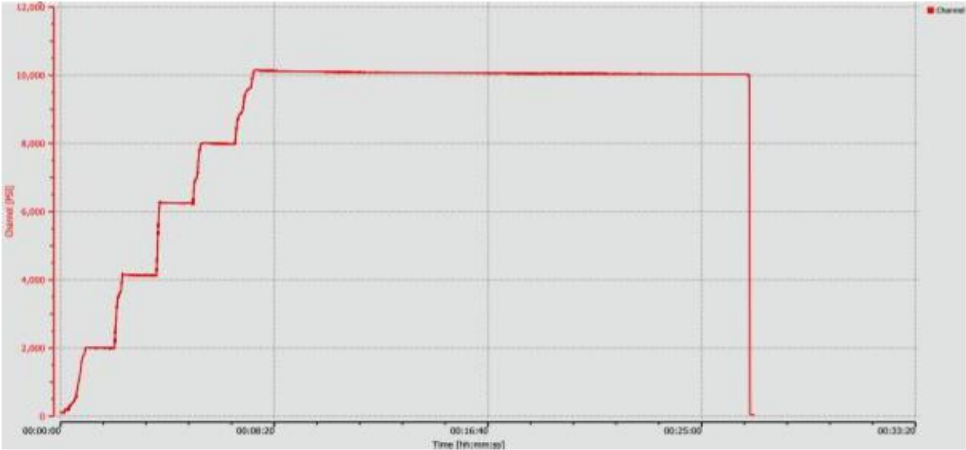


CERTIFICATE OF QUALIFICATION VISUAL AND WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIEREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-08-SPERRY-NDT-017
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASME B31.1
WORK ORDER #	326530611	HALL DOC:	GEO-SPAN PRESSURE TEST PROCEDURE, REVISION C DOC # D01065028
DATE OF INSPECTION :	Thursday, August 22, 2024	INSP. DUE DATE:	Thursday, August 21, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND WITNESS PRESSURE TEST		
DESCRIPTION:	GEO-SPAN	GEO-SPAN S.NO	210247 SR# 11254679
LOWER PRESSURE:	500 psi	HOLDING TIME:	05 MINUTES
MAXIMUM PRESSURE:	10000 Psi	HOLDING TIME:	15 MINUTES
CHART RECORDER S.N:	3741181	CAL DUE DATE:	14.APR.2025
PRESSURE TRANSDUCER S.N:	1107XB8Q	CAL DUE DATE:	14.APR.2025
PRESSURE GAUGE 1 S.N:	124955119	CAL DUE DATE:	14.APR.2025
PRESSURE GAUGE 2 S.N:	2016041.1.1	CAL DUE DATE:	14.APR.2025



ONLINE TRACEABILITY

INSPECTION RESULT

PRESSURE TEST:	The above item was Low Pressure 500 psi pressure hold 05 minutes and Tested up to 2000, 4000, 6000, 8000 psi pressure hold 02 minutes After Each Increase and Maximum Working Pressure 10000 psi pressure hold 15 minutes no Leak was Realized while testing & Pressure Was Stable accordance to chart Recorder Attached.
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PERSON DETAILS		REVIEW BY		
INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	ASNT MT-PT-RT	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN
SIGNATURE & STAMP:				DATE:

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AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

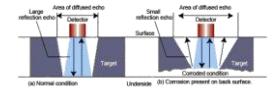
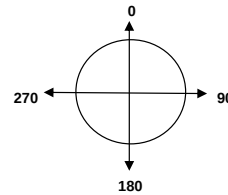
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-08-SPERRY-NDT-001
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326530611	HALL DOC:	GEO-SPAN ULTRASONIC MANUAL, REVISION K DOC # D00112159
DATE OF INSPECTION :	Tuesday, August 20, 2024	INSP. DUE DATE:	Tuesday, August 19, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	GEO-SPAN (IN LET PIPING RUN)	GEO-SPAN S.NO	GEO-SPAN 210247 SR# 11254679
MANUFACTURER:	HES	SERIAL NO:	IPR 247-7



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

POINTS	2" PIPING		3" PIPING		90-DEGREE ELBOW	2" PIPING Minimum Wall Thickness	3" PIPING Minimum Wall Thickness	90-DEGREE ELBOW Minimum Wall Thickness
	A	B	C	D				
0°	0.438	0.610	0.613	0.662		0.355 INCH	0.510 INCH	0.565 INCH
90°	0.445	0.600	0.615	0.677		0.355 INCH	0.510 INCH	0.565 INCH
180°	0.455	0.637	0.617	0.681		0.355 INCH	0.510 INCH	0.565 INCH
270°	0.444	0.620	0.627	0.686		0.355 INCH	0.510 INCH	0.565 INCH

INSPECTION RESULT

VT & MPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E709 Wet Fluorescent inspection Thread With UltraViolet Light	Note:MPI
DPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E165 Note:Dye Penetrant Inspection Groove Area	
UT	The above item was found acceptable as per Halliburton acceptance criteria Geo-span Ultrasonic Manual Revision K DOC # D00112159	

