

Primary Lead Production
FLUBOR® Process and LEADBOR® Process

Title: Atmospheric Leaching and Electrowinning of Lead from Primary Sulphide Concentrate.
The Flubor® Technology

Paper presented at: EMC 2001; September 18th/21st, 2001; Friedrichshafen, Germany

Authors: Dott. Ing. Marco Olper – Engitec S.r.l. – Novate Milanese, Italy
Dott. Massimo Maccagni – Engitec S.r.l. – Novate Milanese, Italy

Abstract: Lead sulphide (galena) is the only lead mineral compound of commercial importance. Galena concentrates are readily treated by pyrometallurgical methods, but all processes have the concerns of in-plant hygiene, worker exposure, and environmental emission caused by Pb, Cd and fugitive SO₂ emissions. In addition, the investment cost to replace obsolete lead smelters with new processes, like Kivcet or QSL, is high (800 – 1000 US\$/yearly ton) and the future of the independent smelters is in doubt.

The next year's forecast of the lead quotations is not exciting and the lead smelter's margins are compressed between mining cost and lead metal market price. The savings in operating cost of the new smelters compared to the traditional sinter-blast furnace technology is completely offset by capital cost burdens on a per ton lead basis.

The environmentally friendly Flubor® Technology offers promise of resolving the problems of both high capital investment and operating cost. The paper introduces the outcome of more than ten years of research performed by Engitec in this field from bench scale through field pilot plant projects.