

## Application Questionnaire for Continuous Emission Monitoring (CEM) Systems (IMR400 and IMR5000)

This document must be filled out as completely as possible to allow our engineering department to choose the best installation hardware for your particular requirements.

Writer's name: \_\_\_\_\_ Date: \_\_\_\_\_

### 1) Customer Information

Company:

Name:

Title:

Address:

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

### 2) Application

Location:

Name of Facility / Plant:

Producing Area:

Fuel:

Calculated Results:

Type of Process:

### 3) Instrument Details

Instrument supply voltage:

- 230 V/50 Hz
- 115 V/60 Hz
- Other: \_\_\_\_\_ V/ \_\_\_\_\_ Hz
- 1-Phase
- 2-Phase

Purge air fan (if required):

- 115/230 V | 50/60 Hz
- 3-Phase 230/400 @50 Hz, 245/430@60 Hz
- Other: \_\_\_\_\_ V/ \_\_\_\_\_ Hz
- 1-Phase
- 3-Phase

#### 4) Location

Distance between sampling point and analyzer: \_\_\_\_\_ m

Requested length of Sample Probe: \_\_\_\_\_ m

Location of analyzer:

- Indoor
- Outdoor

#### 5) Measured Components

- Dust concentration
  - ❖ Measuring range of 0 to \_\_\_\_\_ mg/m<sup>3</sup>
  - ❖ Max emission value of \_\_\_\_\_ mg/m<sup>3</sup> acc. to regulations
- Opacity
  - ❖ Measuring range of 0 to \_\_\_\_\_ % opacity

#### 6) Measured Gas

- Gas velocity
  - ❖ Measuring range of 0 to \_\_\_\_\_ m/s
- Temperature sensor required
- Pressure sensor for calculation of standard flow Nm<sup>3</sup>/h required

Delta Transducer

- Mounted on probe
- Hose connection
  - Counter Support
    - Yes
    - NO

#### 7) Plant Conditions

**Type of filters installed upstream of the sample point**

- Electrostatic precipitator ESP
- Bag house
- Wet scrubber
- Other: \_\_\_\_\_

**Area Classification**

- Non-Ex
- Zone: \_\_\_\_\_ Class: \_\_\_\_\_ Division: \_\_\_\_\_

**Occurrences of temperatures below dew point**

- None
- Weekly
- Daily

### 8) Standard Plant Conditions

	Min	Avg	Max	Unit	
Ambient temperature				C	
Stack gas temperature				C	
Stack gas pressure				hPa	Mm H2O
Water in stack gas				Vol. %	g/m <sup>3</sup>
Water dew point				C	
Acid dew point				C	
Stack gas velocity				m/s	
Stack gas volume				m <sup>3</sup> /h	Nm <sup>3</sup> /h
Stack gas quantity				mg/m <sup>3</sup>	ppm
Standard gas density				mg/m <sup>3</sup>	ppm
Dust				um	
Particle size				mg/m <sup>3</sup>	ppm
O <sub>2</sub>				%	
CO				mg/m <sup>3</sup>	ppm
NO				mg/m <sup>3</sup>	ppm
NO <sub>2</sub>				mg/m <sup>3</sup>	ppm
SO <sub>2</sub>				mg/m <sup>3</sup>	ppm
H <sub>2</sub> S				mg/m <sup>3</sup>	ppm
HC				mg/m <sup>3</sup>	ppm
NH <sub>3</sub>				mg/m <sup>3</sup>	ppm
Cl <sub>2</sub>				mg/m <sup>3</sup>	ppm
CH <sub>4</sub>				mg/m <sup>3</sup>	ppm
CO <sub>2</sub>				mg/m <sup>3</sup>	ppm
H <sub>2</sub>				mg/m <sup>3</sup>	ppm
O <sub>3</sub>				mg/m <sup>3</sup>	ppm
Other				mg/m <sup>3</sup>	ppm

### 9) Data Reporting

- Display
- Printer
- RS232
- 4-20 mA
- 0-10V

### 10) Notes\Comments:

11) Mounting Location:  Indoor  Outdoor  Weather protection cover required

Stack/duct orientation:  Horizontal  Vertical

**Stack/Duct Material**

Carbon (mild) steel

Stainless steel

Brick

Concrete

FRP

Other: \_\_\_\_\_

**Internal lining/material**

No lining

**Stack/duct shape**

Circular

Rectangular

**Internal stack/duct diameter or width**

\_\_\_\_\_ mm

Depth: \_\_\_\_\_ mm

**Stack wall thickness**

\_\_\_\_\_ mm

**External diameter**

\_\_\_\_\_ mm

**Insulation thickness**

\_\_\_\_\_ mm

Double walled stack

Yes  No

**Space between walls**

\_\_\_\_\_ mm

**Undisturbed outlet section**

$\geq 3 \times \text{ID}$

Other: \_\_\_\_\_ mm

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**Undisturbed inlet section**

$\geq 3 \times \text{ID}$

Other: \_\_\_\_\_ mm

**Flange already available**

Yes  NO

**Required flange material**

Carbon (mild) steel ST37 (1.0037)

Stainless steel V4A (1.4571/SS316Ti)

Other: \_\_\_\_\_

**Platform required**

*\*Height of the stack is 10m.*