

# USDA ENERGY AUDIT PROGRAM

## 5. BOILERS:

Boiler Fuel Type	No. of Boilers	Rating (MMBtu/hr) (From Name Plate)	Combustion Air Temp (°F)	Feed water Temp (°F)	Stack Gas Temp (°F)	Oxygen % in Stack Gas	Average Steam Output (lbs/hr)	Max Steam Pressure (PSIG)	Annual Operating Hours (hrs/yr)

Is the Air –Fuel Ratio of the combustion monitored in the boilers? YES / NO

If yes fill the Oxygen % in stack gases column.

Is condensate returned to the boiler: YES / NO

P.S.: Condensate is the used steam from a process in the form of steam and water mixture or hot water

If condensate is returned to the boiler:- How much \_\_\_\_\_%

If condensate is not returned to the boiler:- How much can be returned \_\_\_\_\_%

Is additional piping / ductwork needed to return condensate? YES / NO

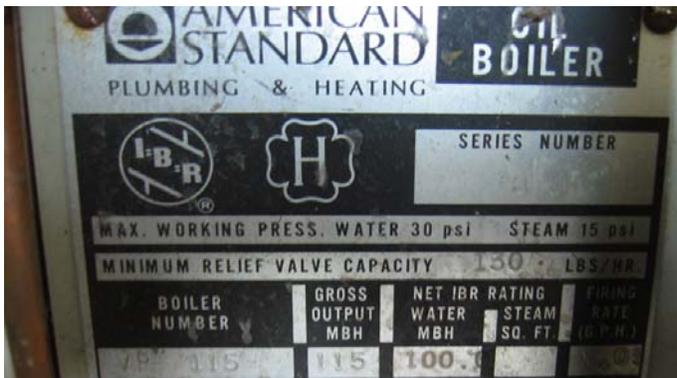
If YES: Length \_\_\_\_\_ ft. Diameter \_\_\_\_\_ ft.

Is combustion air preheated? YES / NO

Is there is a boiler economizer? YES / NO

PS: Boiler economizer is a boiler component that preheats boiler feed water using the heat of stack gases.

If there is waste heat in the stack gases, can it be used for comfort heating in the building?  
YES/NO



Example of Name Plate of Boiler

Is boiler used for supplying domestic hot water? YES/NO

If YES, end use locations of hot water and usage in Gallons/min

S. No.	End use Location	Usage (Gallons/min)
1		
2		
3		
4		
5		
6		
7		

**Furnaces:**

Furnace Fuel Type*	No. of Furnaces	Rating (MMBtu/hr or kW)	Combustion Air Temp (°F)	Stack Gas Temp** (°F)	Oxygen % in Stack Gas	Annual Operating Hours

\*Electric, Natural Gas, Propane, Others etc.,

\*\* If non-electric

Is the Air –Fuel Ratio monitored in the furnace? YES / NO

If YES fill the ‘Oxygen % in stack gases’ column.

If there is waste heat in the stack gases, can it be used for comfort heating in the building?  
YES/NO

Is combustion air preheated? YES / NO

Comments or other Information: