INTRODUCTION

Secondary lead industry is polluting by nature. Addressing to constraints as specified by low 4/94 would elaborate the importance of carrying out this study. Along with concern, it would beneficial to provide those it may concern, the initial data and necessary information updating the technology of secondary lead industry. The starting material is the dust and slag of secondary lead industry, in general and by recycling the laden- flue dust in particular.

Different options are now available that may encourage collection of flue dust, processing the collected lead-bearing dust, and to estimate the economy of this process. When the output of this study come into force, national economy would save several millions of pounds and control pollution hazards of secondary lead industry.

Governmental legislations aim to force renewing the secondary lead industry in Egypt. It seems reasonable to implement the suggested method to abate fugitive emissions and slag, to improve the extent of lead recovery from these secondary resources. As far as this goal is concerned, the problem of making use of fugitive emissions and slag would save the national metal resources. The structure of lead industry in Egypt produces thousands tons of emissions causing hazardous waste and lose valuable materials.

This study used a representative sample of fugitive emissions and slag coming out from industrial plants producing secondary lead from spent acid lead battery scrape. The sample was taken out from the tunnel path connecting the cooling room of the rotary furnace and

stack. It was further homogenized before use. The method was carried out through two ways:

a- The lead metal was recovered from the dust or slag samples without pelletization

b- The dust or slag powder was first pelletized before reduction.

In each case, the dust or slag was either used as such of carbonated using sodium carbonate and sodium sulfite mixture. This technique was selected to make the reduction step easy and safe taking into mined that the collected dust contains appreciable amount of lead sulfate which resists reduction with hydrogen.