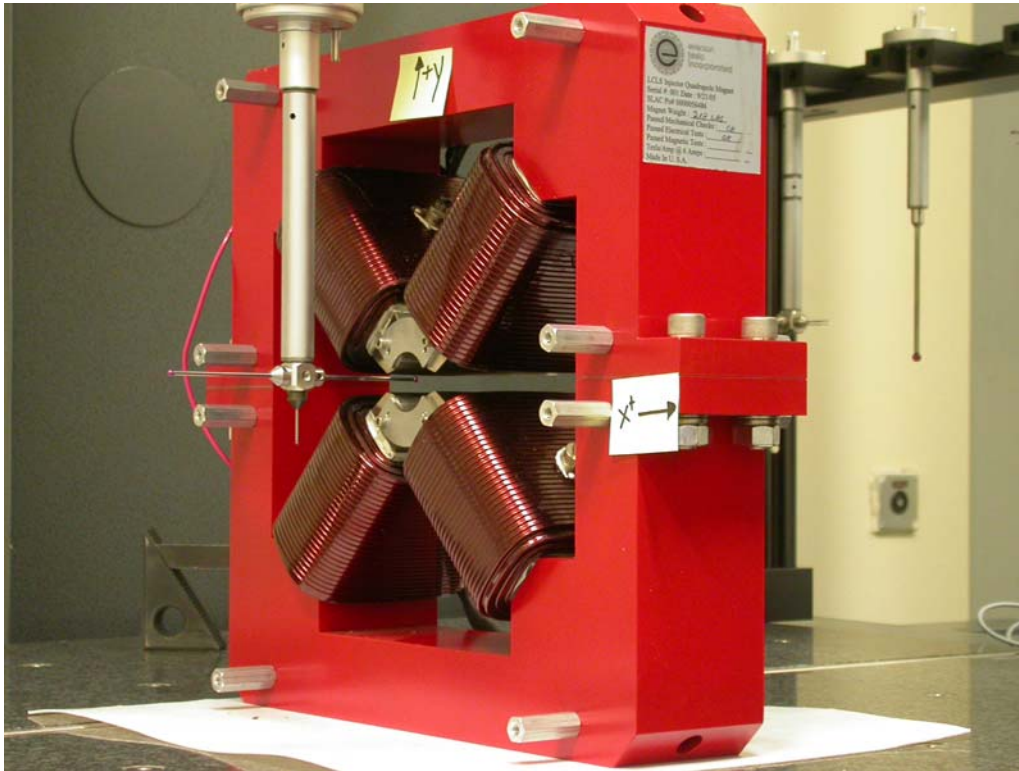


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	Roger Carr
Date:	Tuesday, July 11, 2006
Work Order/Charge No.:	92-4215-8
Serial Number	000421

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

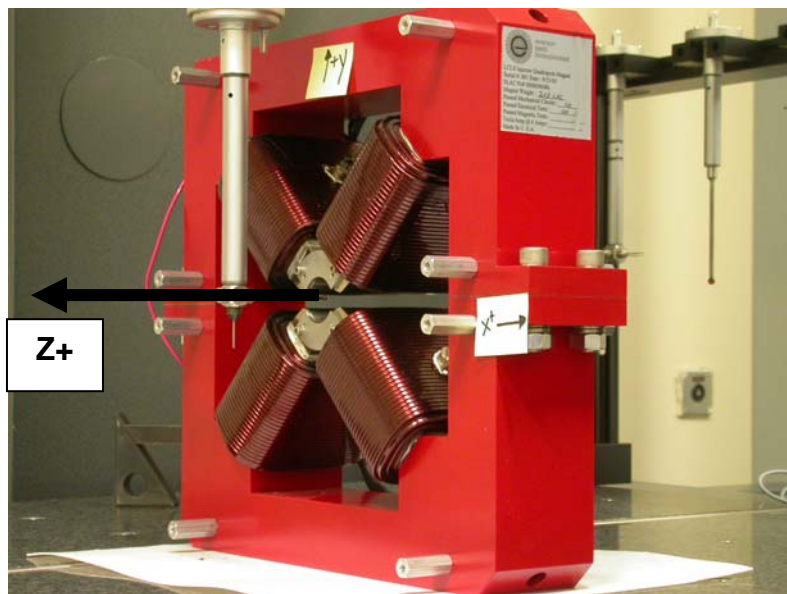
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

