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June 13, 2008

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

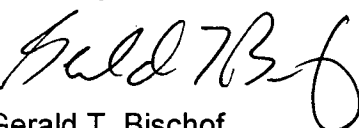
Serial No. 08-0047B  
NL&OS/MAE R0  
Docket No. 50-336  
License No. DPR-65

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 2**  
**SUMMARY OF REACTOR COOLANT PUMP DISSIMILAR METAL WELD EXAMINATIONS**

Dominion Nuclear Connecticut, Inc. (DNC) is providing herein a summary of the Millstone Power Station Unit 2 (MPS2) reactor coolant pump Dissimilar Metal (DM) weld examinations performed during refueling outage 18. The summary report in the attachment to this letter provides results of an examination technique described by Relief Request 89-64 for select Class 1 piping DM welds at MPS2, (Reference DNC letters 07-0533, 08-0047, and 08-0047A dated September 27, 2007, February 18 and March 26, 2008).

Please contact Mr. William D. Bartron at (860) 444-4301 if you have any questions or require additional information.

Sincerely,

  
Gerald T. Bischof  
Vice President – Nuclear Engineering

Commitments made in this letter: None

Attachment: Summary of Reactor Coolant Pump Dissimilar Metal Weld Examinations

cc: U. S. Nuclear Regulatory Commission  
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**ATTACHMENT**

**SUMMARY OF REACTOR COOLANT PUMP DISSIMILAR METAL WELD EXAMINATIONS**

**DOMINION NUCLEAR CONNECTICUT, INC. (DNC)  
MILLSTONE POWER STATION UNIT 2**

## SUMMARY OF REACTOR COOLANT PUMP DISSIMILAR METAL WELD EXAMINATIONS

Eight (8) high safety significant (HSS) dissimilar metal (DM) welds located on the reactor coolant pump (RCP) inlet and outlet reactor coolant system (RCS) cold leg piping were examined using ultrasonic examination techniques during the recent 2R18 refueling outage. Manual ultrasonic techniques qualified in accordance with ASME Section XI, Appendix VIII, Supplement 10 for DM welds, as modified by the Performance Demonstration Initiative (PDI) Program, were applied from the outside surface of the components for the examinations.

The DM welds examined consisted of the inlet nozzle (suction) elbow to safe-end welds and outlet nozzle (discharge) safe-end to pipe welds of each RCP. The inlet elbow to safe-end welds consists of clad ferritic steel elbow (P-1) to cast austenitic stainless steel safe-end (P-8) with Alloy 82/182 weld material. The outlet safe-end to pipe welds consists of cast austenitic stainless steel safe-end (P-8) to clad ferritic steel piping (P-1) with Alloy 82/182 weld material. The applicable weld numbers for each configuration is tabulated in Table 1 along with the figures associated with the examination coverage figures.

Table 1			
Weld Number	Configuration	Description	Coverage Plots
P-4-C-1	Inlet	Elbow to Safe-End	Figures 1, 2, & 3
P-5-C-3	Outlet	Safe-End to Pipe	Figures 4, 5, & 6
P-8-C-1	Inlet	Elbow to Safe-End	Figures 7, 8, & 9
P-9-C-3	Outlet	Safe-End to Pipe	Figures 10, 11, & 12
P-13-C-1	Inlet	Elbow to Safe-End	Figures 13, 14, & 15
P-14-C-3	Outlet	Safe-End to Pipe	Figures 16, 17, & 18
P-17-C-1	Inlet	Elbow to Safe-End	Figures 19, 20, & 21
P-18-C-3	Outlet	Safe-End to Pipe	Figures 22, 23, & 24

These welds were examined under the Risk Informed Inservice Inspection (RI-ISI) Program as Code Item Number R1.15, "Elements Subject to PWSCC." The inner 1/3 of the weld and adjacent base material were required to be volumetrically examined for 1/2" from the weld toe or counterbore (if present) on each side of the weld. In addition to the RI-ISI Program requirements, MPS2 applied the industry guidance contained in the Materials Reliability Program, "Primary System Piping Butt Weld Inspection and Evaluation Guidelines (MRP-139)," dated August 2005.

The design configuration of these dissimilar metal welds limits the volumetric examination from the ferritic steel side of the welds. Due to the short length of the cast austenitic stainless steel safe-ends and the adjacent safe-end to pump welds there is no access or surface to perform any scanning from the safe-end side of the weld.

All scanning of the ultrasonic search units was performed from the ferritic elbow or pipe side of the weld using the Appendix VIII, Supplement 10 demonstrated examination procedure for DM welds. The cast stainless steel safe-end base material portion of the examination volume is not addressed by the Supplement 10 procedure demonstration. This portion of the examination volume was examined to the extent possible on a "best effort" basis from the far side of the weld using the Appendix VIII, Supplement 10 demonstrated procedure. The use of the low frequency longitudinal wave search units, focused for the thickness being examined and with the examination parameters of the DM weld procedure, meets or exceeds the ASME Section XI, Appendix III examination requirements.

The determination of examination volume coverage is addressed by region based on procedure qualifications; 1) qualified material (Inconel weld/butter and ferritic base material) volume, 2) best effort cast stainless steel volume, and 3) total RI examination volume.

The coverage determination of the Appendix VIII procedure qualified materials was performed using a conservative approach, claiming complete coverage only when both beam angles (45° and 60°) interrogate the volume when scanning in the axial direction. Circumferential scanning was performed by skewing the ultrasonic beam into the examination volume from the adjacent base material to interrogate the required volume. Scanning from the weld surface was not possible due to the tapered surface which results in loss of contact of the search unit at the transition between the component and weld. The entire wetted surface of the Alloy 82/182 material was examined with at least one beam angle.

The coverage determination of the cast stainless steel examination volume was performed claiming coverage of the portion of volume interrogated by at least one beam angle, either 45° or 60° in the axial scan direction. Coverage of the far side of the weld examination volume (cast stainless steel safe-end) is not practical when scanning in the circumferential direction through the weld material. No coverage of the cast stainless steel examination volume in the circumferential scan direction is claimed during these examinations.

Coverage of the entire RI examination volume is determined by combining the Appendix VIII qualified volume coverage and the Appendix III "best effort" volume coverage.

Table 2 summarizes the examination coverage for these eight DM weld examinations. Figures 1 through 24 detail the claimed coverage of each weld and examination volume region discussed above. Scan limitations exist on the discharge safe-end to pipe welds, which consist of nozzle penetrations in the pipe at several circumferential locations (as described on the applicable figures) that restrict the axial movement of the search units. The axial movement of the search unit was also restricted by the weld taper transition at the weld toe of the discharge DM welds, which limits the coverage of the far side cast stainless steel volume.

<b>Table 2</b> <b>Examination Volume Coverage Summary</b>						
	<b>Appendix VIII Qualified Material/Technique Coverage</b> <b>(Alloy 600 &amp; CS Base Material)</b>				<b>CSS</b> <b>Best Effort</b> <b>Coverage</b>	<b>Total Risk</b> <b>Informed (RI)</b> <b>Volume</b> <b>Coverage</b>
Weld #	Axial Beam Direction	Circumferential Beam Direction	Composite Coverage	Wetted Surface		
P-4-C-1	100	100	100	100	50	80
P-5-C-3	83.8	100	91.9	100	45.9	73.1
P-8-C-1	100	100	100	100	50	80
P-9-C-3	85.5	100	92.7	100	45.9	73.6
P-13-C-1	100	100	100	100	50	80
P-14-C-3	87.2	100	93.6	100	45.9	74.5
P-17-C-1	100	100	100	100	50	80
P-18-C-3	87.2	100	93.6	100	45.9	74.5

**Note:** Wetted surface coverage refers to the ID surface of the Alloy 82/182 material completely interrogated by at least one beam angle in the axial and circumferential beam directions.

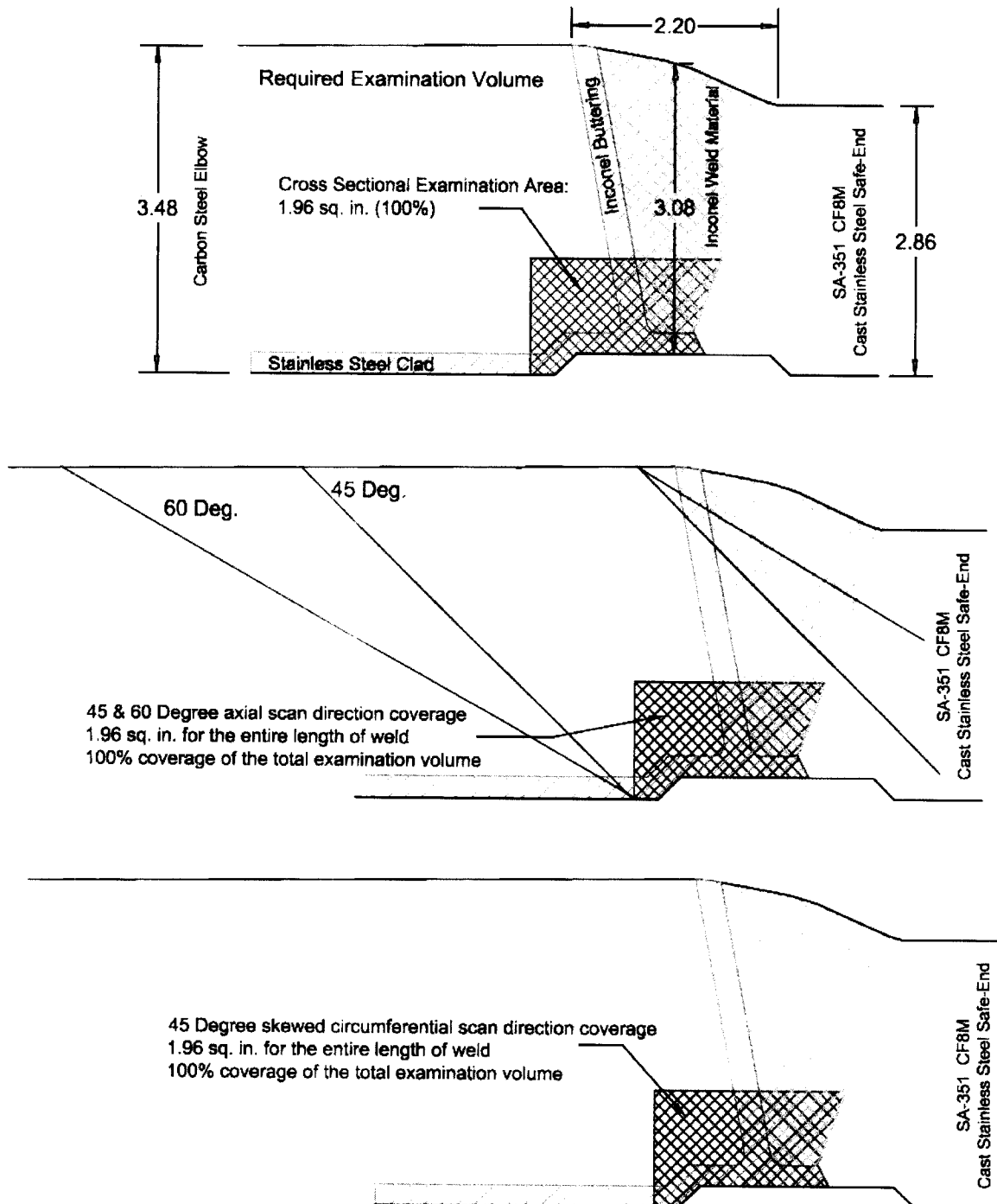
In summary, no flaw indications were detected for these eight DM welds examined with the qualified ultrasonic examination procedure, equipment and personnel.

Weld# P-4-C-1

Appendix VIII qualified Procedure/Material Examination Coverage Calculations  
(Inconel Weld Metal & Inconel Buttering and Carbon Steel Base Material)

Examination Volume Coverage

Axial Scan Direction = 100%, Circumferential Scan Direction Coverage = 100%  
Composite Axial and Circumferential Examination Coverage = 100%



Examination Performed as Detailed Above.

