

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

Basra, North Rumaila, Quality Control Yard - Iraq



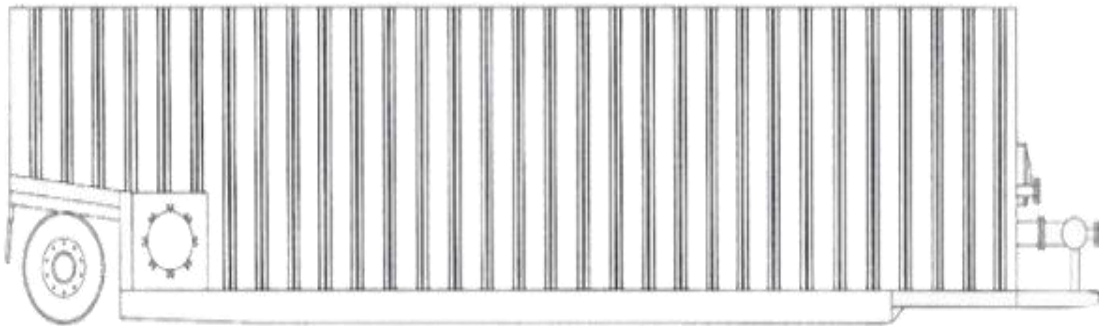
CERTIFICATE OF VISUAL AND WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-001
LOCATION:	TSS YARD	JOB NO :	2807024
WORK ORDER #	***	SPECIFICATION:	ASME B31.1 / CUSTOMER SPECIFICATION
DATE OF INSPECTION :	Monday, July 29, 2024	NEXT INSP. DATE:	Tuesday, January 28, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND WITNESS PRESSURE TEST		
DESCRIPTION:	FRAC TANK 500 BBL	FRAC TANK SAP NO	HSL-FTA-008
BODY PRESSURE TEST	50 Psi	HOLDING TIME:	15 MINUTES
INLET PRESSURE TEST	50 Psi	HOLDING TIME:	15 MINUTES
Pump NO.:	EQ_NO:13119220	CAL DUE DATE:	20.AUG.2024
Pressure Gauge NO.:	468066	CAL DUE DATE:	19.JUL.2025



ONLINE TRACEABILITY



INSPECTION RESULT

BODY PRESSURE TEST 1:	The Above Item was Pressure Tested Up to 50 PSI Maximum Working pressure, Hold For 15 Minutes no Leak was Found while testing & Pressure Was Stable According To Chart Recorder
INLET PRESSURE TEST 2:	The Above Item was Pressure Tested Up to 50 PSI Maximum Working pressure, Hold For 15 Minutes no Leak was Found while testing & Pressure Was Stable According To Chart Recorder

PERSON DETAILS

INSPECTOR NAME:	Ueeman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CPVT, CSWI, CUI, VT,	INSPECTION SUPERVISOR:	HANI ALI	HB&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

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-002
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		

DESCRIPTION:	FRAC TANK 500 BBL	SAP NO.:	HSL-FTA-008
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INSPECTION DETAILS

RIGHT SIDE FRAC TANK

LEFT SIDE FRAC TANK

BACK SIDE FRAC TANK **FRONT SIDE FRAC TANK**

ONLINE TRACEABILITY

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

ANGLE	THICKNESS AT POSITION						MINIMUM THICKNESS	FINAL REMARKS
	A	B	C	D	E	F		
RIGHT SIDE TOP 1	7.69	7.75	7.66	7.52	7.43	7.49	4.67 MM	SATISFACTORY
RIGHT SIDE MIDDLE 2	7.53	7.41	7.46	7.52	7.56	7.43		
RIGHT SIDE BOTTOM 3	7.41	7.43	7.63	7.69	7.61	7.65		
	G	H	I	J	K	L		
LEFT SIDE TOP 1	7.50	7.42	7.47	7.53	7.57	7.53		
LEFT SIDE MIDDLE 2	7.59	7.64	7.31	7.34	7.26	7.30		
LEFT SIDE BOTTOM 3	7.68	7.61	7.30	7.33	7.25	7.33		
	M	N			O			
BACK SIDE TOP 1	8.31	8.40			8.44			
BACK SIDE MIDDLE 2	8.28	8.35			8.23			
BACK SIDE BOTTOM 3	8.37	8.51			8.32			
	P	Q			R			
FRONT SIDE TOP 1	8.37	8.31			8.38			
FRONT SIDE MIDDLE 2	8.25	8.16			8.24			
FRONT SIDE BOTTOM 3	8.22	8.13			8.37			

