

Pb



Eco-friendly **Pure** **Lead** Alloy
Recycling **Battery Scrap** Recycling
Lead Oxide Manufacturing



Eco Friendly Recycling



GRAVITA
EXIM LIMITED

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Environment friendly solutions for Lead Battery Scrap Recycling

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“ **Technical Consultants & Turnkey Project Supplier for environment friendly Lead Battery Scrap Recycling** ”



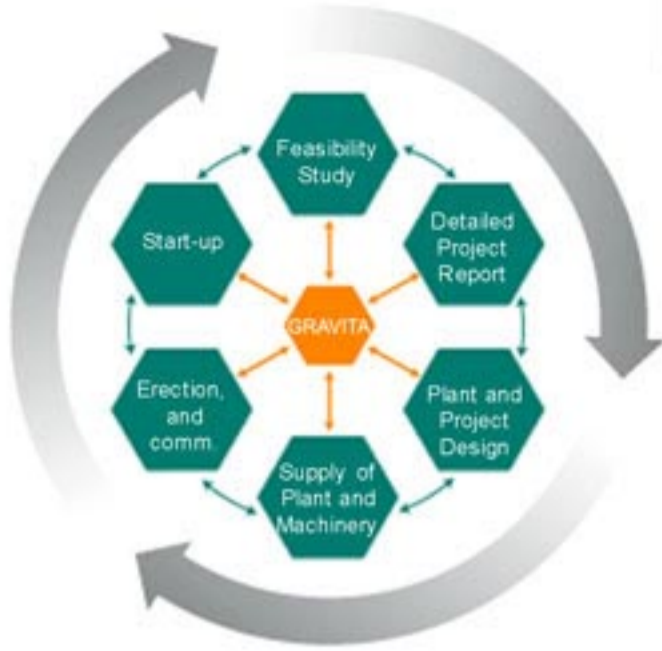
An Overview

The Gravita Group is owned and managed by an advanced team of professionals, with more than 14 years experience in Battery Processing & Lead Recycling Technology.

At Gravita Exim our all business processes are targeted at maintaining the highest level of environmental integrity and cost competitiveness, which has ensured the company gain international recognition.



Services & Turnkey Projects



- ✓ Turnkey project services
- ✓ Operations assistance and management
- ✓ Training and technical staff outsourcing
- ✓ Productivity studies including smelting and refining instructions or improvements
- ✓ Environmental and Occupational Health Assessments

For operational units, a complete range of services for modernisation, expansion, retrofitting for pollution control including technical studies, remediation, supply of equipment and integration.

Our Expertise Covers

Secondary Lead Smelting

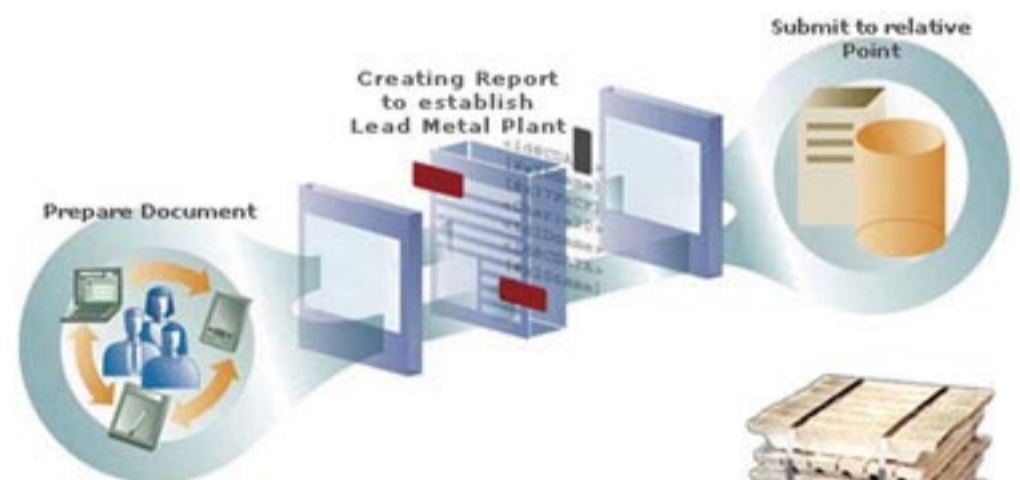
Lead Refining

Lead Alloying (Pb-Ca, Pb-Se etc.)

