

AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-001
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	GATE VALVE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO.:	106294-1-1-1

INSPECTION DETAILS

Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

(a) Normal condition
(b) Corrosion present on back surface

A: 12'O CLOCK / FORWARD
B: 3'O CLOCK / CENTER
C: 6'O CLOCK / AFT

* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.423	1.456	2.941	2.973	1.290	2.650	2.460
90°	1.430	1.444	2.927	2.903	1.290	2.650	2.460
180°	1.437	1.455	2.979	2.937	1.290	2.650	2.460
270°	1.446	1.462	2.940	2.969	1.290	2.650	2.460

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS

INSPECTOR NAME:	M. Shabir Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	SI, LF, PT, UT, VT	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	

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CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-002
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	GATE VALVE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-1-2
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

(a) Normal condition
 (b) Corrosion present on back surface.
 Reflection echo become wide small by different reflection caused by corroded scabrous surface.

A:12'O CLOCK / FORWARD
 B:3'O CLOCK / CENTER
 C:6'O CLOCK / AFT

* ALL READINGS IN INCH
 **MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.415	1.451	2.936	2.904	1.290	2.650	2.460
90°	1.427	1.441	2.914	2.882	1.290	2.650	2.460
180°	1.434	1.452	2.874	2.823	1.290	2.650	2.460
270°	1.438	1.454	2.913	2.942	1.290	2.650	2.460

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709
U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)
Pressure Test-The Above Item was Pressure Tested up to 300 PSI a low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS					
INSPECTOR NAME:	M. SHAIKH	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT LEVEL II MT,PT,UT,VT,	INSPECTION SUPERVISOR:	HANI ALI	HRDESIGN	
SIGNATURE & STAMP:				DATE:	



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-003
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	GATE VALVE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-1-3
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

(a) Normal condition
 (b) Corrosion present on back surface.
 Reflection echo become wide small by diffused reflection caused by corroded scabrous surface.

SECTION-1
SECTION-2
SECTION-3

A:12'O CLOCK / FORWARD
 B:3'O CLOCK / CENTER
 C:6'O CLOCK / AFT

* ALL READINGS IN INCH
 **MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.432	1.460	2.945	2.884	1.290	2.650	2.460
90°	1.444	1.458	2.931	2.899	1.290	2.650	2.460
180°	1.451	1.469	2.883	2.841	1.290	2.650	2.460
270°	1.455	1.461	2.920	2.934	1.290	2.650	2.460

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI a low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M.Shabbad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	UT,VT,MPI	INSPECTION SUPERVISOR:	HANI ALI	HRDESIGN
SIGNATURE & STAMP:				DATE:



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-004
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	GATE VALVE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-1-4
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

(a) Normal condition
 (b) Corrosion present on back surface.
 Reflection echo become wide small by diffused reflection caused by corroded scabrous surface.

A:12'O CLOCK / FORWARD
 B:3'O CLOCK / CENTER
 C:6'O CLOCK / AFT

* ALL READINGS IN INCH
 **MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.416	1.444	2.915	2.854	1.290	2.650	2.460
90°	1.428	1.442	2.906	2.874	1.290	2.650	2.460
180°	1.435	1.453	2.888	2.846	1.290	2.650	2.460
270°	1.439	1.445	2.904	2.916	1.290	2.650	2.460

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI a low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M. Shabbir Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	ASME SECTION V MPI,PT,UT,VT	INSPECTION SUPERVISOR:	HANI ALI	HR DESIGN
SIGNATURE & STAMP:				DATE:



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-005
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	GATE VALVE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-1-5
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

Reflection echo become wide small by diffused reflection caused by corroded scabrous surface.

SECTION-1, SECTION-2, SECTION-3

A:12'O CLOCK / FORWARD
 B:3'O CLOCK / CENTER
 C:6'O CLOCK / AFT

* ALL READINGS IN INCH
 **MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.443	1.471	2.942	2.881	1.290	2.650	2.460
90°	1.455	1.469	2.933	2.901	1.290	2.650	2.460
180°	1.462	1.480	2.915	2.873	1.290	2.650	2.460
270°	1.466	1.472	2.931	2.943	1.290	2.650	2.460

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI a low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M. Shabbad Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	SI A LE 3101-01-01-PT,UT,VT,	INSPECTION SUPERVISOR:	HANI ALI	HRDESIGN
SIGNATURE & STAMP:				DATE:

CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-006
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	GATE VALVE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-1-6
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

(a) Normal condition
 (b) Corrosion present on back surface.
 Reflection echo become wide small by diffused reflection caused by corroded scabrous surface.

