Lead-acid battery factory environmental assessment

Health risk assessment of various metal(loid)s via multiple exposure pathways on children living near a typical lead-acid battery plant, China. S. Cao X. Duan ...

Lead (Pb) pollution from smelters and lead-acid battery has become a serious problem worldwide owing to its toxic nature as a heavy metal. Stricter regulations and monitoring strategies have been formulated, legislated and implemented in various parts of the world on heavy metal usage. Developed countries such as the USA and in Europe ...

Environmental Impact Assessment of the Dismantled Battery: Case Study of a Power Lead-Acid Battery Factory in China Zhiguo Wang 1, *, Jie Yang 2, Renxiu Qu 3 and Gongwei Xiao 1

capacity basis, lead-acid batteries have the lowest production energy, carbon dioxide emissions, and criteria pollutant emissions. -related Some process emissions are also reviewed in this report.

Environmental Impact Assessment of the Dismantled Battery: Case Study of a Power Lead-Acid Battery Factory in China Processes (IF 2.8) Pub ... Although this paper is aimed at the power lead-acid battery, the research method is also of significance for the power lithium-ion battery, and we will conduct relevant research on the disassembly ...

The leakage of sulfuric acid was the main environmental risk of lead-acid batteries in the process of production, processing, transportation, use or storage. ...

Wang Z, Yang J, Qu R, Xiao G. Environmental Impact Assessment of the Dismantled Battery: Case Study of a Power Lead-Acid Battery Factory in China. ...

DOI: 10.1016/j.jhazmat.2018.04.054 Corpus ID: 21707375; A systemic ecological risk assessment based on spatial distribution and source apportionment in the abandoned lead acid battery plant zone, China.

findings, some suggestions are put forward for a policy to promote environmental green growth of WPB treatment. Although this paper is aimed at the power lead-acid battery, ...

DOI: 10.1016/J.JCLEPRO.2015.07.026 Corpus ID: 153209736; Life cycle assessment of lead-acid batteries used in electric bicycles in China @article{Liu2015LifeCA, title={Life cycle assessment of lead-acid batteries used in electric bicycles in China}, author={W. Liu and Jing Sang and Lu-jun Chen and Jinping Tian and Huatang Zhang and Grecia Olvera ...

China is the largest lead-acid battery (LAB) consumer and recycler, but suffering from lead contamination due to the spent-lead recycling problems. This paper describes a comparative study of five typical LAB recycling

processes in China by compiling data about the input materials, energy consumptions, pollution emissions, and final ...

In recent decades, lead acid batteries (LAB) have been used worldwide mainly in motor vehicle start-light-ignition (SLI), traction (Liu et al., 2015, Wu et al., 2015) and energy storage applications (Díaz-González et al., 2012).At the end of their lifecycles, spent-leads are collected and delivered to lead recycling plants where they are often ...

The growth of e-waste streams brought by accelerated consumption trends and shortened device lifespans is poised to become a global-scale environmental issue at a short-term [1], i.e., the electromotive vehicle industry with its projected 6 million sales for 2020 [[2], [66]].Efforts for the regulation and proper management of electronic residues ...

In this paper, environmental performance is investigated quantitively using life cycle assessment (LCA) methodology for a dismantled WPB manufacturing process in Tongliao city of Inner Mongolia...

Blood lead levels of several hundreds of residents were over 100 mg/L due to exposure to the waste discharges from a lead-acid battery factory in Heyuan, Guangdong province. Therefore, this study was designed to find out the environmental lead sources, the human lead exposure pathways, and the amplitudes from a lead-acid ...

Request PDF | Lead exposure assessment from study near a lead-acid battery factory in China | The production of lead-acid battery in China covered about one-third of the world total output and ...

Lead-acid batteries are the most widely used type of secondary batteries in the world. Every step in the life cycle of lead-acid batteries may have negative impact on the environment, and the assessment of the impact on the environment from production to disposal can provide scientific support for the formulation of effective management policies.

was necessary for the study on the environment risk assessment(ERA)3 of lead-acid batteries. Environmental risk assessment is the process of identifying, evaluating, selecting, and implementing ...

Despite China"s leaded gasoline phase out in 2000, the continued high rates of lead poisoning found in children"s blood lead levels reflect the need for identifying and controlling other sources of lead pollution. From 2001 to 2007, 24% of children in China studied (N = 94,778) were lead poisoned with levels exceeding 100 mg/L. These levels ...

A lead-acid battery recycling factory impacted human and environmental health in Mombasa, Kenya. For forcing its closure, Phyllis Omido won the Goldman Environmental Prize in 2015. ... [13] Etiang, N et al. "Environmental Assessment and Blood Lead Levels of Children in Owino Uhuru and Bangladesh ...

Lead-acid battery factory environmental assessment

Lead (Pb) pollution in the environment predominantly occurs through anthropogenic activities, which pose significant threats to human health and that of biota this study, Pb and other elements were investigated in different soils (n = 52), crops (n = 24) and water (n = 13) around a lead-acid battery (LAB) recycling workshop in southwestern ...

AMA Style. Wang Z, Yang J, Qu R, Xiao G. Environmental Impact Assessment of the Dismantled Battery: Case Study of a Power Lead-Acid Battery Factory in China.

DOI: 10.1016/J.ECOLIND.2014.04.040 Corpus ID: 84543613; An ecological risk assessment of heavy metal pollution of the agricultural ecosystem near a lead-acid battery factory @article{Liu2014AnER, title={An ecological risk assessment of heavy metal pollution of the agricultural ecosystem near a lead-acid battery factory}, ...

DOI: 10.1016/J.PROENV.2016.02.103 Corpus ID: 111429064; Study on the Environmental Risk Assessment of Lead-Acid Batteries @article{Zhang2016StudyOT, title={Study on the Environmental Risk Assessment of Lead-Acid Batteries}, author={Jing Zhang and Chuanmin Chen and Xue-ying Zhang and Liu Songtao}, journal={Procedia ...

Lead-acid battery factories can lead to heavy metal pollution of nearby agricultural ecosystems. To assess the ecological risk and to understand the transport processes of heavy metals in an agricultural ecosystem, the concentrations of heavy metals in agricultural soils (As, Cd, Cr, Cu, Mn, Ni, Pb, and Zn) and in wheat plants at different stages of ...

The good news is that lead-acid batteries are 99% recyclable. However, lead exposure can still take place during the mining and processing of the lead, as well as during the recycling steps.

Although this paper is aimed at the power lead-acid battery, the research method is also of significance for the power lithium-ion battery, and we will conduct ...

Lead-acid battery industries in Bangladesh have proliferated in urban areas, leading to the release of significant amounts of potentially toxic elements (PTEs) and metalloids into the environment. ... Environmental risk assessment near a typical spent lead-acid battery recycling factory in China. 2023, Environmental Research. Show ...

Lead-acid batteries (LABs), a widely used energy storage equipment in cars and electric vehicles, are becoming serious problems due to their high environmental impact. In this study, an integrated method, combining material flow analysis with life cycle assessment, was developed to analyze the environmental emissions and burdens of lead in LABs. ...

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