

**Examination Program Plan  
For  
New York Power Authority  
Indian Point Unit No. 3  
1st Outage; 1st Period; 2nd Interval  
1987**

This document details the proposed planned scope of examination by Westinghouse Nuclear Services Integration Division - Inspection Services for Indian Point Unit No. 3, including items and areas selected for examination, examination and documentation procedure and sketches containing identification of all areas to be examined.

Qualification of examiners, materials and equipment will be available on site prior to the start of examinations.

Efforts should be made to provide access to all planned examinations, however, due to circumstances such as radiation, environment, accessibility, etc., some variations may occur. In the event of such occurrences, substitute areas may be selected.

This program and the procedure incorporated herein require approval of New York Power Authority and the Authorized Inspector prior to the start of examinations.

Prepared by: Westinghouse Electric Corporation

W Approval: Larry E. Mahle <sup>26 L.E.M.</sup> 05/14/87  
ISI Coordinator Date

New York Power Authority Approval: [Signature] 5/28/87  
Date

Title: NDE LEVEL III

Authorized Inspector Review: Robert L. [Signature] 5/28/87  
Date

Agency: HARTFORD STEAMBOILER INSPECTION CO.

8712160337 871207  
PDR ADOCK 05000286  
Q PDR

NEW YORK POWER AUTHORITY  
 INDIAN POINT UNIT NO. 3  
 1ST OUTAGE: 1ST PERIOD; 2ND INTERVAL  
 EXAMINATION PROGRAM PLAN  
 1987

All items listed below were examined, as indicated, in accordance with the requirements of the ASME Boiler and Pressure Vessel Code Section XI 1983 Edition up to and including Summer 1983 Addenda and Westinghouse NSID Position on NRC Regulatory Guide 1.150 Rev. 1 to the extent practical with the access available and the limitations of component geometry.

Program Item	IWB-2500-1 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
<u>REACTOR VESSEL</u>						
1.	B1.30	Vessel to Flange Weld 1 from Seal Surface - From 40° clockwise to 106.67°; 133.35° clockwise to 183.3° and 253.46° clockwise to 316.8°	154	--	--	1-1100
2.	B3.90	Loop 31 Outlet Nozzle to Vessel Weld 23	154	--	--	1-1100
3.	B3.90	Loop 32 Outlet Nozzle to Vessel Weld 22	154	--	--	1-1100
4.	B3.90	Loop 33 Outlet Nozzle to Vessel Weld 26	154	--	--	1-1100
5.	B3.90	Loop 34 Outlet Nozzle to Vessel Weld 27	154	--	--	1-1100
6.	B3.100	Loop 31 Outlet Nozzle Inside Radius Section - 23IR	154	--	--	1-1100
7.	B3.100	Loop 32 Outlet Nozzle Inside Radius Section - 22IR	154	--	--	1-1100
8.	B3.100	Loop 33 Outlet Nozzle Inside Radius Section - 26IR	154	--	--	1-1100
9.	B3.100	Loop 34 Outlet Nozzle Inside Radius Section - 27IR	154	--	--	1-1100
10.	B5.10	Loop 31 Outlet Nozzle to Safe End Butt Weld - IDM	154	--	--	1-4100

Program Item	IWB-2500-1 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
11.	B5.10	Loop 32 Outlet Nozzle to Safe End Butt Weld - 1DM	154	--	--	1-4200
12.	B5.10	Loop 33 Outlet Nozzle to Safe End Butt Weld - 1DM	154	--	--	1-4300
13.	B5.10	Loop 34 Outlet Nozzle to Safe End Butt Weld - 1DM	154	--	--	1-4400
14.	B6.40	Threads in Flange - around Stud Holes 21 thru 30; 35 thru 42; 53, 54 and 1 thru 7.	154	--	--	1-1100
<b><u>Circumferential Butt Welds</u></b>						
15.	B9.11	Loop 31 Reactor Coolant Pipe - 2	154	--	--	1-4100
16.	B9.11	Loop 32 Reactor Coolant Pipe - 2	154	--	--	1-4200
17.	B9.11	Loop 33 Reactor Coolant Pipe - 2	154	--	--	1-4300
18.	B9.11	Loop 34 Reactor Coolant Pipe - 2	154	--	--	1-4400

