



Stack Air Emission Report of Generator-3:

INDESORE SWEATER LTD.



Conducted By

GREENTECH TESTING COMPANY LTD.

Corporate Office:

House: 4 Sobhanbag, Mohammadia Super
Market, Dhanmondi-27, Dhaka-1207

Contact: +8801727-310675, 01795-333332



Date of Testing: January 28, 2019

Date of Report Submitting: February 2, 2019



GREENTECH TESTING COMPANY

Environmental Testing, Inspection, Assessment, Calibration
& Consultancy Organisation.



Certificate Number: GTCL/VER/2019/214

Stack Air Emission Report

Issued By	: Greentech Testing Company Ltd. House No: 4 Sobhanbag, 123 Mohammadia Super Market (2 nd Floor), Mirpur Road, Dhaka-1207. Contact Number: 01795-333332 E-mail: ceo@gtclbangladesh.com
Date of Issue	: February 2, 2019
Certificate Number	: Certificate Number: GTCL/VER/2019/214
Customer	: INDESORE SWEATER LTD. Deger Chala, National University, Gazipur Sadar, Gazipur-1704, Bangladesh.
Description	: Stack Air Emission Assessment of Generator. (Included Parameter: 1. SPM- Suspended Particulate Matter, 2. NOx- Oxides of Nitrogen, 3. SOx- Sulfur Dioxide, 4. CO- Carbon Mono-oxide, 5. CO ₂ - Carbon Di-oxide, 6. O ₂ - Oxygen,)
Date of Assessment	: January 28, 2019



Prepared By:

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Approved By:

Md. Atiqur Rahman
Environmental Specialist
Head of- Quality Assurance
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Stack Air Emission Report

Description of Sampling:

Name of Combustion Unit: Generator (Diesel Generator)

Key Information of Generator	Generator
Location of Generator	Ground floor, Generator Room
Capacity	700 KVA / 560 KW
Brand Name	Perkins
Supplier Name	Energy Pac
Model No.	P700-1
Serial No.	FGWPES28PPCB01079
Frequency	50 Hz
Volts	400/230V
Manufacturer Year	2015
Origin	UK
Relevant Weather Condition	
Temperature of Generator Room	26.4°C
Humidity of Generator Room	55% RH
Ambient Weather	Normal

Sampling has been done by automatic sampler connected with the analyzer. During the sampling procedure, all instruction stated in the Greentech Testing Company Ltd. work instruction GT-101 has followed. The machine probe has set to the center point of the exhaust. Sampling has been conducted for specific time intervals mentioned in the work instruction and recorded in a field data collection sheet.

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Description of Analysis

SN	Sample Description	Name of the Parameters					
		SPM	NOx	SOx	CO	CO ₂	O ₂
01	Method of Analysis	Gravimetric	EPA Method (7-1)	Hydrogen Per-Oxide	ORSAT Method	ORSAT Method	ORSAT Method
02	Emission Source from Diesel Generator Exhaust (Capacity- 700 KVA/ 560 KW)	236	185	290	414	6.5%	9.8%
03	Unit	mg/Nm ³	mg/Nm ³	mg/Nm ³	mg/Nm ³	V/v	%
04	Duration (Minutes)	30	30	30	30	30	30
05	Bangladesh (DoE) Standard	100 (Gas) 300 (Liquid)	150 (Gas) 300 (Liquid)	NYS	NYS	NYS	NYS
06	IFC / World Bank Standard	NYS	320 (Gas) 460 (Liquid)	2000	NYS	NYS	NYS
07	Remark	Excellent	Good	Good	Good	Good	Good

(Note: these above-mentioned parameters are GHG substance)

Abbreviation: - 1. SPM- Suspended Particulate Matter, 2. NOx- Oxides of Nitrogen, 3. SOx- Sulfur Dioxide, 4. CO- Carbon Mono-oxide, 5. CO₂- Carbon Di-oxide, 6. O₂- Oxygen, 7. NYF- Not Yet Set-Not Found. 8. V/v- Volume / volume, 9. DoE – Department of Environment. 10. N/A- Not Applicable.

