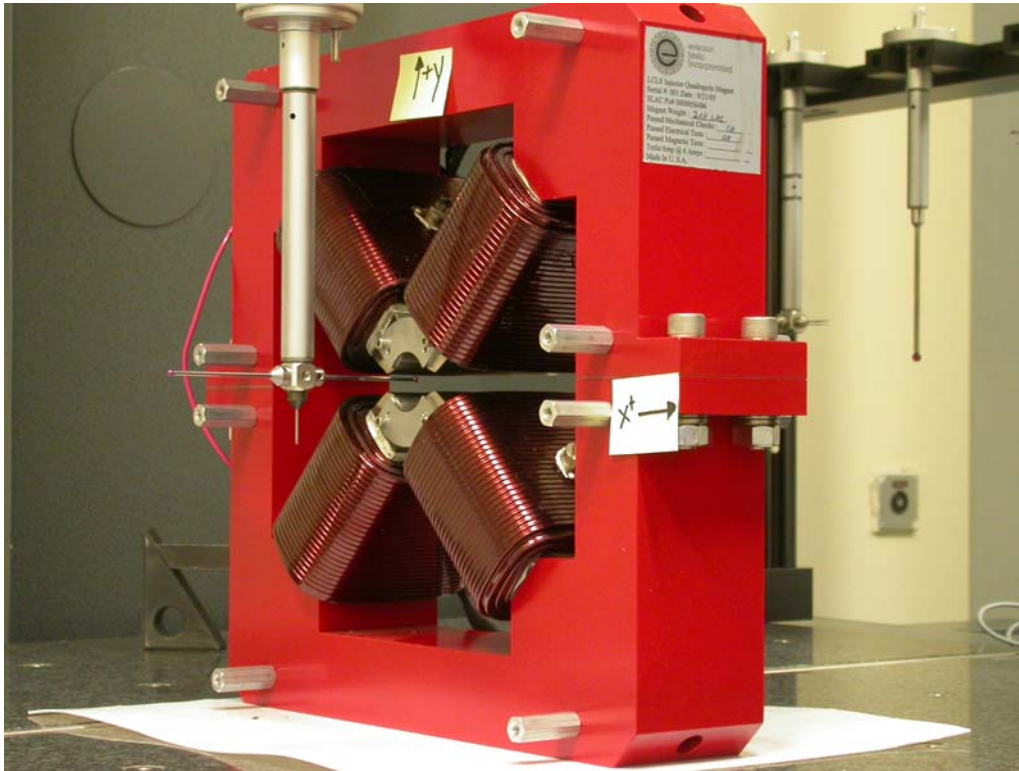


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Roger Carr
Date:	Tuesday, July 11, 2006
Work Order/Charge No.:	92-4215-8
Serial Number	000425

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

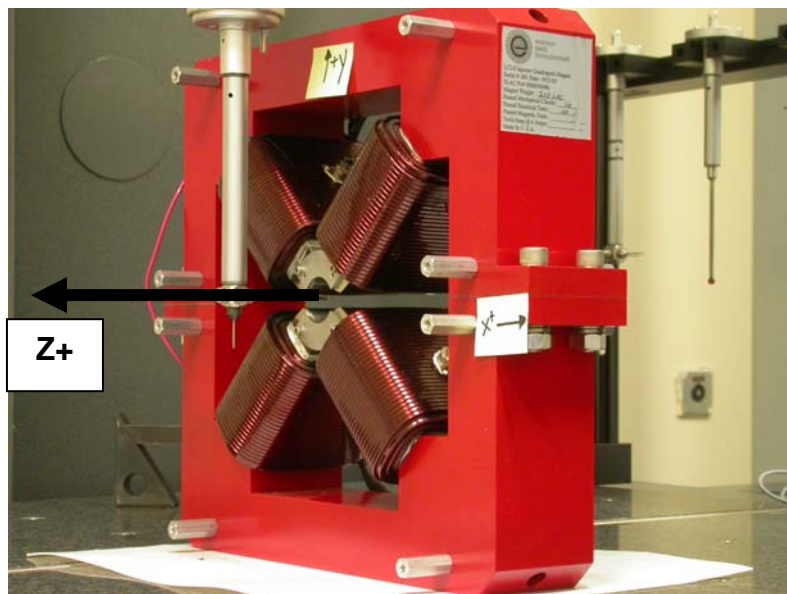
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