A: 12'O CLOCK / FORWARD
 B: 3'O CLOCK / CENTER
 C: 6'O CLOCK / AFT

* ALL READINGS IN INCH
 **MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.436	1.453	2.924	2.863	1.290	2.650	2.460
90°	1.450	1.462	2.926	2.894	1.290	2.650	2.460
180°	1.457	1.472	2.897	2.854	1.290	2.650	2.460
270°	1.448	1.455	2.914	2.925	1.290	2.650	2.460

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI a low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M. Shalwad Ahmad	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	NDT Level 2 UT, VT,	INSPECTION SUPERVISOR:	HANI ALI	HR DESIGN
SIGNATURE & STAMP:				DATE:



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-007
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	GATE VALVE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-1-7
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

(a) Normal condition
 (b) Corrosion present on back surface.
 Reflection echo become wide small by diffused reflection caused by corroded scabrous surface.

A: 12'O CLOCK / FORWARD
 B: 3'O CLOCK / CENTER
 C: 6'O CLOCK / AFT

* ALL READINGS IN INCH
 **MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.424	1.443	2.914	2.856	1.290	2.650	2.460
90°	1.438	1.450	2.914	2.882	1.290	2.650	2.460
180°	1.445	1.460	2.887	2.844	1.290	2.650	2.460
270°	1.436	1.443	2.902	2.913	1.290	2.650	2.460

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI a low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	ASNT LEVEL II MET PT	INSPECTION SUPERVISOR:	HANI ALI	HRDESIGN
SIGNATURE & STAMP:				DATE:



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-008
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	GATE VALVE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-1-8
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

(a) Normal condition
 (b) Corrosion present on back surface.
 Reflection echo become wide small by diffused reflection caused by corroded scabrous surface.

SECTION-1
SECTION-2
SECTION-3

A:12'O CLOCK / FORWARD
 B:3'O CLOCK / CENTER
 C:6'O CLOCK / AFT

ONLINE TRACEABILITY

* ALL READINGS IN INCH
 **MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.438	1.458	2.870	2.838	1.290	2.650	2.460
90°	1.452	1.464	2.928	2.896	1.290	2.650	2.460
180°	1.463	1.475	2.902	2.859	1.290	2.650	2.460
270°	1.452	1.461	2.920	2.931	1.290	2.650	2.460

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation
 (MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709
 U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)
 Pressure Test-The Above Item was Pressure Tested up to 300 PSI a low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M. Shahrad Ahmadi	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	NDT Level 2 (UT, VT, MPI)	INSPECTION SUPERVISOR:	HANI ALI	HR DESIGN:
SIGNATURE & STAMP:				DATE:

**AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED**

Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-009
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	BLOCK 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-2-1
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

A:12'O CLOCK / FORWARD
B:3'O CLOCK / CENTER
C:6'O CLOCK / AFT

* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

(a) Normal condition: Large reflection echo, Area of diffused echo, Detector, Surface, Target.

(b) Corrosion present on back surface: Small reflection echo, Area of diffused echo, Detector, Surface, Target.

(c) Corroded condition: Reflection echo become wide small by diffused reflection caused by corroded surface.

POINTS	THICKNESS AT POSITION			MINIMUM THICKNESS
	A	B	C	
0°	4.882	4.950	4.963	4.720
90°	4.889	4.892	4.893	
180°	4.903	4.926	4.983	
270°	4.921	4.929	4.938	

INSPECTION RESULT			
VT & MPI	Accepted	* ACCORDING TO ASTM E709	
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)	
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria	

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN.2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURER	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M. Sushbad Alhamdani	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	SAFETY, NDT, VT, UT	INSPECTION SUPERVISOR:	HANI ALI	HR&SIGN
SIGNATURE & STAMP:				DATE:

**AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED**

Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-010
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	BLOCK 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-9-2
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

A:12'O CLOCK / FORWARD
B:3'O CLOCK / CENTER
C:6'O CLOCK / AFT

* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

(a) Normal condition: Large reflection echo, Area of diffused echo, Detector, Surface, Target.

