

AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

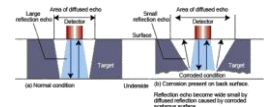
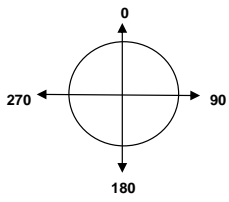
Basra, North Rumaila, Quality Control Yard - Iraq



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

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIEREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-SPERRY-NDT-001
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326556650	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:	GEO-SPAN (IN LET PIPING RUN)	GEO-SPAN S.NO	13763092 (13857709)
MANUFACTURER:	HES	SERIAL NO:	W22075620#3



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

* 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°	0.438	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 Fluorescent inspection Thread With UltraViolet Light	Note:MPI Wet
DPI	The Above Item Was Found Acceptable At The Time Of Inspection Accordance To ASTM E165 Inspection Groove Area	Note:Dye Penetrant
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	12-Aug-24	White Contrast WCP 2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	Magnaflu	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	14-Aug-24	Red Penetrant	Magnaflu	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
DC COIL:	22650	CAL DUE DATE	12-Aug-24	Wet FLUORESCENT Particle Concentration 14 HF	Magnaflu	220306	March,2025
COMPARATOR BLOCK	11223	CAL DUE DATE	12-Aug-24	Black Magnetic Ink Concentration 7 HF	MANUFACTURE	BATCH NO	EXPIRE DATE
INFRARED THERMOMETER	201704125	CAL DUE DATE	14-Aug-24		Magnaflu	220511	May,2025
UV BLACK LIGHT:	1898977	CAL DUE DATE	12-Aug-24		MANUFACTURE	BATCH NO	EXPIRE DATE
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes		Magnaflu	220302	March,2025
TEST PART TEMPERATURE :	92 °F	WHITE LIGHT INTENSITY:	3620 lux				0.1 to 0.4 ml/100 ml
UV BLACK LIGHT INTENSITY:	2980 μw/cm ²						1.2 to 2.4 ml/100 ml

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shahid	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	SAFETY ENGINEER (MPI, UT, T)	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	

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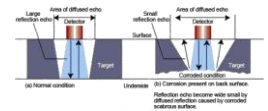
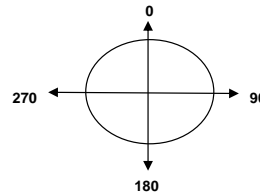
Basra, North Rumaila, Quality Control Yard - Iraq



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

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIEREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-SPERRY-NDT-002
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326556650	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:	FLOW DIVERTER HOUSING	GEO-SPAN S.NO	13763092 (13857709)
MANUFACTURER:	HES	SERIAL NO:	W22075627#3



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

* 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	12-Aug-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	Magnaflux	220602	JUN.2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY.2025
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24	Fluorescent Magnetic Ink 14HF	MANUFACTURE	BATCH NO	EXPIRE DATE
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24		Magnaflux	220306	March.2025
DC COIL:	22650	CAL DUE DATE	12-Aug-24	Red Penetrant	MANUFACTURE	BATCH NO	EXPIRE DATE
COMPARATOR BLOCK	11223	CAL DUE DATE	12-Aug-24		Magnaflux	220511	May.2025
INFRARED THERMOMETER	201704125	CAL DUE DATE	14-Aug-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
UV BLACK LIGHT:	1898977	CAL DUE DATE	12-Aug-24		Magnaflux	220302	March.2025
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes	Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml	
TEST PART TEMPERATURE :	92 °F	WHITE LIGHT INTENSITY:	3620 lux	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml	
UV BLACK LIGHT INTENSITY:	2980 μw/cm ²						

PERSON DETAILS

REVIEW BY

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

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

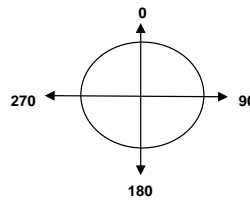
Basra, North Rumaila, Quality Control Yard - Iraq



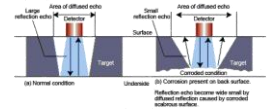
CERTIFICATE OF QUALIFICATION VISUAL AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING INSPECTION

