

AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

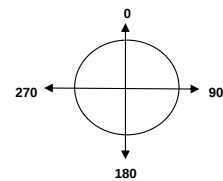
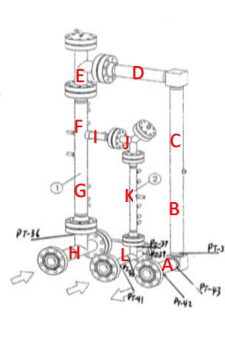
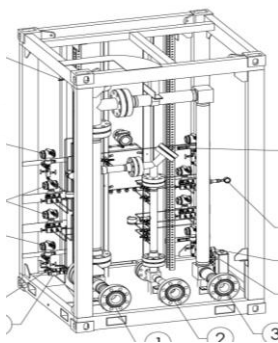
Basra, North Rumaila, Quality Control Yard - Iraq



MAJOR INSPECTION CERIFICATE

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-25-05-TSS-NDT MAJ-001
LOCATION:	TSS WORKSHOP & INSPECTION TEST AREA	SPECIFICATION:	ASTM E709 & ASTM E797 & ASME B31.1 Manufacturing Date Book
WORK ORDER #	326752491		
DATE:	Wednesday, May 29, 2024	INSP. DUE DATE:	ANNUAL INSPECTION
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING & WITNESS PRESSURE TEST		
DESCRIPTION:	MULTI PHASE FLOW METER 5K (MPFM)	SAP NO.:	12332299
Max. Working Pressure:	5000 PSI	Holding Time:	18 Min
Low pressure:	300 PSI	Holding Time:	05 Min
Pump S.N.:	13119220 Cal DUE. AUG.2024	Pressure Gauge NO.:	468066 Cal DUE. AUG.2024

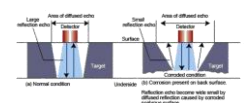


A:12'O CLOCK / FORWARD
B:3'O CLOCK / CENTER
C:6'O CLOCK / AFT

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



ONLINE TRACEABILITY



ANGLE	THICKNESS AT POSITION				MINI.THICKNESS	FINAL REMARKS
	0°	90°	180°	270°		
A	0.650	0.670	0.680	0.685	13.35 MM 0.525 INCH	SATISFACTORY
B	0.687	0.678	0.680	0.685		
C	0.690	0.689	0.687	0.684		
D	0.685	0.678	0.645	0.654		
E	0.658	0.678	0.685	0.652		
F	0.658	0.689	0.690	0.670		
G	0.645	0.656	0.651	0.650		
H	0.651	0.650	0.640	0.625		
I	0.471	0.470	0.485	0.460	7.38 MM 0.290 INCH	
J	0.462	0.456	0.465	0.450		
K	0.456	0.450	0.459	0.465		
L	0.458	0.456	0.465	0.469		

INSPECTION RESULT

VT & MPI	Accepted	* ACCORDING TO ASTM E709
UT	Accepted	According to ASTM E 797 & Manufacturing Date Book
BODY	Accepted	*** These Are The Actual Readings Need To Follow As Per Manufacturing Date Book

Inspection Evaluation

(MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable Accordance To ASTM E709

U.T-The Above Item Was Found Acceptable As Per ASTM E 797 & Manufacturing Date Book

Pressure Test-The Above Item was Pressure Tested to 300 PSI A low Pressure Hold for 5 min And Maximum Working pressure 5000 psi Hold 18 min no Leak was Realized while testing & Pressure Was Stable Accordance To Chart Recorder Attached

INSPECTION EQUIPMENT DETAILS

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	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 7HF		1.2 to 2.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3620 lux						

PERSON DETAILS

INSPECTOR NAME:	Usman shabbir	SENIOR INSPECTOR:	M.Shahzad	CLIENT:	
QUALIFICATION:	ASNT CP-1, CP-2, UT, VT,	INSPECTION SUPERVISOR:	HANI ALI	SIGNATURE:	
SIGNATURE & STAMP:				DATE:	

