

# LEAD SMELTING

The background image shows a worker in a dark protective suit and a clear face shield, standing in a smelting plant. In the foreground, a large ladle is pouring molten lead into a large container, creating a bright orange glow. The scene is filled with industrial equipment and a hazy atmosphere of smoke or steam.

## Project Introduction

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*AN ANNUAL OUTPUT OF 50000 TONS OF  
ELECTROLYTIC LEAD*

**XIANGTAN LUFENG MECHINERY CO.,LTD.**



# Electrolytic Lead Project



The grade of crude lead is generally only 95-98%, which also contains many impurities. The presence of these impurities can affect the properties of lead, such as increasing its hardness, reducing its ductility and corrosion resistance, making it unsuitable for industrial use. To this end, refining is necessary.



## Refining method

- This project adopts electrolytic refining
- Design capacity 50000t/a.

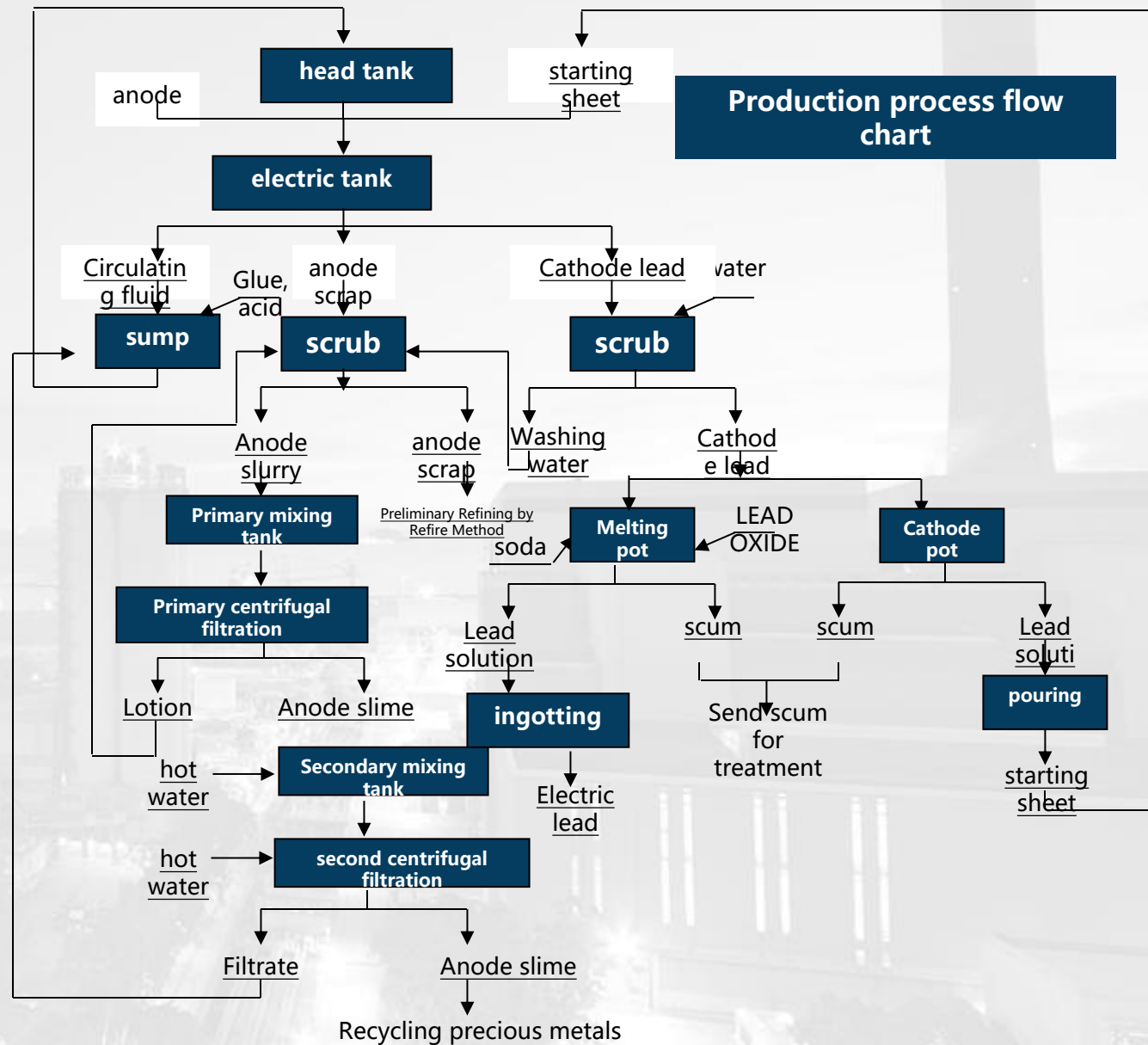
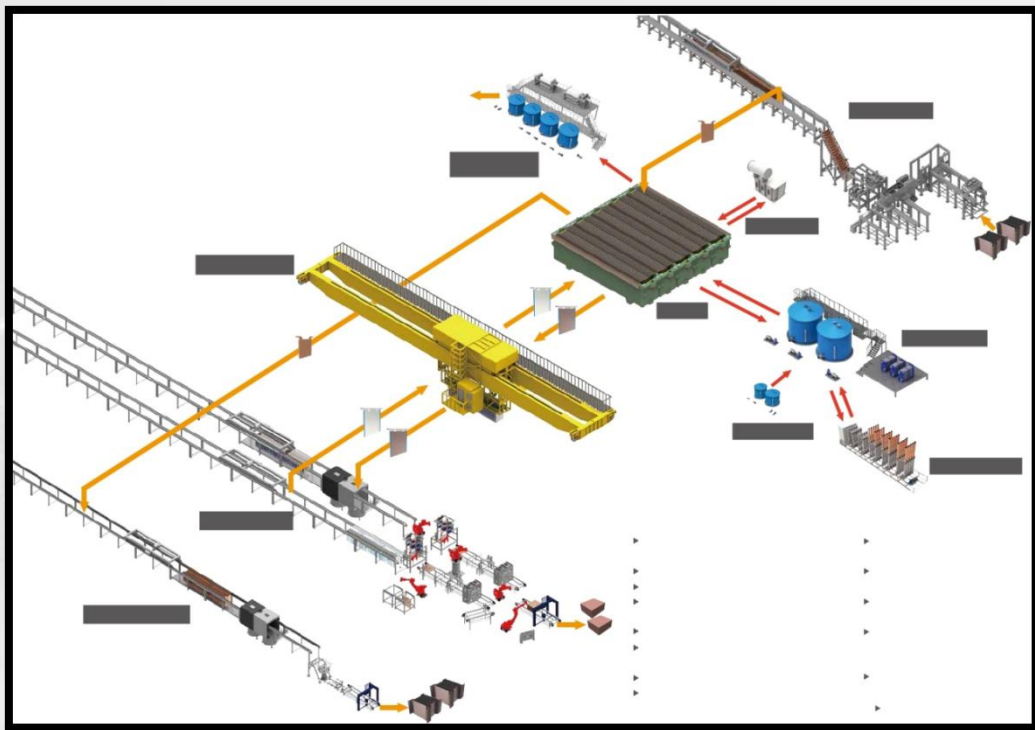
## The main characteristics of electrolytic refining

