

APPENDIX B

MODE OF FAILURE AND LATERAL DEFLECTIONS



a) Front view

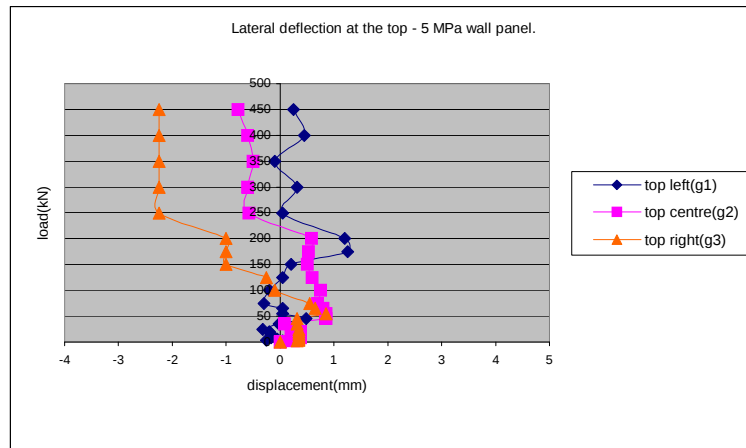


b) Side view.

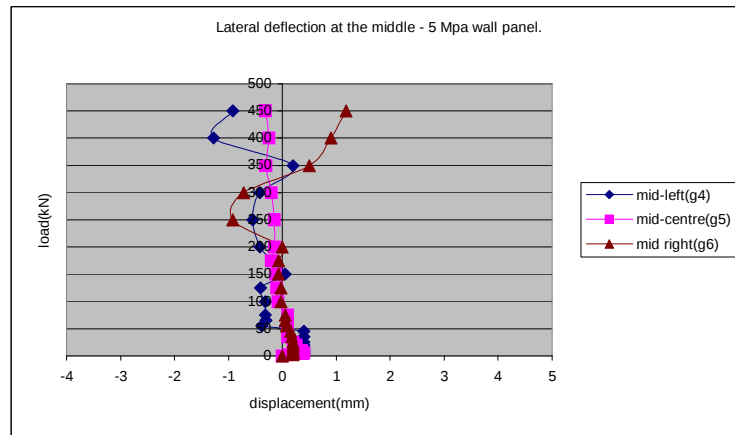
Figure 1 Mode of failure 5MPa units specimen

Details of 5 MPa units specimen

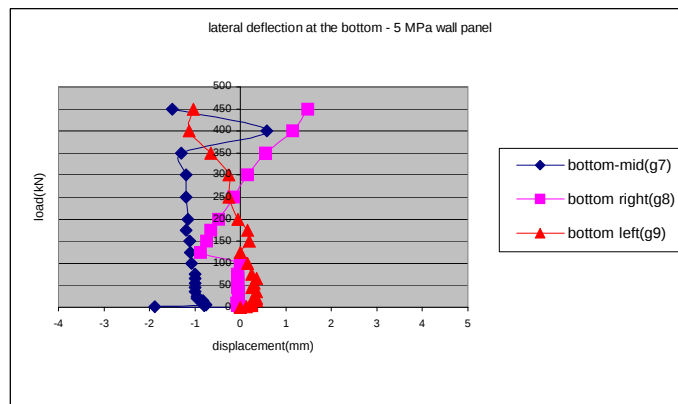
Initial load at units failure: 175 kN
Max. load at total failure : 595 kN
Max. Lateral deflection: 2.25 mm
Type of failure: crushing of the top 10 courses