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-SPERRY-NDT-003
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797
WORK ORDER #	326556650	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 INSPECTION AND MAGNETIC PARTICLE INSPECTION AND ULTRASONIC THICKNESS GAUGING		
DESCRIPTION:	GEO SPAN MANIFOLD	GEO-SPAN S.NO	13763092 (13857709)
MANUFACTURER:	HES	SERIAL NO:	W22075622#3



ONLINE TRACEABILITY



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

* 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	12-Aug-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	Magnaflu x	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24		Magnaflu x	220605	JULY,2025
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24	Fluorescent Magnetic Ink 14HF	Magnaflu x	220306	March,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml
DC COIL:	22650	CAL DUE DATE	12-Aug-24	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml	
UV BLACK LIGHT:	1898977	CAL DUE DATE	12-Aug-24				
WHITE LIGHT INTENSITY:	3620 lux	UV BLACK LIGHT INTENSITY:	2980 μw/cm ²				

PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M. Shattad Ab...	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	ASNT, NDT, B, E, A, G, T, VT,	INSPECTION SUPERVISOR:	HANI ALI	HBASIGN	
SIGNATURE & STAMP:				DATE:	

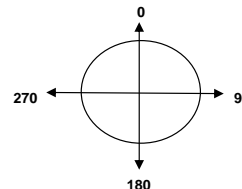
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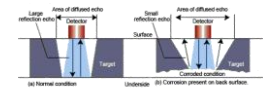
CERTIFICATE OF VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-SPERRY-NDT-005
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326556650	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:	CHOKE INLET WELDMNT	GEO-SPAN S.NO	13763092 (13857709)
MANUFACTURER:	HES	SERIAL NO:	13857709-1



ONLINE TRACEABILITY



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

* 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	12-Aug-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Red Penetrant	MANUFACTURE	BATCH NO	EXPIRE DATE
COMPARATOR BLOCK	11223	CAL DUE DATE	12-Aug-24		Magnaflux	220511	May,2025
INFRARED THERMOMETER	201704125	CAL DUE DATE	14-Aug-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	15 minutes		Magnaflux	220302	March,2025
TEST PART TEMPERATURE :	92 °F	WHITE LIGHT INTENSITY:	3620 lux	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml	

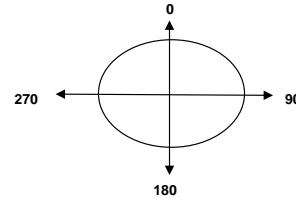
PERSON DETAILS

REVIEW BY

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

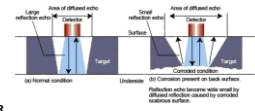
CERTIFICATE OF VISUAL AND MAGNETIC PARTICLE & DYE PENETRANT INSPECTION AND ULTRASONIC THICKNESS GAUGING
THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-SPERRY-NDT-006
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326556650	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	13763092 (13857709)
MANUFACTURER:	HES	SERIAL NO:	W22075660#3



ONLINE TRACEABILITY

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



* 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	12-Aug-24	White Contrast WCP-2	MANUFACTURE	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24		Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	MANUFACTURE	BATCH NO	EXPIRE DATE
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
ASTM Test Block:	1657	CAL DUE DATE	14-Aug-24	Red Penetrant	MANUFACTURE	BATCH NO	EXPIRE DATE
COMPARATOR BLOCK	11223	CAL DUE DATE	14-Aug-24		Magnaflux	220511	May,2025
INFRARED THERMOMETER	201704125	CAL DUE DATE	14-Aug-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	12-Aug-24		Magnaflux	220302	March,2025
TEST PART TEMPERATURE	92 °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	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	BSN EN 28547,PT,UT,VT,	INSPECTION SUPERVISOR:	HANI ALI	HS&SIGN	
SIGNATURE & STAMP:				DATE:	

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AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

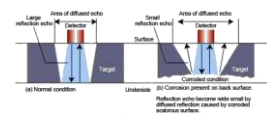
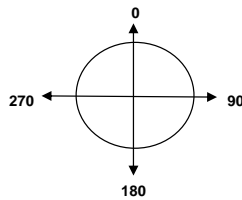
Basra, North Rumaila, Quality Control Yard - Iraq



