

Secondary Lead Production (Hydrometallurgical Treatment) **CX-EW[®] Process and CX-EWS[®] Process**

Title: CX-EWS: a New Process for the Electrochemical Treatment of the Spent Lead Acid Batteries by Obtaining Electrolytic Lead and Elemental Sulphur

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Abstract: After two years of extensive research a new and innovative modification to the CX-EW process has been exploited. This process, called CX-EWS, avoids completely all the critical aspects of the previous electrochemical process which affected the cost of the energy, of the chemicals and of the maintenance of the insoluble anodes. All these benefits reflect a saving of about 30 % of the operation cost compared to the present traditional production and allow for a total operating cost of less than 6,50 cts/lb lead (net of raw material cost). With this new technology it is allowed for the first time the treatment in the same plant facilities of both primary lead sulphide concentrates and spent batteries. The paper describes the critical and economical aspect of the new process with a feasibility study for 150.000 t/y spent battery facility throughput.