INSPECTION EQUIPMENT DETAILS

TECHNICAL DETAILS

AC YOKE S.N:	201504052	CAL DUE DATE	14-Oct-24	White Contrast WCP 2	MANUFACTURE Magnafly	BATCH NO	220602	EXPIRE DATE	JUN,2025
Digital Lux Meter	2722003	CAL DUE DATE	16-Oct-24	Black Magnetic Ink 7HF	MANUFACTURE Magnafly	BATCH NO	220605	EXPIRE DATE	JULY,2025
WHITE LIGHT	3997	CAL DUE DATE	14-Aug-24	Fluorescent Magnetic Ink 14HF	MANUFACTURE Magnafly	BATCH NO	220306	EXPIRE DATE	March,2025
UT THICKNESS GAUGE:	NoBo5087	CAL DUE DATE	15-Oct-24	Red Penetrant	MANUFACTURE Magnafly	BATCH NO	220511	EXPIRE DATE	May,2025
UT TEST BLOCK:	1657	CAL DUE DATE	14-Oct-24	Developer	MANUFACTURE Magnafly	BATCH NO	220302	EXPIRE DATE	March,2025
ASTM Test Block:	22650	CAL DUE DATE	15-Oct-24	Wet FLUORESCENT Particle Concentration 14 HF					0.1 to 0.4 ml/100 ml
DC COIL:	11223	CAL DUE DATE	16-Oct-24	Black Magnetic Ink Concentration 7 HF					1.2 to 2.4 ml/100 ml
COMPARATOR BLOCK	201704125	CAL DUE DATE	16-Oct-24						
INFRARED THERMOMETER	1898977	CAL DUE DATE	14-Oct-24						
UV BLACK LIGHT:	30 minutes	DEVELOPER DWELL TIME:	15 minutes						
PENETRANT DWELL TIME:	104 °F	WHITE LIGHT INTENSITY:	3620 lux						
TEST PART TEMPERATURE :	3210 μw/cm²								
UV BLACK LIGHT INTENSITY:									

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shahad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT, LEVT, UT	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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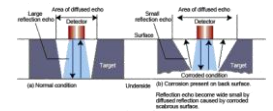
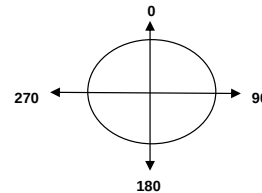
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-08-SPERRY-NDT-002
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326530611	HALL DOC:	GEO-SPAN ULTRASONIC MANUAL, REVISION K DOC # D00112159
DATE OF INSPECTION :	Tuesday, August 20, 2024	INSP. DUE DATE:	Tuesday, August 19, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	FLOW DIVERTER HOUSING	GEO-SPAN S.NO	GEO-SPAN 210247 SR# 11254679
MANUFACTURER:	HES	SERIAL NO:	FDH 247-5



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

POINTS	A	Minimum Wall Thickness
0°	0.807	0.510 INCH
90°	0.816	
180°	0.824	
270°	0.811	

INSPECTION RESULT

VT & MPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E709 Note:MPI Wet Fluorescent inspection Thread With UltraViolet Light
DPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E165 Note:Dye Penetrant Inspection Groove Area
UT	The above item was found acceptable as per Halliburton acceptance criteria Geo-span Ultrasonic Manual Revision K DOC # D00112159

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	Black Magnetic Ink 7HF	Magnaflux	220602	JUN.2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	15-Oct-24	Red Penetrant	Magnaflux	220605	JULY.2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	15-Oct-24	Wet FLUORESCENT Particle Concentration 14 HF	Magnaflux	220306	March.2025
COMPARATOR BLOCK	11223	CAL DUE DATE	16-Oct-24	Black Magnetic Ink Concentration 7 HF	MANUFACTURE	BATCH NO	EXPIRE DATE
INFRARED THERMOMETER	201704125	CAL DUE DATE	16-Oct-24		Magnaflux	220511	May.2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24		MANUFACTURE	BATCH NO	EXPIRE DATE
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes		Magnaflux	220302	March.2025
TEST PART TEMPERATURE :	104 °F	WHITE LIGHT INTENSITY:	3620 lux				0.1 to 0.4 ml/100 ml
UV BLACK LIGHT INTENSITY:	3210 μw/cm ²						1.2 to 2.4 ml/100 ml

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP-105	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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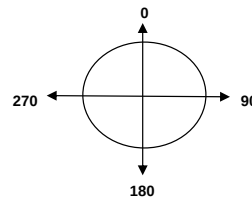
Basra, North Rumaila, Quality Control Yard - Iraq



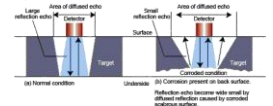
CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-08-SPERRY-NDT-003
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797
WORK ORDER #	326530611	HALL DOC:	GEO-SPAN ULTRASONIC MANUAL, REVISION K DOC # D00112159
DATE OF INSPECTION :	Tuesday, August 20, 2024	INSP. DUE DATE:	Tuesday, August 19, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	GEO SPAN MANIFOLD	GEO-SPAN S.NO	GEO-SPAN 210247 SR# 11254679
MANUFACTURER:	HES	SERIAL NO:	GSV 247-6



ONLINE TRACEABILITY



* ALL READINGS IN INCH

**MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	A	Minimum Wall Thickness
0°	0.479	0.355 INCH
90°	0.486	
180°	0.496	
270°	0.485	

INSPECTION RESULT

VT & MPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E709 Note:MPI Wet Fluorescent inspection Thread With UltraViolet Light
UT	The above item was found acceptable as per Halliburton acceptance criteria Geo-span Ultrasonic Manual Revision K DOC # D00112159

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		Magnaflu x	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		Magnaflu x	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	15-Oct-24	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	15-Oct-24		Magnaflu x	220306	March,2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	14-Oct-24	Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml	
WHITE LIGHT INTENSITY:	3620 lux	UV BLACK LIGHT INTENSITY:	3210 $\mu\text{w}/\text{cm}^2$	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shattad Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT CP, B, UT, VT,	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	

