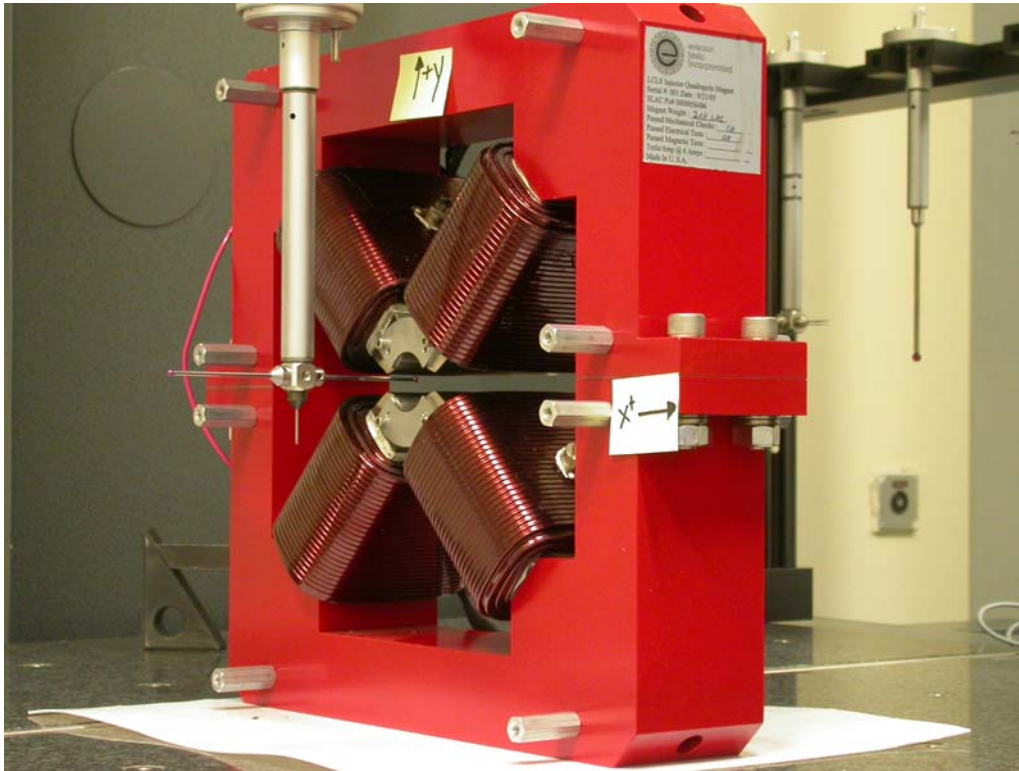


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Roger Carr
Date:	Monday, May 10, 2006
Work Order/Charge No.:	92-4215-8
Serial Number	000384

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

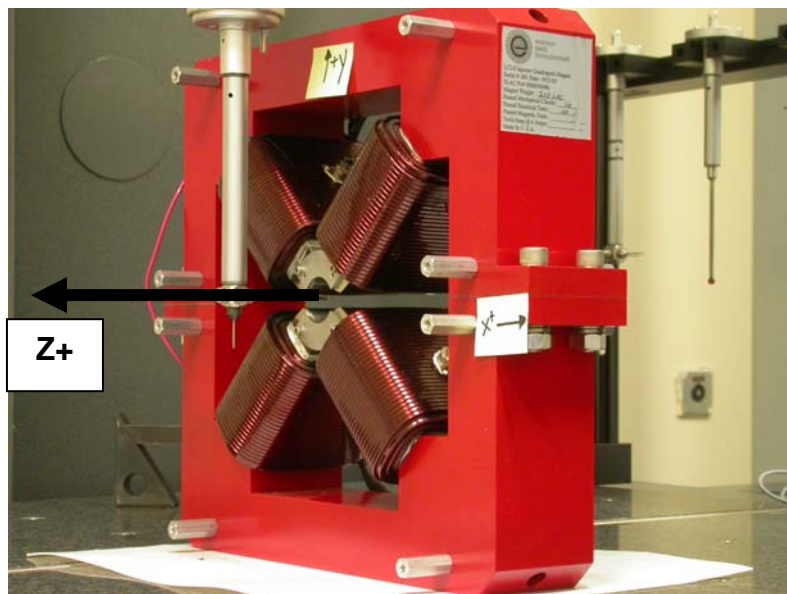
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

