Al Takamul Company For Engineering Services
Quality Control – Iraq

Certificate of Calibration

AlTakamul Yard, North Rumaila-South Iraq
●Phone : +964 7810009138 ● www.qualitycontrol-iraq.com ● E-mail: op@qualitycontrol-iraq.com

Date of Issue: June 13, 2024

REF NUMBER	: By Contract	APPROVED BY LAB INCHARGE QC
Job No #	: QC/JN/24/00239	
CERTIFICATE NUMBER	: **QC240613-01**	

CUSTOMER DETAILS

Name **Honghua Oil & Gas Engineering Services Limited**
Address Basra, South Iraq
Rig HH029

EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : **Multigas Detector**
Manufacturer : Honeywell BW
Model : GasAlert Max XT II
Serial Number : MA220-007356
Type : Digital
Calibrated Range : 25 PPM H2S 100 PPM CO
18.00% O2 50% LEL
Calibrated By : Hussein Alaa
Calibration Date : June 13, 2024
Calibration Due : December 12, 2024

Alarm Details	Low	High
Oxygen (O2) %	19.5	23.5
H2S-ppm	5	10
CH4-%LEL	10	20
CO-ppm	35	200

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature	:	22 °C	±	2 °C
Relative Humidity	:	45 %RH	±	5 %RH

CALIBRATION METHOD

A reference cylinder consisting of composition gases (O2, LEL, H2S, CO) is used , which are detected by gas detector by diffusion.

TRACEABILITY

The measurements made by QC Calibration & Testing Labs are traceable to NIST, vide CALGAZ Certificate of Analysis
The measurements made by QC Calibration & Testing Labs, realize the physical units of measurements (SI), through its state of the art calibration standards that are controlled and maintained by QC.

REFERENCE EQUIPMENT USED :

DESCRIPTION	SERIAL NO.	MAKE	GAS EXPIRY DATE
Multigas Calibration cylinder	950-106554	CALGAZ	21/08/2025

CALIBRATION TEST RESULTS

Gas Name	Values of UUC	Values on Reference Standard	Error in Reading of UUC	Uncertainty of Measurement
Oxygen(O2)%	18.0	18.0	0	±1
Methane(CH4) LEL	50	50	0	±1
Carbon Monoxide(CO) ppm	100	100	0	±1
Hydrogen Sulphide(H2S) ppm	25	25.0	0	±1

Results :
The above Value Indicates That the Instrument complies with the Specified Maximum Permissible error tolerance.
At The Time of Calibration. and ready for use.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with international practice.

DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

☐ The results are as found (no adjustment done).
■ The results are post adjustment.

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Date of Issue: June 13, 2024

REF NUMBER	: By Contract	APPROVED BY LAB INCHARGE QC
Job No #	: QC/JN/24/00239	
CERTIFICATE NUMBER	: **QC240613-02**	

CUSTOMER DETAILS

Name **Honghua Oil & Gas Engineering Services Limited**
Address Basra, South Iraq
Rig HH029

EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : **Multigas Detector**
Manufacturer : Honeywell BW
Model : GasAlert Max XT II
Serial Number : MA222-000303
Type : Digital
Calibrated Range : 25 PPM H2S 100 PPM CO
18.00% O2 50% LEL
Calibrated By : Hussein Alaa
Calibration Date : June 13, 2024
Calibration Due : December 12, 2024

Alarm Details	Low	High
Oxygen (O2) %	19.5	23.5
H2S-ppm	5	10
CH4-%LEL	10	20
CO-ppm	35	200

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature	:	22 °C	±	2 °C
Relative Humidity	:	45 %RH	±	5 %RH

CALIBRATION METHOD

A reference cylinder consisting of composition gases (O2, LEL, H2S, CO) is used , which are detected by gas detector by diffusion.

TRACEABILITY

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REFERENCE EQUIPMENT USED :

DESCRIPTION	SERIAL NO.	MAKE	GAS EXPIRY DATE
Multigas Calibration cylinder	950-106554	CALGAZ	21/08/2025

CALIBRATION TEST RESULTS

Gas Name	Values of UUC	Values on Reference Standard	Error in Reading of UUC	Uncertainty of Measurement
Oxygen(O2)%	18.0	18.0	0	±1
Methane(CH4) LEL	50	50	0	±1
Carbon Monoxide(CO) ppm	100	100	0	±1
Hydrogen Sulphide(H2S) ppm	25	25.0	0	±1

Results :
The above Value Indicates That the Instrument complies with the Specified Maximum Permissible error tolerance. At The Time of Calibration. and ready for use.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with international practice.

DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

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Job No #	: QC/JN/24/00239	
CERTIFICATE NUMBER	: **QC240613-03**	

CUSTOMER DETAILS

Name **Honghua Oil & Gas Engineering Services Limited**
Address Basra, South Iraq
Rig HH029

EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : **Multigas Detector**
Manufacturer : Honeywell BW
Model : GasAlert Max XT II
Serial Number : MA221-020521
Type : Digital
Calibrated Range : 25 PPM H2S 100 PPM CO
18.00% O2 50% LEL
Calibrated By : Hussein Alaa
Calibration Date : June 13, 2024
Calibration Due : December 12, 2024

Alarm Details	Low	High
Oxygen (O2) %	19.5	23.5
H2S-ppm	5	10
CH4-%LEL	10	20
CO-ppm	35	200

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature	:	22 °C	±	2 °C
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CALIBRATION METHOD

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REFERENCE EQUIPMENT USED :

DESCRIPTION	SERIAL NO.	MAKE	GAS EXPIRY DATE
Multigas Calibration cylinder	950-106554	CALGAZ	21/08/2025

CALIBRATION TEST RESULTS

Gas Name	Values of UUC	Values on Reference Standard	Error in Reading of UUC	Uncertainty of Measurement
Oxygen(O2)%	18.0	18.0	0	±1
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DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

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