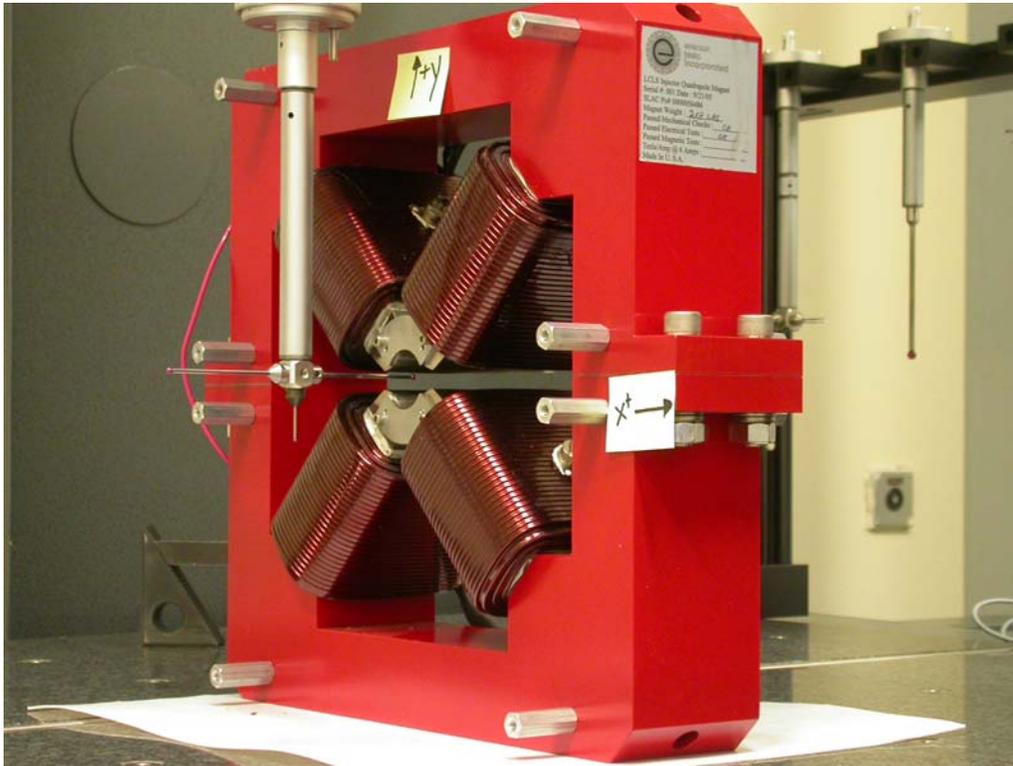


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Roger Carr
Date:	Thursday, June 01, 2006
Work Order/Charge No.:	92-4215-8
Serial Number	000391

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

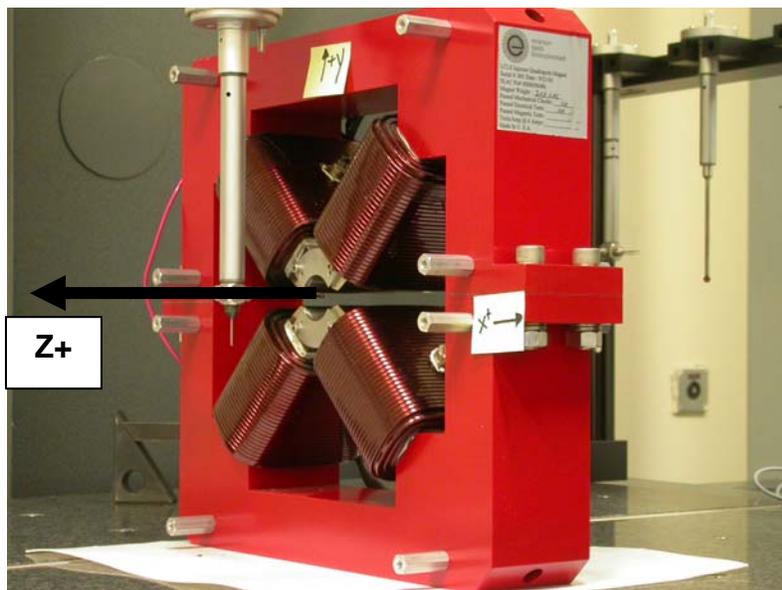
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

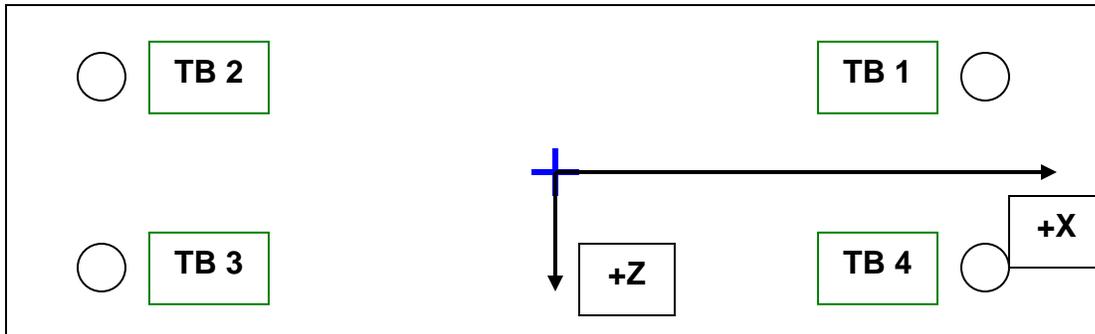
“X” & “Y” Zero

- 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	0.00030	0.49908	6.50004	8.87887	-1.25164
TB 2	0.00006	0.49997	-6.49905	8.87804	-1.25049
TB 3	0.00011	0.49998	-6.49786	8.87861	1.24881
TB 4	0.00035	0.49785	6.50056	8.87998	1.24962

Additional Requested Measurements

View From +Z

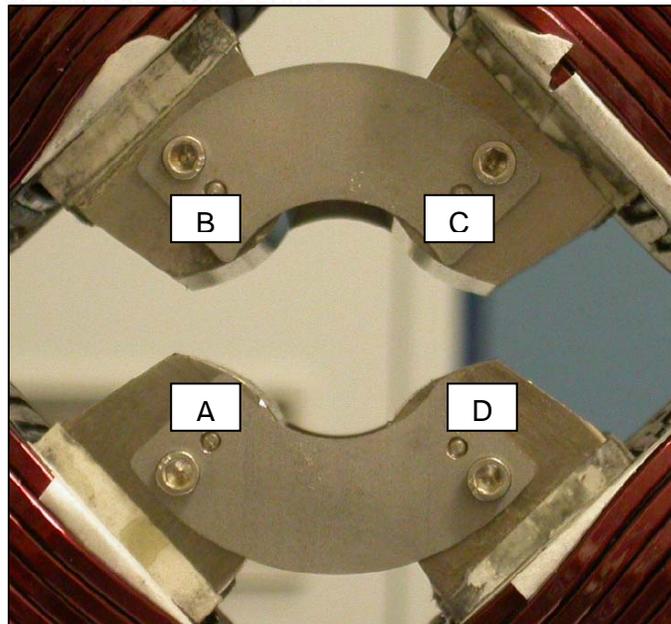
Tangent Point Straightness

- A. 0.00024
- B. 0.00009
- C. 0.00037
- D. 0.00032

Parallelism to Beamline

- A. 0.00049
- B. 0.00037
- C. 0.00069
- D. 0.00050

Distance of opposite Tangent Axis



A-C = 1.26050 (0.63023, 0.63027)

B-D = 1.25828 (0.62930, 0.62937)