Lead Sub-Oxide, Red Lead and Litharge Manufacturing

Optimizing production and melting of environmental status for Lead processing industry

All technical aspects related to Lead Battery Recycling



OUR INVOLVEMENT

Fabrication Facility

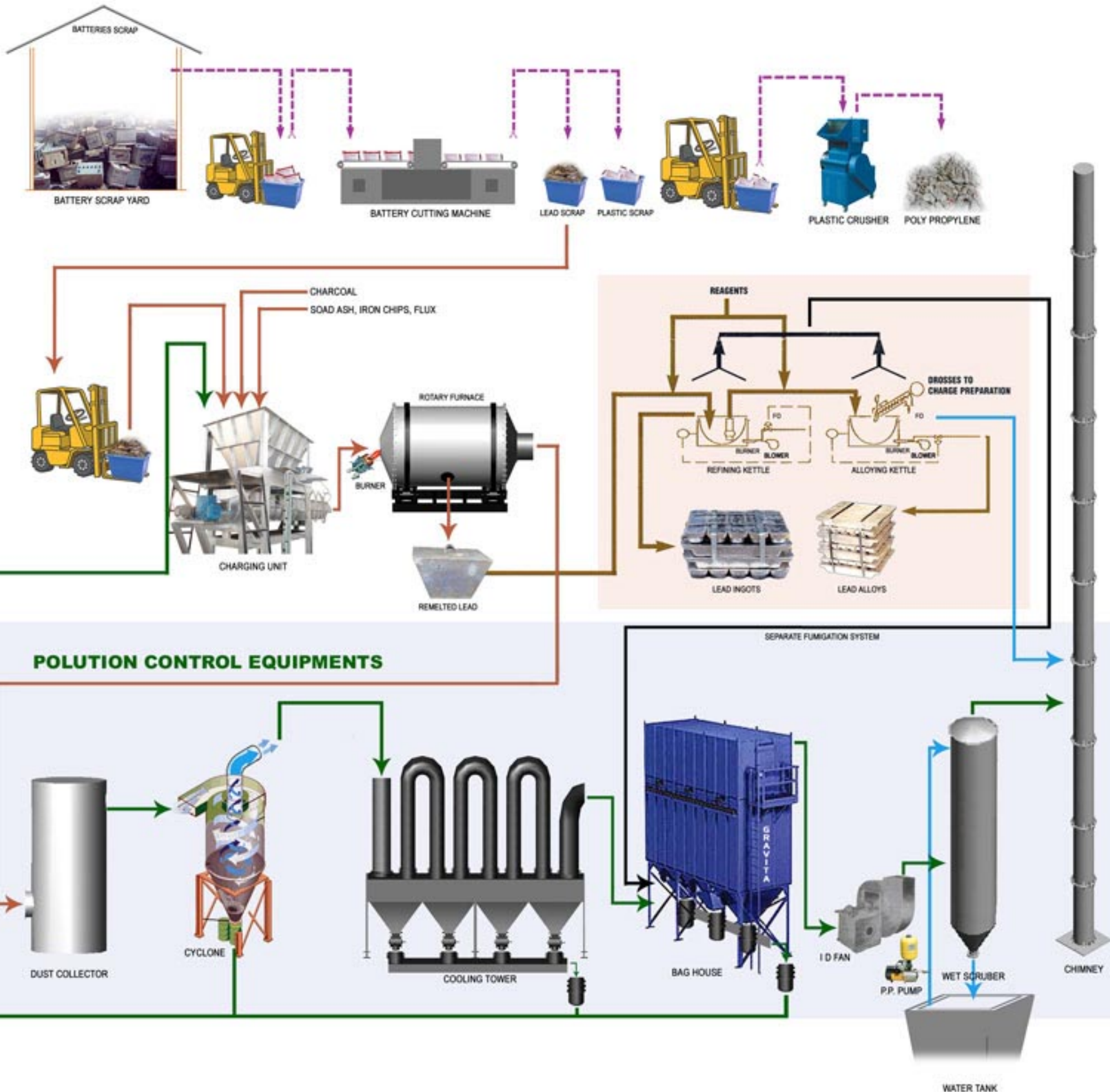
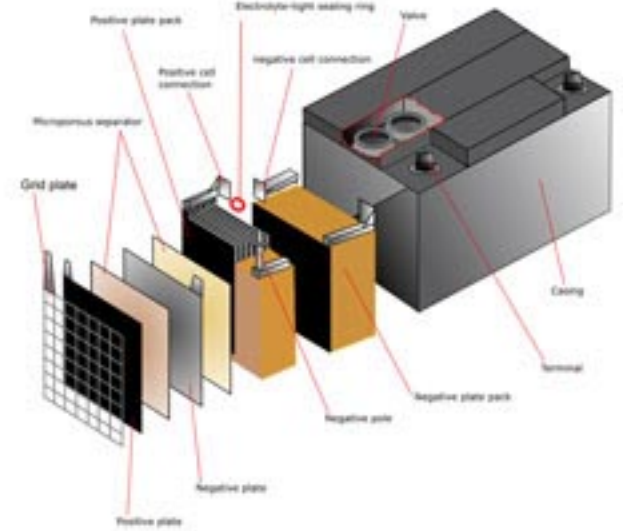
Our Engineering designs are developed on CAD/CAM software. Our fabrication shop follows ISO practices where quality is finally measured by experienced engineers.



