

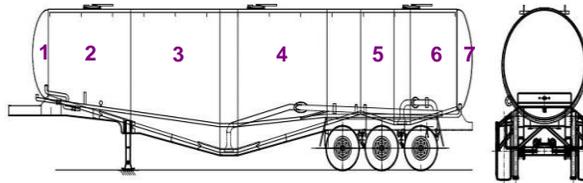
CERTIFICATE OF QUALIFICATION VISUAL INSPECTION INTERNAL & EXTERNAL & ULTRASONIC WALL THICKNESS MEASUREMENT
THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	TAREEK AL-SALEM	REPORT NO:	QC-CMT-23-10-NDT-002
LOCATION:	HALLIBURTON BULK YARD	SPECIFICATION:	ASME SECTION V ARTICLE 5,10 & 27
INSPECTION DATE:	Sunday, October 22, 2023	DUE DATE:	Monday, October 21, 2024
TYPE OF INSPECTION:	VISUAL INSPECTION INTERNAL & EXTERNAL & ULTRASONIC WALL THICKNESS MEASUREMENT		
DESCRIPTION:	CEMENTING BULKER TRANSPORTS / TANK		
MANUFACTURE:	TAREQ HAJI	SERIAL NO:	NP9DTS03WK1113187
ULTRASONIC THICKNESS GAUGE S.NO:	5103161	CAL DUE DATE:	Friday, February 16, 2024
MANUFACTURE:	HUATEC GROUP	MODEL:	TG4000

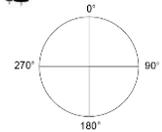
INSPECTION DETAILS

SHELL WALL THICKNESS GRID

HEAD WALL THICKNESS GRID



X INDICATES LOCATION OF THICKNESS MEASUREMENT



SR NO:	POSITION	POSITIONS				MINIMUM THICKNESS INCH
		0°	90°	180°	270°	
NP9DTS03WK1113187	BULK HEAD	0.311	0.301	0.322	0.325	0.182
	HEAD 1	0.312	0.311	0.322	0.321	
	HEAD 7	0.315	0.317	0.324	0.325	
	SHELL 2	0.264	0.274	0.285	0.279	
	SHELL 3	0.275	0.281	0.28	0.284	
	SHELL 4	0.273	0.28	0.285	0.282	
	SHELL 5	0.275	0.278	0.287	0.284	
	SHELL 6	0.278	0.285	0.31	0.282	

VISUALLY & ULTRASONIC WALL THICKNESS MEASUREMENT INSPECTED AREAS

A-Shell and head area, shell and head around piping area. B-Bottom Center Area. C-Opining area, D-Joint welds Area, E-Shell reinforcement area. F-Attachments Area. G-Suspension system attachments and connecting structure. U.T-The Above Item Was Found Acceptable As Per Manufacture Acceptance Criteria.

VT - VISUALLY: SURFACE INSPECTION OF WELDING AND CRITICAL AREAS (ACCEPTED)

INSPECTION RESULT

CEMENTING BULKER TRANSPORTS / TANKACID TANK WAS FOUND ACCEPTIBLE WALL THICKNESS AS PER MANUFACTURE ACCEPTANCE CRITERIA.

ULTRASONIC THICKNESS EQUIPMENT DETAILS		PERSONNEL DETAILS		CUSTOMER DETAILS	
EQUIPMENT:	ULTRASONIC THICKNESS METER	NAME:	NAVEED HUSSAIN	SIGNATURE:	NAME:
MFC & MODEL:	HUATEC GROUP & TG4000	QUALIFICATION:	ASNT LEVEL II MT,PT,UT,VT	SIGNATURE:	
CAL DUE DATE:	 16-02-2024	SIGNATURE:			

Certificate of Calibration

Al Takamul Yard, North Rumailah South Iraq

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Date of Issue: October 20, 2023

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REQUEST NUMBER : By Contract JOB NUMBER : QC/JN/23/00358 CERTIFICATE NUMBER : QC231020-01	CUSTOMER DETAILS Name : Tareek Al-Salem Address : District Zubair-South Iraq
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Description : **Pressure Gauge**
 Manufacturer : PAKKENS
 Model : EN837-1
 Serial Number : **A1353**
 Location : **Vehicle Identification Number : NP9DTS03WK1113187**
 Type : Analog
 Range : 0 to 4 bar
 Calibrated Range : 0 to 4 bar
 Resolution : 0.05 bar
 Accuracy : NA
 Tolerance : ± 1.0 % of Full Scale
 As found : In Tolerance
 Calibration Date : October 20, 2023
Calibration Due : 19 October 2024
 Last Calibration : NA



DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : 35.0 ± 2°C Humidity : 30.0 ± 5 % RH Atm. Pressure 1011.0 ± 10 hPa