(b) Corrosion present on back surface: Small reflection echo, Area of diffused echo, Detector, Surface, Target. Reflection echo become wide small by diffused reflection caused by corroded surface.

POINTS	THICKNESS AT POSITION			MINIMUM THICKNESS
	A	B	C	
0°	4.878	4.923	4.936	4.720
90°	4.890	4.893	4.894	
180°	4.904	4.927	4.956	
270°	4.897	4.905	4.914	

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN.2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURER	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M. Sushvaid Alhamdani	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	SAFETY, NDT, VT, UT	INSPECTION SUPERVISOR:	HANI ALI	HR&SIGN
SIGNATURE & STAMP:				DATE:

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**AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED**

Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-011
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	BLOCK 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-7-1
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

A:12'O CLOCK / FORWARD
B:3'O CLOCK / CENTER
C:6'O CLOCK / AFT

* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION			MINIMUM THICKNESS
	A	B	C	
0°	4.858	4.926	4.939	4.720
90°	4.870	4.873	4.874	
180°	4.884	4.907	4.959	
270°	4.886	4.894	4.903	

INSPECTION RESULT			
VT & MPI	Accepted	* ACCORDING TO ASTM E709	
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)	
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria	

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURER	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS					
INSPECTOR NAME:	M. Sushvaid Alhamdani	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	SAFETY, NDT, UT, VT, PT	INSPECTION SUPERVISOR:	HANI ALI	HR&SIGN	
SIGNATURE & STAMP:				DATE:	



**AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED**

Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-012
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	BLOCK 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-9-1
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

A:12'O CLOCK / FORWARD
B:3'O CLOCK / CENTER
C:6'O CLOCK / AFT

* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION			MINIMUM THICKNESS
	A	B	C	
0°	4.854	4.922	4.935	4.720
90°	4.861	4.864	4.865	
180°	4.875	4.898	4.955	
270°	4.893	4.901	4.910	

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURER	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M. Sushbad Alhamdani	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	SAFETY, NDT, UT, VT, PT	INSPECTION SUPERVISOR:	HANI ALI	HR&SIGN
SIGNATURE & STAMP:				DATE:

CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON		REPORT No.:	QC-24-05-TSS-NDT-013			
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA		STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75			
WORK ORDER #	326589885						
DATE OF INSP:	Monday, May 13, 2024		INSP. DUE DATE:	Monday, May 12, 2025			
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING						
DESCRIPTION:	POSITIVE CHOKE 3 1/16" 15K	CHOKE MANIFOLD #	11483766				
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-5-1				
INSPECTION DETAILS							
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min				
Low pressure:	300 PSI	Holding Time:	05 Min				
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025				
<p>A:12'O CLOCK / FORWARD B:3'O CLOCK / CENTER C:6'O CLOCK / AFT</p> <p>* ALL READINGS IN INCH **MINIMUM THICKNESS PROVIDED BY CUSTOMER</p>							
POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS		
		SECTION 1	SECTION 2	SECTION 1	SECTION 2		
	0°	1.567	1.618	1.360 INCH	1.360 INCH		
	90°	1.579	1.610				
	180°	1.593	1.605				
270°	1.585	1.597					
INSPECTION RESULT							
VT & MPI	Accepted	* ACCORDING TO ASTM E709					
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)					
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria					
Inspection Evaluation							
(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709							
U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)							
Pressure Test-The Above Item was Pressure Tested up to 300 PSI a low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached							
INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURER	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						
PERSON DETAILS							
INSPECTOR NAME:	M. Shaheed Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:			
QUALIFICATION:	ASNT CP-1, UT II, ASME SECTION V	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN			
SIGNATURE & STAMP:				DATE:			

CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST
THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-014
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	ADJUSTABLE CHOKE 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	106294-1-4-1
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

(a) Normal condition
(b) Corrosion present on back surface

Reflection echo become wide small by diffused reflection caused by corroded scabrous surface.

