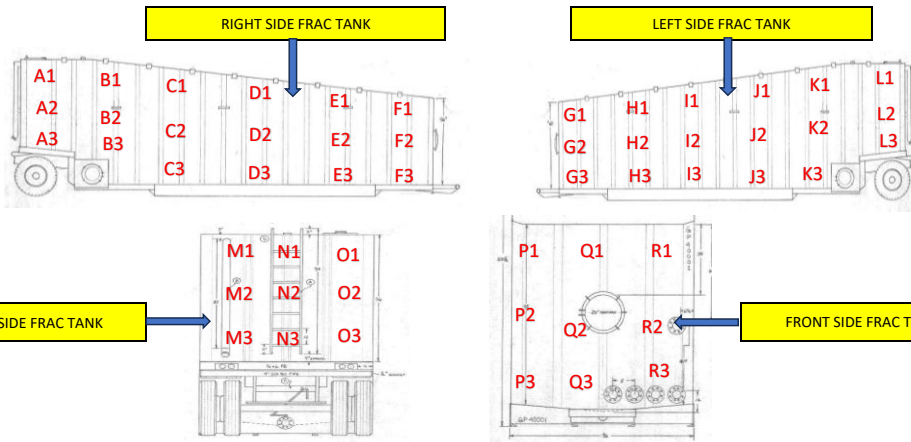


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

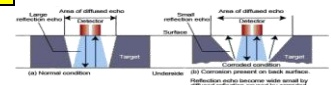
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-88-NDT-002
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	JOB NO :	190924
WORK ORDER #	327063242	SPECIFICATION:	ASTM E709 & ASTM E 797
DATE:	Tuesday, September 17, 2024	INSP. DUE DATE:	Tuesday, September 16, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FRAC TANK 500 BBL	SAP NO.:	12241588
MANUFACTURER:	Alshirawi Equipment Company		

INSPECTION DETAILS



ONLINE TRACEABILITY

* ALL READINGS IN MM
**MINIMUM THICKNESS PROVIDED BY CUSTMER



ANGLE	THICKNESS AT POSITION						MINIMUM THICKNESS	FINAL REMARKS
	A	B	C	D	E	F		
RIGHT SIDE TOP 1	7.73	7.80	7.73	7.59	7.74	7.80	4.67 MM	SATISFACTORY
RIGHT SIDE MIDDEL 2	7.80	7.72	7.77	7.83	7.87	7.79		
RIGHT SIDE BOTTOM 3	7.89	7.91	7.68	7.71	7.63	7.67		
	G	H	I	J	K	L		
LEFT SIDE TOP 1	7.73	7.65	7.70	7.76	7.80	7.72		
LEFT SIDE MIDDEL 2	7.82	7.84	7.79	7.82	7.74	7.78		
LEFT SIDE BOTTOM 3	7.91	7.93	7.53	7.56	7.48	7.52		
	M		N		O			
BACK SIDE TOP 1	8.49		8.57		8.61			
BACK SIDE MIDDEL 2	8.58		8.53		8.41			
BACK SIDE BOTTOM 3	8.67		8.46		8.49			
	P		Q		R			
FRONT SIDE TOP 1	8.65		8.41		8.45			
FRONT SIDE MIDDEL 2	8.74		8.46		8.45			
FRONT SIDE BOTTOM 3	8.52		8.62		8.33			

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	ACCORDING TO ASTM E 797

Inspection Evaluation

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

U.T-The Above Item Was Found Acceptable As Per ASTM E 797

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	15-Oct-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3490 lux						

PERSON DETAILS

INSPECTOR NAME:	Yaman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP/UT	INSPECTION SUPERVISOR:	HANI ALI	DESIGN:	
SIGNATURE & STAMP:				DATE:	

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CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-88-NDT-003
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	JOB NO :	190924
WORK ORDER #	327063242	SPECIFICATION:	ASTM E709 & ASTM E 797
DATE:	Tuesday, September 17, 2024	INSP. DUE DATE:	Tuesday, September 16, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FRAC TANK MANIFOLD	FRAC TANK SAP NO.:	12241588

INSPECTION DETAILS

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

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

ANGLE	THICKNESS AT POSITION					MINIMUM THICKNESS	FINAL REMARKS
	A	B	C	D	E		
0°	9.31	9.40	9.33	9.26	9.31	4.67 MM	SATISFACTORY
90°	9.36	9.28	9.33	9.39	9.43		
180°	9.40	9.42	9.28	9.31	9.23		
270°	9.52	9.54	9.16	9.19	9.11		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	ACCORDING TO ASTM E 797