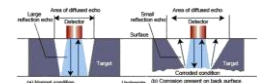
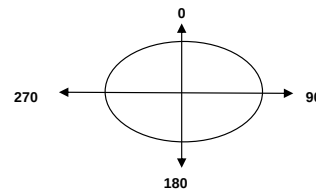
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CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-08-SPERRY-NDT-004
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326530611	HALL DOC:	GEO-SPAN ULTRASONIC MANUAL, REVISION K DOC # D00112159
DATE OF INSPECTION :	Tuesday, August 20, 2024	INSP. DUE DATE:	Tuesday, August 19, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	U-SHAPED WELDMENT	GEO-SPAN S.NO	GEO-SPAN 210247 SR# 11254679
MANUFACTURER:	HES	SERIAL NO:	USW 247-1



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

POINTS	2" PIPING				90-DEGREE ELBOW		2" PIPING Minimum Wall Thickness	90-DEGREE ELBOW Minimum Wall Thickness
	A	B	C	D	E	F		
0°	0.437	0.446	0.449	0.456	0.562	0.553	0.355 INCH	0.395 INCH
90°	0.444	0.450	0.457	0.443	0.549	0.566	0.355 INCH	0.395 INCH
180°	0.454	0.458	0.456	0.472	0.554	0.561	0.355 INCH	0.395 INCH
270°	0.443	0.446	0.453	0.441	0.528	0.556	0.355 INCH	0.395 INCH

INSPECTION RESULT

VT & MPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E709
DPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E165 Penetrant Inspection Groove Area
UT	The above item was found acceptable as per Halliburton acceptance criteria Geo-span Ultrasonic Manual Revision K DOC # D00112159

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	Red Penetrant	MANUFACTURE	BATCH NO	EXPIRE DATE
COMPARATOR BLOCK	11223	CAL DUE DATE	16-Oct-24		Magnaflux	220511	May,2025
INFRARED THERMOMETER	201704125	CAL DUE DATE	16-Oct-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes		Magnaflux	220302	March,2025
TEST PART TEMPERATURE :	104 °F	WHITE LIGHT INTENSITY:	3620 lux	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml	

PERSON DETAILS		REVIEW BY		
INSPECTOR NAME:	M. Shabaz Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:
QUALIFICATION:	ASNT CP-1, CP-2, CP-3, CP-4, CP-5, CP-6, CP-7, CP-8, CP-9, CP-10, CP-11, CP-12, CP-13, CP-14, CP-15, CP-16, CP-17, CP-18, CP-19, CP-20, CP-21, CP-22, CP-23, CP-24, CP-25, CP-26, CP-27, CP-28, CP-29, CP-30, CP-31, CP-32, CP-33, CP-34, CP-35, CP-36, CP-37, CP-38, CP-39, CP-40, CP-41, CP-42, CP-43, CP-44, CP-45, CP-46, CP-47, CP-48, CP-49, CP-50, CP-51, CP-52, CP-53, CP-54, CP-55, CP-56, CP-57, CP-58, CP-59, CP-60, CP-61, CP-62, CP-63, CP-64, CP-65, CP-66, CP-67, CP-68, CP-69, CP-70, CP-71, CP-72, CP-73, CP-74, CP-75, CP-76, CP-77, CP-78, CP-79, CP-80, CP-81, CP-82, CP-83, CP-84, CP-85, CP-86, CP-87, CP-88, CP-89, CP-90, CP-91, CP-92, CP-93, CP-94, CP-95, CP-96, CP-97, CP-98, CP-99, CP-100, CP-101, CP-102, CP-103, CP-104, CP-105, CP-106, CP-107, CP-108, CP-109, CP-110, CP-111, CP-112, CP-113, CP-114, CP-115, CP-116, CP-117, CP-118, CP-119, CP-120, CP-121, CP-122, CP-123, CP-124, CP-125, CP-126, CP-127, CP-128, CP-129, CP-130, CP-131, CP-132, CP-133, CP-134, CP-135, CP-136, 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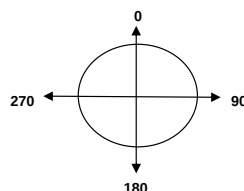
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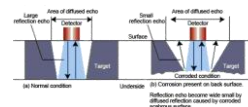
CERTIFICATE OF VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING

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WORK ORDER #	326530611	HALL DOC:	GEO-SPAN ULTRASONIC MANUAL, REVISION K DOC # D00112159
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MANUFACTURER:	HES	SERIAL NO:	CIW 247-2



ONLINE TRACEABILITY



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

POINTS	2" PIPING	3" PIPING		90-DEGREE ELBOW	2" PIPING Minimum Wall Thickness	3" PIPING Minimum Wall Thickness	90-DEGREE ELBOW Minimum Wall Thickness
	A	B	C	D			
0°	0.448	0.620	0.623	0.706	0.355 INCH	0.510 INCH	0.565 INCH
90°	0.457	0.612	0.627	0.702	0.355 INCH	0.510 INCH	0.565 INCH
180°	0.443	0.625	0.627	0.691	0.355 INCH	0.510 INCH	0.565 INCH
270°	0.460	0.636	0.643	0.690	0.355 INCH	0.510 INCH	0.565 INCH

INSPECTION RESULT

VT & MPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E709
DPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E165 Note:Dye Penetrant Inspection Groove Area
UT	The above item was found acceptable as per Halliburton acceptance criteria Geo-span Ultrasonic Manual Revision K DOC # D00112159

INSPECTION EQUIPMENT DETAILS				TECHNICAL DETAILS			
AC YOKE S.N:	201504052	CAL DUE DATE	14-Oct-24	White Contrast	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter	2722003	CAL DUE DATE	16-Oct-24	WCP-2	Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Oct-24	Black Magnetic	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	15-Oct-24	Ink 7HF	Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24	Red	MANUFACTURE	BATCH NO	EXPIRE DATE
COMPARATOR BLOCK	11223	CAL DUE DATE	16-Oct-24	Penetrant	Magnaflux	220511	May,2025
INFRARED THERMOMETER	201704125	CAL DUE DATE	16-Oct-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes		Magnaflux	220302	March,2025
TEST PART TEMPERATURE :	104 °F	WHITE LIGHT INTENSITY:	3620 lux	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml	

