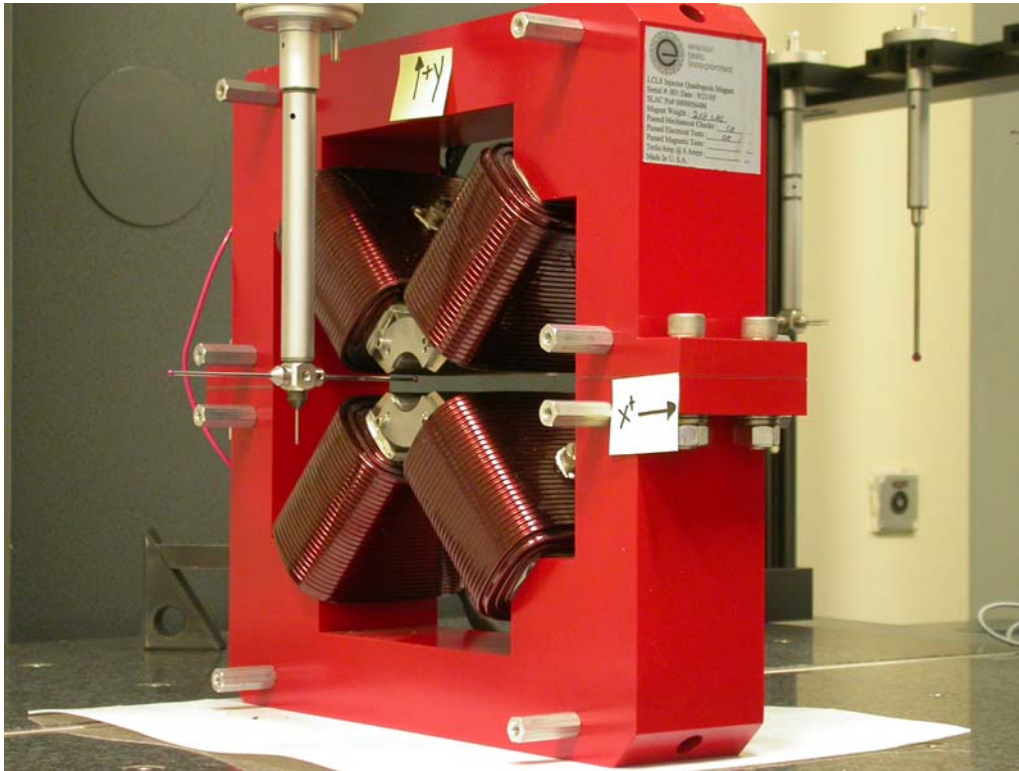


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Roger Carr
Date:	Tuesday, July 11, 2006
Work Order/Charge No.:	92-4215-8
Serial Number	000427

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

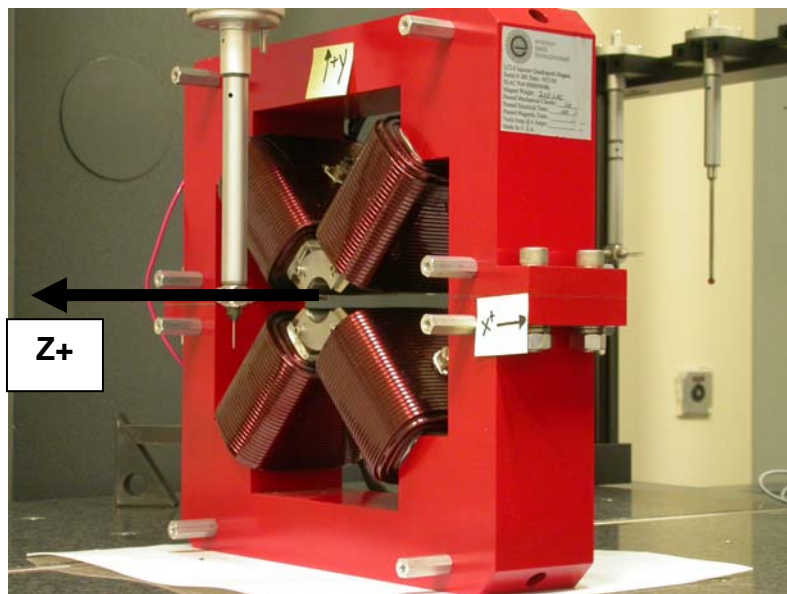
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

