

CASE STUDY

VAN PHONG 1 THERMAL POWER PLANT PROJECT



Project Participants

Owner

Van Phong Power Company Limited (VPCL)

Client

Doosan Heavy Industries & Construction

Chimney EPC Contractor

Balanced Engineering and Construction Pte Ltd.

CHIMNEY DESIGN & BUILD



Vietnam Electricity (EVN) was constructing a 1,320 MW super critical coal fired power plant in the Khanh Hoa province of Vietnam. Doosan Heavy Industries & Construction was one of the main EPC Contractor.

Van Phong 1 Thermal Power Plant Project

The thermal power station will consist of two super-critical coal-fired units of 660MW capacity each. Each unit will be equipped with a once-through pulverised coal-fired boiler and a steam turbine from Toshiba. Both the units will be fitted with electrostatic precipitators (ESP), flue gas desulphurisation (FGD) and low NOX burners to control emissions.

The Van Phong 1 thermal power station is estimated to require 3.4 million tonnes (Mt) of coal a year which will be sourced from Australia and Indonesia. The coal shipments for the project are expected to be started from 2023 onwards.

Detail of work by BEC

BEC was awarded the Design & Build package for the chimney, slipform, heavy lifting of roof, floors and flues, installation of internal rack and pinion hoist, AWLs, internal lighting, lightning conductor, earthing works and Ecocera borosilicate block protection lining system to the inside face of the flues but excluding piling and pile cap works.

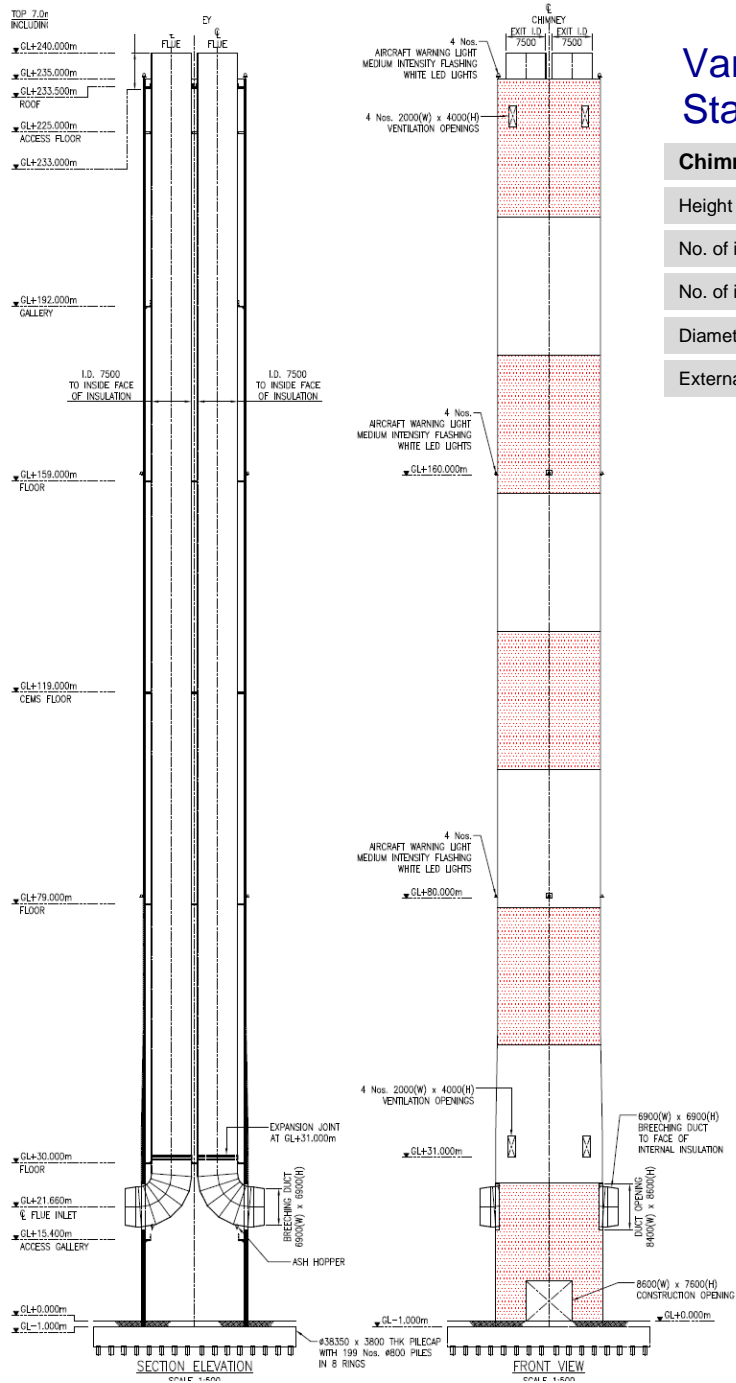
Challenges

- Carry out the works during COVID-19 lockdown
- Constructed on reclaimed land
- Working at height



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Van Phong 1 Stack elevation

Chimney Data:

Height	240m
No. of internal steel flues	2
No. of internal platforms	6
Diameter of internal flues	7.5m
External concrete diameter	20.2m



Slipform erection



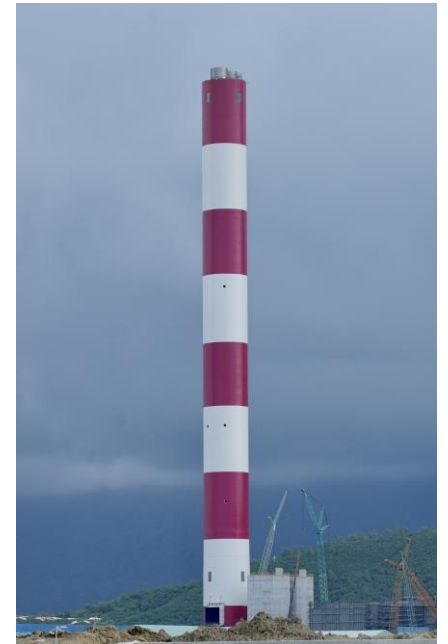
Slip-forming of silo wall



Lifting of flue liners



Borosilicate blocks installation



Completed chimney