

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

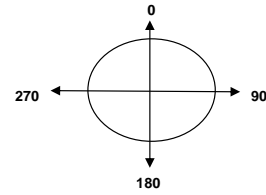
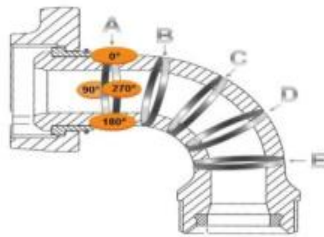
Basra, North Rumaila, Quality Control Yard - Iraq



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

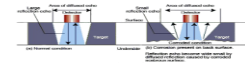
THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	<b>HALLIBURTON</b>	REPORT NO.:	QC-24-07-TSS-NDT-017
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & ASME B31.1
WORK ORDER #	*****	HALLIBURTON DOC	Halliburton Acceptance Criteria WM-GL-HAL-SWT-501
DATE OF INSPECTION:	Wednesday, July 24, 2024	NEXT INSPECTION DATE:	<b>Wednesday, July 23, 2025</b>
TYPE OF INSPECTION:	<b>VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING &amp; WITNESS PRESSURE TEST</b>		
DESCRIPTION:	4" 90 DEGREE ELBOW H2S 4" 206 WING X THREAD	SERIAL NO.:	380749
Pump NO:	13119220 CAL DUE DATE 27.AUG.2024	Pressure Gauge NO:	218230280019 CAL DUE DATE 06.MAR.2025



ONLINE TRACEABILITY

\* ALL READINGS IN INCHES  
\*\*MINIMUM THICKNESS PROVIDED BY CUSTOMER



THICKNESS POINTS AREA	WALL THICKNESS RESULT				MINIMUM THICKNESS IN INCHES
	0°	90°	180°	270°	
A	0.317	0.329	0.315	0.312	0.218 INCH
B	0.322	0.319	0.316	0.321	
C	0.320	0.323	0.327	0.325	
D	0.327	0.315	0.321	0.317	
E	0.313	0.316	0.322	0.326	

**INSPECTION RESULT**

VT & MPI	Accepted	According to ASTM E709
UT	Accepted	According to ASTM E 797 & Halliburton Procedure WM-GL-SWT-501
BODY	Accepted	*** These Are The Actual Readings Need To Follow The Halliburton Procedure

**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  
 Magnetic Particle Inspection With A/C Hand Yoke Welds & Available Areas  
 U.T-The Above Item Was Found Acceptable As Per ASTM E797 & Halliburton Procedure WM-GL-SWT-501  
 Pressure Test/Witness-The Above Item was Pressure Tested up to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 2.000 psi Hold 15 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

**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
DC COIL:	22650	CAL DUE DATE	15-Oct-24
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24
WHITE LIGHT INTENSITY:	3630 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm <sup>2</sup>
		White Contrast WCP-2	MANUFACTURE BATCH NO EXPIRE DATE
		Black Magnetic Ink 7HF	MANUFACTURE BATCH NO EXPIRE DATE
		Fluorescent Magnetic Ink 14HF	MANUFACTURE BATCH NO EXPIRE DATE
		Concentration of 14HF:	0.1 to 0.4 ml/100 ml
		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:	ASNT LEVEL II MT PT	INSPECTION SUPERVISOR:	HANI ALI	HR&SIGN	
SIGNATURE & STAMP:				DATE:	

Original - Client Files Copy - Area Office QC/EN/P1/077 Rev.00 DATED 07.NOV.2021