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuities At The Time Of Inspection And Found Acceptable According To ASTM E709
U.T-The Above Item Was Found Acceptable As Per ASTM E 797

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	15-Oct-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Fluorescent Magnetic Ink 7HF		1.2 to 2.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3490 lux						

PERSON DETAILS

INSPECTOR NAME:	Uman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:		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

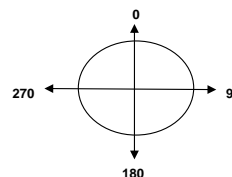


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-88-NDT-004
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	JOB NO :	190924
WORK ORDER #	327063242	SPECIFICATION:	ASTM E709 & ASTM E 797
DATE:	Tuesday, September 17, 2024	INSP. DUE DATE:	Tuesday, September 16, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FRAC TANK FILL LINE	FRAC TANK SAP NO.:	12241588

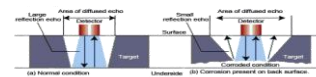
INSPECTION DETAILS



ONLINE TRACEABILITY

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

* ALL READINGS IN MM
**MINIMUM THICKNESS PROVIDED BY CUSTMER



ANGLE	THICKNESS AT POSITION				MINIMUM THICKNESS	FINAL REMARKS
	0°	90°	180°	270°		
A	6.34	6.39	6.32	6.25	4.67 MM	SATISFACTORY
B	6.43	6.35	6.40	6.46		
C	6.52	6.54	6.27	6.30		
D	6.59	6.51	6.56	6.62		
E	6.63	6.65	6.42	6.45		
F	6.60	6.52	6.57	6.63		
G	6.42	6.44	6.53	6.56		
H	6.24	6.26	6.40	6.43		
I	6.43	6.45	6.23	6.26		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	ACCORDING TO ASTM E 797

Inspection Evaluation

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

U.T-The Above Item Was Found Acceptable As Per ASTM E 797

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24		Magnaflux	220602	JUN.2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	15-Oct-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3490 lux						

PERSON DETAILS

INSPECTOR NAME:	Yusuf Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP	INSPECTION SUPERVISOR:	HANI ALI	HS&SIGN	
SIGNATURE & STAMP:				DATE:	

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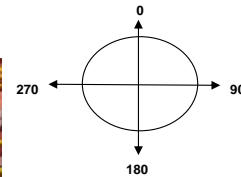


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-88-NDT-005
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	JOB NO :	190924
WORK ORDER #	327063242	SPECIFICATION:	ASTM E709 & ASTM E 797
DATE:	Tuesday, September 17, 2024	INSP. DUE DATE:	Tuesday, September 16, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FRAC TANK RELIEF LINE	FRAC TANK SAP NO.:	12241588

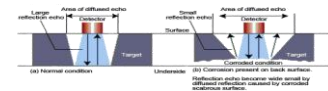
INSPECTION DETAILS



ONLINE TRACEABILITY

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

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



ANGLE	THICKNESS AT POSITION				MINIMUM THICKNESS	FINAL REMARKS
	0°	90°	180°	270°		
A	6.17	6.20	6.13	6.04	4.67 MM	SATISFACTORY
B	6.21	6.13	6.18	6.24		
C	6.27	6.29	6.08	6.11		
D	6.34	6.26	6.31	6.37		
E	6.38	6.40	6.17	6.20		
F	6.26	6.18	6.23	6.29		
G	5.99	6.01	6.28	6.31		
H	5.81	5.83	6.06	6.09		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	ACCORDING TO ASTM E 797

Inspection Evaluation

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

U.T-The Above Item Was Found Acceptable As Per ASTM E 797

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	16-Oct-24		Magnaflux	220602	JUN.2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	15-Oct-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3490 lux						

PERSON DETAILS

INSPECTOR NAME:	Yasmin Shabbir	SENIOR INSPECTOR:	NAVZED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP/MLA MPI Level 2	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	


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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION									
Client:		HALLIBURTON (TSS)			Report No:		QC-24-09-TSS-88-NDT-006		
Location:		TSS WORKSHOP & INSPECTION TEST AREA			WORK ORDER		327063242		
Date:		Tuesday, September 17, 2024			Next Inspection Date:		Tuesday, September 16, 2025		
Type Of Inspection:		VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION			Specification:		ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)		
					UNIT DESCRIPTION:		FLAME ARRESTER 4" 150 CL		
					UNIT S/N:		1598		
					FRAC TANK SAP NO:		12241588		
					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: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN
S.No:	1657	S.No:	2722003	S.No:	201504048			QUALIFICATION ASNT LEVEL II MT & PT & VT	SUPERVISOR:
Cal Due Date:	14-Oct-24	Cal Due Date:	16-Oct-24	Cal Due Date:	14-Oct-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)		3640 Lux					
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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)	Report No:	QC-24-09-TSS-88-NDT-007
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063242
Date:	Tuesday, September 17, 2024	Next Inspection Date:	Tuesday, September 16, 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:	FLANGE: 4" 150 CL X 4" 206 WING
	UNIT S/N:	1909-15
	FRAC TANK SAP NO:	12241588
	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	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED


COMMENT:		
(MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast		


EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY		
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3140 µw/cm²	INSPECTOR NAME: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN	
S.NO:	201504048	S.NO:	22650	S.NO:	1898977			QUALIFICATION: ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.OCT.2024	Cal Due Date:	14.OCT.2024			STAMP & SIGNATURE:	CLIENT:	
FLUORESCENT 14HF	Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025					
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025					
TECHNICAL DETAILS					Black Magnetic Ink Manufacture:7HF					
Digital Lux Meter WHITE LIGHT INTENSITY:	Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605					
3620 Lux/S.NO:2722003	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:	Jul-25				
Cal Due Date:16.OCT.2024										


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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)	Report No:	QC-24-09-TSS-88-NDT-008
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063242
Date:	Tuesday, September 17, 2024	Next Inspection Date:	Tuesday, September 16, 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:	FLANGE: 4" 150 CL X 4" 206 WING
	UNIT S/N:	1909-16
	FRAC TANK SAP NO:	12241588
	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	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED


COMMENT:		
(MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast		


EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY		
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3140 µw/cm²	INSPECTOR NAME: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN	
S.NO:	201504048	S.NO:	22650	S.NO:	1898977			QUALIFICATION: ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.OCT.2024	Cal Due Date:	14.OCT.2024			STAMP & SIGNATURE:	CLIENT:	
FLUORESCENT 14HF	Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025					
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025					
TECHNICAL DETAILS					Black Magnetic Ink Manufacture:7HF					
Digital Lux Meter WHITE LIGHT INTENSITY:	Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605					
3620 Lux/S.NO:2722003	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:	Jul-25				
Cal Due Date:16.OCT.2024										


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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)	Report No:	QC-24-09-TSS-88-NDT-009
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063242
Date:	Tuesday, September 17, 2024	Next Inspection Date:	Tuesday, September 16, 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:	FLANGE: 4" 150 CL X 4" 206 WING
	UNIT S/N:	1909-17
	FRAC TANK SAP NO:	12241588
	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	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED


COMMENT:		
(MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast		


EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY		
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3140 µw/cm²	INSPECTOR NAME: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN	
S.NO:	201504048	S.NO:	22650	S.NO:	1898977			QUALIFICATION: ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.OCT.2024	Cal Due Date:	14.OCT.2024			STAMP & SIGNATURE:	CLIENT:	
FLUORESCENT 14HF	Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025					
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025					
TECHNICAL DETAILS					Black Magnetic Ink Manufacture:7HF					
Digital Lux Meter WHITE LIGHT INTENSITY:	Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605					
3620 Lux/S.NO:2722003	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:	Jul-25				
Cal Due Date:16.OCT.2024										


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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)	Report No:	QC-24-09-TSS-88-NDT-010
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063242
Date:	Tuesday, September 17, 2024	Next Inspection Date:	Tuesday, September 16, 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:	FLANGE: 4" 150 CL X 4" 206 WING
	UNIT S/N:	1909-18
	FRAC TANK SAP NO:	12241588
	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	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED


COMMENT:		
(MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast		


EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY		
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3140 µw/cm²	INSPECTOR NAME: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN	
S.NO:	201504048	S.NO:	22650	S.NO:	1898977			QUALIFICATION: ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.OCT.2024	Cal Due Date:	14.OCT.2024			STAMP & SIGNATURE:	CLIENT:	
FLUORESCENT 14HF	Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025					
White Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025					
TECHNICAL DETAILS					Black Magnetic Ink Manufacture:7HF					
Digital Lux Meter WHITE LIGHT INTENSITY:	Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605					
3620 Lux/S.NO:2722003	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:	Jul-25				
Cal Due Date:16.OCT.2024										

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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)	Report No:	QC-24-09-TSS-88-NDT-011
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063242
Date:	Tuesday, September 17, 2024	Next Inspection Date:	Tuesday, September 16, 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:	FLANGE: 4" 150 CL X 4" 206 WING
	UNIT S/N:	1909-19
	FRAC TANK SAP NO:	12241588
	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	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED
	COMMENT: (MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast	


EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY		
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3140 µw/cm²	INSPECTOR NAME: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN	
S.NO:	201504048	S.NO:	22650	S.NO:	1898977			QUALIFICATION: ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.OCT.2024	Cal Due Date:	14.OCT.2024			STAMP & SIGNATURE:	CLIENT:	
FLUORESCENT 14HF		Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025				
Whie Contrast Paint Manufacture:		Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025				
TECHNICAL DETAILS										
Digital Lux Meter WHITE LIGHT INTENSITY:		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Black Magnetic Ink Manufacture:7HF		Batch No:220605		
3620 Lux/S.NO:2722003		Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:		Jul-25		

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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)	Report No:	QC-24-09-TSS-88-NDT-012
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063242
Date:	Tuesday, September 17, 2024	Next Inspection Date:	Tuesday, September 16, 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:	FLANGE: 4" 150 CL X 4" 206 WING
	UNIT S/N:	1909-20
	FRAC TANK SAP NO:	12241588
	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	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED
	COMMENT: (MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast	


EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY		
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3140 μw/cm ²	INSPECTOR NAME: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN	
S.NO:	201504048	S.NO:	22650	S.NO:	1898977			QUALIFICATION: ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.OCT.2024	Cal Due Date:	14.OCT.2024			STAMP & SIGNATURE:	CLIENT:	
FLUORESCENT 14HF	Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025					
White Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025					
TECHNICAL DETAILS					Black Magnetic Ink Manufacture:7HF					
Digital Lux Meter WHITE LIGHT INTENSITY:	Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605					
3620 Lux/S.NO:2722003	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:	Jul-25				
Cal Due Date:16.OCT.2024										

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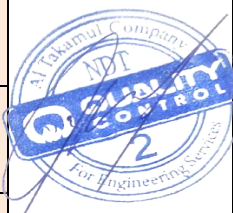
CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)	Report No:	QC-24-09-TSS-88-NDT-013
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063242
Date:	Tuesday, September 17, 2024	Next Inspection Date:	Tuesday, September 16, 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:	FLANGE: 4" 150 CL X 4" 206 WING
	UNIT S/N:	1909-21
	FRAC TANK SAP NO:	12241588
	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	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED
	COMMENT: (MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast	

EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY		
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3140 μw/cm ²	INSPECTOR NAME: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN	
S.NO:	201504048	S.NO:	22650	S.NO:	1898977			QUALIFICATION: ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.OCT.2024	Cal Due Date:	14.OCT.2024			STAMP & SIGNATURE:	CLIENT:	
FLUORESCENT 14HF	Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025					
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025					
TECHNICAL DETAILS					Black Magnetic Ink Manufacture:7HF					
Digital Lux Meter WHITE LIGHT INTENSITY:	3620 Lux/S.NO:2722003		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml	Batch No:220605				
Cal Due Date:16.OCT.2024	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:	Jul-25				

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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION									
Client:		HALLIBURTON (TSS)			Report No:		QC-24-09-TSS-88-NDT-014		
Location:		TSS WORKSHOP & INSPECTION TEST AREA			WORK ORDER		327063242		
Date:		Tuesday, September 17, 2024			Next Inspection Date:		Tuesday, September 16, 2025		
Type Of Inspection:		VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION			Specification:		ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)		
					UNIT DESCRIPTION:		BALON VALVE 4"150 CL		
					UNIT S/N:		00 LR6		
					FRAC TANK SAP NO:		12241588		
					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:		SENIOR INSPECTOR:	NAVEED HUSSAIN
S.No:	1657	S.No:	2722003	S.No:	201504048			QUALIFICATION	SUPERVISOR:
Cal Due Date:	14-Oct-24	Cal Due Date:	16-Oct-24	Cal Due Date:	14-Oct-24	ASNT LEVEL II	CLIENT:		
Black Magnetic Ink Manufacture:	Magnaflux	Batch No:	220605	Expiry Date:	JULY.2025	MT & PT & VT			
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	Expiry Date:	JUN,2025	STAMP & SIGNATURE:			
Technical Details:	Magnetic Partical Concentration		Method		WMPT Light Intensity				
	1.2 to 2.4 ml/100 ml		Wet Magnetic Particle Testing (WMPT)		3640 Lux				
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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALLBURTON (TSS)	Report No:	QC-24-09-TSS-88-NDT-014
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063242
Date:	Tuesday, September 17, 2024	Next Inspection Date:	Sunday, March 16, 2025
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION	Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)



