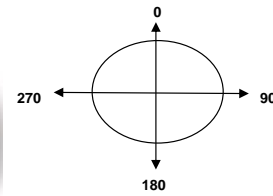
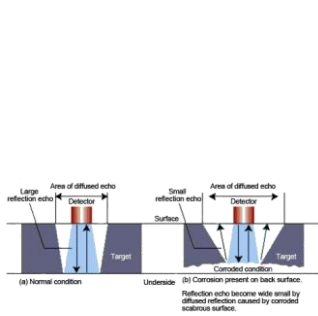


CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-10-TSS-NDT-77-001
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & AP6A
WORK ORDER #	*****		
DATE OF INSPECTION:	Wednesday, October 16, 2024	INSPECTION. DUE DATE:	Tuesday, April 15, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	BALON VALVE 4" 600 CL	DIVERTER MANIFOLD SAP NO:	12032177
		SERIAL NO:	FCG-0036



* ALL READINGS IN MM
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	THICKNESS AT POSITION		MINIMUM THICKNESS PROVIDED BY CUSTOMER
	A	B	
0°	12.72	13.14	6.5 MM
90°	12.60	12.65	
180°	12.83	13.02	
270°	12.89	12.76	

INSPECTION RESULT

VT & MPI	Accepted	According to ASTM E709
UT	Accepted	According to ASTM E 797

Inspection Evaluation

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

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

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	11-Apr-25	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	13-Apr-25		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	5500391	CAL DUE DATE	11-Apr-25	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	12-Apr-25		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	11-Apr-25	Concentration of 7HF:		1.2 to2.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3640 lux						

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	NDT Level 2	INSPECTION SUPERVISOR:	HANI ALI	HSIGN	
SIGNATURE & STAMP:				DATE:	



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-10-TSS-NDT-77-002
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & AP6A
WORK ORDER #	*****		
DATE OF INSPECTION:	Wednesday, October 16, 2024	INSPECTION. DUE DATE:	Tuesday, April 15, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	BALON VALVE 4" 600 CL	DIVERTER MANIFOLD SAP NO:	12032177
		SERIAL NO:	FCG-0038

*** ALL READINGS IN MM**
****MINIMUM THICKNESS PROVIDED BY CUSTOMER**

POINTS	THICKNESS AT POSITION		MINIMUM THICKNESS PROVIDED BY CUSTOMER
	A	B	
0°	12.07	12.21	6.5 MM
90°	12.36	12.44	
180°	12.41	12.09	
270°	11.93	12.48	

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

Inspection Evaluation
 (MPI) The Above Item Has No Significant Discontinuous At The Time Of Inspection And Found Acceptable According to ASTM E709
 U.T-The Above Item Was Found Acceptable As Per ASTM E797

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	11-Apr-25	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	13-Apr-25		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	5500391	CAL DUE DATE	11-Apr-25	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	12-Apr-25		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	11-Apr-25	Concentration of 7HF:		1.2 to 2.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3640 lux						

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



AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

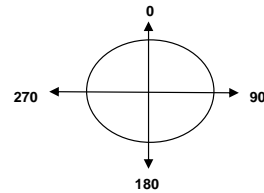
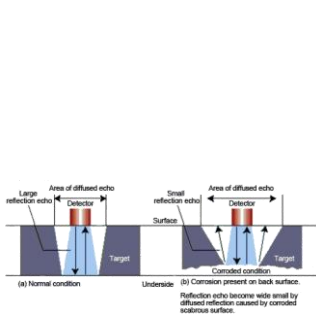
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-10-TSS-NDT-77-003
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & AP6A
WORK ORDER #	*****		
DATE OF INSPECTION:	Wednesday, October 16, 2024	INSPECTION. DUE DATE:	Tuesday, April 15, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLANGE: 4" 600 CL X 4" 206 WING	DIVERTER MANIFOLD SAP NO:	12032177
		SERIAL NO:	FCG-0031



ONLINE TRACEABILITY

* ALL READINGS IN MM
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	THICKNESS AT POSITION	MINIMUM THICKNESS PROVIDED BY CUSTOMER
	A	
0°	8.67	4.04 MM
90°	8.59	
180°	8.79	
270°	8.81	