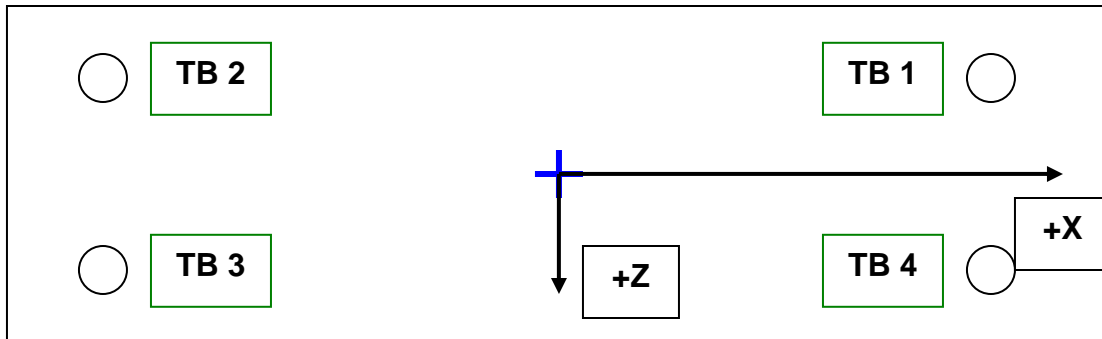
“X” & “Y” Zero

- 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	0.00086	0.49725	6.49968	8.87717	-1.25176
TB 2	0.00048	0.49751	-6.49867	8.87643	-1.24975
TB 3	0.00022	0.49844	-6.49887	8.87722	1.24993
TB 4	0.00053	0.49781	6.50011	8.87772	1.24805

Additional Requested Measurements

View From +Z

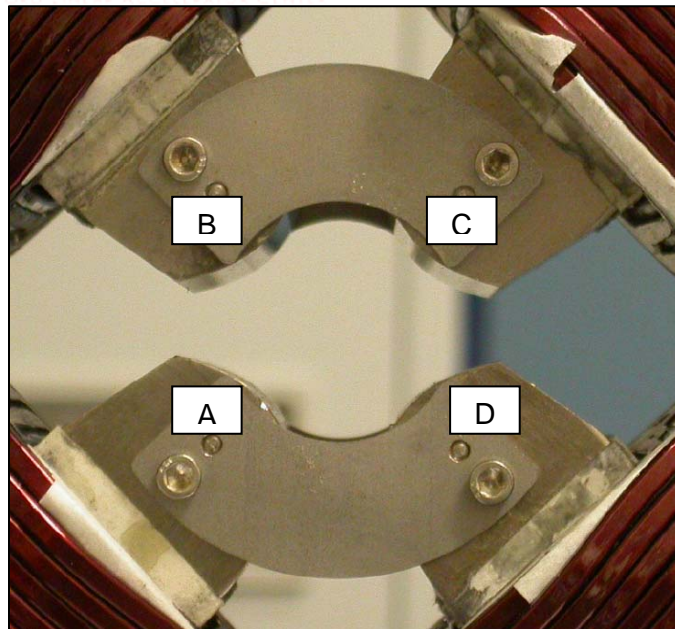
Tangent Point Straightness

- A. 0.00047
- B. 0.00018
- C. 0.00020
- D. 0.00030

Parallelism to Beamline

- A. 0.00046
- B. 0.00020
- C. 0.00023
- D. 0.00029

Distance of opposite Tangent Axis



A-C = 1.25981 (0.62994, 0.62987)

B-D = 1.25974 (0.62983, 0.62990)