

- HEAT RECOVERY
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## BIOMASS POWER PLANT WIDNES, GREAT BRITAIN



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<b>Fuel</b>	Waste Wood (A1 - A4), Fuel Oil (at the burner)
<b>Low Heating Value (min./nom./max.)</b>	10.5/13.9/15.5 MJ/kg
<b>Fuel Throughput (nom.)</b>	18 t/h
<b>Rated Thermal Input</b>	70 MW
<b>Electrical Power Output</b>	20.2 MW
<b>Steam Capacity</b>	81.7 t/h
<b>Steam Temperature</b>	468 °C
<b>Steam Pressure</b>	81 bar
<b>Feed Water Temperature</b>	115 °C
<b>Rated Flue Gas Volume dry (nom.)</b>	100,000 Nm <sup>3</sup> /h
<b>FG-Temperature</b>	120 °C
<b>Type of Boiler</b>	Natural Circulation
<b>Year of Commissioning</b>	2016

### THE TASK

At the Widnes location in the United Kingdom the construction of a new biomass-fired power plant was planned. The power plant is part of the Stobart Park project for the extension of a transshipment terminal and is meant to supply all of the facilities with heat in the future and to additionally feed electricity into the public grid. Standardkessel Baumgarte was selected as the technology supplier in advance because of its technical know-how.

### THE SOLUTION

The plant is being constructed with the already frequently tried and proven Standardkessel Baumgarte firings system and boiler concept that is specially designed for the combustion of waste wood. The generously dimensioned furnace of the 4-pass boiler concept, as well as, the radiation pass arranged downstream ensure excellent burnout of the flue gases. The downstream convective passes house the heating surfaces of the superheaters, evaporators and economisers. The grate firing system is supplied with combustion air via separate primary air/secondary air systems. The primary air is fed in below the grate, the secondary air above the grate via secondary air nozzles systematically to combustion.

### SCOPE OF SUPPLY

- Fuel Feeding System, Pusher Type Grate System
- Ignition and Auxiliary Burners
- Boiler
- SNCR Plant
- Feed Water System
- Ancillary Plants
- Insulation
- Structural Steelwork and Platforms of the Boiler House

### ENGINEERING SERVICES

- Engineering incl. Approval Engineering
- Erection and Commissioning
- Trial Operation