A:12'O CLOCK / FORWARD
B:3'O CLOCK / CENTER
C:6'O CLOCK / AFT

* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

ONLINE TRACEABILITY

POINTS	THICKNESS AT POSITION		MINIMUM THICKNESS	
	SECTION 1	SECTION 2	SECTION 1	SECTION 2
0°	1.552	1.603	1.360 INCH	1.360 INCH
90°	1.564	1.595		
180°	1.578	1.590		
270°	1.570	1.582		

INSPECTION RESULT		
VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709
U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)
Pressure Test-The Above Item Was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS				
INSPECTOR NAME:	M. Shaheed Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	ASNT CP-1, UT II, VT II, MPI II, PT II	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN
SIGNATURE & STAMP:				DATE:



AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

Basra, North Rumaila, Quality Control Yard - Iraq

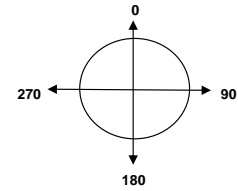
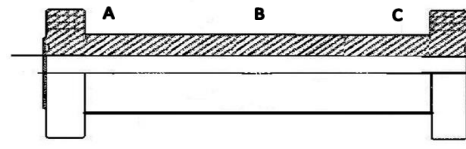
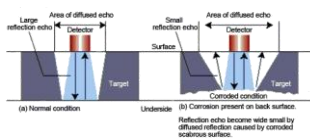


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-015
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	SPOOL 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	22051-1
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025



* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	THICKNESS AT POSITION			MINIMUM THICKNESS
	A	B	C	
0°	1.781	1.808	1.821	1.425 INCH
90°	1.788	1.791	1.792	
180°	1.802	1.807	1.790	
270°	1.820	1.808	1.817	

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS

INSPECTOR NAME:	M.Shanzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	AI, UT, VT, MPI, PT, ET, RT, T, S, W, X, Y, Z	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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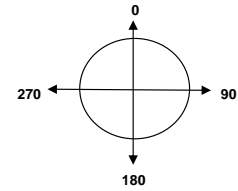
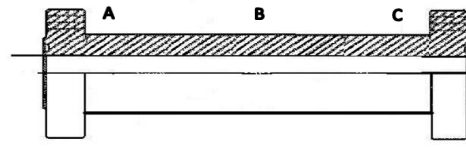
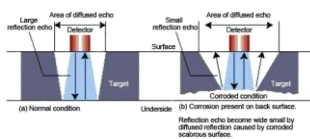


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-016
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589885		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	SPOOL 3 1/16" 15K	CHOKE MANIFOLD #	11483766
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	M36031-1
INSPECTION DETAILS			
Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025



A:12'O CLOCK / FORWARD
B:3'O CLOCK / CENTER
C :6'O CLOCK / AFT

* ALL READINGS IN INCH
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	THICKNESS AT POSITION			MINIMUM THICKNESS
	A	B	C	
0°	1.772	1.794	1.805	1.425 INCH
90°	1.779	1.782	1.783	
180°	1.793	1.798	1.776	
270°	1.811	1.797	1.806	

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709
U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)
Pressure Test-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS



AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						


PERSON DETAILS

INSPECTOR NAME:	M.Shanzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	AI	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	





CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION


Client:	HALLIBURTON (TSS)	Report No:	QC-24-05-TSS-NDT-017
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	326589885
Date:	Monday, May 13, 2024	Next Inspection Date:	Monday, May 12, 2025
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION	Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A
		UNIT DESCRIPTION:	BLIND FLANGE 3 1/16" 15K
		UNIT S/N:	M33867-10
		CHOKE MANIFOLD S/N:	11483766
		INSPECTION RESULT :	
		VISUAL , THOROUGH EXAMINATION	VISUAL & MAGNETIC PARTICLE INSPECTION (M.P.I.) HAD BEEN DONE ON THE AVAILABLE AREAS FOR THE ABOVE DESCRIPTION
		MAGNETIC PARTICLE INSPECTION	Available critical areas inspected and found free from cracks and other defects
		FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED
COMMENT:			
Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast			

EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY	
Equipment:	AC-Yoke Test Block	Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke	INSPECTOR NAME: M.Shahzad Ahmed		SENIOR INSPECTOR:	NAVEED HUSSAIN
S.No:	1657	S.No:	2722003	S.No:	201504052			QUALIFICATION ASNT LEVEL II MT & PT & VT	SUPERVISOR:
Cal Due Date:	12-Aug-24	Cal Due Date:	14-Aug-24	Cal Due Date:	12-Aug-24	CLIENT:			
Black Magnetic Ink Manufacture:	Magnaflux	Batch No:	220605	Expiry Date:	JULY.2025				
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	Expiry Date:	JUN,2025				
Technical Details:	Magnetic Partical Concentration		Method		WMPT Light Intensity	STAMP & SIGNATURE:			
	1.2 to 2.4 ml/100 ml		Wet Magnetic Particle Testing (WMPT)		3620 Lux				