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

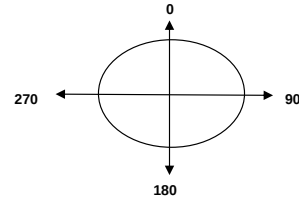
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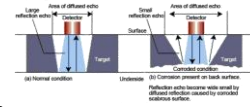
CERTIFICATE OF VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-08-SPERRY-NDT-006
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326530611	HALL DOC:	GEO-SPAN ULTRASONIC MANUAL, REVISION K DOC # D00112159
DATE OF INSPECTION :	Thursday, May 2, 2024	INSP. DUE DATE:	Thursday, May 1, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	Downstream Orifice Piping Run	GEO-SPAN S.NO	GEO-SPAN 210247 SR# 11254679
MANUFACTURER:	HES	SERIAL NO:	DOP 247-3



ONLINE TRACEABILITY



* ALL READINGS IN INCH

**MINIMUM THICKNESS PROVIDED BY CUSTOMER

POINTS	2" PIPING					90-DEGREE ELBOW	2" PIPING Minimum Wall Thickness	90-DEGREE ELBOW Minimum Wall Thickness
	A	B	C	D	E	F		
0°	0.452	0.459	0.462	0.446	0.461	0.550	0.355 INCH	0.395 INCH
90°	0.461	0.467	0.472	0.478	0.482	0.569	0.355 INCH	0.395 INCH
180°	0.442	0.446	0.466	0.469	0.474	0.581	0.355 INCH	0.395 INCH
270°	0.458	0.461	0.468	0.477	0.481	0.563	0.355 INCH	0.395 INCH

INSPECTION RESULT

VT & MPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E709
DPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E165 Note:Dye Penetrant Inspection Groove Area
UT	The above item was found acceptable as per Halliburton acceptance criteria Geo-span Ultrasonic Manual Revision K DOC # D00112159

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	Red Penetrant	MANUFACTURE	BATCH NO	EXPIRE DATE
COMPARATOR BLOCK	11223	CAL DUE DATE	16-Oct-24		Magnaflux	220511	May,2025
INFRARED THERMOMETER	201704125	CAL DUE DATE	16-Oct-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes		Magnaflux	220302	March,2025
TEST PART TEMPERATURE :	104 °F	WHITE LIGHT INTENSITY:	3620 lux	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M.Shahzad Ali	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	UT, PT, VT, ET, NDT	INSPECTION SUPERVISOR:	HANI ALI	HD&SIGN	
SIGNATURE & STAMP:				DATE:	

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AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

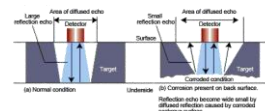
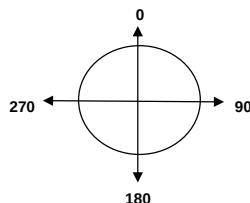
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-08-SPERRY-NDT-007
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326530611	HALL DOC:	GEO-SPAN ULTRASONIC MANUAL, REVISION K DOC # D00112159
DATE OF INSPECTION :	Tuesday, August 20, 2024	INSP. DUE DATE:	Tuesday, August 19, 2025
TYPE OF INSPECTION:	VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	CHOKE VALVE BODY	GEO-SPAN S.NO	13GEO-SPAN 210247 SR# 11254679
MANUFACTURER:	HES	SERIAL NO:	CV 247-4



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

POINTS	A1	A2	B	Location A Minimum Wall Thickness	Location B Minimum Wall Thickness
0°	0.482	0.491	1.003	0.400 INCH	0.800 INCH
90°	0.489	0.476	0.982	0.400 INCH	0.800 INCH
180°	0.499	0.506	0.989	0.400 INCH	0.800 INCH
270°	0.488	0.497	0.985	0.400 INCH	0.800 INCH

INSPECTION RESULT

VT & MPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E709
DPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E165 Note:Dye Penetrant Inspection Groove Area
UT	The above item was found acceptable as per Halliburton acceptance criteria Geo-span Ultrasonic Manual Revision K DOC # D00112159

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	Black Magnetic Ink 7HP	Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Oct-24	Red Penetrant	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	15-Oct-24	Developer	Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	14-Oct-24		MANUFACTURE	BATCH NO	EXPIRE DATE
COMPARATOR BLOCK	11223	CAL DUE DATE	16-Oct-24		Magnaflux	220511	May,2025
INFRARED THERMOMETER	201704125	CAL DUE DATE	16-Oct-24		MANUFACTURE	BATCH NO	EXPIRE DATE
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes		Magnaflux	220302	March,2025
TEST PART TEMPERATURE :	104 °F	WHITE LIGHT INTENSITY:	3620 lux	Black Magnetic Ink Concentration 7 HP		1.2 to 2.4 ml/100 ml	

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shahzad	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	A. N. Lev	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