- Advantages: It can enrich bismuth and precious metals in anode mud, which is beneficial for recycling and treatment of coarse lead with high bismuth content. In addition, the working conditions are good,
- Disadvantages: More equipment used, high infrastructure investment, and high metal occupation.

# Electrolytic Lead Project



Electrolytic refining process flow and electrolytic lead production process flow





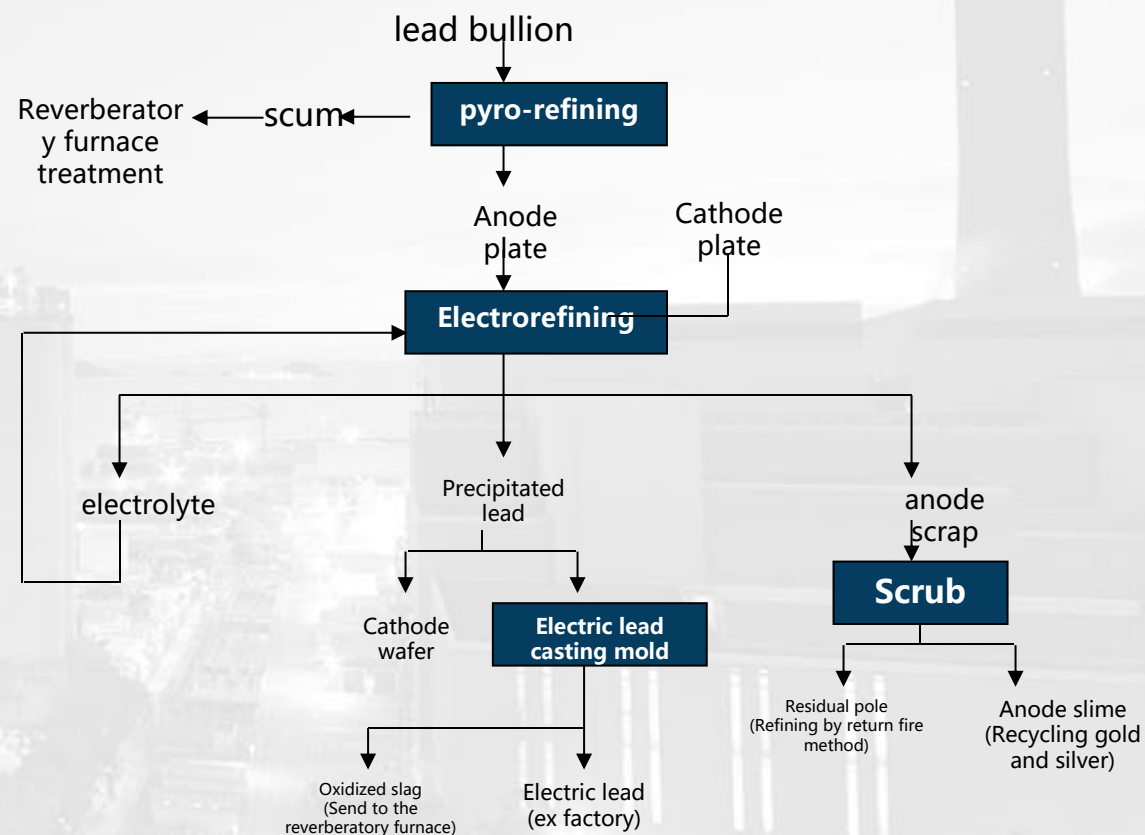
# Electrolytic Lead Project



Electrolytic refining process flow and electrolytic lead production process flow



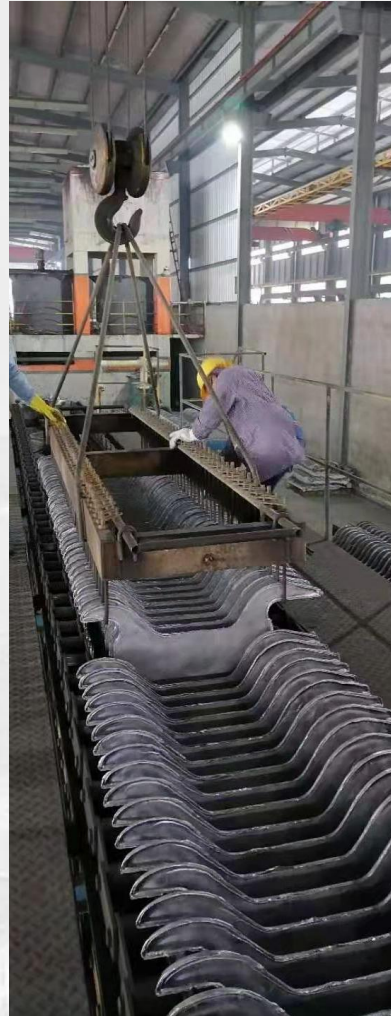
## Process Flow Diagram of Lead Electrolytic Refining



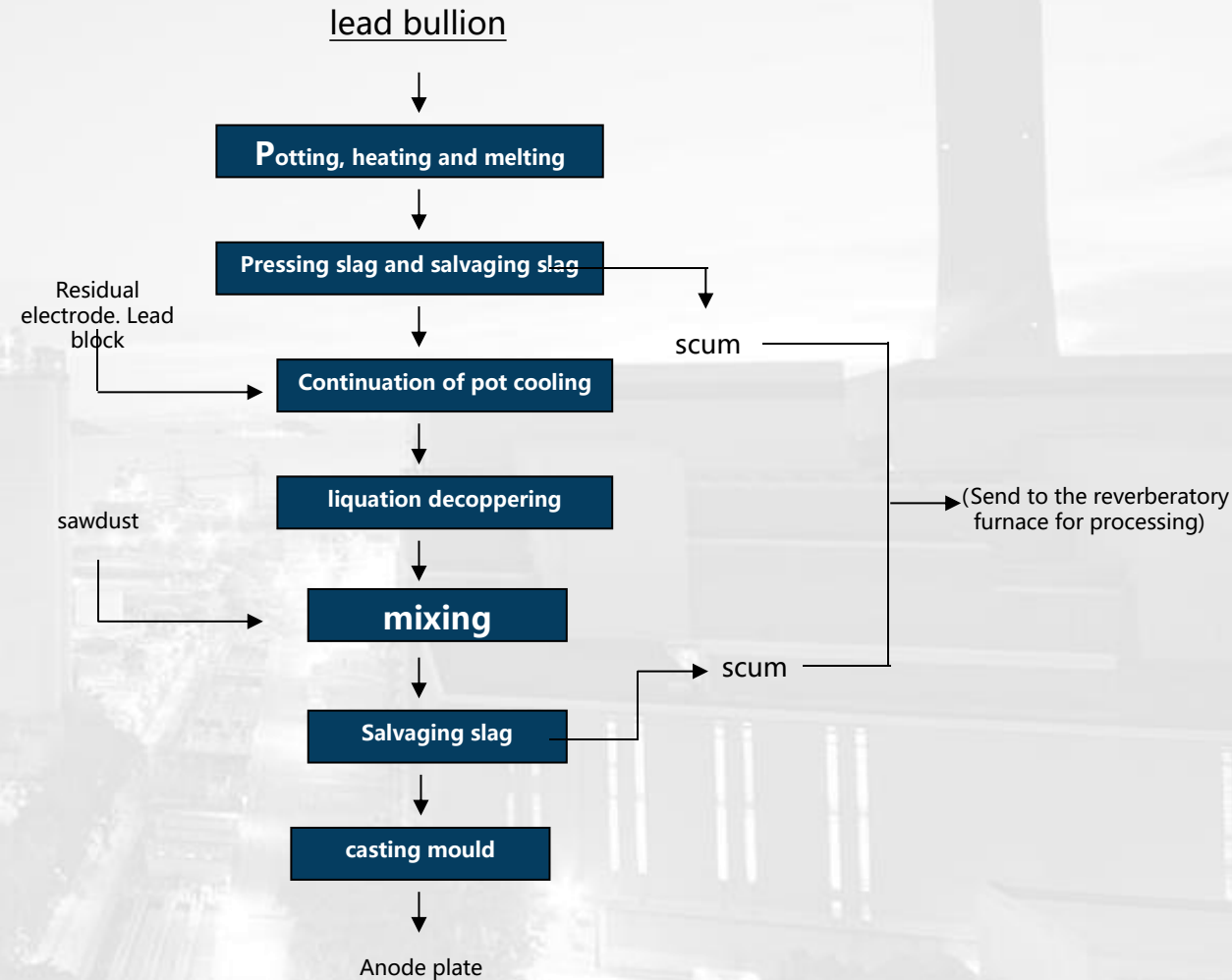
# Electrolytic Lead Project



Electrolytic refining process flow and electrolytic lead production process flow



## Anode manufacturing process flow





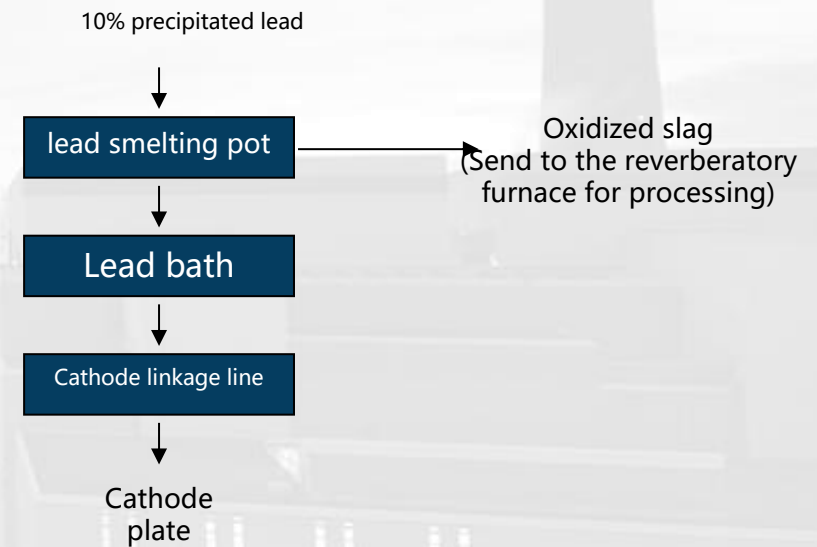
