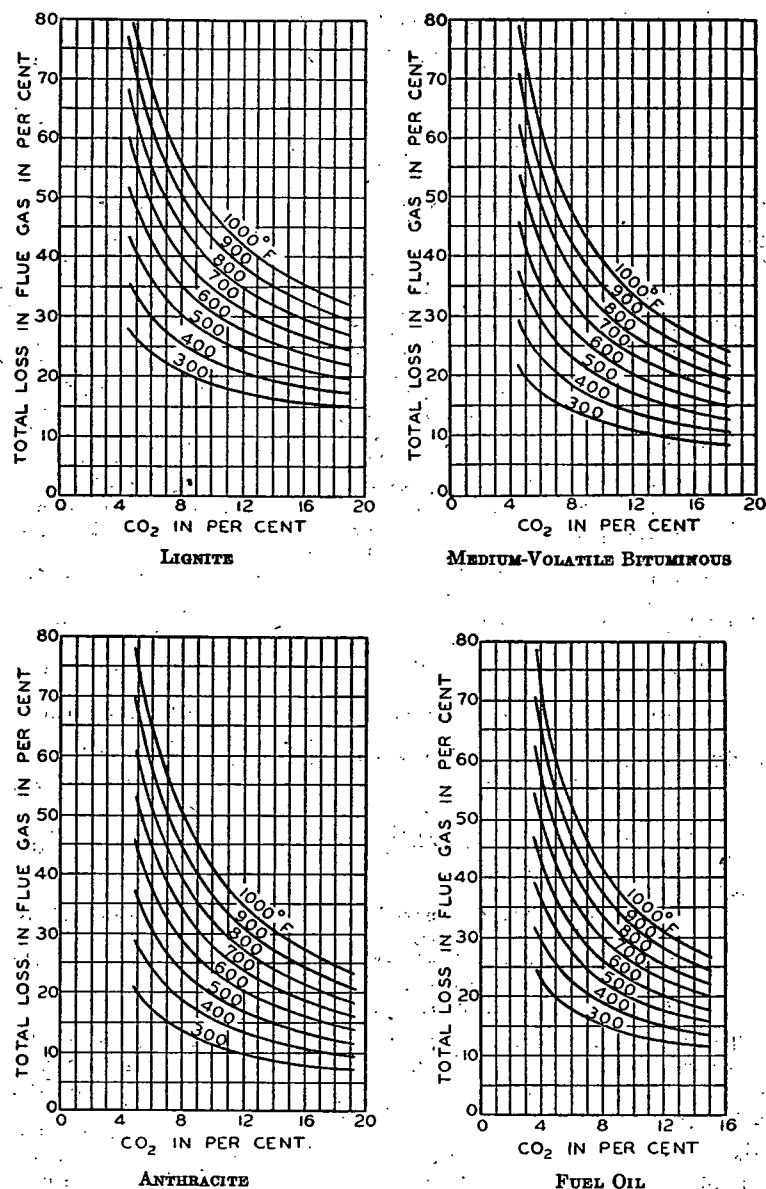
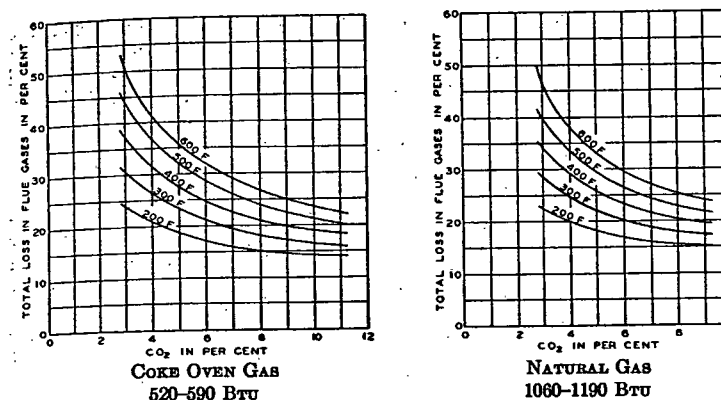


FIG. 1. FLUE GAS LOSSES WITH VARIOUS FUELS¹

Flue Gas Temperature Shown. Loss is Based on 65 F Room Temperature.

FIG. 2. FLUE GAS LOSS WITH GAS FUEL¹
Curves Show Flue Gas Minus Room Temperature.

FIRING METHODS FOR ANTHRACITE

An anthracite fire should never be poked or disturbed, as this serves to bring ash to the surface of the fuel bed, where it may melt into clinker.

Egg size is suitable for large fire-pots (grates 24 in. and over) if the fuel can be fired at least 16 in. deep. For best results this coal should be fired deeply.

Stove is the proper size of anthracite for many boilers and furnaces. It burns well on grates at least 16 in. in diameter on which it is fired about 12 in. deep. The fuel should be fired deeply and uniformly.

Chestnut size coal is in demand for fire-pots up to 20 in. in diameter, and is usually fired to a depth of from 10 to 15 in.

Pea size coal is often an economical fuel to burn. When fired carefully pea coal can be burned on standard grates. Care should be taken to shake the grates only until the first bright coals begin to fall through the grates. The fuel bed, after a new fire has been built, should be increased in thickness by the addition of small charges until it is at least level with the sill of the fire-door. A satisfactory method of firing pea coal consists of drawing the red coals toward the front end, and piling fresh fuel toward the back of the firebox.

Pea size coal requires a strong draft, and therefore the best results generally will be obtained by keeping the choke damper open, and regulating solely by means of the cold air check and the air inlet damper.

Buckwheat size coal, for best results, requires more attention than pea size coal, and in addition the smaller size of the fuel makes it more difficult to burn on ordinary grates. Greater care must be taken in shaking the grates than with the pea coal on account of the danger of having fuel fall through the grate. In house heating furnaces, the coal should be fired lightly and more frequently than pea coal. When banking a buckwheat coal fire, it is advisable after coaling to expose a small spot of hot fire by putting a straight poker down through the bed of fresh coal. This will serve to ignite the gas that will be distilled from the fresh coal and prevent delayed ignition within the fire pot, which in some cases, depending upon