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:	3670 lux						

PERSON DETAILS

INSPECTOR NAME:	Usman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP-1	INSPECTION SUPERVISOR:	HANI ALI	HSASIGN	
SIGNATURE & STAMP:				DATE:	

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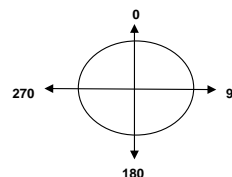
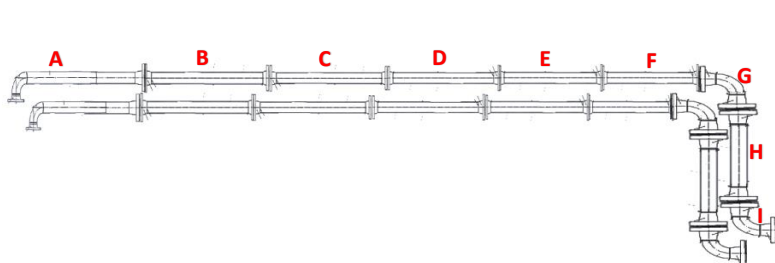


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

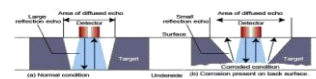
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-003
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FRAC TANK FILL LINE	FRAC TANK SAP NO.:	HSL-FTA-008

INSPECTION DETAILS



ONLINE TRACEABILITY

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



THICKNESS POINT	THICKNESS ANGLE				MINIMUM THICKNESS	FINAL REMARKS
	0°	90°	180°	270°		
A	7.12	7.05	6.97	7.01	4.67 MM	SATISFACTORY
B	7.08	7.00	7.05	7.11		
C	7.17	7.19	6.93	6.96		
D	7.21	7.13	7.18	7.24		
E	7.25	7.27	7.07	7.10		
F	7.16	7.08	7.13	7.19		
G	7.08	7.10	7.15	7.18		
H	7.13	7.15	7.05	7.08		
I	7.05	7.07	7.09	7.16		

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:	3670 lux						

PERSON DETAILS

INSPECTOR NAME:	Yaman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT Level II MPI	INSPECTION SUPERVISOR:	HANI ALI	HS&SIGN	
SIGNATURE & STAMP:				DATE:	

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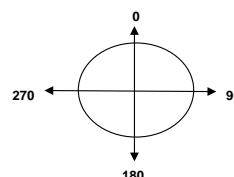
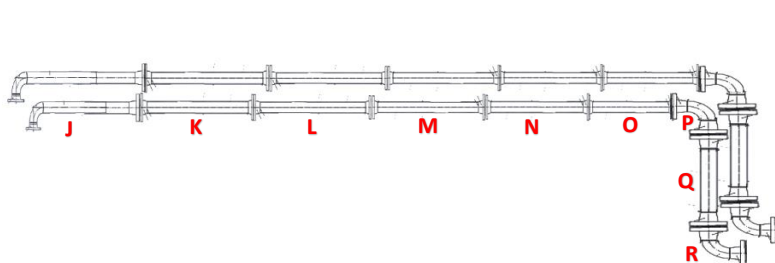


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

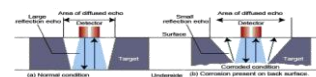
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-004
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FRAC TANK FILL LINE	FRAC TANK SAP NO.:	HSL-FTA-008

INSPECTION DETAILS



ONLINE TRACEABILITY

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



THICKNESS POINT	THICKNESS ANGLE				MINIMUM THICKNESS	FINAL REMARKS
	0°	90°	180°	270°		
J	7.24	7.15	7.21	7.17	4.67 MM	SATISFACTORY
K	7.28	7.20	7.25	7.31		
L	7.33	7.35	7.03	7.06		
M	7.19	7.11	7.16	7.22		
N	7.23	7.25	7.23	7.26		
O	7.11	7.03	7.08	7.14		
P	7.07	7.09	7.13	7.16		
Q	7.25	7.27	7.09	7.12		
R	7.21	7.23	7.08	7.11		

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 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:	CAL DUE DATE	14-Oct-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	16-Oct-24		Magnaflux	220602	JUN.2025
UT THICKNESS GAUGE:	3997	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	15-Oct-24		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	14-Oct-24	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3670 lux					

PERSON DETAILS

INSPECTOR NAME:	Yaman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT Level II MPI	INSPECTION SUPERVISOR:	HANI ALI	HS&SIGN	
SIGNATURE & STAMP:				DATE:	

