

Below 30%

3. Combustion modification alone (for low part of range so as to minimize boiler problems)
 4. Low-NO_x burners^b
1. Staged combustion^a
 2. Low-NO_x burners^a
 3. Gas recirculation (except for coal)^a

^aUsed in combination with others if necessary to achieve the required reduction level.

^bUnder development.

C) Particulate Matter Control

a) Precipitation and Filtration: Electrostatic precipitation is the basic method in the power generation industry for removing particulates originating as ash in the fuel. However, there is a trend toward using fabric filters (baghouses) in the U.S. as a means of attaining the very stringent emission standard adopted recently for new boilers.

b) Wet Scrubbing: The limited ability of wet scrubbers to remove very fine particulates makes their use questionable to meet the new regulations in the U.S., an unfortunate situation because scrubbers can remove the bulk of the coarse particulates at very low cost. In a new development, a wet precipitator after the scrubber removes the fine particulates.

c) Process Choice: For the current new source performance standards in the U.S. (0.03 lb/10⁶ Btu), baghouses are probably superior for low-sulphur coal because the ash does not precipitate easily. For high-sulphur fuel, the situation is not clear; more experience with baghouses is needed. For a standard such as 0.1 lb/10⁶ Btu, precipitators are more cost effective.

B.1.2.1 Technologies in Use

SO₂ Reduction

- a) Physical coal cleaning
- b) Blending with low-sulphur fuel