

## LCLS Laser Heater Chicane Dipole Magnet FIDUCIALIZATION REPORT

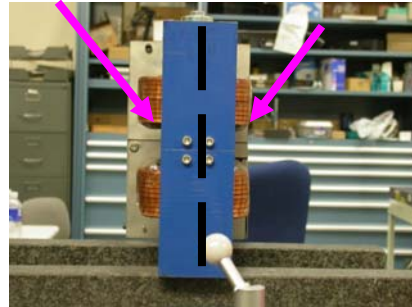


Inspector: Keith Caban  
Responsible Engineer: C. Rago  
Date: Tuesday, December 18, 2007  
Work Order/Charge No.: 96-8337-5  
Serial Number: LCLS - 002009 MAG SN – 42611-2  
URL of Fiducial Report: <\\Web002\www-group\met\Quality\FIDUCIAL REPORTS\LCLS Laser Heater Dipole Magnets\002009.pdf>

## Part Set-up – Coordinate System Set-up

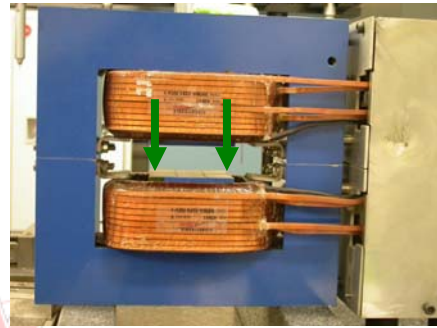
### Planar Alignment

- Mid-Plane of the magnet



### Spatial Alignment

- Plane along the bottom 2 planes.

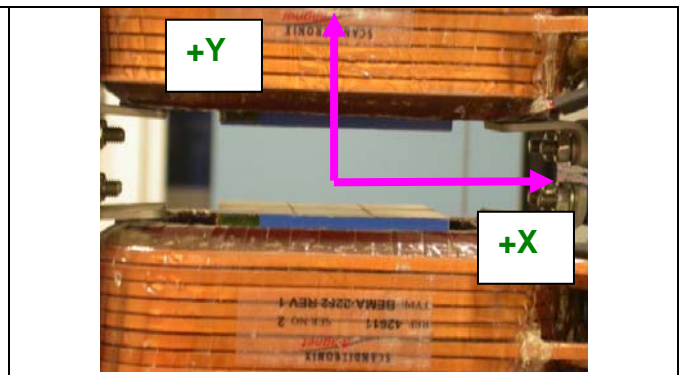
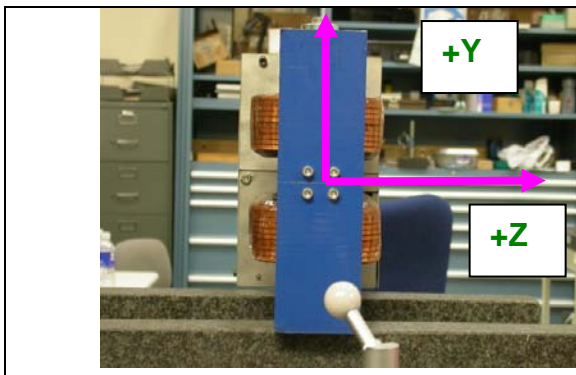