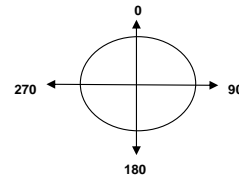
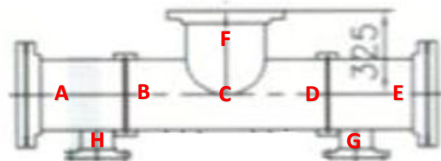


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

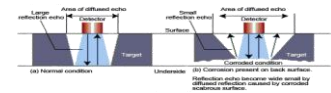
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-005
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FRAC TANK MANIFOLD	FRAC TANK SAP NO.:	HSL-FTA-008

INSPECTION DETAILS



ONLINE TRACEABILITY

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



THICKNESS POINT	THICKNESS ANGLE				MINIMUM THICKNESS	FINAL REMARKS
	0°	90°	180°	270°		
A	9.43	9.37	9.28	9.36	4.67 MM	SATISFACTORY
B	9.50	9.37	9.44	9.50		
C	9.62	9.64	9.32	9.35		
D	9.71	9.63	9.68	9.37		
E	9.57	9.59	9.52	9.43		
F	9.48	9.40	9.45	9.51		
G	7.29	7.17	7.22	7.30		
H	7.25	7.32	7.05	7.08		

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:	CAL DUE DATE	MANUFACTURE	BATCH NO	EXPIRE DATE	
Digital Lux Meter	201504048	White Contrast WCP-2	Magnaflux	220602	JUN.2025
WHITE LIGHT	2722003	Black Magnetic Ink 7HF	Magnaflux	220605	JULY.2025
UT THICKNESS GAUGE:	3997	Fluorescent Magnetic Ink 7HF	1.2 to 2.4 ml/100 ml		
UT TEST BLOCK:	NoBo5087				
ASTM Test Block:	1657				
WHITE LIGHT INTENSITY:	3670 lux				

PERSON DETAILS

INSPECTOR NAME:	Eman Shabbir	SENIOR INSPECTOR:	NAVZED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP-1	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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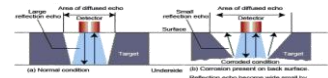
CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-006
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FRAC TANK RELIEF LINE	FRAC TANK SAP NO.:	HSL-FTA-008

INSPECTION DETAILS

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



THICKNESS POINT	THICKNESS ANGLE				MINIMUM THICKNESS	FINAL REMARKS
	0°	90°	180°	270°		
A	7.42	7.38	7.29	7.33	4.67 MM	SATISFACTORY
B	7.29	7.30	7.37	7.44		

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:	3670 lux						

PERSON DETAILS

INSPECTOR NAME:	Usman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	

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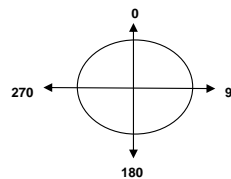
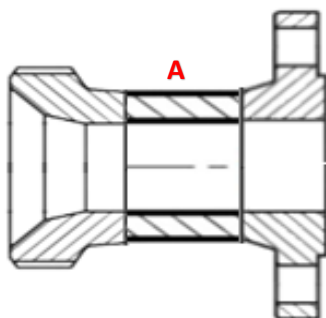


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

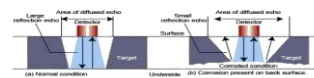
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-007
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797 & API 6A
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLANGE: 4" 150 CL X 4" 206 THREAD	FRAC TANK SAP NO.:	HSL-FTA-008
		UNIT S/N:	008-1

INSPECTION DETAILS



ONLINE TRACEABILITY

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



ANGLE	THICKNESS POINT	MINIMUM THICKNESS	FINAL REMARKS
	A		
0°	7.12	4.67 MM	SATISFACTORY
90°	7.16		
180°	7.02		
270°	7.17		

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 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	15-Oct-24		Magnaflux	220306	March.2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24	Concentration of 14HF:		0.1 to 0.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3670 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm ²	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

INSPECTOR NAME:	Uman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP-1	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	



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-24-07-TSS-NDT-008
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797 & API 6A
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLANGE: 4" 150 CL X 4" 206 THREAD	FRAC TANK SAP NO.:	HSL-FTA-008
		UNIT S/N:	008-2

INSPECTION DETAILS

ONLINE TRACEABILITY

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

ANGLE	THICKNESS POINT	MINIMUM THICKNESS	FINAL REMARKS
	A		
0°	7.25	4.67 MM	SATISFACTORY
90°	7.34		
180°	7.16		
270°	7.22		

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 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	15-Oct-24		Magnaflux	220306	March.2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24	Concentration of 14HF:		0.1 to 0.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3670 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm ²	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