# Electrolytic Lead Project



Electrolytic refining process flow and electrolytic lead production process flow



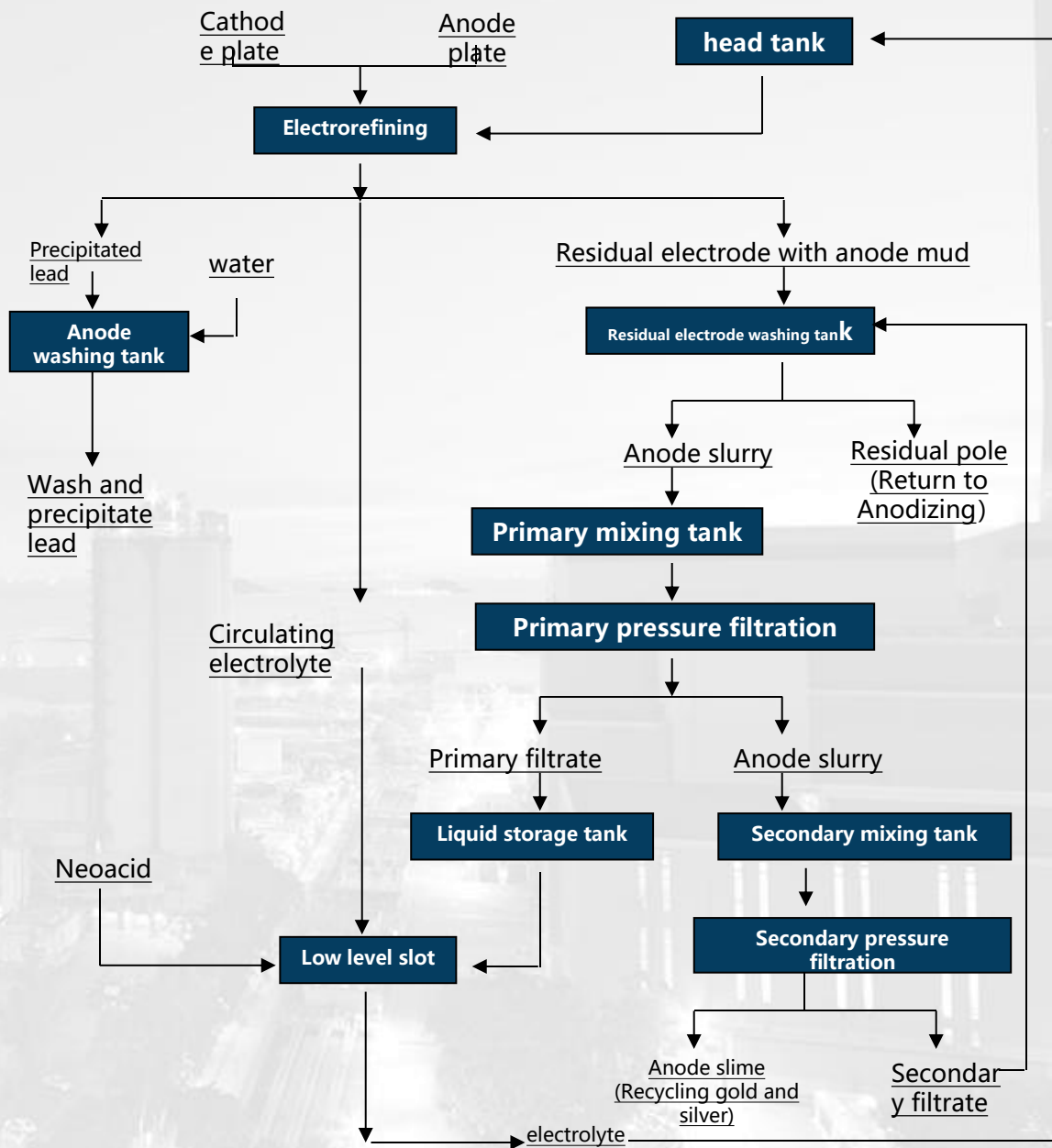
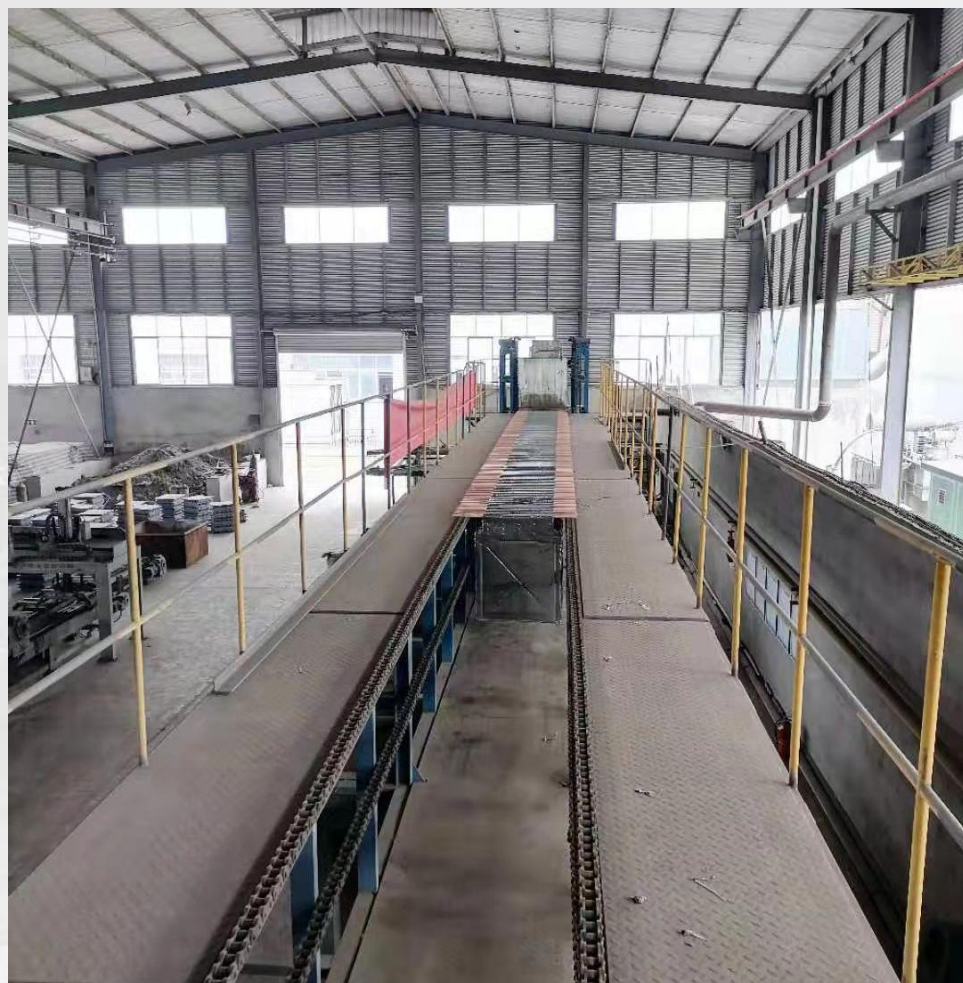
## Cathode production process flowchart



