

Since 1948, substantial increases have occurred in the total number of electric furnaces in use in Los Angeles County, and in the total tonnage of steel melted in those furnaces. From 1948 to 1953 the total tonnage of electric steel production increased greatly, even though the number of furnaces in operation remained the same. This resulted from the replacement of smaller capacity furnaces with larger ones. Since 1953-54, the reverse has occurred, with a substantial increase in usage of small capacity furnaces, having only a moderate effect on total production tonnage. Application of permit standards has insured that all electric steel furnaces operate in compliance with Air Pollution Control District Rules.

Currently there are over 400 companies engaging in non-ferrous metal melting operations. Over 100,000 tons per month of aluminum, brass, lead, magnesium, zinc and other non-ferrous metals are processed in approximately 1600 furnaces. Engineering estimates show that 75 tons of aerosol contaminants are prevented from entering the atmosphere on an average day and but three tons are emitted.

The main regulatory statute forcing pollution from all types of metal melting furnaces to be reduced to acceptable levels is Rule 54, which limits the weight of emission on a graduated scale corresponding to the amount of metal processed.

Vigorous application of Rule 54 has changed the industry from one of almost no control in 1938 to one of almost complete control in 1966, through the installation of over 300 devices consisting mostly of baghouses and electrical precipitators. Culminating this program, but by no means ending this period of achievement, is the placing in operation of a baghouse, the first installation of its kind to collect all emissions within a building containing steel melting and pouring operations. This major piece of air pollution control equipment has been constructed at a cost of over 1.5 million dollars.

ENGINEERING "FIRSTS"

In staying at least one pace ahead of the problem, the engineering control program has produced many "firsts" during the past eighteen years. The type of equipment and approximate costs involved are listed in Table III presented in the following pages. With the technological developments necessary to keep pace, even some of these "firsts" are no longer in use since better methods of solving the air pollution problem have been found and adopted.

Table IV gives a list of typical basic and control equipment installed in Los Angeles County over the past eighteen years. In some cases, the cost of the control equipment is but a small fraction of the cost of the production equipment. In other cases, the cost of control equipment is greater than the cost of the basic equipment.