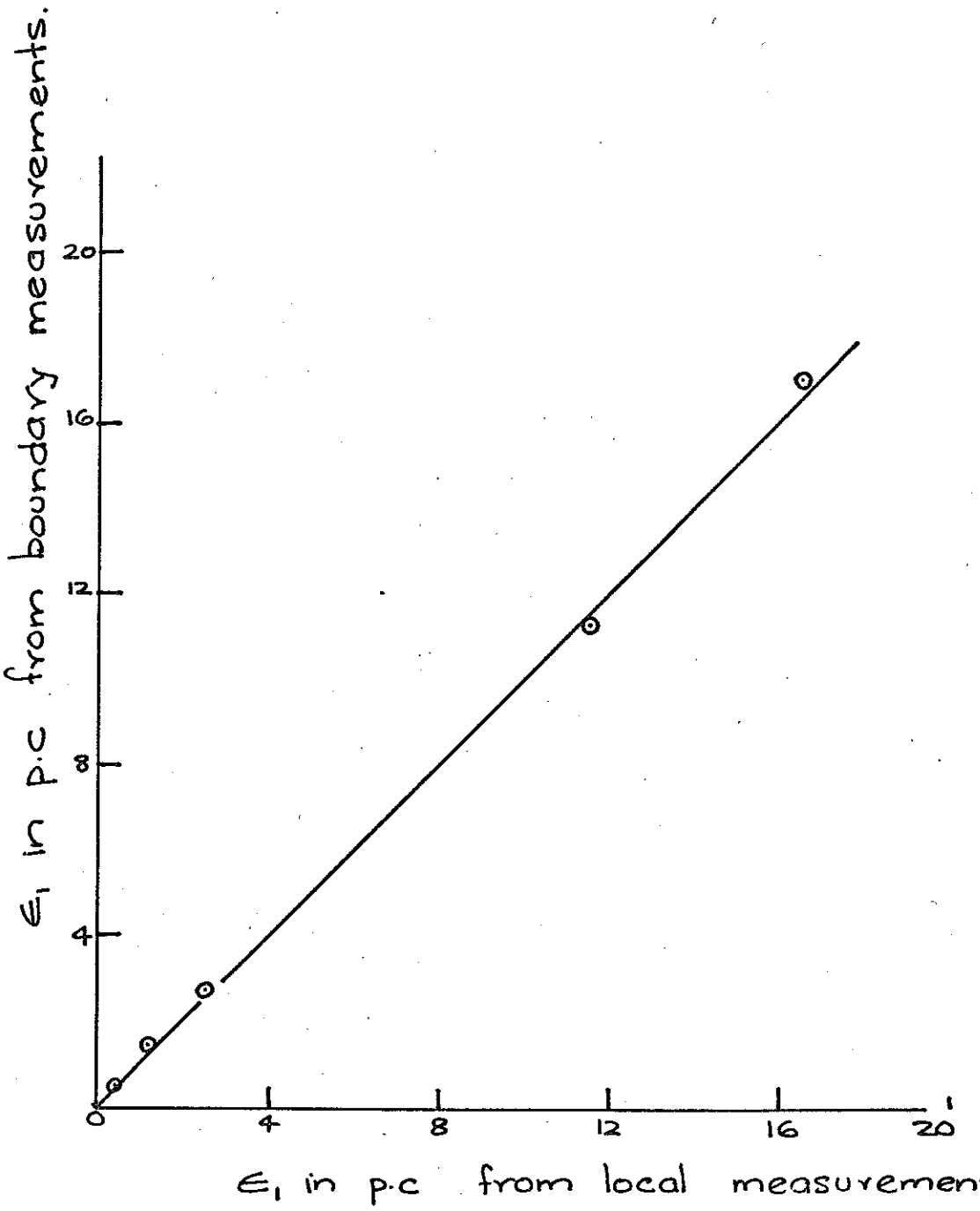


Fig. 3.38 (a) Comparison of average axial strain from boundary measurements and that from local measurements in sample AQ (constant p test from 60 psi isotropic stress).

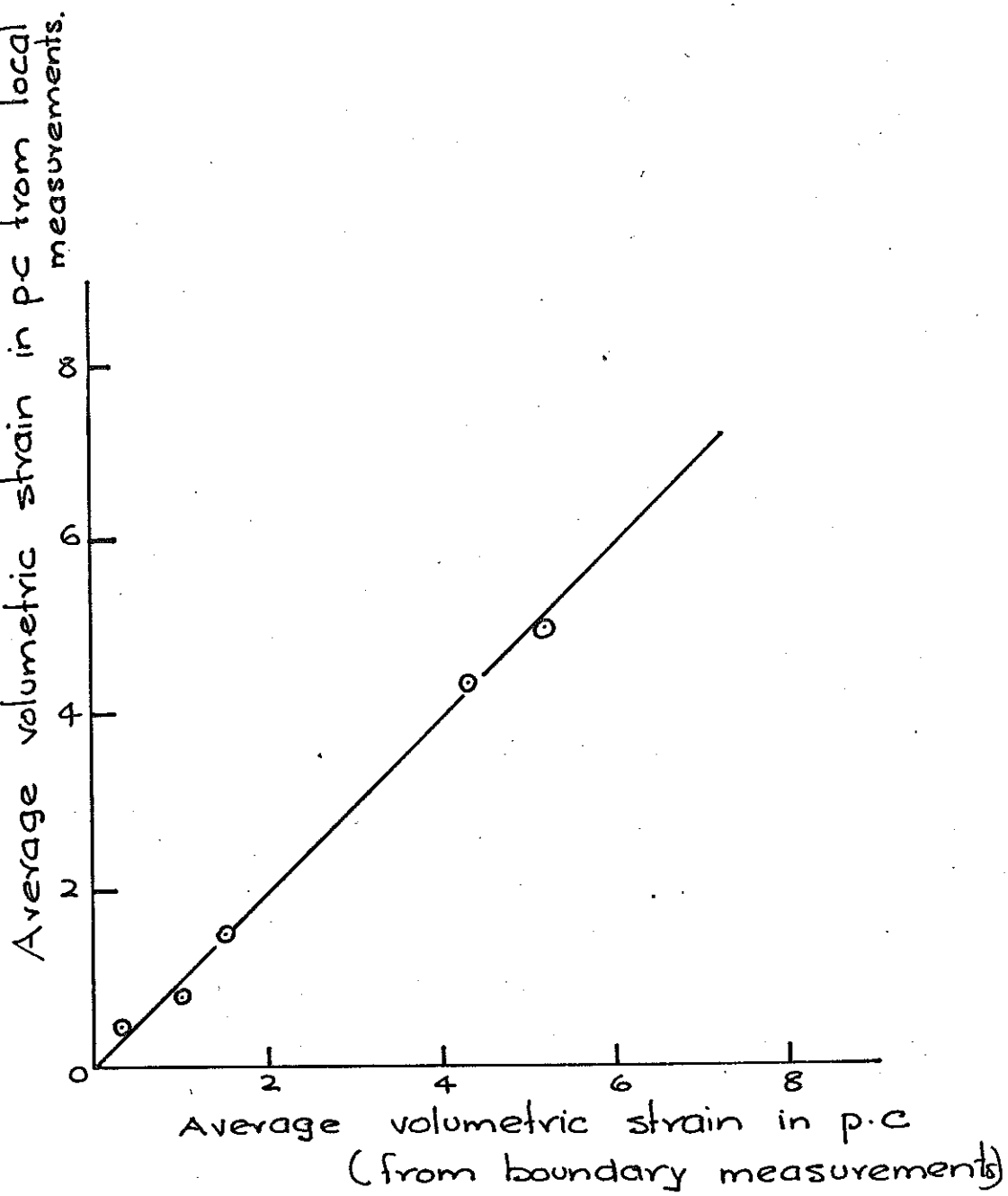


Fig. 3.38 (b) Comparison of average volumetric strain from boundary measurements and that from local measurements in sample AQ (constant p test path - from 60 psi isotropic stress)

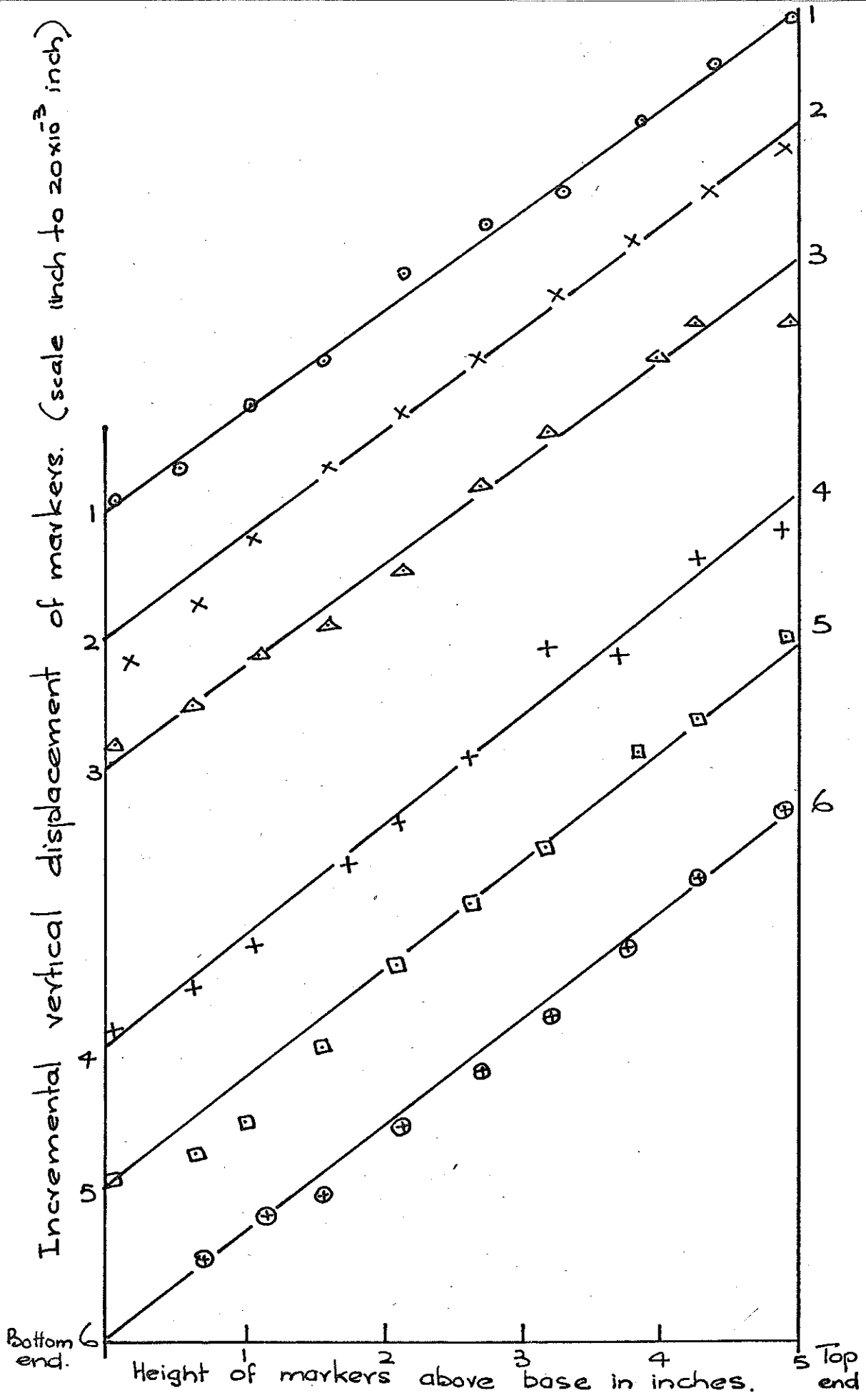


Fig. 3.39(a) Incremental vertical displacement of markers plotted against their heights above base for 6 vertical columns in plane 1 of sample OB (Fully drained test at 30psi cell-pressure. $\eta = 0.5$ $\Delta\eta = 0.05$)

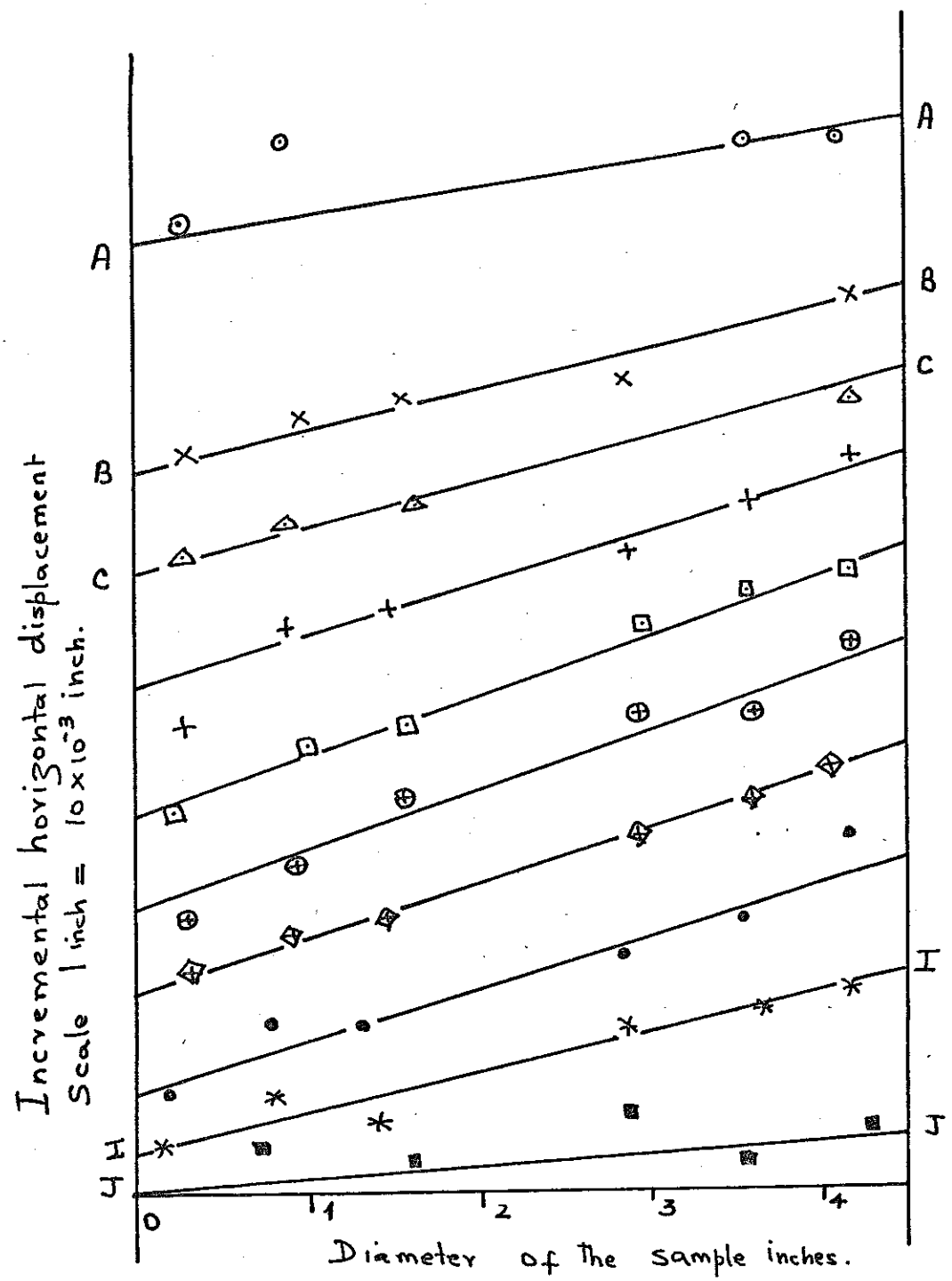


Fig. 3.39 (b). Incremental horizontal displacement of markers plotted against the diameter of the sample for nine horizontal rows in plane I of the normally consolidated sample OB.

