

CHAPTER NINE

RECOMMENDATIONS

Further suggested areas of study to assist in the development of the iron-reduction distillation process for the treatment of EAF dust are as follows :

1. Investigate the use of sintered briquette or pellet for both stages. An EAF dust sinter should be strong but capable of being crushed to the required size without generating a large quantity of fines. It should also be chemically reactive, permeable to gases and of large specific surface. In the commercial scale, the sintering process is also required.
2. Investigate the application of low calorific value waste gas available from some metallurgical processes. The effect of changing reactant gas composition for the first reduction stage could be further studied by using gas mixtures of carbon monoxide and nitrogen.
3. Investigate further the mechanism and kinetics of zinc oxide reduction by metallic iron to confirm whether the process is chemical or mixed control.
4. Investigate the purity of metallic zinc if the high purity zinc is required.