

Mission of Eco Globe 21 Project

Eco Globe 21 Project

N. "Tom" Tamura

9th July, 2008
Yokohama, Japan



Global concerns



Environmental crisis

melting 4 x 25m pool / 1 sec



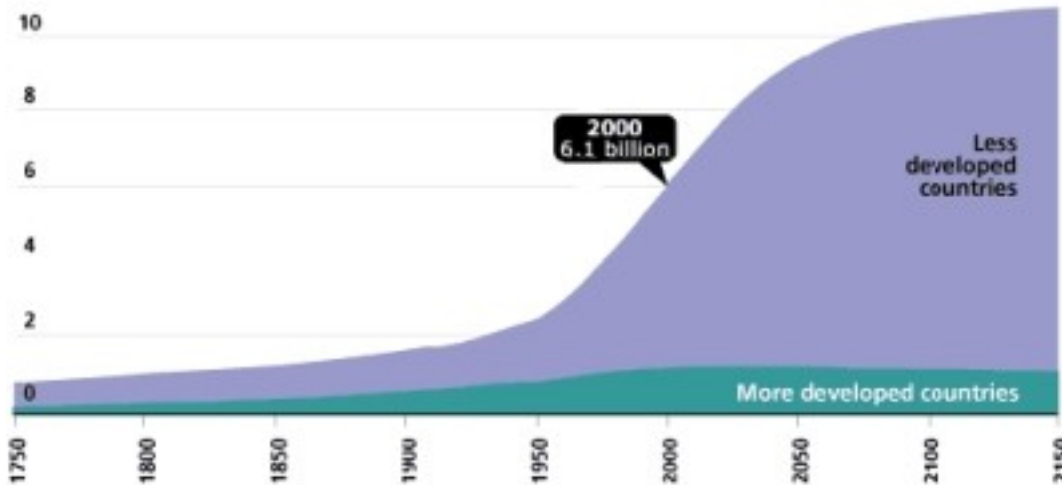
Oil price

18 Jan, 07 = \$50

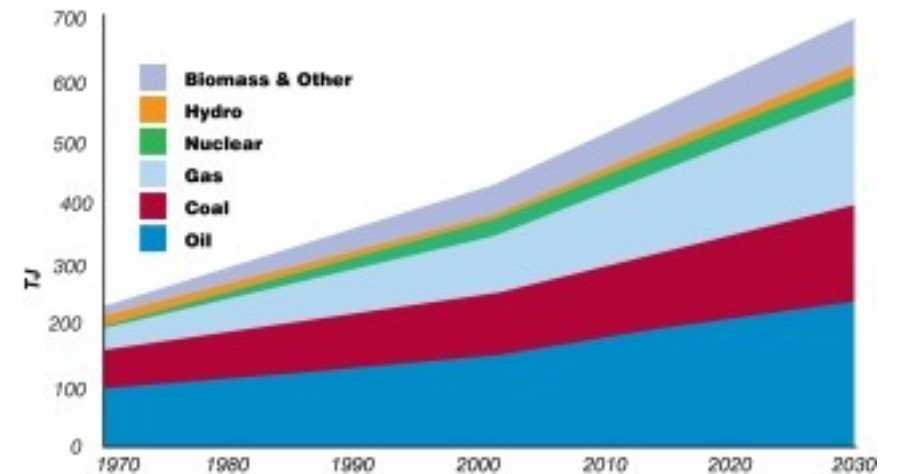
Pollution and
economy grow

Population (in billions)

Population increase



Energy demand



Make difference?

By Petro EXL (PEAM)

**Reduce fuel consumption
and maintenance cost**



By Petro EXL (PEAM)

**Improve flue gas
(NO_x, SO_x, Co, etc)**

By Super Desulfation

Reduce battery maintain cost

Forklift, UPS, Auto start, etc



By Super Desulfation

Low cost off-grid programs

Reuse waste battery from UPS

Company Profile

Company Adicon Co., Ltd.