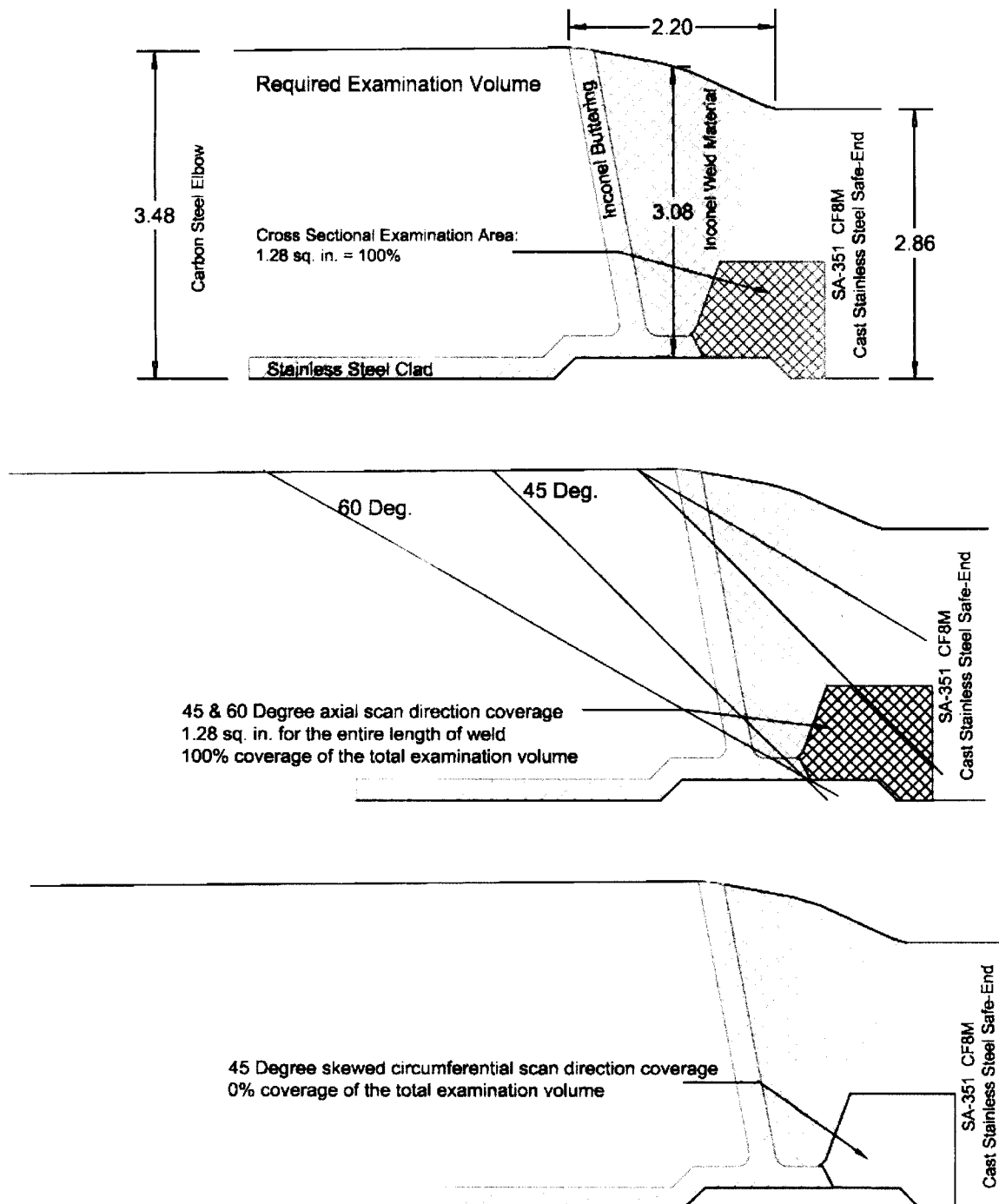
No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 1

## Weld# P-4-C-1

Risk Informed Examination Coverage of the Cast Stainless Steel (CSS) Base Material Examination Volume on the Far Side of the Weld as a "Best Effort" Examination in Accordance with ASME Section XI, Appendix III

Composite (Axial & Circumferential Directions) of the CSS Examination Volume Coverage = 50%  
Examination Performed Using ASME Section XI, Appendix VIII Qualified Procedure for the Dissimilar Metal Welds.  
The Examination Techniques Used Meet or Exceed the Appendix III Examination Requirements.



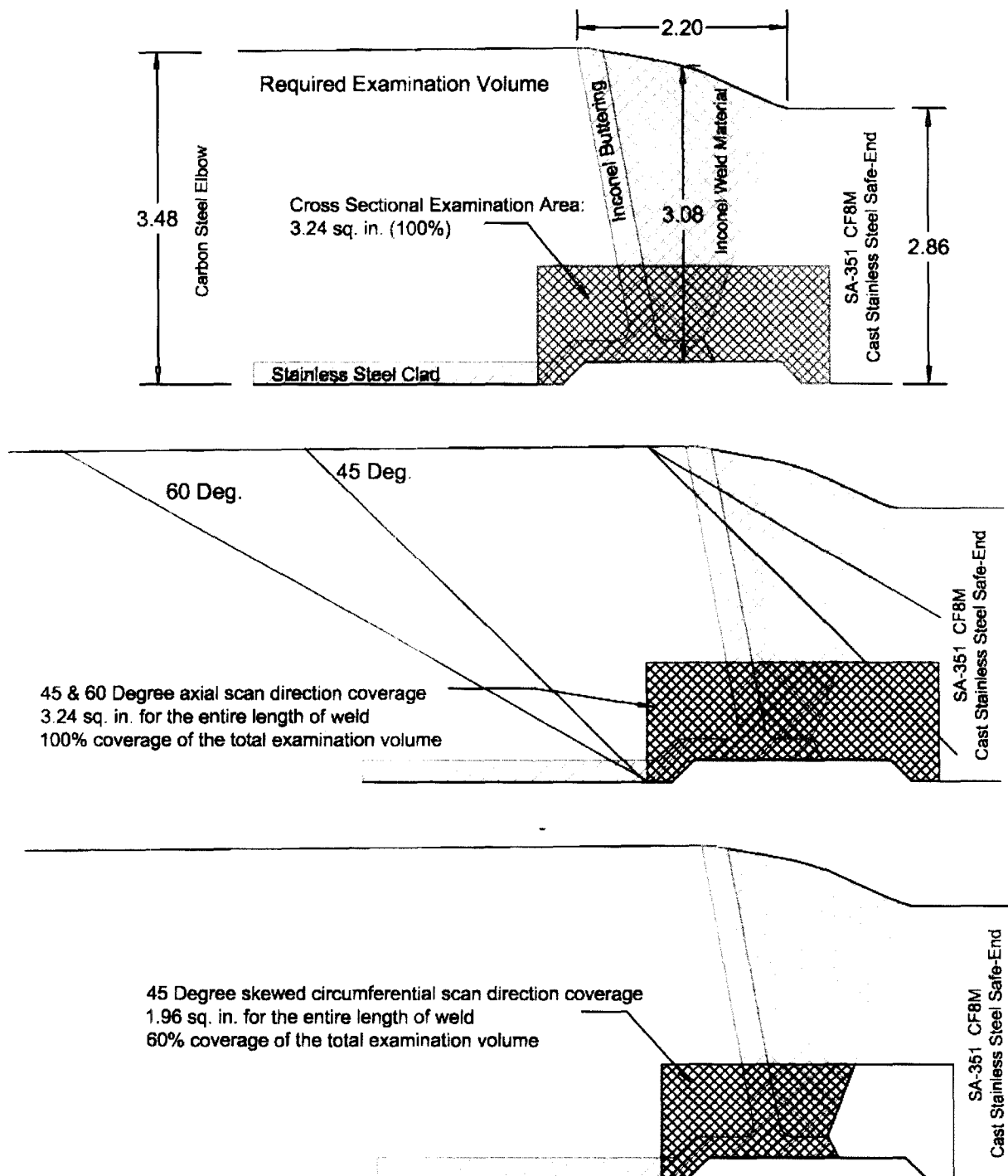
Examination Performed as Detailed Above.

No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 2

Weld# P-4-C-1  
Total Risk Informed (RI) Examination Volume Coverage

Examination Volume Coverage  
Axial Scan Direction = 100%, Circumferential Scan Direction Coverage = 60%  
Composite Axial and Circumferential Examination Coverage = 80%



Examination Performed as Detailed Above.  
No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 3



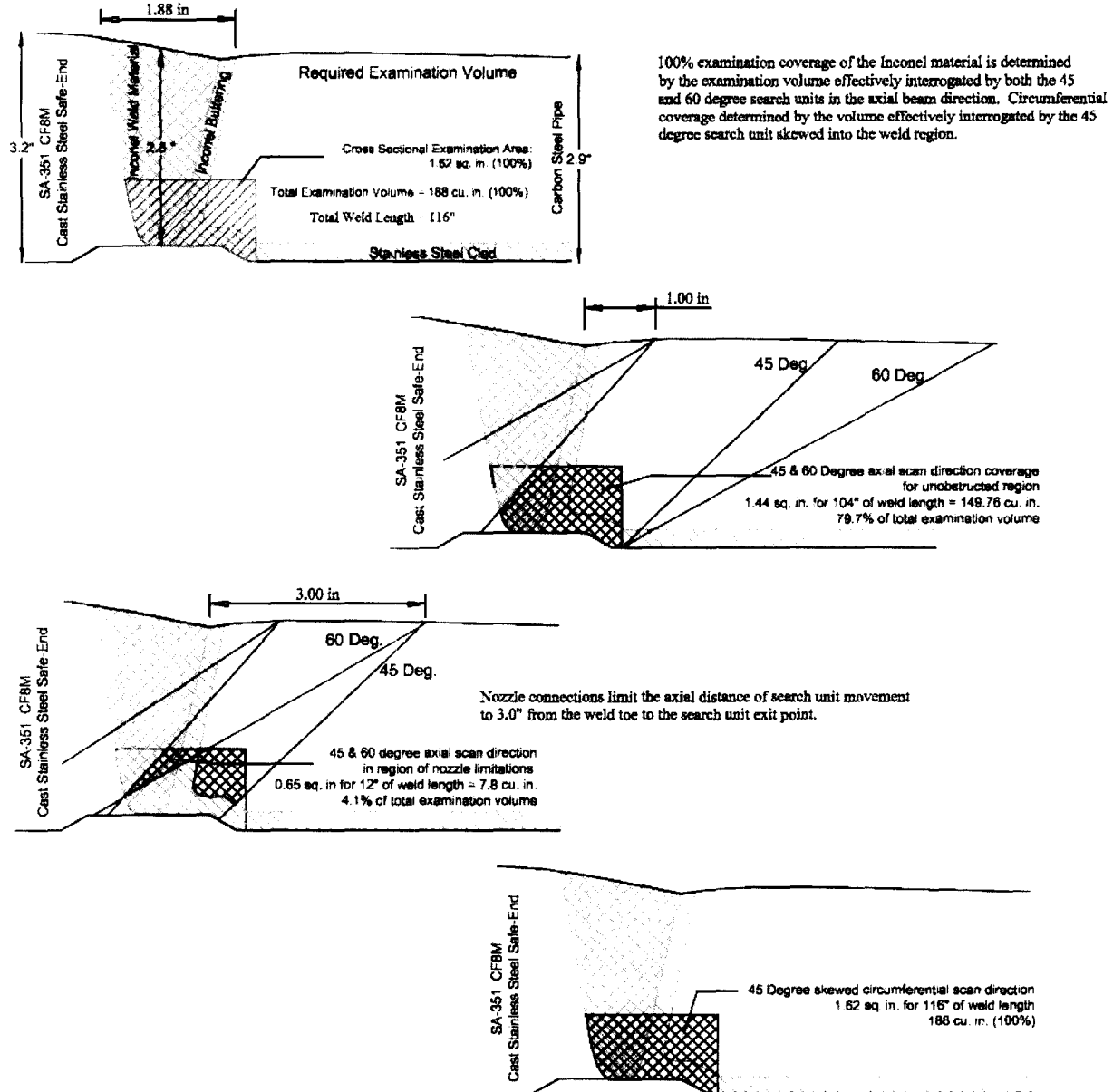
Weld# P-5-C-3

Appendix VIII Qualified Procedure/Material Examination Coverage Calculations  
(Inconel Weld Metal & Inconel Buttering and Carbon Steel Base Material)

Examination Volume Coverage

Axial Scan Direction = 83.8%, Circumferential Scan Direction Coverage = 100%  
Composite Axial and Circumferential Examination Coverage = 91.9%

The entire Alloy 600 weld material (weld & buttering) is interrogated by at least one beam angle, 45 or 60 deg. as detailed below.



Axial Scan Limited for 12" of Weld Length Due to Spray Nozzle and Instrumentation Nozzle on the Pipe Side of the Weld.  
The Spray Nozzle is Located @ TDC From 4" CCW TO 4" CW. The Instrumentation Nozzle is Located @ 10" CCW TO 14" CCW.

No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

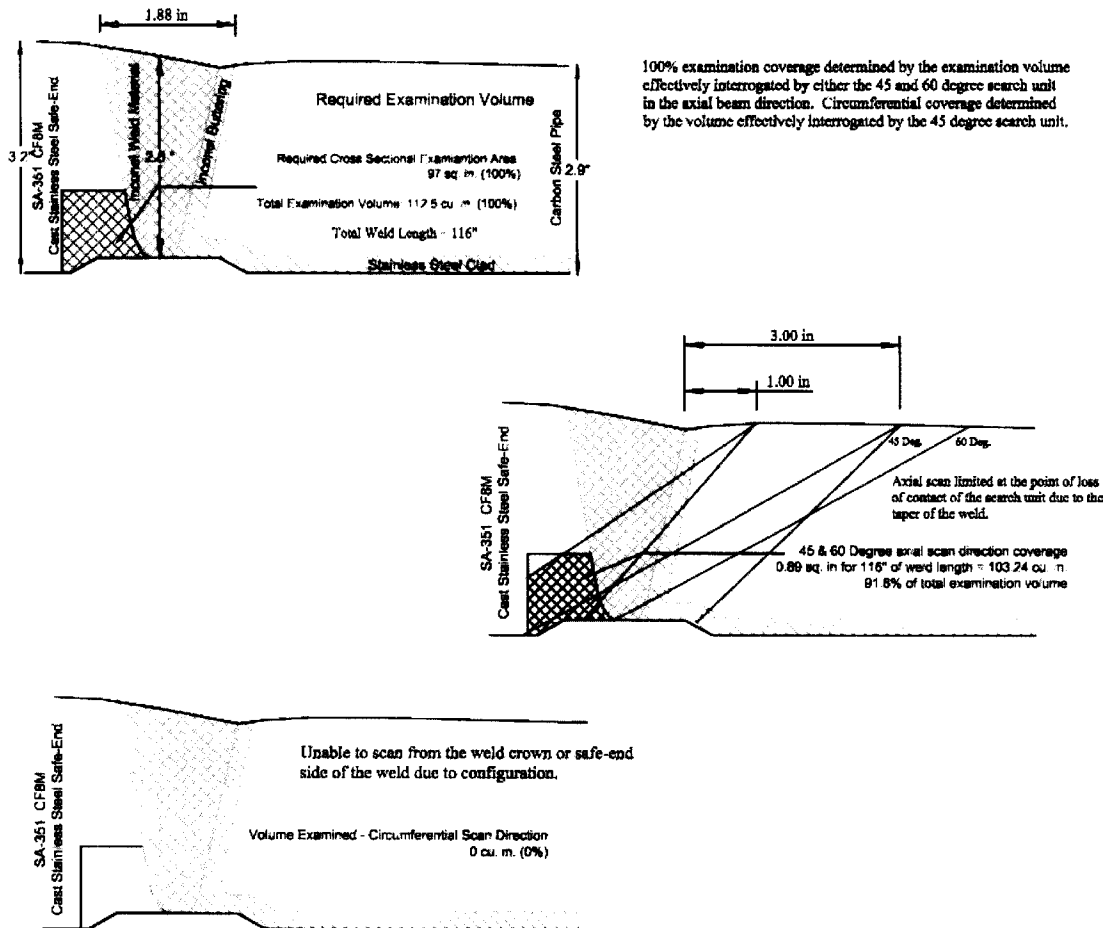
Examination Performed as Detailed Above

Figure 4

Weld# P-5-C-3

Risk Informed Examination Coverage of the Cast Stainless Steel (CSS) Base Material Examination Volume on the Far Side of the Weld as a "Best Effort" Examination in Accordance with ASME Section XI, Appendix III

Composite (Axial & Circumferential Directions) of the CSS Examination Volume Coverage = 45.9%  
Examination Performed Using ASME Section XI, Appendix VIII Qualified Procedure for the Dissimilar Metal Welds.  
The Examination Techniques Used Meet or Exceed the Appendix III Examination Requirements.



