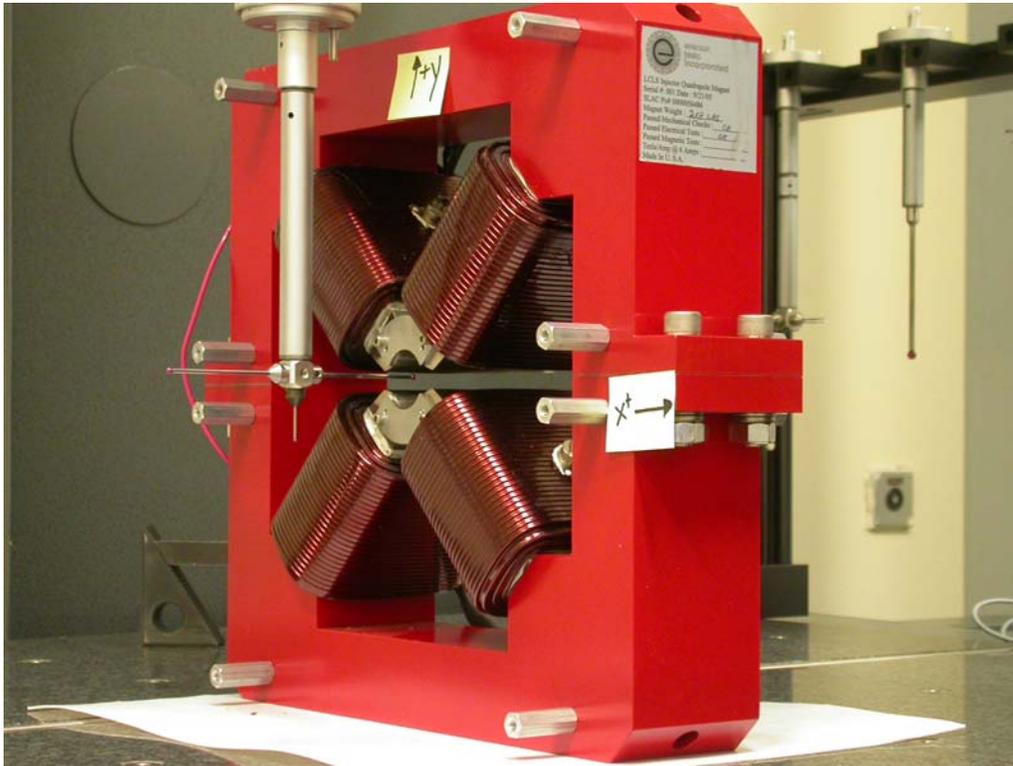


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Roger Carr
Date:	Monday, May 10, 2006
Work Order/Charge No.:	92-4215-8
Serial Number	000386

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

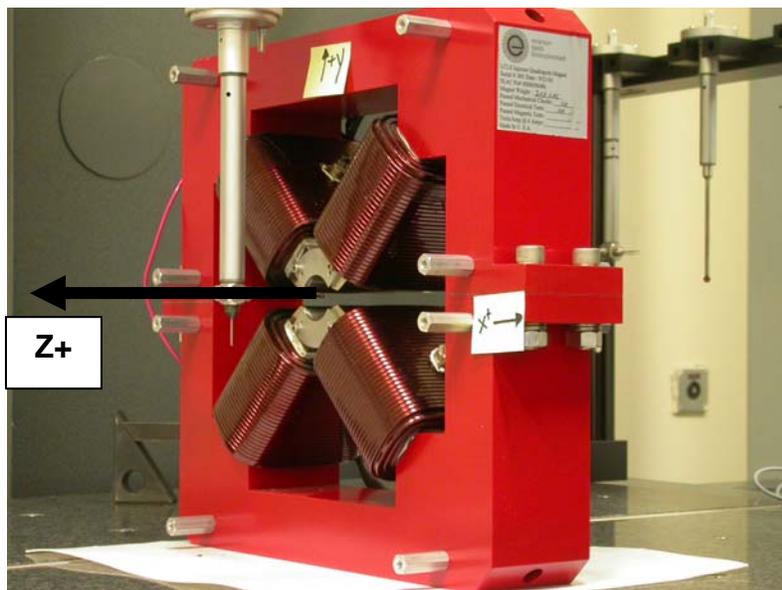
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

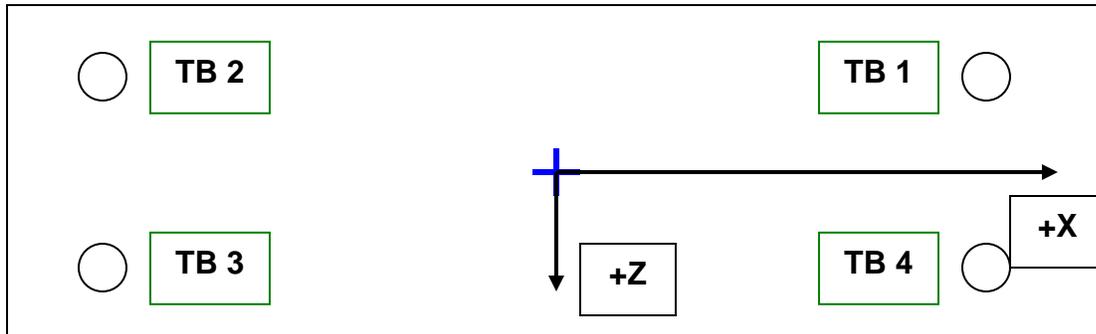
“X” & “Y” Zero

- 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	0.00033	0.49857	6.50238	8.87793	-1.25019
TB 2	0.00054	0.49708	-6.49831	8.87849	-1.24898
TB 3	0.00039	0.49748	-6.49823	8.87850	1.24994
TB 4	0.00045	0.49699	6.50104	8.87863	1.25055

Additional Requested Measurements

View From +Z

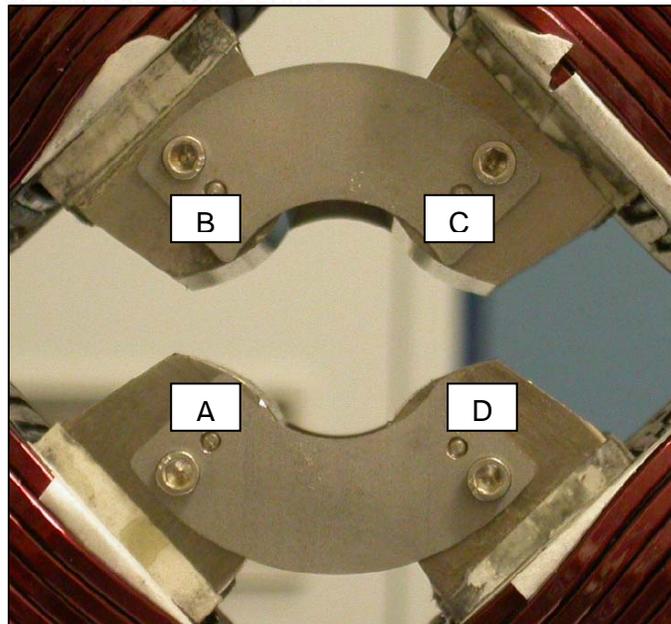
Tangent Point Straightness

- A. 0.00035
- B. 0.00033
- C. 0.00060
- D. 0.00033

Parallelism to Beamline

- A. 0.00034
- B. 0.00050
- C. 0.00048
- D. 0.00056

Distance of opposite Tangent Axis



A-C = 1.26015 (0.63006, 0.63010)

B-D = 1.25924 (0.62959, 0.62966)