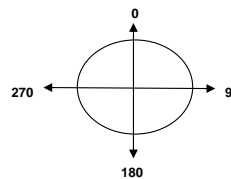
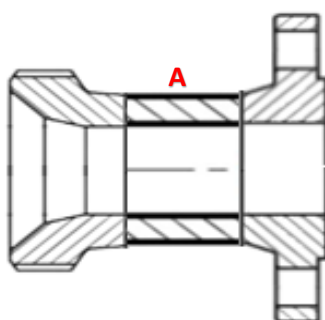
INSPECTOR NAME:	Uman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP-1	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

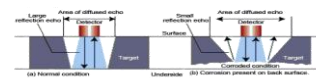
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-009
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797 & API 6A
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLANGE: 4" 150 CL X 4" 206 THREAD	FRAC TANK SAP NO.:	HSL-FTA-008
		UNIT S/N:	008-3

INSPECTION DETAILS



ONLINE TRACEABILITY

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



ANGLE	THICKNESS POINT	MINIMUM THICKNESS	FINAL REMARKS
	A		
0°	7.19	4.67 MM	SATISFACTORY
90°	7.08		
180°	7.17		
270°	7.23		

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 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	15-Oct-24		Magnaflux	220306	March.2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24	Concentration of 14HF:		0.1 to 0.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3670 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm ²	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

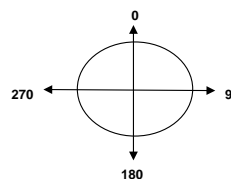
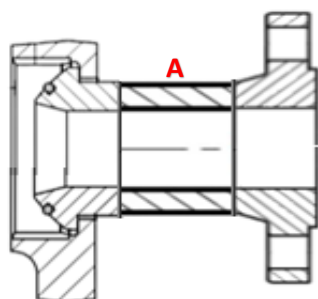
INSPECTOR NAME:	Uman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP-1	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

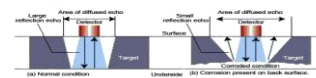
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-010
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797 & API 6A
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLANGE: 4" 150 CL X 4" 206 WING	FRAC TANK SAP NO.:	HSL-PTA-008
		UNIT S/N:	008-4

INSPECTION DETAILS



ONLINE TRACEABILITY

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



ANGLE	THICKNESS POINT	MINIMUM THICKNESS	FINAL REMARKS
	A		
0°	7.22	4.67 MM	SATISFACTORY
90°	7.14		
180°	7.18		
270°	7.06		

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 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	15-Oct-24		Magnaflux	220306	March.2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24	Concentration of 14HF:		0.1 to 0.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3670 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm ²	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

INSPECTOR NAME:	Usman Shah	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	NDT Level II	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	

Original - Client Files Copy - Area Office QC/EN/PT/077 Rev.00 DATED 07.NOV. 2021

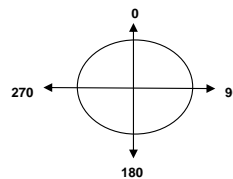
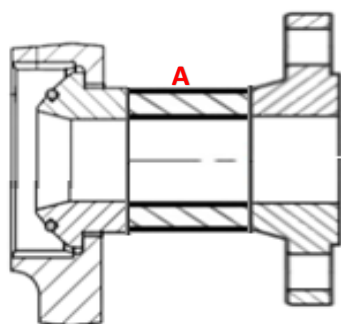


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

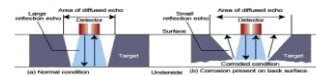
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-07-TSS-NDT-011
LOCATION:	TSS YARD	JOB NO :	28072024
WORK ORDER #	*****	SPECIFICATION:	ASTM E709 & ASTM E 797 & API 6A
INSPECTION DATE:	Sunday, July 28, 2024	NEXT INSPECTION DATE:	Monday, January 27, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLANGE: 4" 150 CL X 4' 206 WING	FRAC TANK SAP NO.:	HSL-FTA-008
		UNIT S/N:	008-5

INSPECTION DETAILS



ONLINE TRACEABILITY

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



ANGLE	THICKNESS POINT	MINIMUM THICKNESS	FINAL REMARKS
	A		
0°	7.12	4.67 MM	SATISFACTORY
90°	7.14		
180°	7.24		
270°	7.32		

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 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	15-Oct-24		Magnaflux	220306	March.2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24	Concentration of 14HF:		0.1 to 0.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3670 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm ²	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

INSPECTOR NAME:	Uman Shabbir	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP-1	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	