Business segment
 -Manufacturing and sales of fuel additives
 (Diesel /Light Oil, Gasoline, Kerosene, Heavy oil)
 -Sales of Diesel, Gasoline, Kerosene, Heavy oil, lubricating oil
 -Management consulting

Founded July 30, 1986

Corporate Headquarters Sanho Bldg. 4F, 1-1-28 Sakuragawa, Naniwa-ku, Osaka, Japan
 81-06-6561-5850

President Kinuko Gomi

Capital 10,000,000 yen

Main suppliers

Chukyo Kasei Kogyo Co., Ltd.	Meiwa Kinzoku Kogyo Co., Ltd.
Mikuni Kinzoku Corporation	Sanwa yuko Co., Ltd.
Tsuchiya Kaorin Kogyo Co., Ltd.	Nisso Shoji Co., Ltd.
Asahi Container Co., Ltd.	

Main clients

Chukyo Kasei Kogyo Co., Ltd.	Rekisei Shoji Co., Ltd.
Futami Co. Ltd.	New Japan Machinery Corporation
Yamato Kogyo Co., Ltd.	Sojitz Energy Corporation
YKK Corporation	Tokiwa Shoji Co., Ltd.
Nikko Sangyo Co., Ltd.	Iwate Isuzu Motor Co., Ltd.
Mie Isuzu Motor Co., Ltd.	etc.

Kerosene additive for
 Diesel application

Enzymatic fuel additive



Gas-Adicon

Main product adoption

Public Construction Industry

Asunaro Aoki Construction Co., Ltd.[designate]		Taisei Corporation
Sato Kogyo Co., Ltd.	Shimizu Corporation	Kumagai Gumi Co., Ltd.
Obayashi Corporation	Tobishima Corporation	Sankyu Inc.
Daishou Corporation	Maeda Corporation	Kajima Corporation
Okumura Corporation	The Nippon Road Co., Ltd.	
Tokyu Construction Co., Ltd.	Penta-Ocean Construction Co., Ltd.	
Sumitomo Mitsui Construction Co., Ltd.	etc.	

Factory Premises Work

Nippon Steel Corporation	YKK Corporation
Sumitomo Metal Industries, Ltd.	Aichi Steel Corporation
JFE Steel Corporation	Kobe Steel Ltd.
Nakayama Steel Works Ltd.	etc.

Others

Japan Fisheries cooperative organizations
 Japan Agricultural Cooperatives organizations

Main Products of Adicon

ONLY ONE Technology Products

Kerosene additive for Diesel application



Gas-Adicon



This product will add viscosity to Kerosene (lamp / heating oil) to be able to use for Diesel engine.

The markets are the countries have large price gap on Kerosene and Diesel.

We are proud of non claim for more than 40 years, and the product has been adopted by major corporations in Japan.

Enzymatic fuel additive



This product leads to perfect combustion of fuel, which brings multiple benefits...

- improving fuel efficiency to reduce fuel cost
- improving exhaust quality to reduce pollution
- reducing carbon contaminations in systems

This product is produced dissolving special Enzymes into Kerosene, which is a very unique product and does not create collateral air pollution as others.

Markets and application of Petro EXL

Main feature

This product leads to perfect combustion of fuel.

- Sludge control in the fuel
- Removing and preventing unburnt-carbon & soot
- Accelerating combustion

What would be the factors of imperfect combustion?

