

Quality Assurance Labs Inc.

NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES

80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04106 • TEL: (207) 799-8911 • FAX: (207) 799-7251

ULTRASONIC INSPECTION REPORT

CUSTOMER: SW COLE GRAY OFFICE		DATE OF INSPECTION	M 10	D 16	Y 08	
ATTENTION: CRAIG		REPORT No.	QAL-08-2181			
PROJECT: MARRIOTT HOTEL		PAGE	1	OF	4	
COMPONENT INSPECTED: ROOF FRAMING ELEVATOR SHAFT		JOB No.	06-0726			
AREA OF INTEREST: MOMENT CONNECTIONS		P.O. No.	06-0726.2			
COMPONENT LOCATION: PORTLAND ME		INSTRUMENT				
CUSTOMER WORK ORDER No: 06-0726.2		PART No.:	N/A			
MATERIAL: CARBON STEEL		HEAT No.:	N/A			
COMPONENT SURFACE CONDITION: AS WELDED		MAKE:	PANAMETRICS			
EXAMINATION DATA		MODEL:	LTC			
		EQUIPMENT No.:	35403			
Project Code/Spec AWS D1.1		MATERIAL THICKNESS:	15.875 mm (0.625 in.)			
U.T. Procedure No.		SCREEN RANGE:	10"			
U.T. Technique No.		COUPLANT:	SONO-CLEAR			
RESULTS: AS NOTED		INDICATIONS:	AS NOTED			
<p>REMARKS:</p> <p>PERFORMED ULTRASONIC INSPECTION ON THE FOLLOWING MOMENT CONNECTIONS IAW AWSD1.1.</p> <p>GRID LINES:</p> <p>N-29 North & West T/B ACCEPTED N-30 South & West T/B South Welds Accepted, West Top Reject. S-29 North & East T/B North Welds Accepted, East top Reject. S-30 East & South T/B East Welds Accepted, South Top Reject.</p> <p>RESULTS OF INSPECTION: ACCEPT: ALL REMAINING WELDS UNLESS NOTED NO CRACKS, CRACKLIKE, OR RELEVANT INDICATIONS NOTED.</p> <p>T/B = TOP & BOTTOM.</p> <p>/// LAST ITEM///</p> <p style="text-align: center;">FAA REPAIR STATION NUMBER RX5R187N METHOD(S),PROCESS(ES),PROCEDURE(S) MERCURY FREE</p>		TRANSDUCERS				
		MAKE:		PANAMETRICS		
		FREQ.:		2.25 MHz	ANGLE: 0°	
		SIZE:		25.4 mm (1.000 in.)		
		STYLE:		SINGLE	SHAPE: ROUND	
		EQUIPMENT No.:				
		MAKE:		PANAMETRICS		
		FREQ.:		2.25 MHz	ANGLE: 70°	
		SIZE:		12.7 mm (0.500 in.)		
		STYLE:		SINGLE	SHAPE: SQUARE	
EQUIPMENT No.:						
MAKE:						
FREQ.:			ANGLE:			
SIZE:						
STYLE:			SHAPE:			
EQUIPMENT No.:						
REFERENCE BLOCKS						
MAKE:		PANAMETRICS				
TYPE:		IIW				
MATERIAL:		CARBON STEEL				
EQUIPMENT No.:						
SENSITIVITY:		40%FSH				
TRANSFER VALUE:						
ADDITIONAL INFORMATION - SEE ATTACHED:		<input type="checkbox"/> SKETCH(ES)	<input type="checkbox"/> SUPPLEMENTARY SHEET(S)	<input type="checkbox"/> VIDEO		
SIGNATURES		CERTIFICATION		DATE		
		LEVEL		M D Y		
INSPECTOR	S. Dyer	ASNT	II	10	16 08	
SUPERVISOR						
AUTHORIZED INSPECTOR						
CUSTOMER REPRESENTATIVE						



REPORT OF ULTRASONIC EXAMINATION OF WELDS
AS PER ANSI / AWS D1.1 2008
ULTRASONIC ACCEPTANCE-REJECTION CRITERIA FOR STATICALLY LOADED NONTUBULAR
CONNECTIONS

JOB No.: 06-072612

REPORT No.: QAL-08-2181

PROJECT: MARriott HOTEL

WELD IDENTIFICATION:

REF ELEVATED
S-29 EAST TOP

WELDING PROCESS: SMAW

MATERIAL THICKNESS: .500

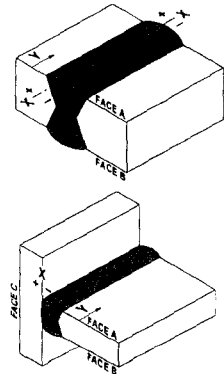
QUALITY REQUIREMENTS-SECTION No.:

