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**FLUE CLEANER PROJECT - TEST REPORT SUMMARY**

**CLIENT:** Peter Leonard Hutchison  
**CLIENT REF:** Order No. 218

**REPORT NO:** ATL61-03  
**DATE:** 15 December 2003

**TEST SPECIFICATION:** AS/NZS 4013:1999

**TEST FUEL:** Hardwood

**FLUE CLEANER DEVICE:-**

**Description:** Hollow steel tube 150mm long, 30 to 60mm diameter with partially crimped ends containing the active ingredient (identified as a naturally occurring non-toxic solid material).

**Manufactured by:** Peter Leonard Hutchison

**WORK REQUESTED:-**

Measure particulate emissions, power output, efficiency and assess effect on soot/creosote deposition in the flue pipe. A typical medium sized fan-forced convection woodheater compliant with AS/NZS 4013:1999 was used for the test. Tests were conducted with and without the flue cleaner device fitted inside the firebox on high, medium and low air settings.

**SUMMARY OF RESULTS:-**

Emission performance

Reduction in particulate emissions of 50% on low setting, 24% on medium setting and 37% on high setting with the device fitted. Average reduction was 37%.

A reduction in particulate emissions indicates higher combustion efficiency.

Power output

6% increase in power output on the high setting with the flue cleaner installed. No significant change on the medium and low air settings.

Flue pipe condition

The interior surface of the flue pipe showed a complete conversion of the black/brown soot and creosote deposits into fine white ash on the high setting with the device fitted for 90% of its length. Cooler top 10 % of the flue pipe did not show any observable change. Burn time was 9 hours.



BEFORE



AFTER

A new thin layer of black soot was deposited in the pipe during the medium and low settings with the device fitted (these followed the high setting). Burn time was 41 hours.

The high, medium and low settings without the device fitted did not show any observable changes to the existing soot/creosote layer.

Flue Gas Temperature

A 17% increase in the flue gas temperature occurred on the high setting with the device fitted.

**Investigation and Report by:** Michael J Greenwood

Demi Brown  
General Manager

Michael J Greenwood  
Laboratory Manager