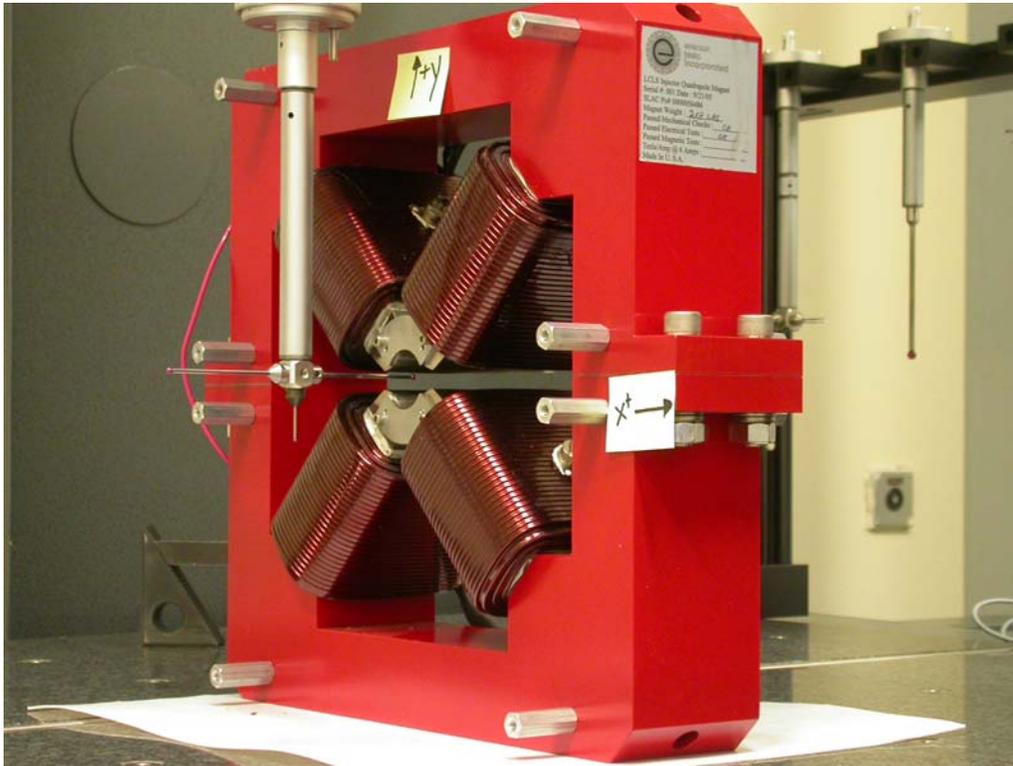


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



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

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

Serial Number: 002404

URL of Fiducial Report: <\\Web002\www-group\met\Quality\FIDUCIAL REPORTS\LCLS QUADS\LCLS QUAD 002404.pdf>

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

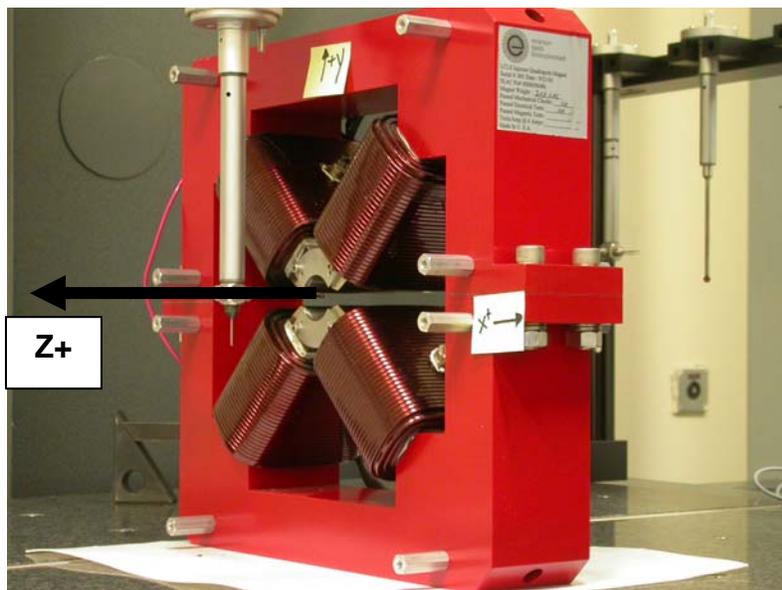
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

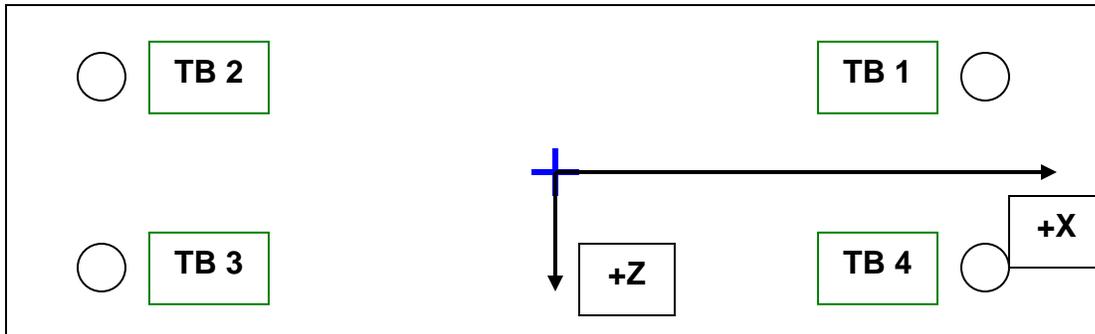
“X” & “Y” Zero

- 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	0.00114	0.49618	6.49823	8.87835	-1.24699
TB 2	0.00088	0.49584	-6.50008	8.87831	-1.24507
TB 3	0.00131	0.49669	-6.50048	8.87835	1.25483
TB 4	0.00029	0.49942	6.49904	8.87701	1.25125

Additional Requested Measurements

Pole	Straightness	Parallelism
A	0.00042	0.00040
B	0.00021	0.00064
C	0.00040	0.00033
D	0.00024	0.00022

Pole Dist	Z+ Side	Z- Side
A-C	1.25986	1.25919
B-D	1.25919	1.25970