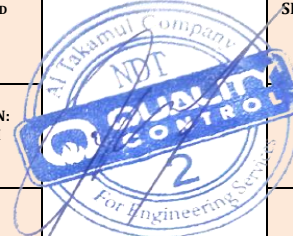
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AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE & DYE PENETRANT INSPECTION									
Client:		HALLIBURTON			Report No:		QC-24-08-SPERRY-NDT-008		
Location:		Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:		326530611		
Inspection Date:		Tuesday, August 20, 2024			Next Inspection Date:		Tuesday, August 19, 2025		
Type Of Inspection:		VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE & DYE PENETRANT INSPECTION			Specification:		ASTM E165/E165M ,ASTM E1417/E1417M ,EN ISO 3452-1,EN ISO 3452-2 ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A, 16A		
				UNIT DESCRIPTION:		INLET FLANGE 2 1/16" 10K BX152 X 2" 1502 THREAD			
				UNIT S/N:		IN 247-9			
				GEO-SPAN S.NO		GEO-SPAN 210247 SR# 11254679			
				INSPECTION RESULT :					
				VISUAL , THOROUGH EXAMINATION		Above Item fully inspected and found freedom from deforms, cracks, corrosion & mechanical damage			
				MAGNETIC PARTICLE INSPECTION (MPI)		Thread & Available critical areas inspected and found free from cracks and other defects'			
				DYE PENETRANT INSPECTION (DPI)		Groove areas inspected and found free from cracks and other defects'			
FINAL RESULTS		Above Item found satisfactory and free of defects at the time of inspection							
TECHNICAL DETAILS DPI									
TECHNIQUE 2 - TYPE II VISIBLE, METHOD 'A' WATER -WASHABLE									
PENETRANT DWELL TIME:		30 minutes		DEVELOPER DWELL TIME:		15 minutes		(MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast Dye Penetrant Inspection Groove Area	
TEST PART TEMPERATURE :		104 °F		WHITE LIGHT INTENSITY:		3620 LUX			
EQUIPMENT DETAILS									
EQUIPMENT :		AC/DC HAND Yoke		EQUIPMENT :		Shooting Coil DC		EQUIPMENT :	
S.NO:		201504052		S.NO:		22650		S.NO:	
Cal Due Date:		14.OCT.2024		Cal Due Date:		15.OCT.2024		Cal Due Date:	
EQUIPMENT :		COMPARATOR BLOCK		EQUIPMENT :		Pressure Gauge 30 PSI		EQUIPMENT :	
S.NO:		11223		S.NO:		SSR825		S.NO:	
Cal Due Date:		16.OCT.2024		Cal Due Date:		16.OCT.2024		Cal Due Date:	
Red Penetrant Manufacture:		Magnaflux		Batch No:		220511		EXPIRE DATE:	
Developer Manufacture:		Magnaflux		Batch No:		220302		EXPIRE DATE:	
FLUORESCENT 14HF		Magnaflux		Batch No:		220306		EXPIRE DATE:	
White Contrast Paint Manufacture:		Magnaflux		Batch No:		220602		EXPIRE DATE:	
Digital Lux Meter		TECHNICAL DETAILS				Black Magnetic Ink Manufacture:7HF			
S.NO:2722003		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605			
Cal Due Date:16.OCT.2024		Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:		Jul-25	
PERSON DETAILS					REVIEW BY				
INSPECTOR NAME: M.SHAHZAD AHMED					SENIOR INSPECTOR: NAVEED HUSSAIN				
QUALIFICATION: ASNT LEVEL II MT & PT & VT					SUPERVISOR: HANI ALI				
STAMP & SIGNATURE:					CLIENT:				



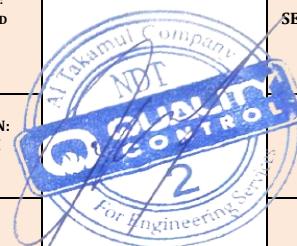
Address: North Rumaila, Al Takamul Yard
Contact: +9647810009138

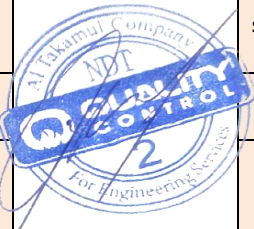
Tel: +9647810009138 / +9647834964657
Email: OP@qualitycontrol-iraq.com / hany.akafi@qualitycontrol-iraq.com

AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE & DYE PENETRANT INSPECTION													
Client:		HALLIBURTON			Report No:		QC-24-08-SPERRY-NDT-009						
Location:		Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:		326530611						
Inspection Date:		Tuesday, August 20, 2024			Next Inspection Date:		Tuesday, August 19, 2025						
Type Of Inspection:		VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE & DYE PENETRANT INSPECTION			Specification:		ASTM E165/E165M ,ASTM E1417/E1417M ,EN ISO 3452-1,EN ISO 3452-2 ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) & API 6A, 16A						
					UNIT DESCRIPTION:		OUTLET FLANGE 2 1/16" 10K BX152 X 2" 1502 THREAD						
					UNIT S/N:		OUT 247-8						
					GEO-SPAN S.NO		GEO-SPAN 210247 SR# 11254679						
					INSPECTION RESULT :								
					VISUAL , THOROUGH EXAMINATION		Above Item fully inspected and found freedom from deforms, cracks, corrosion & mechanical damage						
					MAGNETIC PARTICLE INSPECTION (MPI)		Thread & Available critical areas inspected and found free from cracks and other defects'						
					DYE PENETRANT INSPECTION (DPI)		Groove areas inspected and found free from cracks and other defects'						
FINAL RESULTS		Above Item found satisfactory and free of defects at the time of inspection											
TECHNICAL DETAILS DPI					COMMENT:								
TECHNIQUE 2 - TYPE II VISIBLE, METHOD 'A' WATER -WASHABLE													
PENETRANT DWELL TIME:		30 minutes		DEVELOPER DWELL TIME:						15 minutes			
TEST PART TEMPERATURE :		104 °F		WHITE LIGHT INTENSITY:		3620 LUX		(MPI Wet Fluorescent inspection Thread With UltraViolet Light) Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast Dye Penetrant Inspection Groove Area					
EQUIPMENT DETAILS										PERSON DETAILS		REVIEW BY	
EQUIPMENT :		AC/DC HAND Yoke		EQUIPMENT :		Shooting Coil DC		EQUIPMENT :		UV BLACK LIGHT: 3210 µw/cm ²		INSPECTOR NAME: M.SHAHZAD AHMED	
S.NO:		201504052		S.NO:		22650		S.NO:		1898977			
Cal Due Date:		14.OCT.2024		Cal Due Date:		15.OCT.2024		Cal Due Date:		14.OCT.2024			
EQUIPMENT :		COMPARATOR BLOCK		EQUIPMENT :		Pressure Gauge 30 PSI		EQUIPMENT :		INFRARED THERMOMETER		SENIOR INSPECTOR:	
S.NO:		11223		S.NO:		SSR825		S.NO:		201704125			
Cal Due Date:		16.OCT.2024		Cal Due Date:		16.OCT.2024		Cal Due Date:		16.OCT.2024			
Red Penetrant Manufacture:		Magnaflux		Batch No:		220511		EXPIRE DATE:		May,2025		SUPERVISOR:	
Developer Manufacture:		Magnaflux		Batch No:		220302		EXPIRE DATE:		March,2025			
FLUORESCENT 14HF		Magnaflux		Batch No:		220306		EXPIRE DATE:		MARCH,2025			
White Contrast Paint Manufacture:		Magnaflux		Batch No:		220602		EXPIRE DATE:		JUN,2025		CLIENT:	
Digital Lux Meter		TECHNICAL DETAILS				Black Magnetic Ink Manufacture:7HF							
S.NO:2722003		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605							
Cal Due Date:16.OCT.2024		Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:		Jul-25					



CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION										
Client:		HALLIBURTON			Report No:		QC-24-08-SPERRY-NDT-010			
Location:		Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:		326530611			
Inspection Date:		Tuesday, August 20, 2024			Next Inspection Date:		Tuesday, August 19, 2025			
Type Of Inspection:		VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION			Specification:		ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)			
					UNIT DESCRIPTION:		TURNING FORK (GEO-SPAN)			
					UNIT S/N:		TF 247-10			
					GEO-SPAN S.NO		GEO-SPAN 210247 SR# 11254679			
					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		Full Body areas inspected and found free from cracks and other defects			
					FINAL RESULTS		THE ABOVE INSPECTED AREAS WAS ACCEPTED			
COMMENT:										
Magnetic Particle Inspection With A/C Hand Yoke , Black & White Contrast										
EQUIPMENT DETAILS						PERSON DETAILS		REVIEW BY		
Equipment:	AC-Yoke Test Block	Equipment:	Digital Lux Meter	Equipment:	AC/DC Yoke	INSPECTOR NAME:	M.SHAHZAD AHMED	SENIOR INSPECTOR:	NAVEED HUSSAIN	
S.No:	1657	S.No:	2722003	S.No:	201504052	QUALIFICATION:	ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI	
Cal Due Date:	14.OCT.2024	Cal Due Date:	16.OCT.2024	Cal Due Date:	14.OCT.2024			CLIENT:		
Black Magnetic Ink Manufacture:	Magnaflux	Batch No:	220605	Expiry Date:	JULY.2025					
Whie Contrast Paint Manufacture:	Magnaflux	Batch No:	220602	Expiry Date:	JUN,2025					
Technical Details:		Magnetic Partical Concentration		Method		WMPT Light Intensity		STAMP & SIGNATURE:		
		1.2 to 2.4 ml/100 ml		Wet Magnetic Particle Testing (WMPT)		3620 Lux				

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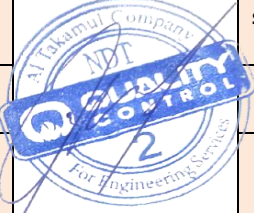
Corporate Partner



Address: Noth Rumaila, Al Takamul Yard
Contact: +9647810009138

Tel: +9647810009138 / +9647834964657

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

CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION											
Client:	HALLIBURTON				Report No:	QC-24-08-SPERRY-NDT-011					
Location:	Sperry (Burjesia Halliburton Camp)				WORK ORDER NO:	326530611					
Inspection Date:	Tuesday, August 20, 2024				Next Inspection Date:	Tuesday, August 19, 2025					
Type Of Inspection:	VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION				Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)					
					UNIT DESCRIPTION:		BONNET (GEO-SPAN)				
					UNIT S/N:		BNT 247-11				
					GEO-SPAN S.NO		GEO-SPAN 210247 SR# 11254679				
					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 & Body 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 :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3210 $\mu\text{w}/\text{cm}^2$	INSPECTOR NAME:	M.SHAHZAD AHMED	SENIOR INSPECTOR:	NAVEED HUSSAIN		
S.NO:	201504052	S.NO:	22650	S.NO:	1898977	QUALIFICATION:	ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI		
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.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	
Digital Lux Meter WHITE LIGHT INTENSITY:		TECHNICAL DETAILS Wet FLUORESCENT Particle Concentration 14 HF 0.1 to 0.4 ml/100 ml Black Magnetic Ink Manufacture:7HF Batch No:220605 Black Magnetic Ink Concentration 7 HF 1.2 to 2.4 ml/100 ml EXPIRE DATE: Jul-25									
Cal Due Date:16.OCT.2024						STAMP & SIGNATURE:					

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QC/FN/MPI/065 Rev.00 DATED 07 NOV 2021