12

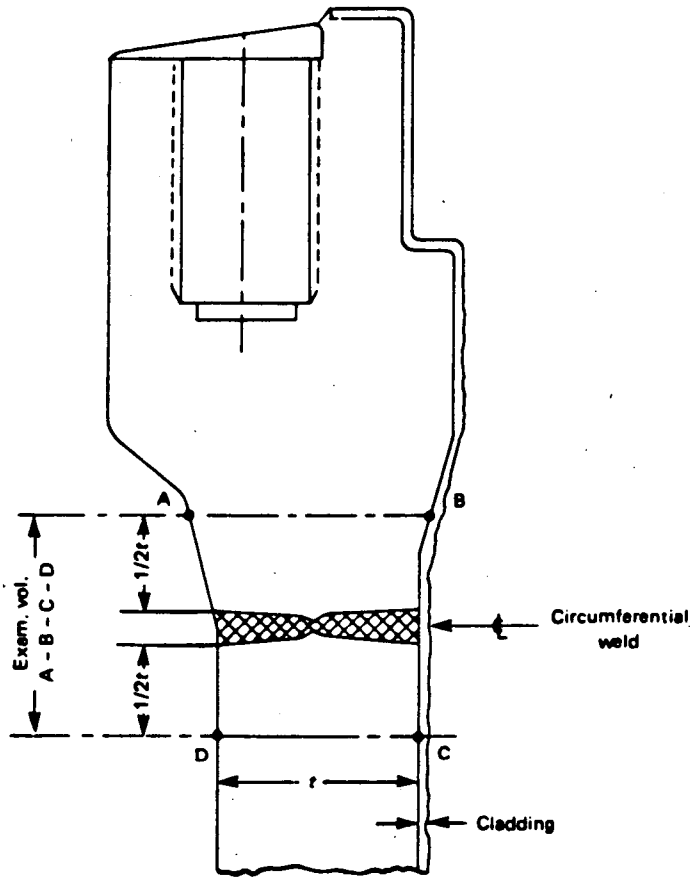


FIG. IWB-2500-4 SHELL-TO-FLANGE WELD JOINT

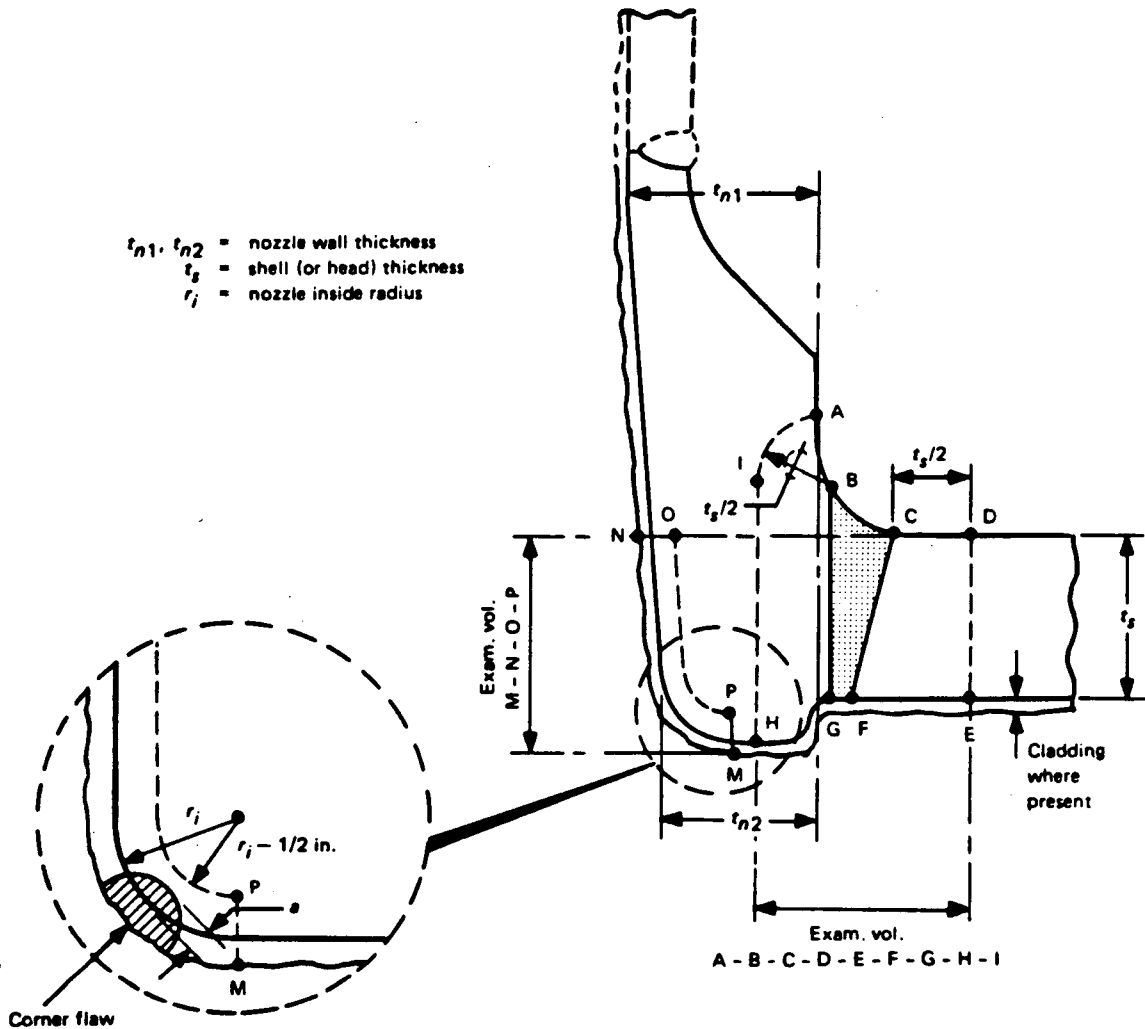
FORM 484

13

WESTINGHOUSE ELECTRIC CORPORATION

Reference: Section XI 1983 Edition Page 75

$t_{n1}, t_{n2}$  = nozzle wall thickness  
 $t_s$  = shell (or head) thickness  
 $r_i$  = nozzle inside radius



**EXAMINATION REGION [Note (1)]**

- Shell (or head) adjoining region
- Attachment weld region
- Nozzle cylinder region
- Nozzle inside corner region

**EXAMINATION VOLUME [Note (2)]**

- C-D-E-F
- B-C-F-G
- A-B-G-H-I
- M-N-O-P

**NOTES:**

- (1) Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
- (2) Examination volumes may be determined either by direct measurements on the component or by measurements based on design drawings.

**FIG. IWB-2500-7(a) NOZZLE IN SHELL OR HEAD**  
 (Examination Zones in Barrel Type Nozzles Joined by Full Penetration Corner Welds)

