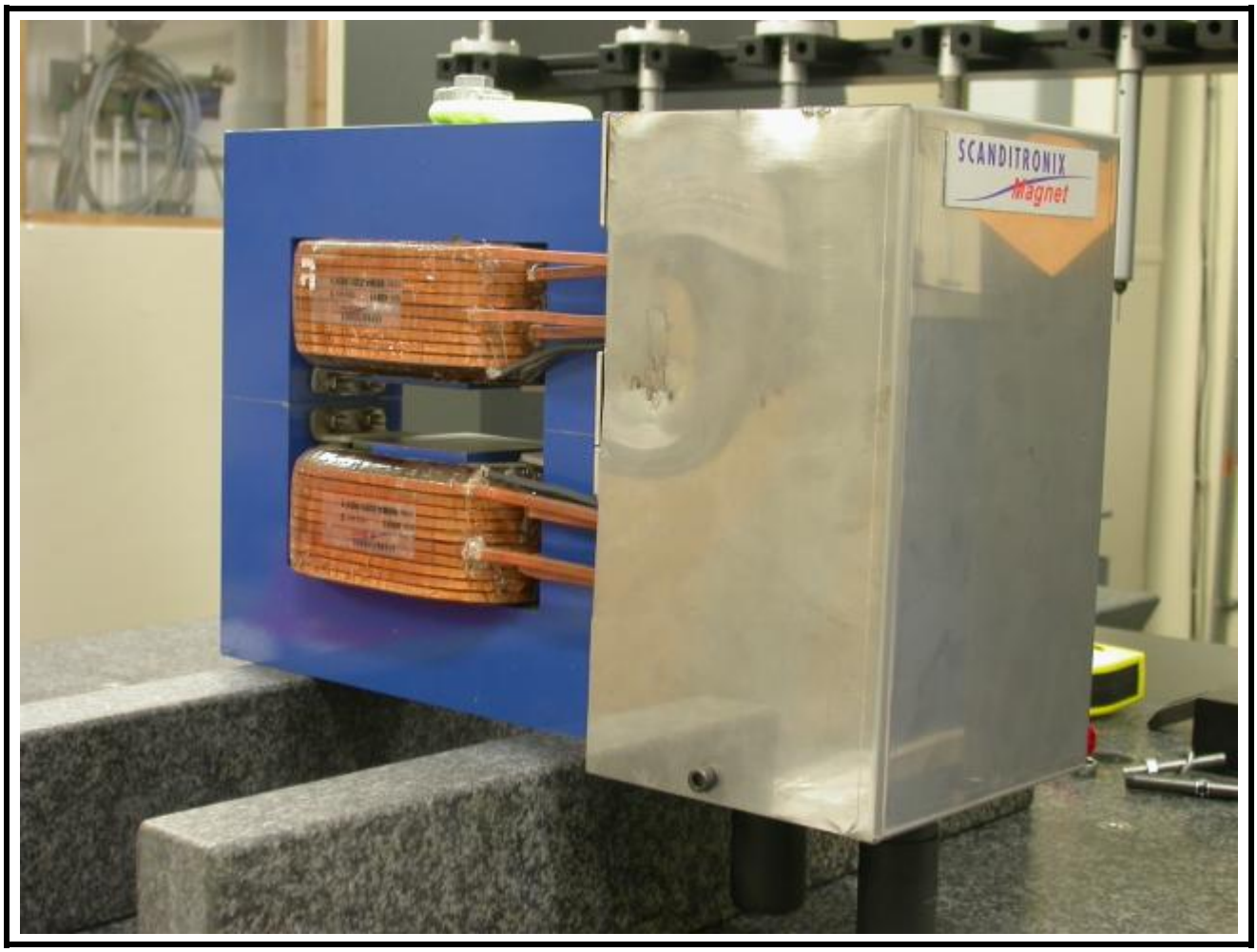
Linac Coherent Light Source

Stanford Linear Accelerator Center

Stanford Synchrotron Radiation Laboratory

LCLS Laser Heater Chicane Dipole Magnet
FIDUCIALIZATION REPORT

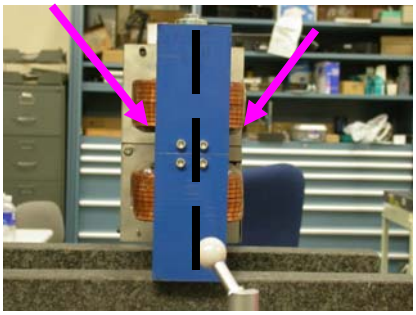


Inspector:	Keith Caban
Responsible Engineer:	C. Rago
Date:	Monday, December 17, 2007
Work Order/Charge No.:	96-8337-5
Serial Number:	LCLS - 002008 MAG SN – 42611-1
URL of Fiducial Report:	\\Web002\www-group\met\Quality\FIDUCIAL REPORTS\LCLS Laser Heater Dipole Magnets\002008.pdf

Part Set-up – Coordinate System Set-up
** Poles have been modified

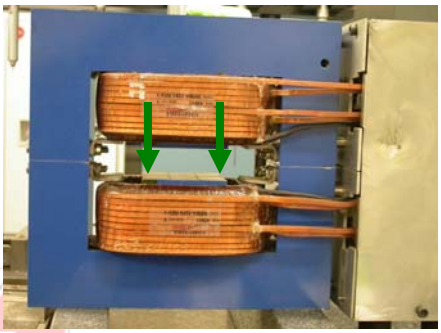
Planar Alignment

- Mid-Plane of the magnet



Spatial Alignment

- Plane along the bottom 2 planes.

