

ENCLOSURE TO BID INVITATION 6300036456**ANNEXURE 1**

Monthly Stack Monitoring – comply with ISO 14001, and KSPCB requirement for INDUSTRY SCALE:
 LARGE, INDUSTRY COLOUR: RED. COMBINED CONSENT ORDER NO.: AW-303859 PCB ID: 10708
 DT. 07/10/2017

Location: Engine Divn. BEML Ltd. mysore complex.

1) ANALYSIS REPORT OF SOURCE EMISSION -- For Diesel Engine Generator Sets (3 Chimneys)

Sl. No.	General Details	62.5 KVA DG set		548 KVA DG set No. -1		548 KVA DG set no. -2	
	Stack Diameter	0.15 Mtr	Result	0.1512 Mtr	Results	0.1512 Mtr	Results
	Stack Cross Sectional Area	0.017 Sq. Mtr		0.0181 sq. Mtr		0.0181 Sq. Mtr	
1	Temperature of Flue Gas	Deg C		Deg C		Deg C	
2	Ambient Tempr.	Deg C		Deg C		Deg C	
3	Velocity of Flue Gas	Mtr / sec		Mtr / sec		Mtr / sec	
	Parameter & Protocol	Unit	Result				Results
4	Particulate Matter (at NTP) IS 11255 (part 01)	Mg/Nm3 (KSPCB Std. 150.0)		Mg/Nm3 (KSPCB Std. 150.0)		Mg/Nm3 (KSPCB Std. 150.0)	
5	Discharge Rate (at NTP) IS 11255 (Part 03)	Nm3/hr NS		Nm3/hr NS		Nm3/hr NS	
6	Emission Rate (at NTP)	Kg/hr NS		Kg/hr NS		Kg/hr NS	
7	Sulphur Dioxide (SO2) Flue Gas Analyzer	Mg/Nm3 (KSPCB Std. 100.0)		Mg/Nm3		Mg/Nm3	
8	Oxides of Nitrogen (NOx) Flue Gas Analyzer	Mg/Nm3 (KSPCB Std. 50.0)					

NS – Not Specified

BDL – Below Detectable Limit

Firm's sign & stamp.

2) ANALYSIS REPORT OF SOURCE EMISSION -- For Diesel Engine Exhaust Chimney (01 chimney)

Sl. No.	General Details	Engine Exhaust Chimney			Shot Peening m/c Chimney	
	Stack Diameter	0.80 Mtr	Result		0.254 Mtr	Results
	Stack Cross Sectional Area	0.50 Sq. Mtr			0.05 sq. Mtr	
1	Temperature of Flue Gas	Deg C			Deg C	
2	Ambient Tempr.	Deg C			Deg C	
3	Velocity of Flue Gas	Mtr / sec			Mtr / sec	
	Parameter & Protocol	Unit	Result			
4	Particulate Matter (at NTP) IS 11255 (part 01)	Mg/Nm3 (KSPCB Std. 150.0)			Mg/Nm3 (KSPCB Std. 150.0)	
5	Discharge Rate (at NTP) IS 11255 (Part 03)	Nm3/hr NS			Nm3/hr NS	
6	Emission Rate (at NTP)	Kg/hr NS			Kg/hr NS	
7	Sulphur Dioxide (SO2) Flue Gas Analyzer	Mg/Nm3 (KSPCB Std. 100.0)			Mg/Nm3	
8	Oxides of Nitrogen (NOx) Flue Gas Analyzer	Mg/Nm3 (KSPCB Std. 50.0)				

NS – Not Specified

BDL – Below Detectable Limit

3) ANALYSIS REPORT OF SOURCE EMISSION -- For Paint Booth Chimneys (02 Chimneys)

Sl. No.	General Details	Paint Booth Chimney No. – 1			Paint Booth Chimney No. -2	
	Stack Diameter	0.80 Mtr	Result		0.60 Mtr	Results
	Stack Cross Sectional Area	0.50 Sq. Mtr			0.28 Sq. Mtr	
1	Temperature of Flue Gas	Deg C			Deg C	
2	Ambient Tempr.	Deg C			Deg C	
3	Velocity of Flue Gas	Mtr / sec			Mtr / sec	
	Parameter & Protocol	Unit	Result			Results
4	Particulate Matter (at NTP) IS 11255 (part 01)	Mg/Nm3 (KSPCB Std. 150.0)			Mg/Nm3 (KSPCB Std. 150.0)	
5	Discharge Rate (at NTP) IS 11255 (Part 03)	Nm3/hr NS			Nm3/hr NS	
6	Emission Rate (at NTP)	Kg/hr NS			Kg/hr NS	
7	Volatiles Organic Compound	Paint Mist VOC – B, T,X			Paint Mist VOC – B, T, X	

