

Case Study

Slipform Construction of Chimney for Masinloc Power Plant Expansion Philippines

DATA AT A GLANCE

Chimney height	155 m
No. of internal steel flue	1
No. of internal platforms	5
Concrete volume	2800 m ³
Diameter of internal flue	5.4 m

Precision Engineering



Delivered a structurally complex 155-meter slipformed chimney with precise vertical alignment.

Safety Leadership



Zero lost time injuries through proactive safety planning, daily risk assessments, and disciplined execution.

Results that Matter



Met all delivery milestones with full transparency, quality assurance, and client coordination.

Project Overview

As part of the Masinloc Power Plant Expansion in Zambales, Philippines, Balanced Engineering & Construction (BEC) was commissioned to design and construct a 155-meter single-flue environmental compliance chimney, a mission-critical component of the 335 MW thermal plant. This project contributes to the broader energy security strategy of the Philippines by enhancing base-load capacity.

The chimney was engineered using a vertical slipforming process, integrating structural steelwork, flue liners, roofworks, and mechanical & electrical systems, all under BEC's turnkey delivery model.

Challenges

- **Complex Foundation Design:** Designing foundations for a 155-meter-high chimney required geotechnical precision, high-load capacity detailing, and strict settlement controls to ensure long-term structural integrity.
- **Slipform Tolerance and Wind Exposure:** Maintaining vertical accuracy over 155 meters during slipforming required continuous monitoring and real-time adjustment, particularly during periods of seasonal typhoons and elevated wind conditions.

