Baseplate Update

Van Graves
Tony Gabriel, Phil Spampinato
MERIT Videoconference
19 Jul 2005
Baseplate Status

- Two baseplates designed
  - Target Transporter (moves Hg System only)
  - Common Baseplate (supports Hg System & Magnet)

- Detailed design & fabrication drawings nearly complete
  - Final ORNL review next week
  - Procurement package to BNL August 1

- Need input from MIT/CERN *this week* if changes are needed
**Target Transporter Baseplate**

- Transports Hg system inside tunnel
- Rollers removed once in position
- Rails for Hg system cart wheels
- Will have mechanism to lock cart in place
Common Baseplate

- Same design as transporter baseplate, just longer
- Rollers used to grossly align solenoid to beam
- Provides lateral movement of solenoid for alignment to beam once rollers removed
Baseplate Mobility Issues

- Method needed to remove rollers from baseplates
  - Lift from end or underneath?
  - CERN/MIT or nTOF11 provide?
- How to interface to CERN "turtle"
- How accurately can baseplate be aligned to beam using rollers?
- Lift empty baseplate with side-mount swivel hoist rings
Installation Sequence Part 1 (Out-of-beam)
Installation Sequence Part 2 (In-beam)

- Common baseplate can go in beam line prior to Hg system install if beam attenuator is far enough away
- Magnet set on baseplate prior to Hg system installation
- Jacking system needed to remove rollers
- Blocks under leveling feet to provide adequate elevation
NOTES
1. MATERIAL CERTIFICATIONS REQUIRED
NOTES

1. MATERIAL CERTIFICATIONS REQUIRED
1. ALL WELDS SHALL BE DYE PENETRANT INSPECTED

2. MATERIAL CERTIFICATIONS REQUIRED

### MATERIAL CERTIFICATIONS REQUIRED

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
<th>LENGTH</th>
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<tbody>
<tr>
<td>11</td>
<td>6</td>
<td>PLATE, 4.00 x 6.00 x .50</td>
<td>AL-6061-T6511, ASTM B-221</td>
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### NOTES

1. WELDING & INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.2

2. ALL WELDS SHALL BE DYE PENETRANT INSPECTED

3. MATERIAL CERTIFICATIONS REQUIRED
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SCALE 2 : 15

DETAIL C
SCALE 2 : 15

DETAIL D
SCALE 2 : 15

DETIAL E
SCALE 2 : 15

CUT CHANNELS TO ACCEPT FLUSH MOUNTED GUSSETS

SECTION A-A
SCALE 1 : 5

SUPPORT PLATE FLUSH WITH CHANNELS 4 PLCS.

ALL DIMENSIONS ARE IN INCHES
INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
MACHINED FINISH 125 MICRO-INCHES RMS
CONCENTRICITY .010 TIR
MACHINED ANGLES 1/2 FORMED ANGLES 1
BREAK SHARP CORNERS AND REMOVE ALL BURRS
WHOLE NUMBERS AND FRACTIONS 1/16
X DECIMALS .030
XX DECIMALS .010
XXX DECIMALS .005
UNLESS OTHERWISE NOTED

REFERENCES
1. ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5M
2. INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M
3. MACHINED FINISH 125 MICRO-INCHES RMS
4. CONCENTRICITY .010 TIR
5. MACHINED ANGLES 1/2 FORMED ANGLES 1
6. BREAK SHARP CORNERS AND REMOVE ALL BURRS
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MATERIALS

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ITEM NO. | QTY. | DESCRIPTION | MATERIAL |
---|---|---|---|
7 | 8 | PLATE, 4.00 x 6.00 x .50 | AL - 6061 T651, ASTM B-221 |
6 | 4 | PLATE, 10.50 x 10.50 x .63 | AL - 6061 T651, ASTM B-220 |
5 | 8 | PLATE - 2.50 x 3.00 x .50 | AL - 6061 T6511, ASTM B-221 |
4 | 2 | AMER STD "C", 4.00 x 1.72 x .32 | AL - 6061 T6, ASTM B-308 |
3 | 1 | PLATE, 42.00 x 62.00 x .63 | AL - 6061 T651, ASTM B-209 |
2 | 4 | ANGLE - 3.00 x 3.50 x .50 | AL - 6061 T6511, ASTM B-221 |
1 | 2 | AMER STD "C", 4.00 x 1.72 x .32 | AL - 6061 T6, ASTM B-308 |

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UNLESS OTHERWISE NOTED

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NUFACT HG JET EXPERIMENT
TARGET TRANSPORTER ASSY
TRANSPORTER BASEPLATE WELDMENT

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BASE WELDMENT 47
203-HJ T-0200
SCALE 1:10
REV 2
DATE 06/20/2005

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