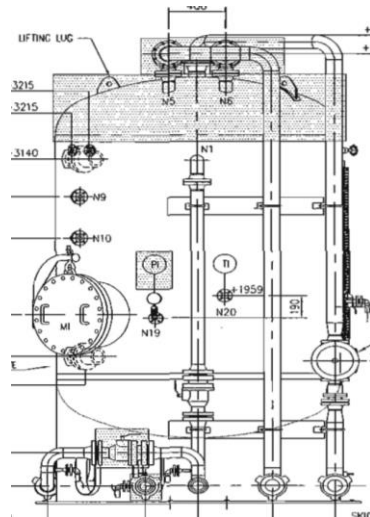


CERTIFICATE OF QUALIFICATION VISUAL AND WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-HALL-NDT-001
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	JOB NO :	180924
WORK ORDER #	327063237	SPECIFICATION:	ASME SECTION VIII DIV 1 Latest Edition , ASME B31.3
DATE OF INSPECTION :	Wednesday, September 18, 2024	INSP. DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND WITNESS PRESSURE TEST		

DESCRIPTION:	SURGE TANK 50BBL 250PSI	SAP NO:	11554067
BODY PRESSURE TEST	250 psi	HOLDING TIME:	19 MINUTES
INLET AND BYPASS PRESSURE TEST	1440 Psi	HOLDING TIME:	24 MINUTES
BODY PRESSURE TEST WITH PRV :	202 psi	HOLDING TIME:	20 MINUTES
Pump NO.::	EQ NO:13119220	CAL DUE DATE:	19.AUG.2025
Pressure Gauge NO.:	468066	CAL DUE DATE:	19.JUL.2025



ONLINE TRACEABILITY

PRESSURE TEST WITNESS RESULT

BODY PRESSURE TEST 1:	The Above Item was Pressure Tested Up to 250 PSI Maximum Working pressure, Hold For 19 Minutes no Leak was Found while testing & Pressure Was Stable According To Chart Recorder
INLET AND BYPASS PRESSURE TEST 2:	The Above Item was Pressure Tested up to 100 Psi A low Pressure Hold for 5 Minutes And Maximum Working pressure 1440 Psi Hold 19 Minutes Leak was Found while testing & Pressure Was Stable According To Chart Recorder
BODY TEST WITH PRV PRESSURE TEST 3:	The Above Item was Pressure Tested Up to 202 PSI Maximum Working pressure, Hold For 20 Minutes no Leak was Found while testing & Pressure Was Stable According To Chart Recorder

PERSON DETAILS

REVIEW BY

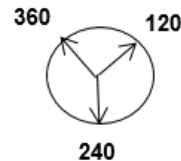
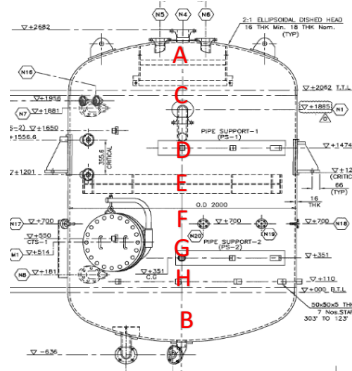
INSPECTOR NAME:	M.Shahzad Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT, UT, VT	INSPECTION SUPERVISOR:	HANI ALI	HD&SIGN	
SIGNATURE & STAMP:				DATE:	

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-24-09-TSS-HALL-NDT-002
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	SPECIFICATION:	ASME SECTION VIII DIV 1 Latest Edition Manufacturing Date Book
WORK ORDER #	327063237		
INSPECTION DATE:	Wednesday, September 18, 2024	INSPECTION.DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	SURGE TANK 50BBL 250PSI	SAP NO:	11554067
MANUFACTURER:	SPECIALIST SERVICES	MANUFACTURER SERIAL NO:	FPZ-294
TOP & BOTTOM MINIMUM THICKNESS	16 MM	TOP & BOTTOM CORROSION ALLOWANCE	3 MM
SHELL NOMINAL THICKNESS	16 MM	SHELL CORROSION ALLOWANCE	3 MM