CALIBRATION METHOD

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01

The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

DESCRIPTION	SERIAL NO.	MAKE / MODEL	CALIBRATION DATE	CALIBRATION DUE DATE
Digital Pressure Gauge	468802	AMETEK / XP2i	20 Dec, 2022	19 Dec, 2023

CALIBRATION TEST RESULTS

Measured Values on Unit Under Calibration (M)	Ref. Standard Values (A)	Deviation (D=M-A)	Full Scale Error %
bar	bar	bar	%
0	0.00	0.00	0.0
1.0	1.00	0.00	0.0
2.0	2.01	-0.01	-0.2
3.0	3.01	-0.01	-0.2
4.0	4.02	-0.02	-0.5

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

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

CALIBRATED BY  Hussein Alaa	REVIEWED & APPROVED BY LAB INCHARGE  LAB INCHARGE Asjad Rafiq	CLIENT
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Certificate of Calibration

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Date of Issue: October 20, 2023

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REQUEST NUMBER : By Contract	CUSTOMER DETAILS
JOB NUMBER : QC/JN/23/00358	Name : Tareek Al-Salem
CERTIFICATE NUMBER : QC231020-02	Address : District Zubair-South Iraq

Description : **Pressure Gauge**
 Manufacturer : PAKKENS
 Model : EN837-1
 Serial Number : **A1354**
 Location : **Vehicle Identification Number : NP9DTS03WK1113187**
 Type : Analog
 Range : 0 to 6 bar
 Calibrated Range : 0 to 6 bar
 Resolution : 0.5 bar
 Accuracy : NA
 Tolerance : ± 1.0 % of Full Scale
 As found : In Tolerance
 Calibration Date : October 20, 2023
Calibration Due : 19 October 2024
 Last Calibration : NA



DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : 35.0 ± 2°C Humidity : 30.0 ± 5 % RH Atm. Pressure 1011.0 ± 10 hPa

CALIBRATION METHOD

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01
 The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

DESCRIPTION	SERIAL NO.	MAKE / MODEL	CALIBRATION DATE	CALIBRATION DUE DATE
Digital Pressure Gauge	468802	AMETEK / XP2i	20 Dec, 2022	19 Dec, 2023

CALIBRATION TEST RESULTS

Measured Values on Unit Under Calibration (M)	Ref. Standard Values (A)	Deviation (D=M-A)	Full Scale Error %
bar	bar	bar	%
0	0.00	0.00	0.0
1.5	1.52	-0.02	-0.3
3.0	3.02	-0.02	-0.3
4.5	4.52	-0.02	-0.3
6.0	6.03	-0.03	-0.5

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

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

CALIBRATED BY  Hussein Alaa	REVIEWED & APPROVED BY LAB INCHARGE  LAB INCHARGE Asjad Rafiq	CLIENT
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Date of Issue: October 20, 2023

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REQUEST NUMBER : By Contract	CUSTOMER DETAILS
JOB NUMBER : QC/JN/23/00358	Name : Tareek Al-Salem
CERTIFICATE NUMBER : QC231020-03	Address : District Zubair-South Iraq

Description : **Pressure Gauge**
 Manufacturer : TSE
 Model : EN837-1
 Serial Number : **A1355**
 Location : **Vehicle Identification Number : NP9DTS03WK1113187**
 Type : Analog
 Range : 0 to 6 bar
 Calibrated Range : 0 to 6 bar
 Resolution : 0.05 bar
 Accuracy : NA
 Tolerance : ± 1.0 % of Full Scale
 As found : In Tolerance
 Calibration Date : October 20, 2023
Calibration Due : 19 October 2024
 Last Calibration : NA



DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : 35.0 ± 2°C Humidity : 30.0 ± 5 % RH Atm. Pressure 1011.0 ± 10 hPa

CALIBRATION METHOD

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01

The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

DESCRIPTION	SERIAL NO.	MAKE / MODEL	CALIBRATION DATE	CALIBRATION DUE DATE
Digital Pressure Gauge	468802	AMETEK / XP2i	20 Dec, 2022	19 Dec, 2023

CALIBRATION TEST RESULTS

Measured Values on Unit Under Calibration (M)	Ref. Standard Values (A)	Deviation (D=M-A)	Full Scale Error %
bar	bar	bar	%
0	0.00	0.00	0.0
1.5	1.51	-0.01	-0.2
3.0	3.02	-0.02	-0.3
4.5	4.52	-0.02	-0.3
6.0	6.02	-0.02	-0.3

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

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

CALIBRATED BY  Hussein Alaa	REVIEWED & APPROVED BY LAB INCHARGE  LAB INCHARGE Asjad Rafiq	CLIENT
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Date of Issue: October 20, 2023

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REQUEST NUMBER	: By Contract	CUSTOMER DETAILS	
JOB NUMBER	: QC/JN/23/00358	Name	Tareek Al-Salem
CERTIFICATE NUMBER	: QC240702-04	Address	District Zubair-South Iraq

EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : **Pressure Relief Valve**
 Manufacturer : NA
 Model : NA
 Serial Number : B1348
 Location : **Vehicle Identification Number : 005**
 Set/Pressure : 36 psi
 Tolerance : ± 2 psi
 As Found : In Tolerance
 Calibration Date : October 20, 2023
Calibration Due : 19 October 2024
 Last Calibration : NA



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ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : 35.0 ± 2°C Humidity : 30.0 ± 5 % RH Atm. Pressure : 1011.0 ± 10 hPa

CALIBRATION METHOD

Standard Method API 527 was used to test the unit under test. Test pressure was applied on inlet of unit under test and test was repeated 3 times. Identical repeatings were carried out as recommended in used standard.