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Process Flow Diagram

A process flow diagram for Lead Battery Recycling System

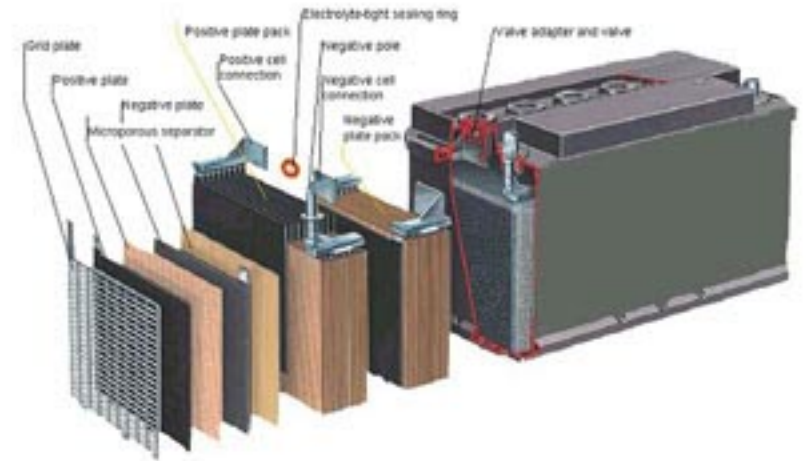


Secondary Lead Smelting Solutions

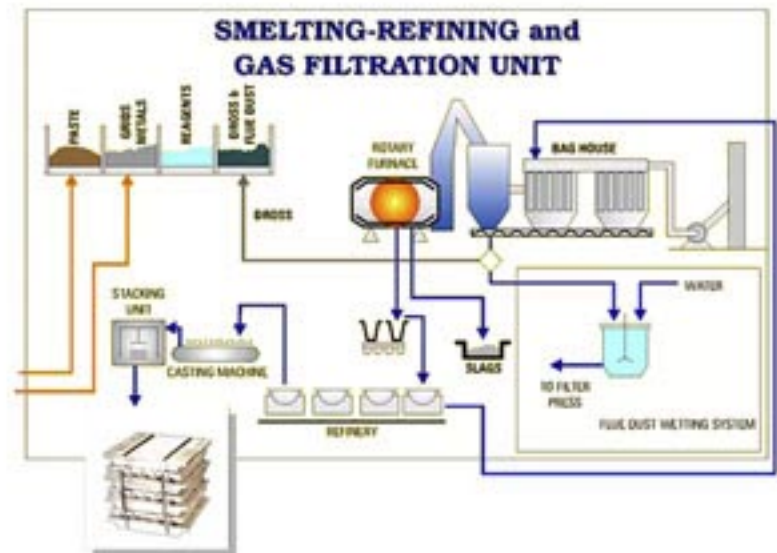
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Typical composition of Lead-Acid Battery Scrap

| Component by weight | Percent |
|-----------------------|------------|
| Metallic Lead | 35 |
| Lead sulphates/oxides | 40 |
| Plastic | 7 |
| Acid | 15 |
| Residuals | 3 |
| TOTAL | 100 |



