The basic-Bessemer plant consists of three converters, each having a capacity of 25 tons with a maximum capacity of 28 tons. The converters are of special design and a number of new improvements have been incorporated in this plant to facilitate operations. The converters are supplied with molten pig-iron from a 1,000-ton mixer of special design to conserve heat. The mixer is electrically operated and fired by automatically-controlled coke-oven-gas burners, one at each end, with an auxiliary gas burner at the spout. The mixer is charged with hot metal by means of a 150-ton crane, the metal being brought directly from the blast furnaces in 60-ton ladles. The metal is weighed before entering and after discharging from the mixer.

The following gives an average analysis of the pig-iron as charged into the converters: Silicon, 0.5 per cent.; Manganese, 1.5; Phosphorus, 1.9; sulphur, 0.05 per cent.

The basic-Bessemer converters are blown by two specially-designed turbo-blowers; each set is designed so that the variation in pressure at the blower discharge is used as a means of governing the speed at which the blower runs. The air pressure is thereby maintained at any required figure. The blowers have fixed diffusers and automatic blow-off valves so as to enable stable operations to be obtained when the blowers are delivering an output of 10,000 cub. ft. of air per min. The steam turbines are of the standard single-cylinder combined impulse and reaction type and suitable for operating with steam at 550 lbs. pressure per sq. in., superheated to 600 deg. Feh.

Housed in the turbo-blower building are the necessary high-pressure hydraulic pumps for supplying hydraulic power for the tilting of the converters. These consist of two high-pressure pumps, each being designed to deliver 450 galls. of water per min. against a head of 2,400 ft. One of these pumps is driven by an electric motor, while the other is steam driven. The steam is supplied from two Babcock & Wilcox boilers generally similar to those at the blast furnaces and also fitted with complete automatic control.

The main Bessemer building is 560 ft. long and contains two 50-ton cranes in the puring bay, together with a 15-ton underhung jib crane. There are two electrically-driven 50-ton floor-type casting machines which run on a wide-gauge track parallel to the converters. They carry 25-ton steel ladles which take the steel from the converters and cast it into the ingot moulds carried on ingot bogies. The ingots are transferred from the Bessemer shop to the stripping bay by steam locomotives.

Located near the basic-Bessemer plant is a lime-burning plant consisting of two blast-furnace-gas fired lime-burning kilns, each with a capacity of 80 tons of burnt lime per 24 hrs.