Amager Power Station

Multifuel Benson Boiler

BWE is the supplier of a multi fuel fired Benson type steam generator for the general upgrade of Vattenfall's Amager Power Station Unit 1 located in Copenhagen, Denmark. The renovated Amager Power Station Unit 1 will be dedicated to the supply of steam to the old steam based district heating grid of central Copenhagen. In addition to supplying steam for the district heating, the plant will also have a capacity of 80 MWe. The commissioning took place in 2009.

The New Boiler

The single reheat steam generator has been installed in the existing boiler house of the slightly smaller previous Unit 1. In order to design a very compact boiler having the correct furnace dimensions for the fuels intended to be used, a 1½ pass boiler type was selected.

Multi Fuel Firing System

The steam generator is equipped with a complete BWE Low NOx firing system able to operate with a quite unusual fuel mix: coal, HFO, wood pellets and straw pellets. This solution makes it possible to use large quantities of pulverized biomass without giving up the possibility to utilize fossil fuels.

In order to obtain the best possible combustion of all fuels, only one fuel type is introduced in one burner at a time. The firing system will be able to switch between the different ground fuels after small modifications (1 outage day) of the mills.

BWE Scope of Supply

In addition to the Benson boiler itself, BWE is also the supplier of the following major auxiliary equipment:

- 12 BWE type Low-NOx coal/oil/wood/straw pellets burners
- Two rotating regenerative BWE air preheaters type VI 25.5/2400 with a diameter of approx. 7.7 meters.
- A rotating regenerative BWE gas-gas heater type GV 32.5/1250 with a diameter of approx.14.66 meters.
- A steam gas heater.
- HP piping.

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:

Fuel consumption at full load:	Coal	50 t/h
	Oil	30 t/h
	Straw pellets	75 t/h
Boiler capacity		250 MJ/s and 80 MWe
Steam Capacity:	HP-part	500 t/h
	RH-part	411 t/h
Steam Pressure:	HP-part	185 bar
	RH-part	75 bar
Steam Temperature:	HP-part	562 °C
	RH-part	540 °C
Efficiency		94.5 % *(LHV)*

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