

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

Basra, North Rumaila, Quality Control Yard - Iraq

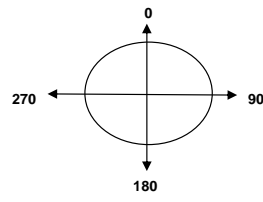
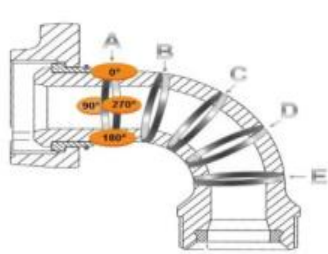


**CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST**

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

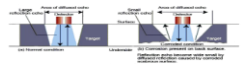
CLIENT:	<b>HALLIBURTON</b>	REPORT NO.:	QC-24-07-TSS-NDT-028
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & ASME B31.1
WORK ORDER #	*****	HALLIBURTON DOC	Halliburton Acceptance Criteria WM-GL-HAL-SWT-501
DATE OF INSPECTION:	Wednesday, July 31, 2024	NEXT INSPECTION DATE:	<b>Wednesday, July 30, 2025</b>
TYPE OF INSPECTION:	<b>VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING &amp; WITNESS PRESSURE TEST</b>		

DESCRIPTION:	<b>4" 90 DEGREE ELBOW H2S 4" 206 WING X THREAD</b>	SERIAL NO.:	377173
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	0.343	0.355	0.341	0.346	0.218 INCH
B	0.348	0.336	0.342	0.343	
C	0.346	0.340	0.353	0.358	
D	0.353	0.341	0.347	0.343	
E	0.349	0.352	0.358	0.362	

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 TestWitness-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			
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:	3670 lux	UV BLACK LIGHT INTENSITY:	3085 µw/cm²	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 NDT	INSPECTION SUPERVISOR:	HANI ALI	HR&SIGN	
SIGNATURE & STAMP:				DATE:	

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