

AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

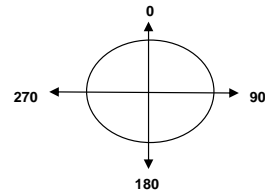
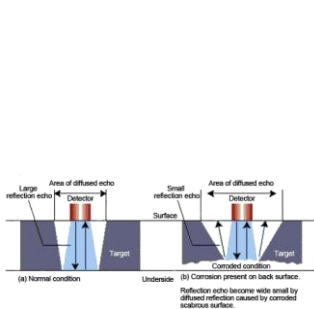
Basra, North Rumaila, Quality Control Yard - Iraq



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

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-09-TSS-NDT-146
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & AP6A, ASME B31.1
WORK ORDER #	*****		
DATE OF INSPECTION:	Thursday, September 19, 2024	INSPECTION. DUE DATE:	Tuesday, March 18, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING & WITNESS PRESSURE TEST		
DESCRIPTION:	BALON VALVE 3" 600 CL	SERIAL NO:	5 FOX
Pump NO :	13119220	CAL DUE DATE:	19.AUG.2025
Pressure Gauge NO.:	468080	CAL DUE DATE:	19.JUN.2025



ONLINE TRACEABILITY

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

POINTS	THICKNESS AT POSITION		MINIMUM THICKNESS PROVIDED BY CUSTOMER
	A	B	
0°	11.45	11.22	5.61 MM
90°	11.65	11.32	
180°	11.27	11.10	
270°	11.42	11.20	

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 E797

BODY PRESSURE TEST- The Above Item was Pressure Tested up to 100 Psi A low Pressure Hold for 5 Minutes And Maximum Working pressure 1440 Psi Hold 18 Minutes Leak was Found while testing & Pressure Was Stable According To Chart Recorder

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	Concentration of 7HF:		1.2 to2.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS

REVIEW BY

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

Original - Client Files Copy - Area Office QC/EN/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

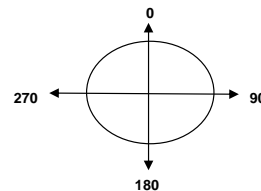
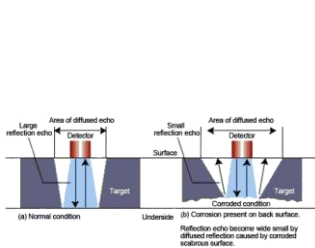


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-09-TSS-NDT-147
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & AP6A, ASME B31.1
WORK ORDER #	*****		
DATE OF INSPECTION:	Thursday, September 19, 2024	INSPECTION. DUE DATE:	Tuesday, March 18, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING & WITNESS PRESSURE TEST		

DESCRIPTION:	FLANGE: 3" 600 CL X 3" 206 WING	SERIAL NO:	HAH 20067-5-5
Pump NO :	13119220	CAL DUE DATE:	19.AUG.2025
Pressure Gauge NO.:	468080	CAL DUE DATE:	19.JUN.2025



ONLINE TRACEABILITY

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

POINTS	THICKNESS AT POSITION		MINIMUM THICKNESS PROVIDED BY CUSTOMER
	A		
0°	7.19		3.15 MM
90°	7.26		
180°	7.38		
270°	7.07		

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

Note:MPI Wet Fluorescent inspection Thread With UltraViolet Light

U.T-The Above Item Was Found Acceptable As Per ASTM E797

BODY PRESSURE TEST- The Above Item was Pressure Tested up to 100 Psi A low Pressure Hold for 5 Minutes And Maximum Working pressure 1440 Psi Hold 18 Minutes Leak was Found while testing & Pressure Was Stable According To Chart Recorder

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:	3620 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm ²	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	

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/EN/PT/077 Rev.00 DATED 07.NOV.2021



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

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-09-TSS-NDT-148
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & AP6A, ASME B31.1
WORK ORDER #	*****		
DATE OF INSPECTION:	Thursday, September 19, 2024	INSPECTION. DUE DATE:	Tuesday, March 18, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING & WITNESS PRESSURE TEST		
DESCRIPTION:	FLANGE: 3" 600 CL X 3" 206 THREAD	SERIAL NO:	HAH 18483-14-6
Pump NO :	13119220	CAL DUE DATE:	19.AUG.2025
Pressure Gauge NO.:	468080	CAL DUE DATE:	19.JUN.2025

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

ONLINE TRACEABILITY

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

POINTS	THICKNESS AT POSITION		MINIMUM THICKNESS PROVIDED BY CUSTOMER
	A		
0°	7.52		3.15 MM
90°	7.80		
180°	7.14		
270°	7.45		

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
 Note:MPI Wet Fluorescent inspection Thread With UltraViolet Light

U.T-The Above Item Was Found Acceptable As Per ASTM E797

BODY PRESSURE TEST- The Above Item was Pressure Tested up to 100 Psi A low Pressure Hold for 5 Minutes And Maximum Working pressure 1440 Psi Hold 18 Minutes Leak was Found while testing & Pressure Was Stable According To Chart Recorder

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:	3620 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm ²	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	

PERSON DETAILS		REVIEW BY		
INSPECTOR NAME:	M. Shalwan Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:		INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN
SIGNATURE & STAMP:				DATE:

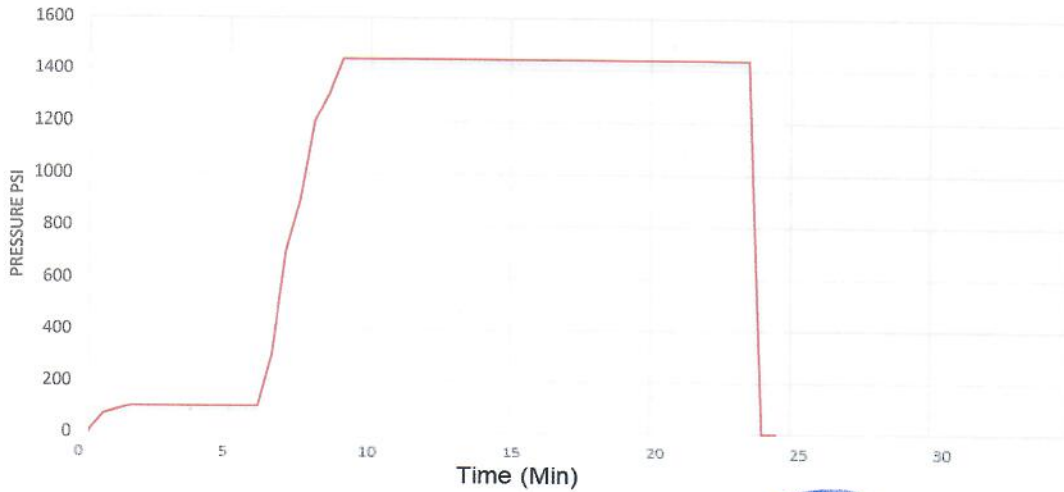


Data Collection Report

Gauge Information	
Serial Number	468080
Model	XP2I
Calibration Date	20-Jun-24
Range	15000 PSI

Run Info	
Start Time	11:00 AM
Stop Time	11:24 AM
Test Date	19-Sep-24
EQ NUMBER	5FOX

READING



TESTED BY : HAIDER EMAD
APPROVED BY: KHALDOON ASAD
COMMENTS: body test

