BIOMASS HEAT AT ITS BEST

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WASTE WOOD PROJECTS

BIOMASS AT ITS BEST IS...

using the appropriate technology

for the fuel specification

with all the correct permits and processes to operate the plant in place.

WASTE WOOD PROJECTS SHOULD BE...

Clean

Low Emissions

Efficient

Sustainable

FUEL SPECIFICATION

Boiler owners and those producing their own fuel from manufacturing operations need to be able to prove that only clean, non-hazardous wood waste will be used in their installation.

It also needs to fall within the acceptable waste codes. This can be achieved through testing.

Regular analysis of the material should also be undertaken by a UKAS accredited laboratory to determine the biogenic content.

This means that there is full transparency of the contamination levels.

APPROPRIATE TECHNOLOGY FOR THE FUEL SPECIFICATION

Boiler owners need to ensure their appliance can tolerate their intended grade or classification of fuel.

Why is this important?

Use of other grades of fuel may adversely affect the operation of the appliance.

This means:

- Emission requirements are not met
- Equipment can get damaged

Other things to consider:

- RHI emissions certificates
- Manufacturer warrantee
- Permits

ABATEMENT

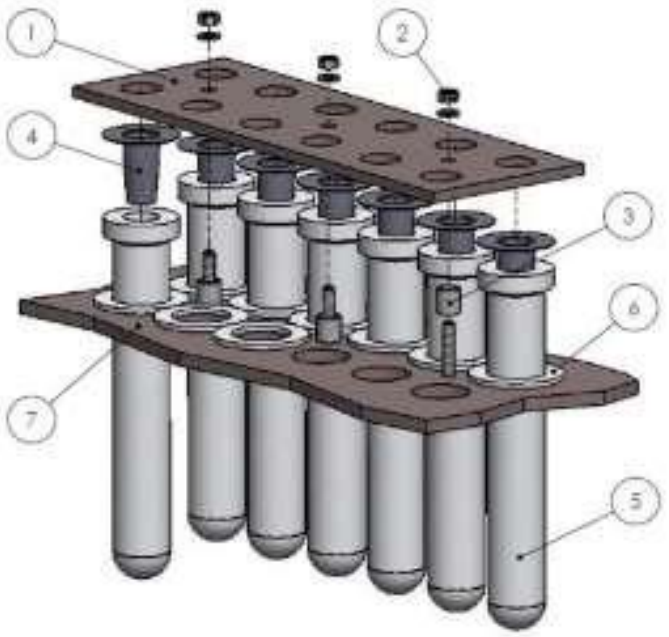
Ceramic Filtration Systems

Multi-cyclones

- Highly efficient at removing particulates from the flue gas

Why is this important?

- Ensures compliance with Emission Limit Values.



PERMITTING REQUIREMENTS

Boiler owners need to ensure that they are regulated by the relevant combustion permits or exemptions to use waste wood as a fuel to produce energy.

U4 Exemption
(<50kg/hr)

Part B Combustion Activity Permit
> 50kg/hr below 1MWth input

Medium Combustion Plant Directive
> 1MWth input

Those manufacturing timber and wood-based products also need to check whether they meet the threshold to require a Part B process permit.

Why is this important?

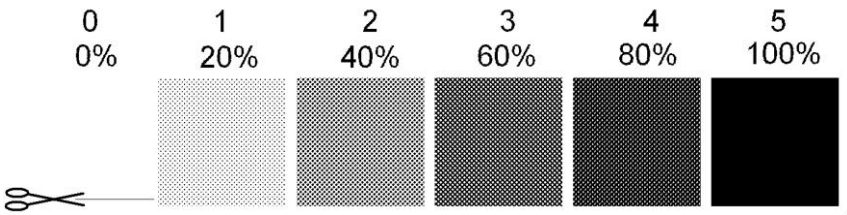
Ensure practices are sustainable and in line with government legislation.

ONGOING OBLIGATIONS

- **Environmental Management System** – Best Available Techniques
- **Record Keeping** – Inspections, Maintenance, Training Records
- **Emissions Monitoring** – Ringelmann Smoke Observation Record, Weekly Environmental Log, Emissions Testing

Why is this important?

To prove compliance to the relevant regulators.



CASE STUDY

- Leading supplier to the fitted furniture industry. As part of their manufacturing process, waste wood offcuts and sawdust is produced.

- Replaced two older and less advanced waste wood boilers with two highly efficient boilers to ensure they are environmental responsible and using the cleanest technology.

- Two 999kW output biomass boilers so were within the scope of the MCPD Permit due to their combined net rated thermal input.

- Still had benefit of the last 10 years of their Renewable Heat Incentive so will also be seeing a return on their investment.

CONCLUSIONS

Using on site generated waste wood as a fuel whilst applying the appropriate technology is a sustainable solution for those within the manufacturing sector that work with wood.

Full transparency of the waste wood used, as it is used at source with no potential to be mixed up with demolition type wastes.

It can provide energy to fulfill office, space heating and process energy requirements promoting self sufficiency and reduces the use of fossil fuels.

The positive message being that biomass heat implemented responsibly and correctly, in appropriate locations, has a number of environmental benefits.

THANK YOU FOR LISTENING...

Any Questions?

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