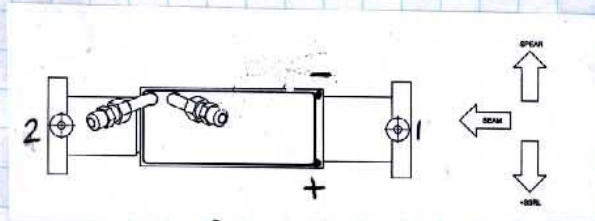


SSRL

2-19-08

BL 4-2 1ST PIVOT MASK

J.M., L.G.



LAB DATA

	X	Y	Z
1	+0.005	3.163	-7.437
2	+0.015	3.161	+3.501

Roll
u/s BODY

TOP	X	Y	Z
	+1.283 (L)+	+1.105	-5.170
BOT.	+1.278 (R)-	+1.115	-5.170

SSRL
BL4-2 1ST PIVOT MASK

3/08

Job Description:

Report Units: inches, radians

Job File: C:\Documents and Settings\levirt\My Documents\My Documents\SSRL 2008\BL4-2
Job Date: Wednesday, February 20, 2008 02:27:14 PM
Report Frame: PART

BL42USPM1	0.005	5.802	670.673	
BL42USPM2	0.015	5.800	681.611	
BL42USPML	1.283	3.744	672.940	
BL42USPMR	-1.283	3.754	672.940	
BL42USPMM	0.000	2.639	678.110	TRANSLATED

X Y Z

SSRL

4-2 1st Root MASK

1-31-08

J.M., L.G.

(X)

Buckin Top u/s + DIS Body

F UNK - 1.283

N - 1.283

u/s Body Bot

20.755 SIR

20.760

-1.005

F 21.320

N 21.284

F 23. -

N 22.857

F 20.755

N 20.755

LOST 22.038

T/B 1

21.033

1. -

22.033

22.038

+0.005 ✓

T/B 2

21.023

1. -

22.023

22.038

+0.015 ✓

(2)

u/s FACE - 7.890 From Aperture

7.502

7.890

-15.392 LOS

T/B 1

6.955

1. - Ft

7.955

15.392

-7.437 ✓

T/B 2

10.022

8.871 Ft

18.893

15.392

+3.501 ✓

1-08

2 y. ✓

SSRL
4-2 FIRST PIVOT MASK

1-30-08
LG, JM

(4)

	U/S FLG	D/S FLG	U/S OPEN
12.497 Ref BLADE	5.435		5.435
(+) .024 to Bot. APERTURE	1.680		.640
12.521	3.755	3.755	6.075
.196 1/2 APERT.	3.752	3.756	1. -
12.717	<u>+ .003</u>	<u>- .001</u>	5.075 SR
18.152 GUNZ			5.073
5.435 HI			<u>+ .002</u>

T/B 1

1.272
1. -
2.272
5.435
<u>+3.163</u>

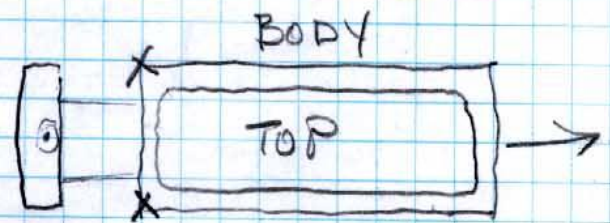
T/B 2

1.274
1. -
2.274
5.435
<u>+3.161</u>

U/S BODY

(+) 4.330
5.435
<u>+1.105</u>

(-) 4.320
5.435
<u>+1.115</u>



1-08
2H ✓

SSK2
4-2 FIRST PIVOT MASK

1-30-08
LG, JMM

Y Top aperture

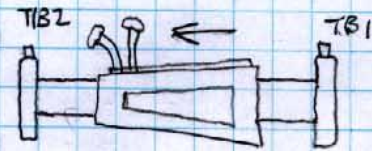
12.951 = ~~Ø~~ Top of Aperture

12.559 = ~~Ø~~ Bot

.392 GAP ✓

$$\begin{array}{r} 12.951 \\ 12.559 \\ \hline 25.510 \end{array} \div 2 = 12.755 \text{ f} \checkmark$$

$$\begin{array}{r} 18.215 \\ 12.755 \\ \hline 5.460 \text{ HI} \end{array} \checkmark$$



