

Appendix I

Landfill Gas Monitoring Equipment Calibration Certificate



路達國際有限公司

ROTTER INTERNATIONAL LIMITED

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Calibration Report - Gas Detector

PGM-2500 (QRAE III) --- LEL/O2/CO/H2S

UNIT INFORMATION :

Customer:	Penta Ocean Construction Co Ltd	Serial #:	M02A001708	Model:	QRAE III
		Firmware:	V2.12	Sensor:	LEL/O2/CO/H2S
		Cal date:	28-Jul-2021	Inspected:	Teddy

SENSOR DATA :

	LEL sensor (ME)	O2 sensor	CO sensor (Tox1)	H2S sensor (Tox2)
Calibration dates:	28-Jul-2021	28-Jul-2021	28-Jul-2021	28-Jul-2021
After Calibration levels	50%	17.90%	50 ppm	10.1 ppm
Alarm levels (Low):	10.00%	19.50%	35 ppm	10 ppm
Alarm levels (High):	20.00%	23.50%	200 ppm	20 ppm
TWA Level:	--	--	35 ppm	10 ppm
STEL Level:	--	--	100 ppm	15 ppm

Status:

Pump Speed	Low	Back Light	Manual
Clock	Yes	Measure	Average

LEL Gas Selection

LEL Calibration Gas	Methane	LEL measurement Gas	Methane
LEL Custom Gas	LEL_custom_gas	LEL Custom Factor	1.0

Gas types used : 4-Gas Mix: (18% O2, 50ppm CO, 10ppm H2S, 50% LEL CH4, BAL N2) Gas lot #1412983 Cyl# 15

*** Fresh Air Calibration is highly recommended to proceed prior for measurement each time.

Replaced Parts:

Notes:

The unit was calibrated and checked under good working condition

**Next calibration due on or before 27 July 2022

Serviced by  Teddy Wong
Rotter International Ltd

Calibration and Test Certificate

Product Name: MultiRAE Lite
Model Number: PGM-6208
Serial Number: M01C031772
Calibration/Inspection Date: 6/4/2021

Calibration Gases:

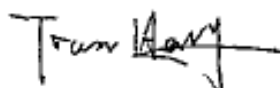
#	Gas	Concentration	Balance	Lot#
1	Hydrogen Sulfide(H ₂ S)	10ppm	Nitrogen(N ₂)	20210508
2	Carbon Monoxide(CO)	50ppm		
3	Oxygen(O ₂)	18%		
4	Methane(CH ₄)	50%LEL	Nitrogen(N ₂)	20210114
5	Sulfur Dioxide(SO ₂)	5ppm		
6	Carbon Dioxide(CO ₂)	5000ppm	Nitrogen(N ₂)	20201203

Test Results:

#	Sensor	Span	UOM
1	LEL	51	%LEL
2	SO ₂	5.2	ppm
3	COSH (H ₂ S / CO)	10.1 / 51	ppm
4	Pb O ₂	17.8	%
5	CO ₂	4900	ppm

This instrument has been calibrated using valid calibration gases and instrument manual operation procedures. Test and calibration data is on file with the manufacturer, RAE Systems.

Approved By:



86-05-51832593

Calibration Certificate

GDJ7

Cert. Ref. No.: BW/XT/4TH/16428

Date: 2021 06 08

EXP-08/06/2022

Customer: Victory Trenchless Engineering Co., Ltd.

Purchase Order No.: P-17-0486

Lot 1477B,

Date: 2017 11 09 INVOICE NO: AP

77 Ping Che,

Email: emily@vtechk.com

Fanling, N.T.

Attn: Ms Emily Fung

Tel: 3525 8826

Fax: 3525 1088

Mobile Phone

User Details:

Gas Detector Model: XT-XWHM-Y-OR

Serial No.: MA217-022158

Pump S/N: 56310

Calibration Record:

Inspection before calibration	Visual inspection	Functional Test
Basic Unit - Case, Clip & Display etc.	OK	OK
Battery and charge etc.	OK	OK
Motorized Pump	OK	OK
Other items		

Type of Sensor	Expiry Date
Oxygen Sensor	
CO & H2S Sensor	
Combustible(LEL) Sensor	

Type of calibration	Date of calibration	H2S (ppm)	CO (ppm)	O2 (%)	LEL (%)
4th Calibration	2021 06 08	25	100	18	50
Result of Calibration		OK	OK	OK	OK

Calibration Cost: (As per attached invoice) F.O.C

Calibration remarks: Oxygen sensor replaced by new one
Warranty: Oxygen Sensor 1 years warranty

Next calibration date of this instrument will be : 2022 06 08

IMPORTANT NOTES TO BW GAS DETECTOR USERS

USERS MUST READ THE OPERATOR'S MANUAL THOROUGHLY BEFORE OPERATING THIS EQUIPMENT AND FOLLOW THEIR OWN SAFETY SUPERVISOR'S INSTRUCTION TO WORK.

All gas detection instrumentation on the market requires periodic calibration to accurately measure gas. Calibration is only as accurate as the test gas used. BW Technologies quality test gases are made to the highest accuracy and trace-ability to N. I.S.T. Standards.



Calibrated By: Sara Tse

Service Hotline: 2592 2120 Ms. Tse - Service Dept.

Asia Pacific Industrial Safety Equipment

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Asia Technologies

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