Tanjung Priok, Indonesia

1220 MW

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John Cockerill

Tanjung Priok, Indonesia | 2 X 610 MW

Combined Cycle for P.L.N.

First John Cockerill's second order for the same owner

Project Description

In 1992, electricity demand on the public supply network was growing at around 15% per year and the utility PLN decided to install series of combined cycle power plants to forestall energy shortage, particularly on the island of Java where 75% of the population live. Tanjung Priok is situated in the port area of Jakarta, alongside an existing oil-fired power plant. The plant consists of two gas-fired blocks, each with three ABB Type GT13E gas turbines and one steam turbine. It was built in stages, with the gas turbines operating in simple cycle mode pending installation of the heat recovery boilers and steam turbines. The main coastal combined cycle sites, boiler make-up water is being produced by distillation of sea water, using a bleed from the steam turbine as a heat source.

The contract

In March 1992, PLN awarded a turnkey contract for the construction of the Tanjung Priok combined cycle power station to a consortium of Marubeni and ABB Power Generation. Marubeni were responsible for civil works and erection of the plant, the procurement of the boilers and the balance of plant. In June 1992, John Cockerill were awarded the contract for six heat recovery boilers, two of which were supplied from Belgium, along with materials and some high pressure parts for the four manufactured by appointed Indonesian subcontractors.

Plant operation

HRSG is designed for semi base load and cycling operation (two shift duty with daily start-up)

Gas turbines

- ABB Type GT13E
- ISO base load rating: 150 MW at 15 °C
- Site rated 130 MW at 35 °C
- Dual fuel capability: natural gas with HS diesel fuel back-up.

Heat recovery steam generators

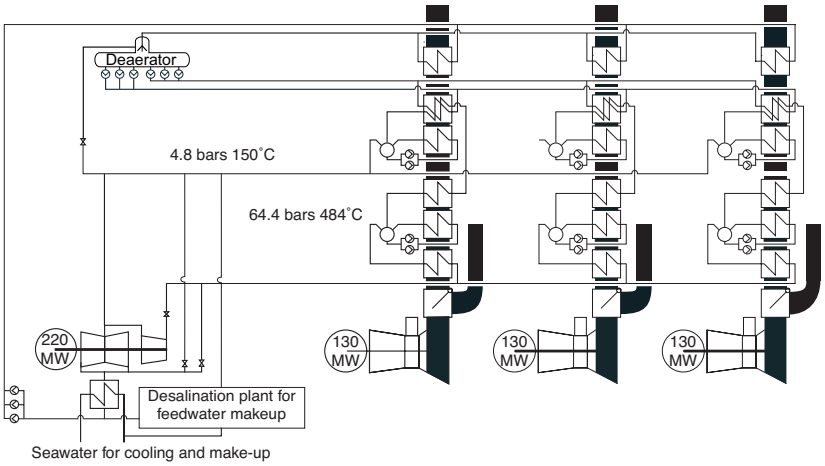
- John Cockerill Vertical, Assisted Circulation type
- Unfired
- Two pressure levels to steam turbine
- Full-flow turbine by-pass to condenser.

Performances

GAS	°C		kg/s
Inlet	528.5		-
Outlet	124.9		-
STEAM	°C	barA	t/h
HP	484	64.5	204
LP	150.3	4.8	57.7

Schedule

Contract award	June 1992
Gas turbine # 1 in simple cycle	November 1993
Gas turbine # 6 in simple cycle	April 1994
First steam to turbine, Block # 1	August 1994
Block # 1 in commercial operation	November 1994
First steam to turbine, Block # 2	November 1994
Block # 2 in commercial operation	February 1995



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CMI becomes **John Cockerill**

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