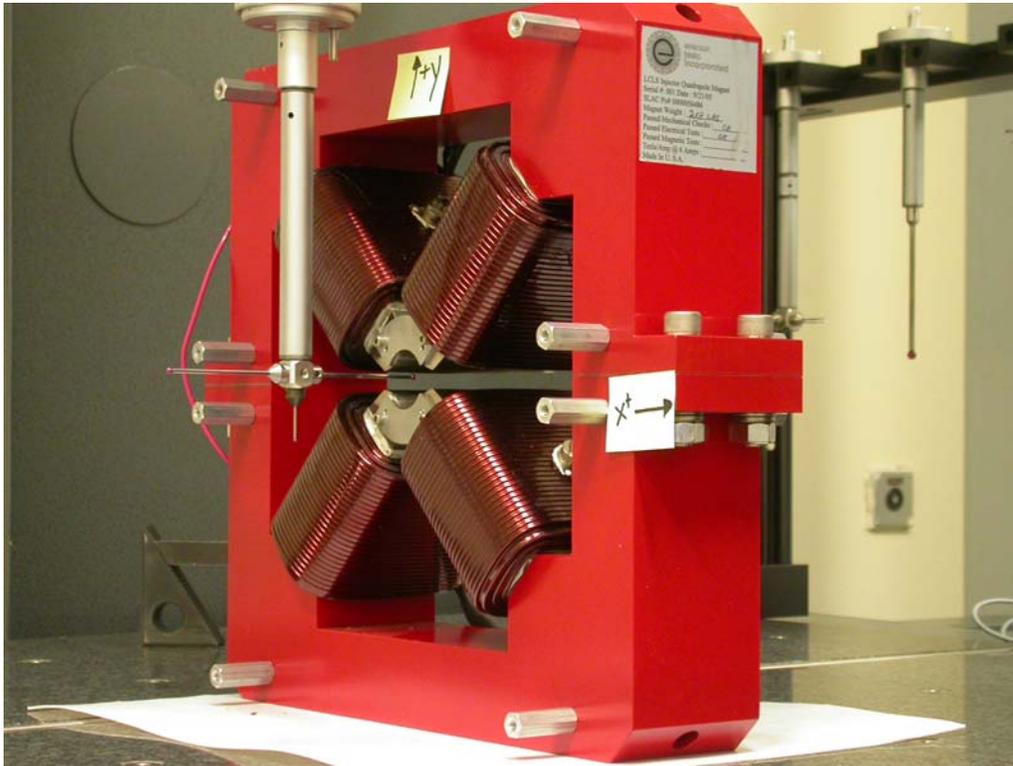


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



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

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

Serial Number: 002406

URL of Fiducial Report: <\\Web002\www-group\met\Quality\FIDUCIAL REPORTS\LCLS QUADS\LCLS QUAD 002406.pdf>

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

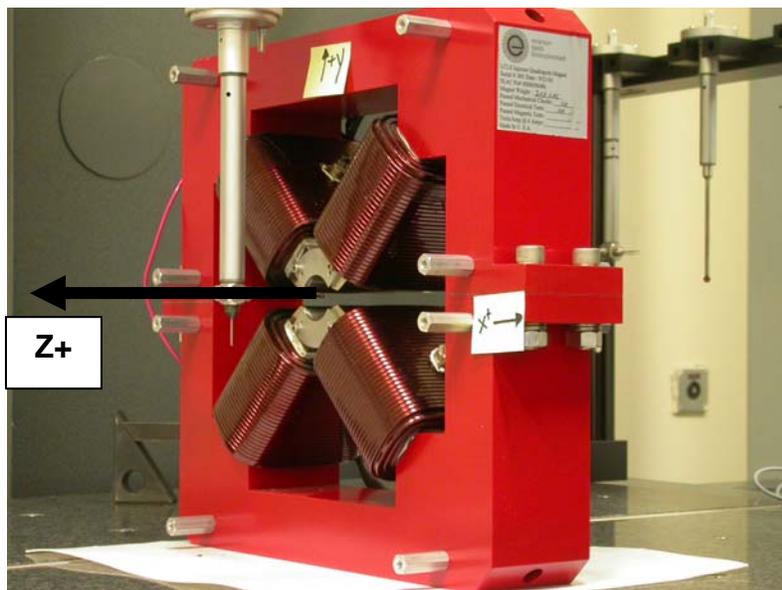
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

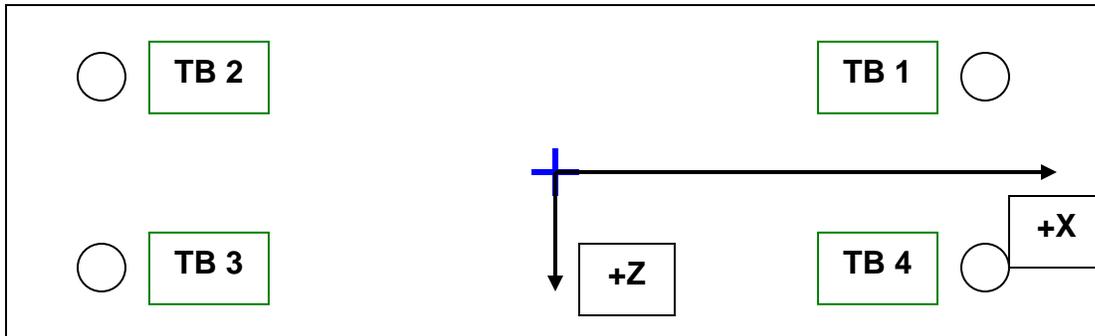
“X” & “Y” Zero

- 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	0.00123	0.49611	6.49983	8.87444	-1.25725
TB 2	0.00040	0.49786	-6.49983	8.87401	-1.25755
TB 3	0.00006	0.49973	-6.49853	8.87314	1.24307
TB 4	0.00103	0.49650	6.49926	8.87431	1.24246

Additional Requested Measurements

Pole	Straightness	Parallelism
A	0.00052	0.00058
B	0.00036	0.00046
C	0.00029	0.00029
D	0.00014	0.00024

Pole Dist	Z+ Side	Z- Side
A-C	1.25934	1.25960
B-D	1.25962	1.25937