$\eta = 0.5$ $\Delta\eta = 0.05$

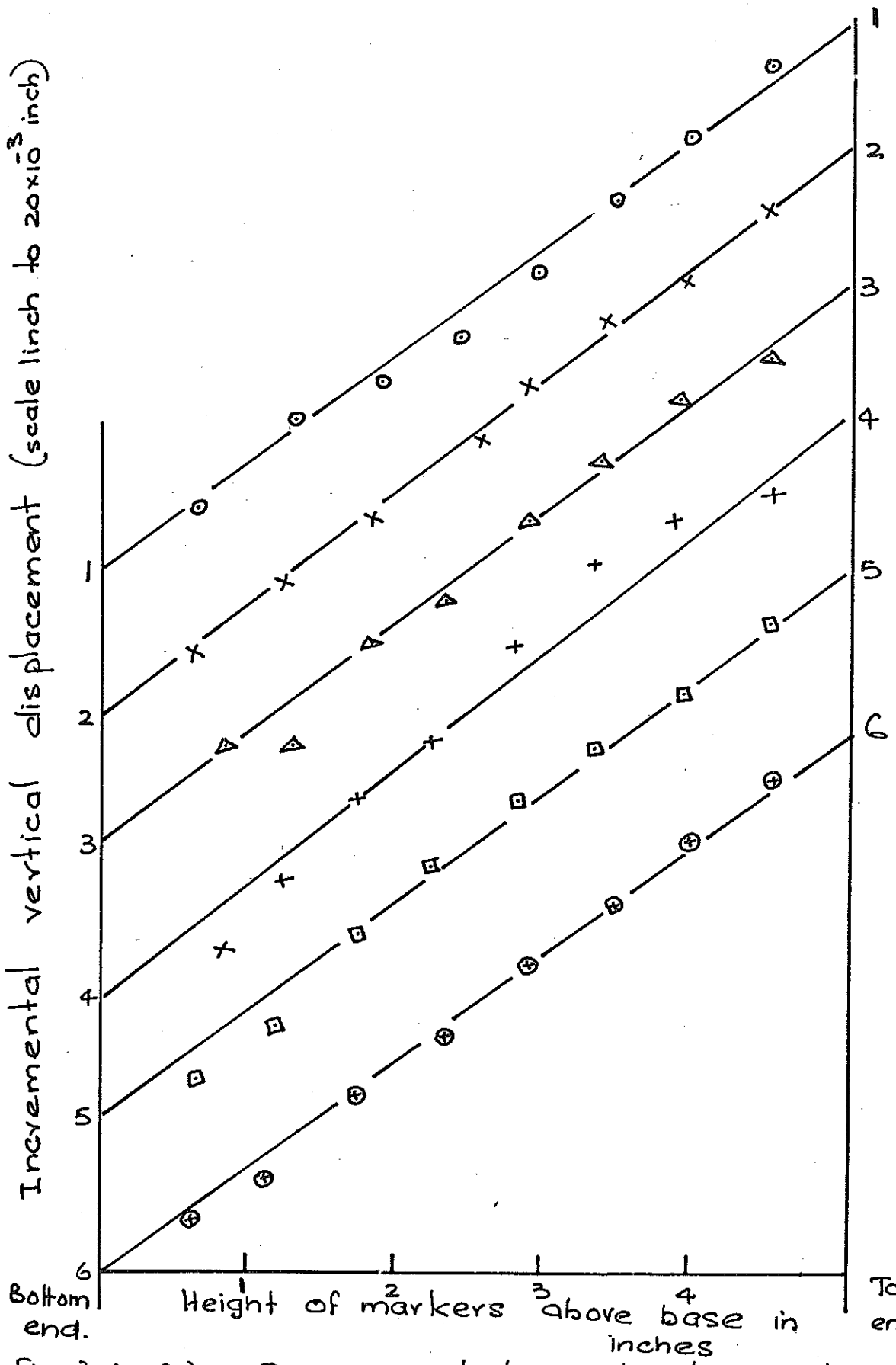


Fig. 340 (a). Incremental vertical displacement of lead markers plotted against their heights for 6 vertical columns in plane 2 of sample OB.
(Fully drained test at 30 psi cell pressure)

$y = 0.5 \quad \Delta y = 0.05.$

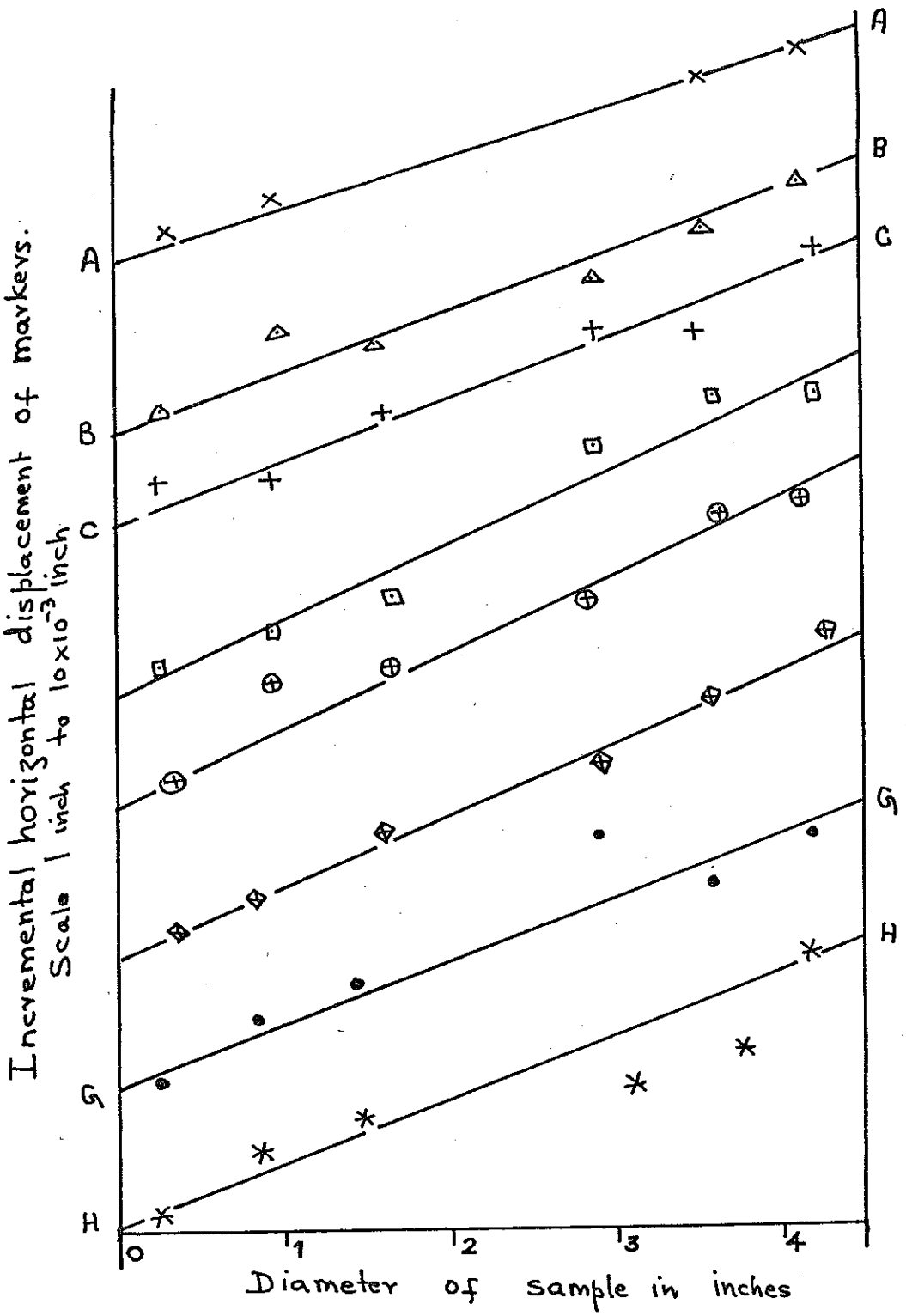


Fig. 3.40 (b). Incremental vertical displacement of markers plotted against their heights above base for eight vertical columns in plane 2 of the normally consolidated sample OB.

$\eta = 0.5$ $\Delta\eta = 0.05$

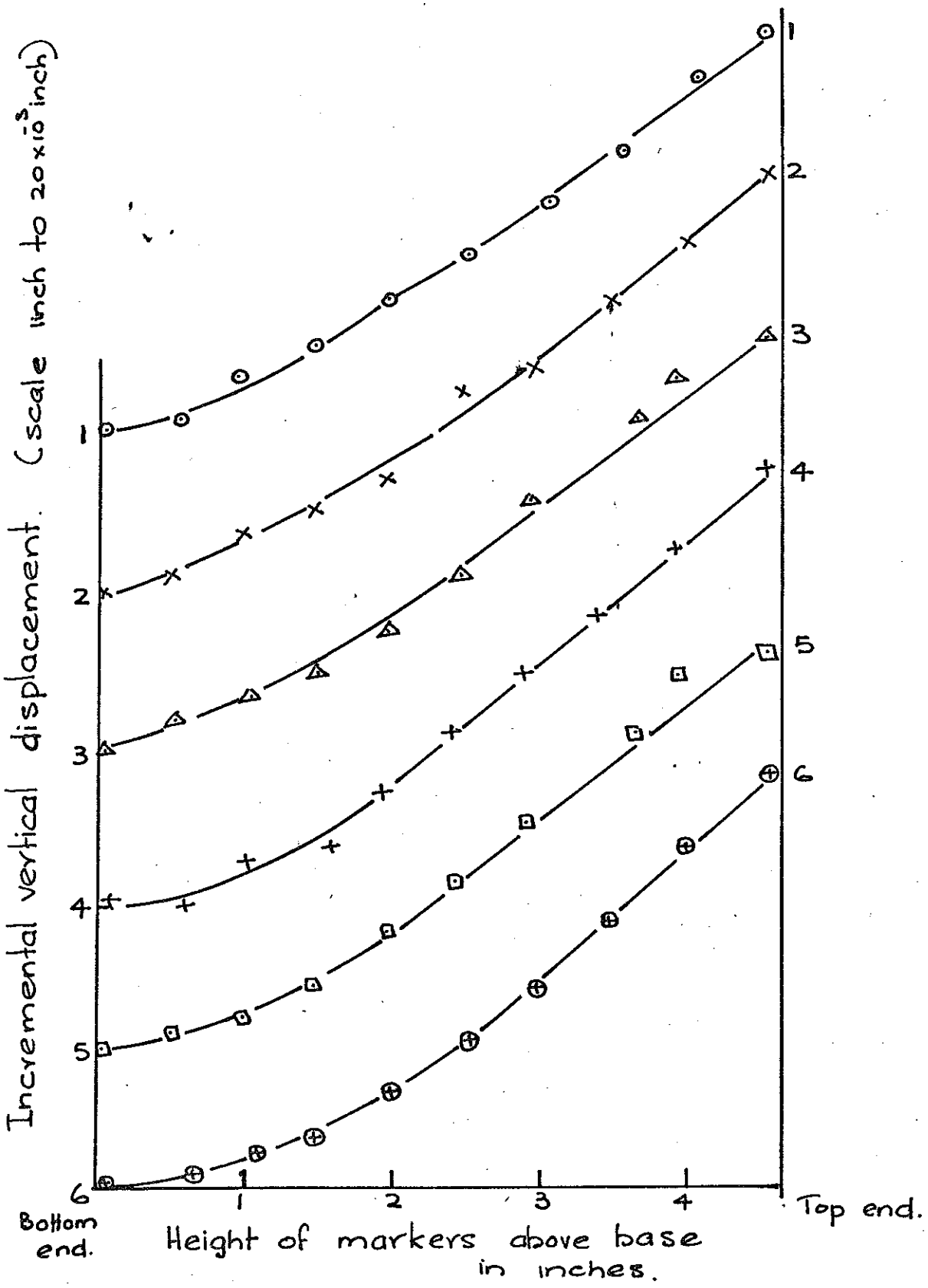


Fig. 3.41 (a) Incremental vertical displacement of lead markers plotted against their heights from base for 6 vertical columns in plane 1 of sample OB during failure
(Fully drained test at 30psi cell pressure)

$y = 0.55 \quad \Delta y = 0.10$

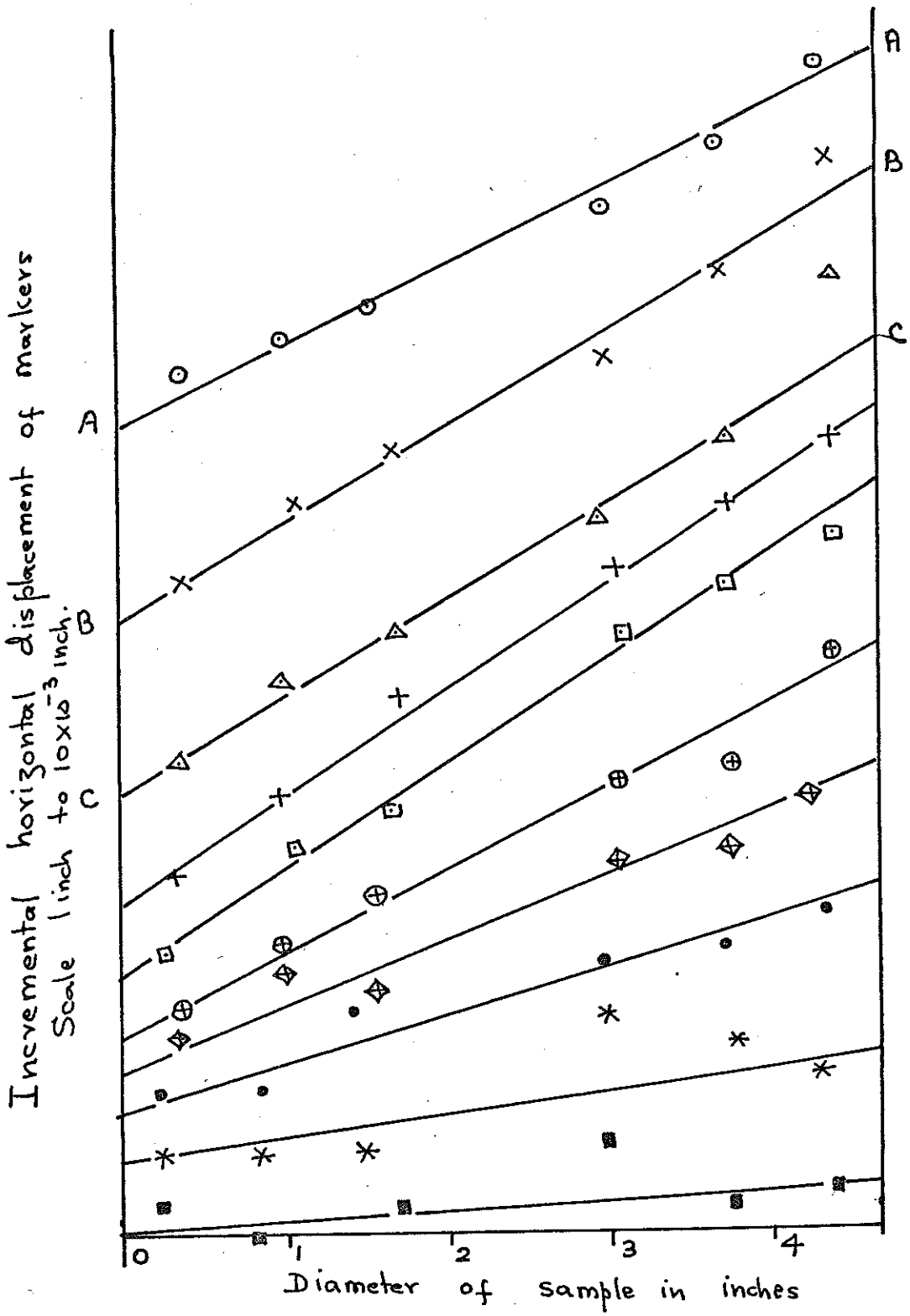
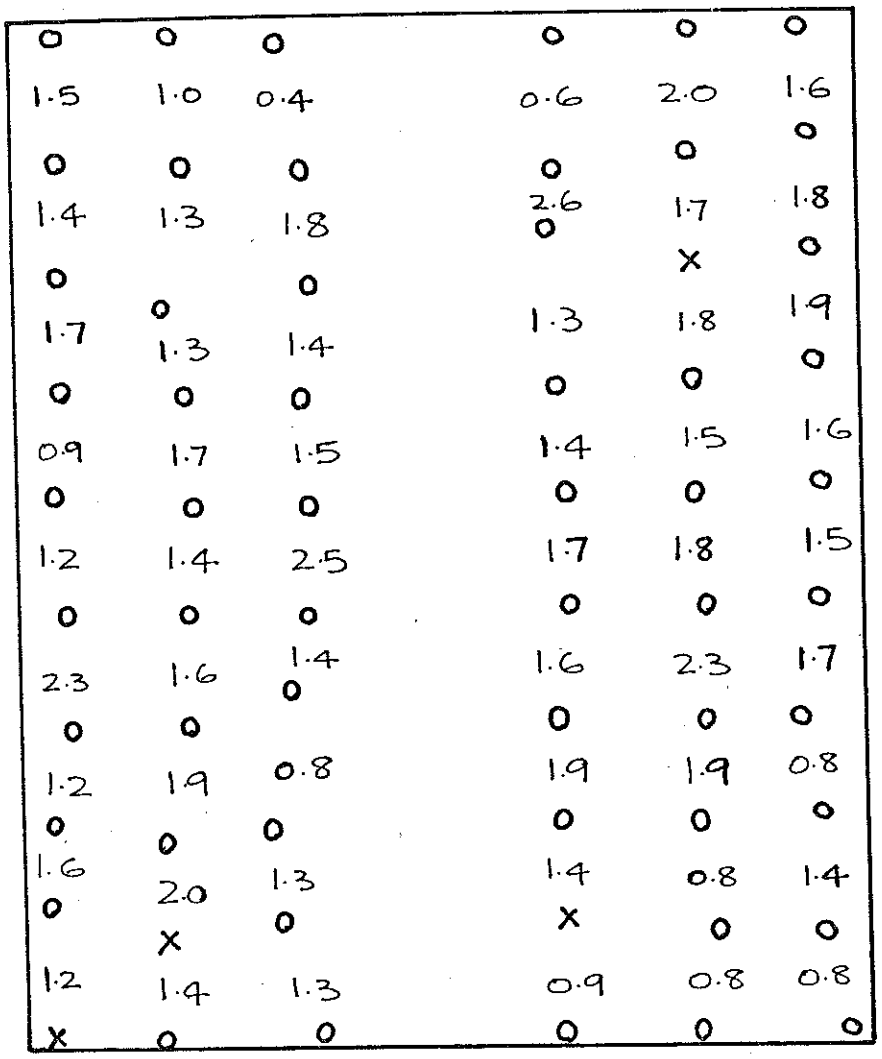


Fig. 3.4I (b). Incremental horizontal displacement of markers plotted against their distances along diameter for ten horizontal rows in plane I of specimen OB during progressive failure.

