



4. FURNACES AND REFRACTORIES

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Figure 4.1 Agricola's round furnace from 1556.

THE HERMANSEN FURNACE

The Hermansen furnace was in use at the beginning of the 20th century. It is a multi-pot furnace, often fitted with six pots, but is no longer in use.

HISTORIC FURNACES

The earliest, prehistoric glass furnaces were fired with wood. Wood was dried and then fed into the furnace. The temperature was quite low but it sufficed to melt the relatively alkaline glass that was produced at the time. As glass-making developed, new types of furnaces were invented.

There have probably been two types of wood-fired furnaces. One was invented by George Agricola in the 16th century and it is described as a pot furnace or oven with a dome – *Figure 4.1*. A central hearth was surrounded by pots. Glass was drawn from the furnace through openings in the dome above the pots.

The other type of furnace was rectangular with fireplaces at each corner and two or three pots along the sides of the furnace.

CONTEMPORARY FURNACES

Furnaces for melting glass can be divided into two main types: pot furnaces and tanks. These are normally heated using oil, gas or electricity. There are also numerous other types of furnaces that are used for heat-treating glass.

POT FURNACES

A pot furnace normally contains one or two pots and is heated with electricity, oil or gas – *Figure 4.2*. Pot furnaces are mainly used for