# Electrolytic Lead Project



Electrolytic refining process flow and electrolytic lead production process flow



Cathode production process flowchart



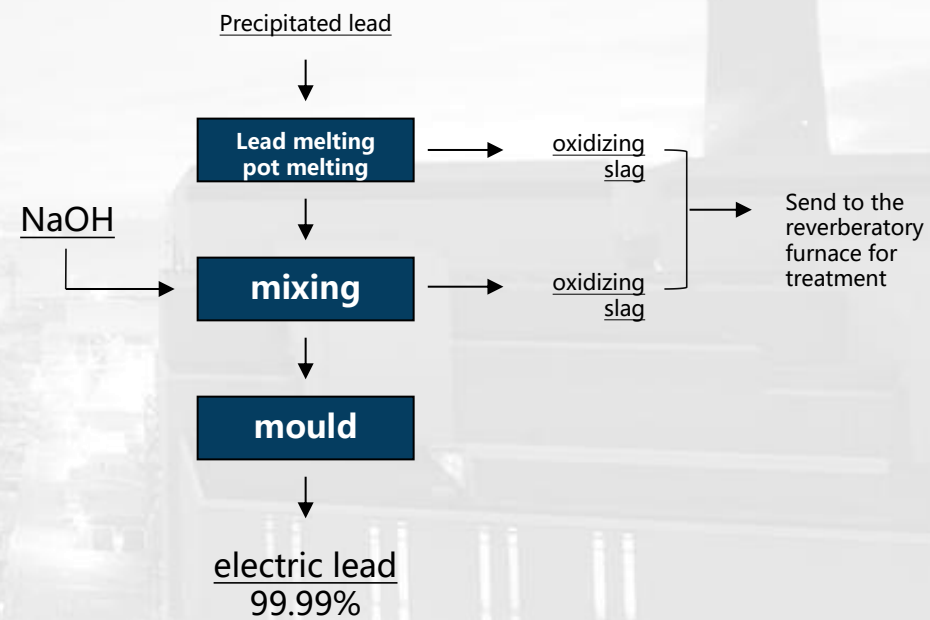
# Electrolytic Lead Project



Electrolytic refining process flow and electrolytic lead production process flow



## Process flow diagram of lead electrolysis process





# Electrolytic Lead Project



## List of electrolytic lead equipment

Indicator Name	number
low voltage distribution panel	1
Low voltage distribution panel	3
Power distribution control box	3
On site operation box	6
rectifier cabinet	2
Control cabinet	2
rectifier transformer	2
transformer	1
dc sensor	2
Computer monitoring system	2
Electric lead ingot casting machine	

Indicator Name	number
Anode linkage	1
Cathode linkage line	1
circulating pump	4
100t lead smelting pot	1
100t Electric lead pot	2
20t Cathode pot	1
Lead pump: 25-30t/h lift	10
Submerged Scraper Conveyor	4
5mmSoft plastic board without adding calcium sulfate and plastic piping	6000m <sup>2</sup>
5t Driving double frame and double hook	4
100m <sup>2</sup> High pressure polyethylene filter press	2

Indicator Name	number
Anode washing machine	2
2000m <sup>2</sup> Pulse bag dust collector	3
2700m <sup>2</sup> Pulse bag dust collector	1
Desulfurization tower system	3
12.5m <sup>2</sup> Scum reverberatory furnace	1
900m <sup>2</sup> condenser	1
φ6700mmCoarse lead casting machine	1
1000kg/次 elevator	1
12.5m <sup>2</sup> Dust collection system for reverberatory furnace position	1

# Recycling of waste lead acid Battery regeneration lead project



|Sawing machine disassembly | Reflex furnace  
melting | Fire refining | Tail gas treatment |  
Experimental equipment | Auxiliary equipment|

PROJECT



# Recycling of waste Lead–acid battery and lead regeneration project



The waste Lead–acid battery is recycled to 99.99% refined lead. The specific process flow is that 99.99% refined lead is obtained from waste Lead–acid battery through sawing, reverberatory furnace smelting and pyrorefining. In order to meet local environmental requirements, corresponding dust collection, desulfurization, and sewage treatment equipment need to be equipped. XXX provides equipment and solutions.



## Fuel and reducing agent

- Pulverized coal and heavy oil
- natural gas

## product

Fire method lead ingots are called 'Lead Ingots'  
(GB/T469-2013) 2 # lead ingot, with a lead content of over 99.99%