= 0.5 = 0.05

Top end



Bottom end

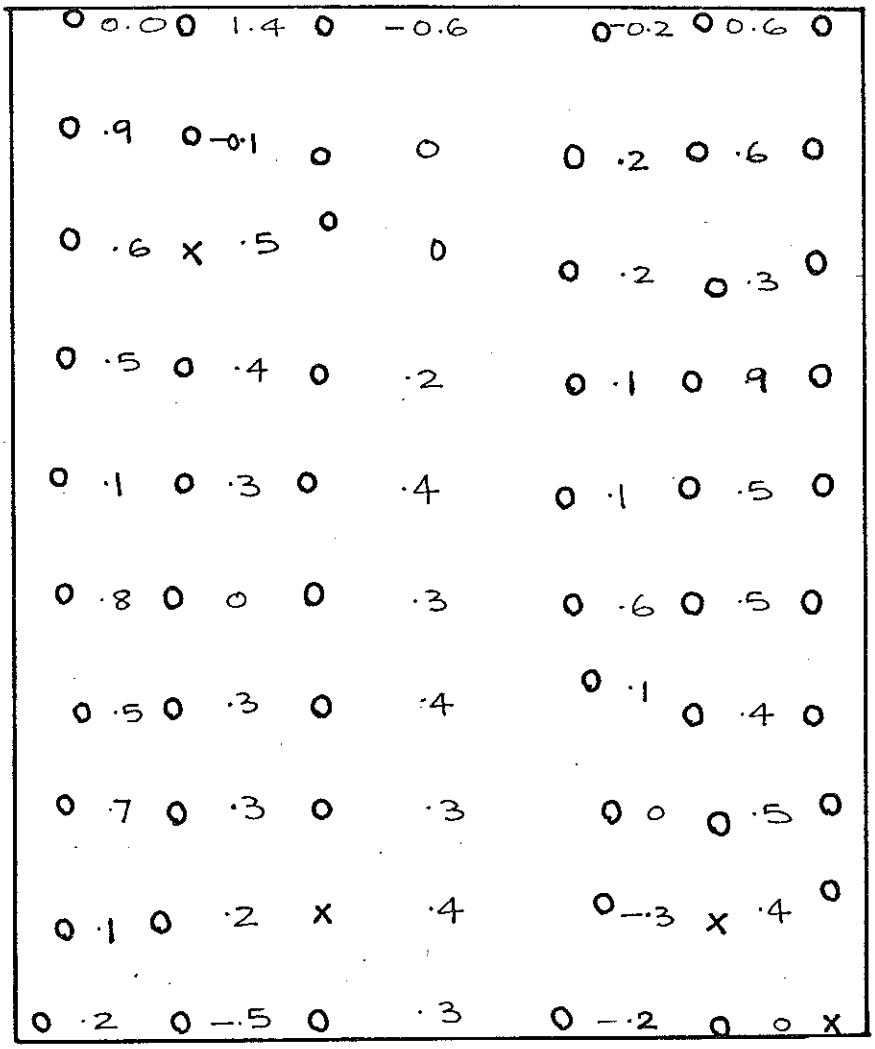
Fig. 3.42 (a). Incremental axial strain distribution in plane I of the normally consolidated sample OB during a fully drained test with constant cell pressure.

$\eta = 0.5$ $\Delta\eta = 0.05$

o Position of markers

× Markers missed during arrangement.

Top end



Bottom end

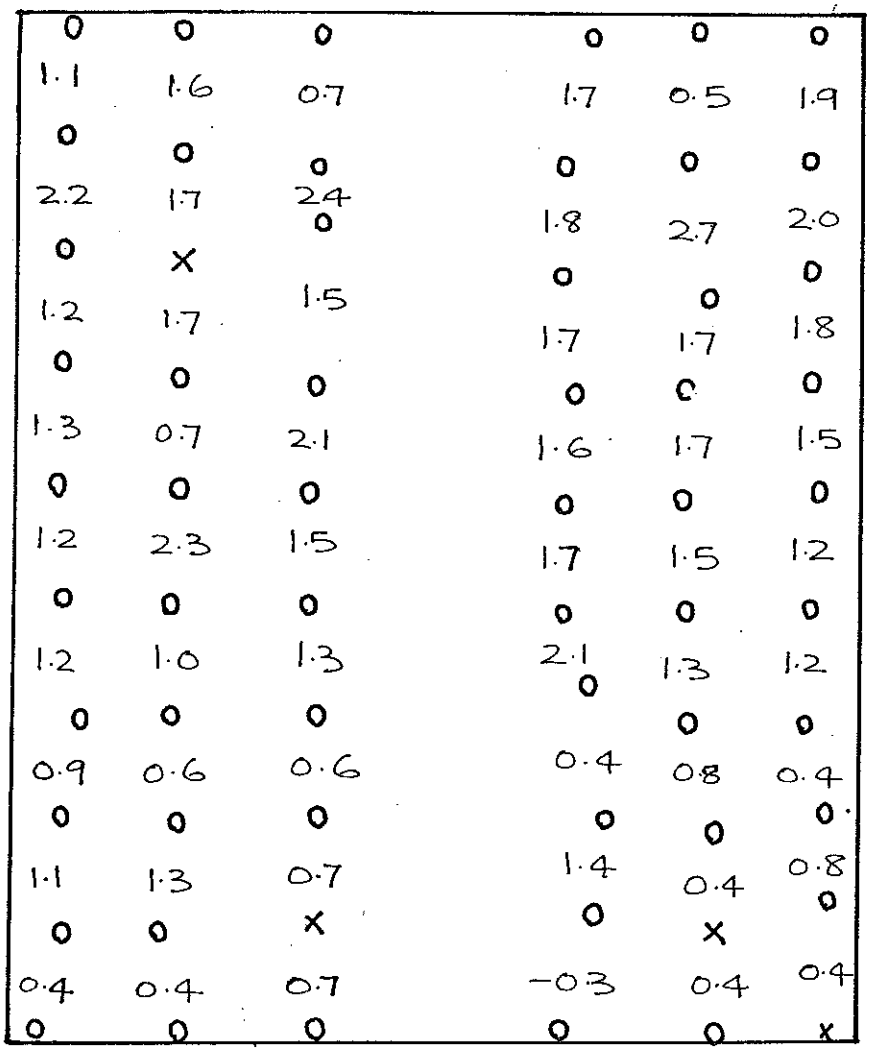
Fig. 3.42 (b). Incremental radial strain distribution in plane I of the normally consolidated sample OB during a fully drained compression test with constant cell pressure.

$\eta = 0.5$ $\Delta\eta = 0.05$

O Position of markers.

× Markers missed during arrangement.

Top end



Bottom end

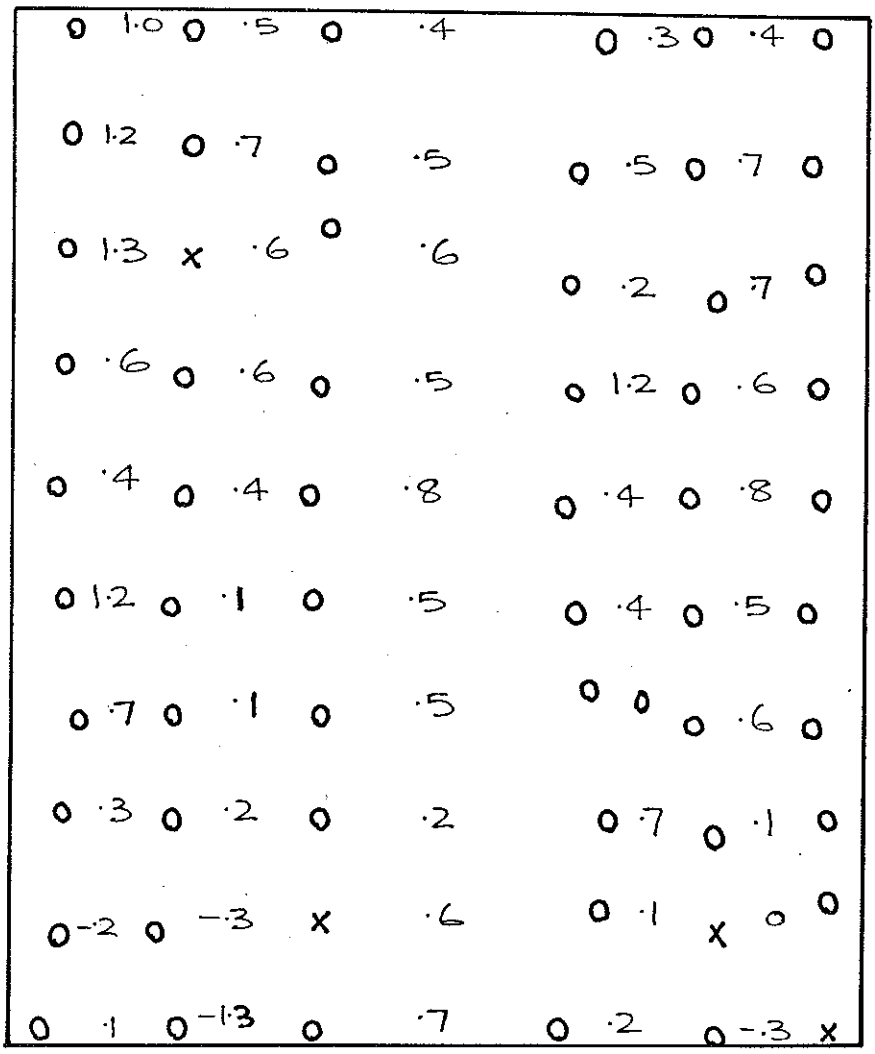
Fig. 3.43 (a). Incremental axial strain distribution in plane I of the normally consolidated sample OB during progressive failure.

$\eta = 0.55$ $\Delta\eta = 0.10$

O Position of markers.

X Markers missed during arrangement.

Top end



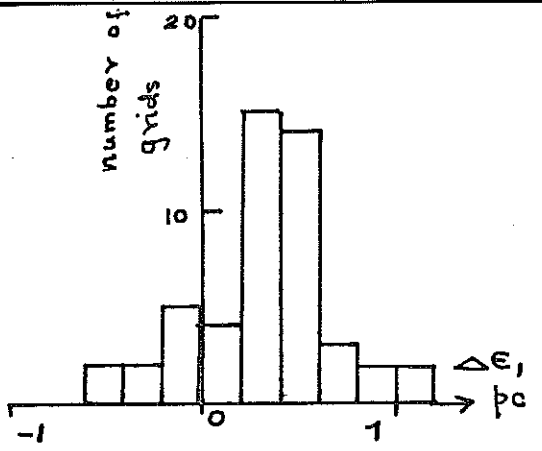
Bottom end

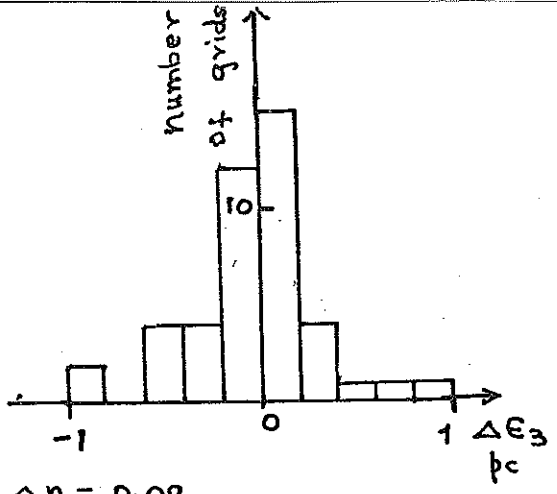
Fig. 3.43 (b). Incremental radial strain distribution in plane I of the normally consolidated sample during progressive failure.