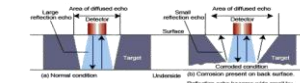
INSPECTION DETAILS



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	CORROSION ALLOWANCE	FINAL REMARKS		
	120°	240°	360°					
SURGE TANK TOP A1	18.03	18.59	18.61	16 MM	3 MM	SATISFACTORY		
SURGE TANK TOP A2	18.20	18.21	18.24					
SURGE TANK TOP A3	18.33	19.40	18.60					
SURGE TANK BOTTOM B1	18.15	18.16	19.29					
SURGE TANK BOTTOM B2	19.42	19.43	18.21					
SURGE TANK BOTTOM B3	18.45	18.44	18.40					
ANGLE	THICKNESS AT POSITION			NOMINAL THICKNESS				
SURGE TANK SHELL C	17.53	18.05	16.22	16 MM				
SURGE TANK SHELL D	17.69	17.70	17.77					
SURGE TANK SHELL E	17.78	16.26	18.06					
SURGE TANK SHELL F	17.53	17.54	17.62					
SURGE TANK SHELL G	16.93	16.94	17.70					
SURGE TANK SHELL H	17.82	17.60	17.51					

INSPECTION RESULT

VT & MPI	Accepted	According to ASME SECTION VIII DIV 1
UT	Accepted	According to ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Manufacturing Date Book

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASME SECTION VIII DIV 1

(U.T) The Above Item Was Found Acceptable As Per ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book

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:	5500391	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5088	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:	3640 lux						

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP-105	INSPECTION SUPERVISOR:	HANI ALI	DESIGN:	
SIGNATURE & STAMP:				DATE:	

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

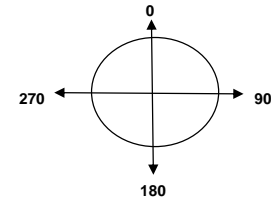
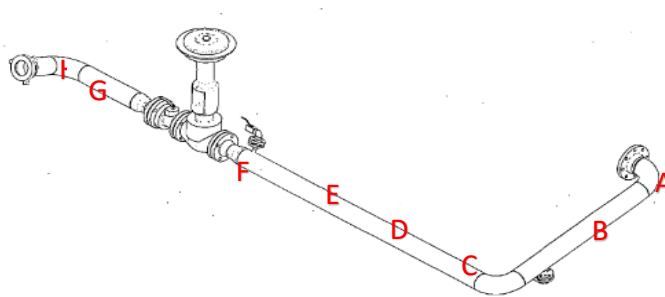


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-HALL-NDT-003
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	SPECIFICATION:	ASME SECTION VIII DIV 1 Latest Edition Manufacturing Date Book
WORK ORDER #	327063237		
INSPECTION DATE:	Wednesday, September 18, 2024	INSPECTION.DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION: VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING			
DESCRIPTION:	SURGE TANK GAS OUTLET LINE	SAP NO:	11554067
MANUFACTURER:	SPECIALIST SERVICES	MANUFACTURER SERIAL NO:	FFZ-294

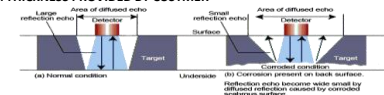
INSPECTION DETAILS



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				CORROSION ALLOWANCE	FINAL REMARKS
	0°	90°	180°	270°		
A	7.34	7.42	7.47	7.59	3 MM	SATISFACTORY
B	7.27	7.34	7.36	7.41		
C	7.33	7.41	7.49	7.37		
D	7.38	7.47	7.50	7.43		
E	7.40	7.48	7.39	7.46		
F	7.36	7.42	7.38	7.50		
G	7.45	7.49	7.52	7.43		
H	7.40	7.42	7.46	7.39		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASME SECTION VIII DIV 1 Latest Edition
UT	Accepted	According to ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Manufacturing Date Book

