

Desulphurization System for Zinc Smelter Plant

# Desulphurization System of Zinc Oxide Method

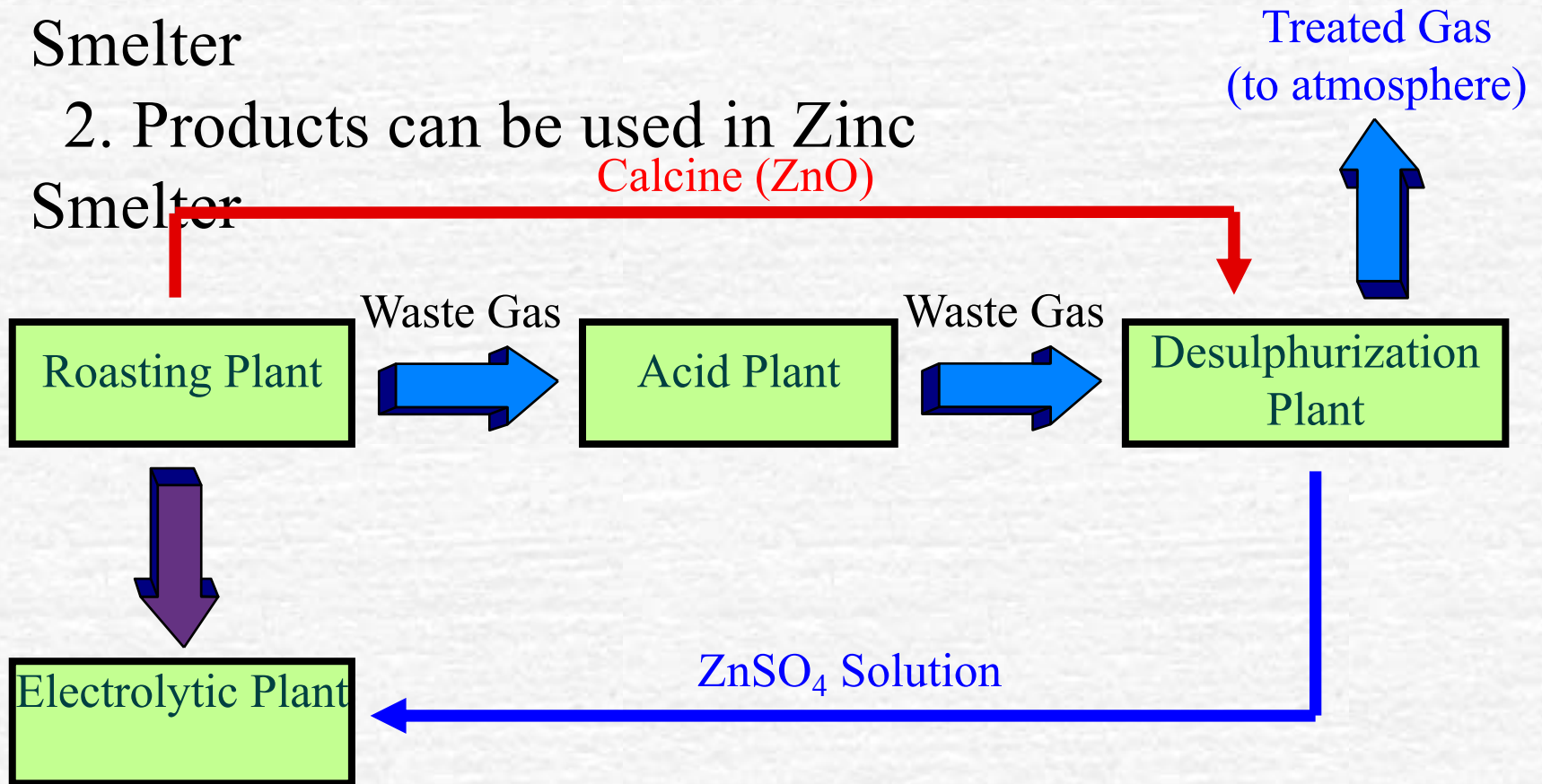
**MESCO, Inc.**

# Feature of Zinc Oxide Method

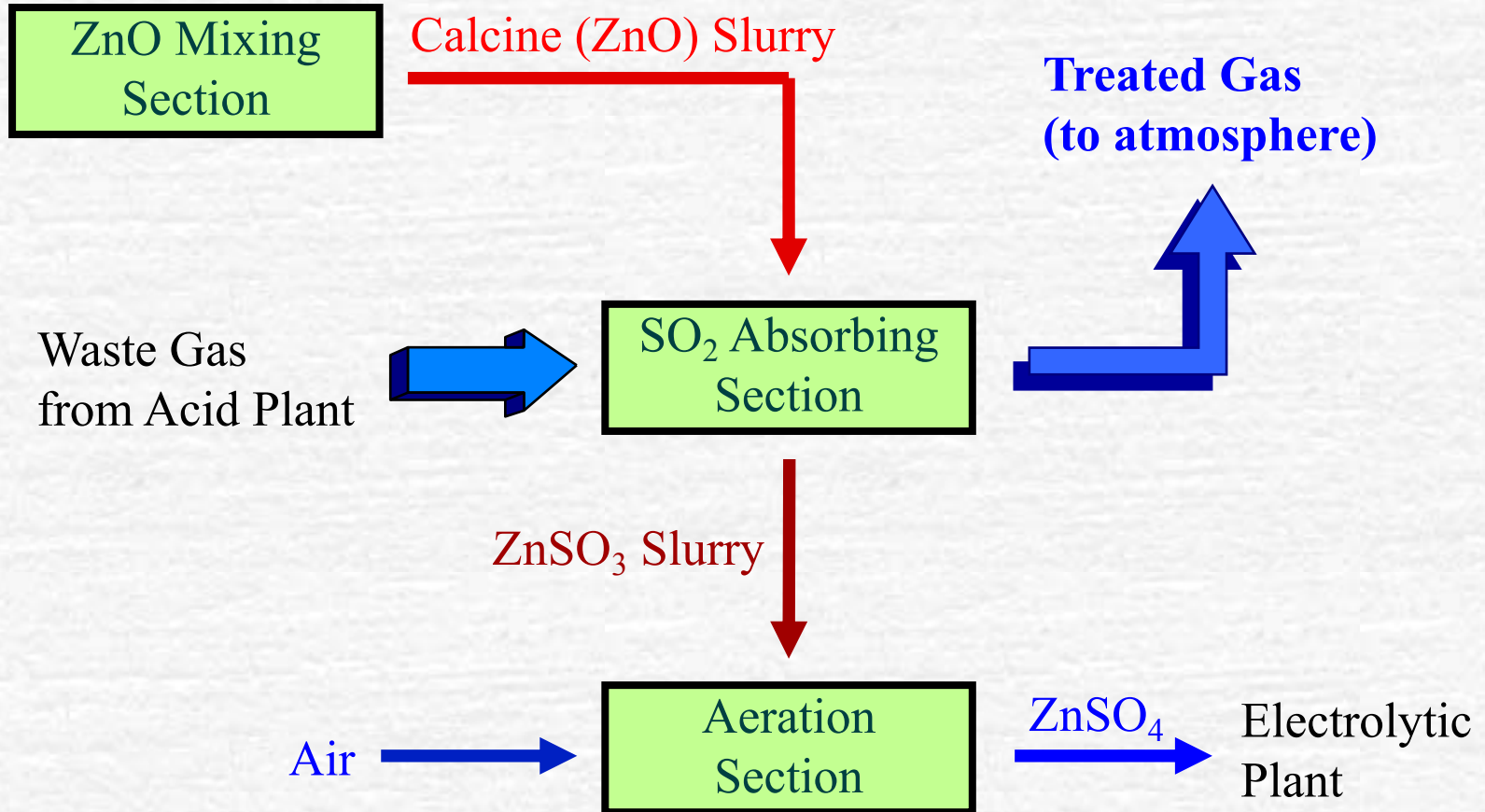
A closed system in Zinc Smelter

1. Materials can be produced in Zinc Smelter