Pollutant Quantity Calculation: Measured Emission Concentration (mg/nm³) × Measured Air Flow (nm³/H) × Operating time (Hour/Year) = Mass pollutant Discharge (Kg/Year):

Pollutant Quantity Calculation	SPM	NOx	SOx
Measured Emission Concentration (Ng/nm ³):	236	185	290
Measured Air Flow (Nm ³ /Hour):	6206		
Operating time (Hour/Year):	674.9		
Total Air Emissions Discharge Inventory (Kg/Year):	988.47	774.86	1214.65

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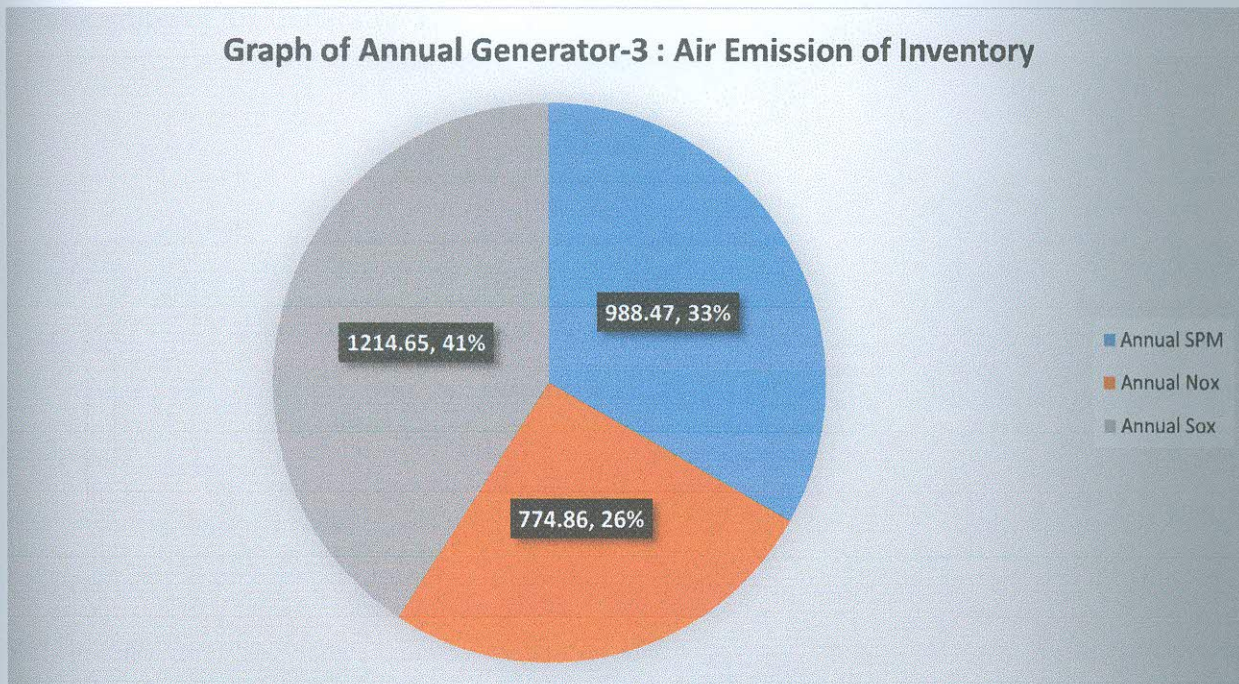
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Graph of Annual Generator-3 : Air Emission of Inventory



Comment: Generator of INDESORE SWEATER LTD. which is run 100% by Diesel. Stack/Point source emission from the generator has been analyzed and to evaluate SPM, NOx, SOx, CO, CO₂, & O₂ from the point source emission. It was observed that the levels of SPM, NOx, SOx, CO, CO₂, & O₂ from emission were within the standard limits as per Bangladesh and IFC / World Bank Standard. Black smoke was not found in the point sources of INDESORE SWEATER LTD.