UNIT DESCRIPTION:	KING PIN OF FRAC TANK 500BBL
UNIT DIMENSIONS:	11.50 M(L) X 2.50 M(W) X 2.70 M(H)
FRAC TANK SAP NO:	12241588
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	forgn areas & King pin 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: Usman Shabbir		SENIOR INSPECTOR:	NAVEED HUSSAIN
S.No:	1657	S.No:	2722003	S.No:	201504048			QUALIFICATION ASNT LEVEL II MT & PT & VT	SUPERVISOR:
Cal Due Date:	14-Oct-24	Cal Due Date:	16-Oct-24	Cal Due Date:	14-Oct-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)		3640 Lux				

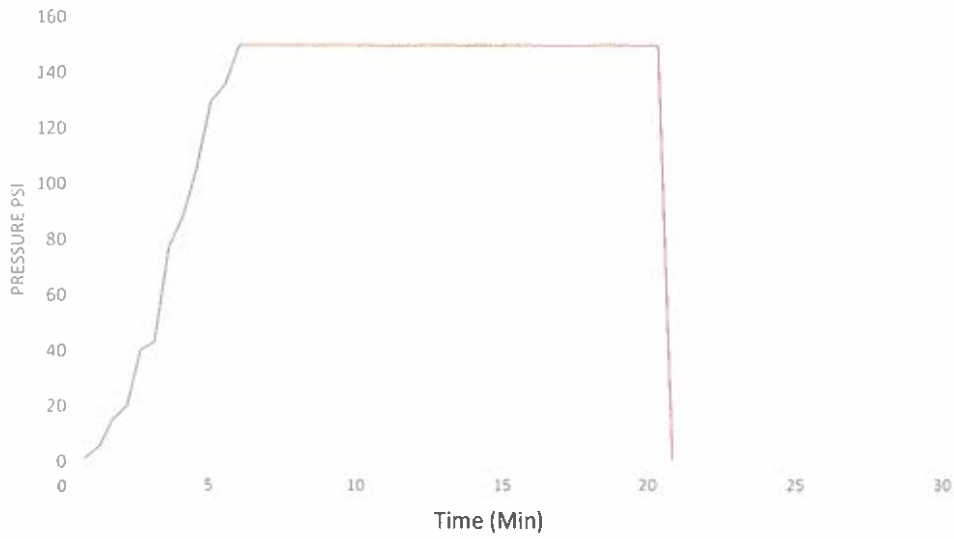
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Data Collection Report

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

Run Info	
Start Time	10:15 AM
Stop Time	10:36 AM
Test Date	17-Sep-24
EQ NUMBER	12241588
CAL DATE	20-Jul-24

READING



TESTED BY : Haider Emad
APPROVED BY: Hassan Kamel
COMMENTS: Inlet Test

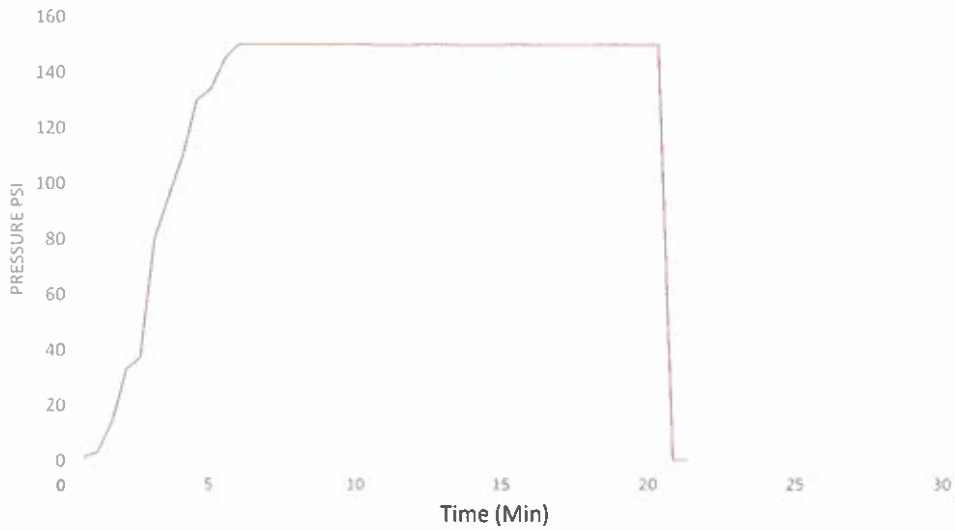


Data Collection Report

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

Run Info	
Start Time	10:44 AM
Stop Time	11:05 AM
Test Date	17-Sep-24
EQ NUMBER	12241588
CAL DATE	20-Jul-24

READING



TESTED BY : Haider Emad
APPROVED BY: Hassan Kamel
COMMENTS: Outlet Test