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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALLIBURTON (TSS)	Report No:	QC-24-05-TSS-NDT-018
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	326589885
Date:	Monday, May 13, 2024	Next Inspection Date:	Monday, May 12, 2025
Type Of Inspection:	VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION	Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A
		UNIT DESCRIPTION:	BLIND FLANGE 3 1/16" 15K
		UNIT S/N:	M33867-7
		CHOKE MANIFOLD S/N:	11483766
		INSPECTION RESULT :	
		VISUAL , THOROUGH EXAMINATION	VISUAL & MAGNETIC PARTICLE INSPECTION (M.P.I.) HAD BEEN DONE ON THE AVAILABLE AREAS FOR THE ABOVE DESCRIPTION
		MAGNETIC PARTICLE INSPECTION	Available critical areas inspected and found free from cracks and other defects
		FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED
COMMENT:			
		Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast	

EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY	
Equipment:	AC-Yoke Test Block	Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke	INSPECTOR NAME: M.Shahzad Ahmed		SENIOR INSPECTOR:	NAVEED HUSSAIN
S.No:	1657	S.No:	2722003	S.No:	201504052			QUALIFICATION ASNT LEVEL II MT & PT & VT	SUPERVISOR:
Cal Due Date:	12-Aug-24	Cal Due Date:	14-Aug-24	Cal Due Date:	12-Aug-24	STAMP & SIGNATURE:		CLIENT:	
Black Magnetic Ink Manufacture:	Magnaflux	Batch No:	220605	Expiry Date:	JULY.2025				
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	Expiry Date:	JUN,2025				
Technical Details:	Magnetic Partical Concentration		Method		WMPT Light Intensity				
	1.2 to 2.4 ml/100 ml		Wet Magnetic Particle Testing (WMPT)		3620 Lux				

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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALLIBURTON (TSS)	Report No:	QC-24-05-TSS-NDT-019
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	326589885
Date:	Monday, May 13, 2024	Next Inspection Date:	Monday, May 12, 2025
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION	Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A
		UNIT DESCRIPTION:	BLIND FLANGE 3 1/16" 15K
		UNIT S/N:	M33867-1
		CHOKE MANIFOLD S/N:	11483766
		INSPECTION RESULT :	
		VISUAL , THOROUGH EXAMINATION	VISUAL & MAGNETIC PARTICLE INSPECTION (M.P.I.) HAD BEEN DONE ON THE AVAILABLE AREAS FOR THE ABOVE DESCRIPTION
		MAGNETIC PARTICLE INSPECTION	Available critical areas inspected and found free from cracks and other defects
		FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED
COMMENT:			
Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast			
EQUIPMENT DETAILS			
Equipment:	AC-Yoke Test Block	Equipment:	Digital Lux Meter
S.No:	1657	S.No:	2722003
Cal Due Date:	12-Aug-24	Cal Due Date:	14-Aug-24
Black Magnetic Ink Manufacture:	Magnaflux	Batch No:	220605
		Expiry Date:	JULY.2025
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602
		Expiry Date:	JUN,2025
Technical Details:	Magnetic Partical Concentration	Method	WMPT Light Intensity
	1.2 to 2.4 ml/100 ml	Wet Magnetic Particle Testing (WMPT)	3620 Lux
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Original - Client Files Copy - Area Office QC/FN/MPI/065 Rev.00 DATED 07 NOV 2021			
PERSON DETAILS		REVIEW BY	
INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN
QUALIFICATION	ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
STAMP & SIGNATURE:		CLIENT:	

AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-TSS-NDT-020
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & ASME SECTION V ARTICLE 5,10 & 27 & ASME B31.1, H2S STANDARD NACE MQ-01-75
WORK ORDER #	326589886		
DATE OF INSP:	Monday, May 13, 2024	INSP. DUE DATE:	Monday, May 12, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION, PRESSURE TEST AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	DATA HEADER 3 1/16" 15K	SAP NO:	11483044
MANUFACTURER:	WORD WIDE OIL FIELD	SERIAL NO:	101869560

INSPECTION DETAILS

Max. Working Pressure:	15,000 PSI	Holding Time:	19 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	218230280019 Cal DUE. MARCH.2025

