

Case Study

MONG DUONG II CHIMNEY PROJECT Vietnam

DATA AT A GLANCE

Chimney Height	208 m
No. of internal steel flues	2
No. of internal platforms	3
Diameter of internal flues	6.6 m
External concrete diameter	19.7 m - 17.7 m
Raft slab	36m

On-Time Delivery



Chimney construction completed within schedule despite logistical complexity.

Safety and Durability



Integrated high-end lining and protection systems for long-term resilience.

Performance Boost



Enabled reliable operation for power generation >7.6 billion kWh annually.

Project Overview

Mong Duong II is a landmark 2 x 560 MW thermal power plant and marked BEC's first project in Vietnam. As the largest private-sector power investment in the country, the project was a strategic milestone for national energy development and for BEC's regional growth.

BEC was entrusted with the design and construction of a 208-meter environmental compliance chimney, built directly on natural rock using a 3.5-meter-high, 36-meter-diameter foundation with no piles. The successful execution of this complex structure played a key role in establishing BEC's long-term presence in Vietnam's energy infrastructure sector.

Challenges

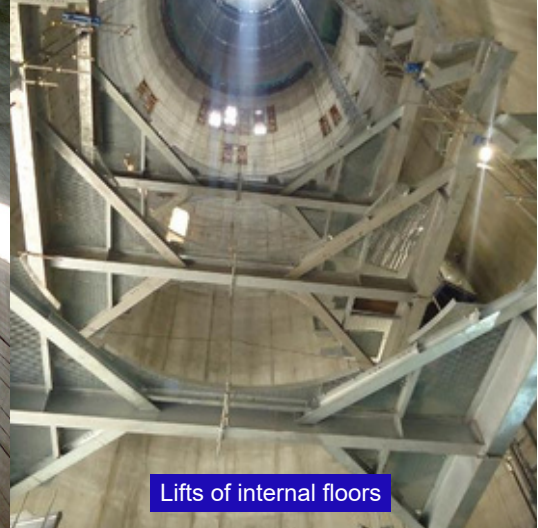
- **Rock-Based Foundation** – With no deep piling, the chimney relied entirely on a broad 36-meter-diameter base seated directly on natural rock. This required highly accurate geotechnical assessment, foundation load distribution modelling, and structural precision to ensure long-term integrity and settlement resistance.
- **Environmental and Operational Complexity** – The chimney had to be built in a coastal industrial environment with corrosive exhaust conditions, tight site logistics, and cross-team coordination among global contractors.



Foundation works



Internal view



Lifts of internal floors

Owner

AES-VCM Mong Duong Power Company Ltd

Client

Doosan Heavy Industries & Construction Co Ltd

Completion Date

November, 2013

Detail of work by BEC

BEC delivered a comprehensive chimney construction package tailored to complex structural, environmental, and logistical requirements.

The scope included:

- 3.5-meter-high, 36-meter-diameter raft foundation
- Slipform construction of the 208-meter chimney
- Heavy lifting of internal steel roof beams, floors, and flues using strand jack technology
- Installation of aircraft warning lights (AWLs)
- Internal lighting systems
- Lightning protection system

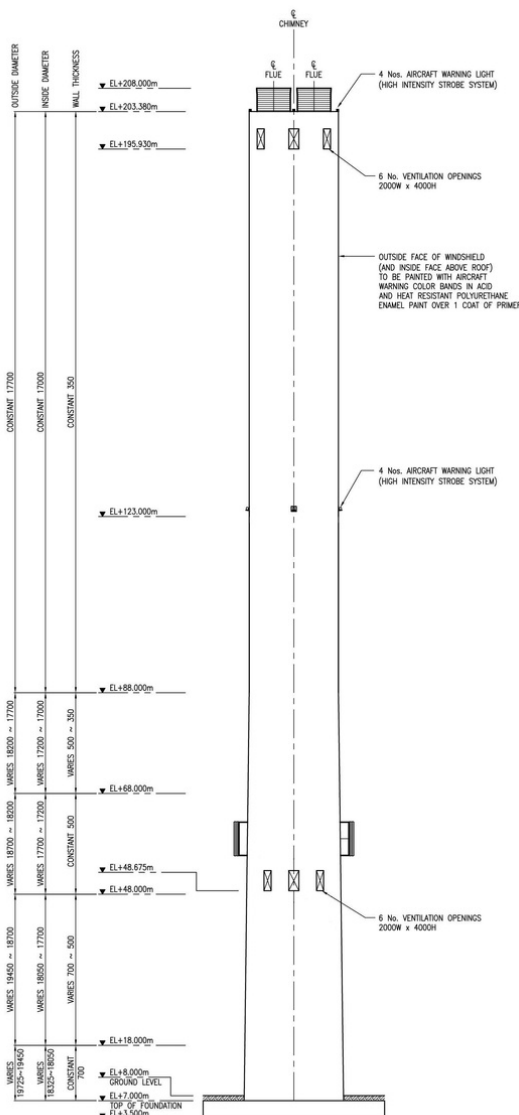
To address the corrosive exhaust environment, BEC's certified technicians applied the Pennguard™ borosilicate lining system, ensuring long-term durability and flue integrity.

Close coordination and sequencing with Doosan and AES-VCM enabled seamless integration with broader site operations and project milestones.

The BEC Advantage

Completed on schedule and within budget, the project reinforced client trust and laid the groundwork for BEC's continued operations in Vietnam. Built to full specification, the chimney now serves as a critical emissions structure for one of the country's most significant thermal power assets—marking both BEC's successful market entry and long-term commitment to Vietnam's energy infrastructure.

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



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