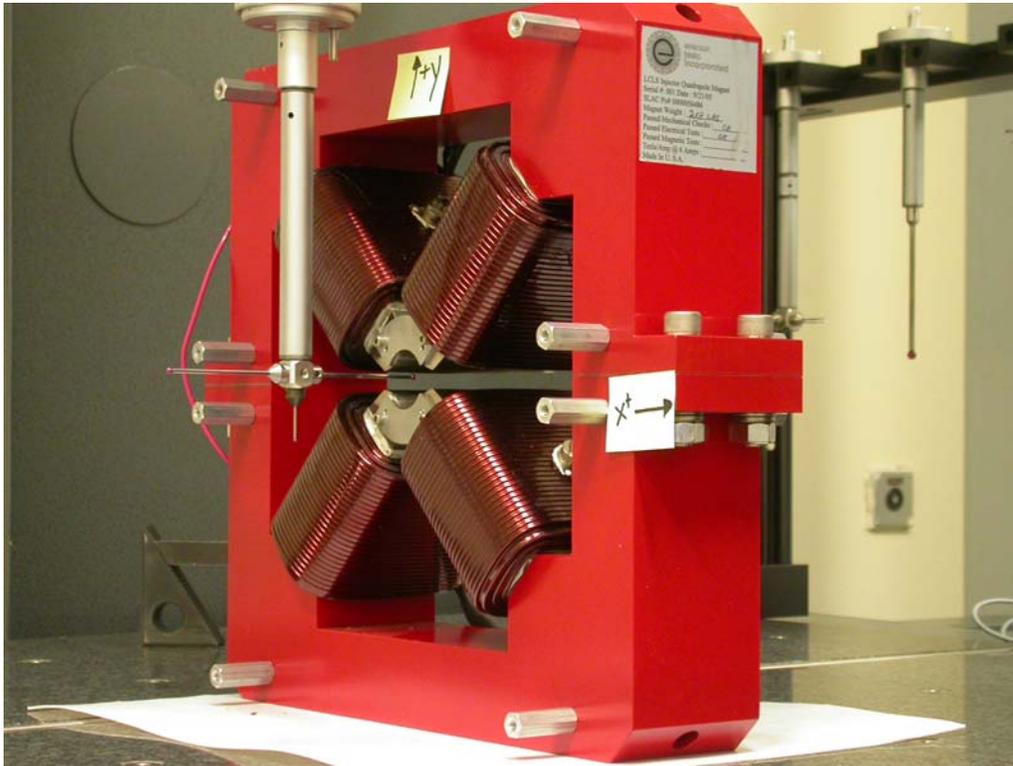


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector: Keith Caban
 Responsible Engineer: T. Borden
 Date: Thursday, January 11, 2007

Work Order/Charge No.: 92-4215-8

Serial Number: 002405

URL of Fiducial Report: <\\Web002\www-group\met\Quality\FIDUCIAL REPORTS\LCLS QUADS\LCLS QUAD 002405.pdf>

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

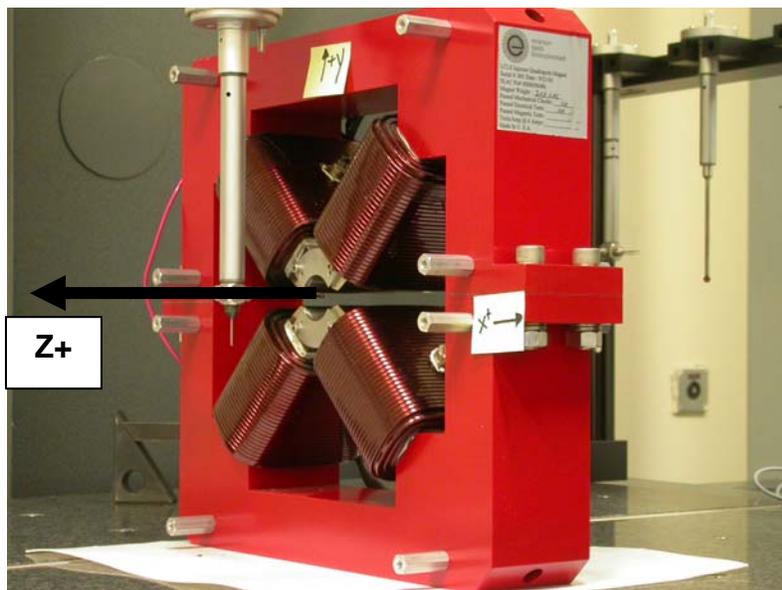
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

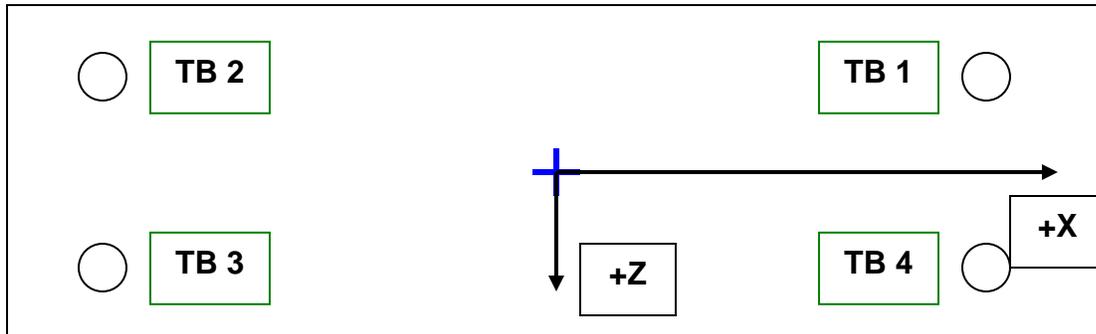
“X” & “Y” Zero

- On both ends
 - Tangent point of each radii (4 on each end, 8 total).
 - Create a line between diagonal tangent points creates 2 lines.
 - Intersect the lines.
 - Creates a point on each end.
- Create a line of these 2 end points
 - This is the “X” & “Y” Zero, and Beamline or “Z” Axis.



Tooling Ball Measurements/Locations

Top of magnet; view from "+Y"



Tooling Ball	FORM	DIAMETER	X	Y	Z
TB 1	0.00014	0.49975	6.50065	8.87655	-1.24994
TB 2	0.00007	0.49985	-6.49702	8.87653	-1.24922
TB 3	0.00010	0.49952	-6.49661	8.87634	1.25097
TB 4	0.00031	0.49939	6.50073	8.87583	1.25092

Additional Requested Measurements

Pole	Straightness	Parallelism
A	0.00031	0.00043
B	0.00029	0.00027
C	0.00039	0.00028
D	0.00032	0.00028

Pole Dist	Z+ Side	Z- Side
A-C	1.26012	1.25901
B-D	1.26047	1.25927

