

PowerPlus Tech Note #301

PowerPlus™ with Biomass Boilers

The benefits of PowerPlus' switchmode technology with respect to improved particle collection on coal-fired power plants have been well documented over the years. However, this technology can also have very positive performance impacts well beyond traditional fossil fuel generating stations.

One of our customers, a leading designer and manufacturer of air pollution control equipment and systems in Finland, has successfully employed PowerPlus on precipitators with biomass fuel boilers, specifically pine oil and peat.

An example of this application is shown in the photo to the right. The table in the bottom right shows the operating conditions of this boiler, as well as the particulate removal results derived with PowerPlus.



Boiler Operating Conditions

- Fuel Type: Pine Oil (100%)
- Gas flow: 25600 Nm³/hr (~15,000 cfm)
- Temperature: 200° C
- Moisture: 12% v/v
- Oxygen content: 3% v/v
- CO₂ content: 18.58% v/v
- Inlet dust: 500mg/Nm³
- Emission allowance: 50mg/Nm³*
- Measured particulate with PowerPlus: 5.3mg/Nm³*

*assumes 13% v/v CO₂