REFERENCE EQUIPMENT USED

DESCRIPTION	SERIAL NO.	MAKE / MODEL	CALIBRATION DATE	CALIBRATION DUE DATE
Digital Pressure Gauge	1505119397	Sino Instruments / HS108	20 Dec, 2022	19 Dec, 2023

CALIBRATION TEST RESULTS

Set Pressure on Unit Under Calibration (M)	Ref. Standard Values (A)	Deviation (D=M-A)	Tolerance Limit
psi	psi	psi	± psi
36	36.3	-0.3	2.0

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

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

CALIBRATED BY  Hussein Alaa	REVISED & APPROVED BY  LAB INCHARGE Asjad Rafiq	CLIENT
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REQUEST NUMBER	: By Contract	CUSTOMER DETAILS	
JOB NUMBER	: QC/JN/23/00358	Name	Tareek Al-Salem
CERTIFICATE NUMBER	: QC240702-05	Address	District Zubair-South Iraq

EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : **Pressure Relief Valve**
 Manufacturer : NOV
 Model : 800 Series
 Serial Number : B1351
 Location : **Vehicle Identification Number : NP9DTS03WK1113187**
 Set/Pressure : 36 psi
 Tolerance : ± 2 psi
 As Found : In Tolerance
 Calibration Date : October 20, 2023
Calibration Due : 19 October 2024
 Last Calibration : NA



ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : 35.0 ± 2°C Humidity : 30.0 ± 5 % RH Atm. Pressure : 1011.0 ± 10 hPa

CALIBRATION METHOD

Standard Method API 527 was used to test the unit under test. Test pressure was applied on inlet of unit under test and test was repeated 3 times. Identical repeatings were carried out as recommended in used standard.

REFERENCE EQUIPMENT USED

DESCRIPTION	SERIAL NO.	MAKE / MODEL	CALIBRATION DATE	CALIBRATION DUE DATE
Digital Pressure Gauge	1505119397	Sino Instruments / HS108	20 Dec, 2022	19 Dec, 2023

CALIBRATION TEST RESULTS

Set Pressure on Unit Under Calibration (M)	Ref. Standard Values (A)	Deviation (D=M-A)	Tolerance Limit
psi	psi	psi	± psi
36	36.3	-0.3	2.0

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

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

CALIBRATED BY	REVIEWED & APPROVED BY / LAB INCHARGE	CLIENT
 Hussein Alaa	 LAB INCHARGE Asjad Rafiq	

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Date of Issue: October 20, 2023

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REQUEST NUMBER	: By Contract	CUSTOMER DETAILS	
JOB NUMBER	: QC/JN/23/00358	Name	Tareek Al-Salem
CERTIFICATE NUMBER	: QC240702-06	Address	District Zubair-South Iraq

EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : **Pressure Relief Valve**
 Manufacturer : NOV
 Model : 800 Series
 Serial Number : B1352
 Location : **Vehicle Identification Number : NP9DTS03WK1113187**
 Set/Pressure : 36 psi
 Tolerance : ± 2 psi
 As Found : In Tolerance
 Calibration Date : October 20, 2023
Calibration Due : 19 October 2024
 Last Calibration : NA



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ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : 35.0 ± 2°C Humidity : 30.0 ± 5 % RH Atm. Pressure : 1011.0 ± 10 hPa

CALIBRATION METHOD

Standard Method API 527 was used to test the unit under test. Test pressure was applied on inlet of unit under test and test was repeated 3 times. Identical repeatings were carried out as recommended in used standard.

REFERENCE EQUIPMENT USED

DESCRIPTION	SERIAL NO.	MAKE / MODEL	CALIBRATION DATE	CALIBRATION DUE DATE
Digital Pressure Gauge	1505119397	Sino Instruments / HS108	20 Dec, 2022	19 Dec, 2023

CALIBRATION TEST RESULTS

Set Pressure on Unit Under Calibration (M)	Ref. Standard Values (A)	Deviation (D=M-A)	Tolerance Limit
psi	psi	psi	± psi
36	36.5	-0.5	2.0

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

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

CALIBRATED BY  Hussein Alaa	REVISED & APPROVED BY  LAB INCHARGE Asjad Rafiq	CLIENT
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