Axial Scan Limited for 12" of Weld Length Due to Spray Nozzle and Instrumentation Nozzle on the Pipe Side of the Weld. The Spray Nozzle is Located @ TDC From 4" CCW TO 4" CW. The Instrumentation Nozzle is Located @ 10" CCW TO 14" CCW. However, the axial scan limitation does not impact the best effort examination of the far side of the weld.

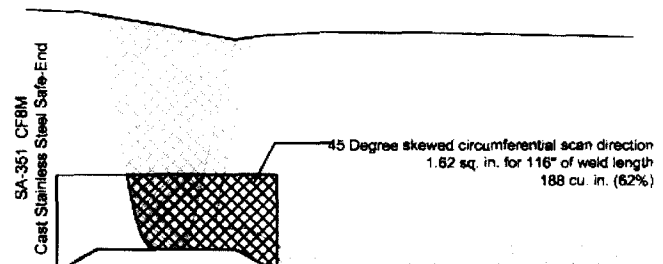
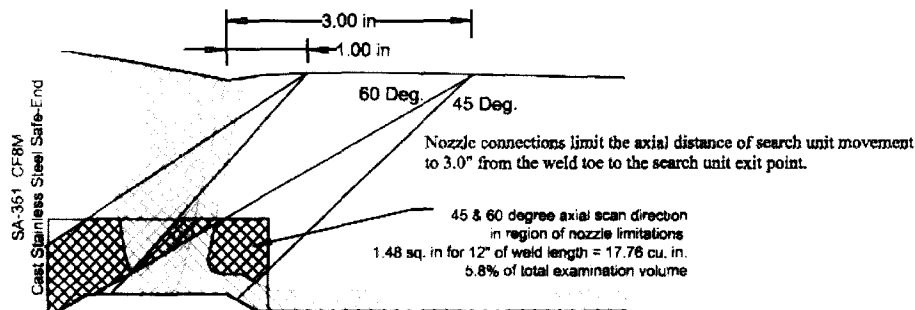
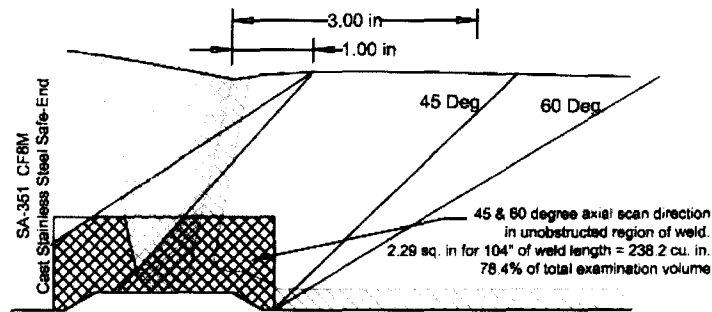
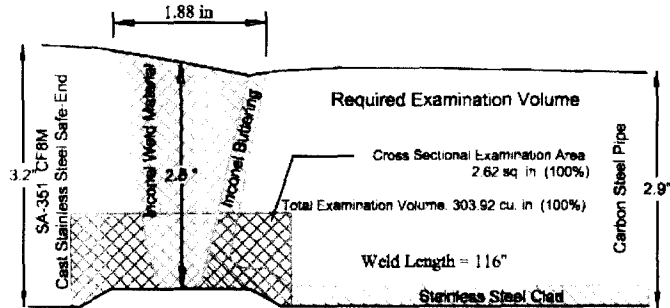
No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

Examination Performed as Detailed Above

Figure 5

Weld# P-5-C-3  
Total Risk Informed (RI) Examination Volume Coverage

Examination Volume Coverage  
Axial Scan Direction = 84.2%, Circumferential Scan Direction Coverage = 62%  
Composite Axial and Circumferential Examination Coverage = 73.1%



Axial Scan Limited for 12" of Weld Length Due to Spray Nozzle and Instrumentation Nozzles on the Pipe Side of the Weld.  
The Spray Nozzle is Located @ TDC From 4" CCW TO 4" CW. The Instrumentation Nozzle is Located @ 10" CCW TO 14" CCW.

No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

Examination Performed as Detailed Above

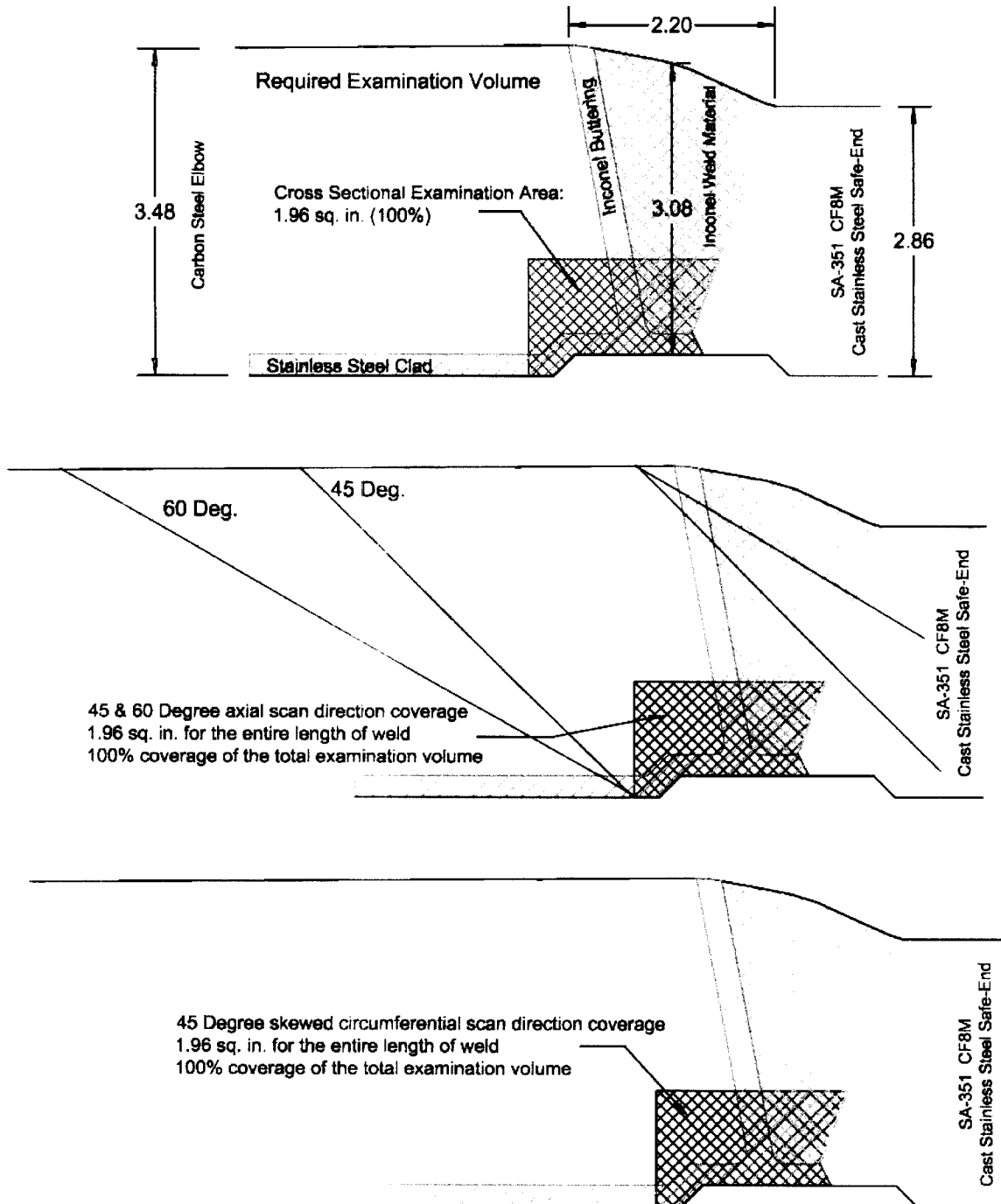
Figure 6

Weld# P-8-C-1

Appendix VIII qualified Procedure/Material Examination Coverage Calculations  
(Inconel Weld Metal & Inconel Buttering and Carbon Steel Base Material)

Examination Volume Coverage

Axial Scan Direction = 100%, Circumferential Scan Direction Coverage = 100%  
Composite Axial and Circumferential Examination Coverage = 100%



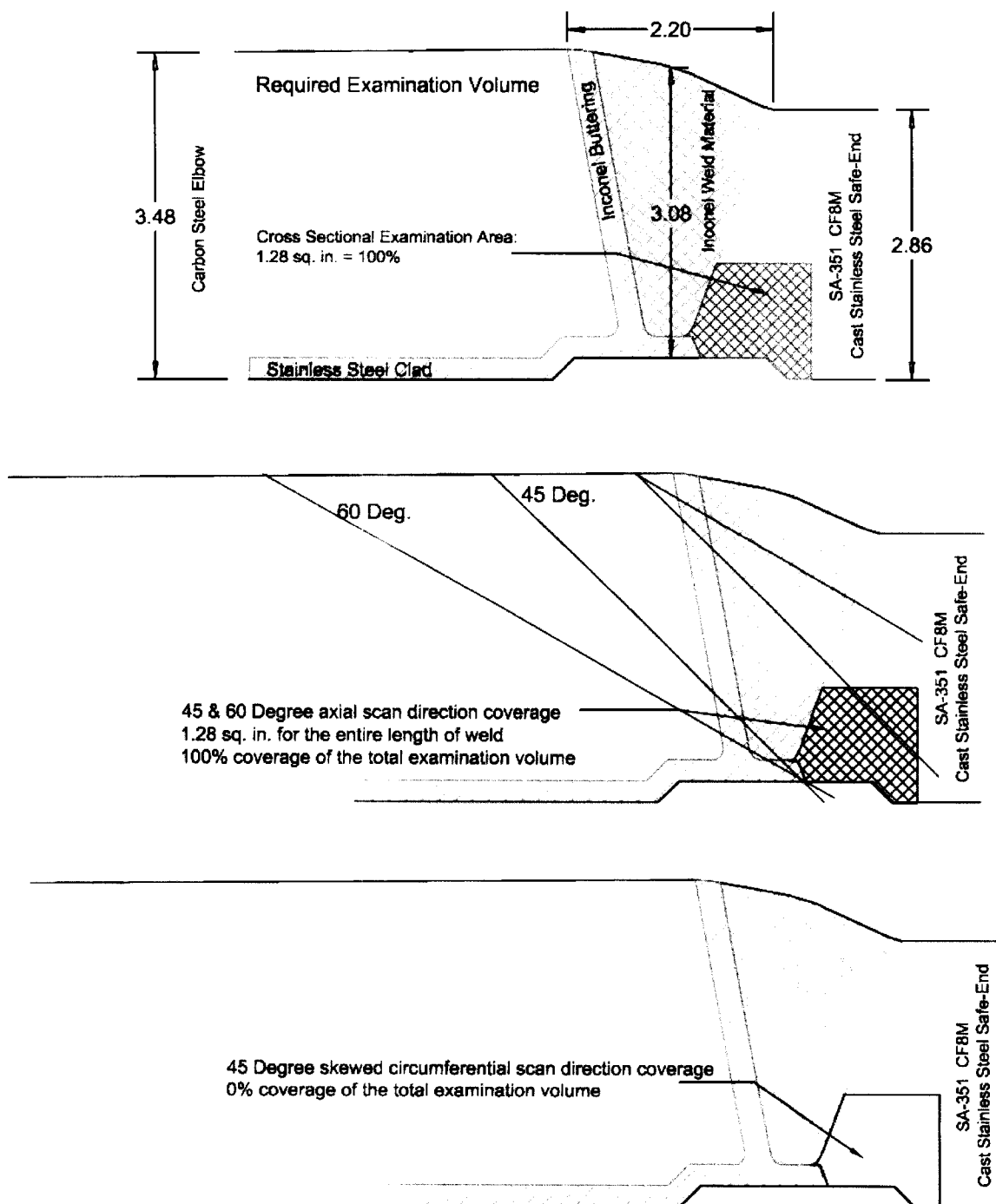
Examination Performed as Detailed Above.  
No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 7

Weld# P-8-C-1

Risk Informed Examination Coverage of the Cast Stainless Steel (CSS) Base Material Examination Volume on the Far Side of the Weld as a "Best Effort" Examination in Accordance with ASME Section XI, Appendix III

Composite (Axial & Circumferential Directions) of the CSS Examination Volume Coverage = 50%  
Examination Performed Using ASME Section XI, Appendix VIII Qualified Procedure for the Dissimilar Metal Welds.  
The Examination Techniques Used Meet or Exceed the Appendix III Examination Requirements.