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MAJOR INSPECTION CERIFICATE

Client:	HALLIBURTON (TSS)	Report No:	QC-05-25-TSS-NDT-MAJ-002								
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	326752491								
Date:	Wednesday, May 29, 2024	Next Inspection Date:	ANNUAL INSPECTION								
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION	Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A								
		UNIT DESCRIPTION:	FLANGE 4 1/16" 5K X 3" 1502 WING								
		UNIT S/N:	W07672								
		MPFM S/N:	12332299								
		INSPECTION RESULT :									
		VISUAL , THOROUGH EXAMINATION	VISUAL & MAGNETIC PARTICLE INSPECTION (M.P.I.) HAD BEEN DONE ON THE AVAILABLE AREAS FOR THE ABOVE DESCRIPTION								
		MAGNETIC PARTICLE INSPECTION	Thread & Groove areas inspected and found free from cracks and other defects								
		FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED								
		COMMENT: (MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast									
EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY			
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	ASTM Test Block	EQUIPMENT :	UV BLACK LIGHT: 3140 $\mu\text{w}/\text{cm}^2$	INSPECTOR NAME:	Usman Shabbir	SENIOR INSPECTOR:	M.SHAZAD		
S.NO:	201504048	S.NO:	1657	S.NO:	1898977	QUALIFICATION:	ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI		
Cal Due Date:	14.OCT.2024	Cal Due Date:	14.OCT.2024	Cal Due Date:	14.OCT.2024			CLIENT:			
FLUORESCENT 14HF		Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025					
White Contrast Paint Manufacture:		Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025					
TECHNICAL DETAILS						STAMP & SIGNATURE:					
Digital Lux Meter WHITE LIGHT INTENSITY:											
3570 Lux/S.NO:2722003											
Cal Due Date:16.OCT2024											

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Tel: +9647810009138 / +9647834964657

Email: OP@qualitycontrol-iraq.com / hany.akafi@qualitycontrol-iraq.com

MAJOR INSPECTION CERIFICATE

Client:	HALLIBURTON (TSS)	Report No:	QC-05-25-TSS-NDT-MAJ-003
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	326752491
Date:	Wednesday, May 29, 2024	Next Inspection Date:	ANNUAL INSPECTION
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION	Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A

	UNIT DESCRIPTION:	FLANGE 4 1/16" 5K X 3" 1502 THREAD
	UNIT S/N:	IFJ 139
	MPFM S/N:	12332299
	INSPECTION RESULT :	
	VISUAL , THOROUGH EXAMINATION	VISUAL & MAGNETIC PARTICLE INSPECTION (M.P.I.) HAD BEEN DONE ON THE AVAILABLE AREAS FOR THE ABOVE DESCRIPTION
	MAGNETIC PARTICLE INSPECTION	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED
	COMMENT: (MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast	

EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY			
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	ASTM Test Block	EQUIPMENT :	UV BLACK LIGHT: 3140 µw/cm ²	INSPECTOR NAME:	Usman Shabbir	SENIOR INSPECTOR:	M.SHAZAD		
S.NO:	201504048	S.NO:	1657	S.NO:	1898977	QUALIFICATION:	ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI		
Cal Due Date:	14.OCT.2024	Cal Due Date:	14.OCT.2024	Cal Due Date:	14.OCT.2024						
FLUORESCENT 14HF		Magnaflux	Batch No:	220306	EXPIRE DATE:					MARCH,2025	
White Contrast Paint Manufacture:		Magnaflux	Batch No:	220602	EXPIRE DATE:					JUN,2025	
TECHNICAL DETAILS											
Digital Lux Meter WHITE LIGHT INTENSITY:		Black Magnetic Ink Manufacture:7HF				STAMP & SIGNATURE:		CLIENT:			
3570 Lux/S.NO:2722003		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml						Batch No:220605	
Cal Due Date:16.OCT2024		Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml						EXPIRE DATE: Jul-25	

