

BIOMASS CHP

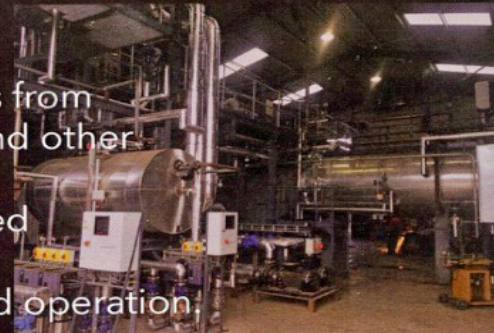
Close Coupled Gasifier for Steam Turbine Electrical Generation

MODULAR BIOMASS & WASTE TO ENERGY COMBINED HEAT & POWER

- Modular Construction.
- Combustion of coarse & high moisture
- Combustion of Biomass & RDF
- Steam production up to 30 bar 480 C
- Gasification for lower dust emissions
- Electrical power generation up to 2 MWeI

MAIN FEATURES

1. Achieving >6.1 MW combusting biomass fuel types from 30% to 54% moisture , including wood chip, RDF and other unscreened hog/coarse fuels.
2. Furnace outlet temperatures of 1025 deg C achieved with 52% moisture fuel.
3. Fully automated control system enabling unmanned operation
4. Flue gas recirculation for precise control of super-heat temperature.
5. Flue gas oxygen level control to maximise efficiency.
6. Automatic grate fuel level adjustment for consistent combustion
7. Pre-drying zone for high moisture content fuels.
8. Fuel storage and infeed system capable of handling random unscreened material.





Biomass combustion with wide feed grate and capable of accepting up to 54% moisture content feed stock.

Hot flue gas to steam generation for driving the turbine for electrical generation



Emission control system tailored to suit feedstock. For pure biomass such as wood shavings, the system is relatively simple.

For RDF and waste products, the flue gas clean up is more complex.



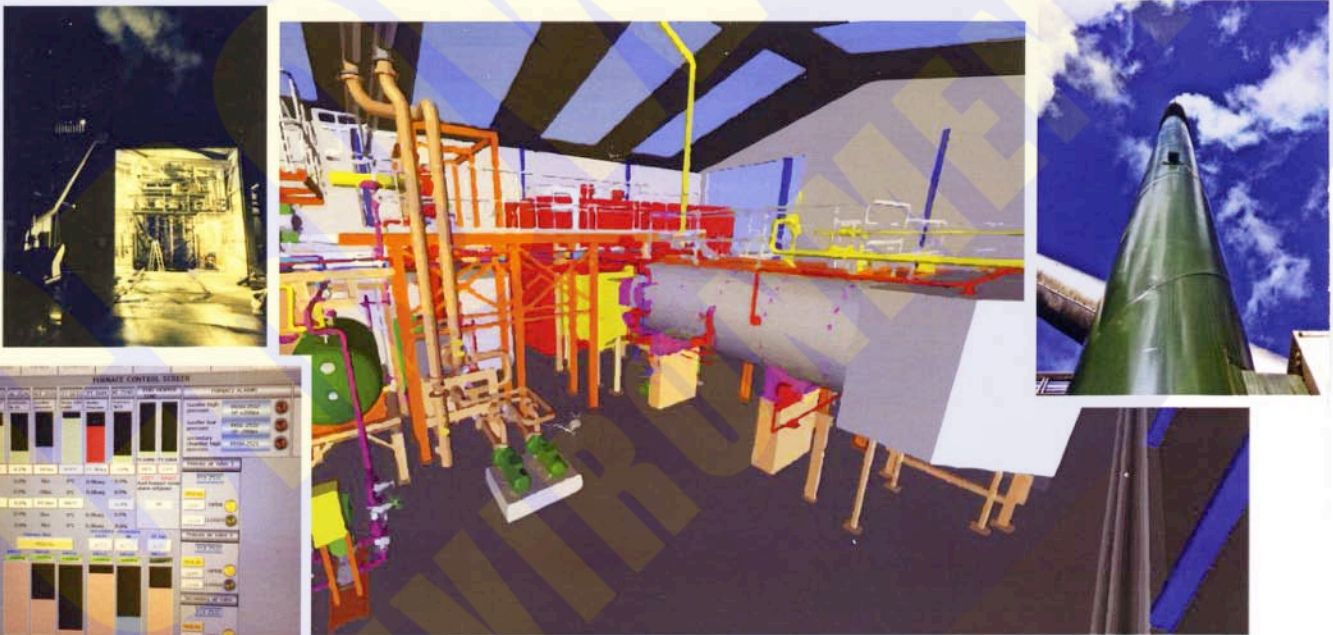
SYSTEM DESCRIPTION

Insulated and refractory lined biomass fired step grate gasification furnace providing 1025 C gas to a 6.5 tonne cassette water tube super-heater and free standing smoke tube boiler and economizer supplying 29 barA 480 C steam to a 1.3 MWel condensing steam turbine.

Demonstration unit currently installed at Woodfab Timber, Aghrim Co Wicklow, Ireland.

A joint venture project with Crowley Engineering designed to develop suitable scaled modular, thermal power plants for small and medium enterprises internationally. The system is specifically designed to meet the combined challenges faced by SMEs of financing, fuelling and operation when considering power generation from biomass or other waste streams.

The demonstration plant is currently available for feasibility and demonstration of client selected biomass or RDF.



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