

Atlantic Industries Drogheda, Ireland



Boiler room



Watercooled grate system

Installation works on the biofueled boiler system at Atlantic Industries began in December 2006. The system being operational from February 2007 is generating 6.3 t/h of steam at 7 bar pressure for process energy purposes.

Fuel is being delivered by truck and unloaded into an underground silo, where a hydraulic operated pushrod outfeeder system extracts the fuel to a chain conveyor taking it to the stoker system.

The system is equipped with a moving grate fitted with watercooled grate supports, which ensure that the temperature of the grate is kept at a constant level. This prevents the build-up of slag on the grates. The walls of the step grate are also watercooled to further ensure a constant combustion temperature.

The steam boiler is an all-welded flue gas tube boiler of the 3-pass type with an open bottom and cylindrical steam drum. The large water capacity combined with the generously sized steam, ensures a steady steam generation and a guaranteed dry steam quality.

The modulating control system means that all parameters are automatically adjusted according to the current load of the boiler and the system is operating continuously at varying loads.

Data:

- max. steam output: 6.3 t/h equal to 4,150 kW
- design pressure: 8.3 bar(o)
- design temperature: 175.9 °C
- thermal efficiency: 86-88%
- calorific value, fuel: 3.81 kWh/kg
- fuel consumption at max. load: 1,250 kg/h

BIOFUELED BOILER SYSTEMS

Biofuels:

- wet wood waste
- dry wood waste
- contaminated wood waste
- bark
- wood pellets
- wood briquettes
- peat blocks
- peat pellets
- grain
- grain husks

Heating transmission mediums:

- hot water
- high pressure hot water
- low pressure steam
- high pressure steam

Capacities:

- 200 kW – 10 MW
- 800 kg/h – 15 t/h

Users:

- district heating plants
- steam consuming industries
- sawmills
- woodworking industry
- hotels
- housing estates
- public buildings

Technologies:

- watercooled moving grates
- underfeed stoker systems
- 3-pass boilers
- 5-pass boilers
- bag filter systems
- aut. deashing systems
- hydraulic outfeeders
- mechanical outfeeders
- fully modulating control systems
- internet control systems
- movable turnkey units

