

**Port Kembla Copper Refinery and Smelter  
Modernized in 2000**

**Operated for three years and then shut down for lack of  
feed**

**Furukawa Mining has decided to liquidate**

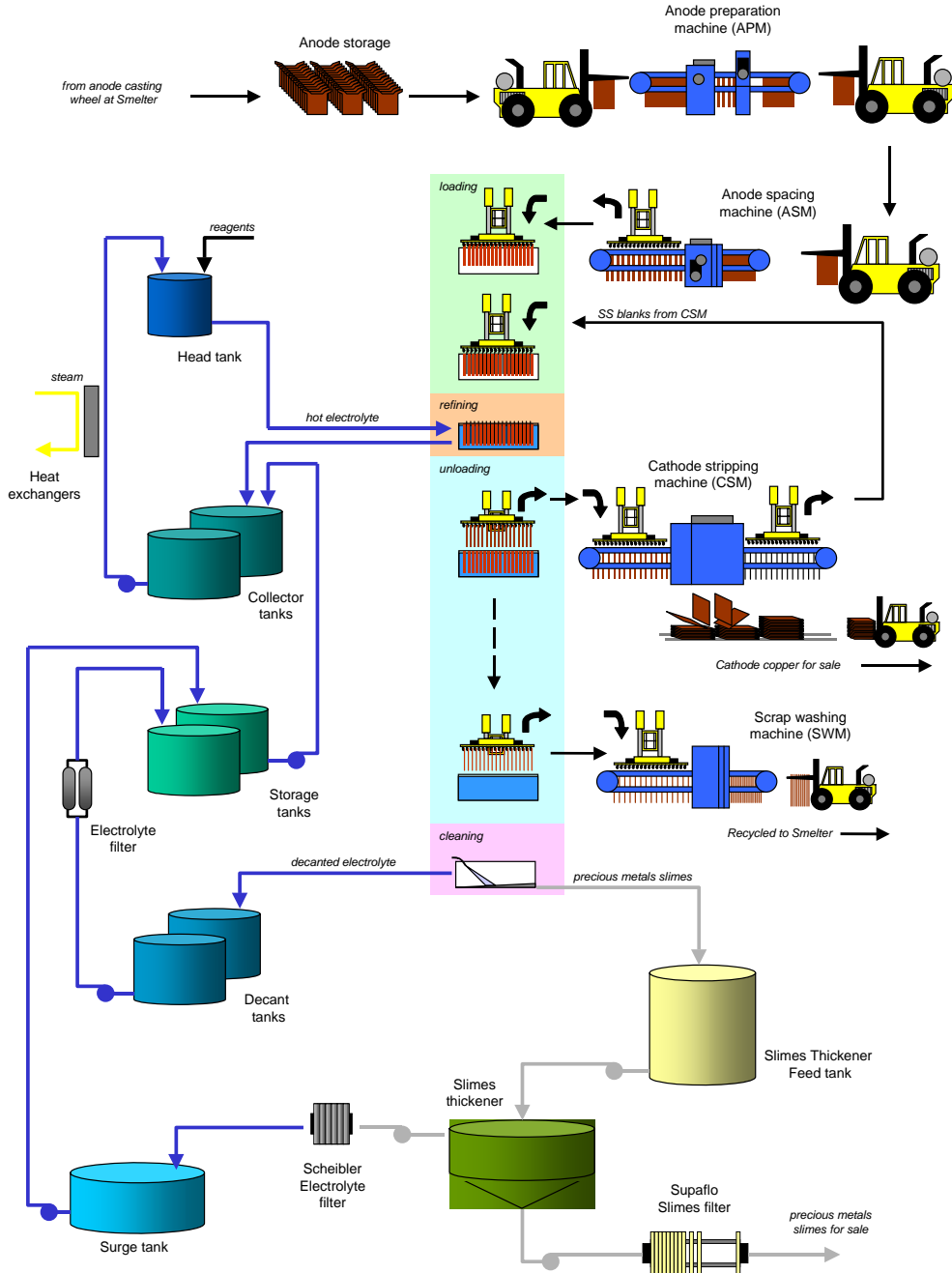
**PI International is Marketing the Assets for relocation**



