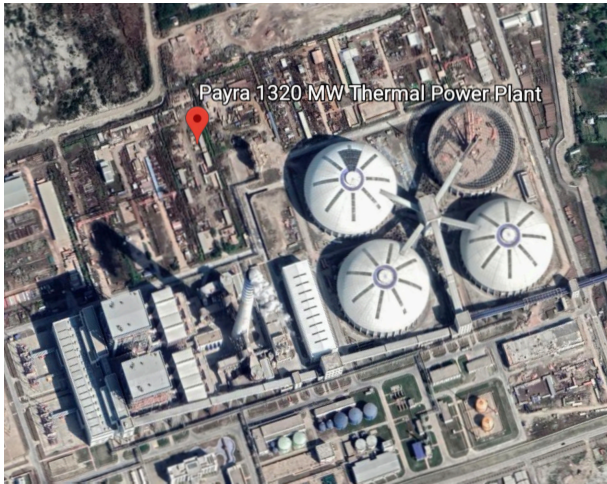




## Payra, Bangladesh



### Key facts about the plant

- 2x660MW ultra-supercritical coal fired power plant
- Owner: Joint Venture Bangladesh-China Power Company (BCPCL)
- Contractor: China Energy Group Northeast No.1 Electric Power Construction Co., Ltd. (NEPC)



### Key facts about the chimney

- Completed in 2020
- Concrete chimney
- Bottom conical to top cylindrical shape
- H 220m
- Outer  $\varnothing = 24\text{m}$ (bottom), 18.2m(the finest), 18.3m(top)
- 2 carbon steel liners,  $\varnothing = 6,500\text{mm}$  each with borosilicate protection

Payra power plant is a 1,320MW ultra-supercritical coal fired with two power generating units at Dhankhali, in the Patuakhali district of Bangladesh, approximately 235km away from Dhakar.

It is the first power plant to come online, among a series of new thermal power projects being developed across the country as part of Bangladesh's plan to increase its electricity generation capacity from 10,445MW to 24,000MW.

BCPCL awarded the EPC contract for the power plant to a Chinese consortium comprising China Energy Engineering Group Northeast No. 1 Electric Power Construction (NEPC), in March 2016.

The Consortium FINT-C3 (Ferbeck International SA and C3 Chimney Consultants and Construction Co., Ltd.) has been awarded an EPC contract of a 220 meter-high-concrete chimney by NEPC.

