

AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

Basra, North Rumaila, Quality Control Yard - Iraq

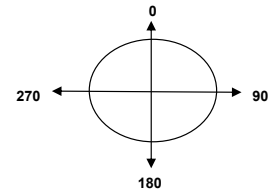
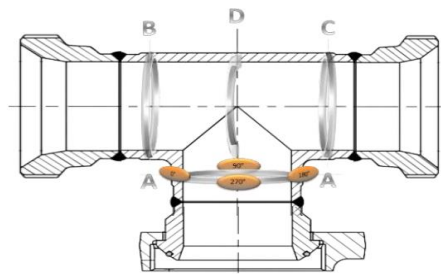


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION & WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

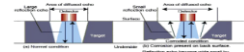
CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-09-TSS-NDT-017
LOCATION:	BASRA IRAQ	STANDARD:	ASTM E709-21 & ASTM E797-21 & ASME B31.1:2024
WORK ORDER #	*****	HALLIBURTON DOC	Halliburton Acceptance Criteria WM-GL-HAL-SWT-501
DATE OF INSPECTION:	Sunday, September 29, 2024	NEXT INSPECTION DATE:	Sunday, September 28, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING & WITNESS PRESSURE TEST		

DESCRIPTION:	TEE 3" 206 T X T X W H2S 2K	SERIAL NO:	492459
Pump NO:	13119220 CAL DUE DATE 19.AUG.2025	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
	0°	90°	180°	270°	IN INCHES
A	0.368	0.356	0.354	0.339	0.170 INCH
B	0.360	0.347	0.341	0.347	
C	0.363	0.341	0.347	0.354	
D	0.376	0.381	0.377	0.370	

INSPECTION RESULT		
VT & MPI	Accepted	According to ASTM E709-21
UT	Accepted	According to ASTM E 797-21
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 E709-21

Note:MPI Wet Fluorescent inspection Thread With UltraViolet Light

Magnetic Particle Inspection With A/C Hand Yoke Welds & Critical Areas

U.T-The Above Item Was Found Acceptable As Per ASTM E797-21

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			
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	230408	APRIL,2026
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	230604	JUNE, 2026
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	230503	MAY,2026
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24	Concentration of 14HF:		0.1 to 0.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3630 lux	UV BLACK LIGHT INTENSITY:	3140 µw/cm²	Concentration of 7HF:		1.2 to2.4 ml/100 ml	

PERSON DETAILS		REVIEW BY			
INSPECTOR NAME:	M. Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT LEVEL III	INSPECTION SUPERVISOR:	HANI ALI	HSB SIGN:	
SIGNATURE & STAMP:				DATE:	

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