

*Tabbin Institute for Metallurgical Studies*

Energy and Environment Research Center

*ISO 9001-2008*

**E2RC**

# Report on

Exhaust Stack Emissions Measurement from

Cement Mill No. (10) Factor (2)

Tourah Cement Company

*Aqua Misr Company*

*December , 2014*

## Team Work

Prof. Dr.\ Tarek Mahmoud Samy	TIMS Director
Chem. \ Samier Hammad	General Manager of Central Lab.
Chem. \ Ragab Abdel Khalik	Head of Air Pollution Lab.
Chem. \ Hamed Saad Hamed	Air pollution Lab. Specialist



## Introduction

According to the contract between *Aqua Misr Co. and Energy and Environment Research Center / Tabbin Institute for Metallurgical Studies (TIMS)* to execute Exhaust Stack emissions Measurement from the bag filter of Cement Mill No.(10) factor (2) at *Tourah Cement Company*, TIMS team work had conducted these measurement in December, 2014.

### ⇒ *Measurements*

⇒ The following parameters were measured from stacks of Raw Mill

1. Concentration of dust emissions form stacks .
2. Concentration of combustion gases (Temp. O<sub>2</sub>) from stacks.

### ⇒ *The Use Equipment*

1. Exhaust stacks emissions for bag filter of Cement Mill No. 10  
Universal Stack sampler. USA

Sampling method : Isokinetic measurement

EPA method No. 1,2 velocity & flow rate

EPA method No. 5 dust emission

- 2 .Combustion gas analyzer Lancom- III U.S.A



Table (1)  
Exhaust Stack Emission

Company Name : Tourah Cement Company  
Measurements date : 22/12 /2014  
Site Name : Stack of Cement Mill No. (10) – Factor 2

<i>Parameter</i>	<i>Unit</i>	<i>Out let</i>	Maximum permissible limits according to law 4/1994 for Environment protection and its amendments by law No.9/2009 and its executive regulation issued in 1995 and its amendments issued no. 1095/ 2011 & 710/2012
Stack Temperature	°C	62	---
Stack diameter	Cm	60	
Cross section area	m <sup>2</sup>	0.28	
Barometer P	mbar	1009	---
Static Pressure	mmH <sub>2</sub> O	-20	---
Dynamic P. (Avg.)	mmH <sub>2</sub> O	12	---
Velocity	m/s	14.95	---
H <sub>2</sub> O	%	0.6	---
O <sub>2</sub>	%	20.2	---
Stack Flow Rate	m <sup>3</sup> /h	15222	---
Dust concentration	mg/m <sup>3</sup>	7.5	50

*Bahia*



*22/12/2014*