

Nature and Amount of the Ore to be Treated.

The "zinc concentrate" or concentrated zinc ore treated by the electrolytic process for the recovery of zinc is the product of ore-dressing operations at the mine, intended to collect the zinc mineral and to reject the gangue and the minerals of lead, iron, copper and other metals. This concentrate consists mainly of zinc sulphide, and usually contains smaller amounts of sulphides of iron, lead, copper and cadmium, with a little silica and still smaller amounts of arsenic and antimony. It may also contain paying amounts of gold and silver. This concentrate is usually in the form of a fine powder.

It is impossible, in advance, to state the probable analysis of the zinc concentrate, as this will vary with the nature of the ore in the mine and with the effectiveness of the dressing operation; it is probable, however, that these concentrates would contain from 40 to 50 percent of zinc and about 32 or 33 percent of sulphur, and these figures will be used for the purposes of this report.

On the basis of 100 tons of zinc per day, and in view of the probable percentage recovery of the process, there would be needed per day about 250 or 300 tons of zinc concentrate.