A: 12'O CLOCK / FORWARD
 B: 3'O CLOCK / CENTER
 C: 6'O CLOCK / AFT

* ALL READINGS IN INCH
 **MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	THICKNESS AT POSITION			MINIMUM THICKNESS
	A	B	C	
0°	1.623	1.674	1.793	1.425 INCH
90°	1.630	1.633	1.732	
180°	1.644	1.667	1.781	
270°	1.662	1.670	1.772	

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASME SECTION V ARTICLE 5 (ASTM E 797)
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASME SECTION V ARTICLE 5 (ASTM E 797)

Pressure Test-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 15.000 psi Hold 19 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

AC YOKE S.N:	201504052	CAL DUE DATE	12-Aug-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS

INSPECTOR NAME:	M.Shanzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	AI, UT, VT, MPI, PT, ET, RT, T, S, W, X, Y, Z	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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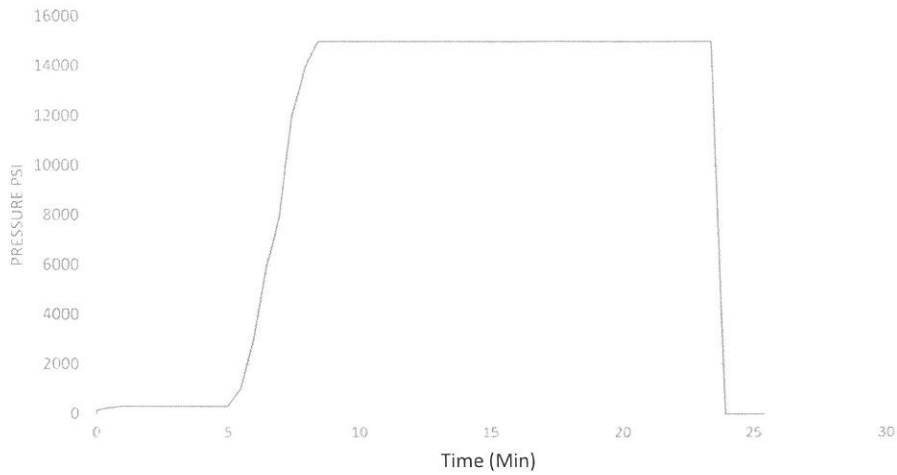


Data Collection Report

Gauge Information	
Serial Number	218230280019
Model	ADT680W-25-GP30K-PSI-AM
Message Store	TSS test area
Units	PSI
SCALE	30000 PSI

Run Info	
Start Time	10:00 AM
Stop Time	10:24 AM
Test Date	13-May-24
EQ NUMBER	11483766
LAST CALIB	7-Mar-24

READING



TESTED BY : Feras Abbas
APPROVED BY: Hassan Kamel
COMMENTS: Body Test

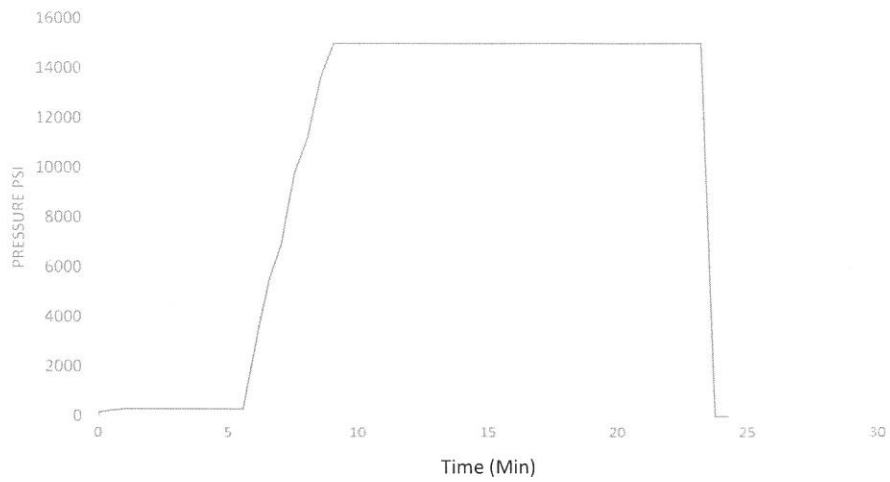


Data Collection Report

Gauge Information	
Serial Number	218230280019
Model	ADT680W-25-GP30K-PSI-AM
Message Store	TSS test area
Units	PSI
SCALE	30000 PSI