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASME SECTION VIII DIV 1 Latest Edition

U.T-The Above Item Was Found Acceptable As Per ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book

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:	5500391	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5088	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:	3640 lux						

PERSON DETAILS

REVIEW BY

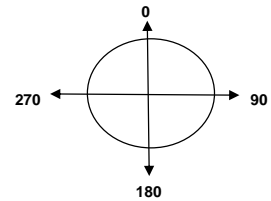
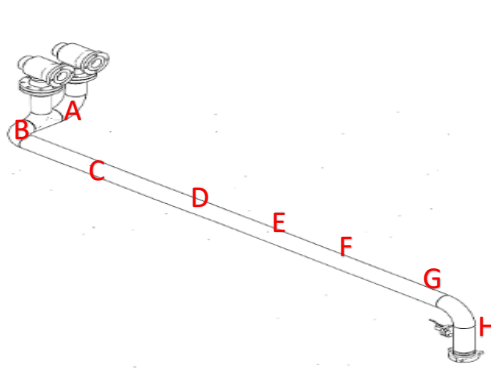
INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CPVT	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	

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-24-09-TSS-HALL-NDT-004
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	SPECIFICATION:	ASME SECTION VIII DIV 1 Latest Edition Manufacturing Date Book
WORK ORDER #	327063237	INSPECTION.DUE DATE:	Wednesday, September 17, 2025
INSPECTION DATE:	Wednesday, September 18, 2024		
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	SURGE TANK RELIEF LINE	SAP NO:	11554067
MANUFACTURER:	SPECIALIST SERVICES	MANUFACTURER SERIAL NO:	FFZ-294

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 CUSTMER



ANGLE	THICKNESS AT POSITION				CORROSION ALLOWANCE	FINAL REMARKS
	0°	90°	180°	270°		
A	7.18	7.27	7.32	7.44	3 MM	SATISFACTORY
B	7.06	7.13	7.15	7.20		
C	7.09	7.17	7.34	7.22		
D	7.22	7.31	7.34	7.11		
E	7.13	7.21	7.18	7.25		
F	7.12	7.18	7.14	7.26		
G	7.29	7.33	7.36	7.27		
H	7.24	7.26	7.30	7.23		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASME SECTION VIII DIV 1 Latest Edition
UT	Accepted	According to ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Manufacturing Date Book

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuities At The Time Of Inspection And Found Acceptable Accordance To ASME SECTION VIII DIV 1 Latest Edition

U.T-The Above Item Was Found Acceptable As Per ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book

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:	5500391	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5088	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:	3640 lux						

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M.Shanzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	(SMT) V.L.I.M.E. (U.T.V)	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

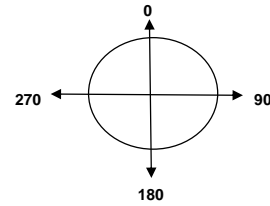


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-HALL-NDT-005
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	SPECIFICATION:	ASME SECTION VIII DIV 1 Latest Edition Manufacturing Date Book
WORK ORDER #	327063237		
INSPECTION DATE:	Wednesday, September 18, 2024	INSPECTION.DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	SURGE TANK INLET LINE	SAP NO:	11554067
MANUFACTURER:	SPECIALIST SERVICES	MANUFACTURER SERIAL NO:	FFZ-294

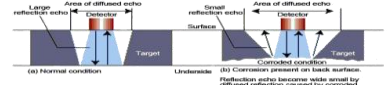
INSPECTION DETAILS



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				CORROSION ALLOWANCE	FINAL REMARKS
	0°	90°	180°	270°		
A	7.31	7.40	7.45	7.57	3 MM	SATISFACTORY
B	7.24	7.31	7.33	7.38		
C	7.30	7.38	7.47	7.35		
D	7.35	7.44	7.47	7.40		
E	7.37	7.45	7.36	7.43		
F	7.33	7.39	7.35	7.47		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASME SECTION VIII DIV 1 Latest Edition
UT	Accepted	According to ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Manufacturing Date Book

