

CASE STUDY TANJUNG BIN PROJECT



Project Participants

Owner

Tanjung Bin Power Sdn. Bhd.

Client

Zelan Holding Sdn. Bhd.

Chimney EPC Contractor

BEC Specialist Sdn. Bhd.

Design Consultant

Arup Group

Lining System

Pennguard Borosilicate
Block Protection Lining System

CHIMNEY DESIGN & BUILD

TANJUNG BIN POWER PLANT



Malakoff Corporation was awarded a design-build-operate contract for the construction of the billion-dollar Tanjung Bin 3 X 700MW coal-fired power plant in Malaysia. Zelan Holding Sdn. Bhd. was the appointed main contractor.

Tanjung Bin Project

Tanjung Bin was the first private coal-fired plant in Malaysia as well as the biggest coal-fired IPP in South-East Asia. It incorporated clean technologies, such as Electrostatic Precipitators (ESP) and Flue Gas Desulphurisation (FGD). The construction of Tanjung Bin power plant was completed on schedule and below budget within 48 months and 16 days from its commencement date.

Detail of work by BEC

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

Challenges

- The tallest structure in Johor, Malaysia at the time
- Constructed on reclaimed land
- Poor ground conditions



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Tanjung Bin stack elevation

Chimney data:

Height	200m
No. of internal steel flues	3
No. of internal platforms	5
Diameter of internal flues	7.5m
External concrete diameter	23m – 22.5m
Piles	60 Nos. x 50m deep
Pile cap	31.4m x 2.5m deep