Run Info	
Start Time	10:30 AM
Stop Time	10:54 AM
Test Date	13-May-24
EQ NUMBER	11483766
LAST CALIB	7-Mar-24

READING



TESTED BY : Feras Abbas
APPROVED BY: Hassan Kamel
COMMENTS: Upstream

SIGN: 

SIGN: 

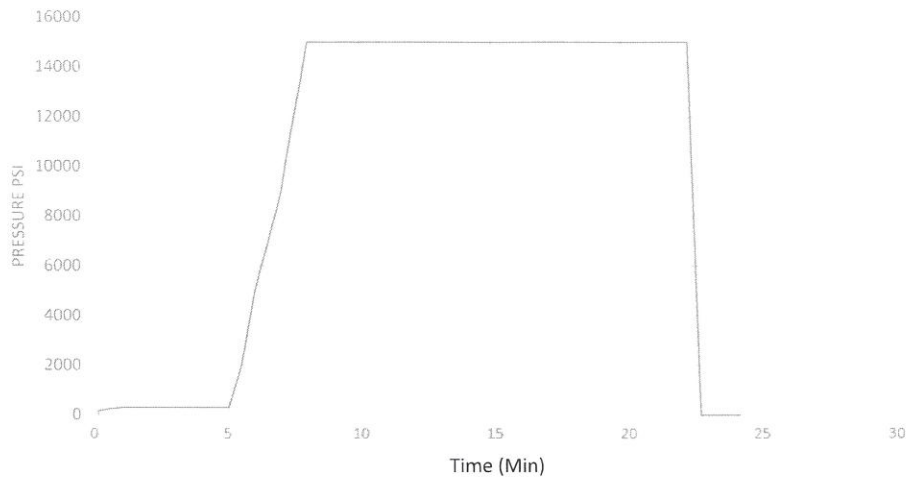


Data Collection Report

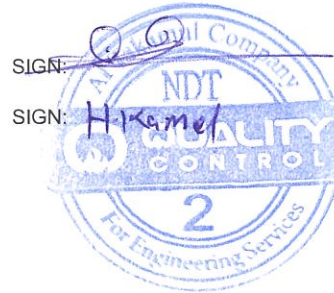
Gauge Information	
Serial Number	218230280019
Model	ADT680W-25-GP30K-PSI-AM
Message Store	TSS test area
Units	PSI
SCALE	30000 PSI

Run Info	
Start Time	11:00 AM
Stop Time	11:24 AM
Test Date	13-May-24
EQ NUMBER	11483766
LAST CALIB	7-Mar-24

READING



TESTED BY : Feras Abbas
APPROVED BY: Hassan Kamel
COMMENTS: Downstream

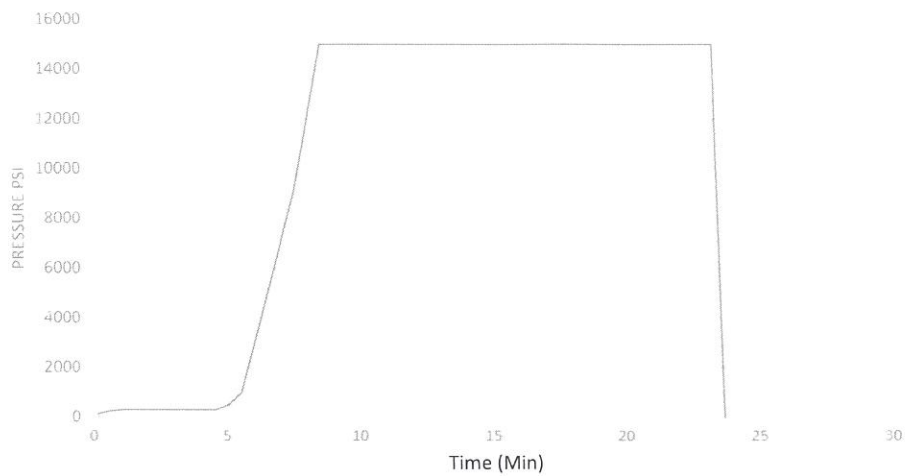


Data Collection Report

Gauge Information	
Serial Number	218230280019
Model	ADT680W-25-GP30K-PSI-AM
Message Store	TSS test area
Units	PSI
SCALE	30000 PSI