WELD JOINT AWS: Square bevel CSP

REMARKS:

INSPECTOR: S. Dyer

DATE: 10-16-2008



MINIMUM ACCEPTANCE LEVELS (DECIBELS)

DISCONTINUITY SEVERITY CLASS	WELD THICKNESS* IN INCHES AND MILLIMETERS AND SEARCH UNIT ANGLE												
	5/16" TO 3/4"		3/4" TO 1 1/2"		>1 1/2" TO 2 1/2"			>2 1/2" TO 4"			>4" TO 8"		
	8 TO 20	>20 TO 38	>38 TO 65	>65 TO 100	>100 TO 200								
	70°	70°	70°	60°	45°	70°	60°	45°	70°	60°	45°		
CLASS A	≤+5	≤+2	≤-2	≤+1	≤+3	≤-5	≤-2	≤0	≤-7	≤-4	≤-1		
CLASS B	+6	+3	-1 0	+2 +3	+4 +5	-4 -3	-1 0	+1 +2	-6 -5	-3 -2	0 +1		
CLASS C	+7	+4	+1 +2	+4 +5	+6 +7	-2 +2	+1 +2	+3 +4	-4 +2	-1 +2	+2 +3		
CLASS D	≥+8	≥+5	≥+3	≥+6	≥+8	≥+3	≥+3	≥+5	≥+3	≥+3	≥+4		

SCANNING LEVEL

SOUND PATH DISTANCE in. (mm)	≤ 2 1/2" (65)	>2 1/2" to 5" (65-125)	>5" to 10" (125-250)	>10" to 15" (250-380)
ABOVE ZERO REFERENCE (dB)	14	19	29	39

LINE NUMBER	INDICATION NUMBER	TRANSDUCER ANGLE	FROM FACE	LEG (HALF SKIP)	DECIBELS				DEFECT (mm)				DISCONTINUITY EVALUATION	REMARKS	
					INDICATION LEVEL	REFERENCE LEVEL	ATTENUATION FACTOR	INDICATION RATING	LENGTH	ANGULAR DISTANCE (SOUND PATH)	DEPTH FROM "A" SURFACE	DISTANCE			
												FROM X			FROM Y
a	b	c	d												
1	1	70°	18A	2	62	56	1.94	4.06	1.5"	1.97	.300	C	3.5	CLASS A	
2															
3															
4															
5															
6															
7															

Notes:

- Class B and C discontinuities shall be separated by at least 2L, L being the length of the longer discontinuity, except that when two or more such discontinuities are not separated by at least 2L, but the combined length of discontinuities and their separation distance is equal to or less than the maximum allowable length under the provisions of Class B or C, the discontinuity shall be considered a single acceptable discontinuity.
- Class B and C discontinuities shall not begin at a distance less than 2L from weld ends carrying a primary tensile stress, L being the discontinuity length.
- Discontinuities detected at "scanning level" in the root face area of complete joint penetration double groove weld joints shall be evaluated using an indicating rating of 4 dB more sensitive than described by d=a-b-c when such welds are designed as "tension welds" on the drawing (subtract 4 dB from the indication rating "d").
- Electroslag or electrogas welds: discontinuities detected at "scanning level" which exceed 2" (50 mm) in length shall be suspected as being piping porosity and shall be further evaluated with radiography.
- Indications that remain on the display as the search unit is moved may be indicative of planar discontinuities with significant through-throat dimension and shall be subjected to a more detailed evaluation by other means (e.g., alternate ultrasonic techniques, radiography, grinding or gouging for visual inspection, etc.).

* Weld Thickness shall be defined as the nominal thickness of the thinner of the two parts being joined.

- | | |
|----------------------------------|--|
| CLASS A (Large Discontinuities) | Any indication in this category shall be rejected, regardless of length. |
| CLASS B (Medium Discontinuities) | Any indication in this category having a length greater than 3/4" (20 mm) shall be rejected. |
| CLASS C (Small Discontinuities) | Any indication in this category having a length greater than 2" (50mm) shall be rejected. |
| CLASS D (Minor Discontinuities) | Any indication in this category shall be accepted, regardless of length or location in the weld. |



REPORT OF ULTRASONIC EXAMINATION OF WELDS
 AS PER ANSI / AWS D1.1 2008
 ULTRASONIC ACCEPTANCE-REJECTION CRITERIA FOR **STATICALLY LOADED** NONTUBULAR CONNECTIONS