$\eta = 0.55$ $\Delta\eta = 0.10$

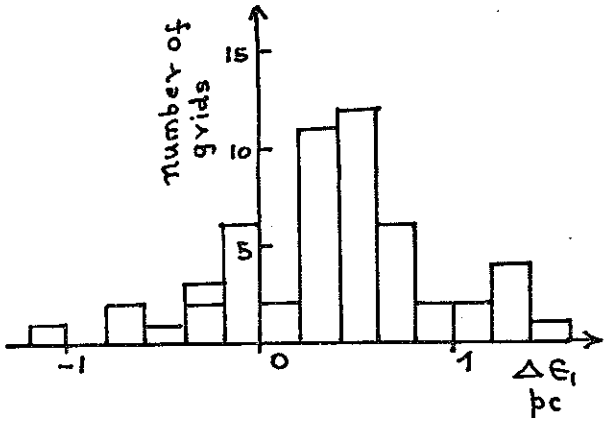
o Position of markers

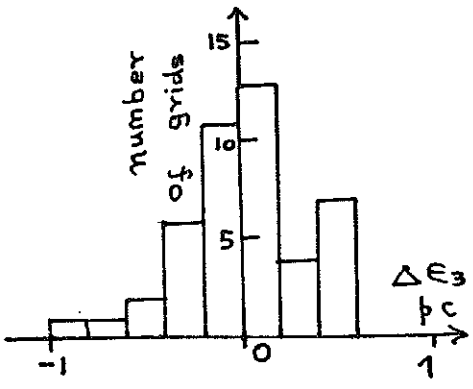
x Markers missed during arrangement



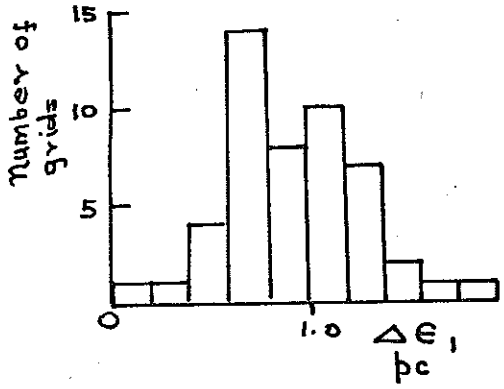


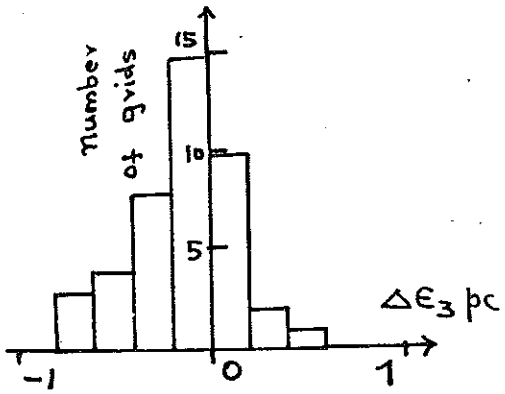
(i) $\eta = 0.11$ $\Delta\eta = 0.09$



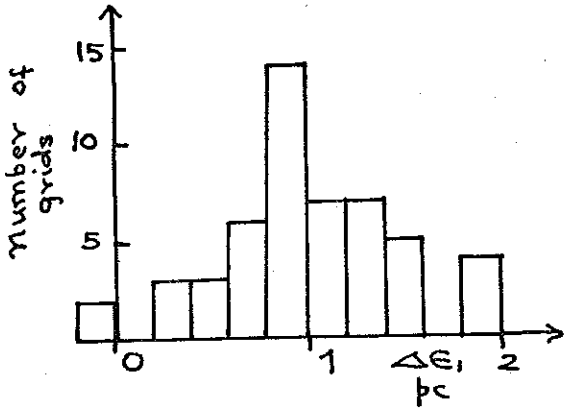


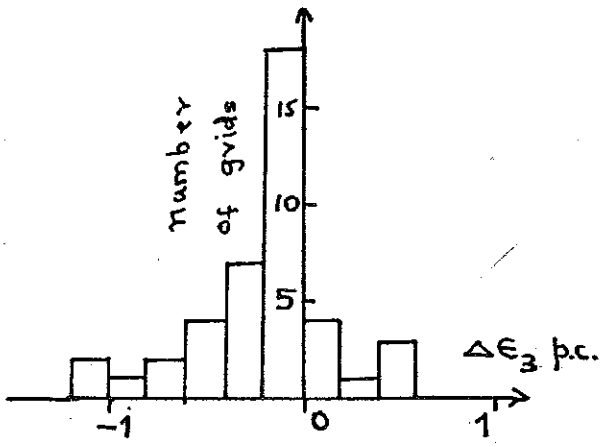
(ii) $\eta = 0.2$ $\Delta\eta = 0.08$





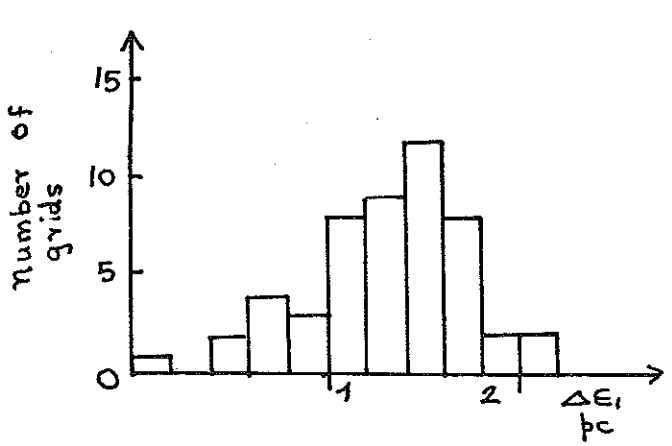
(iii) $\eta = 0.28$ $\Delta\eta = 0.09$

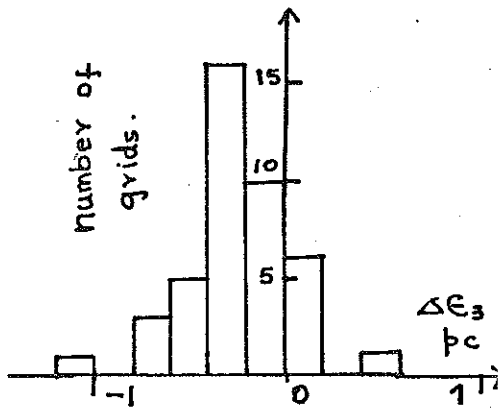




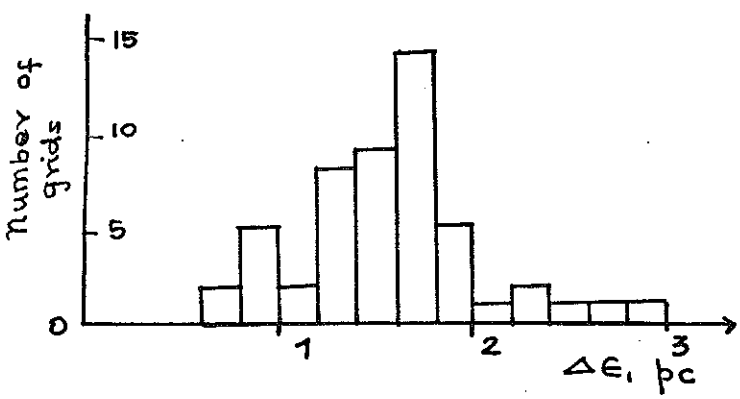
(iv) $\eta = 0.37$ $\Delta\eta = 0.06$

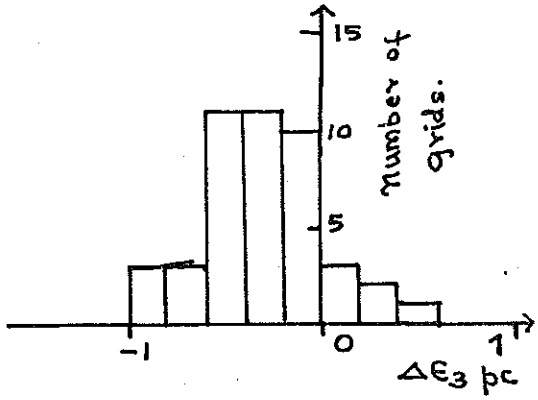
(See overleaf)



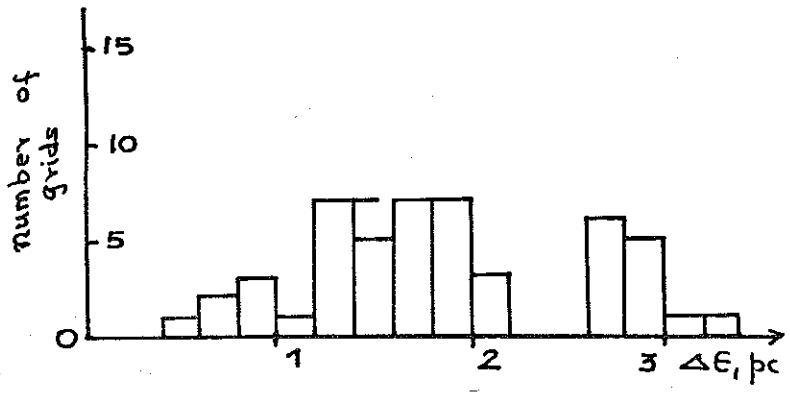


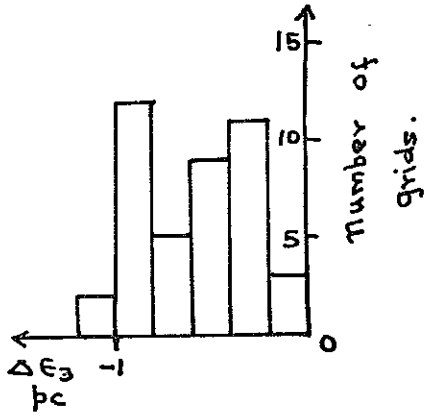
(v) $\eta = 0.43$ $\Delta\eta = 0.07$





(vi) $\eta = 0.5$ $\Delta\eta = 0.05$

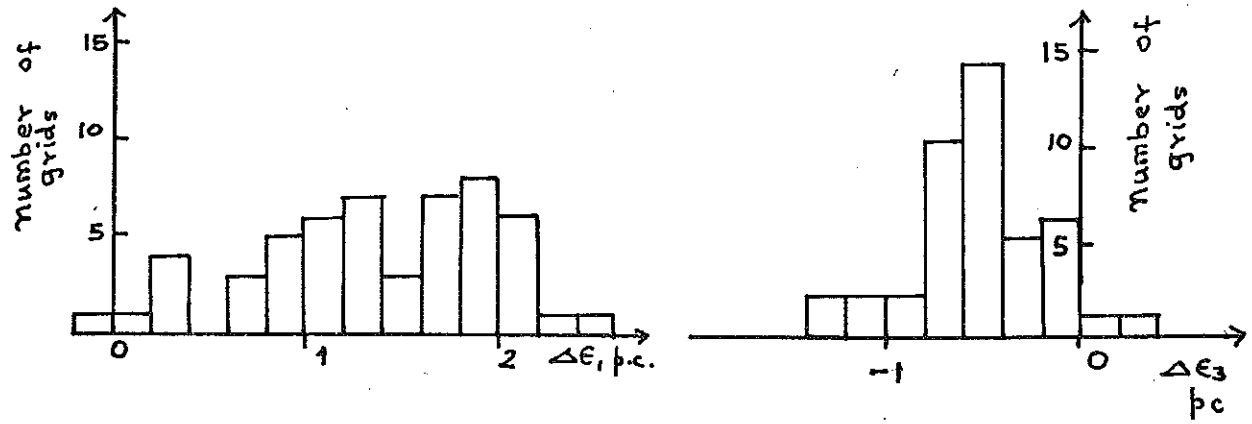




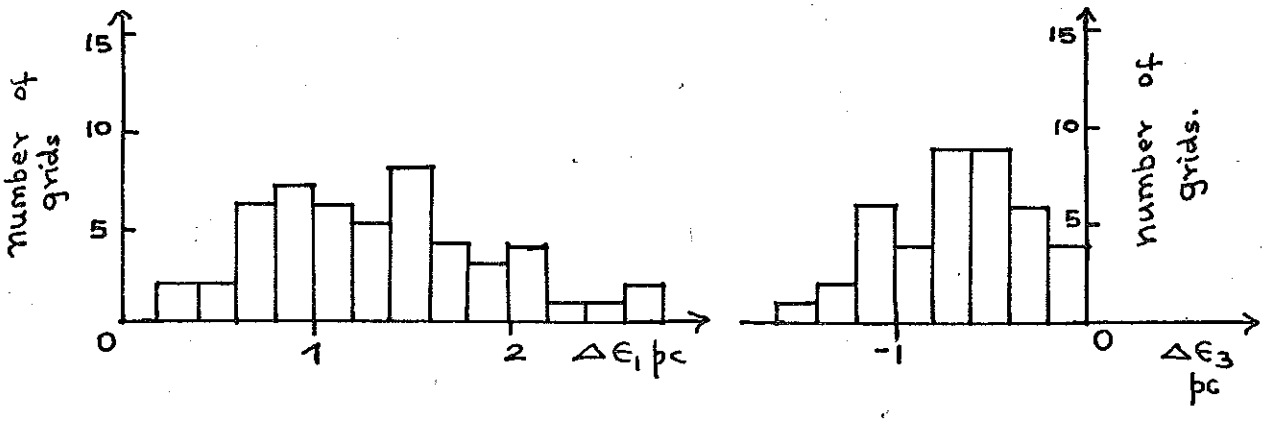
(vii) During progressive failure

$\eta = 0.55$ $\Delta\eta = 0.10$

(See overleaf)



(viii) During progressive failure



(ix) During progressive failure.

Fig. 3.44 (i)- (ix). Histograms representing incremental strain distribution in the grids of the normally consolidated sample OB during a fully drained test with constant cell pressure.

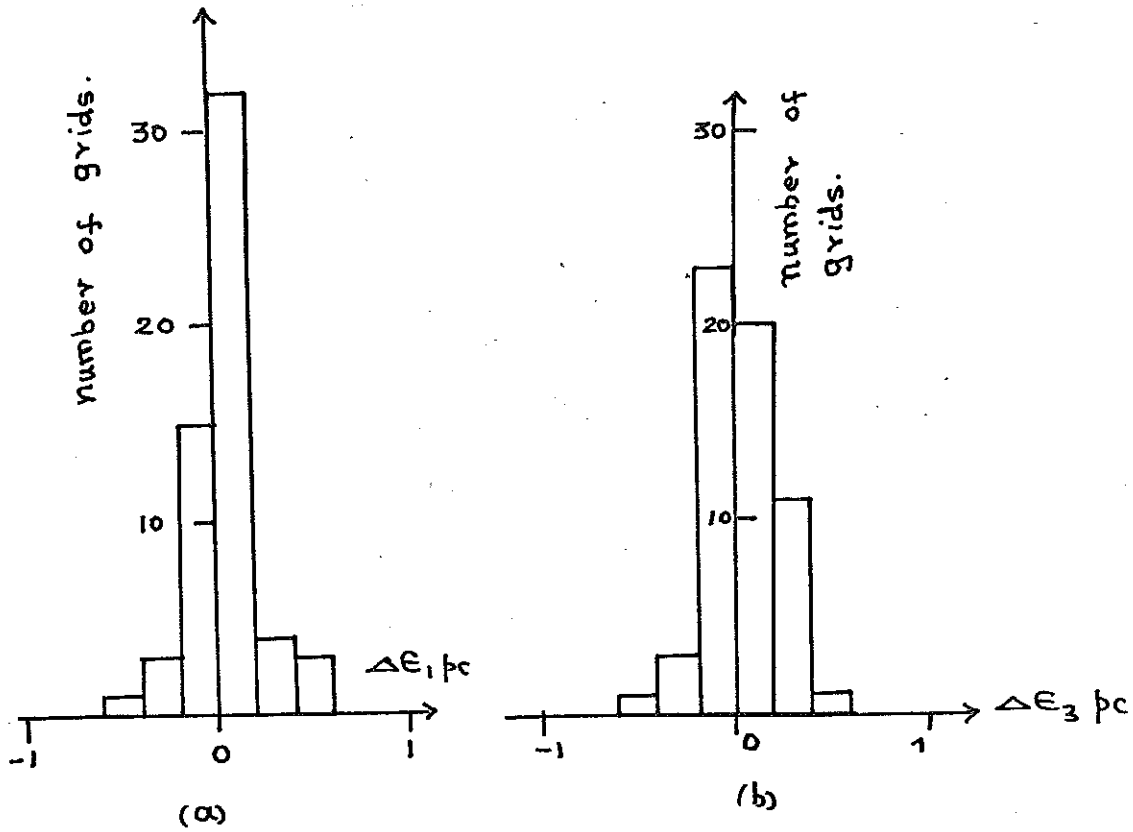


Fig. 3.45 (a) and (b). Histograms representing the errors in the measurements of strains in the grids as computed from two sets of measurements on the same radiograph of a 4 inch diameter sample OB.

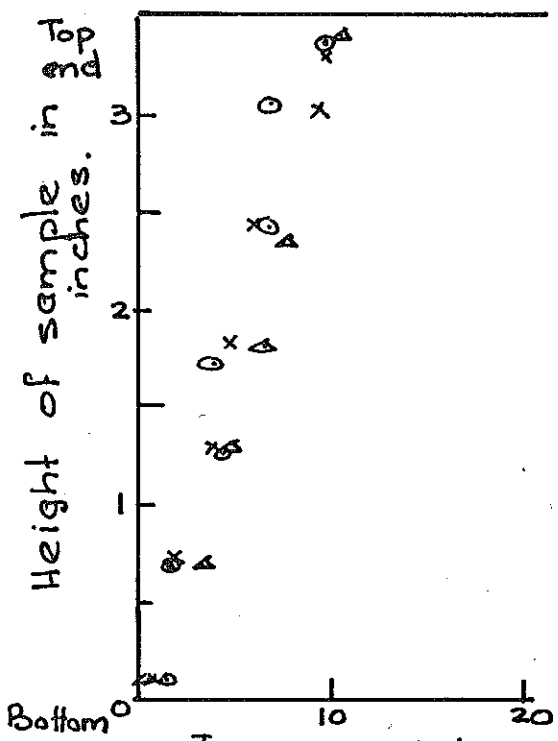


Fig. 3.46(a) Incremental vertical displacement pattern.

$y = 0 \quad \Delta y = 0.23$

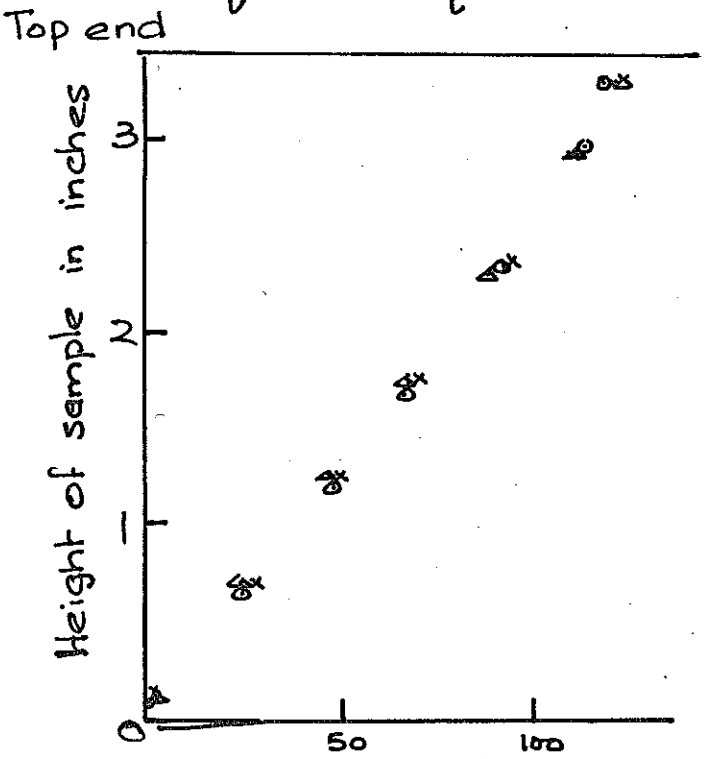


Fig. 3.46(b) Incremental vertical displacement pattern.

