

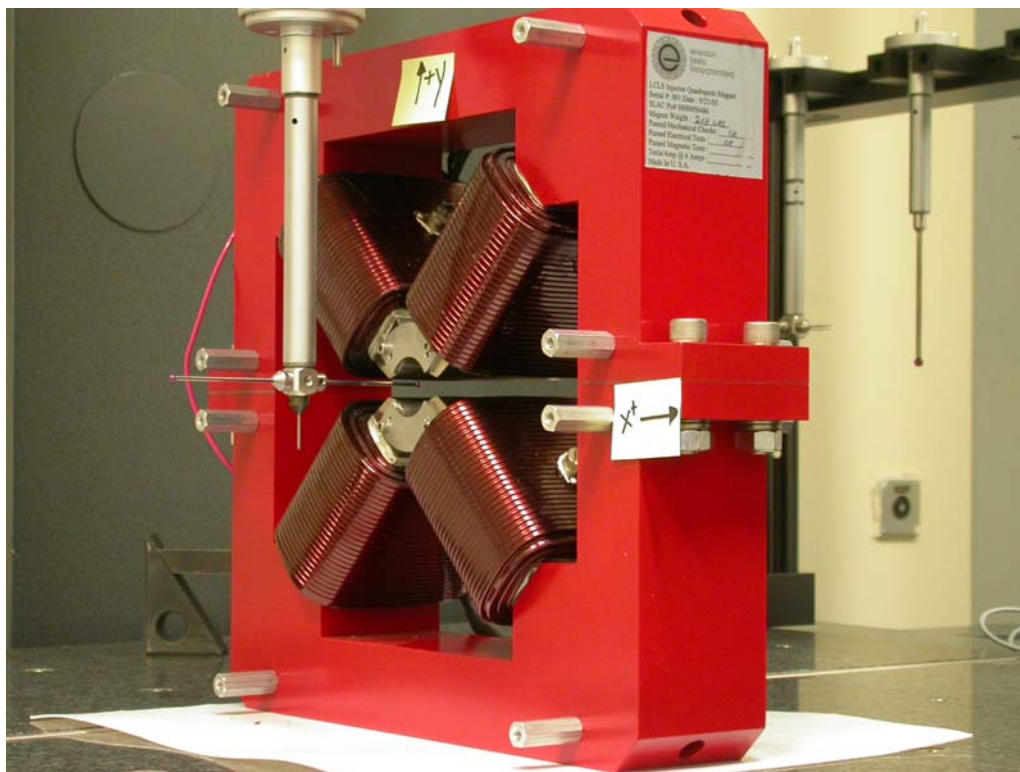


Linac Coherent Light Source

Stanford Linear Accelerator Center

Stanford Synchrotron Radiation Laboratory

LCLS Injector Quadrupole Magnet FIDUCIALIZATION REPORT



Inspector: Keith Caban

Responsible Engineer: T. Borden

Date: Friday, January 12, 2007

Work Order/Charge No.: 92-4215-8

Serial Number: 002407

URL of Fiducial Report: <\\Web002\\www-group\\met\\Quality\\FIDUCIAL\\REPORTS\\LCLS QUADS\\LCLS QUAD 002407.pdf>

Part Set-up – Coordinate System Set-up

Planar Alignment

- Mid-Plane of the magnet

Spatial Alignment

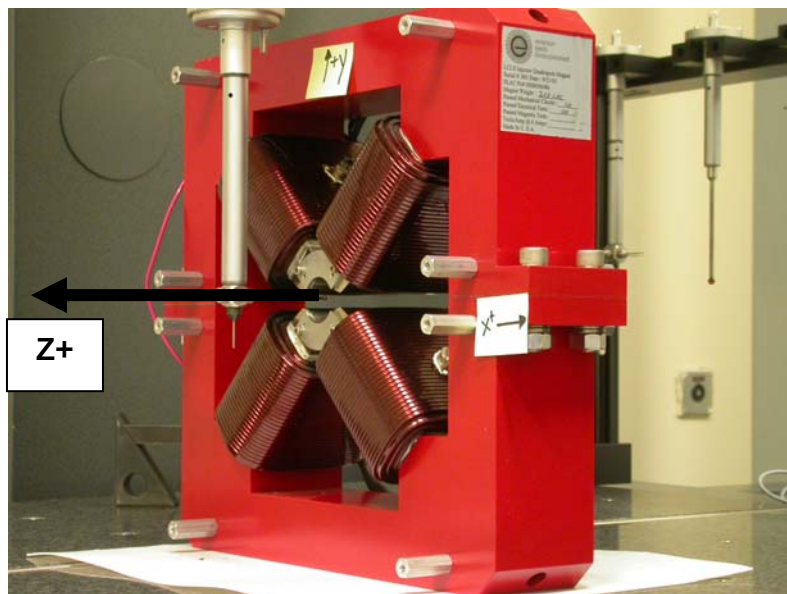
- A line on the top part of the magnet
 - +X goes towards (Magnet Info Label)

“Z” Zero

- Mid-Plane of the magnet

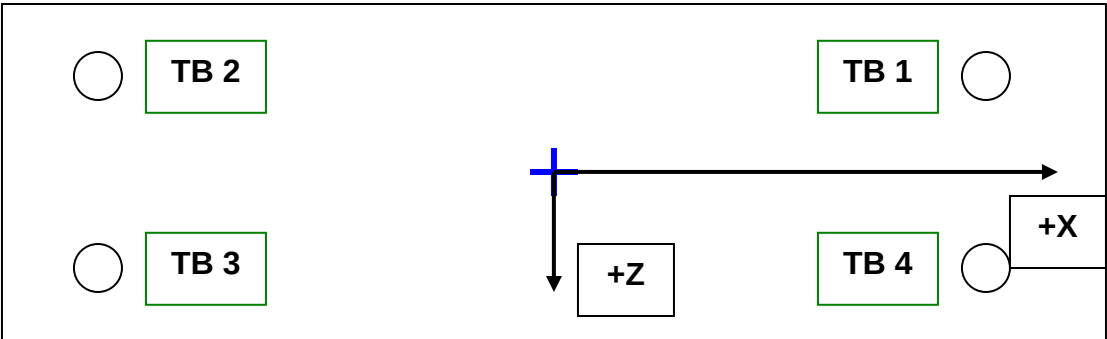
“X” & “Y” Zero

- 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	0.00007	0.50003	6.49895	8.87495	-1.25041
TB 2	0.00006	0.50004	-6.50065	8.87369	-1.25235
TB 3	0.00011	0.49989	-6.49885	8.87603	1.24730
TB 4	0.00008	0.49998	6.49901	8.87588	1.25050

Additional Requested Measurements

Pole	Straightness	Parallelism
A	0.00032	0.00012
B	0.00053	0.00060
C	0.00023	0.00020
D	0.00014	0.00018

Pole Dist	Z+ Side	Z- Side
A-C	1.25948	1.25937
B-D	1.25891	1.25983

