

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

Basra, North Rumaila, Quality Control Yard - Iraq



MAJOR INSPECTION CERIFICATE

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-5-6-TSS-NDT-001
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A ASME B31.1
WORK ORDER #	-	JOB NO:	QC-5-06-TSS-NDT-001
DATE OF INSP:	Tuesday, June 4, 2024	INSP. DUE DATE:	ANNUAL INSPECTION
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND PRESSURE TEST WITNESS		

DESCRIPTION:	FLANGE 3" 600 X 3" 206 WING	DIVERTER MANIFOLD SAP NO:	MF-005
		SERIAL NO:	TBB-001

INSPECTION DETAILS

Max. Working Pressure:	1440 PSI	Holding Time:	18 Min
Low pressure:	100 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	468066 Cal DUE. AUG.2024



ONLINE TRACEABILITY

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709 (70.94158)

Note: MPI Wet Fluorescent inspection Thread With Ultra Violet Light

Pressure Test-The Above Item was Pressure Tested to 100 PSI A low Pressure Hold for 5 min And Maximum Working pressure 1440 psi Hold 18 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24		Magnaflux	220602	JUN.2025
DC COIL:	22650	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UV BLACK LIGHT:	1932401	CAL DUE DATE	15-Oct-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
WHITE LIGHT INTENSITY:	3620 lux				Magnaflux	220306	March.2025

PERSON DETAILS

INSPECTOR NAME:	Usman Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	SAIT, L, PT, UT, VT.	INSPECTION SUPERVISOR:	HANI ALI	HB SIGN	
SIGNATURE & STAMP:				DATE:	

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THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-5-6-TSS-NDT-002
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A ASME B31.1
WORK ORDER #	-	JOB NO:	QC-5-06-TSS-NDT-001
DATE OF INSP:	Tuesday, June 4, 2024	INSP. DUE DATE:	ANNUAL INSPECTION
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND PRESSURE TEST WITNESS		

DESCRIPTION:	3" 600 BALON VALVE	DIVERTER MANIFOLD SAP NO:	MF-005
		SERIAL NO:	3CDB

INSPECTION DETAILS

Max. Working Pressure:	1440 PSI	Holding Time:	18 Min
Low pressure:	100 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	468066 Cal DUE. AUG.2024



ONLINE TRACEABILITY

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709 (70.94158)

Pressure Test-The Above Item was Pressure Tested to 100 PSI A low Pressure Hold for 5 min And Maximum Working pressure 1440 psi Hold 18 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24		Magnaflux	220602	JUN.2025
DC COIL:	22650	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UV BLACK LIGHT:	1932401	CAL DUE DATE	15-Oct-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
WHITE LIGHT INTENSITY:	3620 lux				Magnaflux	220306	March.2025

PERSON DETAILS

INSPECTOR NAME:	Umer Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	SRT I H&T,PT,UT,VT,	INSPECTION SUPERVISOR:	HANI ALI	HS&SIGN	
SIGNATURE & STAMP:				DATE:	

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THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-5-6-TSS-NDT-003
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A ASME B31.1
WORK ORDER #	-	JOB NO:	QC-5-06-TSS-NDT-001
DATE OF INSP:	Tuesday, June 4, 2024	INSP. DUE DATE:	ANNUAL INSPECTION
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND PRESSURE TEST WITNESS		
DESCRIPTION:	3" FLANGE 600 CL X 3" FLANGE 600 CL X 3" 206 THREAD	DIVERTER MANIFOLD SAP NO:	MF-005
		SERIAL NO:	HAH-2006-4-1
INSPECTION DETAILS			
Max. Working Pressure:	1440 PSI	Holding Time:	18 Min
Low pressure:	100 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	468066 Cal DUE. AUG.2024
Inspection Evaluation			
(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709 (70.94158) Note: MPI Wet Fluorescent inspection Thread With Ultra Violet Light Pressure Test: The Above Item was Pressure Tested to 100 PSI A low Pressure Hold for 5 min And Maximum Working pressure 1440 psi Hold 18 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached			
INSPECTION EQUIPMENT DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24
DC COIL:	22650	CAL DUE DATE	14-Oct-24
UV BLACK LIGHT:	1932401	CAL DUE DATE	15-Oct-24
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24
WHITE LIGHT INTENSITY:	3620 lux		
TECHNICAL DETAILS			
White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
	Magnaflux	220602	JUN.2025
Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
	Magnaflux	220605	JULY.2025
Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
	Magnaflux	220306	March.2025
PERSON DETAILS			
INSPECTOR NAME:	NAVEED HUSSAIN	SENIOR INSPECTOR:	HANI ALI
QUALIFICATION:	LEVEL II MT, PT, UT, VT,	INSPECTION SUPERVISOR:	
SIGNATURE & STAMP:			

