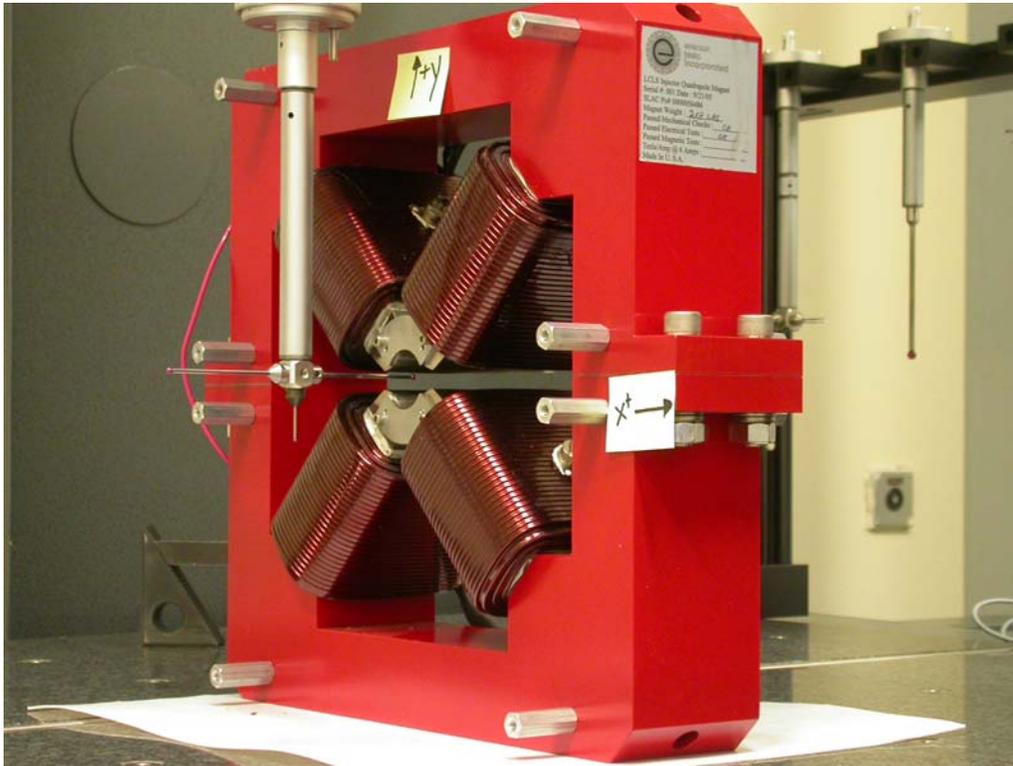


LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector:	Keith Caban
Responsible Engineer:	T. Borden
Date:	Wednesday, January 10, 2007
Work Order/Charge No.:	92-4215-8
Serial Number:	002401
URL of Fiducial Report:	\\Web002\www-group\met\Quality\FIDUCIAL REPORTS\LCLS QUADS\LCLS QUAD 002401.pdf

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

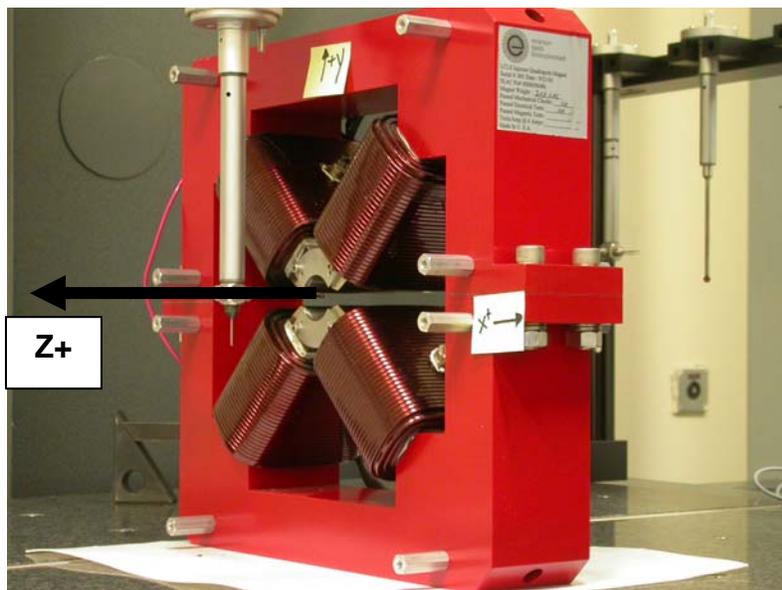
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

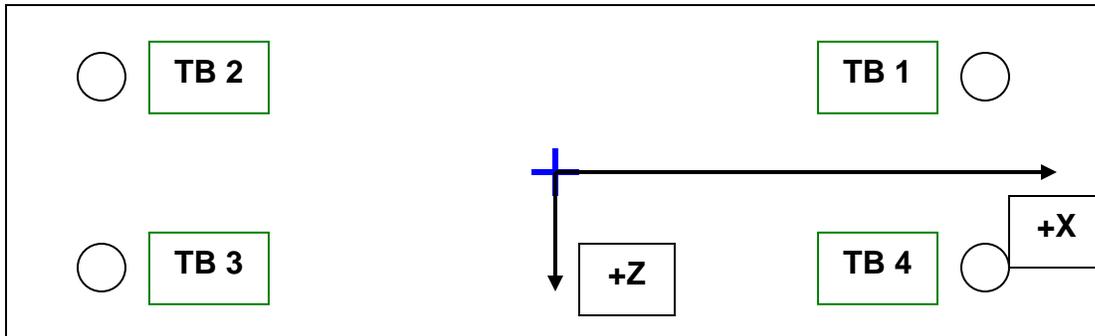
“X” & “Y” Zero

- 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	0.00010	0.49987	6.49988	8.87606	-1.24953
TB 2	0.00019	0.49972	-6.50185	8.87599	-1.25130
TB 3	0.00052	0.49816	-6.50357	8.87606	1.24988
TB 4	0.00012	0.49971	6.49919	8.87551	1.24975

Additional Requested Measurements

Pole	Straightness	Parallelism
A	0.00030	0.00028
B	0.00035	0.00022
C	0.00030	0.00028
D	0.00023	0.00016

Pole Dist	Z+ Side	Z- Side
A-C	1.26000	1.25964
B-D	1.25840	1.25870