2. Products can be used in Zinc Smelter



# Desulphurization Plant



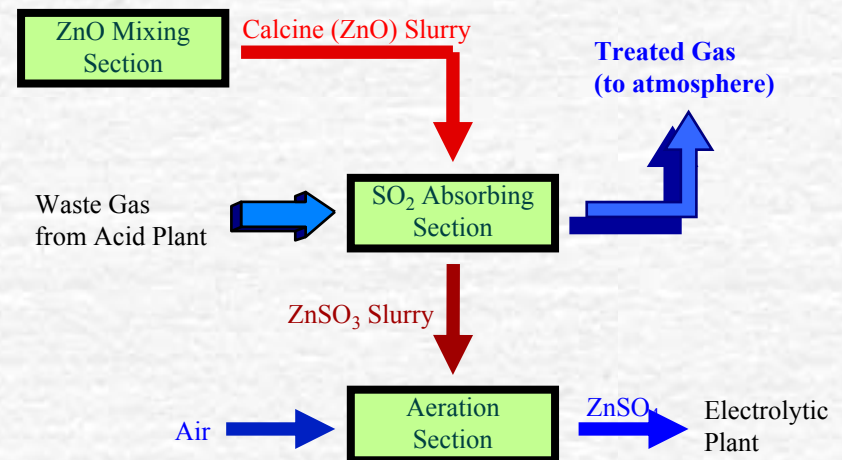
# Reaction in Desulphurization Plant

## Absorption

- (Main)
- $\text{ZnO} + \text{SO}_2 + 2.5\text{H}_2\text{O} = \text{ZnSO}_3 \cdot 2.5\text{H}_2\text{O}$

