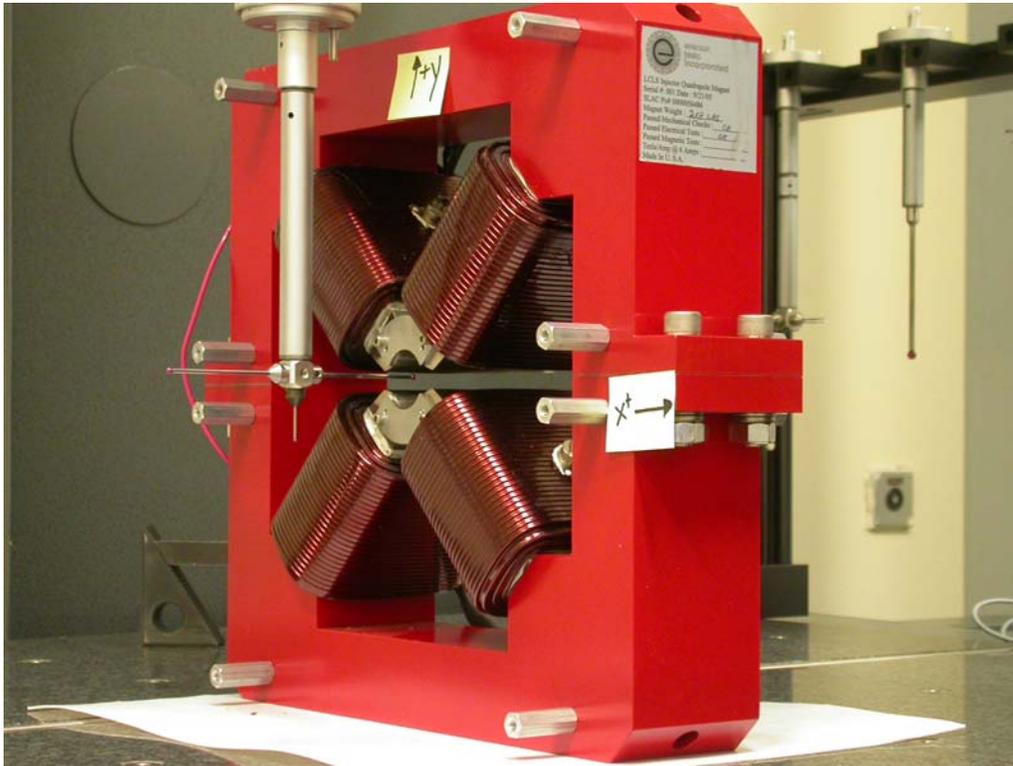


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Roger Carr
Date:	Tuesday, July 11, 2006
Work Order/Charge No.:	92-4215-8
Serial Number	000426

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

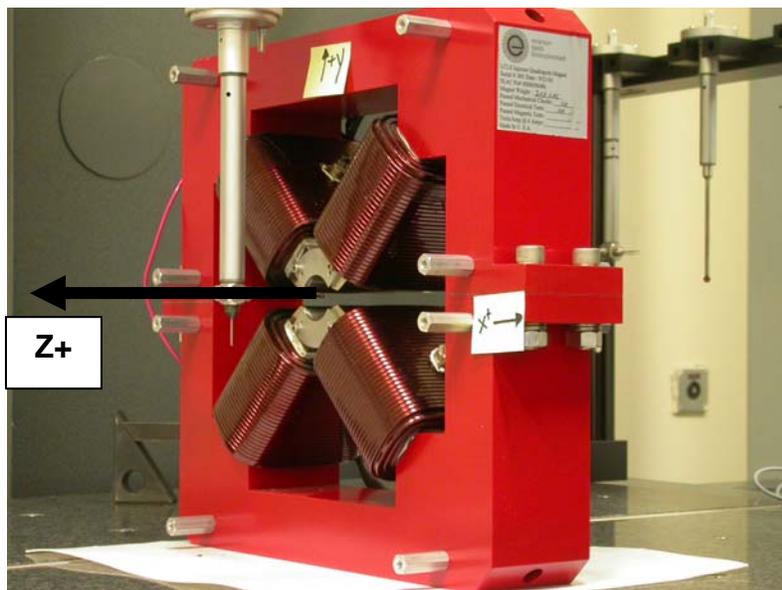
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

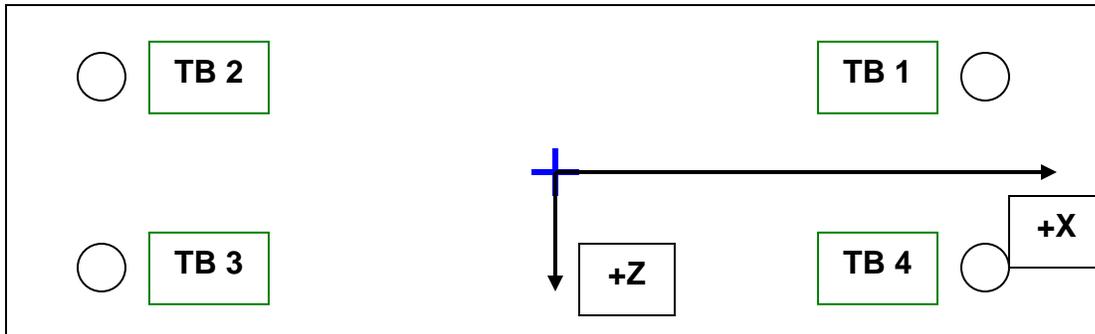
“X” & “Y” Zero

- 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	0.00085	0.49401	6.49958	8.87831	-1.25094
TB 2	0.00143	0.49630	-6.49696	8.87755	-1.25099
TB 3	0.00071	0.49673	-6.50135	8.87753	1.24904
TB 4	0.00053	0.49771	6.49979	8.87746	1.24695

Additional Requested Measurements

View From +Z

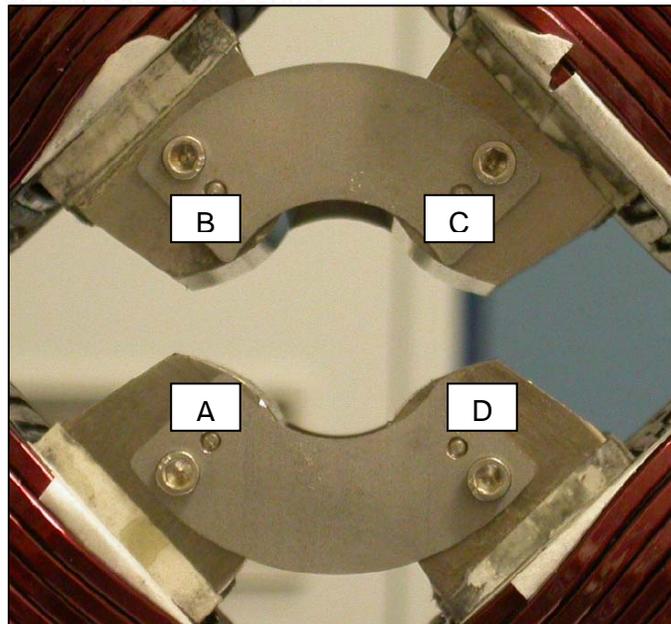
Tangent Point Straightness

- A. 0.00120
- B. 0.00018
- C. 0.00081
- D. 0.00030

Parallelism to Beamline

- A. 0.00093
- B. 0.00108
- C. 0.00037
- D. 0.00040

Distance of opposite Tangent Axis



A-C = 1.25950 (0.62979, 0.62971)

B-D = 1.25926 (0.62981, 0.62945)