

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

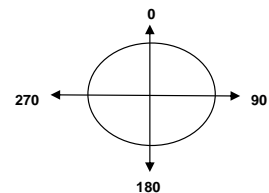
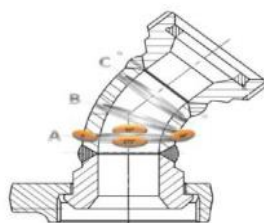
Basra, North Rumaila, Quality Control Yard - Iraq



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

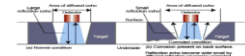
THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	<b>HALLIBURTON</b>	REPORT NO.:	QC-24-07-TSS-NDT-033
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 31, 2024	NEXT INSPECTION DATE:	<b>Wednesday, July 30, 2025</b>
TYPE OF INSPECTION:	<b>VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING &amp; WITNESS PRESSURE TEST</b>		
DESCRIPTION:	4" 45 DEGREE ELBOW H2S 4" 206 WING X THREAD	SERIAL NO:	376404
Pump NO:	13119220 CAL DUE DATE 27.AUG.2024	Pressure Gauge NO:	218230280019 CAL DUE DATE 06.MAR.2025



ONLINE TRACEABILITY

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



THICKNESS POINTS AREA	WALL THICKNESS RESULT				MINIMUM THICKNESS IN INCHES
	0°	90°	180°	270°	
A	0.336	0.341	0.334	0.338	0.218 INCH
B	0.345	0.342	0.339	0.340	
C	0.339	0.346	0.338	0.343	

**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	White Contrast WCP-2 MANUFACTURE Magnaflux BATCH NO 220602 EXPIRE DATE JUN.2025
Digital Lux Meter WHITE LIGHT 2722003 CAL DUE DATE 16-Oct-24	Black Magnetic Ink 7HF MANUFACTURE Magnaflux BATCH NO 220605 EXPIRE DATE JULY.2025
UT THICKNESS GAUGE: 3997 CAL DUE DATE 14-Oct-24	Fluorescent Magnetic Ink 14HF MANUFACTURE Magnaflux BATCH NO 220306 EXPIRE DATE March.2025
UT TEST BLOCK: NoBo5087 CAL DUE DATE 15-Oct-24	Concentration of 14HF: 0.1 to 0.4 ml/100 ml
ASTM Test Block: 1657 CAL DUE DATE 14-Oct-24	Concentration of 7HF: 1.2 to 2.4 ml/100 ml
DC COIL: 22650 CAL DUE DATE 15-Oct-24	
UV BLACK LIGHT: 1898977 CAL DUE DATE 14-Oct-24	
WHITE LIGHT INTENSITY: 3670 lux	UV BLACK LIGHT INTENSITY: 3085 μw/cm²

**PERSON DETAILS**

**REVIEW BY**

INSPECTOR NAME: M. Shahzad Ahmed	SENIOR INSPECTOR: NAVED HUSSAIN	CLIENT:
QUALIFICATION: ASNT LEVEL II MT-2000	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