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASME SECTION VIII DIV 1 Latest Edition

U.T-The Above Item Was Found Acceptable As Per ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book

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:	5500391	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5088	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:	3640 lux						

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	AI N. L. V. G. M. W. P. D. V.	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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



AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

Basra, North Rumaila, Quality Control Yard - Iraq

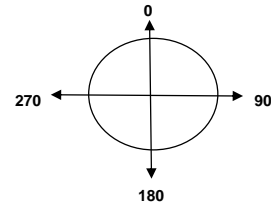
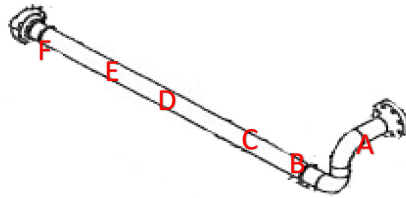


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-HALL-NDT-006
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	SPECIFICATION:	ASME SECTION VIII DIV 1 Latest Edition Manufacturing Date Book
WORK ORDER #	327063237		
INSPECTION DATE:	Wednesday, September 18, 2024	INSPECTION.DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	SURGE TANK BYPASS LINE	SAP NO:	11554067
MANUFACTURER:	SPECIALIST SERVICES	MANUFACTURER SERIAL NO:	FFZ-294

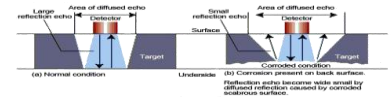
INSPECTION DETAILS



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				CORROSION ALLOWANCE	FINAL REMARKS
	0°	90°	180°	270°		
A	7.78	7.87	7.92	8.04	3 MM	SATISFACTORY
B	7.66	7.73	7.75	7.80		
C	7.72	7.80	7.94	7.82		
D	7.62	7.71	7.74	7.67		
E	7.79	7.87	7.78	7.85		
F	7.94	8.00	7.96	8.08		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TOASME SECTION VIII DIV 1 Latest Edition
UT	Accepted	According to ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Manufacturing Date Book

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASME SECTION VIII DIV 1 Latest Edition

U.T-The Above Item Was Found Acceptable As Per ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book

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:	5500391	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5088	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:	3640 lux						

PERSON DETAILS

REVIEW BY

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

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

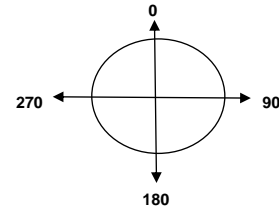


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-HALL-NDT-007
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	SPECIFICATION:	ASME SECTION VIII DIV 1 Latest Edition Manufacturing Date Book
WORK ORDER #	327063237		
INSPECTION DATE:	Wednesday, September 18, 2024	INSPECTION.DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	SURGE TANK OIL OUTLET LINE	SAP NO:	11554067
MANUFACTURER:	SPECIALIST SERVICES	MANUFACTURER SERIAL NO:	FFZ-294

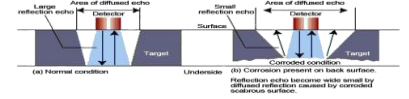
INSPECTION DETAILS



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				CORROSION ALLOWANCE	FINAL REMARKS
	0°	90°	180°	270°		
A	6.65	6.74	6.79	6.91	3 MM	SATISFACTORY
B	6.51	6.58	6.60	6.65		
C	6.57	6.65	6.81	6.69		
D	6.77	6.86	6.89	6.82		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASME SECTION VIII DIV 1 Latest Edition
UT	Accepted	According to ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Manufacturing Date Book

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASME SECTION VIII DIV 1 Latest Edition

U.T-The Above Item Was Found Acceptable As Per ASME SECTION VIII DIV 1 Latest Edition & Manufacturing Date Book

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

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:	5500391	CAL DUE DATE	14-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5088	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:	3640 lux						