Data Collection Report

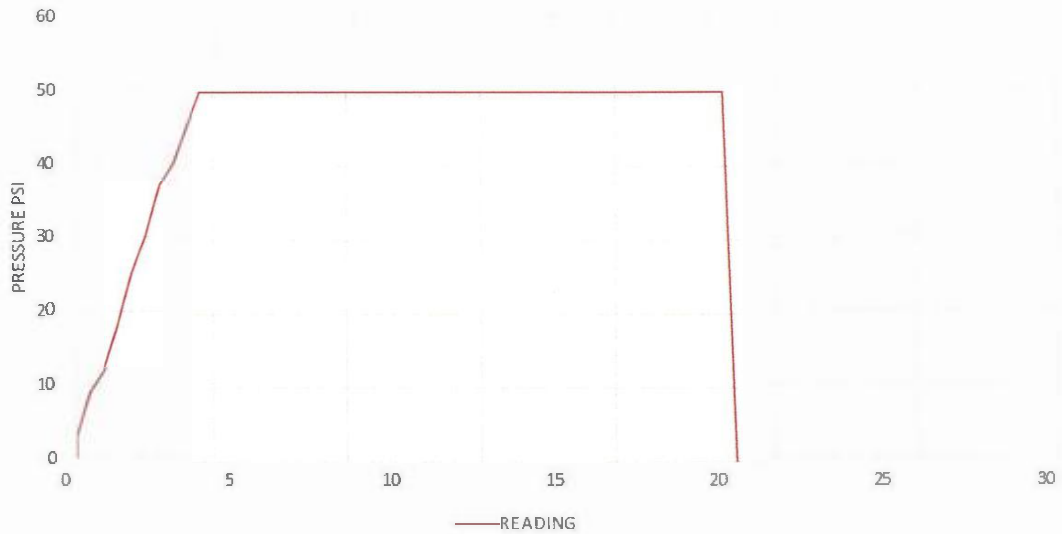
Gauge Information

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

Run Info

Start Time	10:00 AM
Stop Time	10:21 AM
Test Date	29-JUL-24
EQ NUMBER	HSL-FTA-008
LAST CALIB	20.JUL.2024

READING



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

SIGN: 

SIGN: H-Kamel

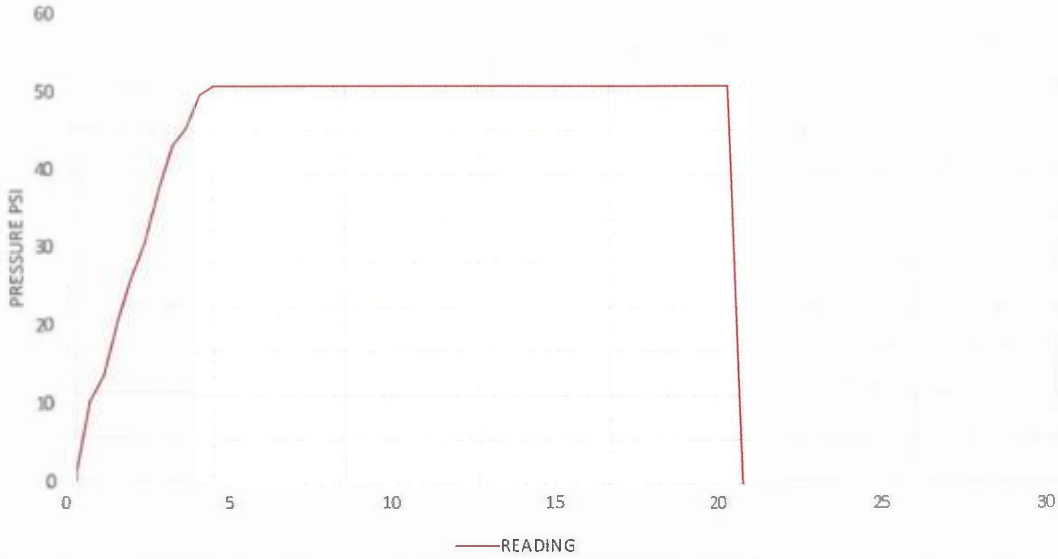


Data Collection Report

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

Run Info	
Start Time	10:47 AM
Stop Time	11:08 AM
Test Date	29-JUL-24
EQNUMBER	HSL-FTA-008
LASTCALIB	20.JUL.2024


READING



TESTED BY: Haider Emad

SIGN: 

APPROVED BY: Hassan Kamel

SIGN: 

COMMENTS: Inlet Test 