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THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-5-6-TSS-NDT-004
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A ASME B31.1
WORK ORDER #	-	JOB NO:	QC-5-06-TSS-NDT-001
DATE OF INSP:	Tuesday, June 4, 2024	INSP. DUE DATE:	ANNUAL INSPECTION
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND PRESSURE TEST WITNESS		

DESCRIPTION:	3" BALON 600 CL	DIVERTER MANIFOLD SAP NO:	MF-005
		SERIAL NO:	00009

INSPECTION DETAILS

Max. Working Pressure:	1440 PSI	Holding Time:	18 Min
Low pressure:	100 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	468066 Cal DUE. AUG.2024



ONLINE TRACEABILITY

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709 (70.94158)

Pressure Test-The Above Item was Pressure Tested to 100 PSI A low Pressure Hold for 5 min And Maximum Working pressure 1440 psi Hold 18 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24		Magnaflux	220602	JUN.2025
DC COIL:	22650	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UV BLACK LIGHT:	1932401	CAL DUE DATE	15-Oct-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
WHITE LIGHT INTENSITY:	3620 lux				Magnaflux	220306	March.2025

PERSON DETAILS

INSPECTOR NAME:	 Usman shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	AI TSS WORKSHOP & INSPECTION TEST AREA	INSPECTION SUPERVISOR:	HANI ALI	HB SIGN	
SIGNATURE & STAMP:				DATE:	

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THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-5-6-TSS-NDT-005
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A ASME B31.1
WORK ORDER #	-	JOB NO:	QC-5-06-TSS-NDT-001
DATE OF INSP:	Tuesday, June 4, 2024	INSP. DUE DATE:	ANNUAL INSPECTION
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND PRESSURE TEST WITNESS		

DESCRIPTION:	FLANGE 3" 600 CL X 3" 206 WING	DIVERTER MANIFOLD SAP NO:	MF-005
		SERIAL NO:	002

INSPECTION DETAILS

Max. Working Pressure:	1440 PSI	Holding Time:	18 Min
Low pressure:	100 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	468066 Cal DUE. AUG.2024



ONLINE TRACEABILITY

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709 (70.94158)

Note: MPI Wet Fluorescent inspection Thread With Ultra Violet Light

Pressure Test-The Above Item was Pressure Tested to 100 PSI A low Pressure Hold for 5 min And Maximum Working pressure 1440 psi Hold 18 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24		Magnaflux	220602	JUN.2025
DC COIL:	22650	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UV BLACK LIGHT:	1932401	CAL DUE DATE	15-Oct-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
WHITE LIGHT INTENSITY:	3620 lux				Magnaflux	220306	March.2025

PERSON DETAILS

INSPECTOR NAME:	Usman Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	S.N.T, PT, UT, VT,	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	

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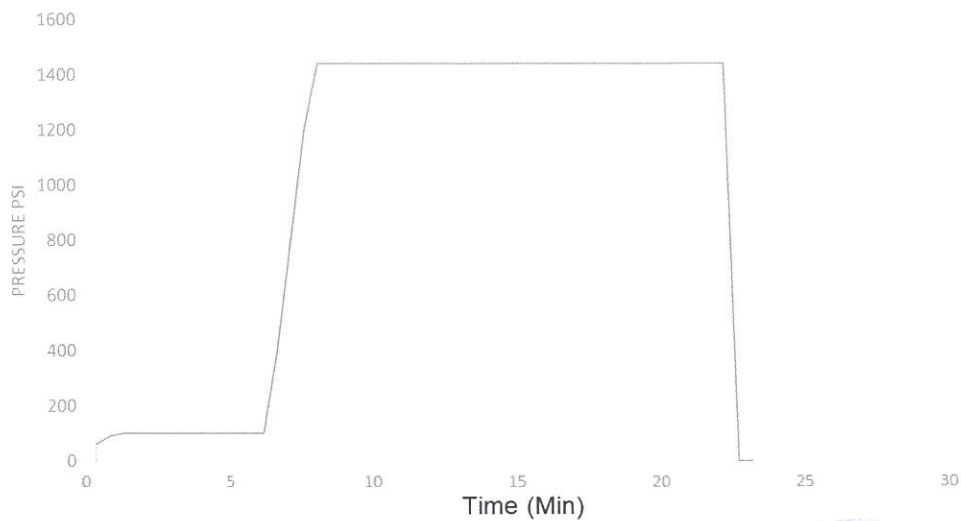