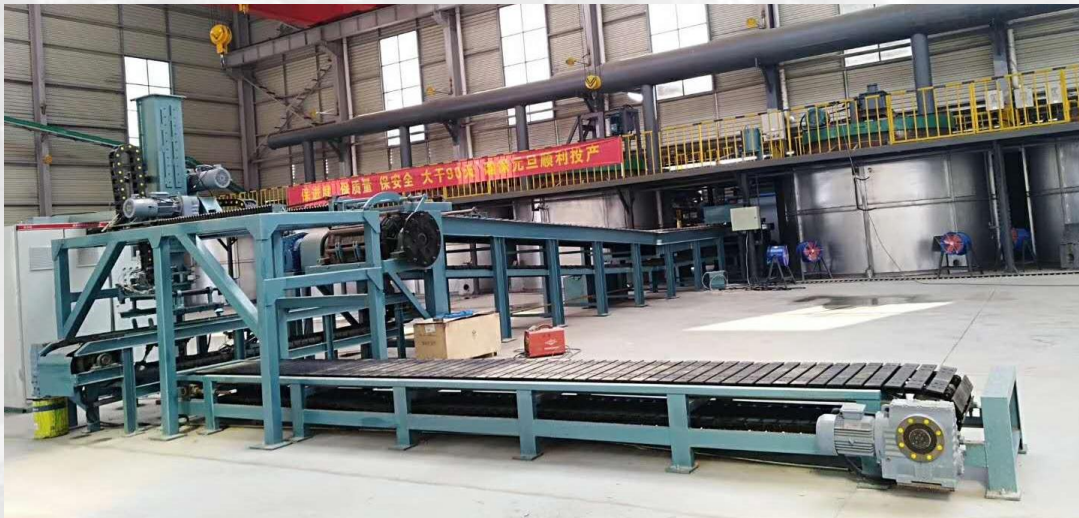




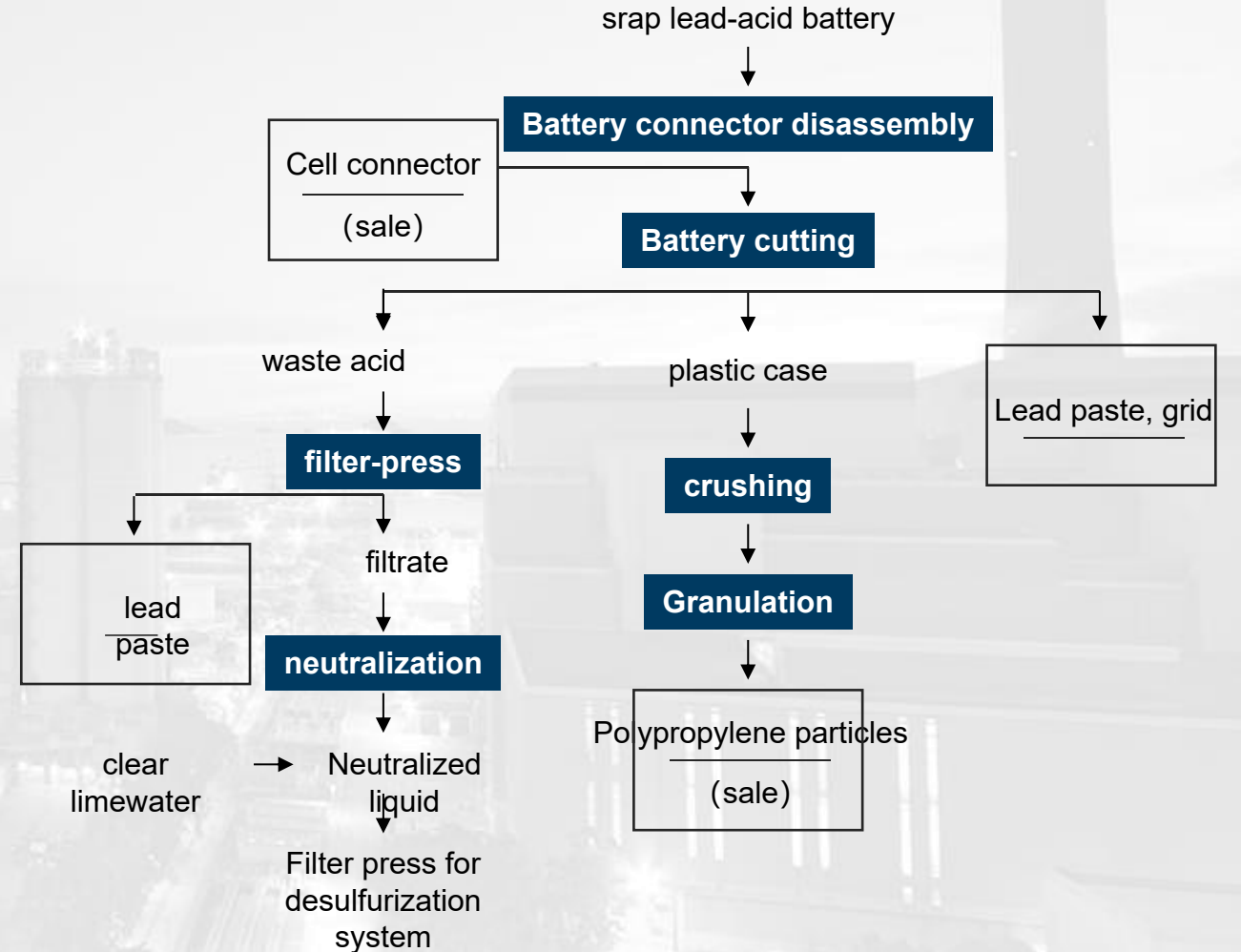
# Recycling of waste Lead–acid battery and lead regeneration project



## Crushing process of waste Lead–acid battery



## Crushing process flow of waste Lead–acid battery



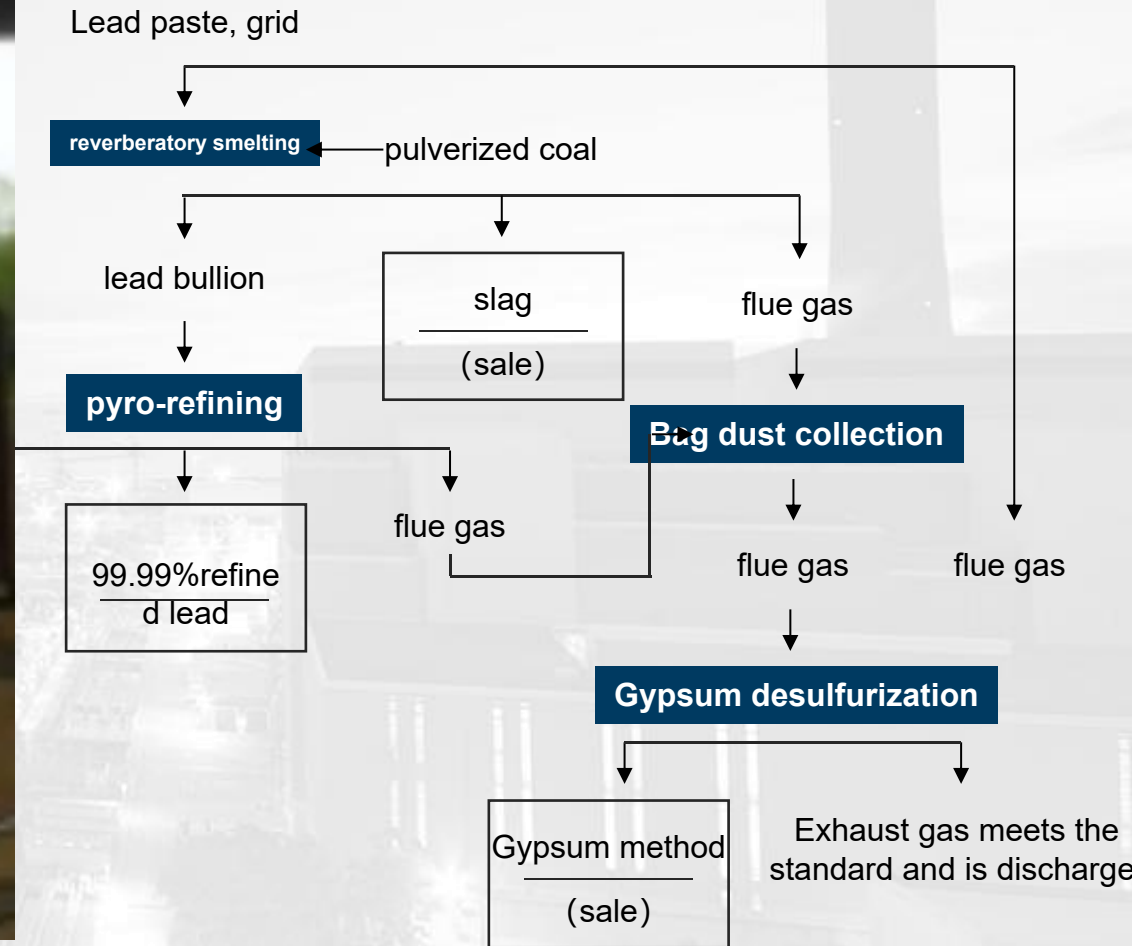
# Recycling of waste lead-acid batteries and regeneration of lead project