### “Z” Zero

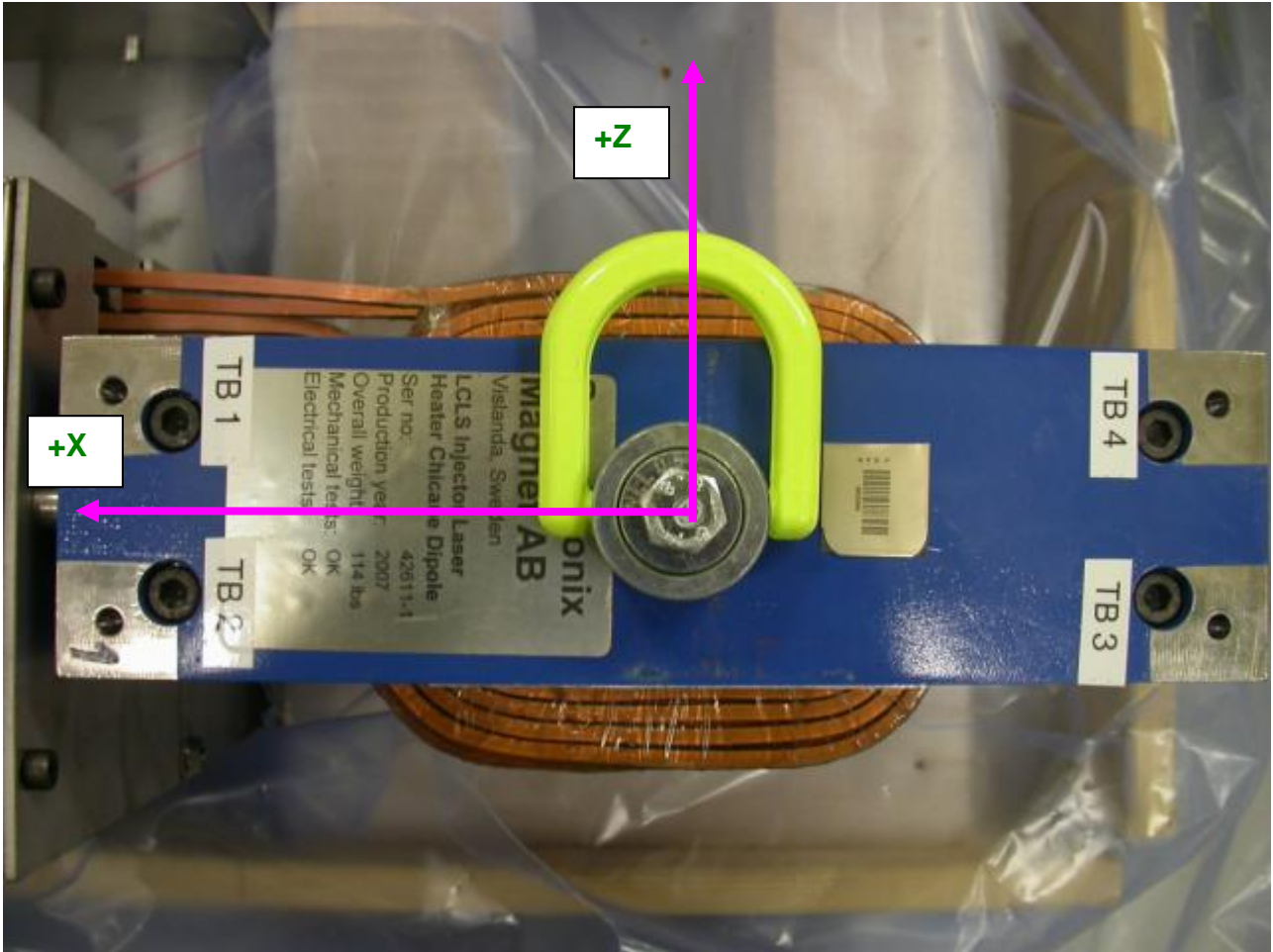
- Mid-Plane of the magnet. (see dashed planar alignment above)

### “X” & “Y” Zero

- X zero is created by the symmetry point of the inner stainless steel where coils lie.
  - Both ends of both sides, lower pole only.
    - Create lines which is y axis.
      - This Creates X- zero
- Symmetry of pole planes
  - This creates Y- zero



## Tooling Ball Measurements/Locations



Projected cylinder into 1" offset plane

Tooling Ball	FORM	DIAMETER	X	Y	Z	⊥
TB 1	0.00120	0.25109	5.19374	6.51232	1.07206	0.00166
TB 2	0.00088	0.25067	5.19674	6.51306	-1.05544	0.00093
TB 3	0.00114	0.25077	-5.19546	6.51388	-1.06213	0.00059
TB 4	0.00244	0.25193	-5.19697	6.51299	1.06379	0.00067

## Pole Gaps

GAP	GAP DIST	STEP	STEP DIST	LG GAP	LG DIST
14P	1.18040	P1	0.00734	P	1.19594
23P	1.18091	P2	0.00795	N	1.19579
14N	1.18034	N1	0.00706		
23P	1.18095	N2	0.00808		