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MAJOR INSPECTION CERIFICATE

Client:	HALLIBURTON (TSS)	Report No:	QC-05-25-TSS-NDT-MAJ-004
Location:	TSS WORKSHOP & INSPECTION TEST AREA	WORK ORDER	326752491
Date:	Wednesday, May 29, 2024	Next Inspection Date:	ANNUAL INSPECTION
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION	Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A

	UNIT DESCRIPTION:	FLANGE 4 1/16" 5K X 3" 1502 THREAD
	UNIT S/N:	21951-2
	MPFM S/N:	12332299
	INSPECTION RESULT :	
	VISUAL , THOROUGH EXAMINATION	VISUAL & MAGNETIC PARTICLE INSPECTION (M.P.I.) HAD BEEN DONE ON THE AVAILABLE AREAS FOR THE ABOVE DESCRIPTION
	MAGNETIC PARTICLE INSPECTION	Thread & Groove areas inspected and found free from cracks and other defects
	FINAL RESULTS	THE ABOVE INSPECTED AREAS WAS ACCEPTED
	COMMENT: (MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast	

EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY			
EQUIPMENT :	AC/DC HAND Yoke	EQUIPMENT :	ASTM Test Block	EQUIPMENT :	UV BLACK LIGHT: 3140 µw/cm ²	INSPECTOR NAME:	Usman Shabbir	SENIOR INSPECTOR:	M.SHAZAD		
S.NO:	201504048	S.NO:	1657	S.NO:	1898977	QUALIFICATION:	ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI		
Cal Due Date:	14.OCT.2024	Cal Due Date:	14.OCT.2024	Cal Due Date:	14.OCT.2024						
FLUORESCENT 14HF		Magnaflux	Batch No:	220306	EXPIRE DATE:					MARCH,2025	
White Contrast Paint Manufacture:		Magnaflux	Batch No:	220602	EXPIRE DATE:					JUN,2025	
TECHNICAL DETAILS											
Digital Lux Meter WHITE LIGHT INTENSITY:		Black Magnetic Ink Manufacture:7HF				STAMP & SIGNATURE:		CLIENT:			
3570 Lux/S.NO:2722003		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml						Batch No:220605	
Cal Due Date:16.OCT2024		Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml						EXPIRE DATE: Jul-25	

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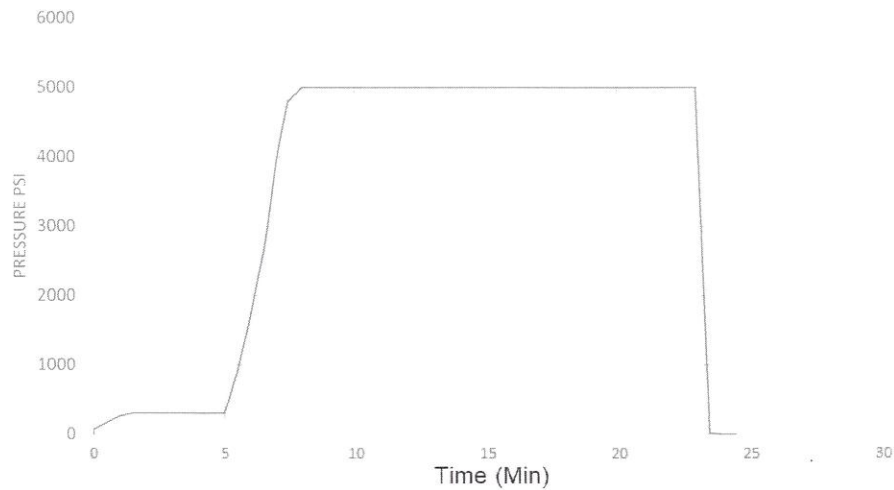
Email: OP@qualitycontrol-iraq.com / hany.akafi@qualitycontrol-iraq.com

Data Collection Report

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

Run Info	
Start Time	2:30 PM
Stop Time	2:54 PM
Test Date	31-May-24
EQ NUMBER	12332299
LAST CALIB	2.Aug.2023

READING



TESTED BY : Feras Abbas
APPROVED BY: Hassan Kamel
COMMENTS: Body Test

SIGN: 

SIGN: 

