

BIOMASS
 INDUSTRIAL RESIDUES
 HEAT RECOVERY
 PRIMARY FUELS



POWER PLANT FOR THE COMBUSTION OF USED TIRES POLGAR, HUNGARY



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THE TASK

In Hungary, the company TECHCON Környezetvédelmi és Energetikai Szolgáltató Kft disposes used tyres and production residues from the production of tyres. The accumulating residues, such as car tyres, truck tyres and tyres of heavy agricultural machines shall be disposed of by thermal means and the inherent energy shall be converted into electricity. The accumulating residual substances as a result of incineration as well as flue-gas cleaning, are either to be treated to obtain valuable substances or to be sent to landfills.

THE SOLUTION

TECHCON Környezetvédelmi és Energetikai Szolgáltató Kft placed an order with a Hungarian general contractor for the supply of a power plant on a turnkey basis. The order for the thermal part, consisting essentially of the fuel conveying system, the steam generator with grate stoker and flue gas cleaning, was secured by Standardkessel. The tyre handling equipment separates and transports the whole tyres from the storage area to the feed device for the firing system. The core of the plant is build up of the underfeed stoker and the vertically arranged natural circulation boiler which generates the superheated steam for feeding into the connected steam turbine. The flue gases are freed of all pollutants in a flue gas cleaning plant, based on the dry sorption process, and are discharged into the atmosphere via a stack after cleaning.

SCOPE OF SUPPLY

- Tyre handling system
- Firing system
- Steam generator
- Flue-gas cleaning system
- Ancillary plants
- Structural steelwork, stairs and platforms

ENGINEERING SERVICES

- Engineering incl. Licensing Engineering and Engineering for official Permits
- Assembly and Commissioning
- Trial-Run

Fuel	Tyres
Low Heating Value (min./max./nom.)	28.0 / 36.0 / 31.4 MJ/kg
Fuel Throughput per Line (min./max./nom.)	2.5 / 3.5 / 2.9 t/h per Line
Rated Thermal Input	25.3 MW
Electrical Power Output	5.6 MW
Steam Capacity	27.4 t/h
Steam Temperature	503 °C
Steam Pressure	80 bar g
Feed Water Temperature	130 °C
Rated Flue Gas Flow (nom.)	55,000 m ³ /h i.N.
Flue Gas Temperature	220 °C
Operating Approval	17. BlmSchV
Year of Commissioning	2008