JOB No.: 06-0726.2

REPORT No.: QAL-08-2181

PROJECT: MARRIOTT HOTEL

WELDING PROCESS: SMAW

WELD IDENTIFICATION: ROOF ELEVATORS
 MATERIAL THICKNESS: N. 30 WEST TOP
 1500

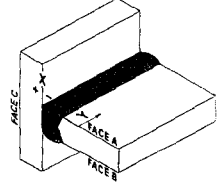
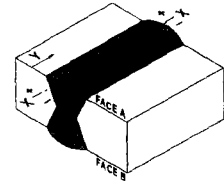
QUALITY REQUIREMENTS-SECTION No.:

WELD JOINT AWS: Square bevel CSP

REMARKS:

INSPECTOR: S. Dyer

DATE: 10-16-09



MINIMUM ACCEPTANCE LEVELS (DECIBELS)

DISCONTINUITY SEVERITY CLASS	WELD THICKNESS* IN INCHES AND MILLIMETERS AND SEARCH UNIT ANGLE										
	5/16" TO 3/4"	3/4" TO 1 1/2"	>1 1/2" TO 2 1/2"			>2 1/2" TO 4"			>4" TO 8"		
	8 TO 20	>20 TO 38	>38 TO 65	>65 TO 100	>100 TO 200	70°	60°	45°	70°	60°	45°
CLASS A	≤+5	≤+2	≤-2	≤+1	≤+3	≤-5	≤-2	≤0	≤-7	≤-4	≤-1
CLASS B	+6	+3	0	+2	+4	-3	0	+1	-6	-3	0
CLASS C	+7	+4	+1	+4	+6	-2	+1	+3	-4	-1	+2
CLASS D	≥+8	≥+5	≥+3	≥+6	≥+8	≥+3	≥+3	≥+5	≥+3	≥+3	≥+4

SCANNING LEVEL

SOUND PATH DISTANCE in. (mm)	≤ 2 1/2" (65)	> 2 1/2" to 5" (65-125)	> 5" to 10" (125-250)	> 10" to 15" (250-380)
ABOVE ZERO REFERENCE (dB)	14	19	29	39

LINE NUMBER	INDICATION NUMBER	TRANSDUCER ANGLE	FROM FACE	LEG (HALF SKIP)	DECIBELS				DEFECT (mm)				DISCONTINUITY EVALUATION	REMARKS	
					INDICATION LEVEL	REFERENCE LEVEL	ATTENUATION FACTOR	INDICATION RATING	LENGTH	ANGULAR DISTANCE (SOUND PATH)	DEPTH FROM "A" SURFACE	DISTANCE			
												FROM X			FROM Y
a	b	c	d												
1	1	70	1.76	2	62	56	2.18	382	2"	2.09	285	C	2 1/2	CLASS A	
2															
3															
4															
5															
6															
7															

Notes:

- Class B and C discontinuities shall be separated by at least 2L, L being the length of the longer discontinuity, except that when two or more such discontinuities are not separated by at least 2L, but the combined length of discontinuities and their separation distance is equal to or less than the maximum allowable length under the provisions of Class B or C, the discontinuity shall be considered a single acceptable discontinuity.
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JOB No.: 06-0726-2

REPORT No.: QAL-08-3181

PROJECT: MARIOTT HOTEL

WELDING PROCESS: SMAW

WELD IDENTIFICATION: ROOF ELEVATOR
 MATERIAL THICKNESS: 5:30 SOUTH TOP
 1.500

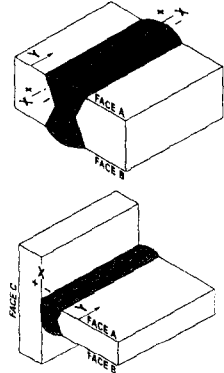
QUALITY REQUIREMENTS-SECTION No.:

WELD JOINT AWS: Square bevel CSP

REMARKS:

INSPECTOR: S. Dyer

DATE: 10-16-2008



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	8 TO 20	>20 TO 38	>38 TO 65	>65 TO 100	>100 TO 200	70°		60°		45°	
CLASS A	≤+5	≤+2	≤-2	≤+1	≤+3	≤-5	≤-2	≤0	≤-7	≤-4	≤-1
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CLASS C	+7	+4	+1	+4	+6	-2	+1	+3	-4	-1	+2
CLASS D	≥+8	≥+5	≥+3	≥+6	≥+8	≥+3	≥+3	≥+5	≥+3	≥+3	≥+4

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					INDICATION LEVEL	REFERENCE LEVEL	ATTENUATION FACTOR	INDICATION RATING	LENGTH	ANGULAR DISTANCE (SOUND PATH)	DEPTH FROM "A" SURFACE	DISTANCE			
												FROM X	FROM Y		
1	1	70	181	2	62	56	184	416	1.25"	1.92"	342	0	3 3/4"	CLASS A	
2															
3															
4															
5															
6															
7															

Notes:

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