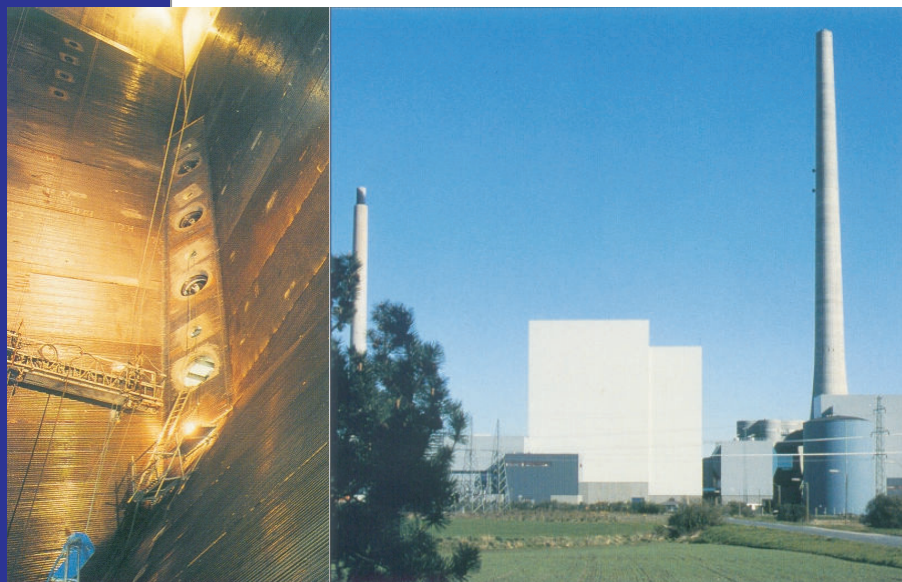


Fynsværket Power Plant



350 MWe Coal-fired CHP Unit



The need of an increase in capacity as a consequence of the continuously growing consumption of electric power, and the replacement of an old and worn power station unit, were the reasons for building a new 350 MWe power station unit at Fynsværket, Odense (Denmark). This unit, which also supplies district heat to the area, is a modern corner-fired plant, which can operate at full load on both coal and oil. The commissioning took place in 1991.

Low-NOx Firing System

The new unit 7 has been designed with special reference to a minimum emission of nitrogen oxides (NOx). Thus, the boiler has been designed with special BWE Low-NOx

burners placed in the corner of a large furnace, having a low thermal loading. The air is supplied firstly through the burners as primary, secondary and tertiary air and secondly above the burners as over-burner air, and finally at the top of the furnace as over-fire air. With this unique BWE design it is possible to guarantee an emission of NOx below the 150 mg/MJ fired (450 mg/Nm³) when burning impoted coals of varying qualities.

Boiler

The boiler is a 2-pass Benson boiler with forced circulation and designed for supercritical operation (250 bar, 540 °C) with reheating to ensure high efficiency.

The boiler is supplied with coal from four coal mills, each of which provides one burner level, comprising 4 burners placed in each of the furnace corners.

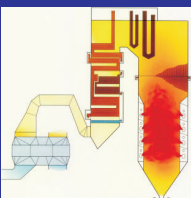
The 16 BWE type 4A Low-NOx burners are characterized by a stable and reliable ignition, good controllability and less than 5 % unburnt in the ash. Further, it is a very sturdy type of burner with low maintenance costs. For the cooling of the flue gases and the preheating of the combustion air, the boiler is equipped with a regenerative BWE air preheater type VIQD 34.0/2800 with a diameter of around 17 meters.

World leader in steam power technology

Burmeister & Wain Energy A/S has specialized in the development and design of advanced steam boiler plants for utility and biomass fired power stations.

Furthermore, BWE designs a wide range of auxiliary power station equipment such as the BWE Low-NOx coal/oil/N-gas/biomass burners, Air Preheaters and Gas-Gas Heaters.

BWE is part of the Italian STF S.p.A. Group.



Boiler Specification:

BWE type 4A Low-NOx coal/oil burners	16 off
Fuel consumption: Coal	128 t/h
Oil	78 t/h
Steam Capacity: HP-part	1,181 t/h
IP-part	1,051 t/h
Steam Pressure: HP-part	250 bar
IP-part	58 bar
Steam Temperature: HP-part	540 °C
IP-part	540 °C
Efficiency, coal	93.7 %

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