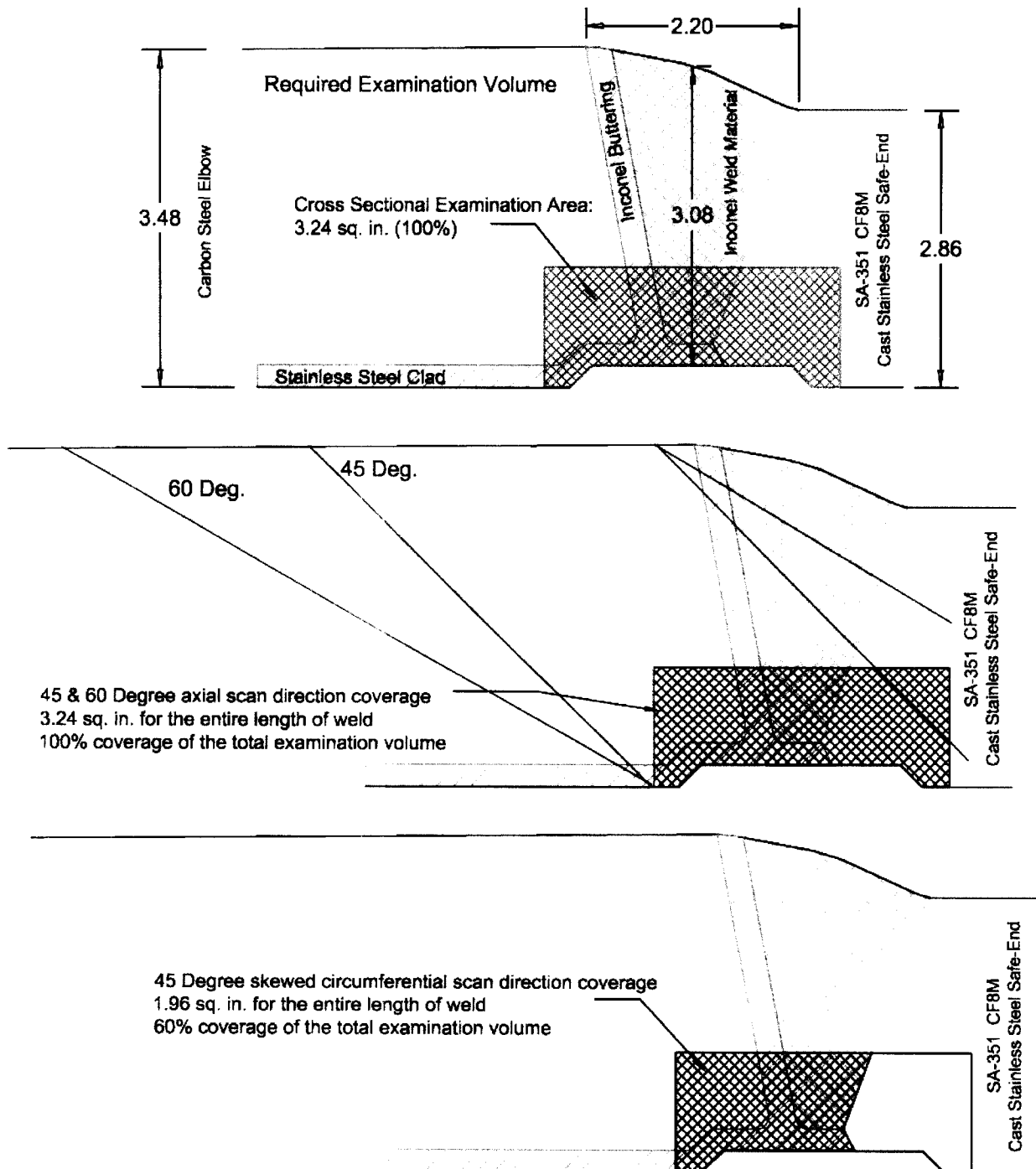
Examination Performed as Detailed Above.

No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 8

Weld# P-8-C-1  
Total Risk Informed (RI) Examination Volume Coverage

Examination Volume Coverage  
Axial Scan Direction = 100%, Circumferential Scan Direction Coverage = 60%  
Composite Axial and Circumferential Examination Coverage = 80%



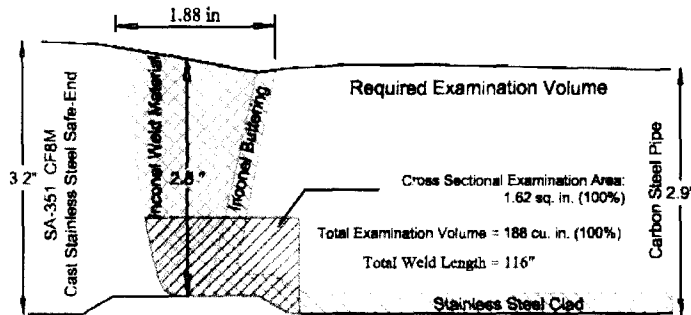
Examination Performed as Detailed Above.  
No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 9

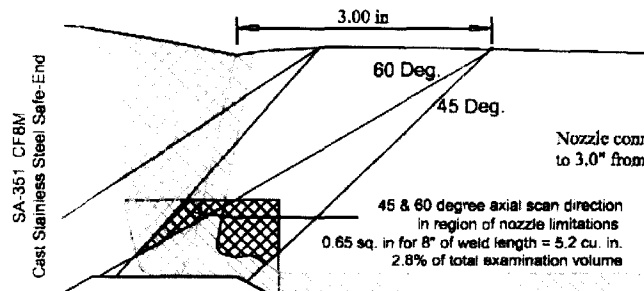
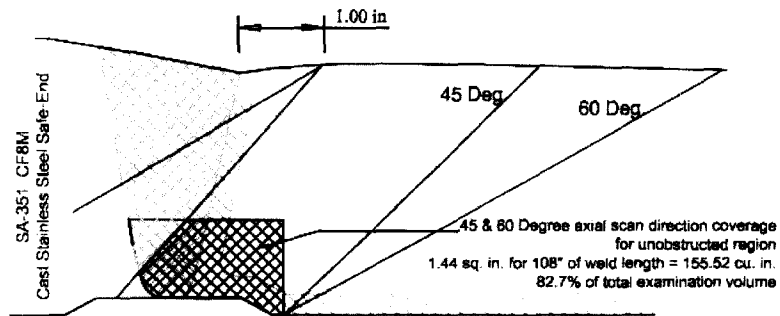
Weld# P-9-C-3  
Appendix VIII Qualified Procedure/Material Examination Coverage Calculations  
(Inconel Weld Metal & Inconel Buttering and Carbon Steel Base Material)

Examination Volume Coverage  
Axial Scan Direction = 86.5%, Circumferential Scan Direction Coverage = 100%  
Composite Axial and Circumferential Examination Coverage = 92.7%

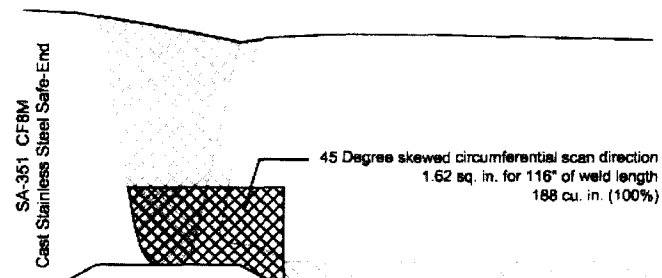
The entire Alloy 800 weld material (weld & buttering) is interrogated by at least one beam angle, 45 or 60 deg as detailed below.



100% examination coverage of the Inconel material is determined by the examination volume effectively interrogated by both the 45 and 60 degree search units in the axial beam direction. Circumferential coverage determined by the volume effectively interrogated by the 45 degree search unit skewed into the weld region.



Nozzle connections limit the axial distance of search unit movement to 3.0" from the weld toe to the search unit exit point.



Axial Scan Limited for 8" of Weld Length Due to Spray Nozzle on the Pipe Side of the Weld.  
The Spray Nozzle is Located @ TDC From 4" CCW TO 4" CW.

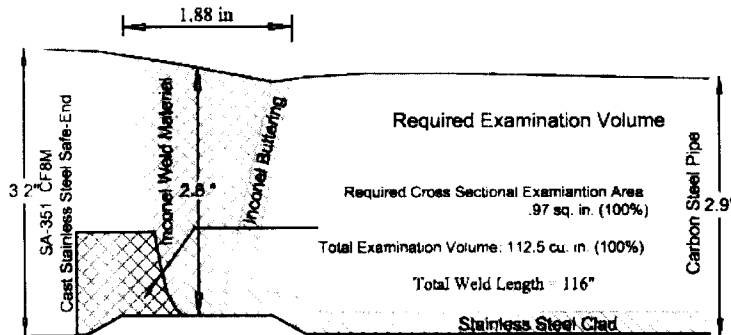
No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

Examination Performed as Detailed Above

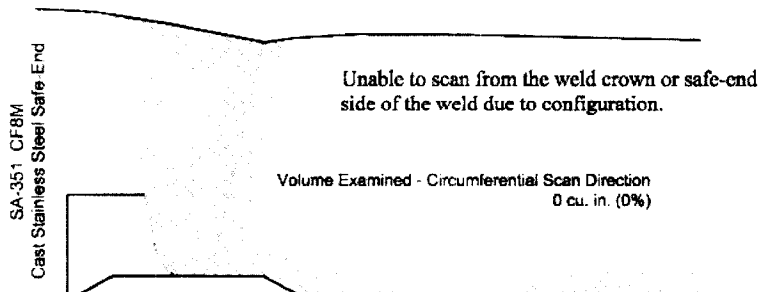
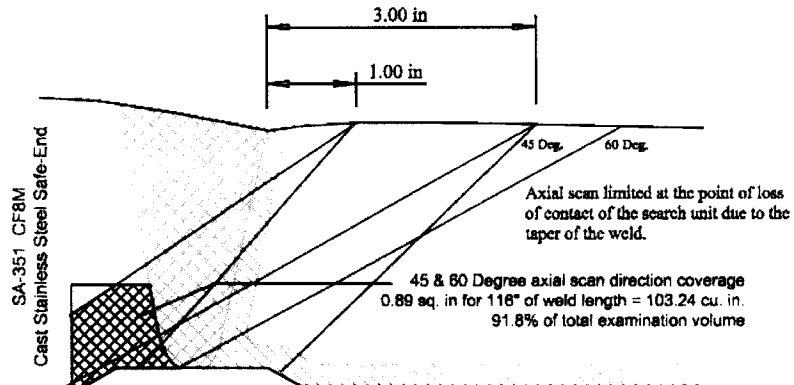
Figure 10

Weld# P-9-C-3  
Risk Informed Examination Coverage of the Cast Stainless Steel (CSS) Base Material Examination Volume  
on the Far Side of the Weld as a "Best Effort" Examination in Accordance with ASME Section XI, Appendix III

Composite (Axial & Circumferential Directions) of the CSS Examination Volume Coverage = 45.9%  
Examination Performed Using ASME Section XI, Appendix VIII Qualified Procedure for the Dissimilar Metal Welds.  
The Examination Techniques Used Meet or Exceed the Appendix III Examination Requirements.



100% examination coverage determined by the examination volume effectively interrogated by either the 45 and 60 degree search unit in the axial beam direction. Circumferential coverage determined by the volume effectively interrogated by the 45 degree search unit.



Axial Scan Limited for 8" of Weld Length Due to Spray Nozzle on the Pipe Side of the Weld. The Spray Nozzle is Located @ TDC From 4" CCW to 4" CW. However, the axial scan limitation does not impact the best effort examination of the far side of the weld.