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-24-05-SPERRY-NDT-007
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASTM E709 & ASTM E797 & ASTM E165, API 6A, 16A
WORK ORDER #	326556650	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:	CHOKE VALVE BODY	GEO-SPAN S.NO	13763092 (13857709)
MANUFACTURER:	HES	SERIAL NO:	CP3140156



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

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

POINTS	A1	A2	B	C	Location A Minimum Wall Thickness	Location B Minimum Wall Thickness	Location C Minimum Wall Thickness
0°	0.473	0.482	0.994	0.896	0.400 INCH	0.800 INCH	0.700 INCH
90°	0.480	0.467	0.973	0.871	0.400 INCH	0.800 INCH	0.700 INCH
180°	0.490	0.497	0.980	0.863	0.400 INCH	0.800 INCH	0.700 INCH
270°	0.479	0.488	0.976	0.889	0.400 INCH	0.800 INCH	0.700 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	12-Aug-24	White Contrast WCP-2	MANUFACTURER	BATCH NO	EXPIRE DATE
Digital Lux Meter WHITE LIGHT	2722003	CAL DUE DATE	14-Aug-24	Black Magnetic Ink 7HF	Magnaflux	220602	JUN,2025
UT THICKNESS GAUGE:	3997	CAL DUE DATE	14-Aug-24		Magnaflux	220605	JULY,2025
UT TEST BLOCK:	NoBo5087	CAL DUE DATE	14-Aug-24	Black Magnetic Ink Concentration 7 HF			1.2 to 2.4 ml/100 ml
ASTM Test Block:	1657	CAL DUE DATE	12-Aug-24	Red Penetrant	MANUFACTURE	BATCH NO	EXPIRE DATE
ASTM Test Block:	1657	CAL DUE DATE	14-Aug-24		Magnaflux	220511	May,2025
COMPARATOR BLOCK	11223	CAL DUE DATE	14-Aug-24	Developer	MANUFACTURE	BATCH NO	EXPIRE DATE
INFRARED THERMOMETER	201704125	CAL DUE DATE	14-Aug-24		Magnaflux	220302	March,2025
PENETRANT DWELL TIME:	30 minutes	DEVELOPER DWELL TIME:	12-Aug-24	Black Magnetic Ink Concentration 7 HF			1.2 to 2.4 ml/100 ml
TEST PART TEMPERATURE :	92 °F	WHITE LIGHT INTENSITY:	3620 lux				




PERSON DETAILS

REVIEW BY

INSPECTOR NAME:	M.Shahzad	SENIOR INSPECTOR:	NAVEED HUSSAIN	CLIENT:	
QUALIFICATION:	N. L.L.V. UT,VT,VT	INSPECTION SUPERVISOR:	HANI ALI	HB&SIGN	
SIGNATURE & STAMP:				DATE:	



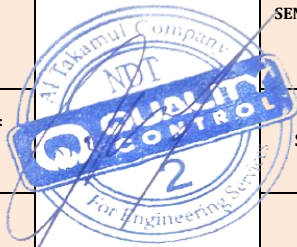
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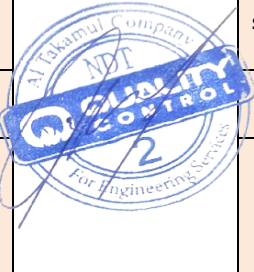


CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE & DYE PENETRANT INSPECTION													
Client:		HALLIBURTON			Report No:		QC-24-05-SPERRY-NDT-008						
Location:		Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:		326556650						
Inspection Date:		Thursday, May 2, 2024			Next Inspection Date:		Thursday, May 1, 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:		W22077287#3							
				GEO-SPAN S.NO		13763092 (13857709)							
				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 :		92 °F		WHITE LIGHT INTENSITY:		3620 LUX							
													