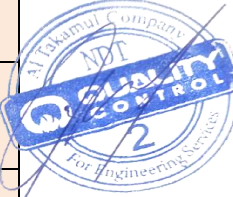
PERSON DETAILS



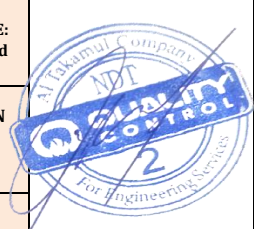
REVIEW BY

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

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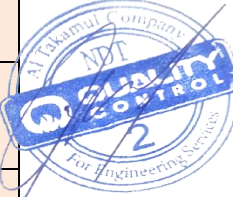
CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION									
Client:		HALIBURTON (TSS)			Report No:		QC-24-09-TSS-NDT-008		
Location:		TSS WORKSHOP & INSPECTION TEST AREA			WORK ORDER		327063237		
Date:		Wednesday, September 18, 2024			Next Inspection Date:		Wednesday, September 17, 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 3" 600 CL		
					UNIT S/N:		3 ITM		
					SURGE TANK SAP NO:		11554067		
					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:	201504048			QUALIFICATION ASNT LEVEL II MT & PT & VT	
Cal Due Date:	14-Oct-24	Cal Due Date:	16-Oct-24	Cal Due Date:	14-Oct-24				
Black Magnetic Ink Manufacture:	Magnaflux	Batch No:	220605	Expiry Date:	JULY.2025				
White 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			
Original - Client Files		Copy - Area Office		QC/FN/MPI/065 Rev.00		DATED 07 Nov 2021			


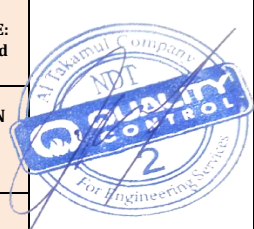
CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION										
Client:		HALIBURTON (TSS)			Report No:		QC-24-09-TSS-NDT-009			
Location:		TSS WORKSHOP & INSPECTION TEST AREA			WORK ORDER		327063237			
Date:		Wednesday, September 18, 2024			Next Inspection Date:		Wednesday, September 17, 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 3" 600 CL			
					UNIT S/N:		05KOV			
					SURGE TANK SAP NO:		11554067			
					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:	201504048		QUALIFICATION	ASNT LEVEL II	SUPERVISOR:	HANI ALI
Cal Due Date:	14-Oct-24	Cal Due Date:	16-Oct-24	Cal Due Date:	14-Oct-24		MT & PT & VT	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)		3640 Lux					
Original - Client Files		Copy - Area Office		QC/FN/MPI/065 Rev.00 DATED 07 Nov 2021						

CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)			Report No:	QC-24-09-TSS-NDT-010					
Location:	TSS WORKSHOP & INSPECTION TEST AREA			WORK ORDER	327063237					
Date:	Wednesday, September 18, 2024			Next Inspection Date:	Wednesday, September 17, 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 3" 150 CL					
				UNIT S/N:	1JTM					
				SURGE TANK SAP NO:	11554067					
				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			
S.No:	1657	S.No:	2722003	S.No:	201504048	SENIOR INSPECTOR:		NAVEED HUSSAIN		
Cal Due Date:	14-Oct-24	Cal Due Date:	16-Oct-24	Cal Due Date:	14-Oct-24	QUALIFICATION	ASNT LEVEL II MT & PT & VT			
Black Magnetic Ink Manufacture:	Magnaflux	Batch No:	220605	Expiry Date:	JULY.2025	SUPERVISOR:		HANI ALI		
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	Expiry Date:	JUN,2025	CLIENT:				
Technical Details:	Magnetic Partical Concentration		Method		WMPT Light Intensity		STAMP & SIGNATURE:			
	1.2 to 2.4 ml/100 ml		Wet Magnetic Particle Testing (WMPT)		3640 Lux					
Original - Client Files		Copy - Area Office		QC/FN/MPI/065 Rev.00 DATED 07 Nov 2021						

CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALIBURTON (TSS)	Report No:	QC-24-09-TSS-NDT-011
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	327063237
Date:	Wednesday, September 18, 2024	Next Inspection Date:	Wednesday, September 17, 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 3" 150 CL
		UNIT S/N:	6 JTL
		SURGE TANK SAP NO:	11554067
		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:	14-Oct-24	Cal Due Date:	16-Oct-24
Black Magnetic Ink Manufacture:	Magnaflux	Batch No:	220605
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602
Equipment:	AC/DC Yoke	S.No:	201504048
Cal Due Date:	14-Oct-24	Cal Due Date:	14-Oct-24
Expiry Date:	JULY.2025	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
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:	
Original - Client Files Copy - Area Office QC/FN/MPI/065 Rev.00 DATED 07 Nov 2021			

CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION									
Client:		HALIBURTON (TSS)			Report No:		QC-24-09-TSS-NDT-012		
Location:		TSS WORKSHOP & INSPECTION TEST AREA			WORK ORDER		327063237		
Date:		Wednesday, September 18, 2024			Next Inspection Date:		Wednesday, September 17, 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 3" 150 CL		
					UNIT S/N:		5 JTL		
					SURGE TANK SAP NO:		11554067		
					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:	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				
Original - Client Files		Copy - Area Office		QC/FN/MPI/065 Rev.00 DATED 07 Nov 2021					

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

Basra, North Rumaila, Quality Control Yard - Iraq

Tel: +9647810009138 / +9647834964657

Email: OP@qualitycontrol-iraq.com / hany.akafi@qualitycontrol-iraq.com



CERTIFICATE OF THOROUGH EXAMINATION

This Certificate complies with the requirements of the Lifting Equipment Operations and Lifting Equipment Regulations

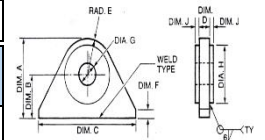
Date of Examination:	18/09/2024	Date of Report:	18/09/2024	Certificate No:	QC-24-09-TSS-012
Client Name:	Halliburton	Location:	TSS Yard	Job Number:	180924

Last Inspection	Last Proof Load Test Date	Next Proof Load Test Due
01/04/2024	09.2013	AFTER REPAIR/MODIFICATION

Serial Number:	QTY	Description	PAYLOAD
A5778-1/10	01	<p align="center">SURGE TANK FRAME</p> <p>DIM: 2.87 M (L) X 2.41 M (W) X 4.00 M (H) FULLY WELDED STEEL STRUCTURE WITH TOP FOUR MOUNTED LIFTING POINTS TARE WEIGHT: 6500 KG M.G.W: 9500 KG FIXED ON TRAILER #11613180</p>	3000 KG

Reference Standard:	DNV2.7-1 / HAL DOC: WM-GL-HAL-HSE-0420F & WM-GL-HAL-HSE-0420C REV 1
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Pad Eyes Dimension:	Thickness:	Pin Hole:	Length:	Height:
	38 MM	30 MM	200 MM	104 MM



Is this the first examination after Installation or assembly at a new site or location?	YES	NO	✓	Was the examination carried out: Within an interval of 6 months?	YES	NO	✓
					Within an interval of 12 months?	YES	NO
If the answer to the above question is YES has the equipment been installed correctly?	YES	NO		In accordance with an examination scheme? After the occurrence of exceptional circumstances?	YES	NO	
					YES	NO	✓

Identification of any part found to have a defect which is or could not become a danger to persons and a description of the defect: (If none State NONE) **NONE**

Is the above a defect which is of immediate danger to persons: YES NO

Is the above a defect which is not yet but could become a danger to persons (If YES state the date by when) N/A

Particulars of any repair, renewal or alteration required to remedy the defect identified above:

Particulars of any tests carried out as part of the examination: (If none state NONE)

**** The subject Items were inspected Visually and dimensionally where no signs of defects were observed at the time of inspection and found satisfactory**