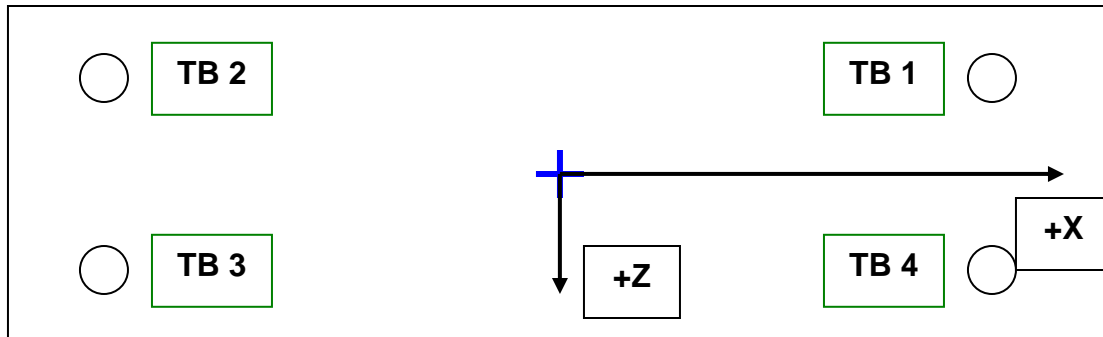
“X” & “Y” Zero

- 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	0.00014	0.49937	6.49932	8.87570	-1.24998
TB 2	0.00011	0.49963	-6.49953	8.87525	-1.25097
TB 3	0.00015	0.49872	-6.49993	8.87595	1.24961
TB 4	0.00036	0.49933	6.50055	8.87670	1.24848

Additional Requested Measurements

View From +Z

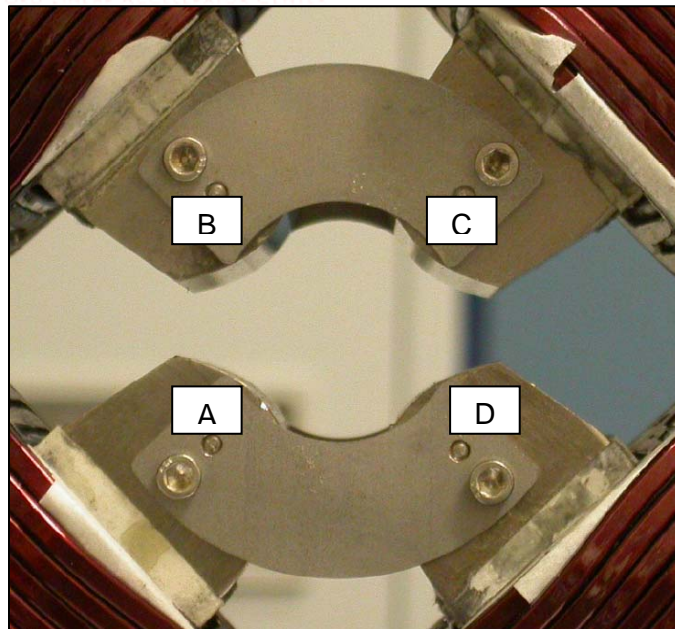
Tangent Point Straightness

- A. 0.00039
- B. 0.00023
- C. 0.00043
- D. 0.00028

Parallelism to Beamline

- A. 0.00023
- B. 0.00028
- C. 0.00036
- D. 0.00028

Distance of opposite Tangent Axis



A-C = 1.25963 (0.62977, 0.62986)

B-D = 1.25927 (0.62961, 0.62966)