



**Asia Masters Center**

## Quality Control Censorship in Pollution for Cement Industry





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### ➔ Course Overview

In most countries the laws limiting dust and gases emission in the atmosphere are becoming increasingly rigorous. The dust trapped in air and smoke gases normally represents material which can be re-used in the production.

Gas emission is normally defined as the maximum permissible dust content per cubic unit of escaping gas or, in some cases, as the maximum total quantity of dust per hour from a single stack or factory.

This course has been developed to achieve information on the types of pollution in the cement plant from quarries to packing plant.

Familiarize the trainees with the types of Filters, materials transportation and how to control the gases emissions pollution.

The purpose of the course is to upgrade the skills and knowledge of process engineers and operators to control the pollution in the cement plants.

### ➔ Course Objective

After completing this course participants will:

- Become familiar with the types of pollution in the Cement plant and how to control it.
- Become familiar with the types of filters.
- Become familiar with the raw materials transportation.
- In-depth understanding of the Kiln Gases emission.
- In-depth understanding of the BY-PASS(Alkalis volatiles) and By-pass gas removal system.
- Become familiar with the dust collection system and the function of Pelletizer System.



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- In-depth understanding of the role of Efficient maintenance to control pollution.
- Become familiar with the quarries restoration to agricultural Land.



### Target Audience

- This course will have a particular focus for people working in the Cement production and process control Engineers, maintenance Engineers, Production and maintenance supervisors, Production and maintenance technicians.



### Course Outline

#### **Module (01) Introduction to Pollution in Cement plants.**

- 1.1 Types of pollution.
- 1.2 Government Regulations to control the pollution.
- 1.3 Dust and Gases Emission limits.

#### **Module (02) pollution in the Cement Quarries and How to control it.**

- 2.1 Quarries Drilling and Blasting.
- 2.2 Raw materials Loading and Hauling.
- 2.3 Quarries roads.
- 2.4 Crushing Raw materials.
- 2.5 How to control the pollution in the Quarries.

#### **Module (03) De dusting.**

- 3.1 Dust-Precipitation.
- 3.2 Cyclones construction and functions.
- 3.3 Bag Filters design.
- 3.4 Cleaning methods.
- 3.5 Central Jet Pulse Filters.



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- 3.6 Insert able Jet Pulse Filters.
- 3.7 Temperature Limitations.
- 3.8 Bag filter Sizing.
- 3.9 Filtration velocity.
- 3.10 Choice of Correct Fabric for application.
- 3.11 Trouble shooting.

### **Module (04) Electrostatic Precipitation.**

- 4.1 Precipitator Design.
- 4.2 How does an EP work?.
- 4.3 How EP Efficiency is determined.
- 4.4 How EP Clean Gas Dust Content is determined.
- 4.5 HT-Rectifier.
- 4.6 Voltage-Current Curves.
- 4.5 Trouble shooting.

### **Module (05) *Pollution from Raw material Transport Equipment and How to Control it.***

- 5.1 *The mechanical transport equipment.*
  - - Belt Conveyor.
  - - Bucket Elevator.
  - - Screw Conveyor.
  - - Drag Chain Conveyor.
  - - MECHANICAL Bucket Conveyor.
  - - Vibratory conveyor.
- 5.2 *The pneumatic transport equipment.*
  - - Air Assisted Gravity Conveyor.
  - - Pneumatic Pipeline Conveyors.
  - - Air Slide.
  - - Fluxo Pump.
  - - Screw Pump.
  - - Air Left.



- - Simple Negative Pressure system.
- 5.3 Selection of transport method.

### **Module (06) Kiln Gases Emission Control**

- 6.1 Sources of SO<sub>2</sub>, NO<sub>x</sub>, and CO of and Reduction of NO<sub>x</sub>-Emissions.
- 6.2 Chemical And Physical Properties And Environmental Aspects Of Some Nitrogen Compounds.
- 6.3 NO<sub>x</sub> Gases Physical Properties, Toxicology and Environmental Aspects.
- 6.4 Effectiveness of NO<sub>x</sub> Reduction Measures.
- 6.5 Examples Of Nox Emission Reduction.
- 6.6 Chemical and Physical Properties and Environmental Aspects of Sulfur Compounds.
- 6.7 SO<sub>x</sub> Emission Limits / Normal Emission.
- 6.8 Sulfur Input into kiln system.
- 6.9 Behavior of S-Compounds in the Process.
- 6.10 SO<sub>2</sub>-Emission Reduction Possibilities.
- 6.11 Reduction of Sulfur Input into the System.
- 7.12 Examples of SO<sub>2</sub> Emission Reduction

### **Module (07) Kiln By-Pass and The volatile circles.**

- 7.1 Volatile circles.
- 7.2 Bypass Principle
- 7.3 The BY-PASS(Alkalis volatiles) and By-pass gas removal system.
- 7.4 Bypass Installation Components
- 7.5 Dust collection system and the function of Pelletizer System.
- 7.7 Troubleshooting

### **Module (08) Lubricants and Fluids leaks.**

- 8.1 The role of Efficient maintenance to control pollution.
- 8.2 Storing and handling of Fluids and lubricant oil.

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### Price (USD)

Communicate with the training department  
to know the participation fees

➤ **There are offers and discounts for groups**

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