

BOILER INSTALL REPORT

754 Brady Ave, Bronx NY

FITCH FUEL CATALYST

Prepared by:
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Measure effect of Fitch Fuel Catalyst on emissions and burner efficiency.

Fitch Fuel Catalyst - Model HO-75UL manufactured by APSI installed by Marlande Heating.

Property Managers: Ry Management

Location: 754-768 Brady Ave, Bronx, NY

Burner type: IC DG105 **Oil type:** #6

Test Personnel:

Bob Hortsmann, Marlande Heating Corp

The boiler was cleaned the same day as installation. Marlande Heating optimized the boiler and ensured the system was operating within specification. The Fitch unit was installed and emissions and efficiency reading were recorded. A retest was completed on November 23. Stack temperature was high indicating a potential dirty boiler. A broken oil atomizer arm was found to cause the problem so it was repaired and a cleaning was performed. The firing rate was set back 20%. A subsequent retest was performed on January 22 verifying the boiler was running very efficiently.

Location	Combustion & emissions	Base data Nov 4th	With Fitch after 30 minutes	11/23/09 retest	1/22/10 retest	% Change
Ry Management	Inlet temp	69.9	72.4	85	80	14.45%
754-768 Brady Ave.	Stack temp	391.9	399.3	601	560	42.89%
Bronx NY	Nett temp	322	326.9	516	480	49.07%
	O2 %	9.9	7.9	8.3	8.5	-14.14%
	Excess air %	90	60.8	60.6	40	-55.56%
	CO2 %	8.2	9.6	10.15	14.5	76.83%
	CO PPM	42	50	46.94	30	-28.57%
	Efficiency %	82.3	83.7	83.4	84.2	2.31%
	Smoke	1	0	0	0	-100.00%
Oil consumption 2009 vs test period	Gal/ Degree day	7.31			5.88	-19.56%

Conclusions

We have calculated the degree day consumption of the installed period versus the 12 months prior. The estimated consumption has dropped by 19.56%. This is only an indicator but falls in line with the adjustment to the firing rate. It is reasonable to say the fuel savings is greater than 10% based on the degree day calculations and a 2.37% combustion efficiency improvement. Zero smoke is also an indicator of optimal combustion.

