



AkkuSer

Clean, Profitable Battery Recycling





Profitable and Expanding

- Recycling rechargeable batteries for 6 years
- Now finalizing alkaline recycling technology
 - MAY need to remove some more Mn from Zn solution
 - In discussions with zinc refiners





Smelters now dominate market

- 1200 degrees
 - Very HOT
- Massive amounts of electricity consumed
- More than 50% of battery goes to landfill
 - AkkuSer almost twice as efficient
- Massive air pollution





5 Advantages (patented)

- Efficient: More than 80% of metals from batteries
- Very Clean (especially compared to a smelter)
- Extensive, unique, reporting system
- Legally Required
 - EU Law REQUIRES battery recycling; NA commitment
 - EU Law REQUIRES use of most efficient system; NA policy
- Inexpensive (especially compared to a smelter)





Most Efficient Alkaline Technology

- Crush
- Remove Iron; Leach remaining black mass
- Very efficient
 - 89% of the zinc
 - 88% of the manganese
 - 83% of the iron





Cleanest Technology

- No Heat
- No Water
- No Chimney
- Slight (7%) organic waste used in town central heating





Extensive, Unique, reporting

- Detailed reports--Exactly :
 - what batteries came in
 - where crushed material sent
 - where raw materials were sent
- Assure, for example
 - CSR investors
 - Gov't agencies
- No one else does this





Required by Law

- EU Law REQUIRES battery recycling
- North American commitment by manufactures
 - www.batterysummit.com
 - Required in 4 Canadian Provinces
 - California forbids disposal





Inexpensive

- Much less expensive than a smelter
 - Crusher 1 million euros
 - Leaching Facility 5 million euros





Collection = Job Creation

- Permanent (AkkuSer alkaline plant)
 - 1 = 86 jobs; 7 (all Calif.'s batteries) = 588
- Construction of AkkuSer's alkaline plant
 - 1 = 59; 7 = 413
- Logistics & employee time: 12,580 jobs





In Conclusion: 5 Advantages

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