# Refinery Equipment

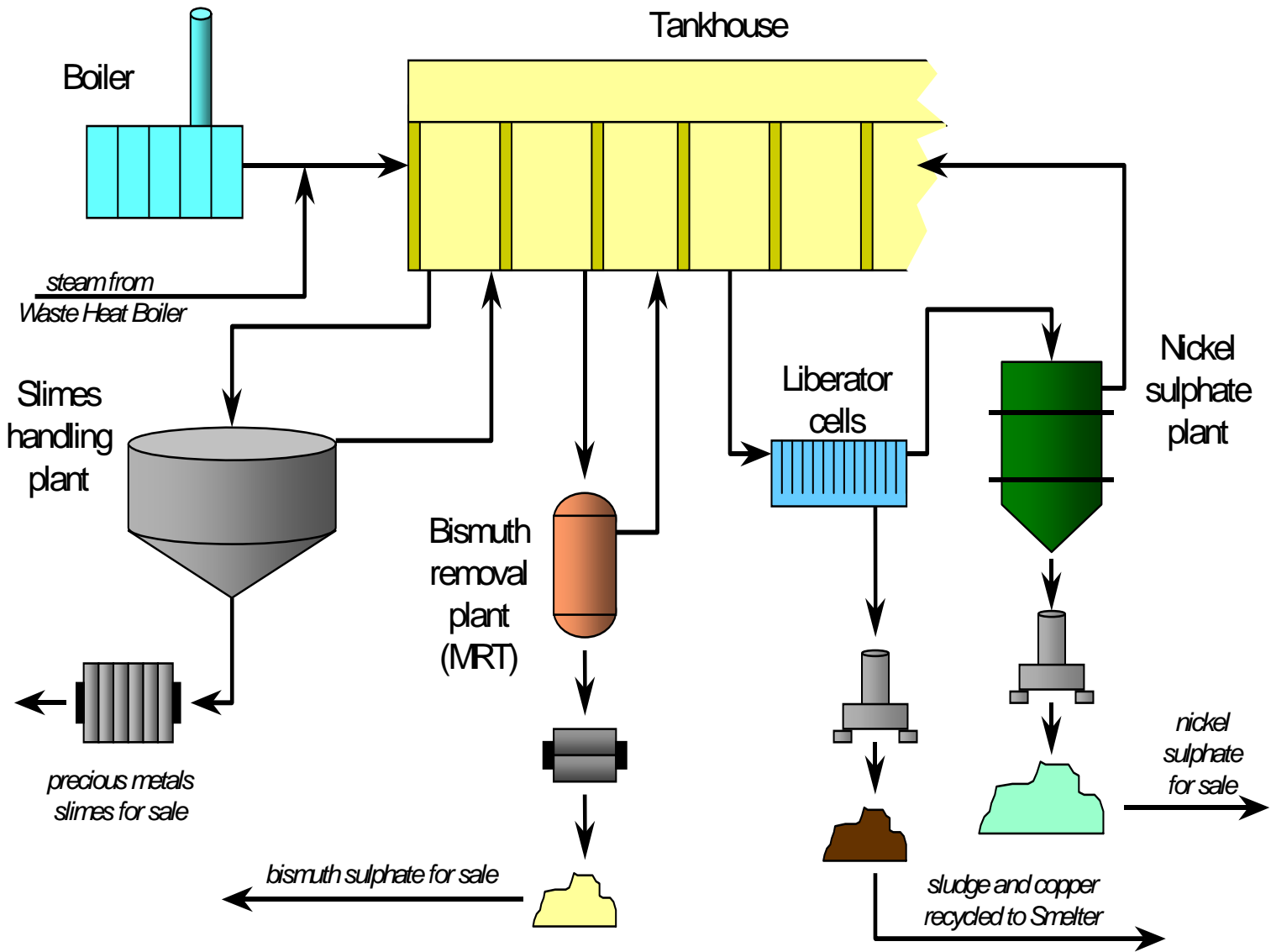
**Anode Preparation**  
**Anode Spacing**  
**Cranes**  
**Commercial Cells**  
**Electrolyte Circulation**  
**DC Power System**  
**Cathode Stripping Machine**  
**Scrap Anode Washing Machine**  
**Slimes Collection**  
**Liberator Cells and Equipment**  
**Bismuth Plant**