EQUIPMENT DETAILS					PERSON DETAILS			REVIEW BY					
EQUIPMENT :		AC/DC HAND Yoke		EQUIPMENT :		Shooting Coil DC		EQUIPMENT :		UV BLACK LIGHT: 2980 μw/cm ²			
S.NO:		201504052		S.NO:		22650		S.NO:		1898977			
Cal Due Date:		12.AUG.2024		Cal Due Date:		12.AUG.2024		Cal Due Date:		12.AUG.2024			
EQUIPMENT :		COMPARATOR BLOCK		EQUIPMENT :		Pressure Gauge 30 PSI		EQUIPMENT :		INFRARED THERMOMETER			
S.NO:		11223		S.NO:		SSR825		S.NO:		201704125			
Cal Due Date:		12.AUG.2024		Cal Due Date:		18.AUG.2024		Cal Due Date:		14.AUG.2024			
Red Penetrant Manufacture:		Magnaflux		Batch No:		220511		EXPIRE DATE:		May,2025			
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			
Digital Lux Meter		TECHNICAL DETAILS				Black Magnetic Ink Manufacture:7HF		STAMP & SIGNATURE: 		SENIOR INSPECTOR: NAVEED HUSSAIN SUPERVISOR: HANI ALI CLIENT:			
S.NO:2722003		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605							
Cal Due Date:14.AUG.2024		Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE: Jul-25							

**AI TAKAMUL COMPANY FOR ENGINEERING TESTS
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Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE & DYE PENETRANT INSPECTION													
Client:		HALLIBURTON			Report No:		QC-24-05-SPERRY-NDT-009						
Location:		Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:		326556650						
Inspection Date:		Thursday, May 2, 2024			Next Inspection Date:		Thursday, May 1, 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:		W22077287#5							
				GEO-SPAN S.NO		13763092 (13857709)							
				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 :		92 °F		WHITE LIGHT INTENSITY:		3620 LUX							
													
EQUIPMENT DETAILS					PERSON DETAILS			REVIEW BY					
EQUIPMENT :		AC/DC HAND Yoke		EQUIPMENT :		Shooting Coil DC		EQUIPMENT :		UV BLACK LIGHT: 2980 μw/cm ²			
S.NO:		201504052		S.NO:		22650		S.NO:		1898977			
Cal Due Date:		12.AUG.2024		Cal Due Date:		12.AUG.2024		Cal Due Date:		12.AUG.2024			
EQUIPMENT :		COMPARATOR BLOCK		EQUIPMENT :		Pressure Gauge 30 PSI		EQUIPMENT :		INFRARED THERMOMETER			
S.NO:		11223		S.NO:		SSR825		S.NO:		201704125			
Cal Due Date:		12.AUG.2024		Cal Due Date:		18.AUG.2024		Cal Due Date:		14.AUG.2024			
Red Penetrant Manufacture:		Magnaflux		Batch No:		220511		EXPIRE DATE:		May,2025			
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			
Digital Lux Meter		TECHNICAL DETAILS				Black Magnetic Ink Manufacture:7HF		STAMP & SIGNATURE: 		SENIOR INSPECTOR: NAVEED HUSSAIN SUPERVISOR: HANI ALI CLIENT:			
S.NO:2722003		Wet FLUORESCENT Particle Concentration 14 HF		0.1 to 0.4 ml/100 ml		Batch No:220605							
Cal Due Date:14.AUG.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-24-05-SPERRY-NDT-010				
Location:		Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:		326556650				
Inspection Date:		Thursday, May 2, 2024			Next Inspection Date:		Thursday, May 1, 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:		13857709-1					
				GEO-SPAN S.NO		13763092 (13857709)					
				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/DC HAND Yoke	EQUIPMENT :	Shooting Coil DC	EQUIPMENT :	UV BLACK LIGHT: 2980 $\mu\text{w}/\text{cm}^2$	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:	12.AUG.2024	Cal Due Date:	12.AUG.2024	Cal Due Date:	12.AUG.2024						
FLUORESCENT 14HF	Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025						
Whie 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:14.AUG.2024	Black Magnetic Ink Concentration 7 HF		1.2 to 2.4 ml/100 ml		EXPIRE DATE:	Jul-25					

