West Africa, Ghana
Once Through Boiler
194 MW

johncockerill.com/energy
The contract for five OTBs. The John Cockerill Energy scope of work includes the design, engineering, manufacture and supply of the boilers. The pressure parts were manufactured in modular box style in Korea. Boiler erection was completed by Metka on behalf of GE.

The Ghana facility required maximum operational flexibility with an extremely compressed construction schedule to convert the already operational simple cycle gas turbines to combined cycle operation. The OTB was the ideal choice for this project based on the flexibility of full dry run capability which allows decoupling of the combustion cycle from the steam cycle. The modular box OTB design maximizes shop fabrication by pre-assembling 100% of the pressure parts in a single module. Construction of the OTBs was quickly completed with minimal field construction hours alongside the operating TM2500+ gas turbines.

The Contract

In January 2019, GE awarded John Cockerill Energy the contract for five OTBs. The John Cockerill Energy scope of work includes the design, engineering, manufacture and supply of the boilers. The pressure parts were manufactured in modular box style in Korea. Boiler erection was completed by Metka on behalf of GE.

Gas Turbine

- GE TM2500+
- ISO rated: 33.5 MW
- Truck mounted GTs
- Fuels: LPG; distillate oil as back up
- Vertical Upward Exhaust

Heat Recovery Steam Generator

- John Cockerill Energy
- Once Through Boiler
- Vertical gas path
- 2 pressure, unfired design
- Full dry run capability
- Prefabricated in Modular Box style
- No diverter damper required
- Tailor made design for this application

Plant Operation

West Africa project is designed for both Base Load and Daily Cycling operation.

Performances

<table>
<thead>
<tr>
<th>GAS</th>
<th>°C</th>
<th>kg/s</th>
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<tbody>
<tr>
<td>Inlet</td>
<td>545</td>
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<tr>
<td>Outlet</td>
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<table>
<thead>
<tr>
<th>STEAM</th>
<th>°C</th>
<th>barA</th>
<th>t/h</th>
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<td>64</td>
<td>40</td>
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<tr>
<td>LP</td>
<td>232</td>
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<td>6</td>
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Schedule

Notice To Proceed: December 2018
Contract awarded: January 2019
Substantial completion: December 2020