Port  
Kembla

# Refinery Process Flow Sheet



# Anode Preparation Machine

WENMEC ---

Capacity --- 250 Anodes/ hr

Machine Cycle time 14.4 sec

Includes:

Lug Milling

Body Press

Weighing

Reject Station



## Anode Spacing Machine

MESCO ---

Capacity --- 450- Anodes/ hr

Machine Cycle time - 8 sec



# Commercial Cranes

Evans Deakins

2 ea

9.5 Tons

Automatic

Air Conditioned Cab

Drip Tray

1 T Auxiliary Hoist

90 degree Swivel Bale

Laser Positioning System



## Commercial Cells

Polymer Concrete 468

Manufactured by CTI

Inside dimensions

5470 X 1150 X 1328-1435mm

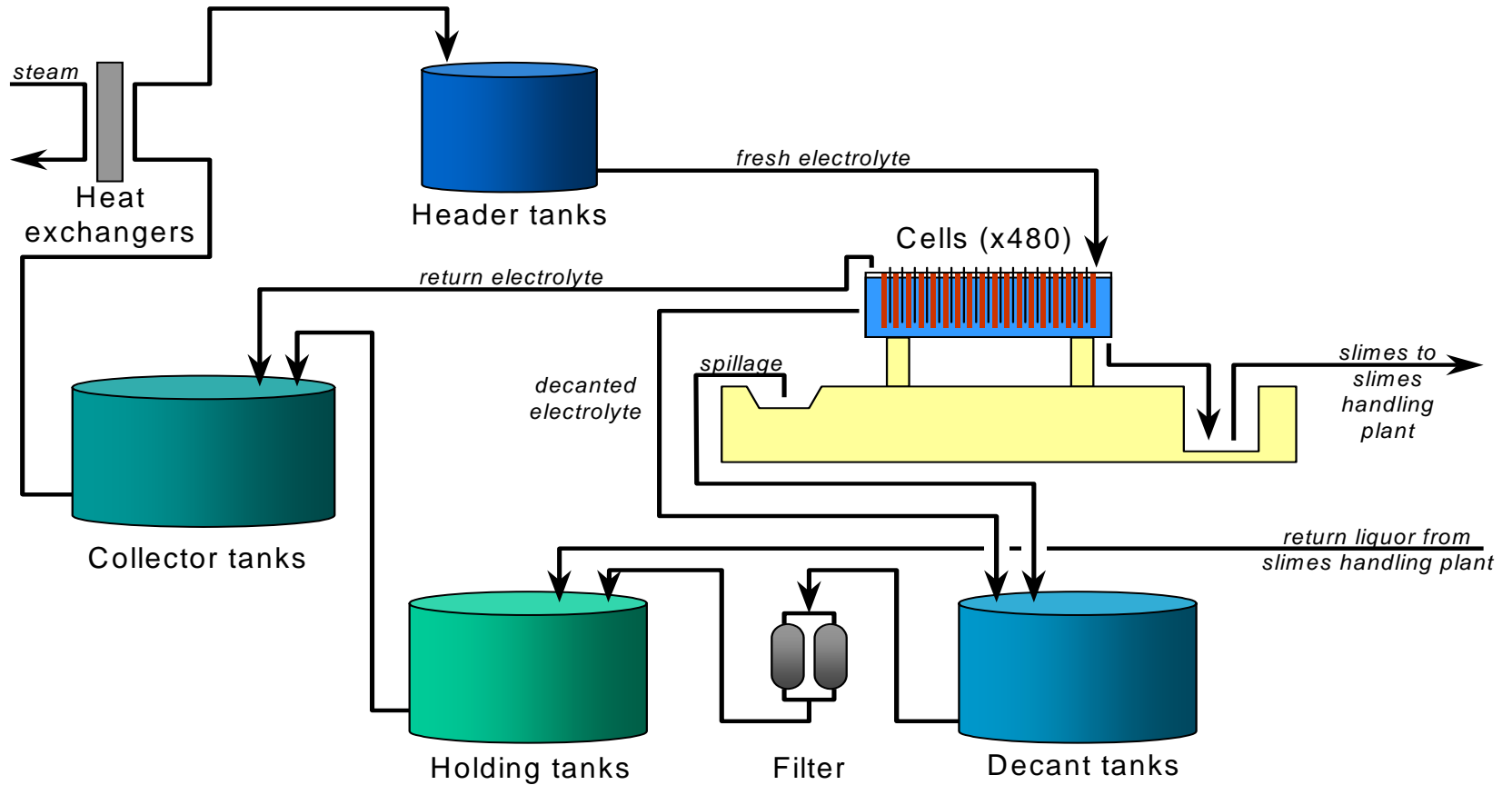
Decant 75% Volume