width = 2.565 = 1.283

u/s Øs = Flg Dia = 3.360 ÷ 2 = 1.680

u/s traw tub = 1.775 ÷ 2 = .946
Øs 1.265 = .663

opening 1.280 ÷ 2 = .640

u/s Flg	u/s traw tub	Øs traw tub	Øs Flg	u/s opening
3.746	4.544	4.837	3.791	5.067
1.680	.946	.663	1.680	1. —
<u>5.426</u>	<u>5.490</u>	<u>5.500</u>	<u>5.471</u>	<u>6.067</u>
5.460	5.460	5.460	5.460	5.460
+ .034	-.030	-.040	-.011	.607

+ u/s edge of Body u/s -
4.330 4.320

5.460	
.640	
<u>6.100</u>	
5.087	5.097
1. —	1. —
<u>6.087</u>	<u>6.097</u>
5.074	
1. —	
<u>6.076</u>	
+ .024	

1-08
28 ✓

Alignment:

04-2 Pivot Mask, upstream

Alignment crew: _____, _____, _____

Dimensions in { } are absolute dimensions.

Reference point (P) / edge (E) / axis (A) / surface (S):

x:	{0.000"}	center of aperture of the pivot mask body
y:	see. comment	center of aperture of the pivot mask body
z:	{678.110"}	aperture of the pivot mask body
roll:	{0.000}	aperture bottom edge
pitch:	{0.000}	upstream and downstream flange center
yaw:	{0.000 rad}	side wall of the mask body

Items to fiducialize:

Entrance aperture of pivot mask body, SSRL side edge and bottom edge:

x(ssrl):	measured: _____
y(bottom):	measured: _____
z:	measured: _____
x(ct):	measured: _____
y(ct):	measured: _____
z(us):	measured: _____

04-2 Pivot Mask, downstream

Alignment crew: _____, _____, _____

Dimensions in { } are absolute dimensions.

Reference point (P) / edge (E) / axis (A) / surface (S):

x:	{0.000"}	center of aperture of the pivot mask body
y:	see. comment	center of aperture of the pivot mask body
z:	{844.488"}	aperture of the pivot mask body
roll:	{0.000}	aperture bottom edge
pitch:	{0.000}	upstream and downstream flange center
yaw:	{0.000 rad}	side wall of the mask body

Items to fiducialize:

Entrance aperture of pivot mask body, SSRL side edge and bottom edge:

x(ssrl):	measured:	_____
y(bottom):	measured:	_____
z:	measured:	_____
x(ct):	measured:	_____
y(ct):	measured:	_____
z(us):	measured:	_____

04-2 Pivot Mask, combined

Alignment crew: _____, _____, _____

Dimensions in { } are absolute dimensions.

Reference point (P) / edge (E) / axis (A) / surface (S):

x:	{0.000"}	center of aperture of downstream pivot mask body
y:	see. comment	center of aperture of downstream pivot mask body
z:	{844.488"}	aperture of downstream pivot mask body
roll:	{0.000}	aperture bottom edge
pitch:	{0.000}	upstream and downstream flange center
yaw:	{0.000 rad}	side wall of the mask body

Items to fiducialize:

Location of the Mask1 aperture and the Mask 2 Entrance due to sagging of the beampipe

x AP (mask 1):	measured:	_____
y AP (mask 1):	measured:	_____
x ENT (mask 2):	measured:	_____
y ENT (mask 2):	measured:	_____
beam pipe max deflection:	measured:	_____

Tolerance at installation:

Alignment crew: _____, _____, _____

Comment:

To align the Pivot Mask: the Breakout as well as the Girder (and preferably the Vert Slit Tank) alignment need to be complete. Next the downstream pivot support will be aligned to be on the same center line as the girder. The girder is then moved (by motor control or by hand) to align the y-locations of the upstream and the downstream pivot points +2.639".

[+67.031mm]. The final alignment of the mask will take place in this orientation. To finish this step the girder will need to move into its extreme positions to verify the required motion.

x:	+/- 0.010"	measured:	_____
y:	+/- 0.005"	measured:	_____
z:	+/- 0.050"	measured:	_____
roll:	+/- 0.000 rad	measured:	_____
pitch:	+/- 0.001 rad	measured:	_____
yaw:	+/- 0.001 rad	measured:	_____