

CASE STUDY

CLP CASTLE PEAK STATION B CHIMNEY EMISSION CONTROL PROJECT



Project Participants

Owner

CLP Power Hong Kong Limited

Chimney EPC Contractor

BEC Specialist (Hong Kong) Ltd.

Lining System

Pennguard Borosilicate Lining System

CHIMNEY LINING SYSTEM: BOROSILICATE BLOCK



Source: CLP Power Hong Kong Limited

CLP Power is a subsidiary of China Light and Power, and is the leading electricity supplier in Hong Kong. It has a combined installed capacity of 4,108MW and is one of the largest coal firing power stations in the world.

CLP Power Station Project

The Castle Peak B Power Station consists of four 677MW units, which uses a common 250m high chimney containing four steel flues within a reinforced concrete windshield. Originally, these steel flues did not have an internal lining.

Detail of work by BEC

BEC was awarded the package to install 18,320m² of Pennguard borosilicate lining to the internal surface of the 4no flues. This was performed during the scheduled boiler outages.

Challenges

- Limited and specialised access due to confined space and design of scaffold
- Tight schedule of 21 days per unit
- Interface with other works

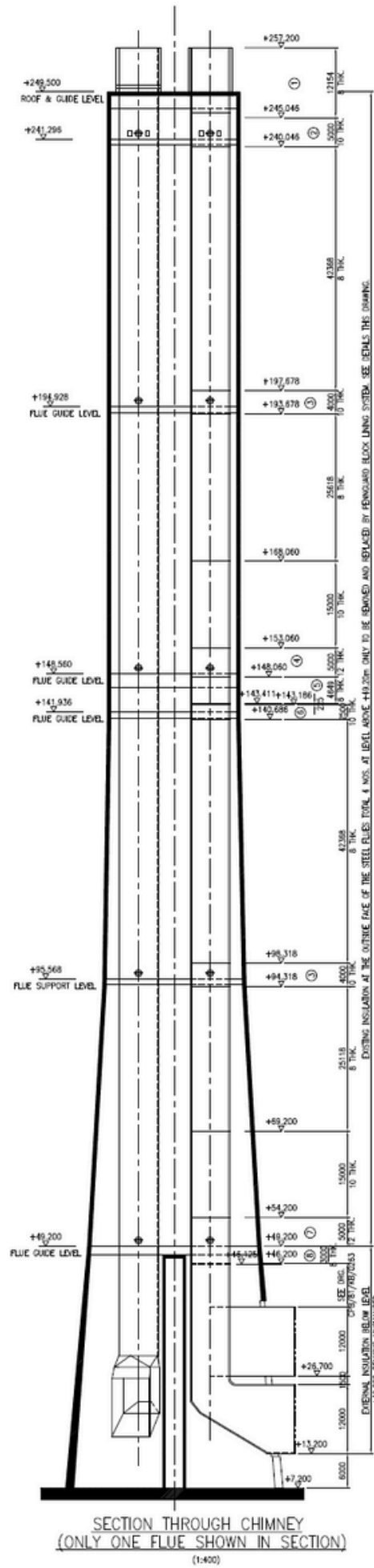
CLP POWER STATION



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Castle Peak stack

Chimney data:

Height	250m
No. of internal steel flues	4
No. of internal platforms	6
Diameter of internal flues	6.6m
External concrete diameter	23m – 22.5m
Duct elbow area	1100m ² /unit
Internal flue area	4580m ² /unit



Laying of borosilicate blocks



Installed borosilicate blocks



Removal of external insulation and installation of new expansion joint



Completed installation of Pennguard Borosilicate Blocks at the top of the flue