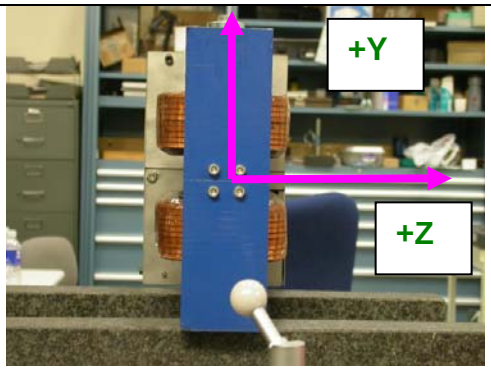


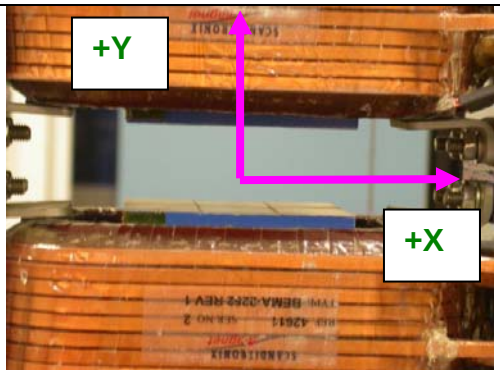
"Z" Zero

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

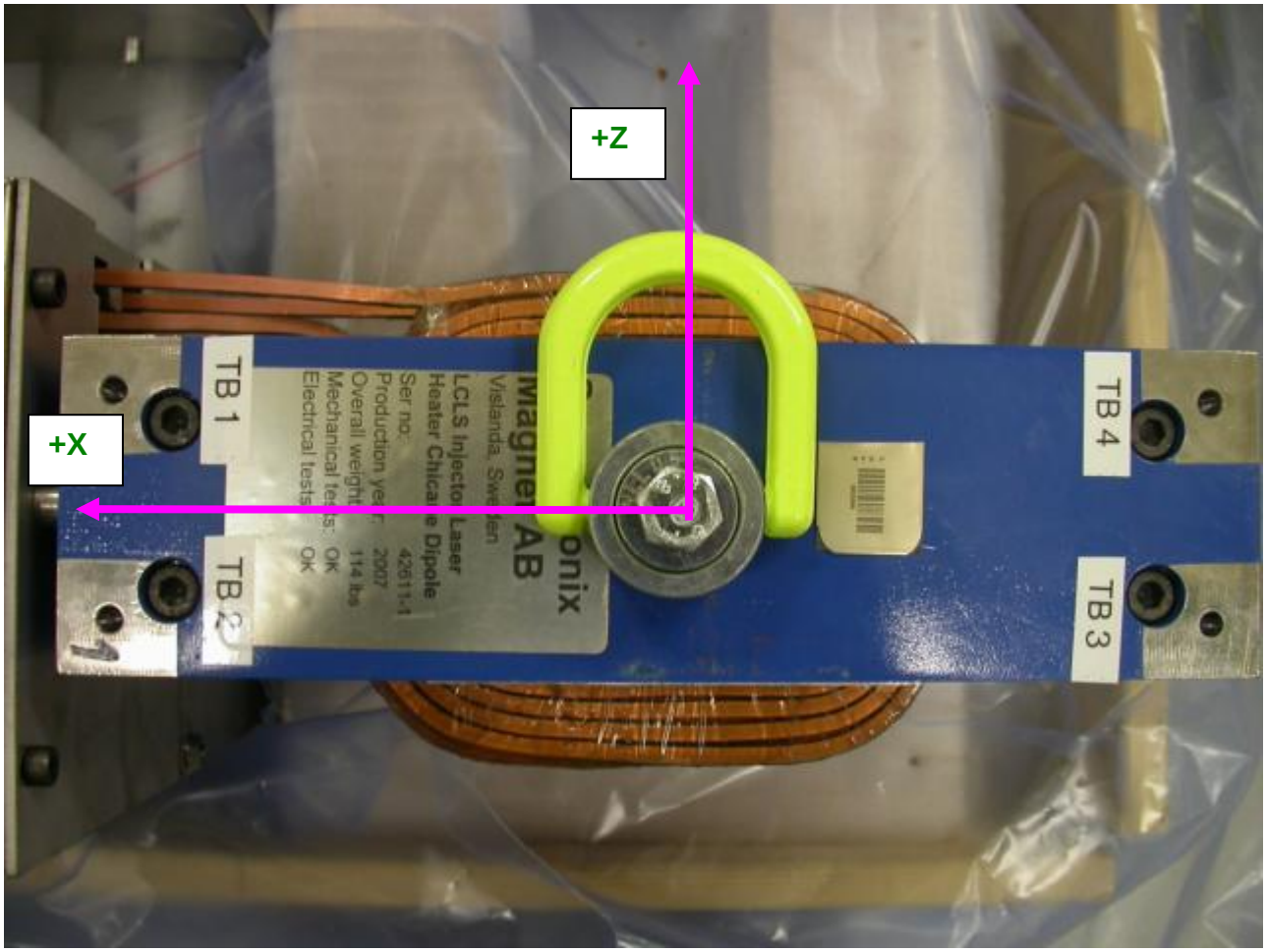
"X" & "Y" Zero

- X zero is created by the symmetry point of the inner stainless steel where coils lie.
    - Both ends of both sides.
        - 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	0.00173	0.25066	5.20207	6.50395	1.06838	0.00295
TB 2	0.00230	0.25052	5.20016	6.50654	-1.05206	0.00156
TB 3	0.00100	0.24998	-5.19613	6.50961	-1.05620	0.00089
TB 4	0.00082	0.25004	-5.19268	6.50711	1.07358	0.00181

Pole Gaps

GAP	GAP DIST	STEP	STEP DIST	LG GAP	LG DIST
14P	1.18091	P1	0.00943	P	1.19751
23P	1.18131	P2	0.00703	N	1.19782
14N	1.18090	N1	0.00942		
23P	1.18107	N2	0.00736		