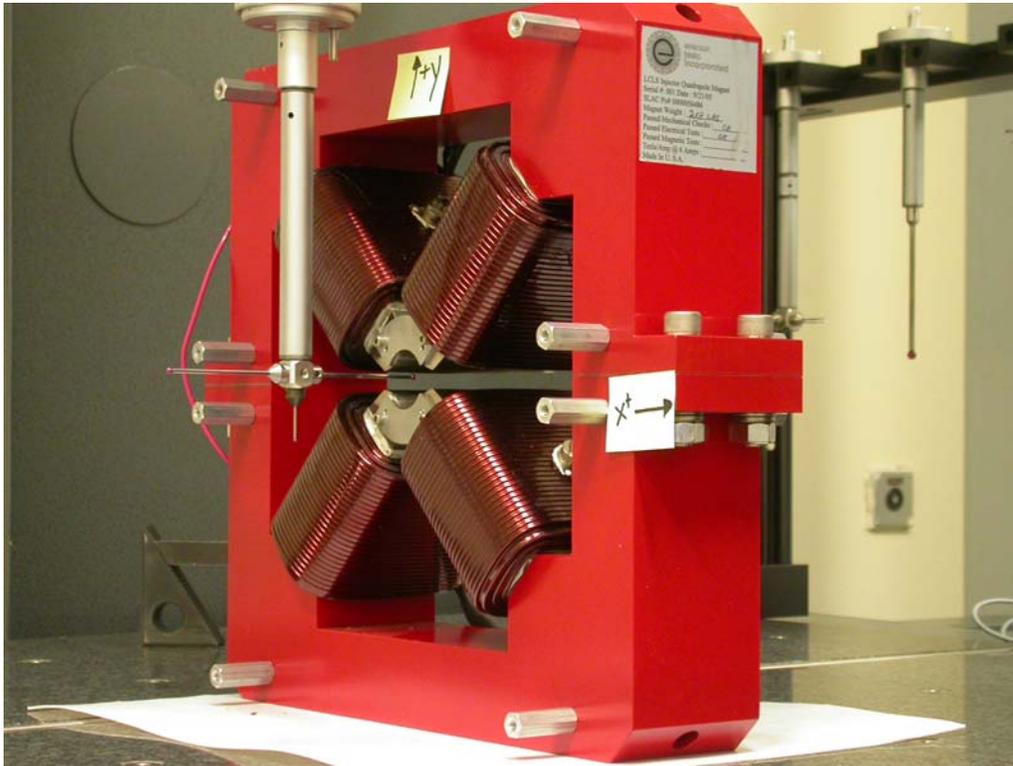


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	T. Borden
Date:	Wednesday, January 10, 2007
Work Order/Charge No.:	92-4215-8
Serial Number:	002402
URL of Fiducial Report:	\\Web002\www-group\met\Quality\FIDUCIAL REPORTS\LCLS QUADS\LCLS QUAD 002402.pdf

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

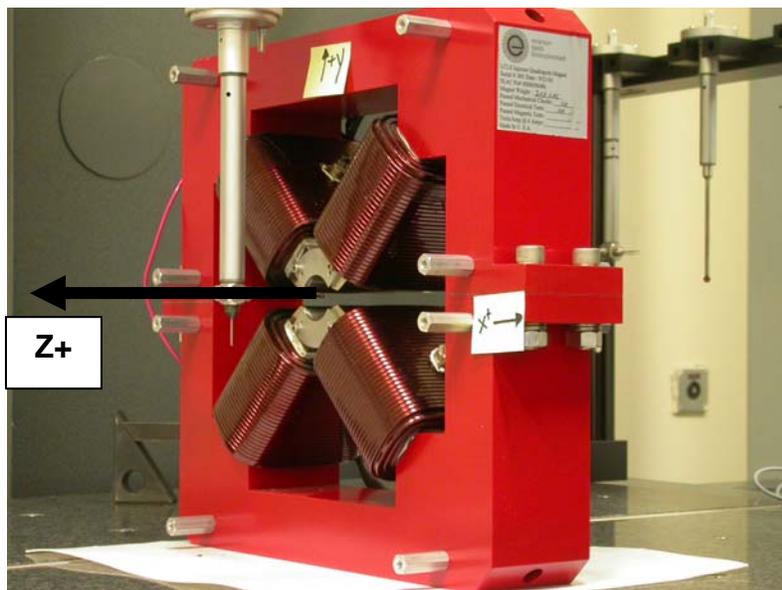
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

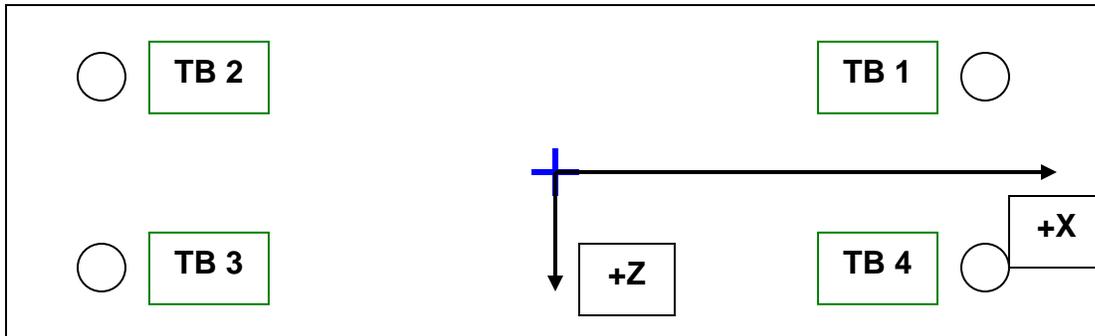
“X” & “Y” Zero

- 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	0.00108	.49817	6.49805	8.87611	-1.25192
TB 2	0.00100	0.49735	-6.50354	8.87587	-1.25231
TB 3	0.00061	0.49782	-6.50144	8.87579	1.24946
TB 4	0.00006	0.49999	6.49734	8.87492	1.24926

Additional Requested Measurements

Pole	Straightness	Parallelism
A	0.00039	0.00033
B	0.00030	0.00019
C	0.00028	0.00023
D	0.00020	0.00068

Pole Dist	Z+ Side	Z- Side
A-C	1.26060	1.26030
B-D	1.26010	1.26007