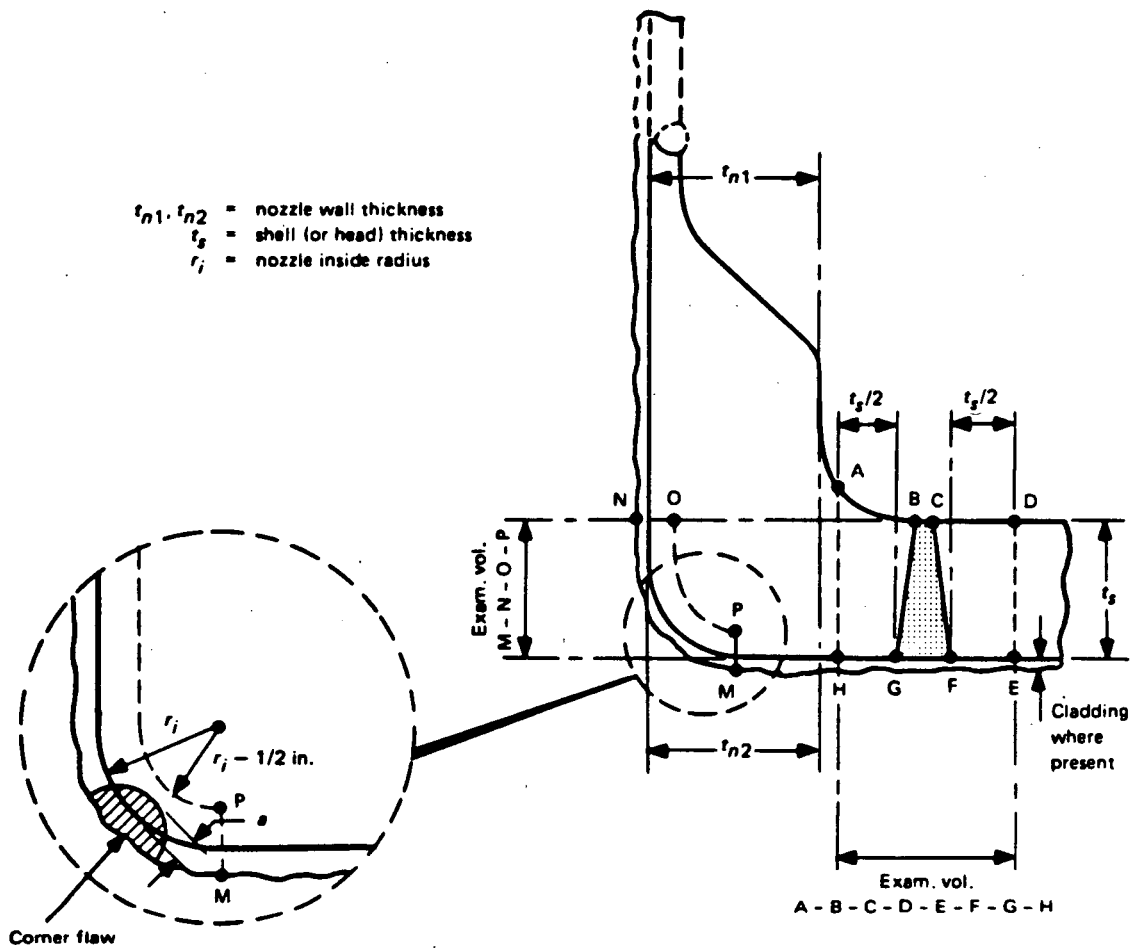
FORM 484

14

WESTINGHOUSE ELECTRIC CORPORATION

Reference: Section XI 1983 Edition Page 76

FORM 48



**EXAMINATION REGION [Note (1)]**

- Shell (or head) adjoining region
- Attachment weld region
- Nozzle cylinder region
- Nozzle inside corner region