$y = 0.23 \quad \Delta y = 0.29$

(See overleaf)

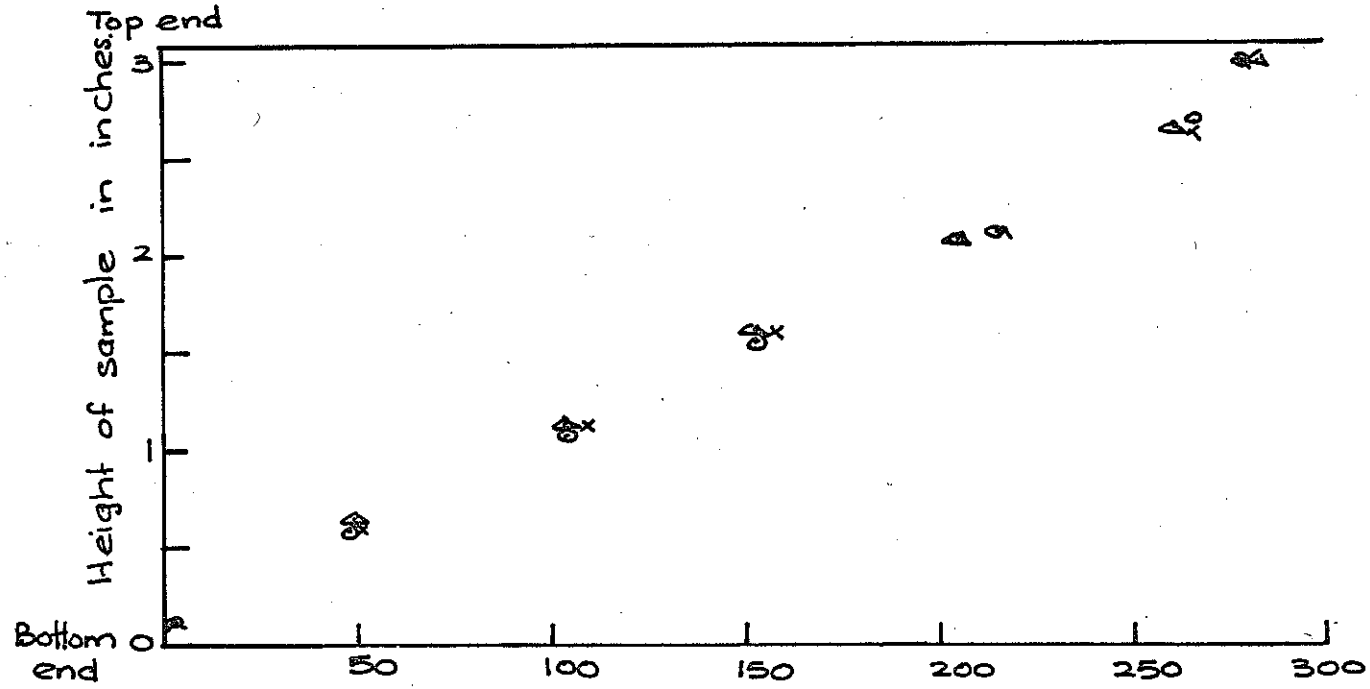


Fig. 3.46 (c) Incremental vertical displacement pattern.
$\eta = 0.52$ $\Delta\eta = 0.18$.

Fig. 3.46 (a-c) Incremental vertical displacement patterns due to three increments of stress ratios in a lightly overconsolidated sample BA.
(Fully drained test at 90 psi cell pressure)

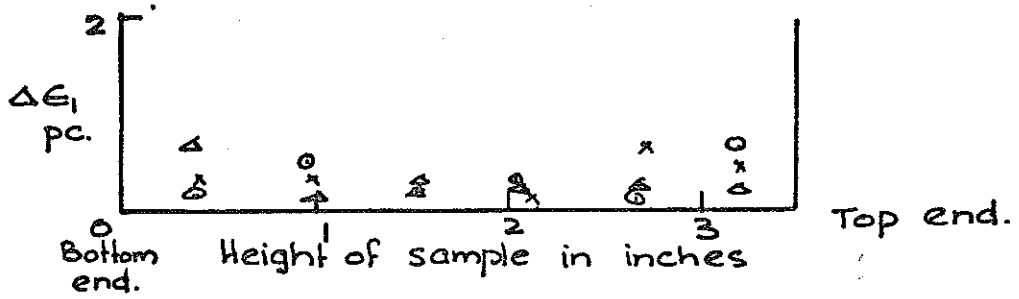


Fig. 3.47(a) Incremental axial strain distribution at $\eta = 0$, $\Delta\eta = 0.23$.

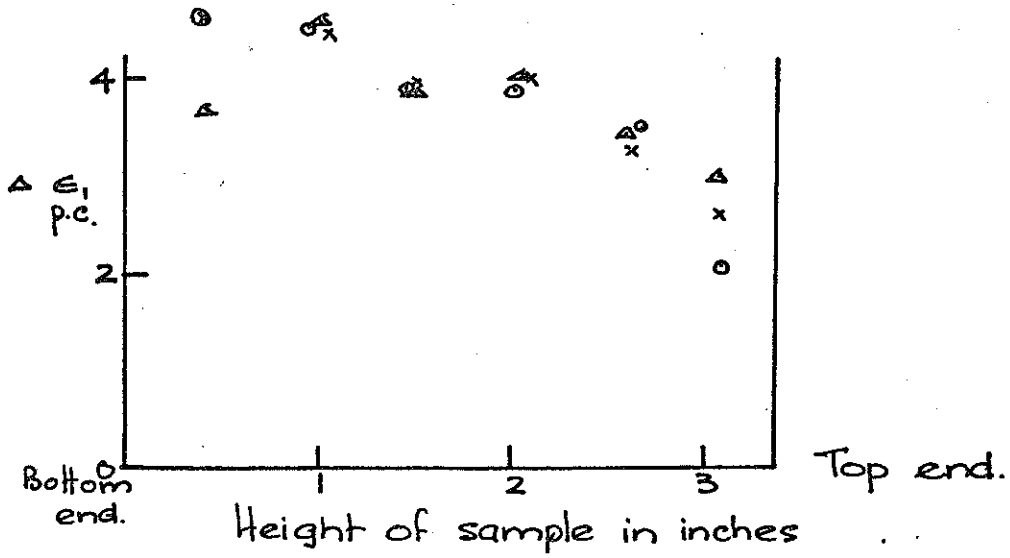


Fig. 3.47(b). Incremental axial strain distribution at $\eta = 0.23$, $\Delta\eta = 0.29$

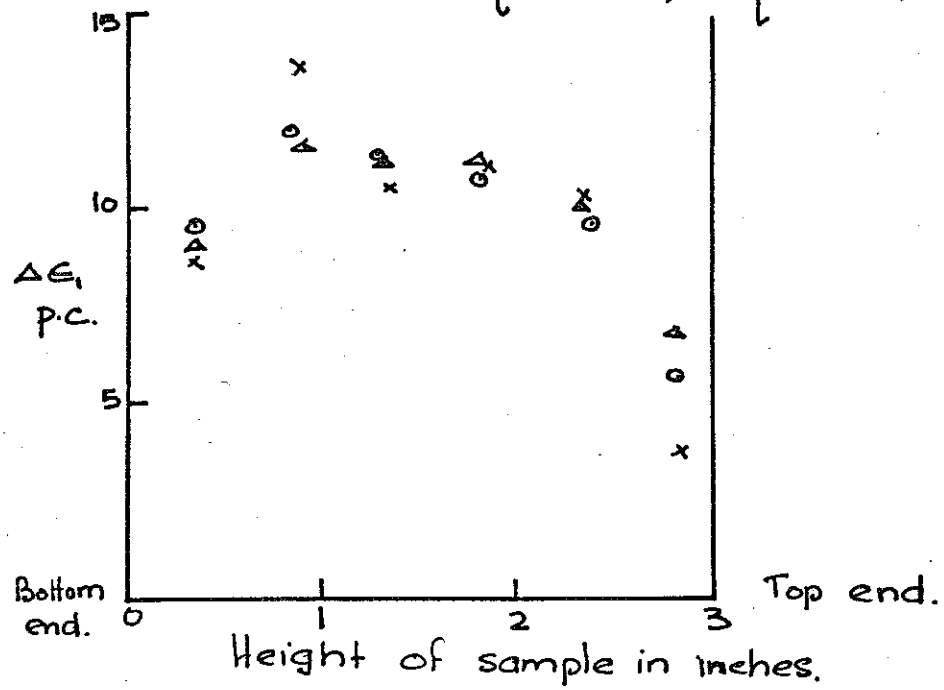
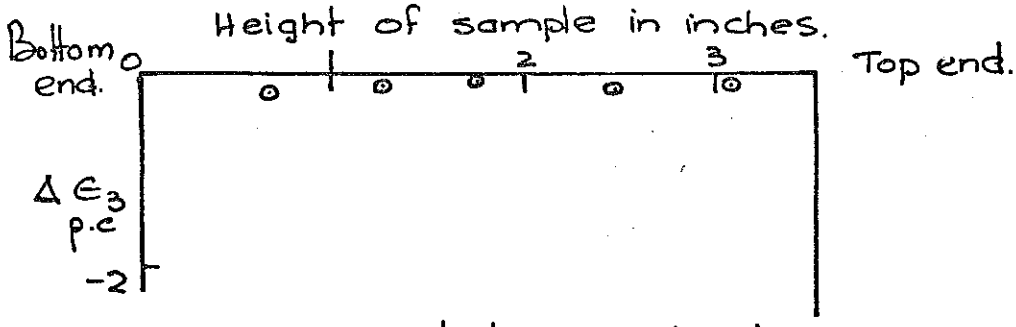
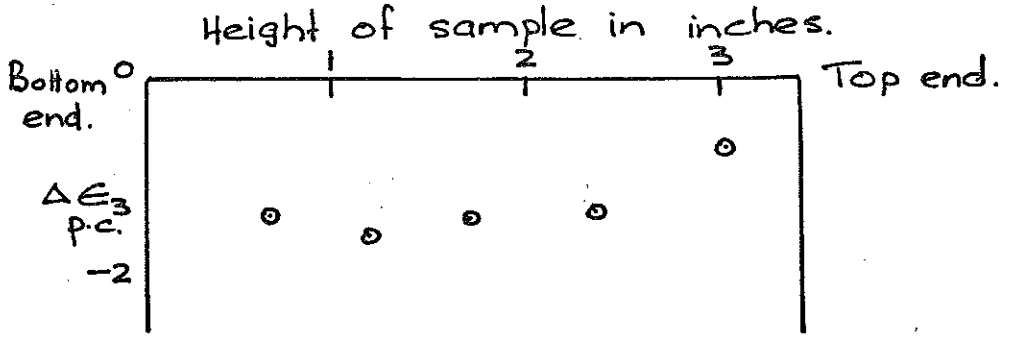


Fig. 3.47(c) Incremental axial strain distribution at $\eta = 0.52$, $\Delta\eta = 0.18$.

Fig. 3.47 (a-c). Incremental axial strain distribution for three increements of stress ratios in the plane 1 of the lightly overconsolidated sample BA.



3.48 (a) Incremental radial strain distribution at $\eta = 0$, $\Delta\eta = 0.23$.



3.48(b). Incremental radial strain distribution. $\eta = 0.23$, $\Delta\eta = 0.29$

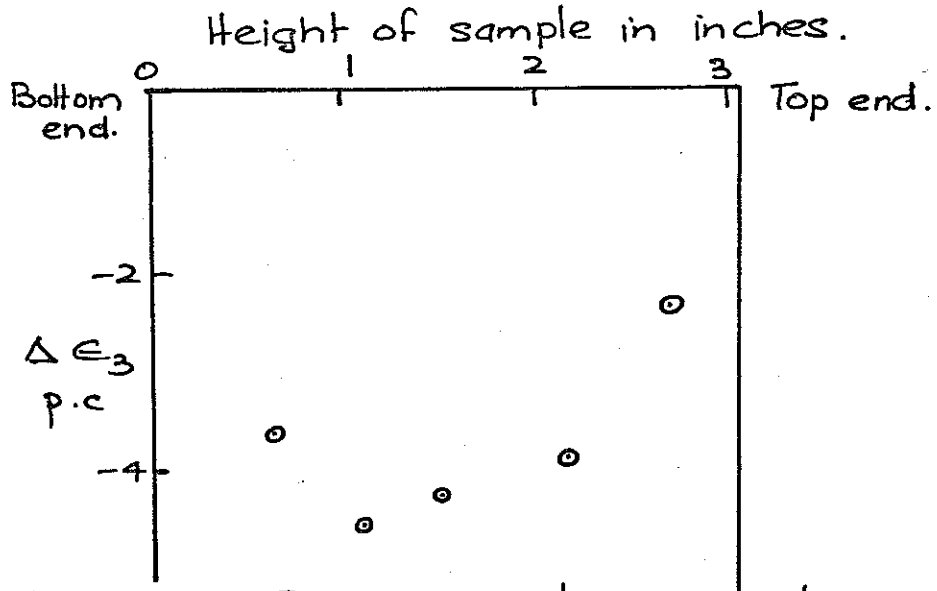
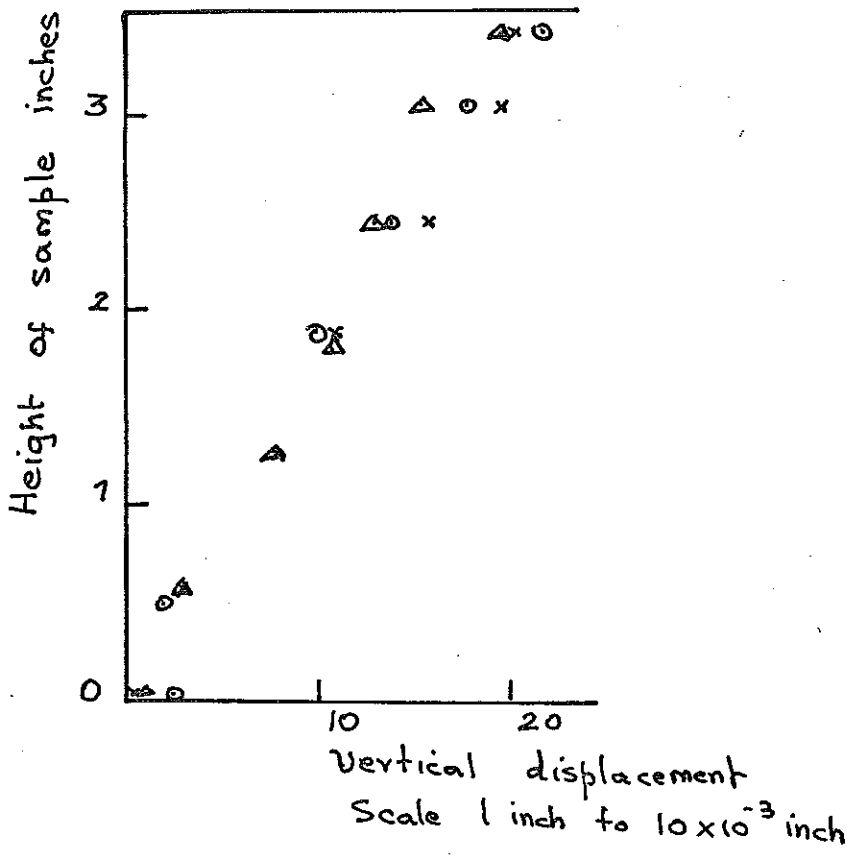
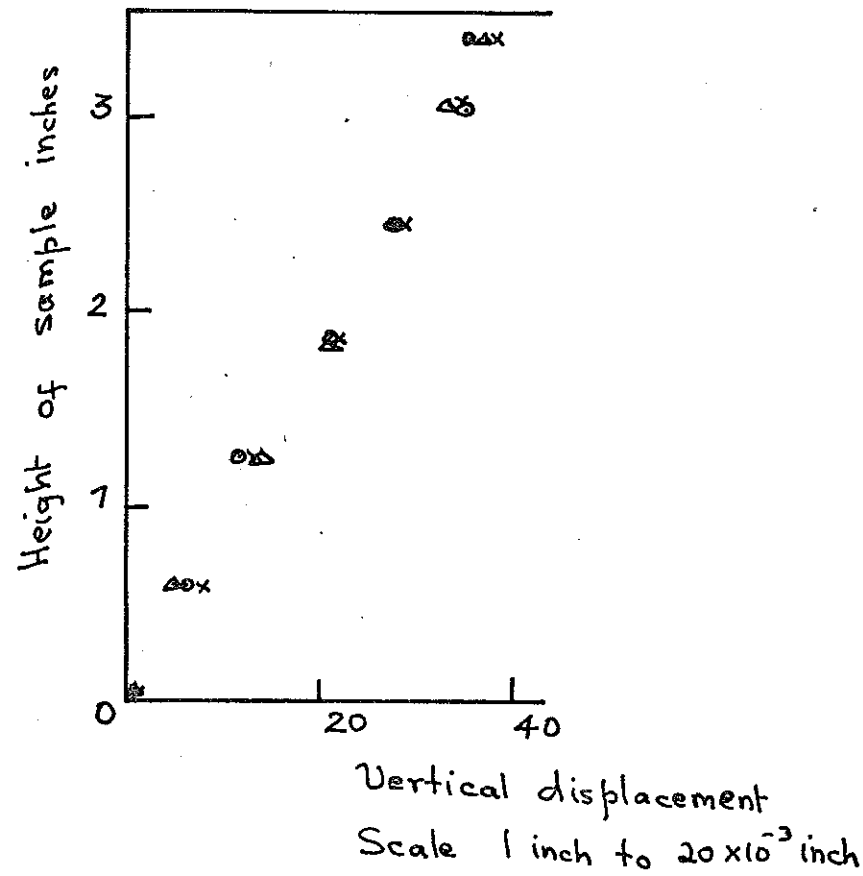


Fig. 3.48 (c) Incremental radial strain distribution. $\eta = 0.52$, $\Delta\eta = 0.18$.