No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

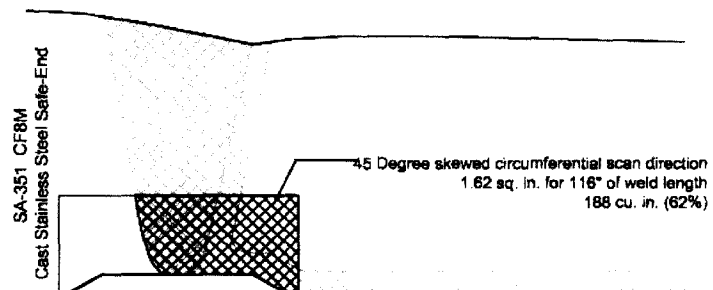
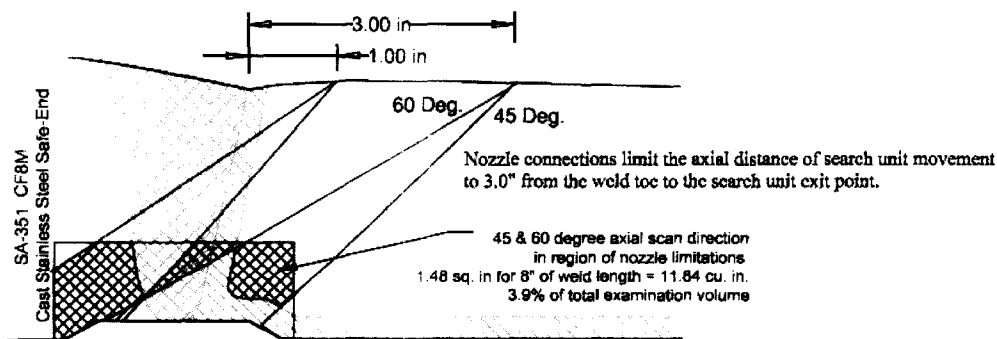
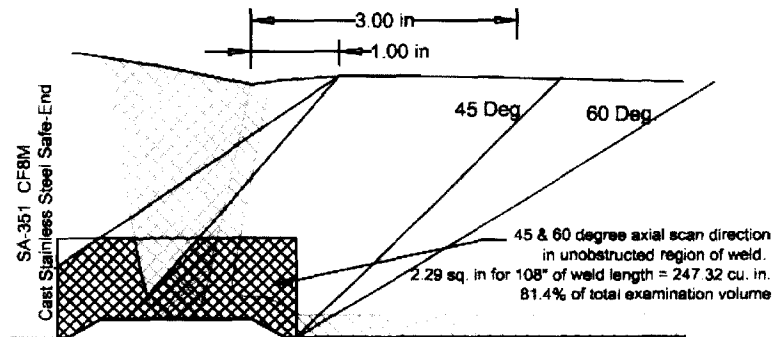
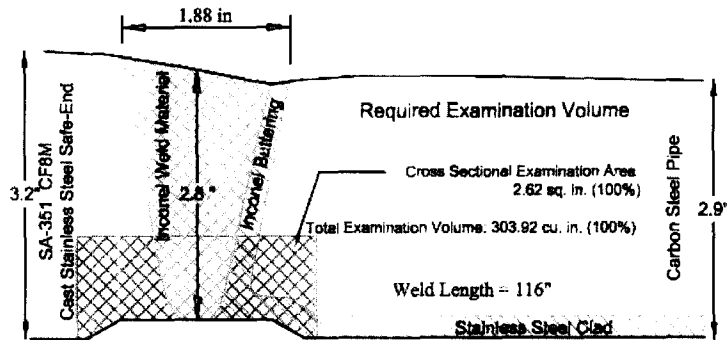
Examination Performed as Detailed Above

Figure 11



Weld# P-8-C-3  
Total Risk Informed (RI) Examination Volume Coverage

Examination Volume Coverage  
Axial Scan Direction = 85.3%, Circumferential Scan Direction Coverage = 62%  
Composite Axial and Circumferential Examination Coverage = 73.6%



Axial Scan Limited for 8" of Weld Length Due to Spray Nozzle on the Pipe Side of the Weld.  
The Spray Nozzle is Located @ TDC From 4" CCW TO 4" CW.

No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

Examination Performed as Detailed Above

Figure 12

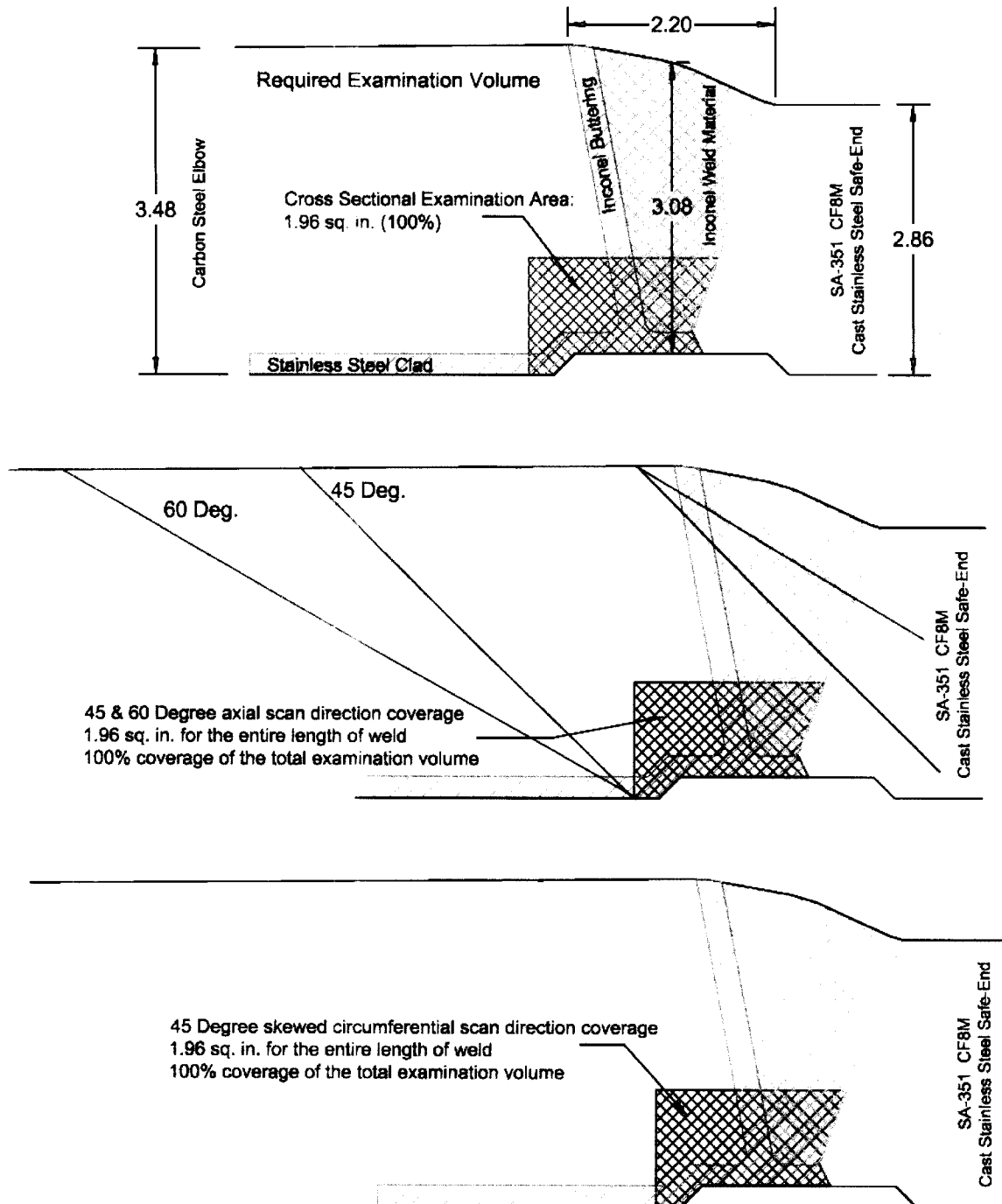
Weld# P-13-C-1.

Appendix VIII qualified Procedure/Material Examination Coverage Calculations  
(Inconel Weld Metal & Inconel Buttering and Carbon Steel Base Material)

## Examination Volume Coverage

Axial Scan Direction = 100%, Circumferential Scan Direction Coverage = 100%

Composite Axial and Circumferential Examination Coverage = 100%



Examination Performed as Detailed Above.

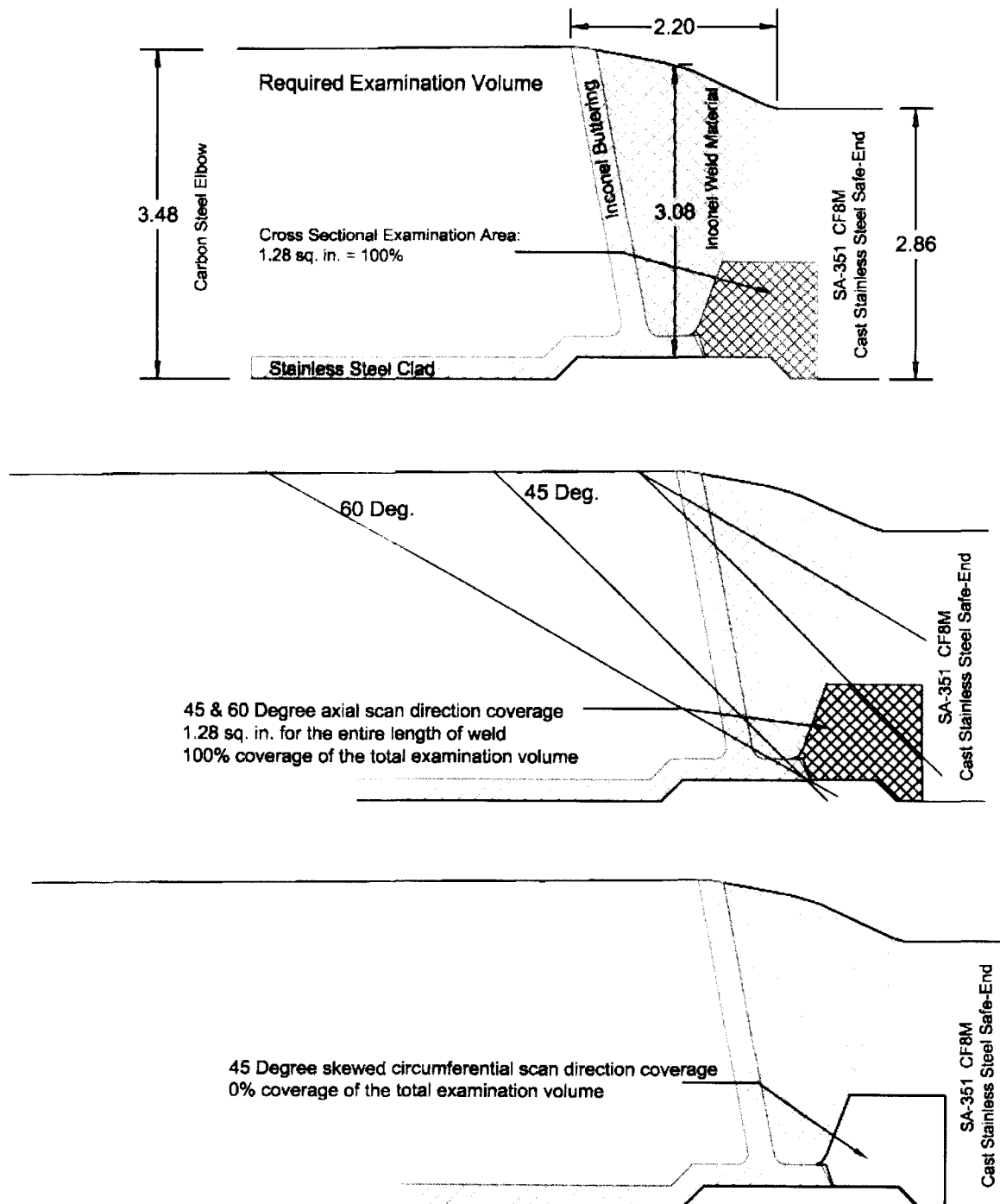
No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 13

Weld# P-13-C-1

Risk Informed Examination Coverage of the Cast Stainless Steel (CSS) Base Material Examination Volume on the Far Side of the Weld as a "Best Effort" Examination in Accordance with ASME Section XI, Appendix III

Composite (Axial & Circumferential Directions) of the CSS Examination Volume Coverage = 50%  
Examination Performed Using ASME Section XI, Appendix VIII Qualified Procedure for the Dissimilar Metal Welds.  
The Examination Techniques Used Meet or Exceed the Appendix III Examination Requirements.



Examination Performed as Detailed Above.