**EXAMINATION VOLUME [Note (2)]**

- C-D-E-F
- B-C-F-G
- A-B-G-H
- M-N-O-P

**NOTES:**

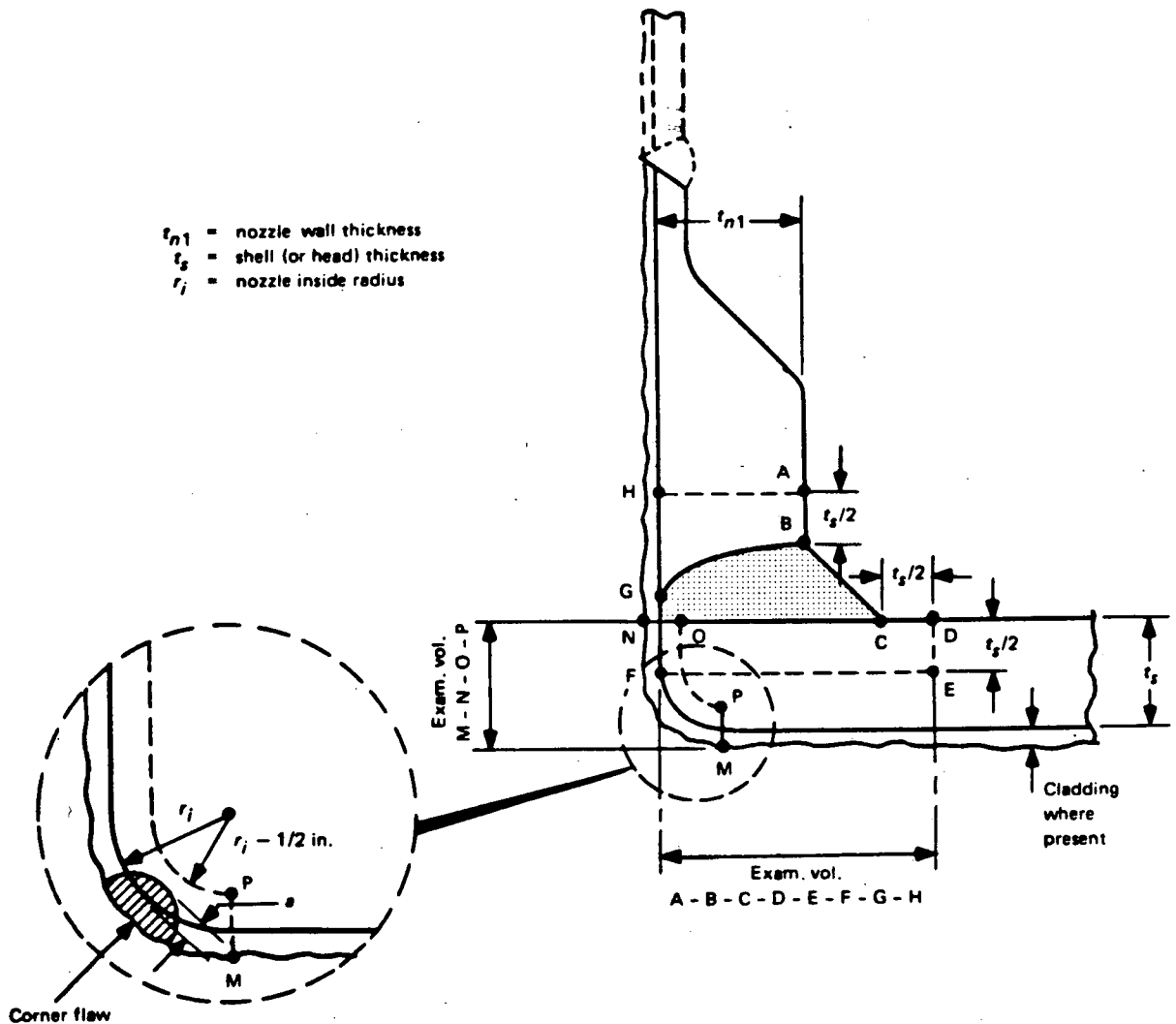
- (1) Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
- (2) Examination volumes may be determined either by direct measurements on the component or by measurements based on design drawings.

FIG. IWB-2500-7(b) NOZZLE IN SHELL OR HEAD  
 (Examination Zones in Flange Type Nozzles Joined by Full Penetration Butt Welds)

# WESTINGHOUSE ELECTRIC CORPORATION

Reference: Section XI 1983 Edition Page 77

FORM 487



**EXAMINATION REGION (Note (1))**

- Shell (or head) adjoining region
- Attachment weld region
- Nozzle cylinder region
- Nozzle inside corner region