Fig. 3.48 (a-c) Incremental radial strain distributions in plane 1 of the lightly overconsolidated sample BA for three increments of stress ratios.
(Fully drained test at 90psi. cell pressure)

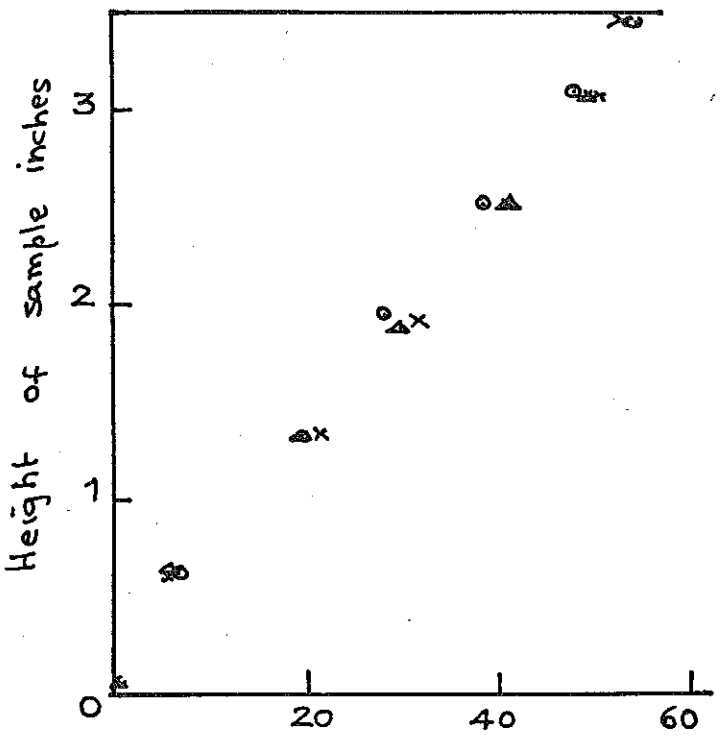


(i) $\eta = 0 \quad \Delta\eta = 0.6$



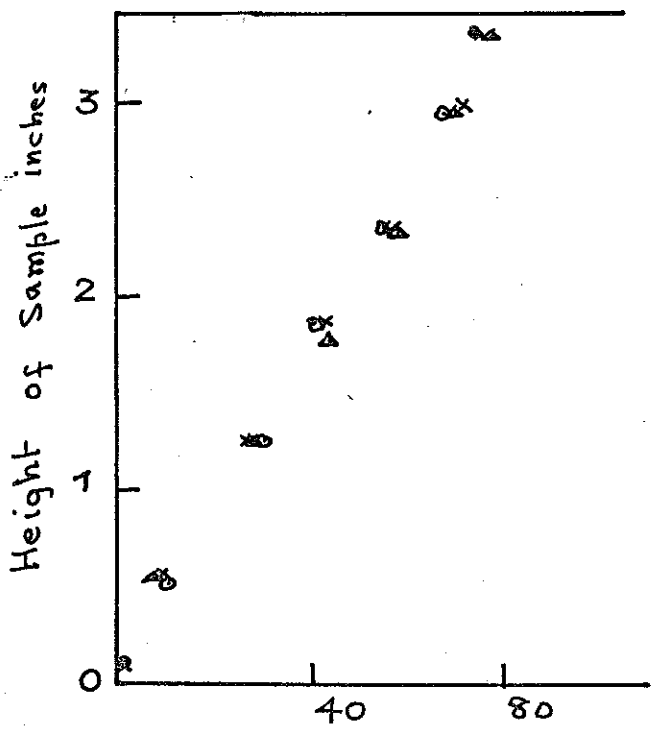
(ii) $\eta = 0.6 \quad \Delta\eta = 0.2$

(See overleaf)



Vertical displacement
Scale 1 inch = 20×10^{-3} inch

(iii) $\eta = 0.8$ $\Delta\eta = 0.2$



Vertical displacement
Scale 1 inch to 40×10^{-3} inch

(iv) $\eta = 1.0$ $\Delta\eta = 0.10$

(See overleaf)

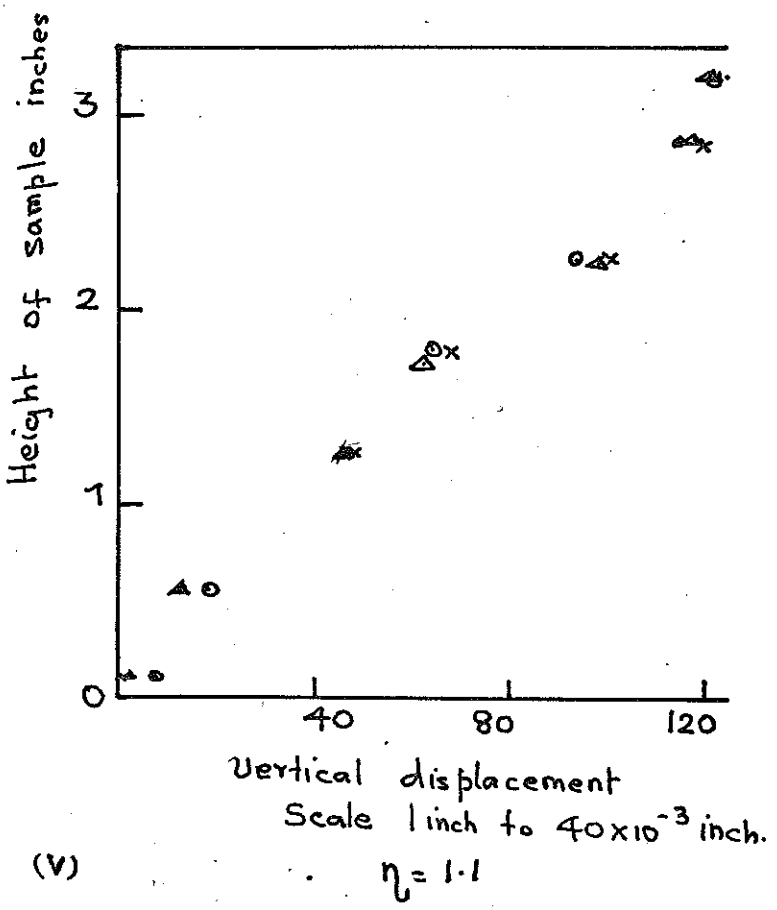
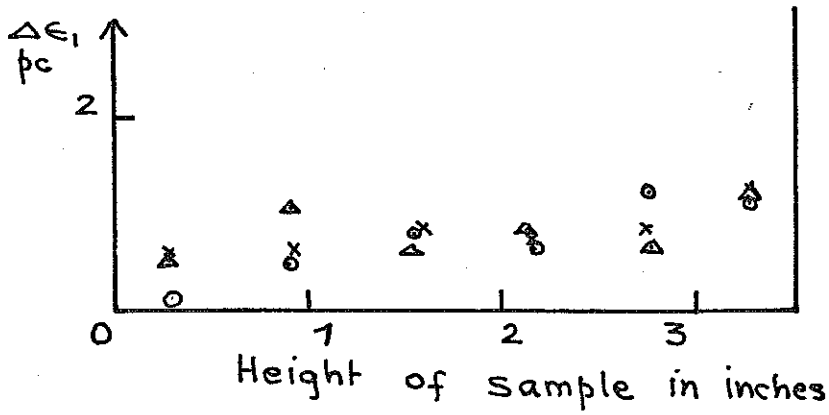
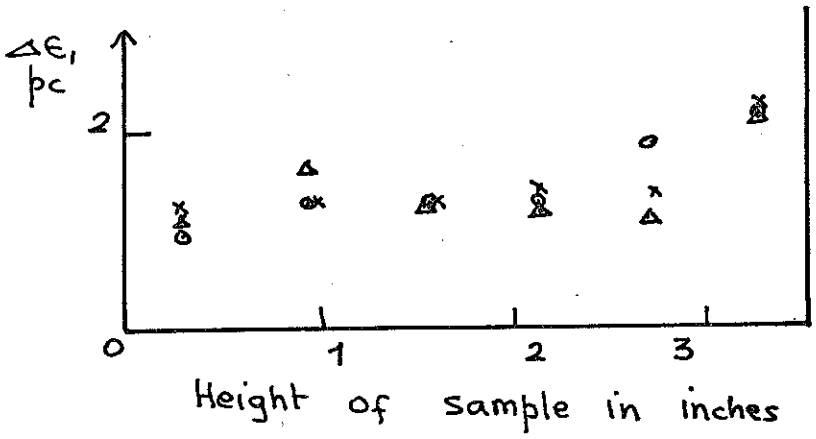


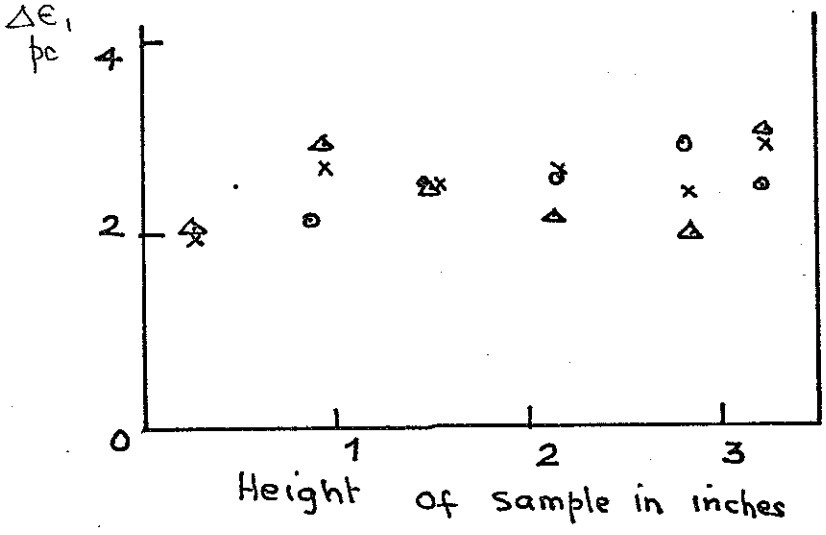
Fig. 3.49 (i-v). Incremental vertical displacement patterns in the heavily overconsolidated sample BZ during a fully drained test with constant cell pressure.



(i) $\eta = 0$ $\Delta\eta = 0.6$

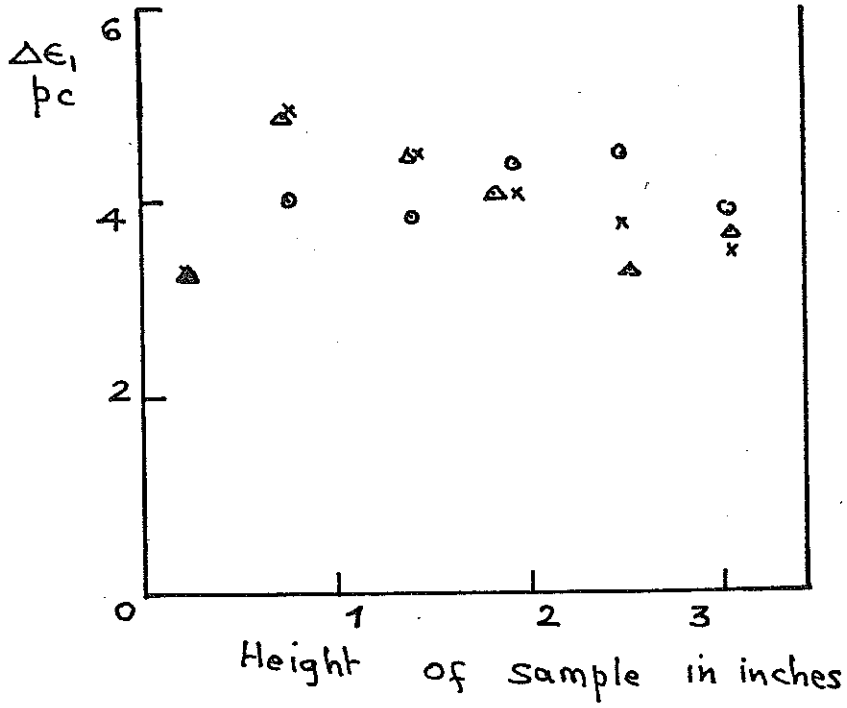


(ii) $\eta = 0.6$ $\Delta\eta = 0.2$

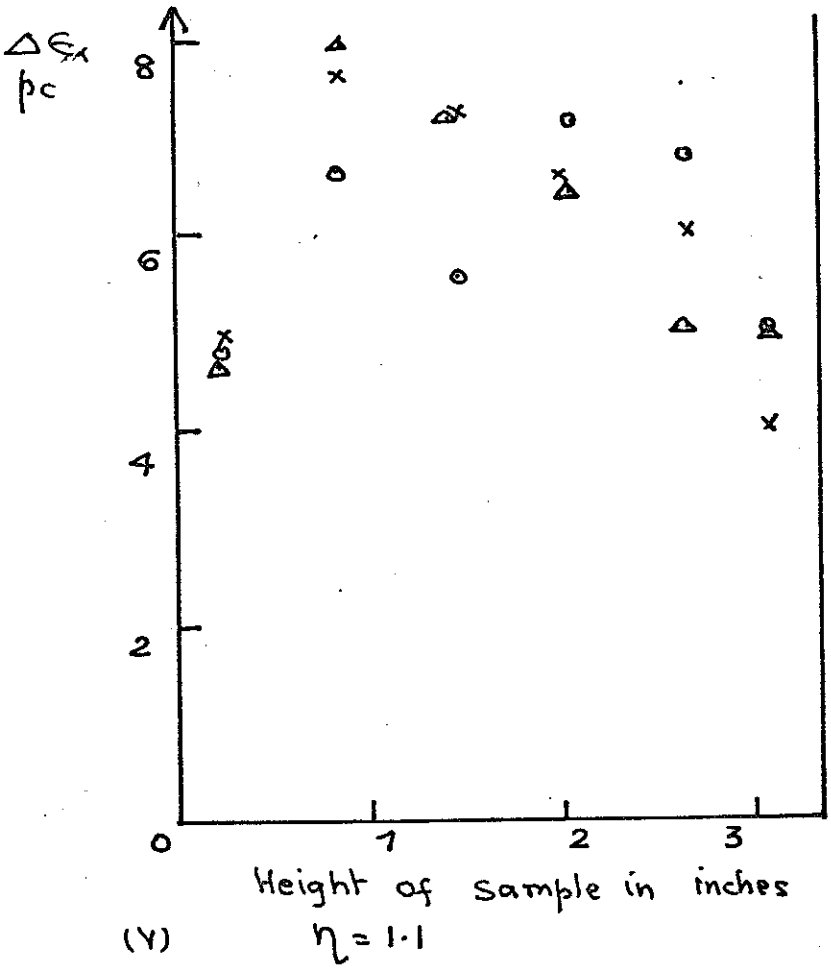


(iii) $\eta = 0.8$ $\Delta\eta = 0.2$

(See overleaf)

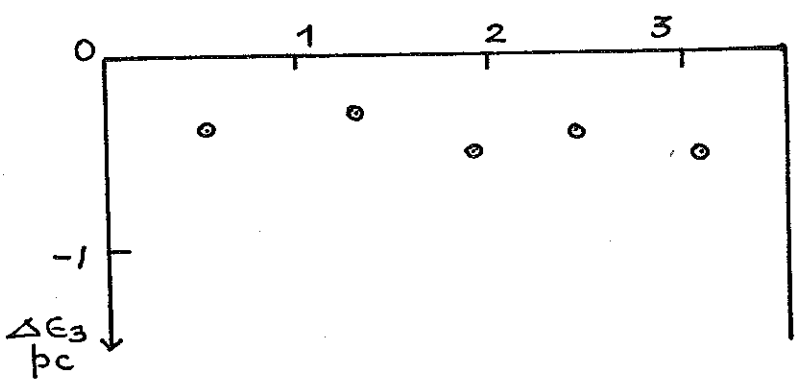


(iv) $\eta = 1.0$ $\Delta\eta = 0.1$

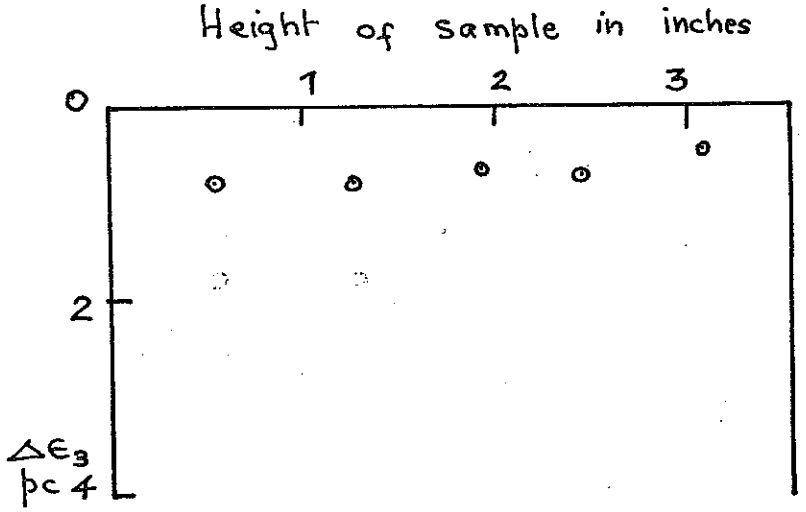


(v) $\eta = 1.1$

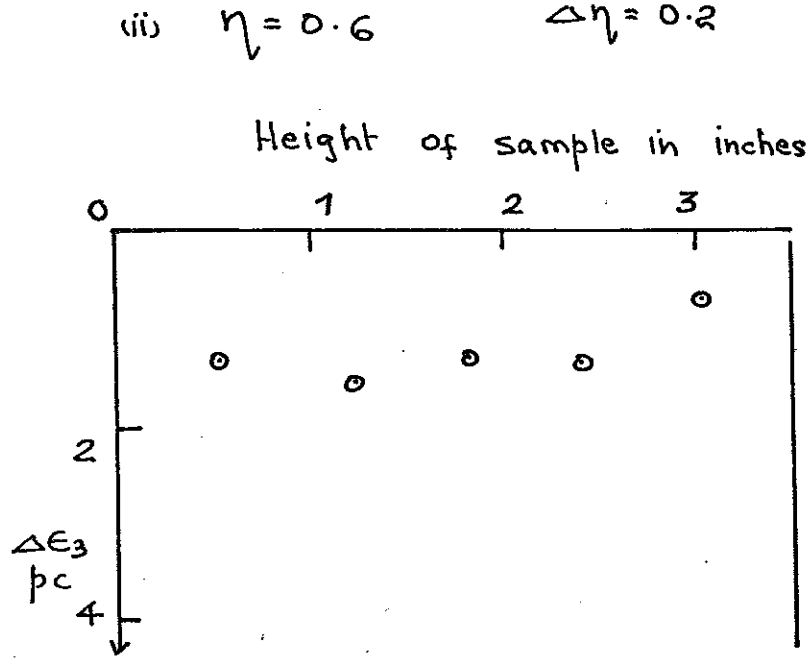
Fig. 3.50 (i-v). Incremental axial strain distributions in the heavily overconsolidated sample BZ during a fully drained test with constant cell pressure.



