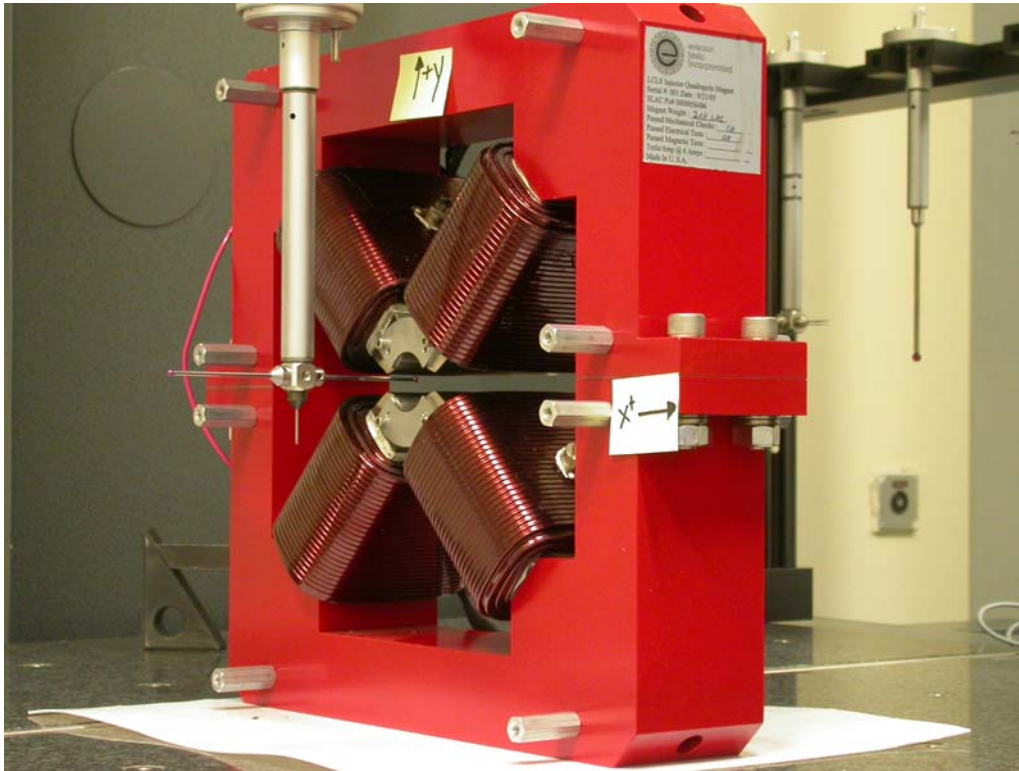


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Roger Carr
Date:	Monday, May 10, 2006
Work Order/Charge No.:	92-4215-8
Serial Number	000385

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

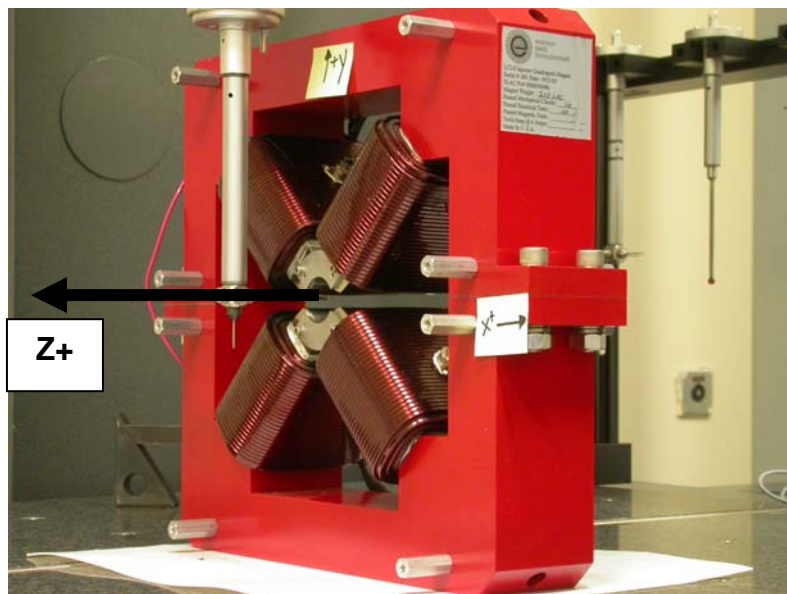
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