**EXAMINATION VOLUME (Note (2))**

- C-D-E-F-G
- B-C-G
- A-B-G-H
- M-N-O-P

**NOTES:**

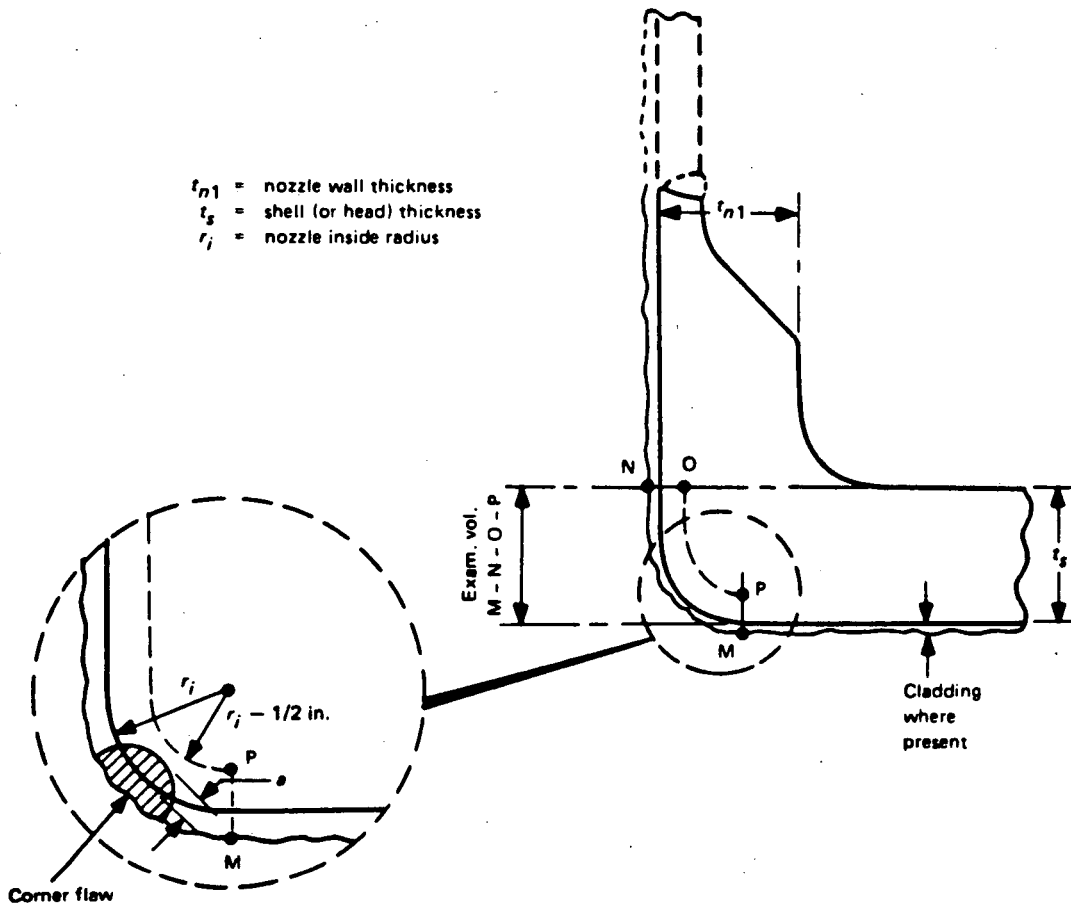
- (1) Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
- (2) Examination volumes may be determined either by direct measurements on the component or by measurements based on design drawings.

**FIG. IWB-2500-7(c) NOZZLE IN SHELL OR HEAD**  
 (Examination Zones in Set-On Type Nozzles Joined by Full Penetration Corner Welds)

WESTINGHOUSE ELECTRIC CORPORATION

Reference: Section XI 1983 Edition Page 78

$t_{n1}$  = nozzle wall thickness  
 $t_s$  = shell (or head) thickness  
 $r_i$  = nozzle inside radius



EXAMINATION REGION [Note (1)]  
 Nozzle inside corner region

EXAMINATION VOLUME [Note (2)]  
 M-N-O-P

NOTES:

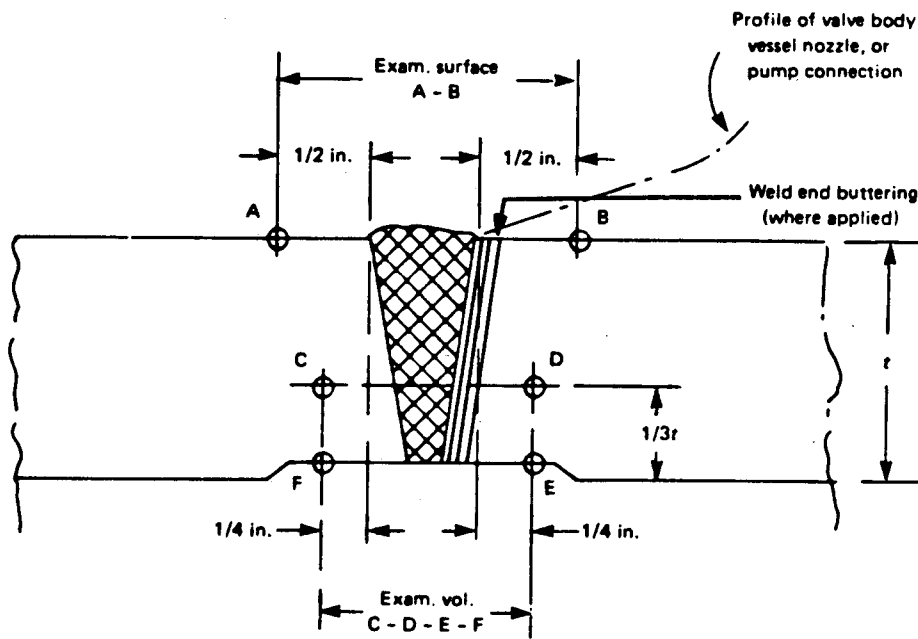
- (1) Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
- (2) Examination volumes may be determined either by direct measurements on the component or by measurements based on design drawings.