Address: Noth Rumaila, Al Takamul Yard
Contact: +9647810009138

Tel: +9647810009138 / +9647834964657

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

CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION									
Client:	HALLIBURTON			Report No:	QC-24-08-SPERRY-NDT-012				
Location:	Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:	326530611				
Inspection Date:	Tuesday, August 20, 2024			Next Inspection Date:	Tuesday, August 19, 2025				
Type Of Inspection:	VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION			Specification:	ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019)				
				UNIT DESCRIPTION:		MANIFOLD NUT (GEO-SPAN)			
				UNIT S/N:		247-12, 247-13, 247-14			
				GEO-SPAN S.NO		GEO-SPAN 210247 SR# 11254679			
				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 & Body 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 :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3210 µw/cm ²	INSPECTOR NAME:	M.SHAHZAD AHMED	SENIOR INSPECTOR:	NAVEED HUSSAIN
S.NO:	201504052	S.NO:	22650	S.NO:	1898977	QUALIFICATION:	ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.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				
Digital Lux Meter WHITE LIGHT INTENSITY:	TECHNICAL DETAILS			Black Magnetic Ink Manufacture:7HF					
3620 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.OCT.2024	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE: Jul-25				

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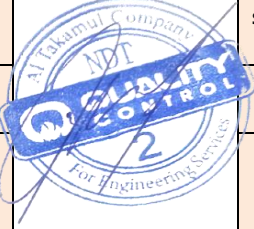
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CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION											
Client:	HALLIBURTON				Report No:	QC-24-08-SPERRY-NDT-013					
Location:	Sperry (Burjesia Halliburton Camp)				WORK ORDER NO:	326530611					
Inspection Date:	Tuesday, August 20, 2024				Next Inspection Date:	Tuesday, August 19, 2025					
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION				Specification:	E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) ASTM					
					UNIT DESCRIPTION:		SBP-PLUG (GEO-SPAN)				
					UNIT S/N:		SBP 247-16				
					GEO-SPAN S.NO		GEO-SPAN 210247 SR# 11254679				
					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 & Body 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 :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 3210 μw/cm ²	INSPECTOR NAME:	M.SHAHZAD AHMED	SENIOR INSPECTOR:	NAVEED HUSSAIN		
S.NO:	201504052	S.NO:	22650	S.NO:	1898977	QUALIFICATION:	ASNT LEVEL II MT & PT & VT	SUPERVISOR:	HANI ALI		
Cal Due Date:	14.OCT.2024	Cal Due Date:	15.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	
Digital Lux Meter WHITE LIGHT INTENSITY:		TECHNICAL DETAILS Wet FLUORESCENT Particle Concentration 14 HF 0.1 to 0.4 ml/100 ml Black Magnetic Ink Manufacture:7HF Batch No:220605 Cal Due Date:16.OCT.2024 Black Magnetic Ink Concentration 7 HF 1.2 to 2.4 ml/100 ml EXPIRE DATE: Jul-25									

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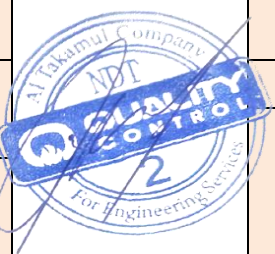
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AI TAKAMUL COMPANY FOR ENGINEERING TESTS
AND PROFESSIONAL SAFETY LIMITED
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATION OF VISUAL THOROUGH EXAMINATION & DYE PENETRANT INSPECTION

Client:	HALLIBURTON	Report No:	QC-24-08-SPERRY-NDT-015
Location:	Sperry (Burjesia Halliburton Camp)	WORK ORDER NO:	326530611
Inspection Date:	Tuesday, August 20, 2024	Next Inspection Date:	Tuesday, August 19, 2025
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & DYE PENETRANT INSPECTION (DPI)	Specification:	ASTM E165/E165M ,ASTM E1417/E1417M ,EN ISO 3452-1,EN ISO 3452-2
		UNIT DESCRIPTION:	FRONT DISC (GEO-SPAN)
		UNIT S/N:	FD 247-17
		GEO-SPAN S.NO	GEO-SPAN 210247 SR# 11254679
		INSPECTION RESULT :	
		VISUAL , THOROUGH EXAMINATION	Above Item fully inspected and found freedom from deforms, cracks, corrosion & mechanical damage
		DYE PENETRANT INSPECTION (DPI)	forgn areas inspected and found freedom from cracks and other defects
		FINAL RESULTS	Above Item found satisfactory and free of defects at the time of inspection
TECHNICAL DETAILS			
TECHNIQUE 2 - TYPE II VISIBLE, METHOD 'A' WATER -WASHABLE			
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes
Test Part Temperature:	104 °F	WHITE LIGHT INTENSITY:	3620 LUX

EQUIPMENT DETAILS						PERSONNEL DETAILS		REVIEW BY	
EQUIPMENT :	COMPARATOR BLOCK	EQUIPMENT :	DIGITAL LUX METER	EQUIPMENT :	INFRARED THERMOMETER	INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN
S.NO:	11223	S.NO:	2722003	S.NO:	201704125	QUALIFICATION:	ASNT LEVEL II MT & PT& VT & UT	SUPERVISOR:	HANI ALI
Cal Due Date:	16.OCT.2024	Cal Due Date:	16.OCT.2024	Cal Due Date:	16.OCT.2024			CLIENT:	
Red Penetrant Manufacture:	Magnaflux	Batch No:	220511	EXPIRE DATE:	May,2025				
Developer Manufacture:	Magnaflux	Batch No:	220302	EXPIRE DATE:	March,2025				
WATER PRESSURE	30 PSI	P. GAUGE	SSR825	DUE CAL DATE:	16,OCT,2024				

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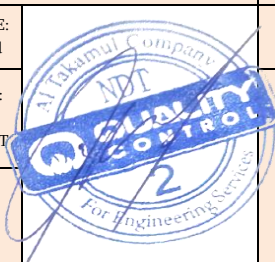
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Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATION OF VISUAL THOROUGH EXAMINATION & DYE PENETRANT INSPECTION

