

## Guide to Low-Emission Boiler and Combustion Equipment Selection

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**GUIDE TO LOW-EMISSION BOILER AND COMBUSTION  
EQUIPMENT SELECTION**

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As an aid in boiler and combustion equipment selection, emission control options for 14 of the most popular boiler and fuel combinations are identified and discussed in Chap. 6. These options reflect combustion of coal, fuel oil, natural gas, biomass, and RDF in watertube and firetube boilers. Their key to success requires selection of an adequately sized low-emission boiler and combustion equipment that can be operated in compliance with emission standards established by state and federal regulatory agencies. This guide presents a broad overview of technical and regulatory issues that may be encountered at various points in the selection process.

6-1 6.1 boilers and combustion equipment . 6-1 6.1.1 Coal-Fired Boilers. 6-2 6.1.2 Fuel-Oil-Fired and Gas-Fired Boilers. ES.1 Format used to present emission control options for various fuel and boiler combinations .xvii. 2.1 Configuration of HRT firetube boiler .Â ES.1 Emission control techniques discussed in the guide .xvi 2.1 Fuels typically fired in ICI firetube boilers. 2-4 2.2 Fuels typically fired in ICI watertube boilers . Combustion equipment, when first commissioned, can be set to operate at its optimum efficiency. With time, however, there will be a deterioration due to blockage of air filters and breather holes, wear in valve linkages, etc. The plant is in fully automatic operation from the fuel feeding and combustion to ash removal and flue gas cleaning. The combustion system ensures low emission and high efficiency without impact on the availability and maintenance (Figure 11.14 and Table 11.4). Figure 11.14. Good automatic pellet-fueled boilers with low emissions and high efficiencies have been on the market for about ten years now. Existing oil-fired boilers can be adapted for pellet use by replacing the existing burner by one constructed to take pellets. Heating water temperature selection. Settings 2 - 8 correspond, when factory-set, to a heating water temperature of 20-80 °C. The heating water thermostat setting becomes ineffective when the system is combined with a digital room thermostat or a weather-compensated controller. 10 3062555\_201804. Emissions test mode The emissions test mode is activated by rotating the heating water temperature selector into position . The illuminated signal ring flashes yellow. After the emissions test mode has been activated, the boiler will heat with the selected maximum heating output. Any previous cycle block will be cancelled. Test the combustion parameters with the boiler closed! Testing the intake air. - Remove the screw from the l.h. test port. - Open the gas shut-off valve.