Data Collection Report

Gauge Information	
Serial Number	468066
Model	XP2I
Message Store	TSS test area
Units	PSI
SCALE	15000 PSI

Run Info	
Start Time	11:30 AM
Stop Time	11:54 AM
Test Date	6-Jun-24
EQ NUMBER	MF-005
LAST CALIB	2.Aug.2023

READING



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



Data Collection Report

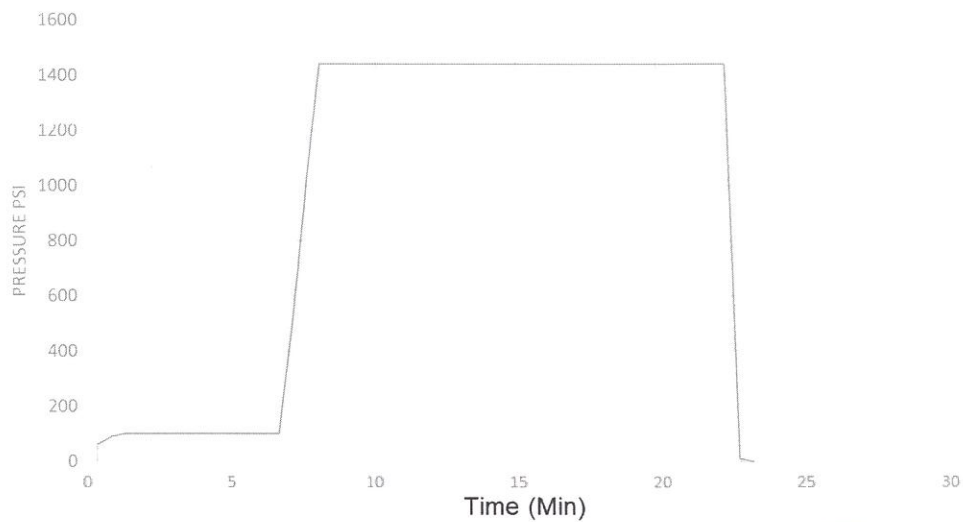
Gauge Information

Serial Number	468066
Model	XP2I
Message Store	TSS test area
Units	PSI
SCALE	15000 PSI

Run Info

Start Time	12:00 PM
Stop Time	12:24 PM
Test Date	6-Jun-24
EQ NUMBER	MF-005
LAST CALIB	2.Aug.2023

READING



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

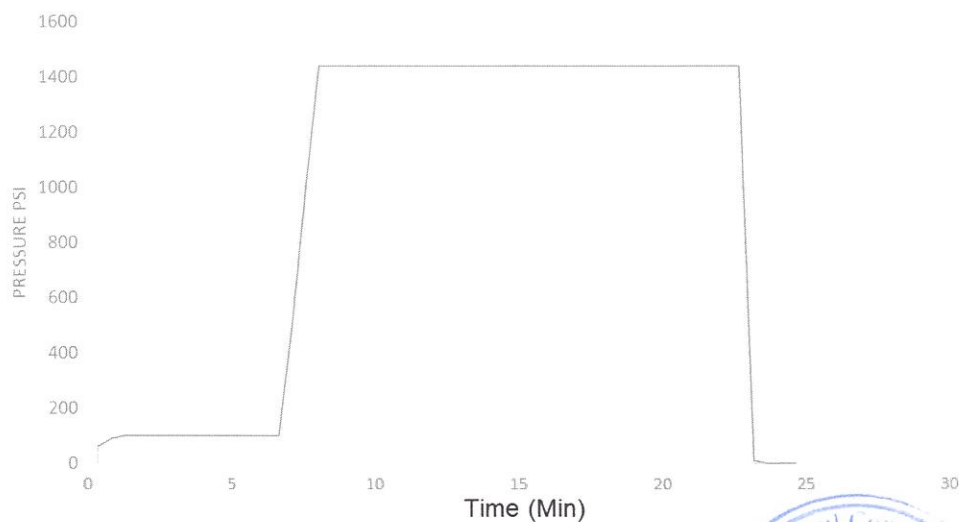


Data Collection Report

Gauge Information	
Serial Number	468066
Model	XP2I
Message Store	TSS test area
Units	PSI
SCALE	15000 PSI

Run Info	
Start Time	12:30 PM
Stop Time	12:54 PM
Test Date	6-Jun-24
EQ NUMBER	MF-005
LAST CALIB	2.Aug.2023

READING



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