Client:	HALLIBURTON	Report No:	QC-24-08-SPERRY-NDT-016	
Location:	Sperry (Burjesia Halliburton Camp)	WORK ORDER NO:	326530611	
Inspection Date:	Tuesday, August 20, 2024	Next Inspection Date:	Tuesday, August 19, 2025	
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & DYE PENETRANT INSPECTION (DPI)	Specification:	ASTM E165/E165M ,ASTM E1417/E1417M ,EN ISO 3452-1,EN ISO 3452-2	
		UNIT DESCRIPTION:	BACK DISC (GEO-SPAN)	
		UNIT S/N:	BD 247-18	
		GEO-SPAN S.NO	GEO-SPAN 210247 SR# 11254679	
		INSPECTION RESULT :		
		VISUAL , THOROUGH EXAMINATION	Above Item fully inspected and found freedom from deforms, cracks, corrosion & mechanical damage	
		DYE PENETRANT INSPECTION (DPI)	forgn areas inspected and found freedom from cracks and other defects	
		FINAL RESULTS	Above Item found satisfactory and free of defects at the time of inspection	
		TECHNICAL DETAILS		
TECHNIQUE 2 - TYPE II VISIBLE, METHOD 'A' WATER -WASHABLE				
PENETRANT DWELL TIME:		30 minutes	DEVELOPER DWELL TIME:	15 minutes
Test Part Temperature:		104 °F	WHITE LIGHT INTENSITY:	3620 LUX



EQUIPMENT DETAILS						PERSONNEL DETAILS		REVIEW BY	
EQUIPMENT :	COMPARATOR BLOCK	EQUIPMENT :	DIGITAL LUX METER	EQUIPMENT :	INFRARED THERMOMETER	INSPECTOR NAME:	M.Shahzad Ahmed	SENIOR INSPECTOR:	NAVEED HUSSAIN
S.NO:	11223	S.NO:	2722003	S.NO:	201704125	QUALIFICATION:	ASNT LEVEL II MT & PT& VT & UT	SUPERVISOR:	HANI ALI
Cal Due Date:	16.OCT.2024	Cal Due Date:	16.OCT.2024	Cal Due Date:	16.OCT.2024			CLIENT:	
Red Penetrant Manufacture:	Magnaflux	Batch No:	220511	EXPIRE DATE:	May,2025				
Developer Manufacture:	Magnaflux	Batch No:	220302	EXPIRE DATE:	March,2025				
WATER PRESSURE	30 PSI	P. GAUGE	SSR825	DUE CAL DATE:	16,OCT,2024				

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Pressure Test Chart

Halliburton

Test Data

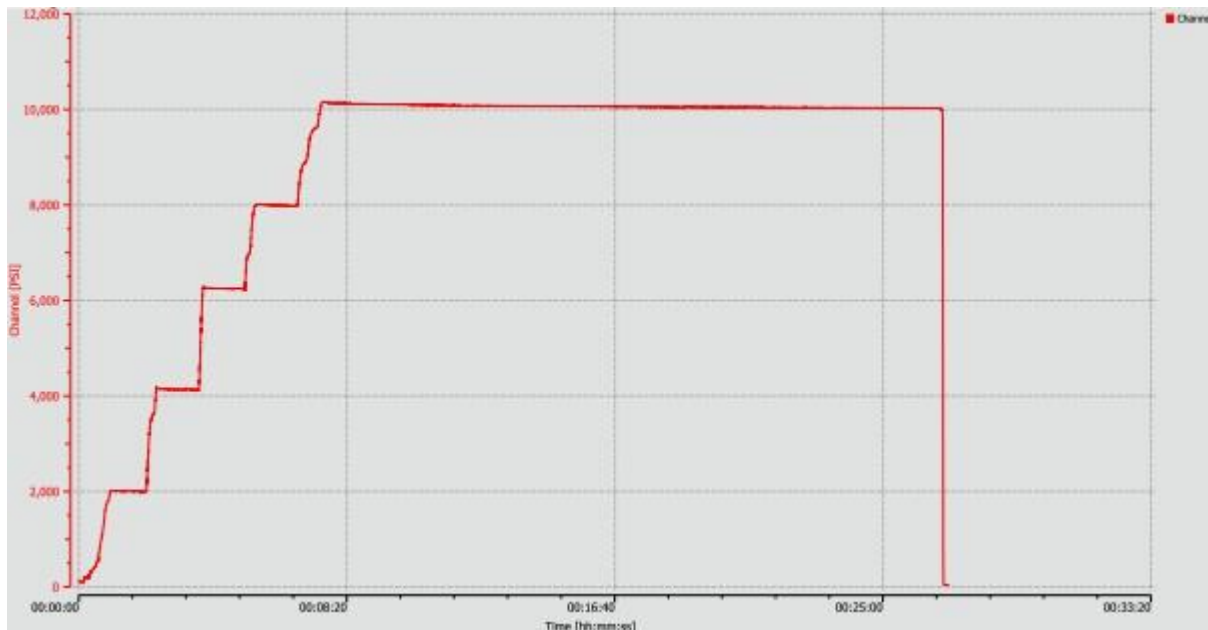
Object data:

Description: GeoSpan Assembly
Part no.: 290765
Serial no.: 210247 (11254679)
Working pressure: 10KPSI
Test pressure: 10KPSI
Test Type: Body Test

Contact information:

PSL: Sperry
Plant: P1950
Location: IEM Test Bay
WO NO.: 326530611

Graph:



Test start: 22-08-2024 15:38:32
Test end: 22-08-2024 16:05:56
Tested by: Hussein Ali
Witnessed by: Hyder Jabar

Device serial number: 27219
Transducer S/N : 1107XB8Q
Range: 25.500 PSI
Calibration date: 14-Apr-25



Signature: