

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

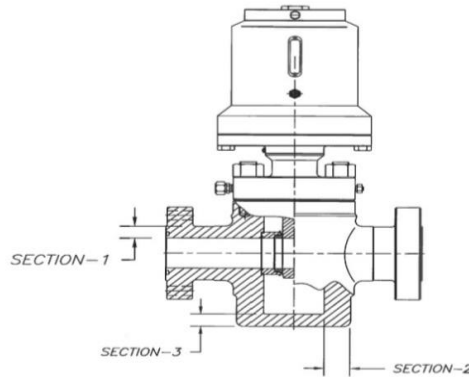
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIEREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-09-TSS-NDT-019
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	JOB NO :	QC-24-09-TSS-NDT-HALL-012
WORK ORDER #	327063236	SPECIFICATION:	ASME B31.1
DATE OF INSPECTION :	Wednesday, September 18, 2024	INSP. DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND WITNESS PRESSURE TEST		
DESCRIPTION:	SSV 3 1/16" 10K	SAP NO:	11653887
LOW PRESSURE TEST	300 psi	HOLDING TIME:	05 MINUTES
MAXIMUM WORKING PRESSURE TEST	10000 Psi	HOLDING TIME:	17 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	The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 10.000 psi Hold 17 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached
DOWNSTREAM PRESSURE TEST	The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 10.000 psi Hold 17 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached
UPSTREAM PRESSURE TEST	The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 10.000 psi Hold 17 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shahzad Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED	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

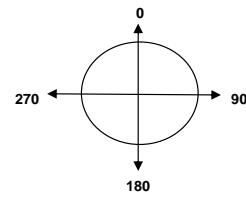
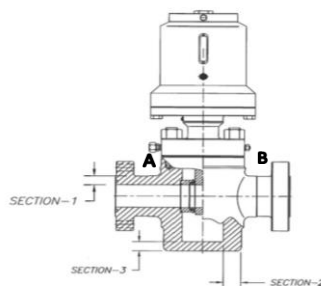
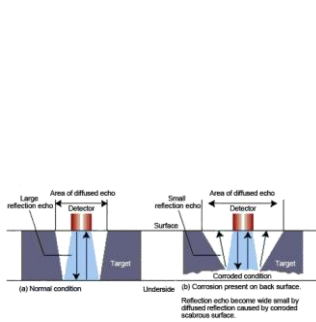
Basra, North Rumaila, Quality Control Yard - Iraq



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-NDT-020
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797
WORK ORDER #	327063236		
DATE OF INSPECTION:	Wednesday, September 18, 2024	INSPECTION. DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	SSV : 3 1/16" 10K	SSV SAP NO :	11653887
MANUFACTURER:	WORLD WIDE OIL FIELD	SERIAL NO:	107026-1



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

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

POINTS	THICKNESS AT POSITION				MINIMUM THICKNESS IN INCHES		
	SECTION-1 A	SECTION-1 B	SECTION-2	SECTION-3	SECTION-1	SECTION-2	SECTION-3
0°	1.204	1.216	2.061	2.077	1.060	1.450	1.250
90°	1.211	1.214	2.067	2.119	1.060	1.450	1.250
180°	1.218	1.236	2.005	2.039	1.060	1.450	1.250
270°	1.227	1.235	2.058	2.096	1.060	1.450	1.250

INSPECTION RESULT

VT & MPI	Accepted	According to ASTM E709
UT	Accepted	According to ASTM E 797
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

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 E797

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

INSPECTION EQUIPMENT DETAILS	TECHNICAL DETAILS
AC YOKE S.N: 201504048	CAL DUE DATE: 14-Oct-24
Digital Lux Meter WHITE LIGHT: 2722003	CAL DUE DATE: 16-Oct-24
UT THICKNESS GAUGE: 3997	CAL DUE DATE: 14-Oct-24
UT TEST BLOCK: NoBo5087	CAL DUE DATE: 15-Oct-24
ASTM Test Block: 1657	CAL DUE DATE: 14-Oct-24
WHITE LIGHT INTENSITY: 3620 lux	

White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Magnaflux	220602	JUN.2025	

Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
Magnaflux	220605	JULY.2025	

Fluorescent Magnetic Ink 7HF	CONCENTRATION
	1.2 to 2.4 ml/100 ml

PERSON DETAILS

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

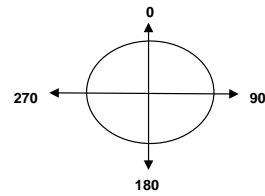
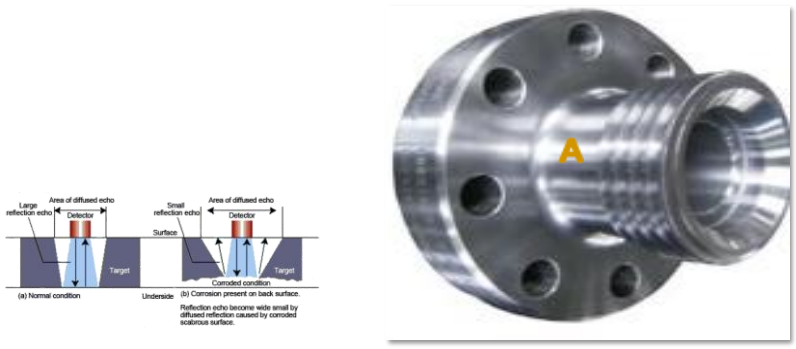
Original - Client Files Copy - Area Office QC/FN/PT/077 Rev.00 DATED 07.NOV. 2021



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-NDT-021
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	STANDARD:	ASTM E709 & ASTM E797 & AP6A
WORK ORDER #	327063236		
DATE OF INSPECTION:	Wednesday, September 18, 2024	INSPECTION. DUE DATE:	Wednesday, September 17, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLANGE 3 1/16" 10K X 3" 1502 THREAD	SSV SAP NO #	11653887
MANUFACTURER:	WORLD WIDE OIL FIELD	SERIAL NO:	M22720-1



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

POINTS	THICKNESS AT POSITION		MINIMUM THICKNESS IN INCHES
	A		
0°	1.042		0.397 INCH
90°	1.035		
180°	1.048		
270°	1.065		

INSPECTION RESULT

VT & MPI	Accepted	According to ASTM E709
UT	Accepted	According to ASTM E 797
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Halliburton Acceptance Criteria

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

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/cm²	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shohad 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

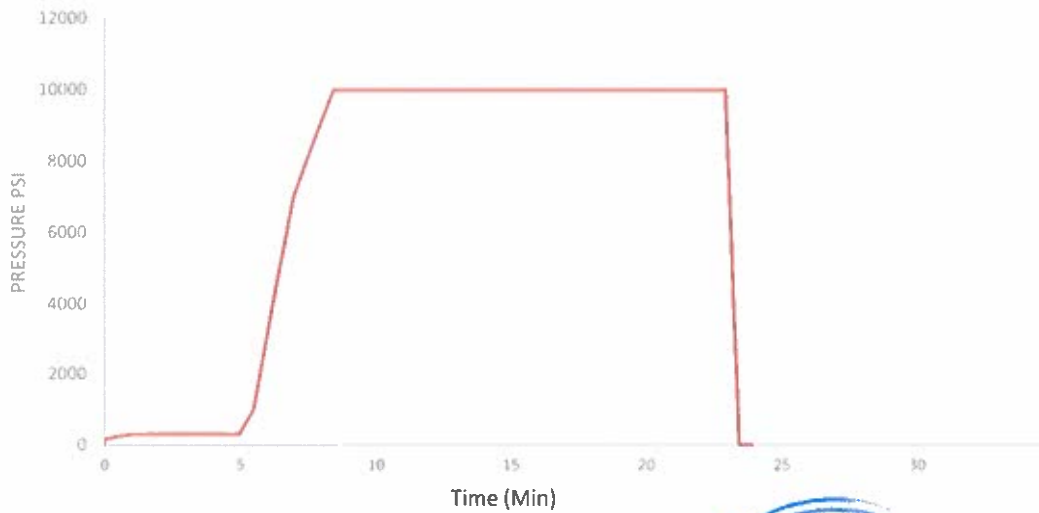


Data Collection Report

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

Run Info	
Start Time	9:30 AM
Stop Time	9:54 AM
Test Date	18-Sep-24
EQ NUMBER	11653887
LAST CALIB	20-Jul-24