**** MPI was carried out on the pad eyes Welding Areas and found satisfactory**

IS THIS EQUIPMENT SAFE TO OPERATE? YES NO

Name of Inspector:	Name of person authenticating this report:	Signature & Stamp:	
ASHRAF ELSAID	MOHAMED ABDALLAH		
Date of Next Through Examination:	17/03/2025		

REV: 01 Dated: 20 June 2022

THIS IS TO CERTIFY THAT; a competent person did attend the above-mentioned owner's work location on the date shown above and the equipment described in this report was tested & inspected as per the requirements of Lifting Operations Lifting Equipment Regulation "LOLER". The result was found Satisfactory at the time of Inspection and considered Safe for Lifting.



**AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED**
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATION OF VISUAL THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION

Client:	HALLIBURTON (TSS)	Report No:	QC-24-09-TSS-NDT-014				
Location:	TSS WORKSHOP & INSPECTION TEST AREA	JOB NO:	180924				
Date:	Wednesday, September 18, 2024	Next Inspection Date:	Monday, March 17, 2025				
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION	Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)				
		UNIT DESCRIPTION:	SURGE TANK FRAME PAD EYE				
		UNIT S/N:	A5778-1/10 SAP NO: 11554067				
		PAD EYE S/N	QTY	SURGE TANK FRAME	MAX GROSS	REMARK	
		S1,S2	04	Length	200 mm	9500 KG	Satisfactory
		S3,S4		Height	104 mm		
Pin Hole	30mm						
Thickness	38 mm						
INSPECTION RESULT :							
VISUAL , THOROUGH EXAMINATION		unit fully inspected and found free from deforms, cracks, corrosion & mechanical damage					
MAGNETIC PARTICLE INSPECTION		Pad Eyes Welds & Critical areas Inspected and Found Free from Cracks and Other Defects.					
FINAL RESULTS		unit found satisfactory and free of defects at the time of inspection					
COMMENT:		Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast;					

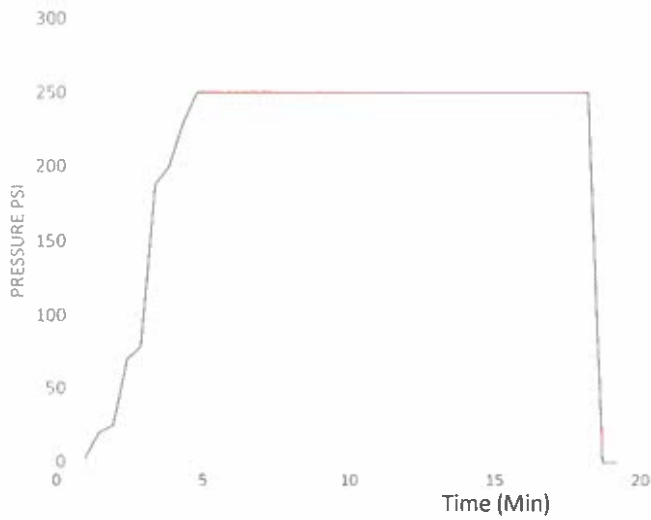
EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY	
Equipment:	AC-Yoke Test Block	Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke	INSPECTOR NAME:	ASHRAF ELSAID	SENIOR INSPECTOR:	MOHAMED ABDALLAH
S.No:	1657	S.No:	2722003	S.No:	201504048		QUALIFICATION ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14-Oct-24	Cal Due Date:	16-Oct-24	Cal Due Date:	14-Oct-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				
	1.2 to 2.4 ml/100 ml		Wet Magnetic Particle Testing (WMPT)		3640 Lux				

Data Collection Report

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

Run Info	
Start Time	8:00 AM
Stop Time	8:19 AM
Test Date	18-Sep-24
EQ NUMBER	11554067
CALIB DATE	20-Jul-24