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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-24-05-SPERRY-NDT-011				
Location:		Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:		326556650				
Inspection Date:		Thursday, May 2, 2024			Next Inspection Date:		Thursday, May 1, 2025				
Type Of Inspection:		VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION			Specification:		ASTM E709 & ASTM E 1444 (2016) ASME V Article 7 (2019) GEO-SPAN R & M MANUAL, REVISION E DOC # D00112140				
				UNIT DESCRIPTION:		MANIFOLD NUT (GEO-SPAN)					
				UNIT S/N:		13857709-2					
				GEO-SPAN S.NO		13763092 (13857709)					
				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: 2980 $\mu\text{w}/\text{cm}^2$	INSPECTOR NAME: M.SHAHZAD AHMED		SENIOR INSPECTOR:	NAVEED HUSSAIN		
S.NO:	201504052	S.NO:	22650	S.NO:	1898977			SUPERVISOR:	HANI ALI		
Cal Due Date:	12.AUG.2024	Cal Due Date:	12.AUG.2024	Cal Due Date:	12.AUG.2024			QUALIFICATION: ASNT LEVEL II MT & PT & VT	CLIENT:		
FLUORESCENT 14HF		Magnaflux	Batch No:	220306	EXPIRE DATE:			MARCH,2025			
Whie Contrast Paint Manufacture:		Magnaflux	Batch No:	220602	EXPIRE DATE:	JUN,2025					
Digital Lux Meter WHITE LIGHT INTENSITY:		TECHNICAL DETAILS			Black Magnetic Ink Manufacture:7HF		STAMP & SIGNATURE:				
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:14.AUG.2024		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

CERTIFICATION OF VISUAL, THOROUGH EXAMINATION & MAGNETIC PARTICLE INSPECTION													
Client:		HALLIBURTON			Report No:		QC-24-05-SPERRY-NDT-012						
Location:		Sperry (Burjesia Halliburton Camp)			WORK ORDER NO:		326556650						
Inspection Date:		Thursday, May 2, 2024			Next Inspection Date:		Thursday, May 1, 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:		13857709-3							
				GEO-SPAN S.NO		13763092 (13857709)							
				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: 2980 $\mu\text{w}/\text{cm}^2$	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:	12.AUG.2024	Cal Due Date:	12.AUG.2024	Cal Due Date:	12.AUG.2024		CLIENT:						
FLUORESCENT 14HF	Magnaflux	Batch No:	220306	EXPIRE DATE:	MARCH,2025								
Whie 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:14.AUG.2024	Black Magnetic Ink Concentration 7 HF	1.2 to 2.4 ml/100 ml		EXPIRE DATE:	Jul-25								

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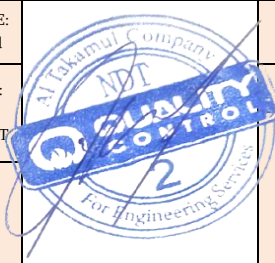
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AND PROFESSIONAL SAFETY LIMITED
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATION OF VISUAL THOROUGH EXAMINATION & DYE PENETRANT INSPECTION

Client:	HALLIBURTON	Report No:	QC-24-05-SPERRY-NDT-013	
Location:	Sperry (Burjesia Halliburton Camp)	WORK ORDER NO:	326556650	
Inspection Date:	Thursday, May 2, 2024	Next Inspection Date:	Thursday, May 1, 2025	
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & DYE PENETRANT INSPECTION (DPI)	Specification:	ASTM E165/E165M ,ASTM E1417/E1417M	
	UNIT DESCRIPTION:	FLOW DIVERTER (GEO-SPAN)		
	UNIT S/N:	13857709-4		
	GEO-SPAN S.NO	13763092 (13857709)		
	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:	92 °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.N:	11223	S.N:	2722003	S.N:	201704125	QUALIFICATION:	ASNT LEVEL II MT & PT& VT & UT	SUPERVISOR:	HANI ALI
Cal Due Date:	12-Aug-2024	Cal Due Date:	14-Aug-2024	Cal Due Date:	14-Aug-2024	SIGNATURE:		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:	18,AUG,2024				

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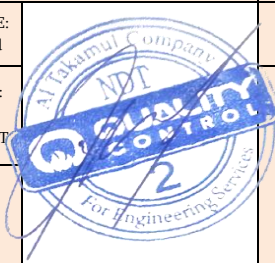
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CERTIFICATION OF VISUAL THOROUGH EXAMINATION & DYE PENETRANT INSPECTION