INSPECTION RESULT

VT & MPI	Accepted	According to ASTM E709
UT	Accepted	According to ASTM E 797

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

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

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	11-Apr-25	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	13-Apr-25		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	5500391	CAL DUE DATE	11-Apr-25	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	12-Apr-25		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	11-Apr-25	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	12-Apr-25		Magnaflux	220306	March,2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	11-Apr-25	Concentration of 14HF:	0.1 to 0.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3640 lux	UV BLACK LIGHT INTENSITY:	3240 µw/cm²	Concentration of 7HF:	1.2 to 2.4 ml/100 ml		

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shalwad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:		INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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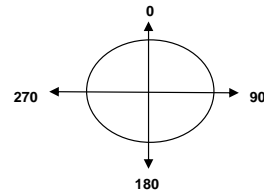
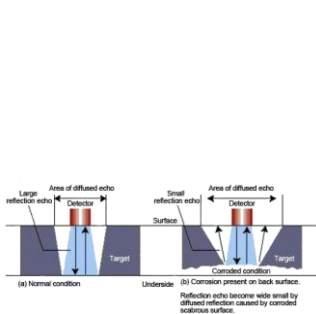
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-10-TSS-NDT-77-004
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & AP6A
WORK ORDER #	*****		
DATE OF INSPECTION:	Wednesday, October 16, 2024	INSPECTION. DUE DATE:	Tuesday, April 15, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLANGE: 4" 600 CL X 4" 206 WING	DIVERTER MANIFOLD SAP NO:	12032177
		SERIAL NO:	FCG-0032



ONLINE TRACEABILITY

* ALL READINGS IN MM
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	THICKNESS AT POSITION		MINIMUM THICKNESS PROVIDED BY CUSTOMER
	A		
0°	8.78		4.04 MM
90°	8.75		
180°	8.54		
270°	8.50		

INSPECTION RESULT

VT & MPI	Accepted	According to ASTM E709
UT	Accepted	According to ASTM E 797

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

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

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

AC YOKE S.N:	201504048	CAL DUE DATE	11-Apr-25	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	13-Apr-25		Magnaflux	220602	JUN.2025
UT THICKNESS GAUGE:	5500391	CAL DUE DATE	11-Apr-25	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	12-Apr-25		Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	11-Apr-25	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	12-Apr-25		Magnaflux	220306	March.2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	11-Apr-25	Concentration of 14HF:		0.1 to 0.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3640 lux	UV BLACK LIGHT INTENSITY:	3240 μw/cm ²	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:	NDT Level 1	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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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

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT NO.:	QC-24-10-TSS-NDT-77-005
LOCATION:	TSS YARD	STANDARD:	ASTM E709 & ASTM E797 & AP6A
WORK ORDER #	*****		
DATE OF INSPECTION:	Wednesday, October 16, 2024	INSPECTION. DUE DATE:	Tuesday, April 15, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	TEE: 4" 600 FLANGE X 4" 600 FLANGE X 4" 206 THREAD	DIVERTER MANIFOLD SAP NO:	12032177
		SERIAL NO:	FCG-0037

* ALL READINGS IN MM
**MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	THICKNESS AT POSITION			MINIMUM THICKNESS PROVIDED BY CUSTOMER
	A	B	C	
0°	8.53	8.65	8.68	4.04 MM
90°	8.60	8.72	8.87	
180°	8.67	8.73	8.83	
270°	8.65	8.68	8.95	

INSPECTION RESULT

VT & MPI	Accepted	According to ASTM E709
UT	Accepted	According to ASTM E 797

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

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

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504048	CAL DUE DATE	11-Apr-25	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	13-Apr-25		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	5500391	CAL DUE DATE	11-Apr-25	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	12-Apr-25		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	11-Apr-25	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	12-Apr-25		Magnaflux	220306	March,2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	11-Apr-25	Concentration of 14HF:	0.1 to 0.4 ml/100 ml		
WHITE LIGHT INTENSITY:	3640 lux	UV BLACK LIGHT INTENSITY:	3240 µw/cm²	Concentration of 7HF:	1.2 to 2.4 ml/100 ml		

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shalazad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:		INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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