READING



TESTED BY : Muntadher Nazar
APPROVED BY: Hassan Kamel
COMMENTS: Body Test

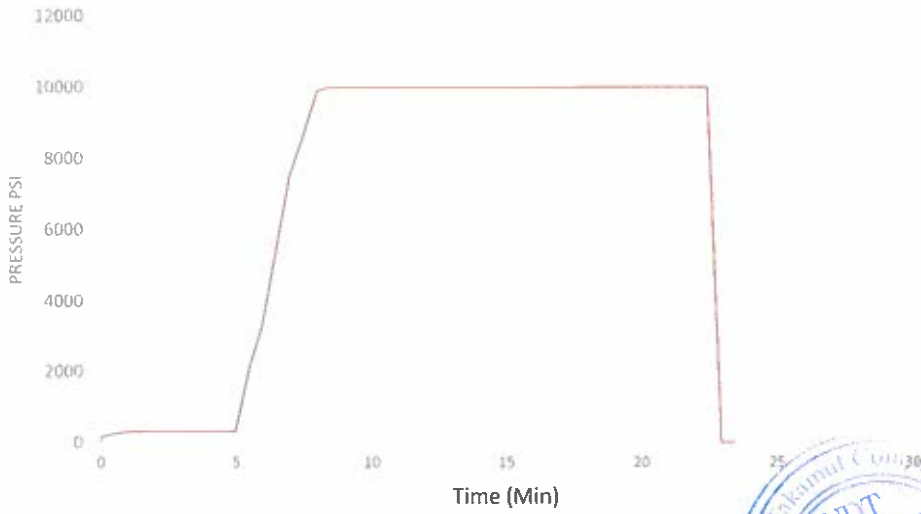


Data Collection Report

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

Run Info	
Start Time	10:00 AM
Stop Time	10:23 AM
Test Date	18-Sep-24
EQ NUMBER	11653887
LAST CALIB	20-Jul-24

READING



TESTED BY : Muntadher Nazar
APPROVED BY: Hassan Kamel
COMMENTS: Upstream Test

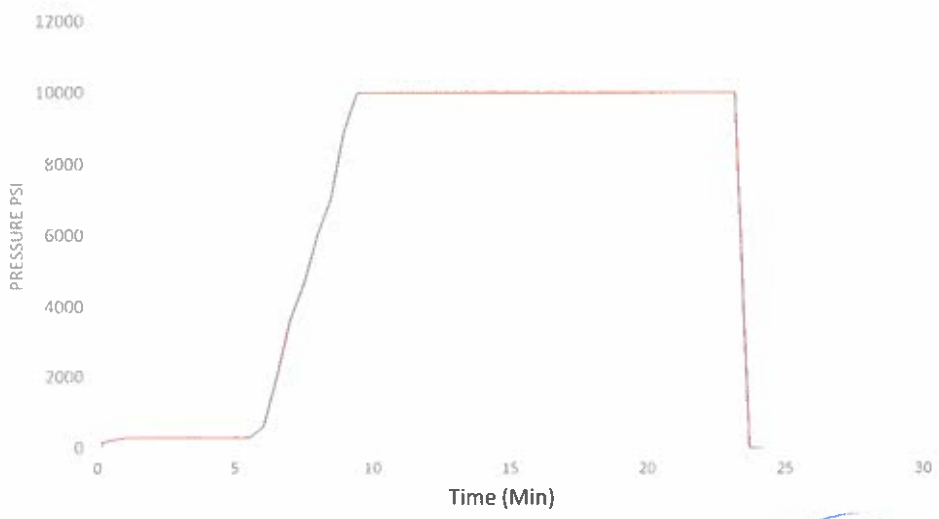


Data Collection Report

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

Run Info	
Start Time	10:30 AM
Stop Time	10:54 AM
Test Date	18-Sep-24
EQ NUMBER	11653887
LAST CALIB	20-Jul-24

READING



TESTED BY : Muntadher Nazar
APPROVED BY: Hassan Kamel
COMMENTS: Downstream Test