a) lateral deflection at the top



b) lateral deflection at the middle



c) lateral deflection at the bottom

Figure 2 Lateral deflection 5 MPa units specimen



a) Front view

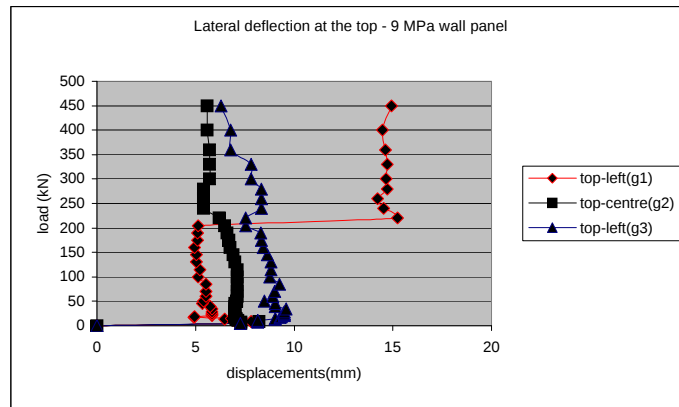


b) side view

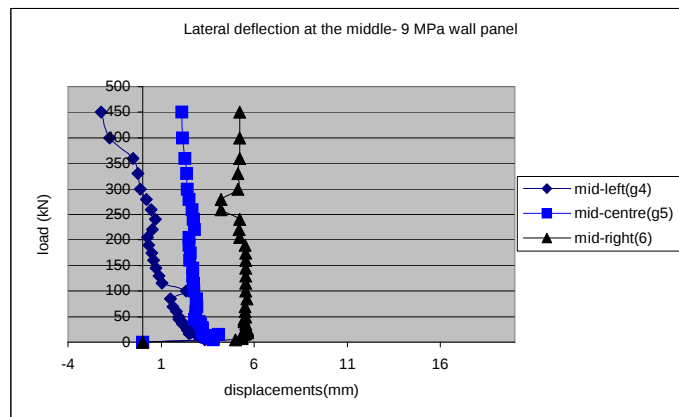
Figure 3 Mode of failure 9 MPa units specimen

Details of 9 MPa units specimen

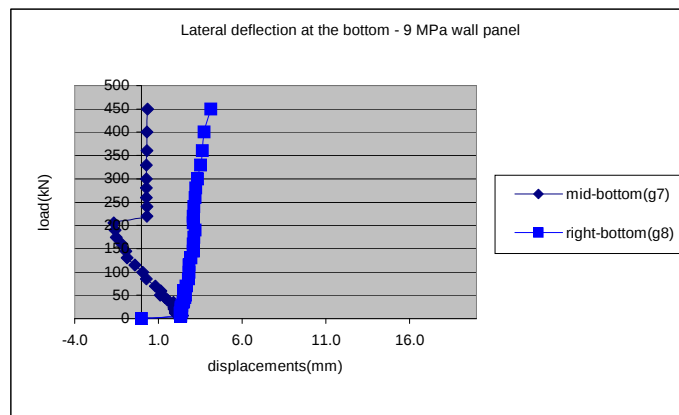
Initial load at units failure	400 kN
Max. load at total failure	721 kN
Max. Lateral deflection	15.2 mm
Type of failure: propagation of vertical cracks	