No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 14

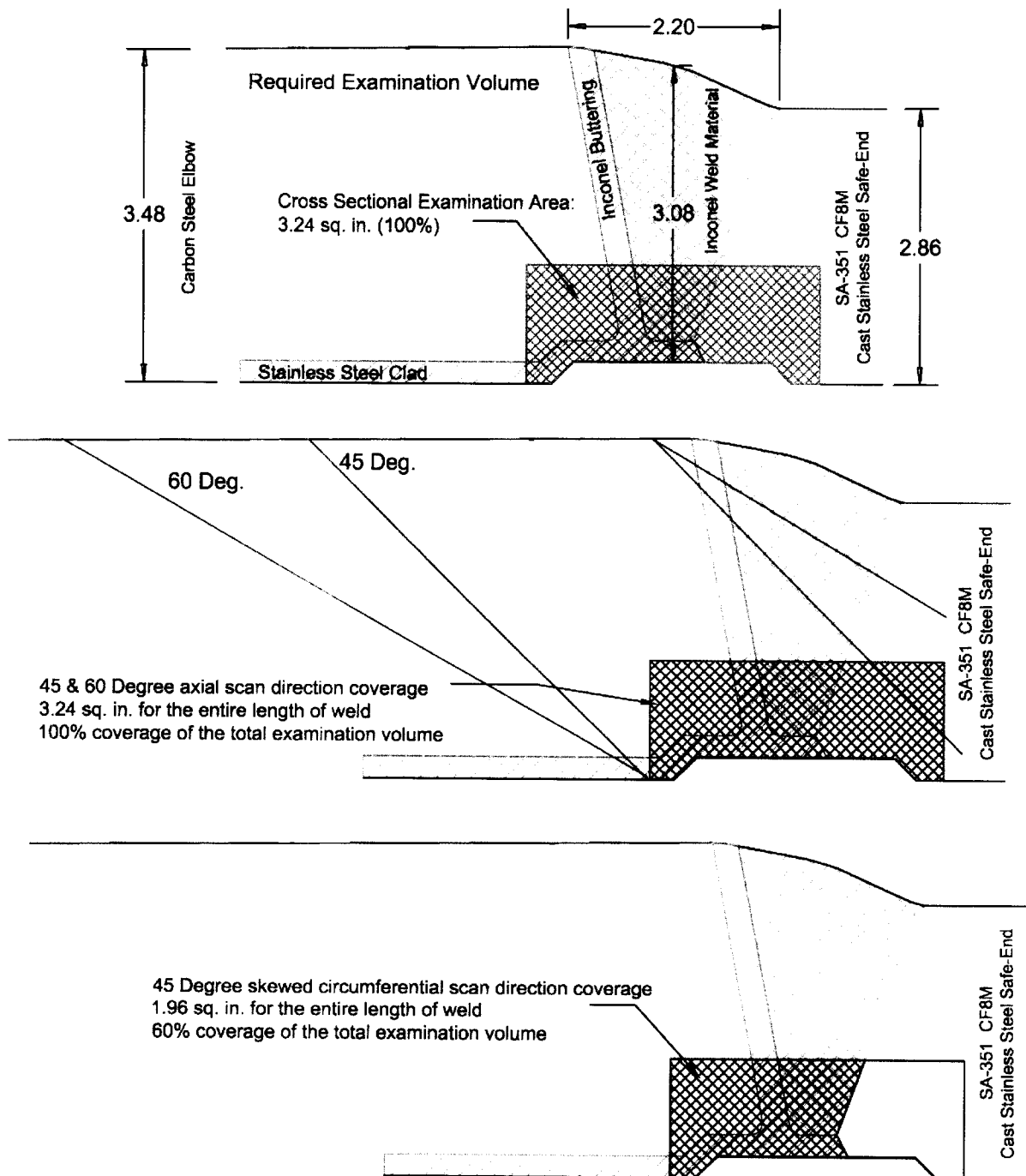
Weld# P-13-C-1

Total Risk Informed (RI) Examination Volume Coverage

## Examination Volume Coverage

Axial Scan Direction = 100%, Circumferential Scan Direction Coverage = 60%

Composite Axial and Circumferential Examination Coverage = 80%



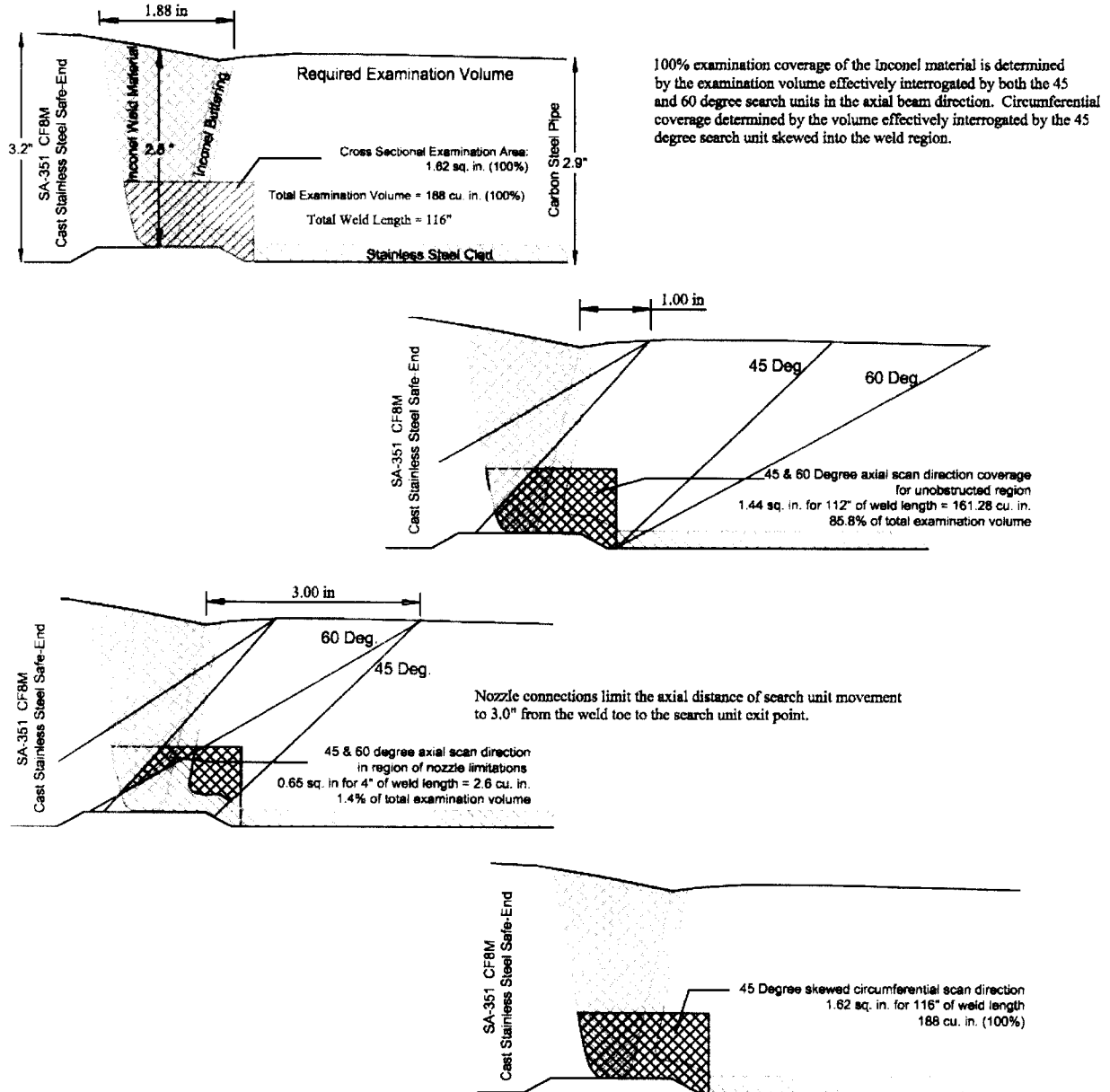
Examination Performed as Detailed Above.

No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 15

Weld# P-14-C-3  
Appendix VIII Qualified Procedure/Material Examination Coverage  
Calculations  
(Inconel Weld Metal & Inconel Buttering and Carbon Steel Base Material)  
Examination Volume Coverage  
Axial Scan Direction = 87.2%, Circumferential Scan Direction Coverage = 100%  
Composite Axial and Circumferential Examination Coverage = 93.6%

The entire Alloy 600 weld material (weld & buttering) is interrogated by at least one beam angle, 45 or 60 deg. as detailed below.



Axial Scan Limited for 4" of Weld Length Due to Instrumentation Nozzle on the Pipe Side of the Weld.  
The Instrumentation Nozzle is Located @ 10" CW TO 14" CW.

No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

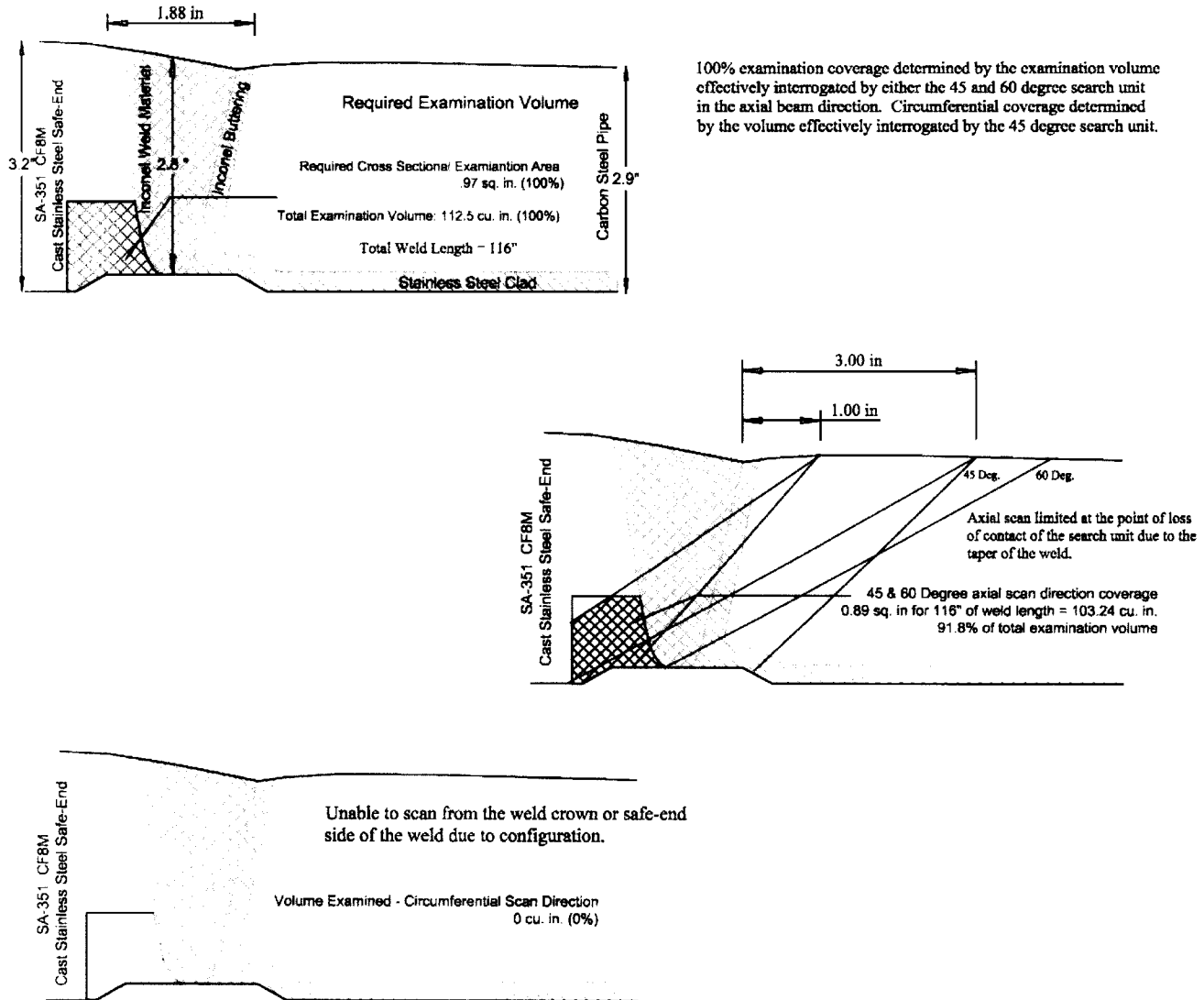
Examination Performed as Detailed Above

Figure 16

Weld# P-14-C-3

Risk Informed Examination Coverage of the Cast Stainless Steel (CSS) Base Material Examination Volume on the Far Side of the Weld as a "Best Effort" Examination in Accordance with ASME Section XI, Appendix III

Composite (Axial & Circumferential Directions) of the CSS Examination Volume Coverage = 45.9%  
Examination Performed Using ASME Section XI, Appendix VIII Qualified Procedure for the Dissimilar Metal Welds.  
The Examination Techniques Used Meet or Exceed the Appendix III Examination Requirements.



Axial Scan Limited for 4" of Weld Length Due to Instrumentation Nozzles on the Pipe Side of the Weld.  
The Instrumentation Nozzle is Located @ 10" CW TO 14" CW. However, the axial scan limitation does not impact the best effort examination of the far side of the weld.

No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

Examination Performed as Detailed Above

Figure 17

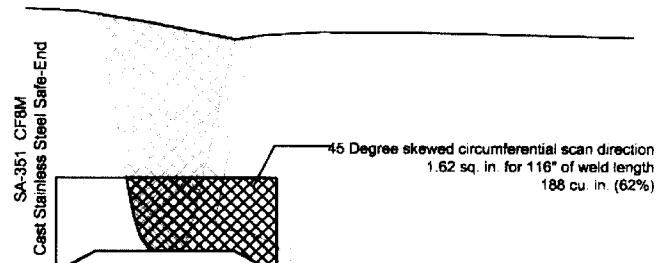
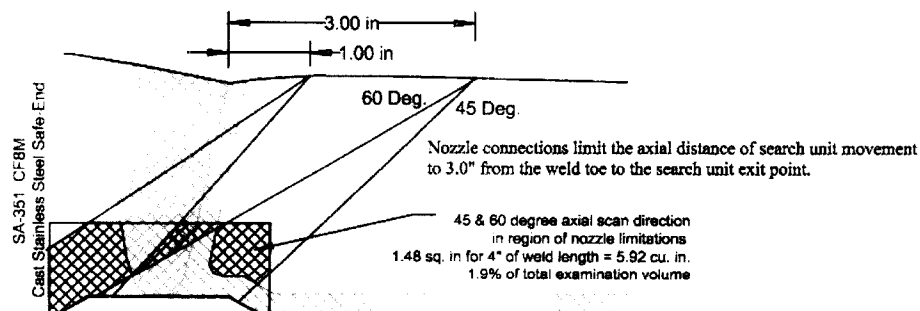
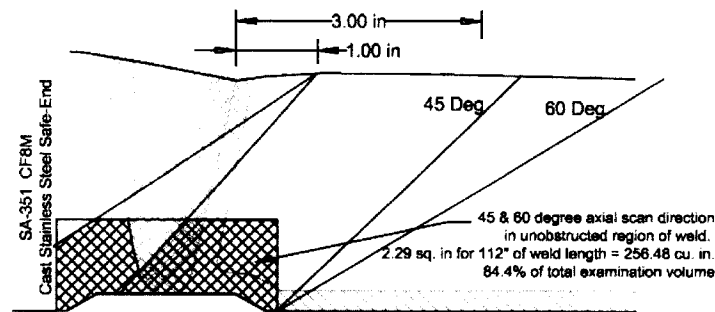
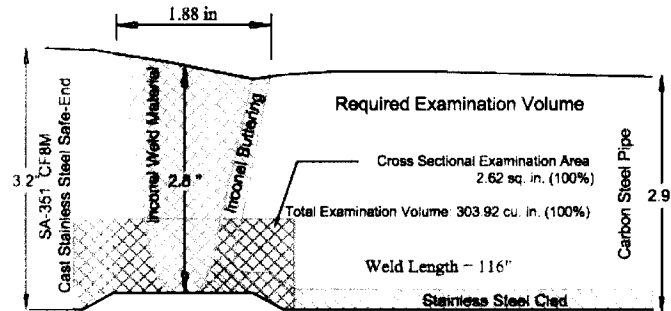
## Weld# P-14-C-3

## Total Risk Informed (RI) Examination Volume Coverage

## Examination Volume Coverage

Axial Scan Direction = 86.3%, Circumferential Scan Direction Coverage = 62%

Composite Axial and Circumferential Examination Coverage = 74.5%



Axial Scan Limited for 4" of Weld Length Due to Instrumentation Nozzles on the Pipe Side of the Weld.