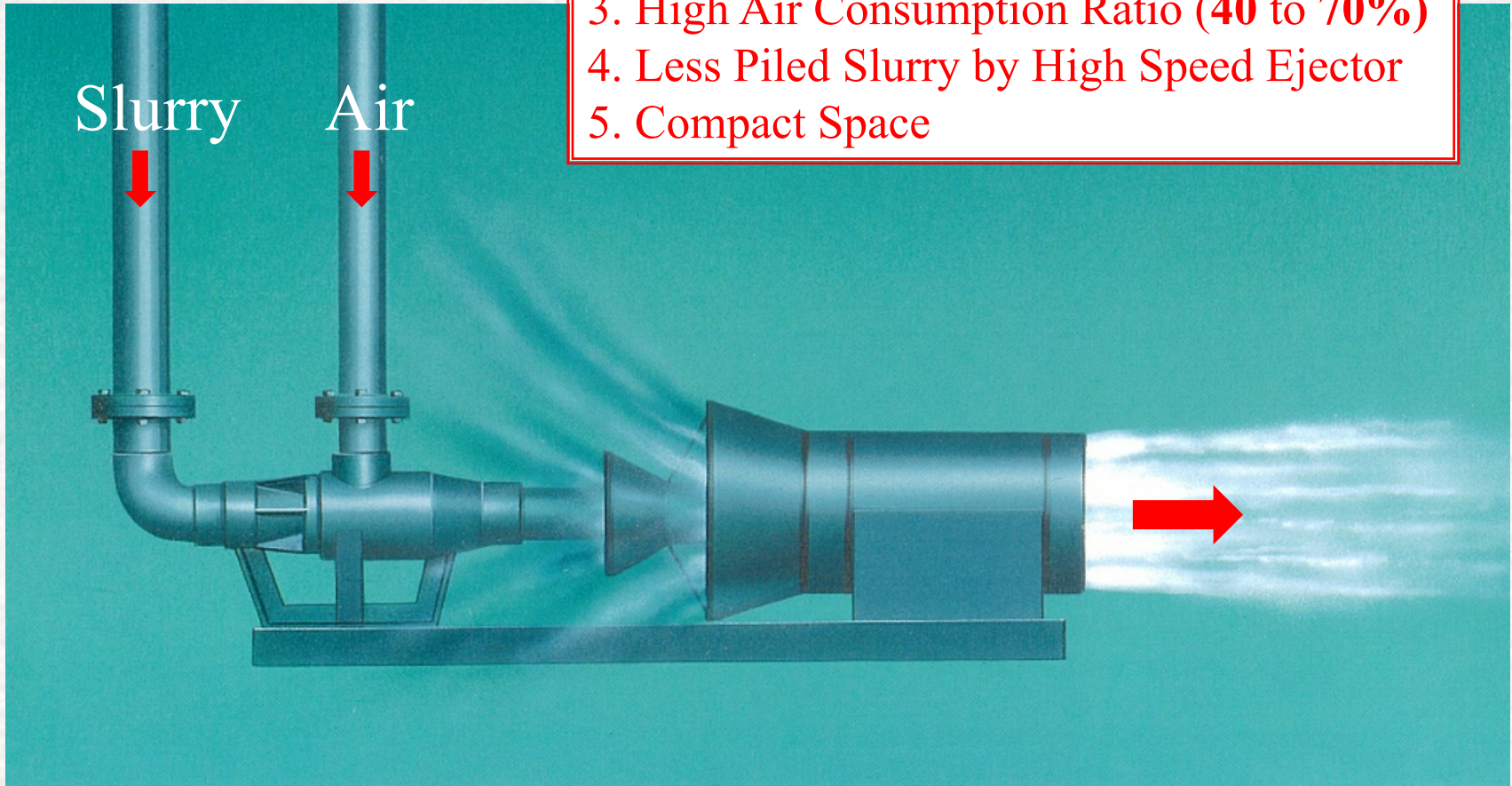
## Aeration Method

- $\text{ZnSO}_3 \cdot 2.5\text{H}_2\text{O} + \text{O}_2 = \text{ZnSO}_4 + 2.5\text{H}_2\text{O}$



# Feature of Special Aerator

1. Not Clogging → Maintenance Free
2. Less Power
3. High Air Consumption Ratio (**40 to 70%**)
4. Less Piled Slurry by High Speed Ejector
5. Compact Space



# Result 1



## Hikoshima Smelter

Over 50 years

SO<sub>2</sub> Gas Volume: 26,000 Nm<sup>3</sup>/h

SO<sub>2</sub> Density: 3,000 ppm



## Vizag Smelter in India

From 1991