NS – Not Specified

BDL – Below Detectable Limit

VOC – Volatile Organic Compound

Firm's sign & Stamp

4) ANALYSIS REPORT OF SOURCE EMISSION -- For Shot peening m/c (01 Chimney)

Sl. No.	General Details	Engine Exhaust Chimney		Shot Peening m/c	
	Stack Diameter	0.80 Mtr	Result	0.254 Mtr	Results
	Stack Cross Sectional Area	0.50 Sq. Mtr		0.05 sq. Mtr	
1	Temperature of Flue Gas	Deg C		Deg C	
2	Ambient Tempr.	Deg C		Deg C	
3	Velocity of Flue Gas	Mtr / sec		Mtr / sec	
	Parameter & Protocol	Unit	Result		
4	Particulate Matter (at NTP) IS 11255 (part 01)	Mg/Nm3 (KSPCB Std. 150.0)		Mg/Nm3 (KSPCB Std. 150.0)	
5	Discharge Rate (at NTP) IS 11255 (Part 03)	Nm3/hr NS		Nm3/hr NS	
6	Emission Rate (at NTP)	Kg/hr NS		Kg/hr NS	
7	Sulphur Dioxide (SO2) Flue Gas Analyzer	Mg/Nm3 (KSPCB Std. 100.0)		Mg/Nm3	
8	Oxides of Nitrogen (NOx) Flue Gas Analyzer	Mg/Nm3 (KSPCB Std. 50.0)			

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5) AMBIENT AIR QUALITY MONITORING – 1 Sample at inside Assembly Shop& another at another place.

Sl. No.	Parameters	Unit	Result	Limits (NAAQS)	Test Method
1	Particulate matter (PM10)				
2	Particulate matter (PM2.5)				

Total 2 points.

6) AMBIENT NOISE LEVEL MONITORING REPORT – (Sound level to be measured at 10 places)

SL No.	Sample Location	Time Frequency 10 Mints. In Each Location		
		Max dB(A)	Min dB(A)	Leq dB(A)
1	Near Compressor Room			
2	Control Console Corridor			
3	Engine Test Cell-1 or 3			
4	Engine Test Cell -2 or 4			
5	Engine Test Cell – 5 or 7			
6	Engine Test Cell – 6 or 8			
7	Outside Testing Dept.			
8	FMS machine Area			
9	Reception Area			
10	South Gate			

Total 10 points. Standard Limits: 75 dB(A) on Day time for Industrial Area.

Firm's sign & stamp.

COMMON RATE FORMAT

SL NO.	Description of monthly monitoring	No. of Samples	Rate per Stack OR sample in Rs.	Amount per month in Rs.
1	Monthly Stack Monitoring for Flue Gas Analysis	05 Stacks		
2	Monthly Stack Monitoring for Flue Gas Analysis (with VOC for paint booth)	02 Stacks		
3	Monthly Ambient Air Quality for PM10, PM2.5 Analysis	02 places		
4	Monthly Noise Monitoring	10 Places		
	Total Price per month			Rs.
	Quoted Price for 1 st year (combined Stack, Air, Noise monitoring)			Rs.
	CGST			
	SGST			
	Quoted Price for 2 nd year (combined Stack, Air, Noise monitoring)			Rs.
	CGST			
	SGST			

Other Terms:

1. Work involved is labour charges only. Firm is Responsible for Supervision/overseeing the activities of Work and is responsible for SAFETY of their Workmen.
2. Firm has to take full responsibility for Any Injury/Accident to their workman during working inside BEML Premises. BEML Ltd. in any wa is NOT RESPONSIBLE.
3. Firm has to arrange for coverage of ESI & PF for its persons or Should furnish Valid Accidental Insurance Policy issued from Govt. Insurance Companies & an Undertaking in BEML Format for all the persons.