The Instrumentation Nozzle is Located @ 10" CW TO 14" CW.

No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

Examination Performed as Detailed Above

Figure 18

Weld# P-17-C-1

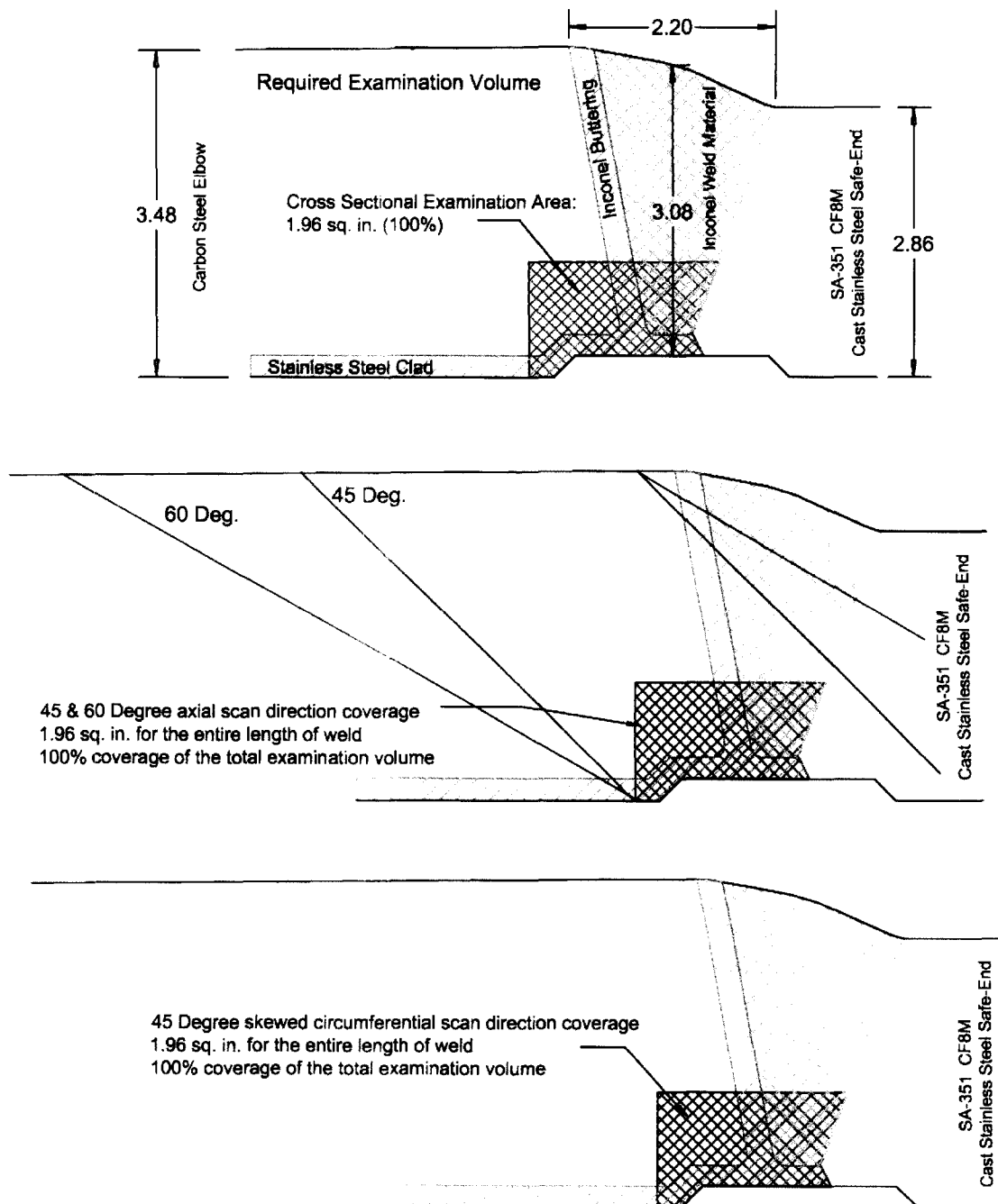
Appendix VIII qualified Procedure/Material Examination Coverage Calculations  
(Inconel Weld Metal & Inconel Buttering and Carbon Steel Base Material)

## Examination Volume Coverage

Axial Scan Direction = 100%, Circumferential Scan Direction Coverage = 100%

Composite Axial and Circumferential Examination Coverage = 100%

The entire Alloy 600 weld material (weld &amp; buttering in interrogated by both beam angles, 45 and 60 degree as detailed below.



Examination Performed as Detailed Above.

No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

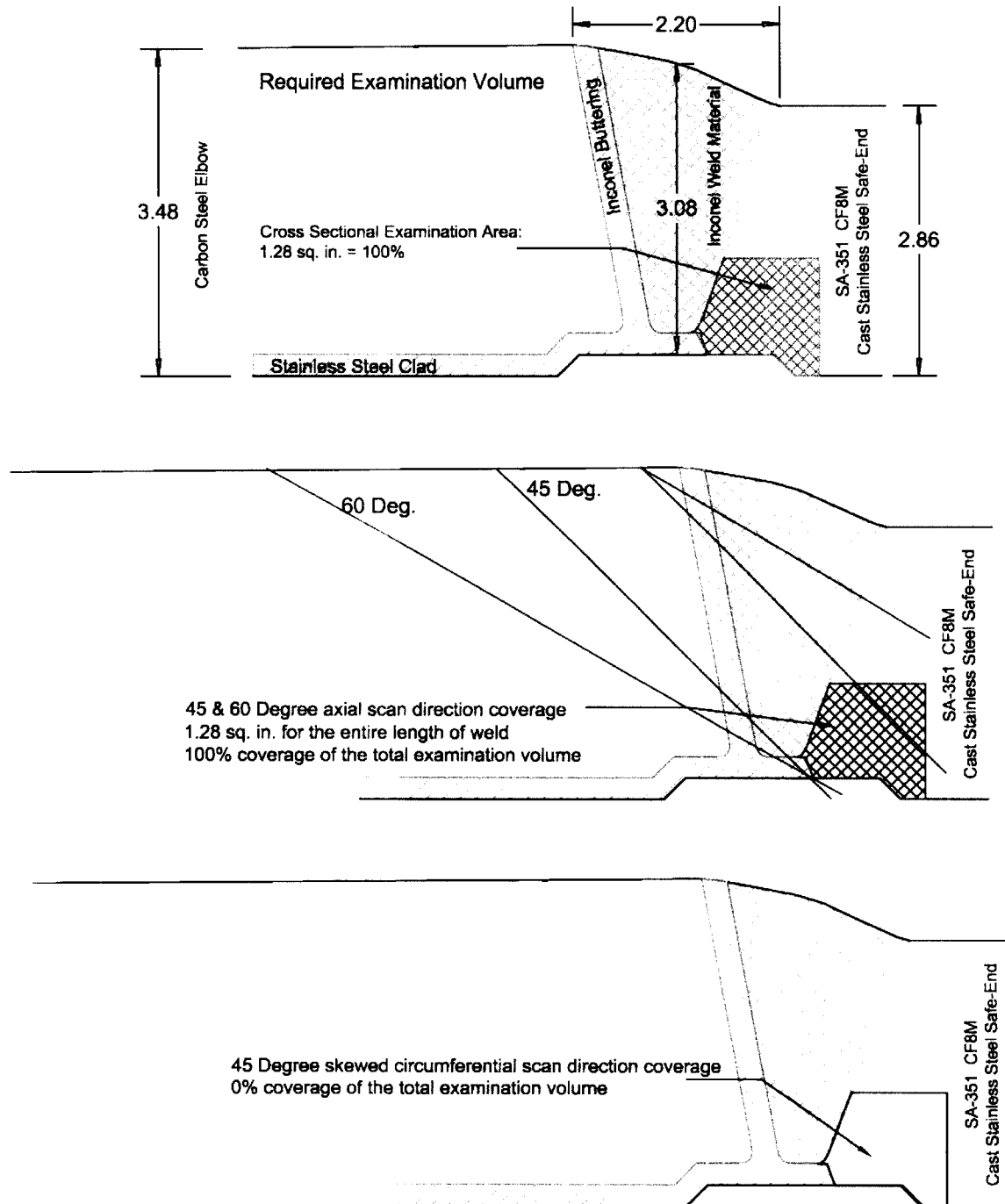
Figure 19



Weld# P-17-C-1

Risk Informed Examination Coverage of the Cast Stainless Steel (CSS) Base Material Examination Volume on the Far Side of the Weld as a "Best Effort" Examination in Accordance with ASME Section XI, Appendix III

Composite (Axial & Circumferential Directions) of the CSS Examination Volume Coverage = 50%  
Examination Performed Using ASME Section XI, Appendix VIII Qualified Procedure for the Dissimilar Metal Welds.  
The Examination Techniques Used Meet or Exceed the Appendix III Examination Requirements.



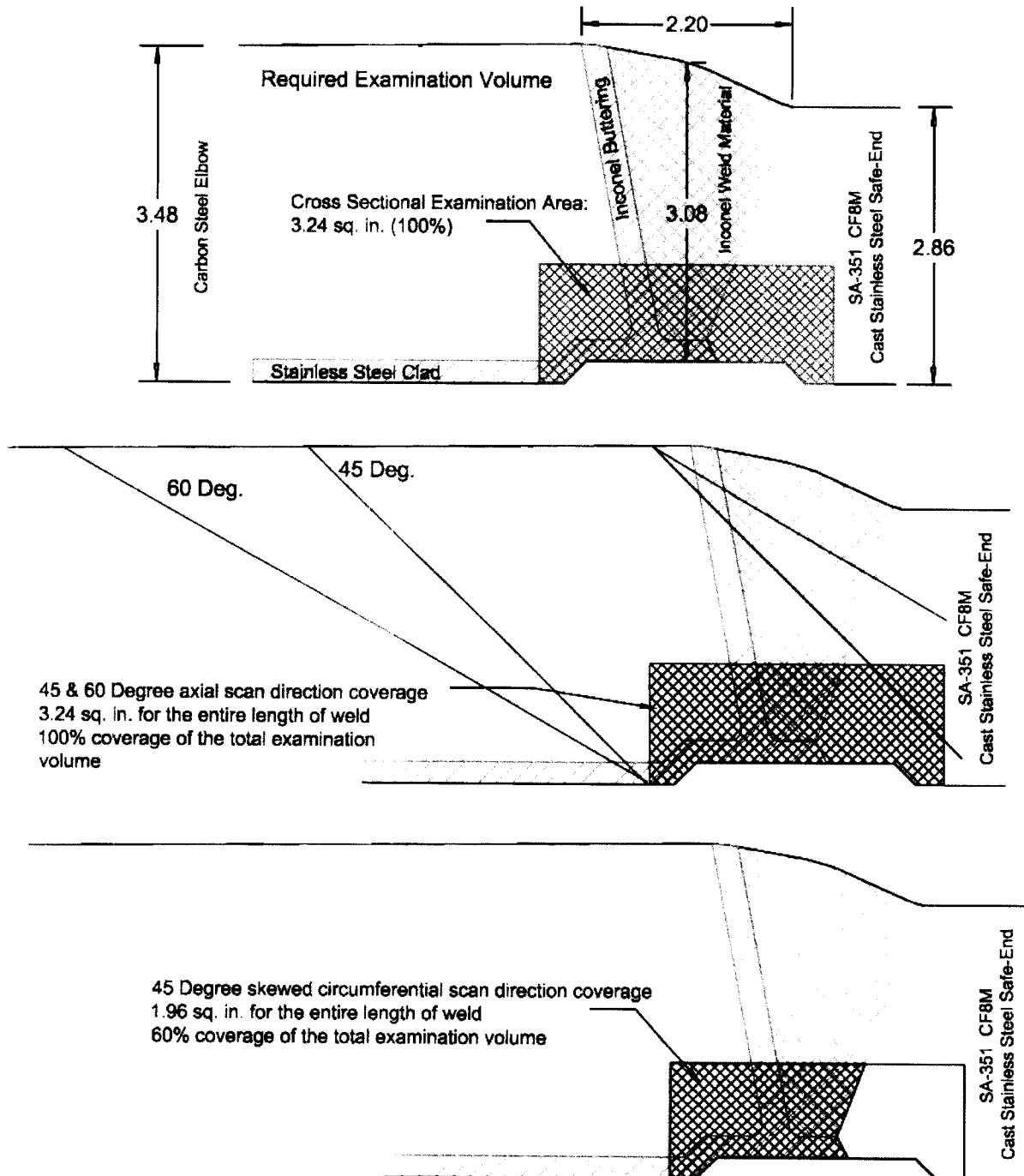
Examination Performed as Detailed Above.