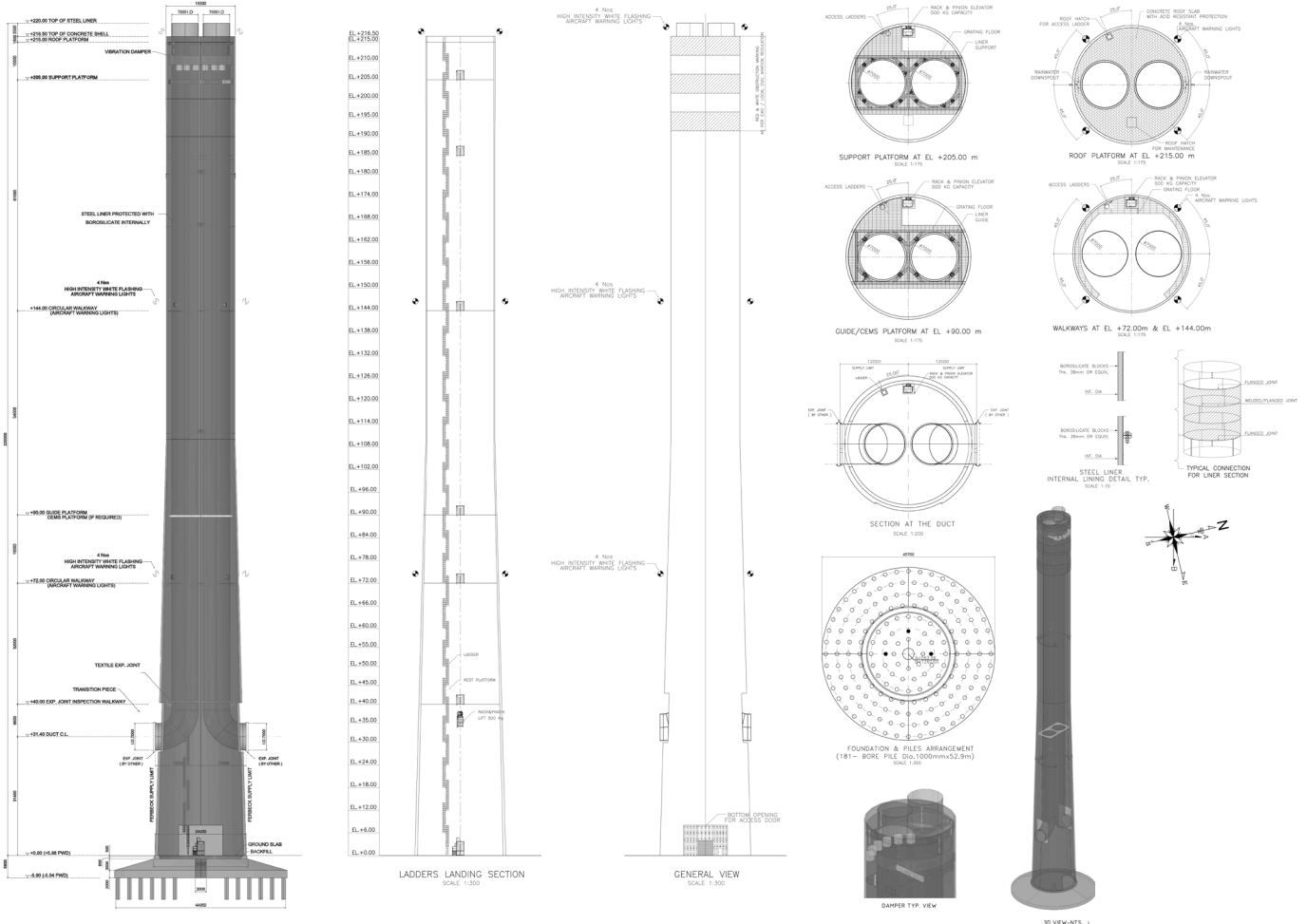


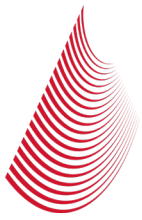


# Concrete chimney

FERBECK's scope of work includes:

- foundation
- concrete shell
- outer shell coat
- steel platforms and walkways
- borosilicate as internal protection
- all other steel elements (doors, windows...)
- access lift and ladders
- electric system (lighting, inner power supply, aircraft signalization lamps...)
- lightning protection system

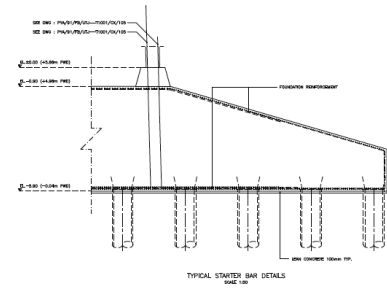
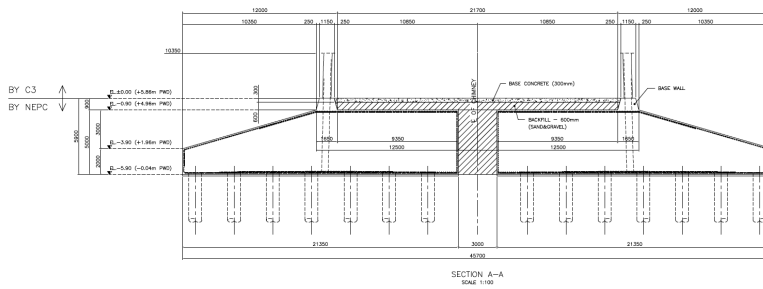




## Foundation

The foundation is made of 6,485m<sup>3</sup> of concrete with the following size:

- 45.7m diameter
- h 5m at EL.-5.9m

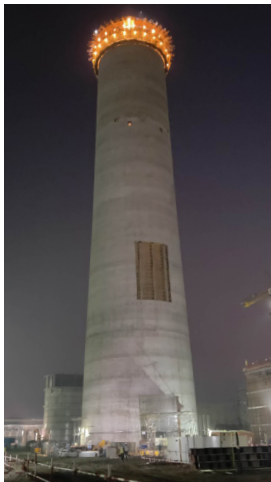


## Concrete shell

The outer concrete shell is made of 6,700m<sup>3</sup> of concrete with the following size:

- 24m(bottom), 18.2m(the finest), 18.3m(top) of external diameter
- h 220m

The casting is performed with a slipform operating 24/7.



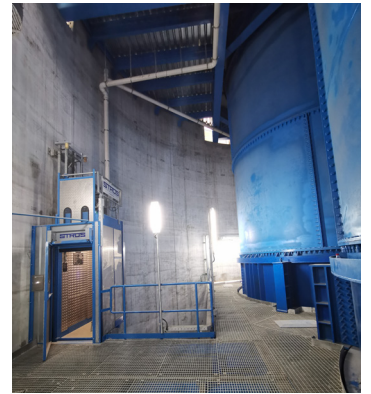


## **| Platforms**

3 platforms and 3 walkways are installed inside the structure:

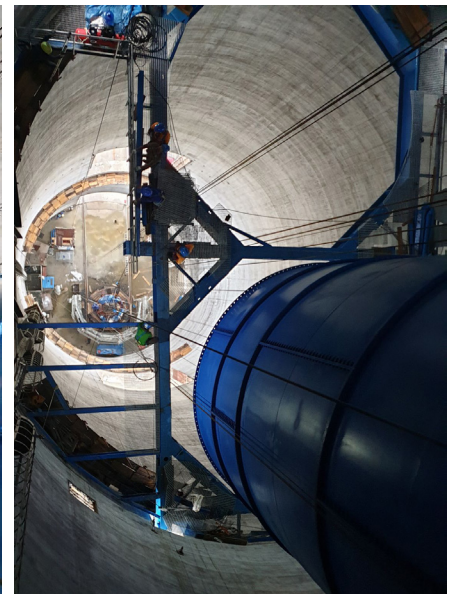
- roof platform at EL.+215m
- support platform at EL.+205m
- AWL walkway at EL.+144m
- guide and CEMS platform at EL.+72m
- expansion joint walkway at EL.+40m
- hopper walkway at EL.+26m

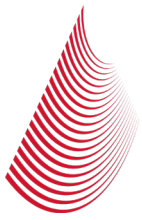
The structure of support platform is made of a huge steel profile for bearing the load of the suspended inner liner.



## **| Liner**

The chimney has 2 carbon steel liners  $\varnothing = 6,500\text{mm}$  each with borosilicate blocks on internal surface.





## Overview of the plant