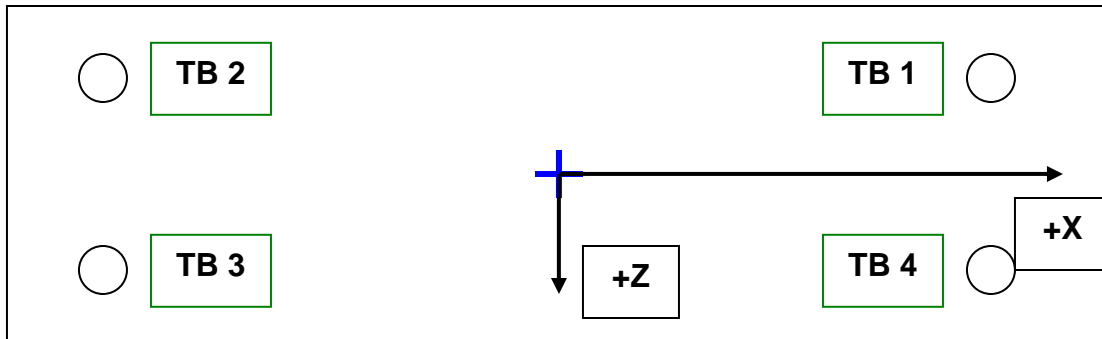
“X” & “Y” Zero

- 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	0.00100	0.49517	6.49797	8.88086	-1.24932
TB 2	0.00101	0.49524	-6.50078	8.87729	-1.24961
TB 3	0.00107	0.49450	-6.50211	8.87781	1.25051
TB 4	0.00072	0.49592	6.49686	8.88091	1.25152

Additional Requested Measurements

View From +Z

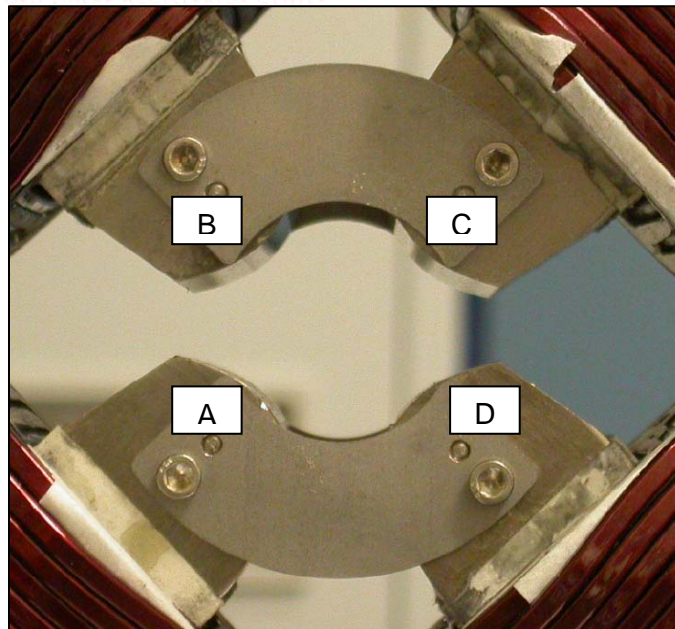
Tangent Point Straightness

- A. 0.00013
- B. 0.00006
- C. 0.00023
- D. 0.00025

Parallelism to Beamline

- A. 0.00007
- B. 0.00022
- C. 0.00021
- D. 0.00030

Distance of opposite Tangent Axis



A-C = 1.26001 (0.63001, 0.62999)

B-D = 1.25901 (0.62951, 0.62950)