FIG. IWB-2500-7(d) NOZZLE IN SHELL OR HEAD  
 (Examination Zone in Nozzles Integrally Cast or Formed in Shell or Head)



WESTINGHOUSE ELECTRIC CORPORATION

Reference: Section XI 1983 Edition Page 80

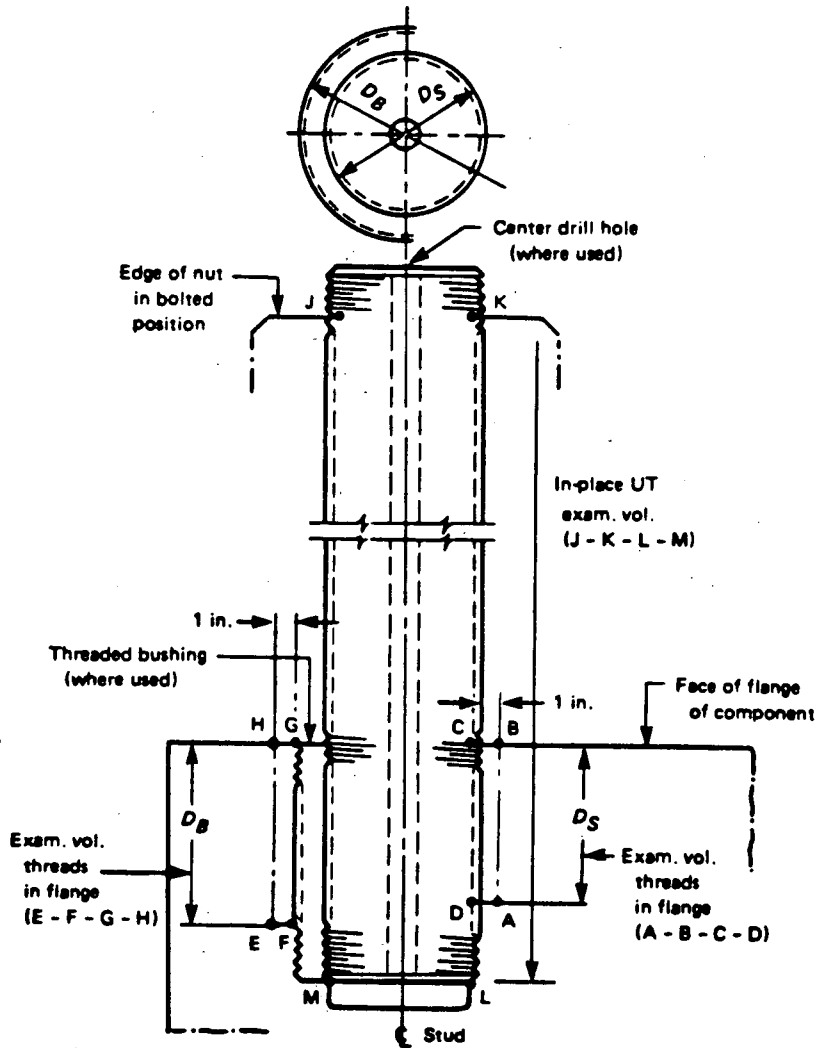


(c) NPS > 4 in.

FIG. IWB-2500-8 SIMILAR AND DISSIMILAR METAL WELDS IN COMPONENTS AND PIPING (CONT'D)

WESTINGHOUSE ELECTRIC CORPORATION

Reference: Section XI 1983 Edition Page 84



$D_B$  = diameter of the threaded bushing  
 $D_S$  = diameter of the stud

FIG. IWB-2500-12 CLOSURE STUD AND THREADS IN FLANGE STUD HOLE

FORM

19