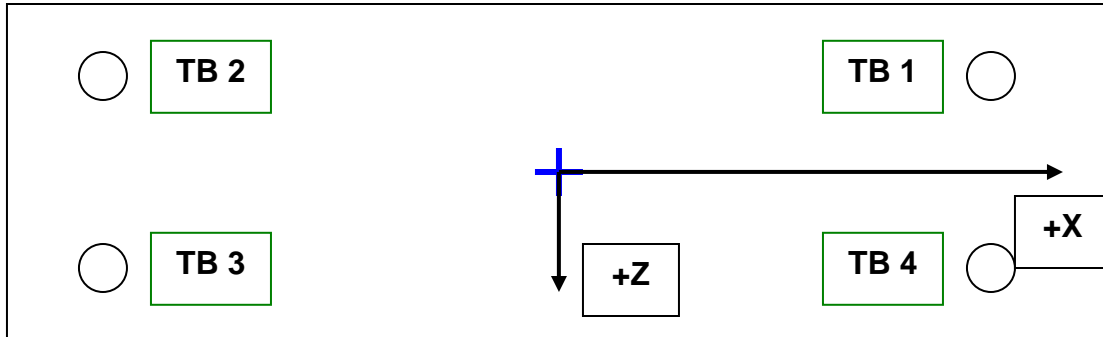
“X” & “Y” Zero

- 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	0.00038	0.49838	6.50042	8.87837	-1.24980
TB 2	0.00077	0.49579	-6.49856	8.88044	-1.24986
TB 3	0.00014	0.49883	-6.49769	8.87965	1.25049
TB 4	0.00111	0.49741	6.50087	8.87896	1.24814

Additional Requested Measurements

View From +Z

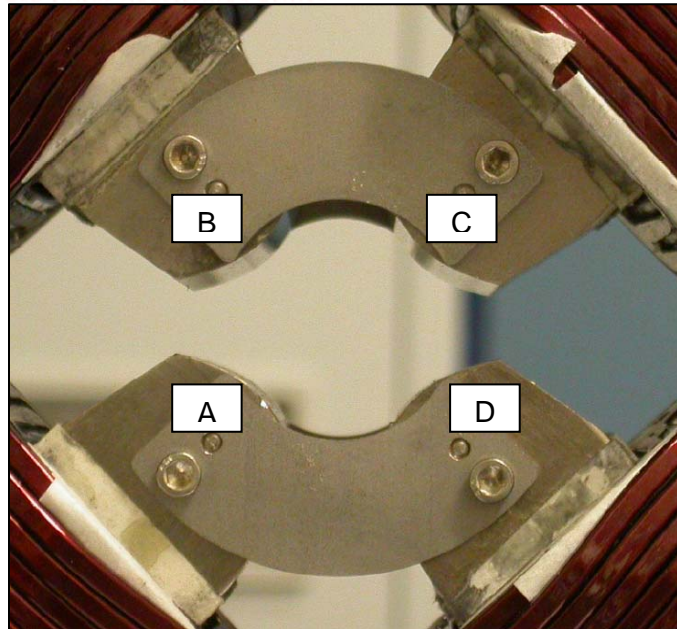
Tangent Point Straightness

- A. 0.00034
- B. 0.00025
- C. 0.00019
- D. 0.00058

Parallelism to Beamline

- A. 0.00031
- B. 0.00032
- C. 0.00026
- D. 0.00065

Distance of opposite Tangent Axis



A-C = 1.25975 (0.62989, 0.62987)

B-D = 1.25896 (0.62964, 0.62932)