READING



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

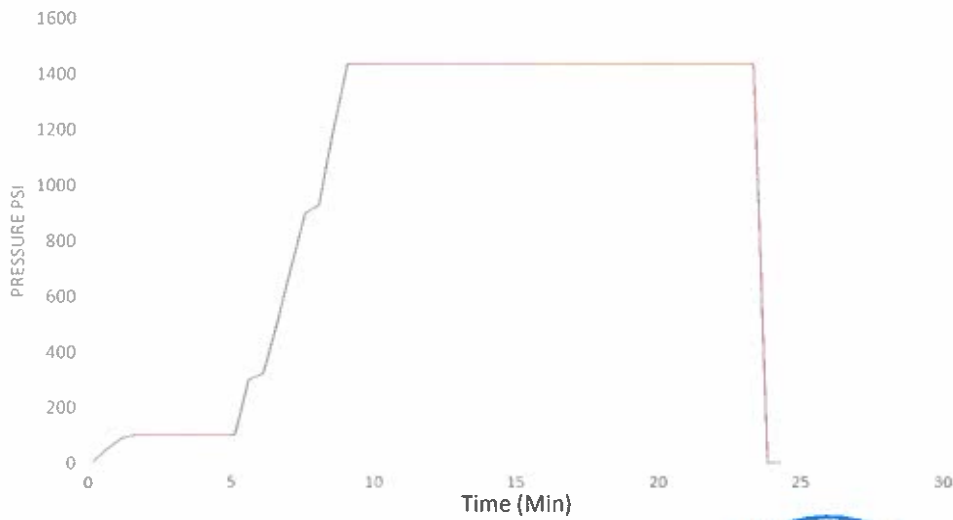


Data Collection Report

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

Run Info	
Start Time	8:28 AM
Stop Time	8:52 AM
Test Date	18-Sep-24
EQ NUMBER	11554067
LAST CALIB	20-Jul-24

READING



TESTED BY : Feras Abbas
APPROVED BY: Hassan Kamel
COMMENTS: Inlet and bypass

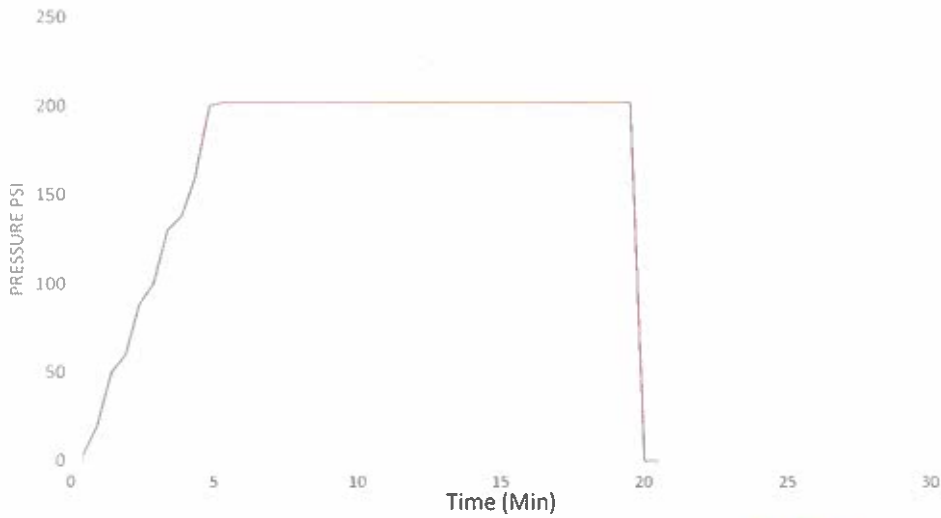


Data Collection Report

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

Run Info	
Start Time	9:3 AM
Stop Time	9:23 AM
Test Date	18-Sep-24
EQ NUMBER	11554067
LAST CALIB	20-Jul-24

READING



TESTED BY: Fears Abbas
APPROVED BY: Haasan Kamel
COMMENTS: Body Test with PRVs