(i) $\eta = 0$ $\Delta\eta = 0.6$

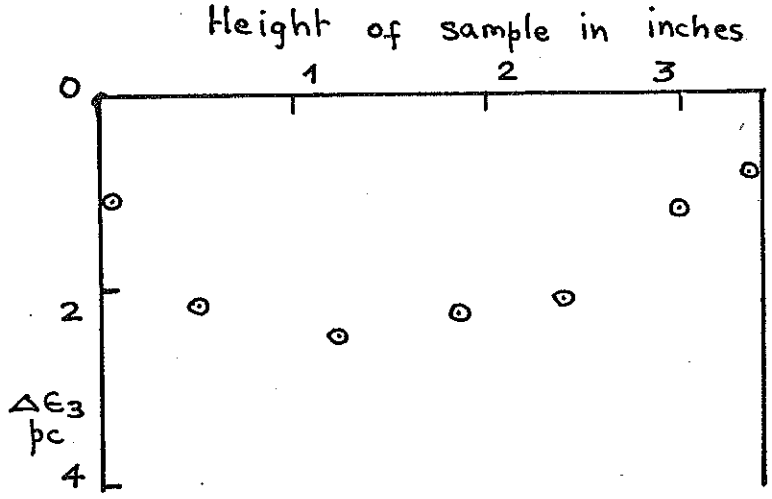


(ii) $\eta = 0.6$ $\Delta\eta = 0.2$

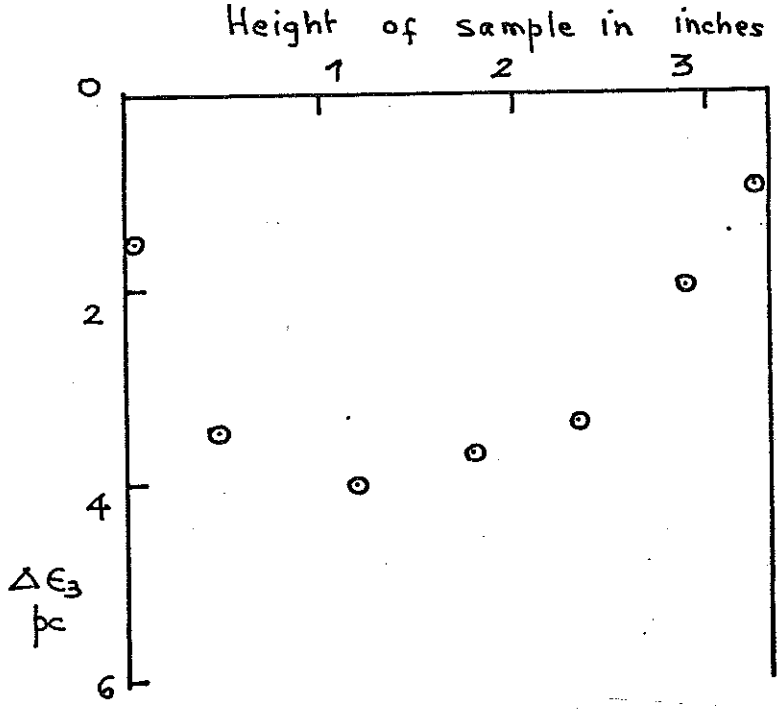


(iii) $\eta = 0.8$ $\Delta\eta = 0.2$

(See overleaf)



(iv) $\eta = 1.0$ $\Delta\eta = 0.1$



(v) $\eta = 1.1$

Fig. 3.5I (i-v). Incremental radial strain distributions in the heavily overconsolidated sample BZ during a fully drained test with constant cell pressure.

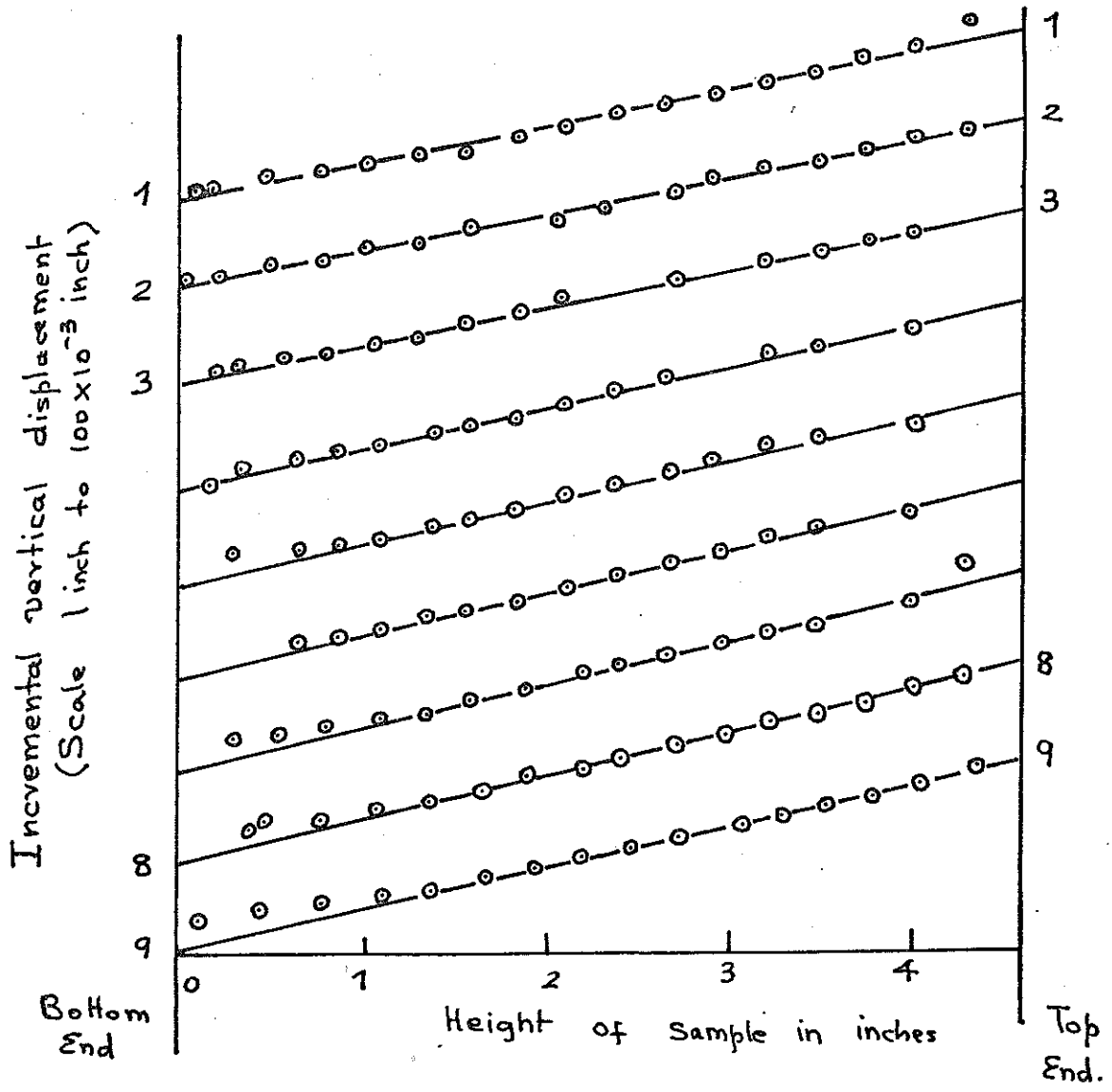


Fig. 3.52 (a). Incremental vertical displacement of markers plotted against their heights above base for nine vertical columns in plane I of the heavily overconsolidated sample OC during a fully drained test with constant cell pressure.

$\eta = 0$ $\qquad\qquad$ $\Delta\eta = 0.63$

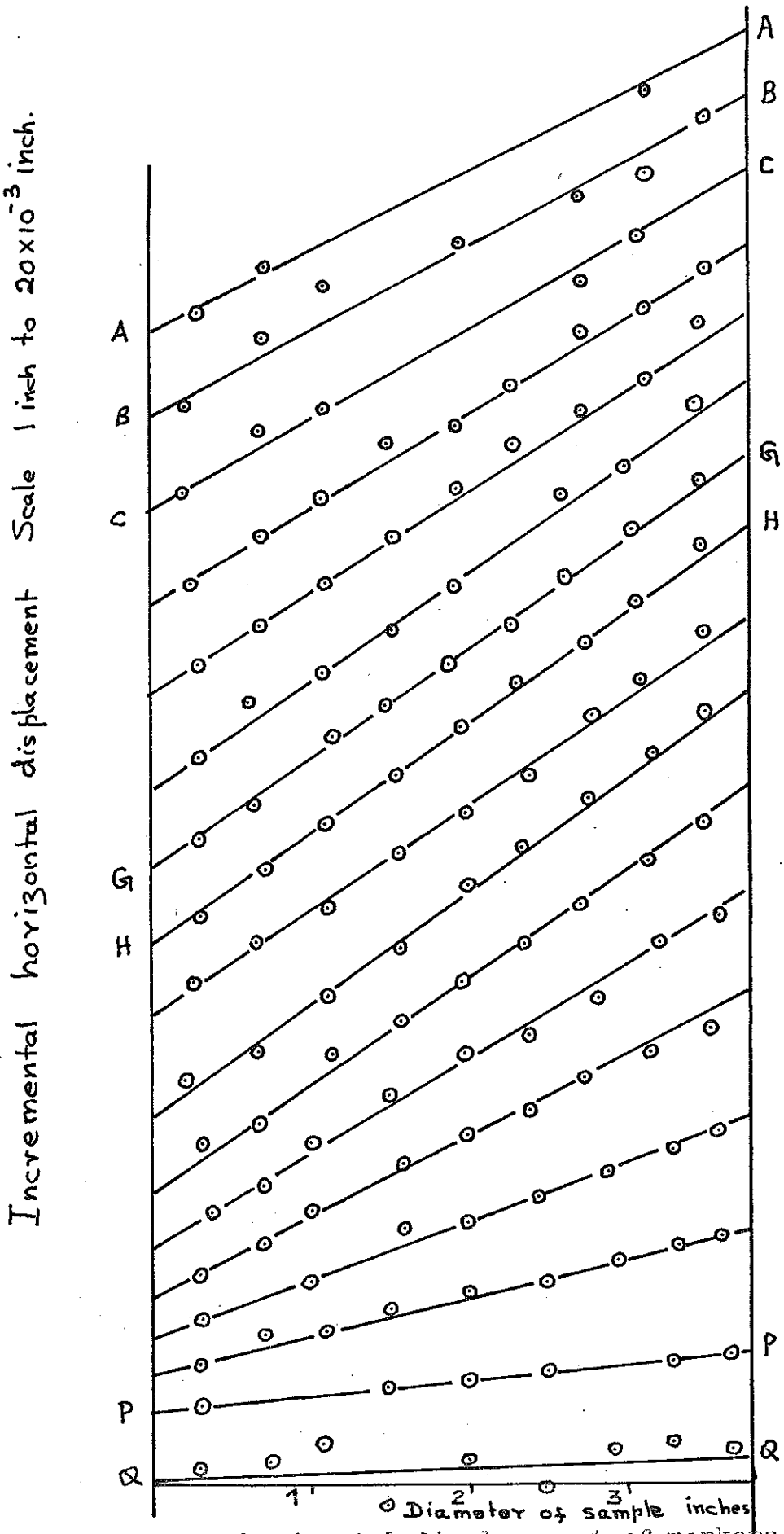
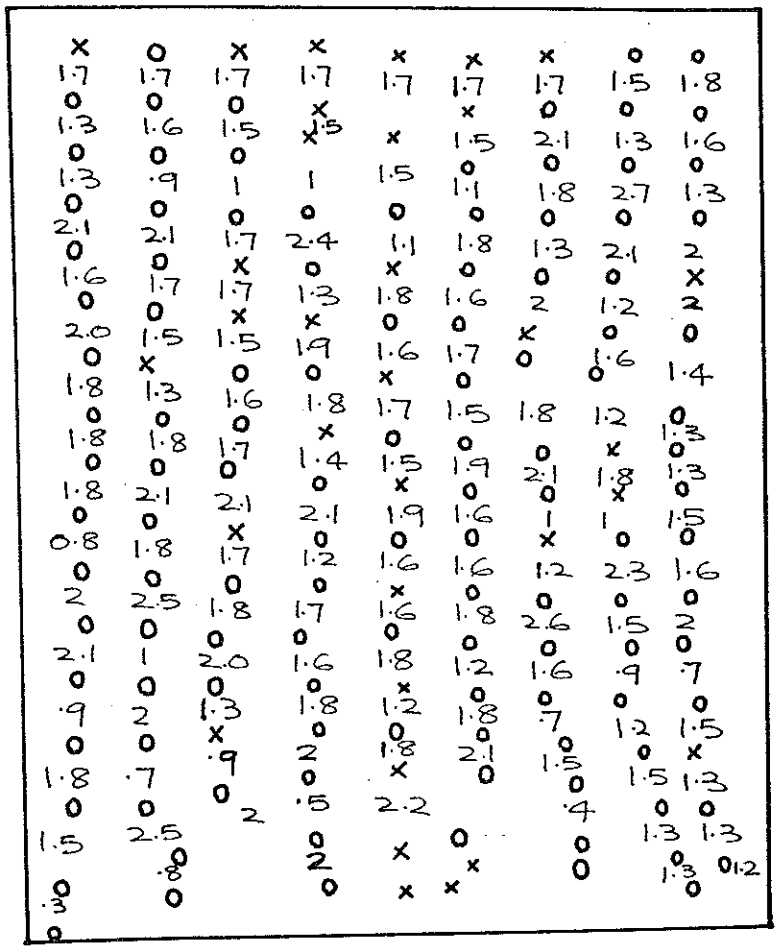


Fig. 3.52 (b). Incremental horizontal displacement of markers plotted against their distances along diameter for seventeen horizontal rows in plane I of the heavily overconsolidated sample OC during a fully drained test with constant cell pressure.

$\eta = 0$ $\Delta\eta = 0.63$

Top end



Bottom end

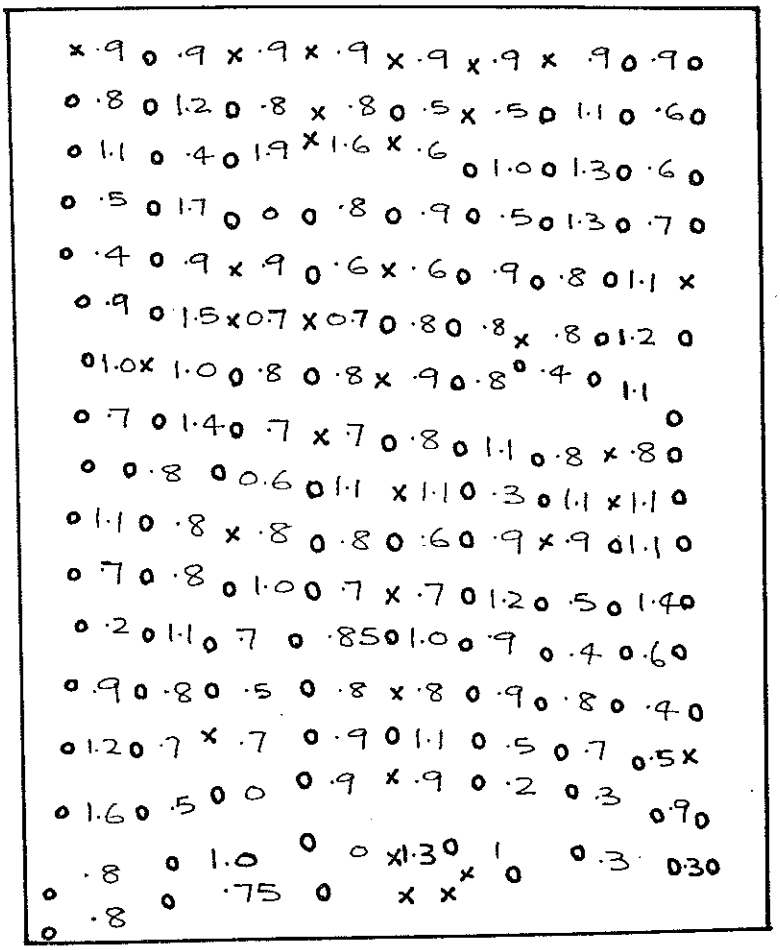
Fig. 3.53 (a). Incremental axial strain distribution in plane I of the heavily overconsolidated sample OC during a fully drained test with constant cell pressure.

