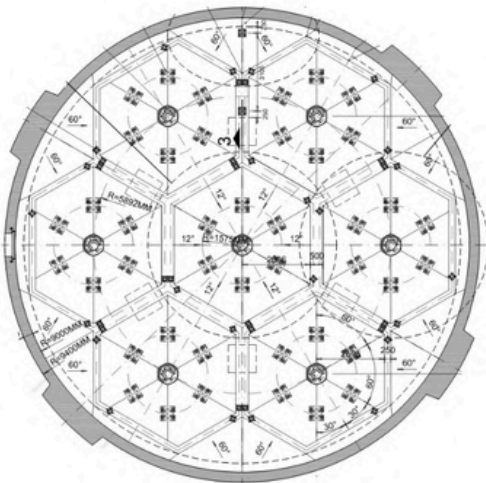
#### Completion Date

October, 2022

## Detail of work by BEC

BEC undertook the slipform construction of the silo walls, installation of inner columns, construction of the silo slab and sloping concrete slab, and installation of post-tensioning ducts and buttresses. To tackle the challenges, BEC implemented the following:

- A phased approach to ensure clear and organised operations at every construction stage.
- Strategic planning improved workflow efficiency and reduced site congestion.
- The addition of a special retarder additive to slow the setting time of the concrete, ensuring optimal workability during transport and placement.



## The BEC Advantage

The Raw Meal Silo project was delivered successfully, meeting all quality and safety standards while staying within the project timeline. BEC's innovative solutions and effective project management significantly contributed to CEMEX's increased production capacity, reinforcing their role in supporting the Philippines' infrastructure development. The project was completed with zero lost-time incidents, demonstrating BEC's unwavering commitment to health, safety, and environmental standards.

Contact us to learn more about BEC's engineering solutions!



#### BEC Group of Companies

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