Contain 52 SS Cathodes 53 Anodes

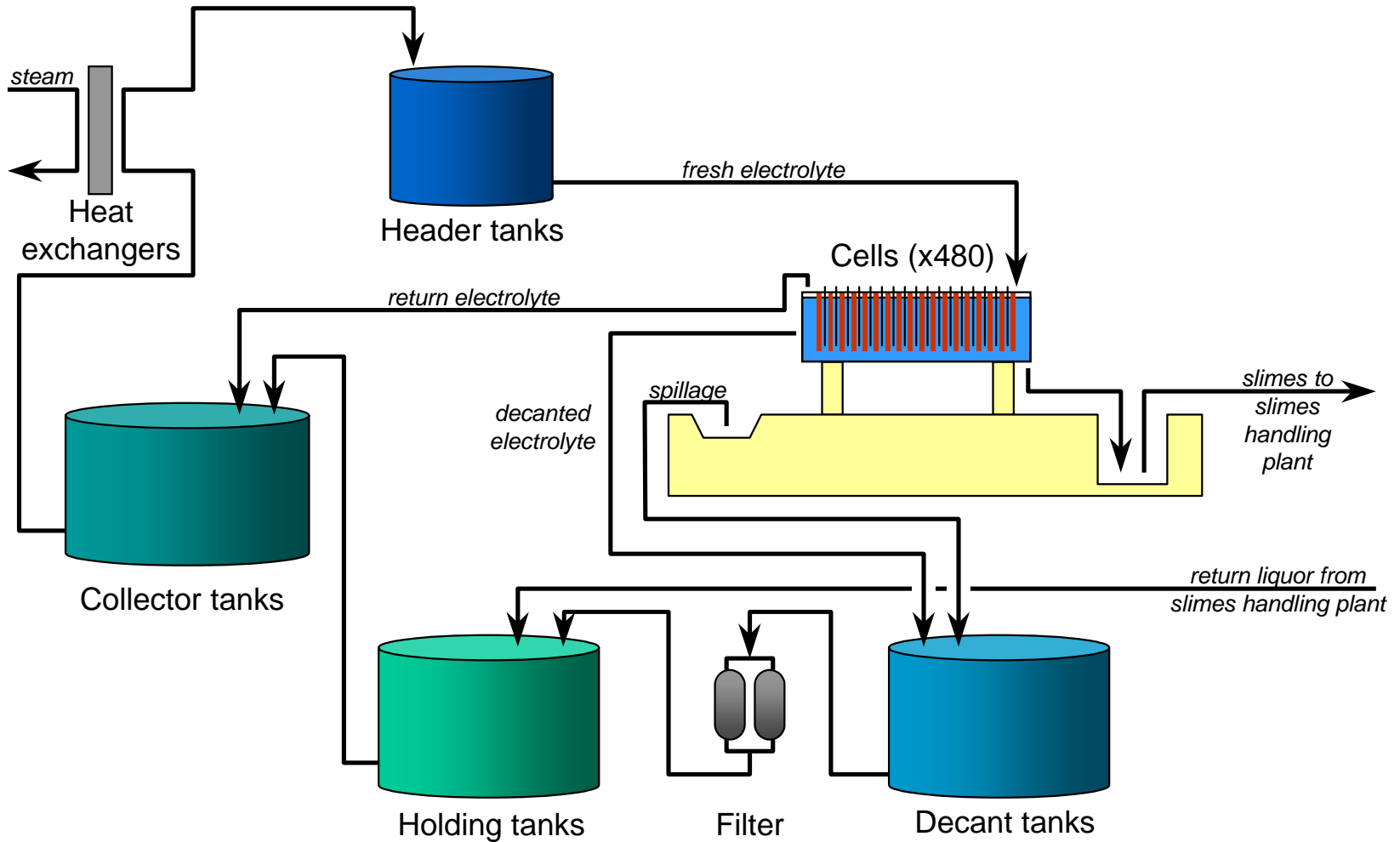
100 mm spacing



- Electrolyte Circulation System



# Electrolyte Circulation



# • Electrolyte Circulation

## Major Components

Collection Tank --- 35 m<sup>3</sup>

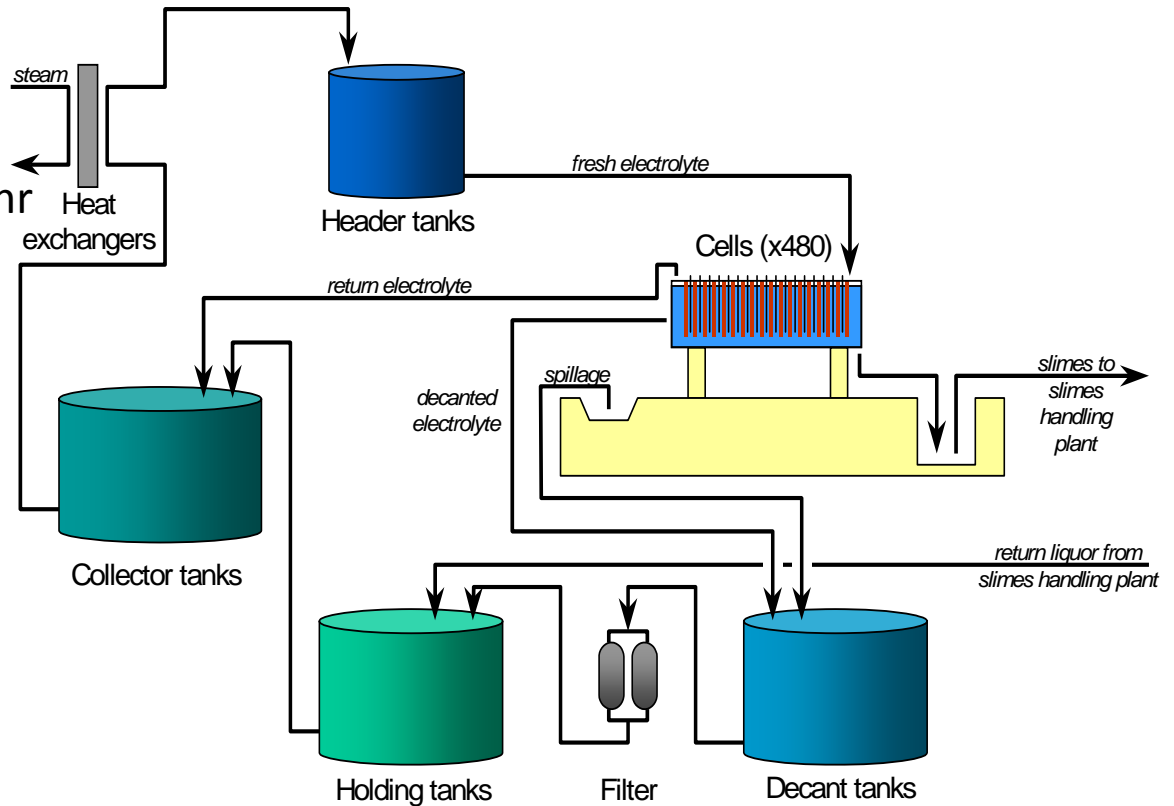
Circulation Pump 6.8 m<sup>3</sup>/hr

Heat Exchanger

Head Tanks 2 at 14.4 m<sup>3</sup>

Filtration -- Scheibler

Control System

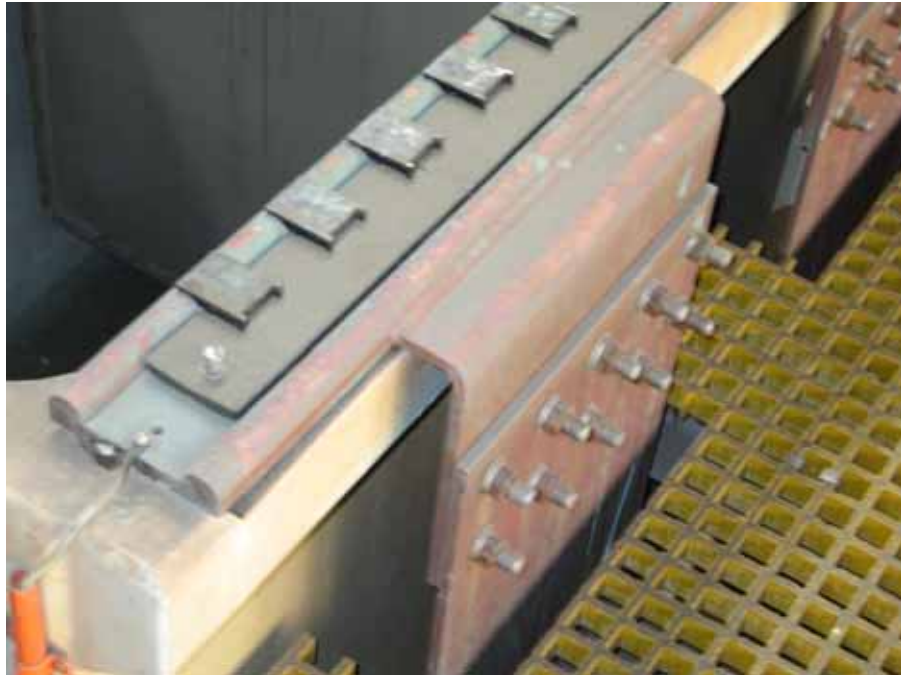


## Bus Bar

Copper Leaves

Vacuum Switches for Section  
Isolation

--- Remote operation



## Power Supply

Rectifier

Manufactured by Fuji -

33000 ADC - 220 V

Rectifier - DI Water Cooled

Rectifier --- Oil Cooled by Sea  