$\eta = 0$ $\quad\quad$ $\Delta\eta = 0.63$

O Position of markers.

× Markers missed during arrangement.

Top end



Bottom end

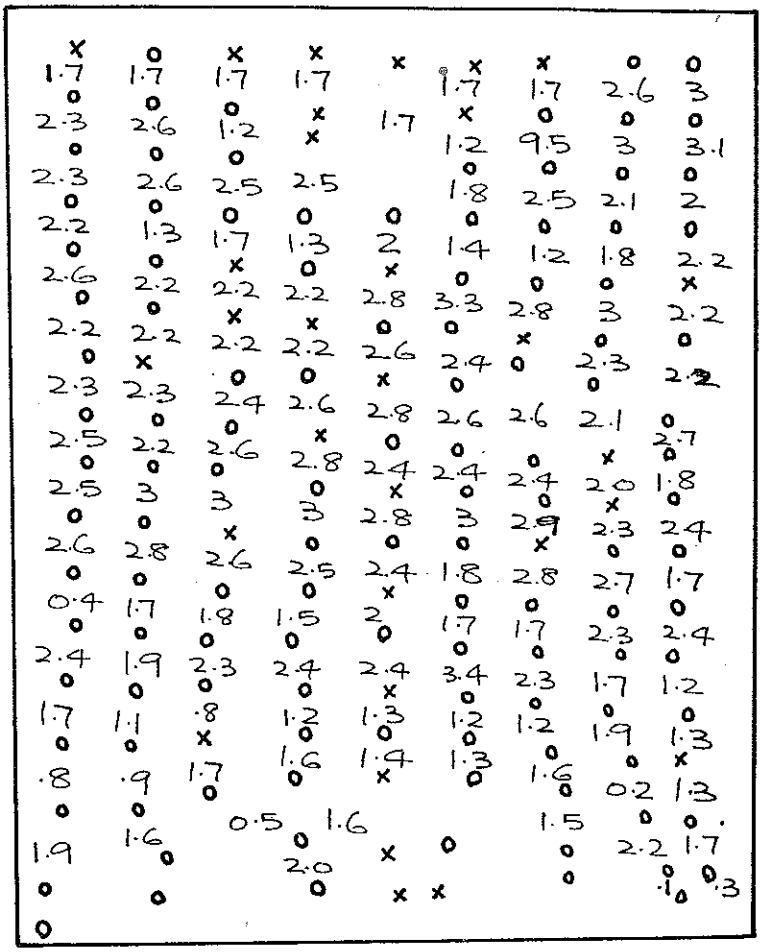
Fig. 3.53 (b). Incremental radial strain distribution in plane I of the heavily overconsolidated sample OC during a fully drained test with constant cell pressure.

$\eta = 0$ $\Delta\eta = 0.63$

o Position of markers.

× Markers missed during arrangement.

Top end



Bottom end

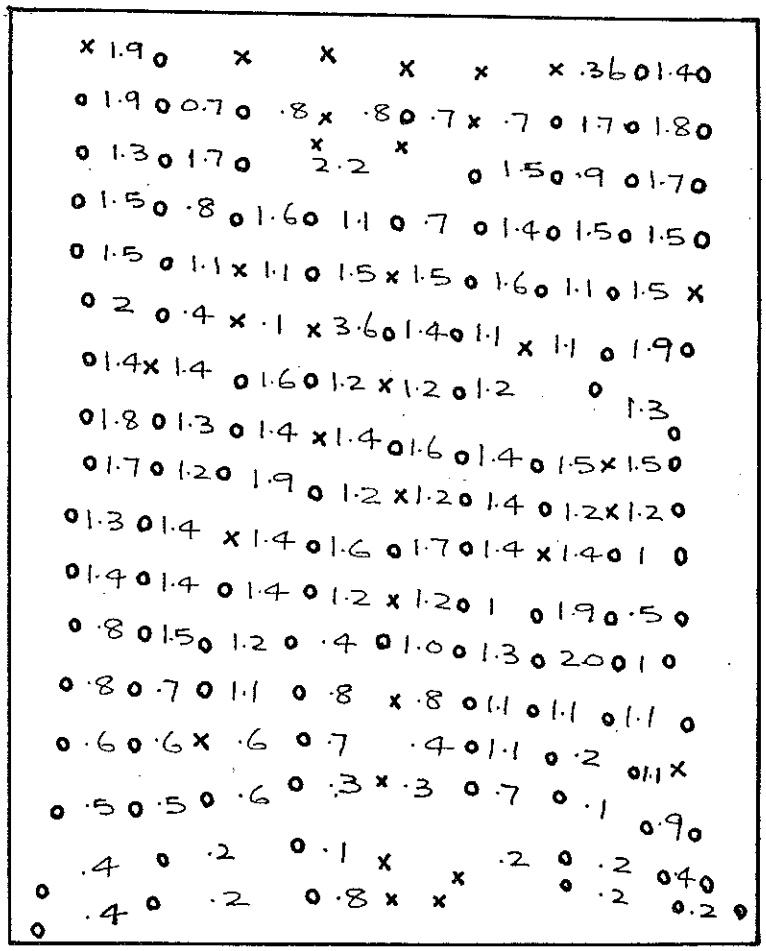
Fig. 3.54 (a). Incremental axial strain distribution in plane I of the heavily overconsolidated sample OC during a fully drained test with constant cell pressure.

$\eta = 0.63$ $\Delta\eta = 0.21$

o Position of markers.

× Markers missed during arrangement.

Top end



Bottom end

Fig. 3.54 (b). Incremental radial strain distribution in plane I of the heavily overconsolidated sample OC during a fully drained test with constant cell pressure.

$\eta = 0.63$ $\Delta\eta = 0.21$

o Position of markers.

× Markers missed during arrangement.

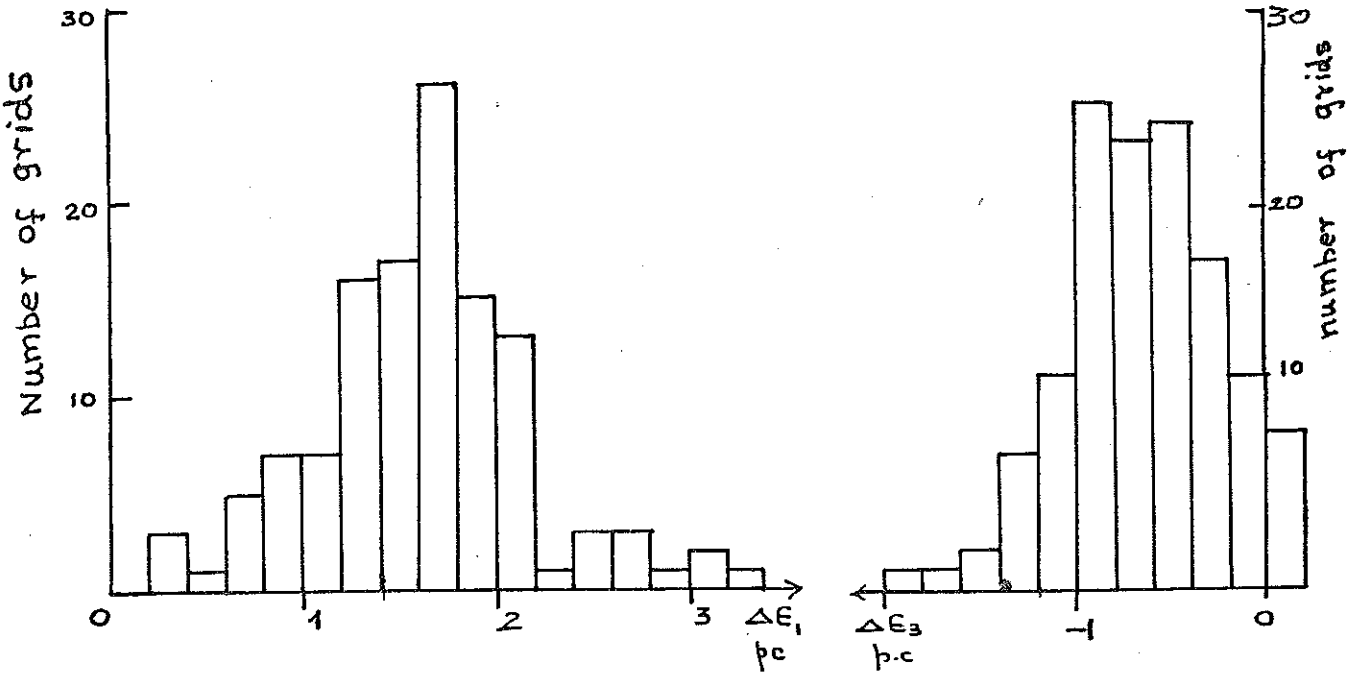


Fig. 3.55. Histograms representing the incremental strain distribution in the grids of the heavily overconsolidated sample OC during a fully drained test with constant cell pressure.

$\eta = 0$ $\Delta\eta = 0.63$

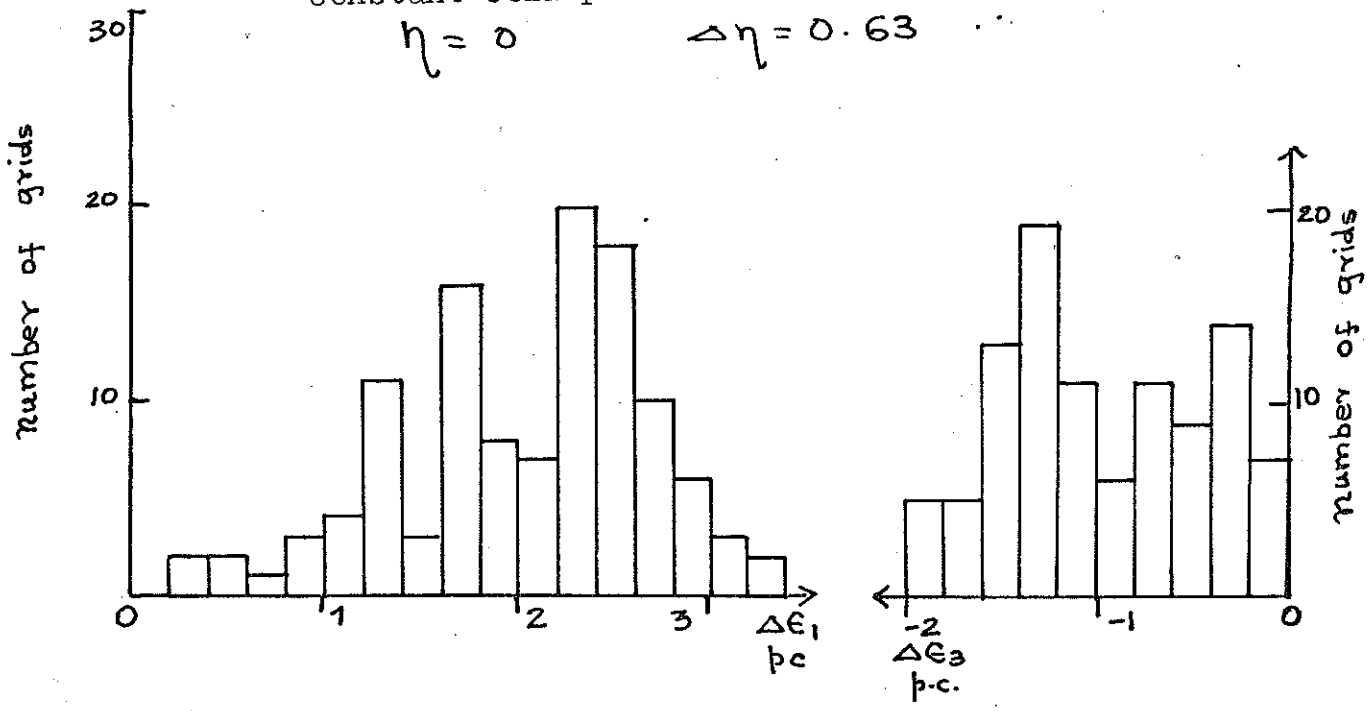
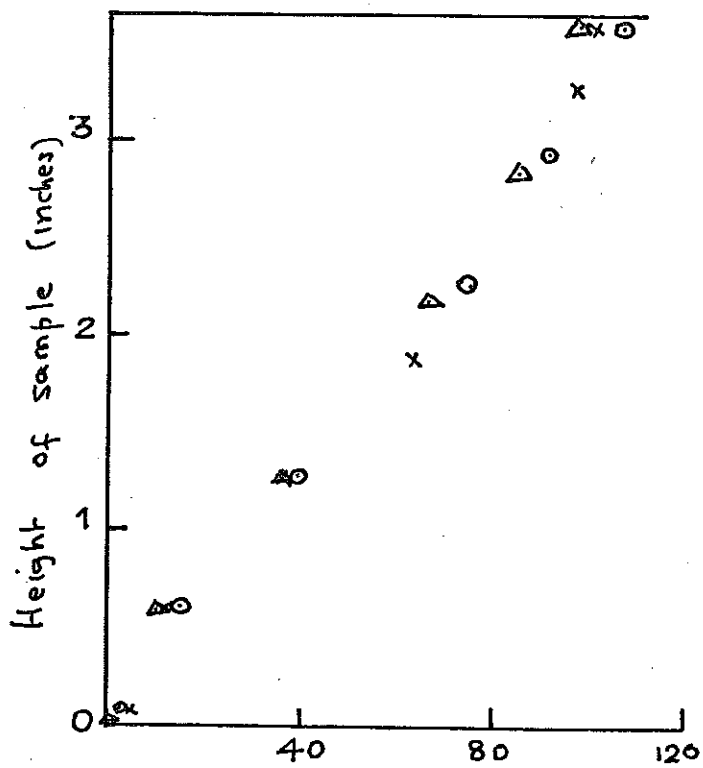
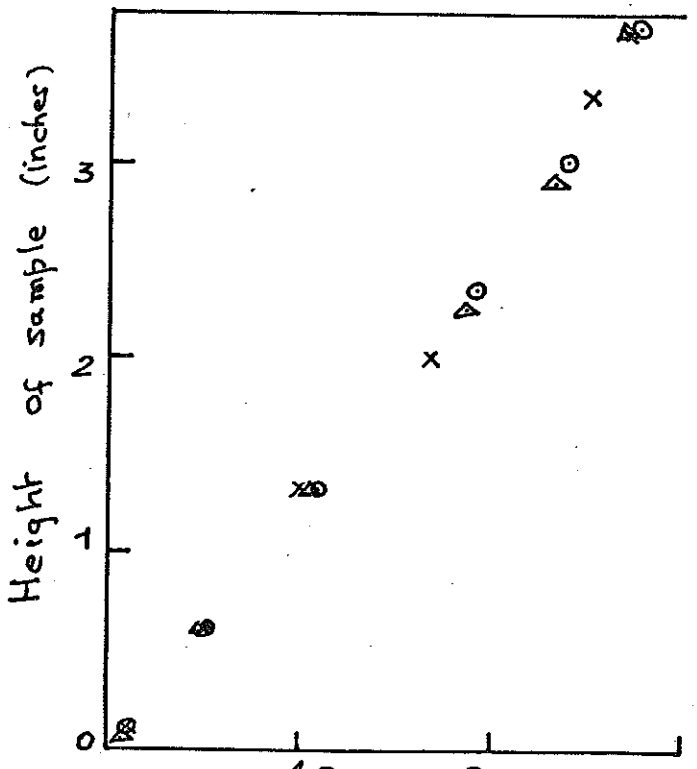


Fig. 3.56. Histograms representing the incremental strain distribution in the grids of the heavily overconsolidated sample OC during a fully drained test with constant cell pressure.

$\eta = 0.63$ $\Delta\eta = 0.21$



(i) $\eta = 0$ $\quad \Delta\eta = 0.42$



(ii) $\eta = 0.42$ $\quad \Delta\eta = 0.08$

(See overleaf)