Physical factors

- Sludge in the fuel
- Contamination of system by Unburnt-carbon & Soot

Mechanical & technical factors

- Timing of ignition, etc.
- Air amount adjustment

Fuel process quality and Sludge problem

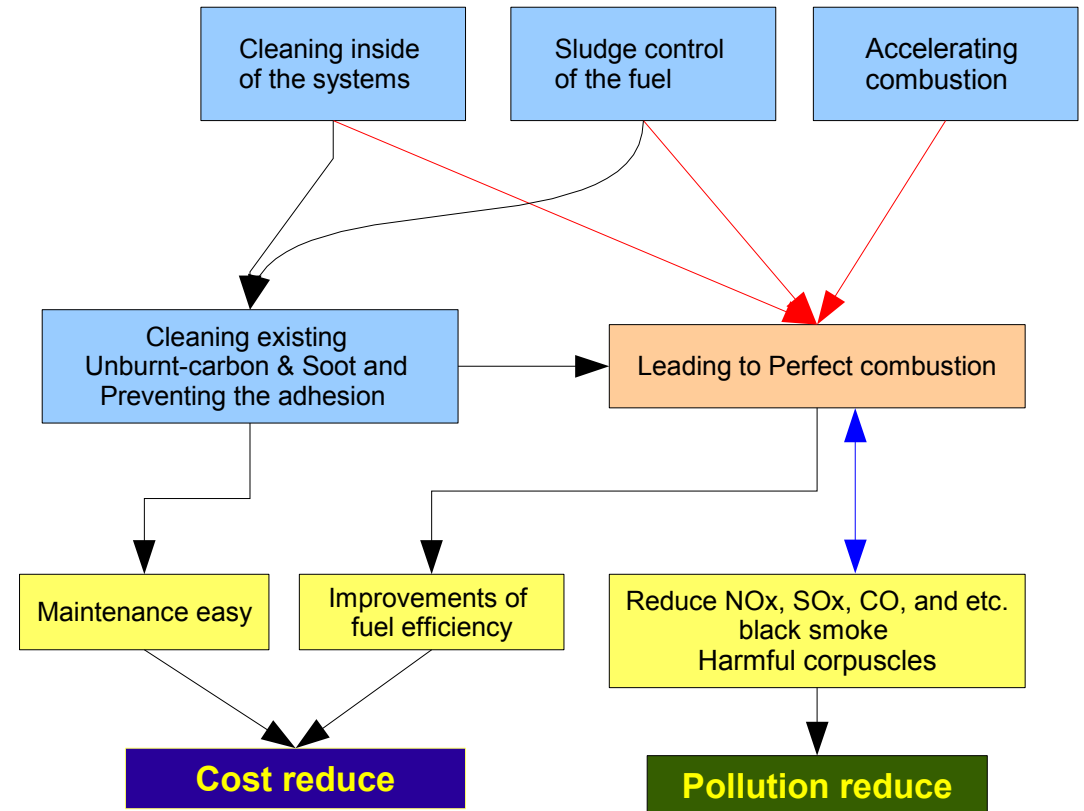
- Contain of the sludge in the fuel is depending on the process technology by country
- Heavy oil contains the most sludge

Why the size of the product effects are different?

The product has accelerating combustion effect, but the adding amount is 1/10000 of the oil, therefore physically the impact of such effect can not be expected as a solo effect.

The size of the product effects will be different depending on the amount of contain sludge in the fuel and existing unburnt -carbon & Soot contamination in the systems.

The total effect will be multiple result of Sludge control in the fuel, Removing and preventing unburnt-carbon & soot and Accelerating combustion.



Enzymatic fuel additive



Markets and application of Petro EXL - 2

How to use

Normally, the product is simply added into the fuel tank, the amount of 1/10000. 1 liter of Petro EXL to 10000 liter of any kind of fuel.

Markets

- **Vessel** (please see below “Fuel process quality and sludge”)
- Vehicle
- Diesel engine
- Boiler
- Agriculture
- Heavy duty equipment
- Incinerator
- Thermal

Vessel

Vessel uses Heavy oil, which contains more sludge in general. Especially for the vessels, requires refueling at different ports at different country, are commonly facing problems with sludge control. Also, the larger sludge content creates more contamination in the system. Today, many ports requires vessels certain exhaust control for authorization of docking.

Vehicles

The size of effect is depending on the sludge amount in the fuel and contamination in the systems. For example, one of our client confirmed average of 10-15% improving the gas millage on taxis in Philippine. The exhaust improvements can be confirmed quite easily, which also proving the improvements on combustion. Private car. Trucks and Buses are also same principal.

Fuel process quality and Sludge

- Contain of the sludge in the fuel is depending on the process technology by country
- Heavy oil contains the most sludge

Diesel Engine

The effects were confirmed in Europe approx 20 years ago, and now China Railway is on testing and confirmed good results in mid report.