## Reflex Furnace Melting Process



## Crushing process flow of waste Lead-acid battery

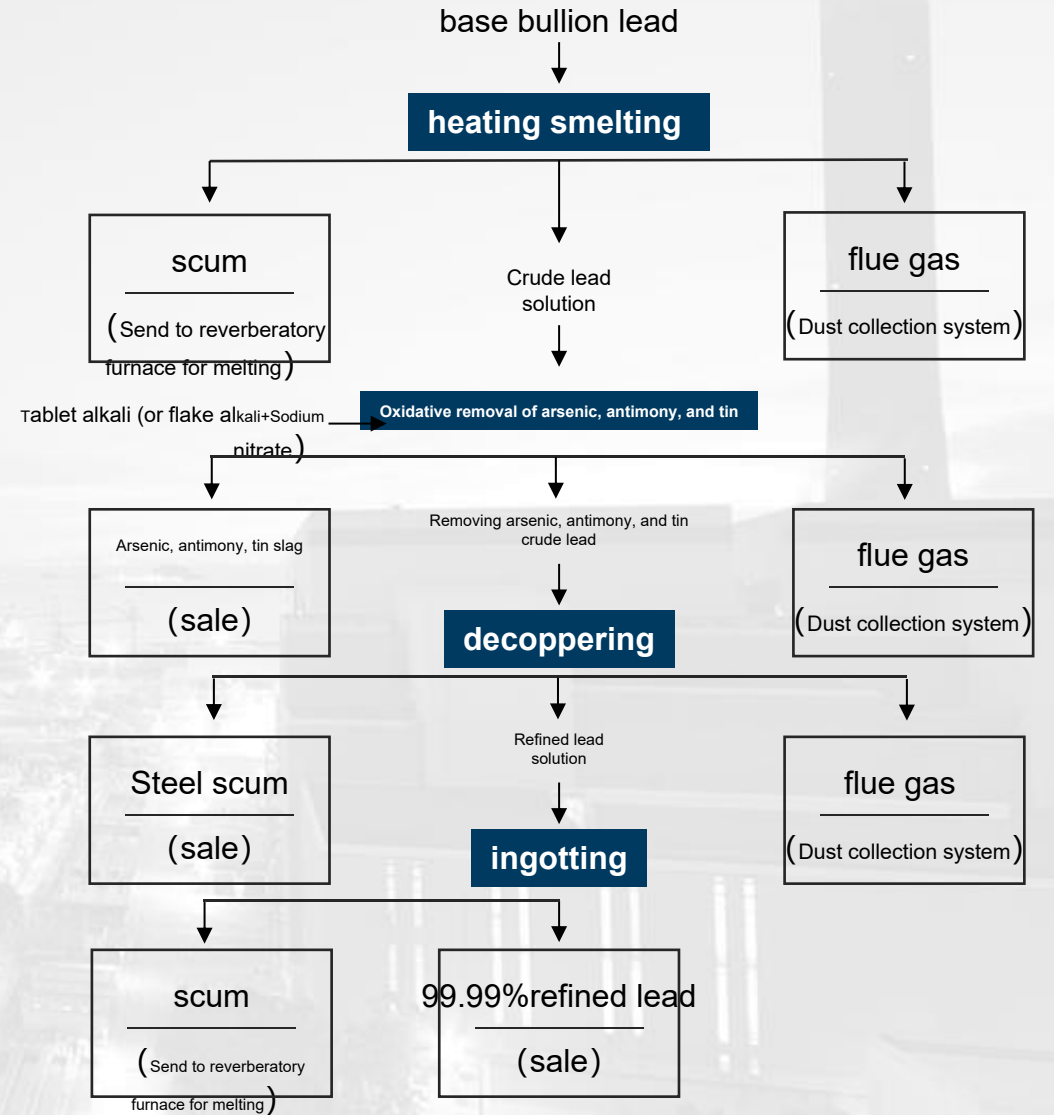




# Recycling of waste Lead–acid battery and lead regeneration project



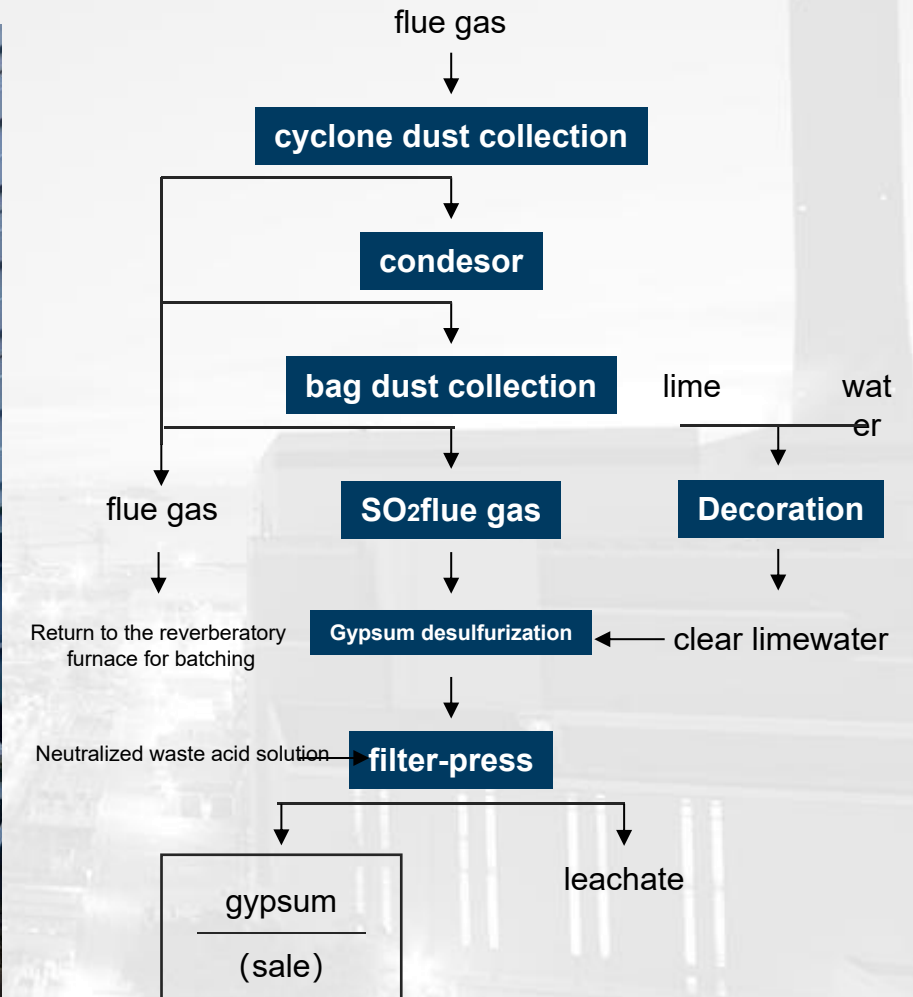
## pyro-refining



# Recycling of waste Lead–acid battery and lead regeneration project



## Flue gas treatment (dust collection and desulfurization)





# Recycling of waste Lead–acid battery and lead regeneration project



## Battery crushing equipment list

Name	Number
Battery waste loading machine	1
Battery cutting machine	2
plastic crusher	1
Polypropylene granulator	1
Waste acid collection tank	1
Waste acid pump	2
filter press	1
Filtrate collection tank	1
Filtrate pump	2
Battery waste loading machine	1
Neutralization tank	1
mixer	1
water pump	2
Power distribution and control system	1
operating platform	

## List of Reflex Furnace Melting Equipment

Name	Number
reverberatory furnace	1
Heavy oil combustion system	
Heavy oil supply system	
Oil heating and processing equipment	
pig moulding machine	
Post dust collection induced draft fan	
Post dust collection hood and pipeline	
operating platform	

## List of Fire Refining Equipment

Name	Number
Refining furnace	2
Ingot Cast Machine	1
crane	1
Lead pump	2
lead mixer	2
Bag dust collector	1
Washing tower	1
Induced draft fan	1