No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 20

Weld# P-17-C-1  
Total Risk Informed (RI) Examination Volume Coverage

Examination Volume Coverage  
Axial Scan Direction = 100%, Circumferential Scan Direction Coverage = 60%  
Composite Axial and Circumferential Examination Coverage = 80%



Examination Performed as Detailed Above.  
No examination performed from the safe-end side of the weld due to lack of scan surface due to configuration.

Figure 21

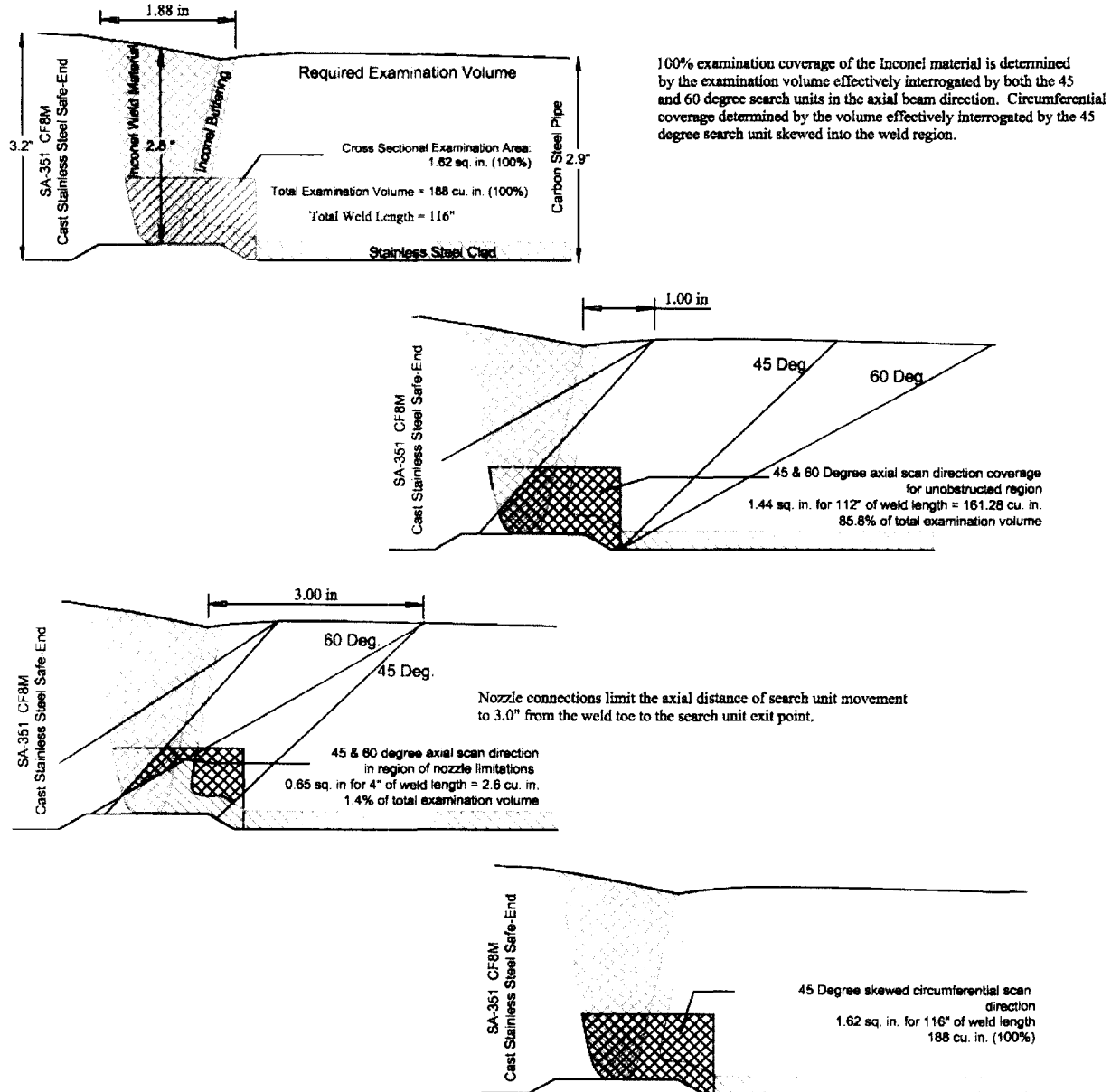
Weld# P-18-C-3

Appendix VIII Qualified Procedure/Material Examination Coverage Calculations  
(Inconel Weld Metal & Inconel Buttering and Carbon Steel Base Material)

Examination Volume Coverage

Axial Scan Direction = 87.2%, Circumferential Scan Direction Coverage = 100%  
Composite Axial and Circumferential Examination Coverage = 93.6%

The entire Alloy 600 weld material (weld & buttering) is interrogated by at least one beam angle, 45 or 60 deg. as detailed below.



Axial Scan Limited for 4" of Weld Length Due to Instrumentation Nozzle on the Pipe Side of the Weld.  
The Instrumentation Nozzle is Located @ 10" CCW TO 14" CCW.

No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

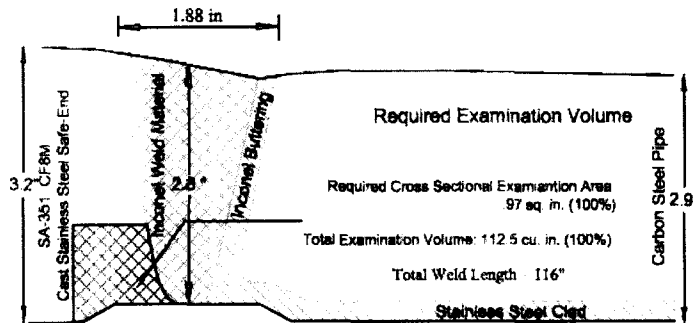
Examination Performed as Detailed Above

Figure 22

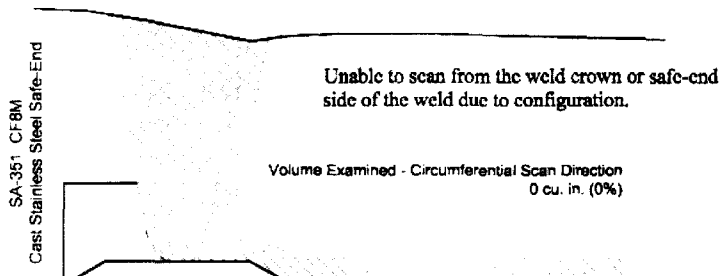
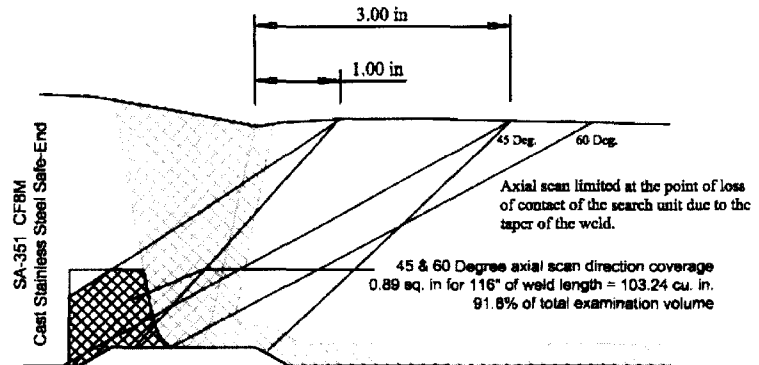
Weld# P-18-C-3

Risk Informed Examination Coverage of the Cast Stainless Steel (CSS) Base Material Examination Volume on the Far Side of the Weld as a "Best Effort" Examination in Accordance with ASME Section XI, Appendix III

Composite (Axial & Circumferential Directions) of the CSS Examination Volume Coverage = 45.9%  
Examination Performed Using ASME Section XI, Appendix VIII Qualified Procedure for the Dissimilar Metal Welds.  
The Examination Techniques Used Meet or Exceed the Appendix III Examination Requirements.



100% examination coverage determined by the examination volume effectively interrogated by either the 45 and 60 degree search unit in the axial beam direction. Circumferential coverage determined by the volume effectively interrogated by the 45 degree search unit.



Axial Scan Limited for 4" of Weld Length Due to Instrumentation Nozzle on the Pipe Side of the Weld.  
The Instrumentation Nozzle is Located @ 10" CCW TO 14" CCW. However, the axial scan limitation does not impact the best effort examination of the far side of the weld.

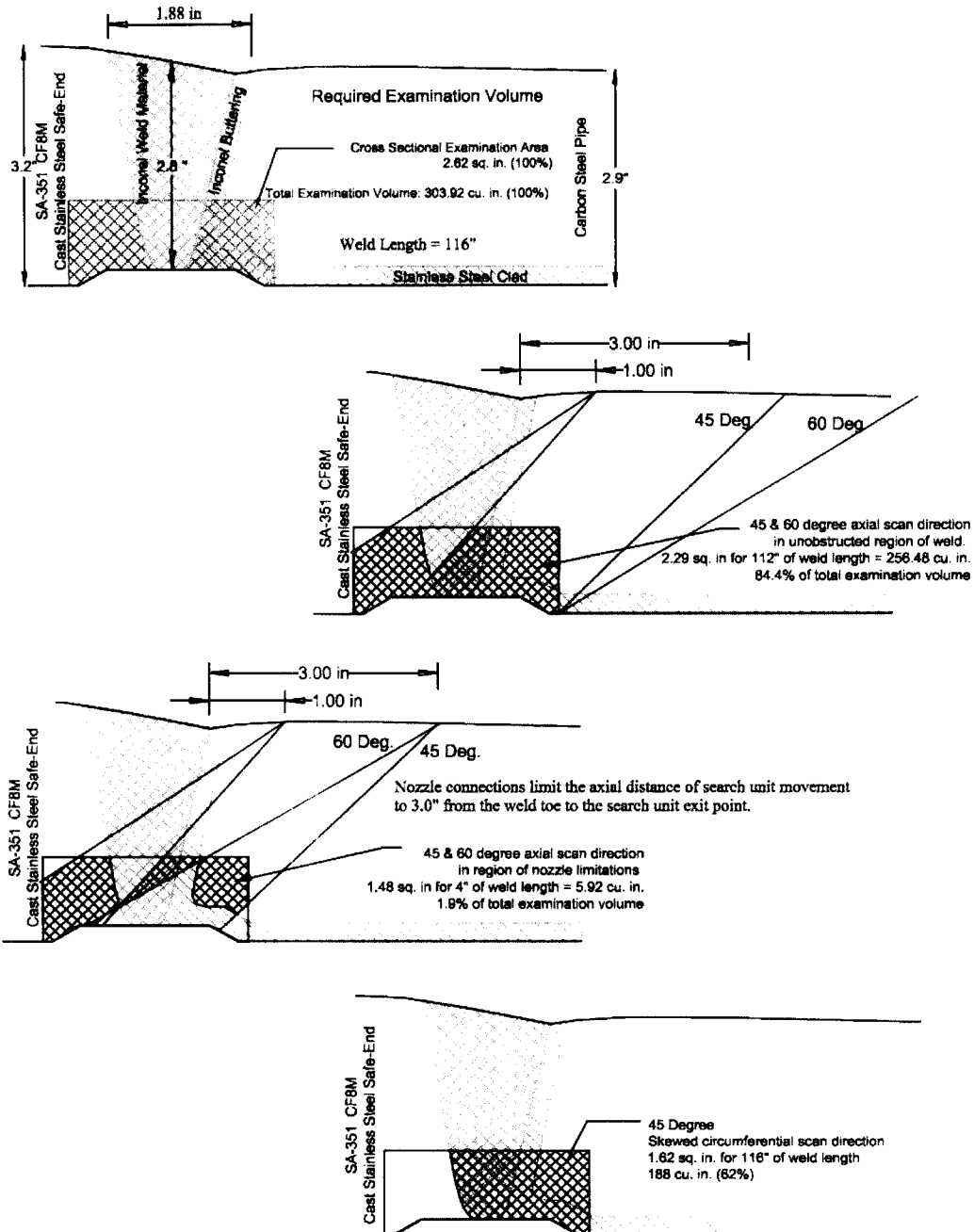
No Examination was Performed on the Upstream Side of the Weld (Safe-End) Due to the Lack of Scan Surface of the Safe-End Configuration.

Examination Performed as Detailed Above

Figure 23

Weld# P-18-C-3  
Total Risk Informed (RI) Examination Volume Coverage

Examination Volume Coverage  
Axial Scan Direction = 86.3%, Circumferential Scan Direction Coverage = 62%  
Composite Axial and Circumferential Examination Coverage = 74.5%



Axial Scan Limited for 4" of Weld Length Due to Instrumentation Nozzle on the Pipe Side  
of the Weld. The Instrumentation Nozzle is Located @ 10° CCW TO 14° CCW.

No Examination was Performed on the Upstream Side of the Weld (Safe-End)  
Due to the Lack of Scan Surface of the Safe-End Configuration.

Examination Performed as Detailed Above

Figure 24