Boiler, Incinerator and Thermal

Generally, heavy oil and coal are used on these applications. The effect impacts are very much expected on fuel saving and exhaust control. Petro EXL will make coating layer inside of chamber to bring the effects and does not require frequent injection by every hour like others, which needs extra investments for the special injection system.

Heavy duty equipments and Agriculture

Petro EXL is used for construction industry and agriculture facilities for fuel saving purpose. Especially, agriculture facility concerns common fuel smell on the crops.

Retail marketing

Some of clients diluted Petro EXL with 10 times of Kerosene and bottled in own label for marketing, on pricing and volume presentation.

Some of house heating oil wholesalers in Japan mixes Petro EXL into their tank and sells as special treated heating oil with less fuel smell.



Enzymatic fuel additive



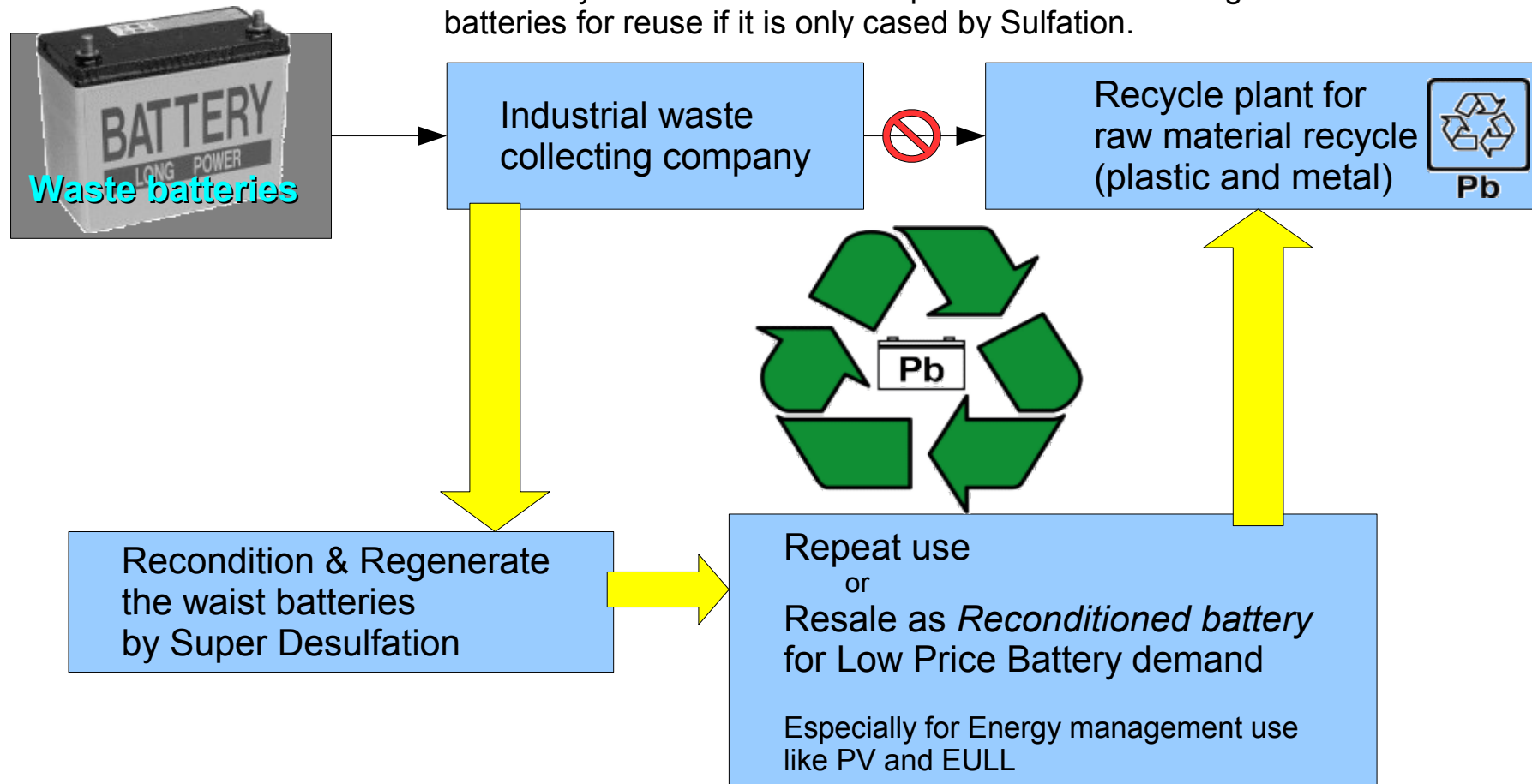
Reuse of Waste Battery

Super Desulfation

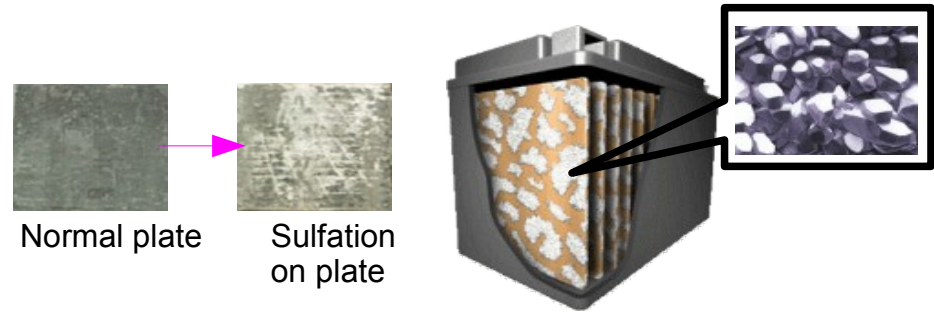
 Solvated-Electrons Agent

Lead-acid batteries become waste batteries, **80-90% by Sulfation** and **10-20% by Physical damage**. Some other data says over 90% by Sulfation.

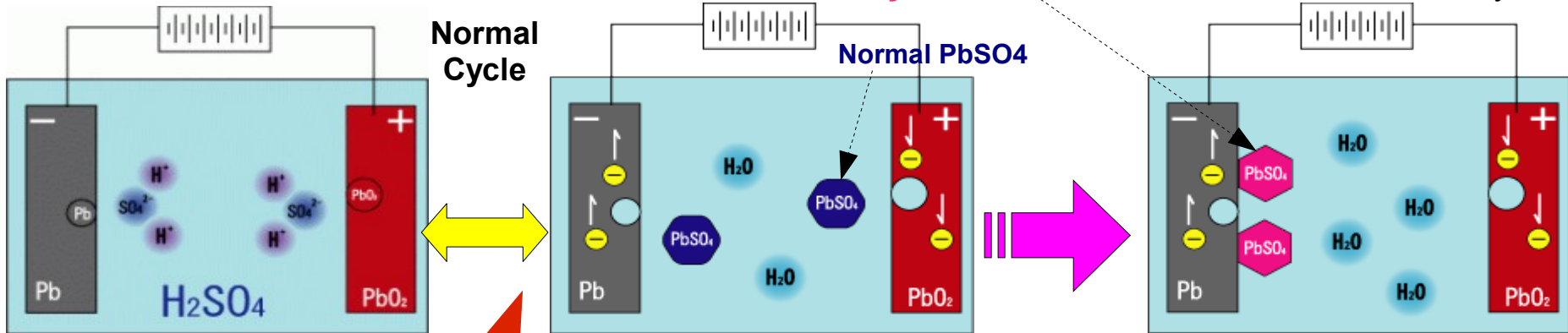
Current recycle system goes to Material Recycle process even the battery is chemically created Sulfation. Super Desulfation can regenerate waste batteries for reuse if it is only caused by Sulfation.



What is Sulfation? How Super Desulfation works?

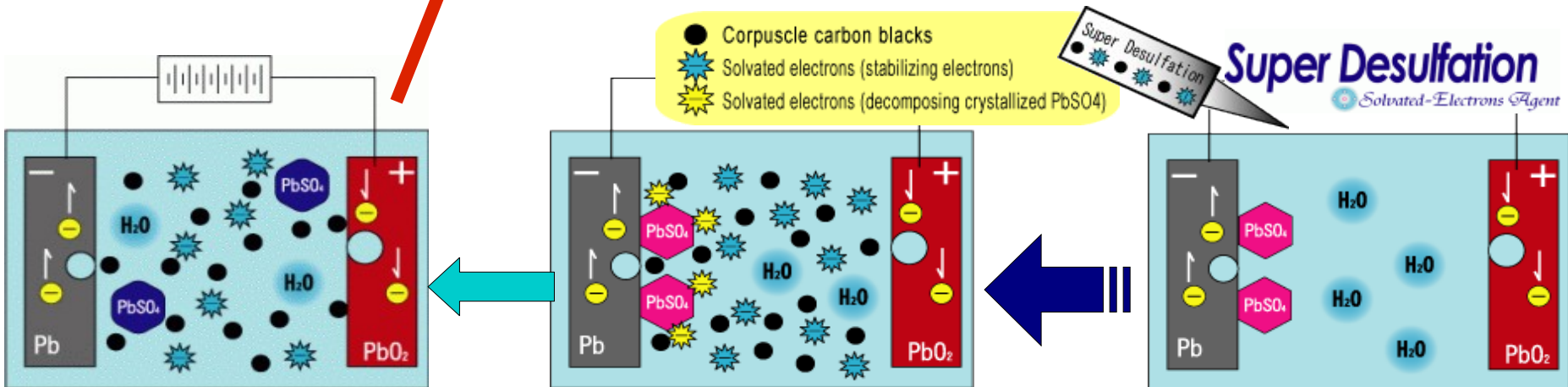


SULFATION is crystallized $PbSO_4$, breaks the chain of cycles



- I. **SULFATION** does NOT dissolve with H_2O to become H_2SO_4
- II. % of electrolyte H_2SO_4 will be less and H_2O stays as H_2O , decrease the capacity
- III. **SULFATION** is nonconductor to reduce conductivity 0

Getting back to Normal Cycle



Ideas of Super Desulfation



Sulfation is a natural, normal process that occurs in all lead-acid batteries during normal operation. Sulfation clogs grids, impedes recharging and ultimately can expand and crack the plates as it accumulates, destroying the battery. Crystalline lead sulfate is resistant to normal charging current, and does not re-dissolve completely. Thus, not all the lead is returned to the battery plates, and the amount of usable active material necessary for electricity generation declines over time. In addition, the sulfate portion (of the lead sulfate) is not returned to the electrolyte as sulfuric acid.

From: <http://en.wikipedia.org/wiki/Sulfation>

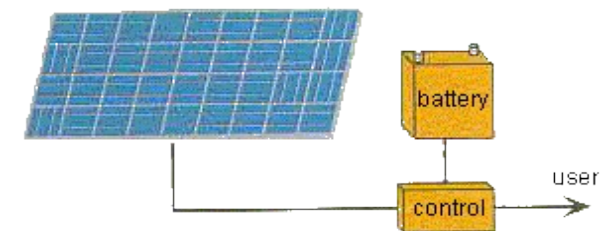
Prevent Sulfation by Pre-treatment

- Sulfation is a natural reaction on lead-acid battery, therefore Super Desulfation can be added into Lead-acid battery in advance, to prevent Sulfation before appearing obvious Sulfation damage and extend actual battery life time.



Regenerate waste battery

- If the waste battery does not have serious physical damage, Super Desulfation can regenerate waste battery.
- Super Desulfation is has been used for forklifts & trucks at transport companies and system maintenance companies instead of installing brand new batteries reducing replace cost.
- For example, some power system companies collects well conditioned waste stationary lead-acid batteries from public facilities & banks and regenerate waste batteries to utilize for alternative offer to their clients reducing system cost of
- **PV (solar generating)** and **EULL (Electric Utility Load Leveling)**.





[Http://www.ecoglobe21.com/](http://www.ecoglobe21.com/)



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