Post dust collection hood and pipeline	
Power distribution and control system	1
operating platform	1

# Recycling of waste Lead–acid battery and lead regeneration project



## List of dust collection and desulfurization equipment

Name	Number
cyclone dust collection	1
bag dust collection	1
condensor	1
Post dust collection	1
Centrifugal induced draft fan	1
Desulfurization system	1
mixer	1
water pump	4
recycle pump	4
filter press	1
Chimney and dust collection pipeline	1
Lime slurry tank	1
Clarification tank	1
Power distribution and control system	1
operating platform	1

## Auxiliary equipment list

Name	Number
sewage-treatment plant	1
weighbridge	1
Laboratory equipment	1
diesel generator	1
Wheel loader	1
forklift	1
Pickup truck	1



# Supporting equipment



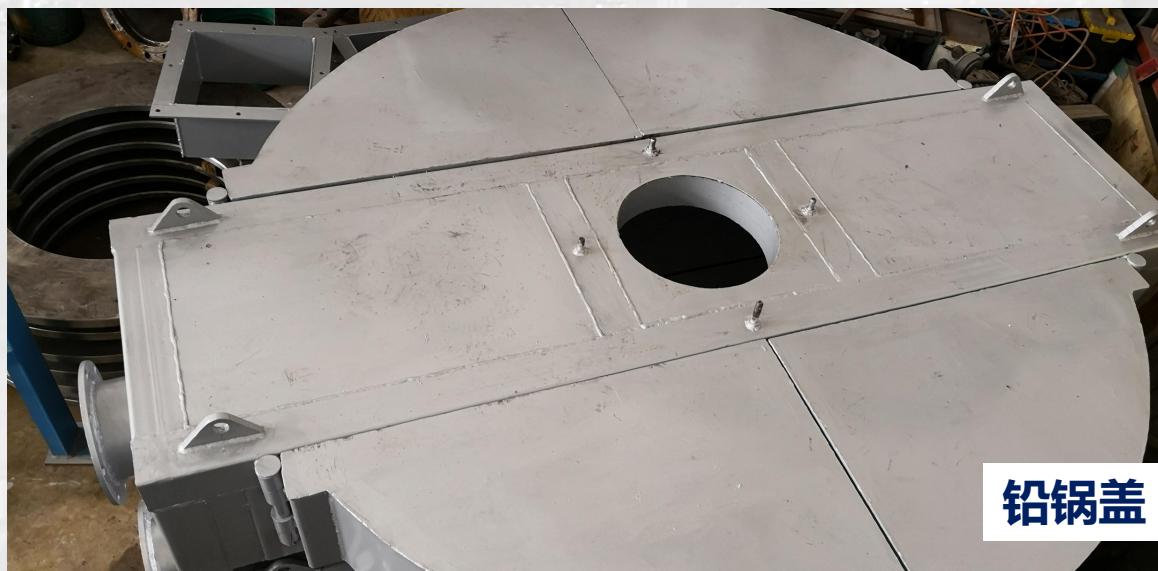
铅锅



搅拌装置



铅泵



铅锅盖



光棒机



A worker in a dark industrial setting, wearing a hard hat and protective gear, is pouring molten metal from a ladle. The scene is illuminated by the bright orange and yellow glow of the molten metal, creating a dramatic contrast with the dark background. The worker is positioned on the left side of the frame, and the ladle is on the right, pouring the metal into a container. The overall atmosphere is one of intense industrial activity.

# Thank you for watching!

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