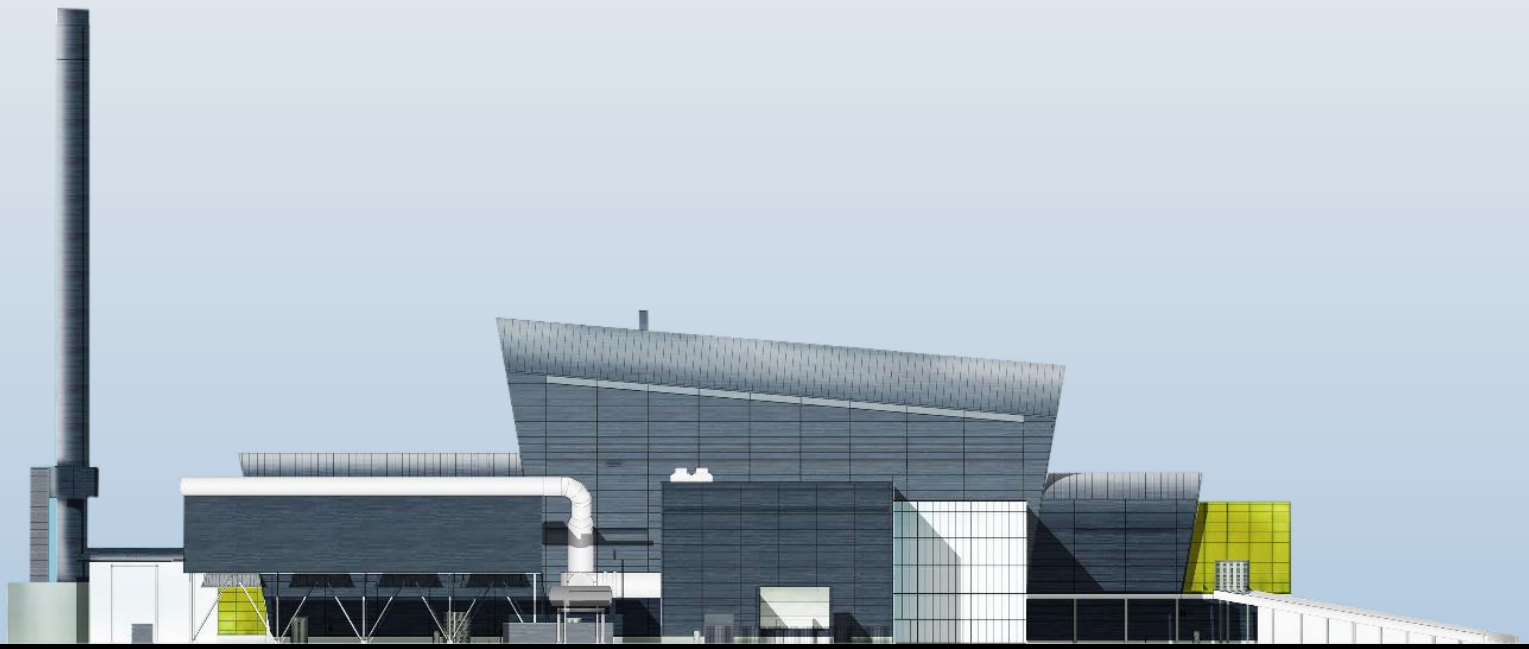
REFERENCE SHEET

HEAT RECOVERY
BIOMASS
PRIMARY FUELS
SOLID RESIDUES
LIQUID & GASEOUS RESIDUES

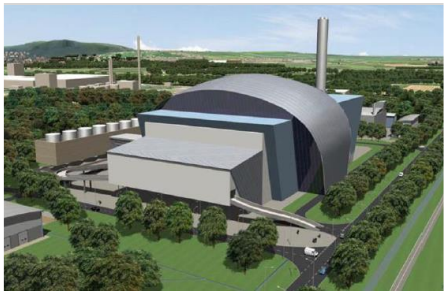
JFE Engineering Group
Standardkessel Baumgarte

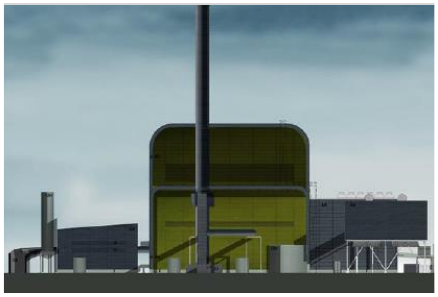
PROTOS ENERGY RECOVERY FACILITY, ELLESMERE PORT, GROßBRITANNIEN



Standardkessel Baumgarte GmbH • Energy from Waste

PROTOS ENERGY RECOVERY FACILITY, ELLESMERE PORT, GREAT BRITAIN





Number of Lines	2
Fuel	RDF and Household Waste
Heating Value (min./nom./max.)	7 / 10.5 / 14 MJ/kg
Fuel Throughput (min./nom./max.)	19.0 / 25.4 / 33.3 t/h
Rated Thermal Input	74 MW
Steam Capacity	2 x 91.4 t/h
Steam Pressure	75 bar
Steam Temperature	450 °C
FW-Temperature	115 °C
Flue Gas Flow (nom/Line)	142,000 Nm³/h
Exhaust gas Temp.	140 °C
Efficiency	> 30 %
Emission Regulation	BREF
Commissioning	2024

THE TASK

Together with its joint venture partner MYTILINEOS S.A., Standardkessel Baumgarte is to build a new Energy from Waste plant for a consortium comprising Covanta, Green Investment Group and Biffa, the Protos Energy Recovery Facility near Ellesmere Port, Cheshire, England. By thermally treating 400,000 tons of non-recyclable household, commercial and industrial waste per year, the two lines will each generate 91.4 tph of steam, which will be used to produce 49 MW of electricity. The plant achieves a very high efficiency of over 30%, ranking it among the top EfW plants in Europe.

THE SOLUTION

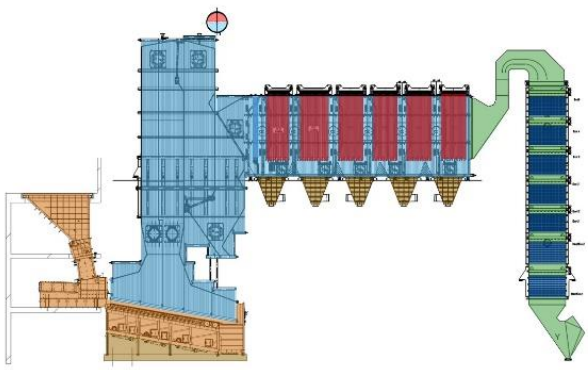
For the implementation of the task, Standardkessel Baumgarte has decided in favour of an air-cooled pusher-type grate, which has already proven its worth in a large number of executed plants. The cooling of the flue gases, and thus the transfer of the heat into the water-steam cycle, is realized by a natural circulation boiler in 3-pass design with downstream horizontal pass and vertical Economiser pass. Connected to the steam generator is the flue gas cleaning system, which operates according to the dry sorption process on a lime basis and frees the flue gases from dust, heavy metals and the acid constituents. To preheat the feed water, an additional heat exchanger is provided in the flue gas path upstream of the flue gas cleaning system.

SCOPE OF SUPPLY

- Pusher-type Grate
  incl. Combustion Air System
- Steam Generator incl. Auxiliaries
- Auxiliary Firing System
- Ash Removal System incl. Transport
- Steel Structure, Platforms and Stairs
- Lifting Devices in Boiler House
- Flue Gas Cleaning System

SERVICES

- Engineering
- Supply and Assembly
- Commissioning and Trial Run



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