

**Case Summary****Amreya Cement Company  
(ACCC)****Company Information:**

Contact Person:	Mr. Luis Fernandes
Position:	Managing director
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Sector:	Private
Project Title:	“Installation of fabric bag filter for kiln/raw mill instead of existing EPs (ACCC) line”
Type of Project:	Air pollution control.

**1. Basic Information:****1.1 Main Products:**

Products	Ton/year
Portland cement	Actual (1,518,000) Design (1,352,089)

**1.2 Raw Materials and Utilities:**

<b>Raw Materials:</b>	
Limestone	1,840,205 t/y
Clay	688,217 t/y
Iron ore	13,520 t/y
Gypsum	168,319 t/y
Marl	306,701 t/y
<b>Energy:</b>	
Mazout (Fuel oil)	8,313 (t/y)
Solar (diesel oil)	Nil
Natural gas	121,293,891.5 Nm3/y
<b>Electricity:</b>	
National grid	159,205,643 kw hr/y
Self generated	-
<b>Water:</b>	
Domestic	49,054.27 m3/y (Mar – Aug-10). 250,477 m3/y (year 2009)
Cooling (make up water)	
Other	

**1.3 Project Location:**

El Garbaneyat Borg El Arab City, Alexandria-Egypt, The factory is located in an area, Currently designated as an industrial area.

**1.4 Project Objectives:**

- Reduction of dust emissions (TSP) in kiln/raw mills stack of (ACCC line) to comply with the Environmental law 4/1994 and other environmental regulation.

- Emission load before and after implementation the project **based on online monitoring data in EEAA and design parameter for new bag filter** :

Parameters	Before the project (t/y)	After the project (t/y)	Reduction %
Dust	559.2	190.08	66

### 1.5 Project Description:

- ACCC plant has one clinker line constituted by one rotary kiln, one pre-heater (five stages), one ID fan, two GCT (gas conditioning tower), one grate clinker cooler and one vertical raw mill. Normal operation fuel is natural gas.
- Raw mill has a dedicated gas circuit with separator, cyclones and fan and when running uses kiln exhaust gases to dry fresh feed. The production of raw mill is collected on cyclones and after transported by air slides and bucket elevator to homo silo.
- The kiln and the raw mill are de-dusted by two ESP (electrostatic precipitator). After each ESP there exists one fan that transports the gas flow to main stack. The dust collected at ESP is transported by two drag chains on bottom of ESP and screw conveyers until homo silo bucket elevator

There are two options for installing the new bag filter:

BASE option: same place

The new bag filter would be erected on place of existing EP, according the following conditions:

- The bag filter steel structure will be supported on existing concrete beams.
- The dust collected by the bag filter should be transported to silo by existing mechanical system.
- Preferably should be re-used existing EP fan massif, even if modified.
- Should be modified/replaced existing EP fan and corresponding drive.
- Should be re-used the existing main stack.
- Inlet point in stack should be the existing one, avoiding any modification on stack.
- Should be dismantled, adapted and supplied all necessary gas ducts to lead the gases to/from bag filter, raw mill fan, fan and stack.
- A compressors room shall be build nearby on concrete/brickworks.

option 1: aside

The project regarding OPTION 1 is quite similar (regarding bag filter characteristics) to the one described on BASE OPTION. The major differences comparing with that option are:

- New foundations for bag filter.
- Bag filter height must be enough not to block maintenance accesses to existing equipments.
- New dust conveying system between bag filter and existing conveying system to silo.
- Eventually, new foundations for fan.

### 1.6 Project Components

Fabric Bag filter and auxiliary equipment	
Mechanical equipment	Compressors, dryers, valves, conveyers
Electrical equipment	Air flow meters, level detectors, solenoid valves
Control devices	Switches, rotating control sensors

1.7 **Project Cost:**  
Estimated of total Cost is US\$ 8.58 million EPAP II financing US\$ 7.8 million.

1.8 **EPAP II Technical Support:**

EPAP II PMU assisted the company in preparing:

- Tender document.
- The bid evaluation report and procurement procedures.

2. **Eligibility Criteria:**

2.1 **Environmental:**

- The project will allow the company to comply with the law regarding dust emissions. Reduction in load will reach 66% and a concentration will decrease to 20 mg/m<sup>3</sup>

2.2 **Financial aspects:**

- The project costs less than US\$ 8 million

3. **Current status of project procedures:**

3.1 **Steering committee approval:** **Approved**

3.2 **Co-financers approval:** **N/A**

3.3 **Technical Procedures:**

Technical Document	submitted	Approved	Date
Environmental Assessment	Y	Y	Nov 11
Compliance Action Plan (CAP)	Y	Y	Nov 11
Environmental Impact Assessment (EIA)	Y	Y	
Technical Agreement	Y		

3.4 **Implementation Procedures:**

3.4.1 **Procurement Procedures:**

The company follows the company Commercial practice to issue National Competitive Bidding (NCB)( 1 stage bidding) for Installation of fabric bag filter for kiln/raw mill instead of existing EPs (ACCC) line

3.4.2 **Status of Implementation:**

Technical Document	submitted	Date	
		Achieved	Planned
Credit worthiness certificate	Y	15-6-2008	
Financial Agreement	On going		Jan11
Bidding document	Y	1-9-2010	
Technical and financial Evaluation	Y		Feb11
Awarding	Y		March11
Contracting	Y		Apr11
Installation and Commissioning	Y	Mar 2013	
Monitoring: Q1:			