

CASE STUDY MMRP1, THAILAND PROJECT



Project Participants

Owner

Electricity Generating Authority of Thailand (EGAT)

Client

Marubeni Corporation

Chimney EPC Contractor

BEC (Thailand) Co., Ltd.

Lining System

Pennguard Borosilicate Lining System (Liner) and S-TEN 2 (Entry Duct Bend)

CHIMNEY DESIGN AND BUILD

MMRP1, THAILAND PROJECT



Electricity Generating Authority of Thailand (EGAT) were constructing a 600MW coal fired power plant adjacent to the existing plant in Mae Moh, Lampang, Thailand. The Consortium consisting of Alstom Power System SA, Alstom (Thailand) Ltd. and Marubeni Corporation were the main EPC contractor for this project.

MMRP1 Project, Thailand

The Mae Moh Power Plant Units 4-7 Replacement (600MW) Project covers the area of 63 Rai of Mae Moh Power Plant. The new plant will use indigenous lignite as main fuel and will be equipped with the supercritical pressure steam generator to obtain higher efficiency, resulting in less fuel use, and therefore less carbon dioxide emission. Furthermore, the plant will be equipped with the FGD System, the Low NOx Burner System, the ESP System, and the new SCR System. The SCR will reduce the nitrogen oxide emission, thus helps effectively control the environmental impact.

Detail of work by BEC

BEC was awarded the Design & Build package for the chimney comprising 1 x7.3m internal diameter flue including pile cap, slipform, heavy lifting of roof, floors, external galleries and flue, flue internal lining, insulation, "Artwork" painting of external windshield, installation of internal rack and pinion hoist, AWLs, internal lighting, lightning conductor and earthing works.

Challenges

- Two different type of designed flue liner material and entry duct material including protection method.
- "Artwork" painting of external windshield as requested by Owner
- Very limited site space was available to BEC.
- Stringent local design requirements



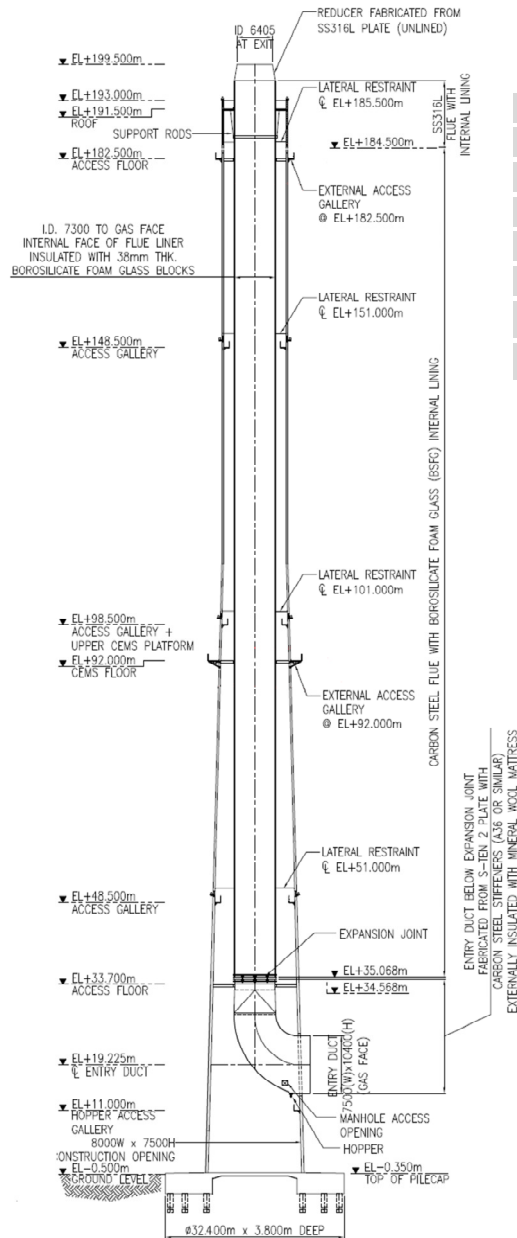
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MMRP1, THAILAND Stack elevation



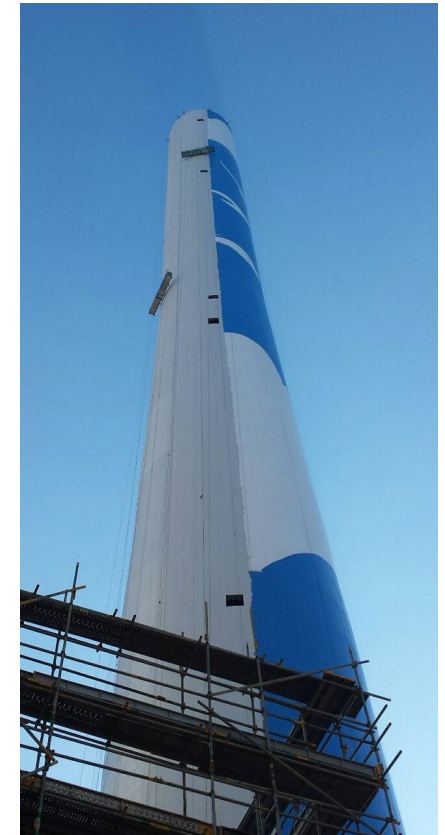
Chimney Data	
Height	200m
No. of internal steel flue	1
No. of internal platforms	3
Diameter of internal flue	7.3m
External concrete diameter	17.743m – 11.900m
Piles	70 Nos. x 1,000mm dia.
Pile Cap	32,400mm dia. x 3,800mm thk



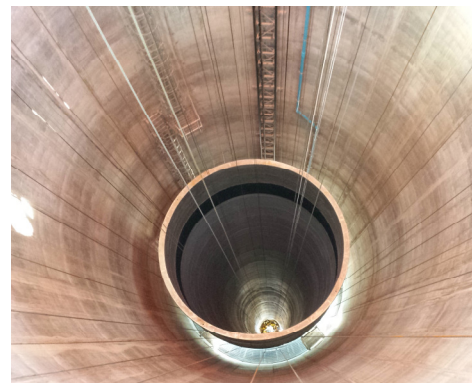
Pilecap Construction



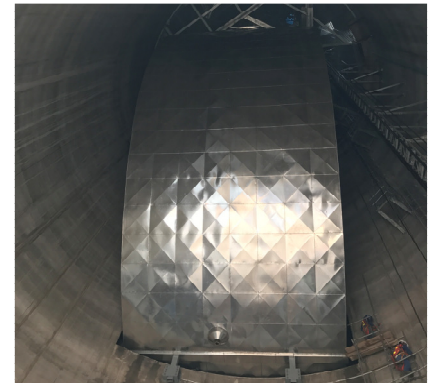
Concrete Windshield Slip-Forming in progress



"Artwork" Painting



Lifting of Flue Liner



Insulation/ Entry Duct Bend Installation