SO<sub>2</sub> Gas Volume: 30,000Nm<sup>3</sup>/h

SO<sub>2</sub> Density: 3,500 ppm

# Result 2

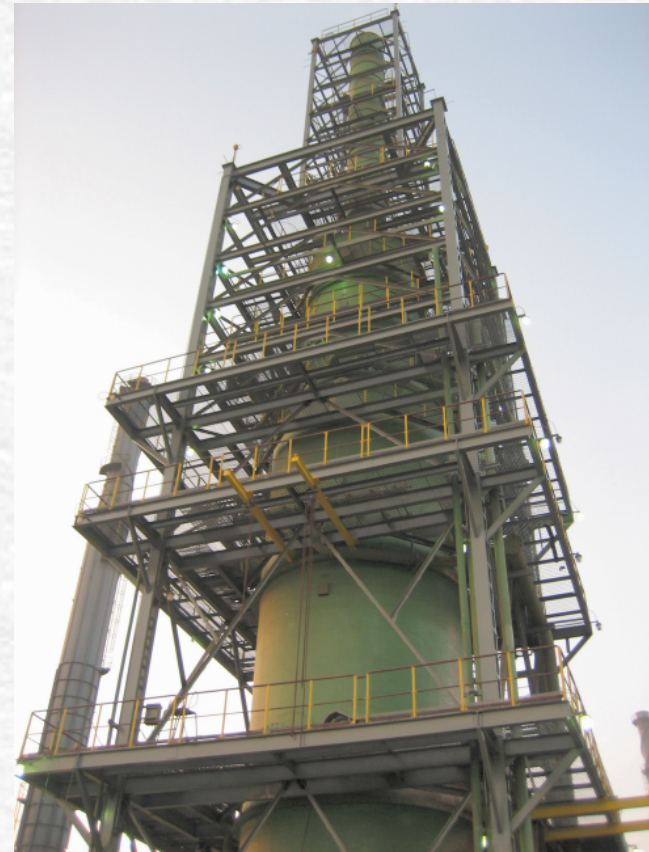


## Debari Smelter in India

from 2006

SO<sub>2</sub> Gas Volume: 54,000 Nm<sup>3</sup>/h

SO<sub>2</sub> Density: 3,000 ppm



## Chandeliya Smelter in India

From 2006

SO<sub>2</sub> Gas Volume: 100,000 Nm<sup>3</sup>/h

SO<sub>2</sub> Density: 1,000 ppm

Contact Address

**MESCO** MESCO, Inc.

Kazumasa Yoshida

Tel: +81-3-5610-7839

Fax: +81-3-5610-7863

E-mail: [yoshida\\_k@mesco.co.jp](mailto:yoshida_k@mesco.co.jp)