

Jefferson Lab Alignment Group

DATA TRANSMITTAL

TO: Tim Whitlatch, Brian Carpenter

DATE: Aug 7, 2001

FROM: Jim Dahlberg

Checked: # : DT_690

DETAILS:

Below are the results from the SNS vacuum vessel inspection performed on Aug 3rd, 2001. The Z axis of the coordinate system is centered on the upstream and downstream 35" \varnothing flanges #1 and #4 (located near the supports). Roll was set by aligning the 20" \varnothing side flanges # 2 and # 6 on the beam right side to an average vertical plane. A positive X is to the beam left. The flanges labeled 1 are toward the upstream end of the vessel and the labels increase in the direction of downstream. All measurements are in millimeters.

HORIZONTAL MEASUREMENTS

LOCATION	X	LOCATION	X
Side flange 1 top	-482.05	Top flange 1 upst beam right side	59.91
bottom	-481.71	dnst beam right side	59.30
upst	-480.41	Top flange 2 upst beam right side	59.87
dnst	-482.21	dnst beam right side	59.07
Side flange 2 top	-482.11	Top flange 3 upst beam right side	56.30
bottom	-483.03	dnst beam right side	56.31
upst	-481.55	Top flange 4 upst beam right side	54.55
dnst	-482.46	dnst beam right side	54.01
Side flange 3 top	-483.25	Top flange 5 upst beam right side	54.65
bottom	-482.51	dnst beam right side	54.51
upst	-482.13	Top flange 6 upst beam right side	58.95
dnst	-482.29	dnst beam right side	59.33
Side flange 4 top	-483.37	Inside guide rail 0' (upst end)	145.18
bottom	-482.53	1'	145.18
upst	-482.47	2'	145.62
dnst	-482.20	3'	145.26
Side flange 5 top	-483.31	4'	145.90
bottom	-482.03	5'	145.80
upst	-481.75	6'	145.60
dnst	-482.31	7'	146.50
Side flange 6 top	-482.43	8'	146.62
bottom	-481.70	9'	146.96
upst	-482.15	10'	145.96
dnst	-481.83	11'	145.82
Side flange 7 top	-482.13	12'	145.20
bottom	-481.15	13'	145.50
upst	-481.63	14'	145.26
dnst	-481.07	15'	146.60
35" \varnothing center flange 1	0.00	16'	146.40
2	-1.04	17'	146.82
3	-1.82	18'	147.18
4	0.00	19'	146.85
		20'	146.68
		21'	147.73
		22' (dnst end)	150.16

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DATA TRANSMITTAL

DT # 690 (continued)

DETAILS:

The 35" Ø flanges #1 and #4 were leveled to a horizontal plane to establish the Z-axis and roll was set as stated above. All measurements are relative to the center of these two flanges. A positive value is above centerline.

VERTICAL MEASUREMENTS

LOCATION	Y	LOCATION	Y
Side flange 1	1.17	Inside guide rail 0' (upst end)	-359.82
2	3.41	1'	-359.86
3	1.55	2'	-359.86
4	-2.65	3'	-360.40
5	-1.90	4'	-360.06
6	-2.28	5'	-360.16
7	-2.11	6'	-360.22
		7'	-359.06
35" Ø flange 1	0.00	8'	-359.82
2	1.38	9'	-359.38
3	1.20	10'	-360.06
4	0.00	11'	-360.72
		12'	-360.14
Elliptical upst end flange	-3.48	13'	-360.14
dnst end flange	-3.11	14'	-359.20
		15'	-358.72
Top flange 1 beam right	481.29	16'	-358.98
beam left	478.91	17'	-358.78
upst	480.29	18'	-359.63
dnst	479.99	19'	-360.24
Top flange 2 beam right	484.30	20'	-361.28
beam left	478.18	21'	-362.00
upst	481.46	22' (dnst end)	-362.32
dnst	481.24		
Top flange 3 beam right	482.59		
beam left	479.24		
upst	481.00		
dnst	480.97		
Top flange 4 beam right	483.43		
beam left	480.25		
upst	481.99		
dnst	481.57		
Top flange 5 beam right	481.49		
beam left	478.71		
upst	480.33		
dnst	480.09		
Top flange 6 beam right	482.00		
beam left	478.11		
upst	480.09		
dnst	480.05		