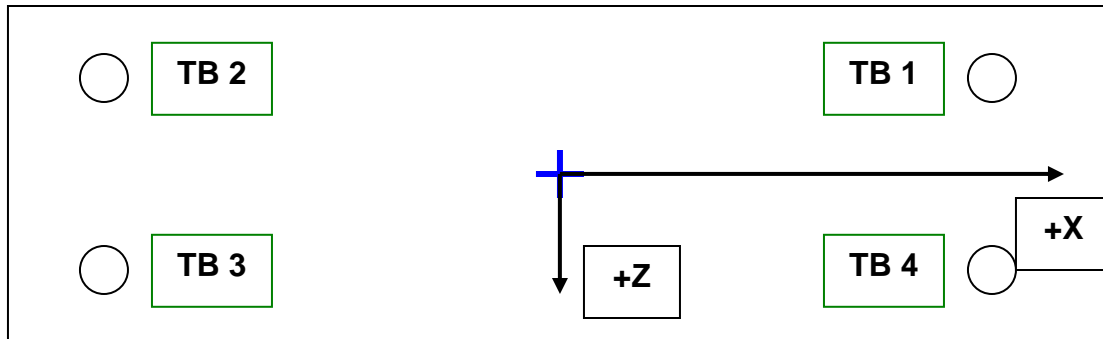
“X” & “Y” Zero

- 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	0.00069	0.49672	6.50027	8.87700	-1.25173
TB 2	0.00115	0.49740	-6.50021	8.87698	-1.25073
TB 3	0.00064	0.49765	-6.49871	8.87707	1.25023
TB 4	0.00077	0.49536	6.49943	8.87804	1.24927

Additional Requested Measurements

View From +Z

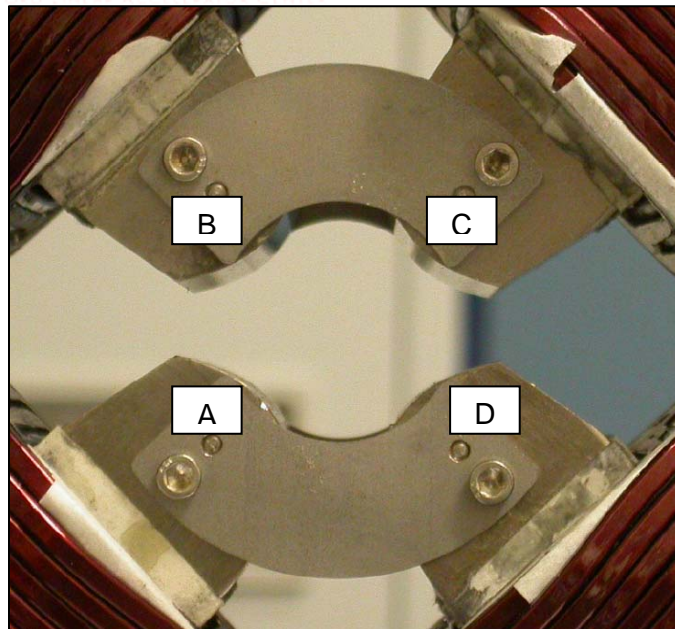
Tangent Point Straightness

- A. 0.00046
- B. 0.00014
- C. 0.00035
- D. 0.00043

Parallelism to Beamline

- A. 0.00038
- B. 0.00046
- C. 0.00045
- D. 0.00051

Distance of opposite Tangent Axis



A-C = 1.26032 (0.63024, 0.63007)

B-D = 1.25907 (0.62959, 0.62948)