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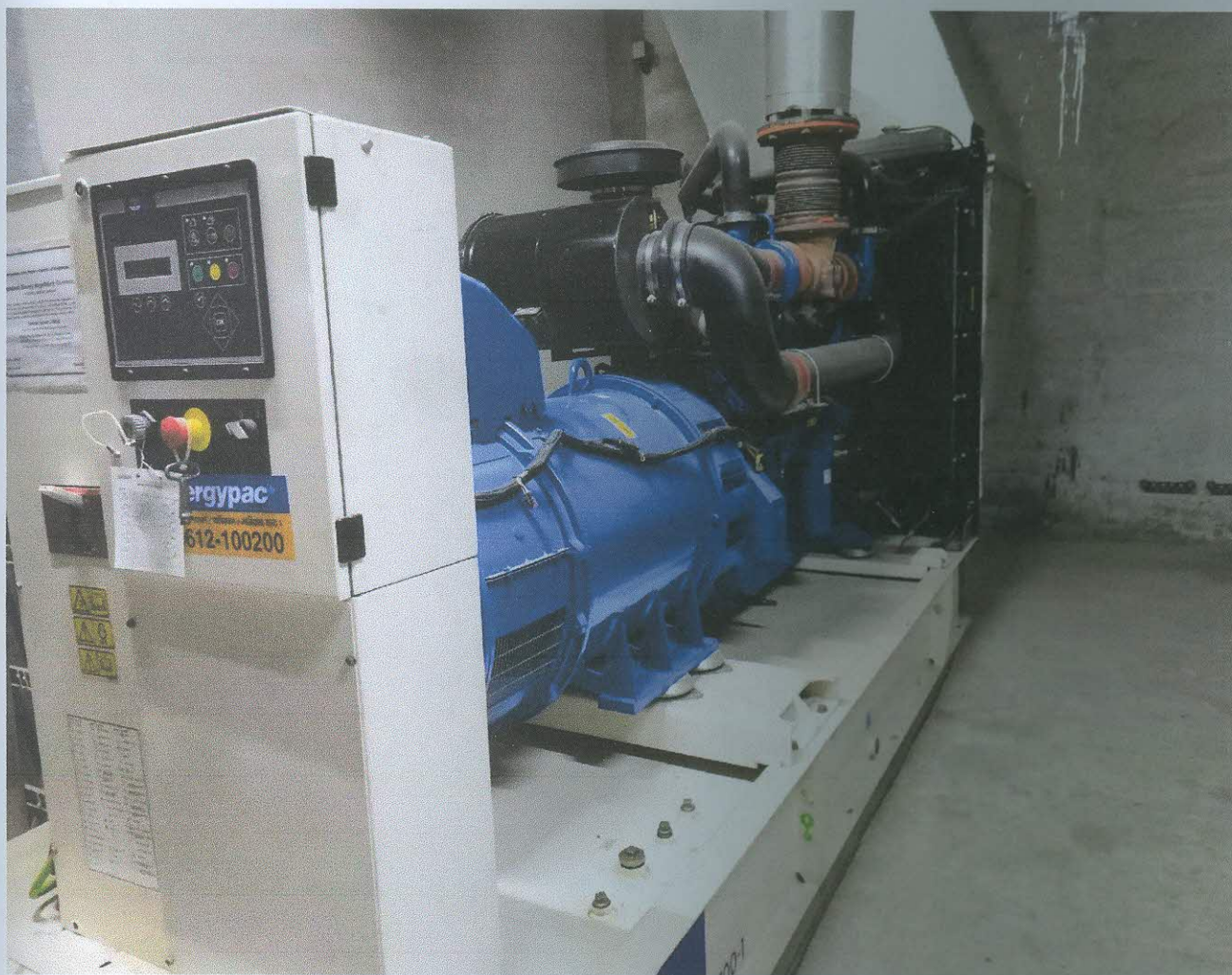
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Photograph of the Generator-3:



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