Water



# Cathode Stripping Machine

MESCO --

Capacity 250 Plates /Hr

Includes:

Washing  
Flexing  
Stripping  
Sampling  
Weighing  
Strapping



## Anode Scrap Washing Machine

WENMEC ---

Capacity --- 250 Anodes/ hr

Includes slimes transfer

Condensate used for washing

Closed Packed for transporting



## Slimes Collection

Collection tanks with Agitation  
Thickener

Automated Process

Dewatering Filter Press

10% Moisture Cake



## Cathodes

ISA Process Stainless Steel

22,746 Including Spares

Stainless Steel Hanger Bar for  
Maximum Strength

Copper Plated For Lower  
Conductivity



# Liberators

## Three Systems

Primary ---

8 cells

53 Lead anodes/cell

52 SS Cathodes

Spacing 100mm

Rectifier --- Commercial

Secondary

12 cells – Apx half size

26 lead Anodes

26 SS Cathodes

Cells hooded and exhausted

Tertiary

18 cells

Apx half size of commercial

26 lead anodes/ cell

26 SS cathodes/cell

Cells Hooded and exhausted

Rectifier – 187V 13.2 KA PRC



# Bismuth Plant

IBC - (MRT)

Molecular Recognition Technology

19 Ton/yr at 0.2 grams/liter Bi



# Smelter Equipment

**Acid Plant**  
**Noranda Reactor**  
**Ladle Transfer System**  
**Holding Furnace**  
**Mitsubishi Converter**  
**2 Anode Furnaces**  
**24 Mould Casting Wheel**  
**Feeding and accessory equipment**