Client:	HALLIBURTON	Report No:	QC-24-05-SPERRY-NDT-016	
Location:	Sperry (Burjesia Halliburton Camp)	WORK ORDER NO:	326556650	
Inspection Date:	Thursday, May 2, 2024	Next Inspection Date:	Thursday, May 1, 2025	
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & DYE PENETRANT INSPECTION (DPI)	Specification:	ASTM E165/E165M ,ASTM E1417/E1417M	
	UNIT DESCRIPTION:	FRONT DISC (GEO-SPAN)		
	UNIT S/N:	13857709-5		
	GEO-SPAN S.NO	13763092 (13857709)		
	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:	92 °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.N:	11223	S.N:	2722003	S.N:	201704125	QUALIFICATION:	ASNT LEVEL II MT & PT& VT & UT	SUPERVISOR:	HANI ALI
Cal Due Date:	12-Aug-2024	Cal Due Date:	14-Aug-2024	Cal Due Date:	14-Aug-2024		SIGNATURE:	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:	18,AUG,2024				

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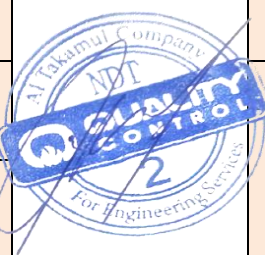
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AND PROFESSIONAL SAFETY LIMITED
Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATION OF VISUAL THOROUGH EXAMINATION & DYE PENETRANT INSPECTION

Client:	HALLIBURTON	Report No:	QC-24-05-SPERRY-NDT-015	
Location:	Sperry (Burjesia Halliburton Camp)	WORK ORDER NO:	326556650	
Inspection Date:	Thursday, May 2, 2024	Next Inspection Date:	Thursday, May 1, 2025	
Type Of Inspection:	VISUAL , THOROUGH EXAMINATION & DYE PENETRANT INSPECTION (DPI)	Specification:	ASTM E165/E165M ,ASTM E1417/E1417M	
	UNIT DESCRIPTION:	BACK DISC (GEO-SPAN)		
	UNIT S/N:	13857709-6		
	GEO-SPAN S.NO	13763092 (13857709)		
	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:	92 °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.N:	11223	S.N:	2722003	S.N:	201704125	QUALIFICATION:	ASNT LEVEL II MT & PT& VT & UT	SUPERVISOR:	HANI ALI
Cal Due Date:	12-Aug-2024	Cal Due Date:	14-Aug-2024	Cal Due Date:	14-Aug-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:	18,AUG,2024				

Original - Client Files Copy - Area Office QC/FN/DPI/NDT/022 Rev.00 Dated: 07 Nov 2021

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

Basra, North Rumaila, Quality Control Yard - Iraq



CERTIFICATE OF QUALIFICATION VISUAL AND WITNESS PRESSURE TEST

THIS REPORT COMPLIES WITH RECOGNIZED INTERNATIONAL STANDARDS & TECHNICAL REQUIREMENTS

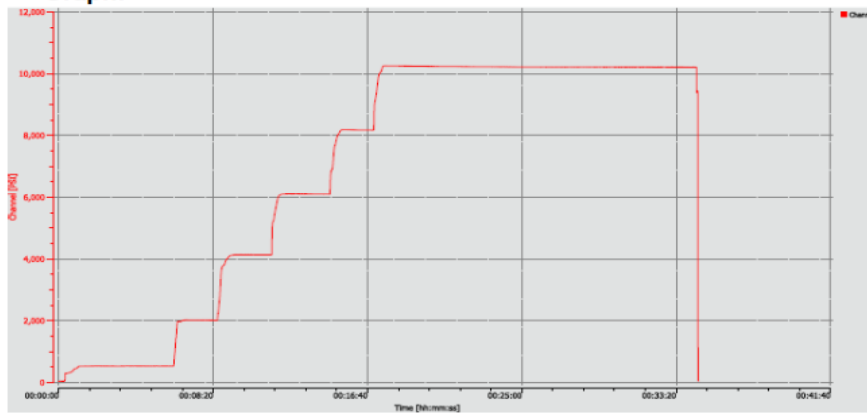
CLIENT:	HALLIBURTON	REPORT No.:	QC-24-05-SPERRY-NDT-016
LOCATION:	Sperry (Burjesia Halliburton Camp)	STANDARD :	ASME B31.3
WORK ORDER #	326556650	HALL DOC:	GEO-SPAN PRESSURE TEST PROCEDURE, REVISION C DOC # D01065028
DATE OF INSPECTION :	Monday, May 6, 2024	INSP. DUE DATE:	Monday, May 5, 2025
TYPE OF INSPECTION:	VISUAL INSPECTION AND WITNESS PRESSURE TEST		

DESCRIPTION:	GEO-SPAN	GEO-SPAN S.NO	13763092 (13857709)
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

Graph:



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.