Our smelting plants are fully integrated with pollution control modules and can be configured for a wide range of Battery Recycling Capacities.



Battery Storage/Stock Yard

Battery Cutting & Processing Section

Plastic Recovery Section

Smelting Section



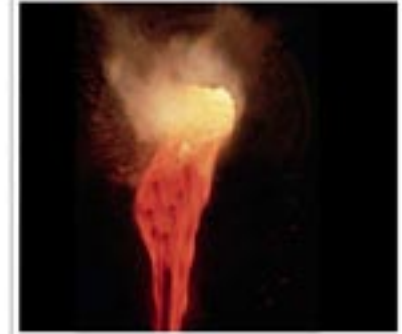
“ We have developed a special blast furnace through in house research. This furnace has low set-up and operating costs with low maintenance requirements while having production levels of up to 12 tonnes/day. In addition, the design and accessories employ environment-friendly technology. ”

Lead Refining and Alloying Solutions

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Lead Refining

Our Refining Plants use pyrometallurgical process to produce Pure Lead with a minimum purity level of 99.97% from furnace tapped crude Lead. We also provide additional equipment for automatic dross removal. The refining unit complement is completed by the automatic Lead ingot-casting machine (with Lead-Pump) having a production capacity of up to 15 tonnes/hr.



Lead Alloying

Gravita offer various Lead Alloys manufacturing processes & Cattle / Pots, which are of highest precision of desired Specification. Our strength lies in process to manufacture Lead-Calcium Alloy and Lead Selenium Alloy, which are used in grid casting for maintenance free & low maintenance Lead-Acid Battery manufacturing. We can also customise plant configuration and process inputs for producing any alloy compositions as desired.



“ For an overview of our entire range of available services from, feasibility studies to turnkey plants, retrofitting and modernisation of existing units for capacity expansion to pollution control reengineering, see our services & turnkey projects section. Contact Us with your requirements for a customised equipment, solutions and services package. ”

Pollution Control Solutions

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Air Lead Pollution Control



We provide the full range of services for air pollution control including consulting services, plant engineering and design, assembly and testing, system integration, commissioning, operations & maintenance and manpower training. We also undertake turnkey assignments.

For operational Lead Acid Battery Recycling and manufacturing units, we undertake diagnostic studies for identifying fugitive emissions, air pollution control plant deficiencies, putting in place of monitoring measures for plant and surrounding areas to ensure environmental control and, equipment recommendations, supply and integration.



Effluents and Solid Waste Management

We provide comprehensive services in layout, design, modification, process selection, and erection & commissioning supervision, for effluent treatment plants, with expert inputs on efficient conversion of liquid effluents to safely disposable / marketable forms.



“ Our plants are specifically designed to meet and exceed the relevant country’s environmental guidelines and standards. In addition, we provide suitable operating instructions and maintenance inputs. As a result, all our installations successfully meet the challenge of showing continuous environmental performance as per the design parameters. ”



Battery Scrap
Recycling Technology



Lead Refining / Alloying / Oxide
Manufacturing process



Plant & Machinery for
Battery Recycling



Turnkey Projects for Waste Battery Processing

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Our technology deployments combine environment-friendliness with flexibility and economical viability. Our integrated turnkey plant installations comprising of Secondary Lead Smelting, Refining and Alloying (Lead Oxide Manufacturing, if required) units, Pollution Control Plant and accessory equipment meet the complete needs of medium sized Used Battery Recycling units and manufacturing plants with guaranteed design performance. ”

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