Run Info	
Start Time	11:30 AM
Stop Time	11:54 AM
Test Date	13-May-24
EQ NUMBER	11483766
LAST CALIB	7-Mar-24

READING



TESTED BY : Feras Abbas
APPROVED BY: Hassan Kamel
COMMENTS: Downstream stream valve from Upstream

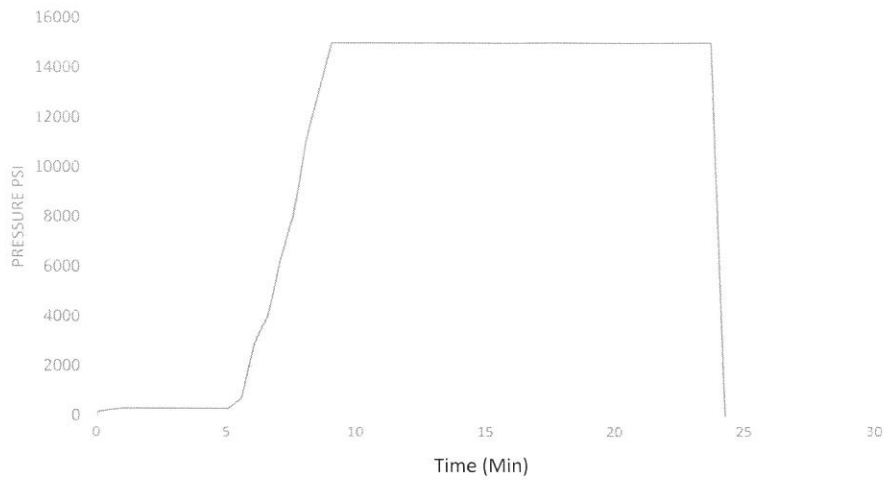


Data Collection Report

Gauge Information	
Serial Number	218230280019
Model	ADT680W-25-GP30K-PSI-AM
Message Store	TSS test area
Units	PSI
SCALE	30000 PSI

Run Info	
Start Time	12:00 AM
Stop Time	12:24 AM
Test Date	13-May-24
EQ NUMBER	11483766
LAST CALIB	7-Mar-24

READING



TESTED BY : Feras Abbas
APPROVED BY: Hassan Kamel
COMMENTS: Upstream valve from Downstream

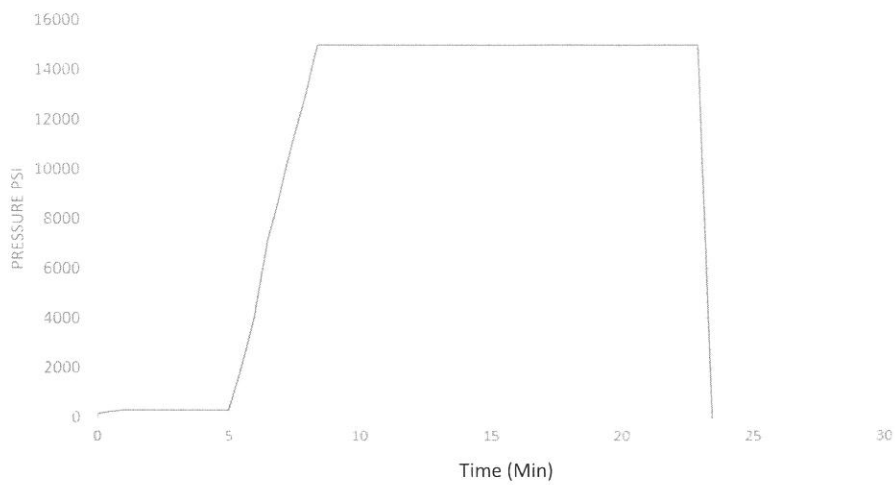


Data Collection Report

Gauge Information	
Serial Number	218230280019
Model	ADT680W-25-GP30K-PSI-AM
Message Store	TSS test area
Units	PSI
SCALE	30000 PSI

Run Info	
Start Time	12:30 AM
Stop Time	12:54 AM
Test Date	13-May-24
EQ NUMBER	11483044
LAST CALIB	7-Mar-24

READING



TESTED BY : Feras Abbas
APPROVED BY: Hassan Kamel
COMMENTS: Data Header test