PERSON DETAILS

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

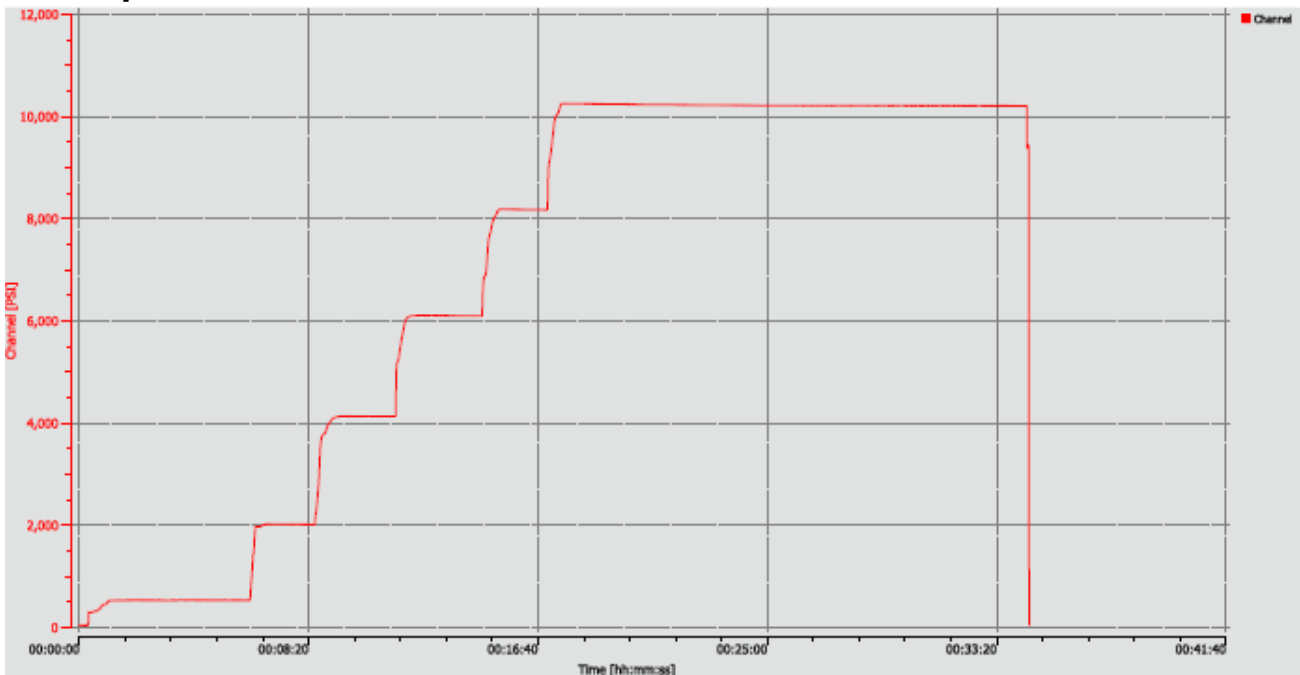
Original - Client Files Copy - Area Office QC/FN/PT/077 Rev.00 DATED 07.NOV. 2021



Test Data

Description:	GEO-SPAN SKD	PSL:	Sperry
Part no.:	102596535	Plant:	1950
Serial no.:	13763092 (13857709)	Location:	IEM Test Bay
Working pressure:	10KPSI	WO NO.:	326556650
Test pressure:	10KPSI	Test Duration:	00:35:40.912
Test Type:	Body Test		

Graph:



Test start:	06-05-2024 10:31:58	Equipment SN.:	27219
Test end:	06-05-2024 11:06:41	Transducer SN:	1 07XB8Q
Tested by:	Hussein Ali	Calibration Due Date:	14-Apr-2025
Witnessed by:	QC Company	Range:	25.500 PSI

Signature:

