Fermilab

TS-SSC-91-111

Short Press Survey Results [1]

Masayoshi Wake
Fermilab,TS/Mag.R&D
June 7, 1991

The curing press for short magnet was measured by survey group. The measurement was carried out for the upper platen of the press with having outer tooling in the press. A target with magnetic attachment was moved along the platen during the measurement. The accuracy of measurement is estimated $\pm$ 1 mil from the reproducibility at both end.

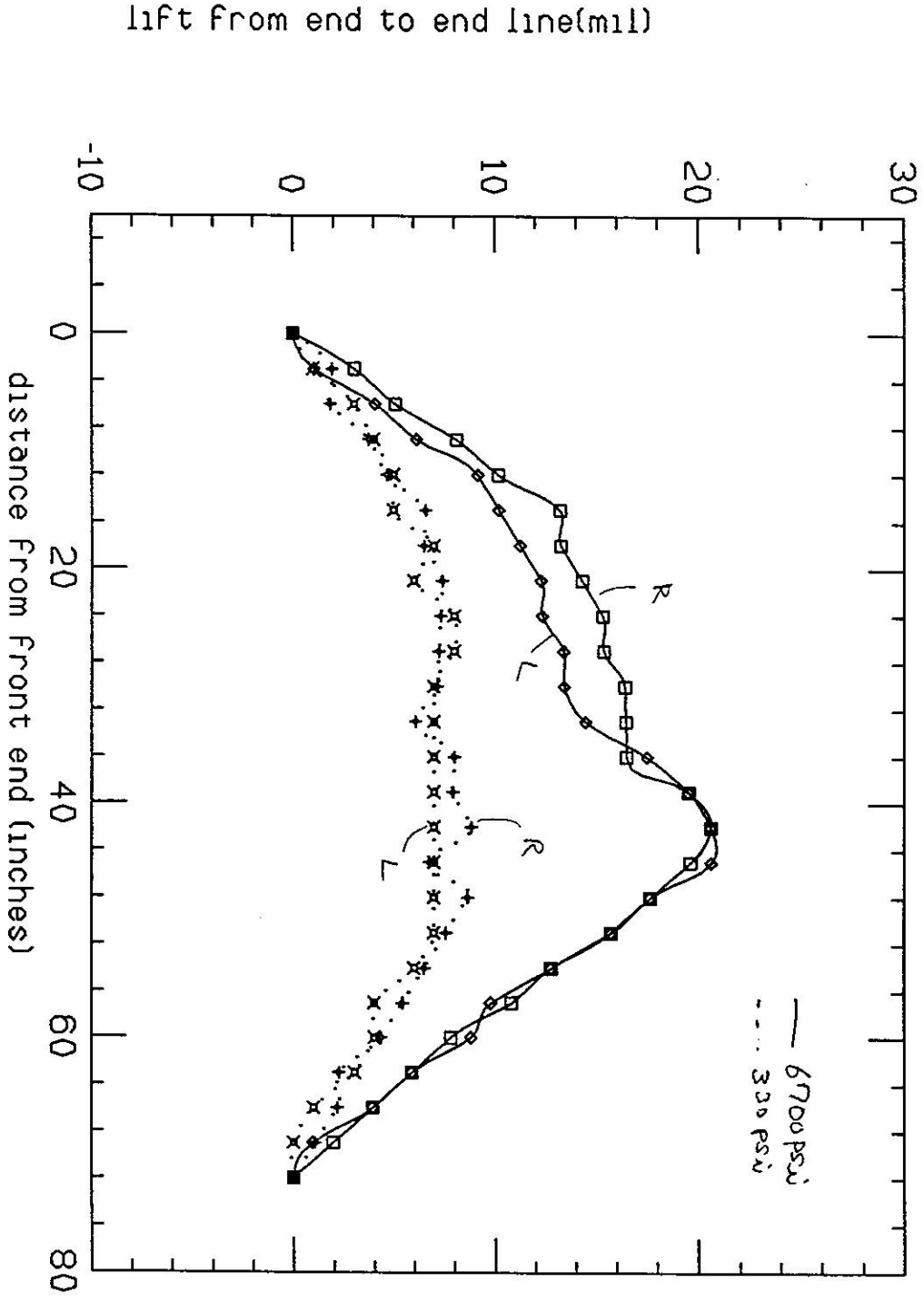
The results shown in the attached figure shows that the platen has a permanent deformation caused by the repeated bending by the press. Although, the central part which is really used to form the coils is fairly flat when there is little force.

At high pressure, the deformation becomes larger. Besides, at position 40 to 50 inches, there seems to be an extra deformation. This position has been having problem of unclosed gap which lasts until the temperature is raised. A 60 mil motion of upper platen was observed when the press was energized. Could this be due to the elongation of tension screw?

The measurement was made for right and left side of the platen. The bending in the direction across is smaller than the longitudinal direction.

The adjustment of tesion screw is at least necessary for this press. The same sort of measurement for long press may be useful to solve the problem of size variation of the coil.

[1]Distribution: R.Bossert, J.Carson, S.Delchamps, I.Gonczy, S.Gourlay, W.Koska, M.Kuchnir, M.Lamm, G.Pewitt, R.Sims, F.Turkot,J.Strait


lift from end to end line(mil)
-10
0
10
20
30
0
20
40
60
80
distance from front end (inches)
R
L
R
L
6700 psi
330 psi