a) lateral deflection at the top



b) lateral deflection at the middle



c) lateral deflection at the bottom

Figure 4 Lateral deflection 9 MPa units specimen



a) Side view

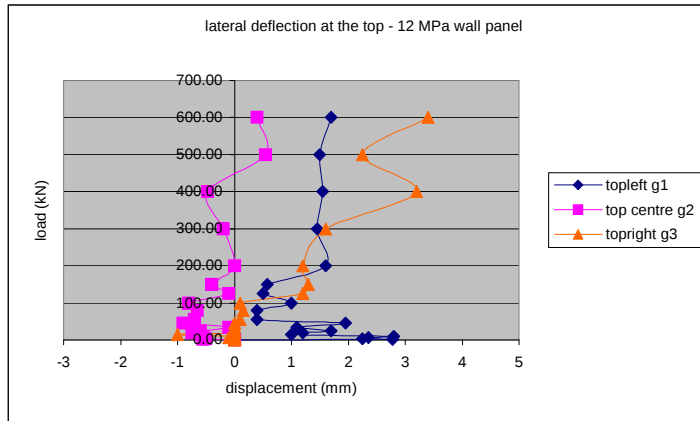


b) Elevation

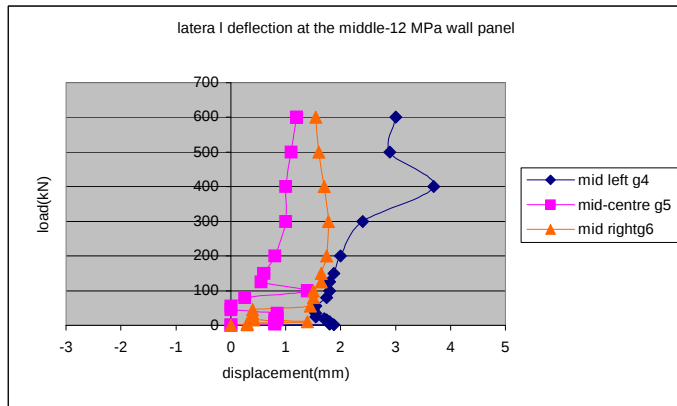
Figure 5 Mode of failure 12 MPa units specimen

Details of 12 MPa units specimen

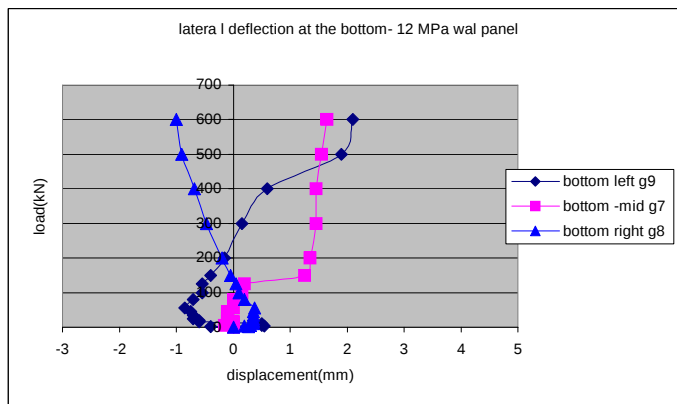
Initial load at units failure	600 kN
Max. load at total failure	938 kN
Max. Lateral deflection	3.4 mm
Type of failure: localised crushing and extension of cracks	



a) lateral deflection at the top

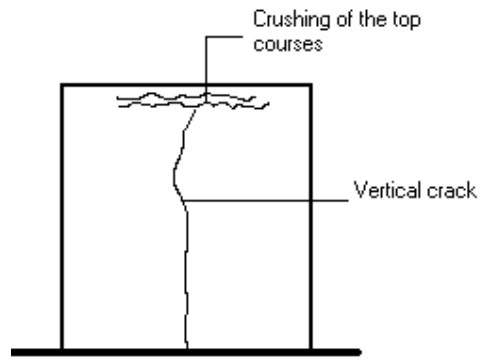


b) lateral deflection at the middle



c) lateral deflection at the bottom

Figure 6 Lateral deflection 12 MPa units specimen

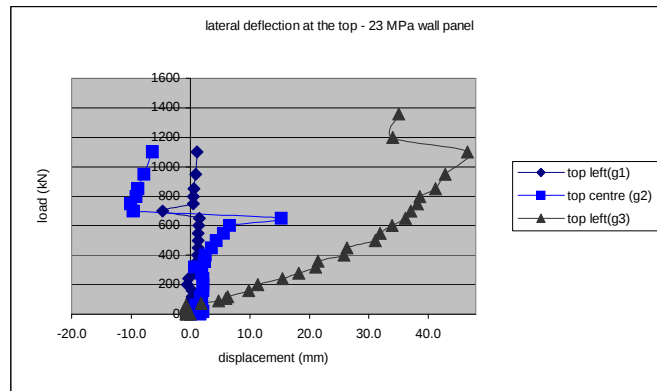


a) Elevation

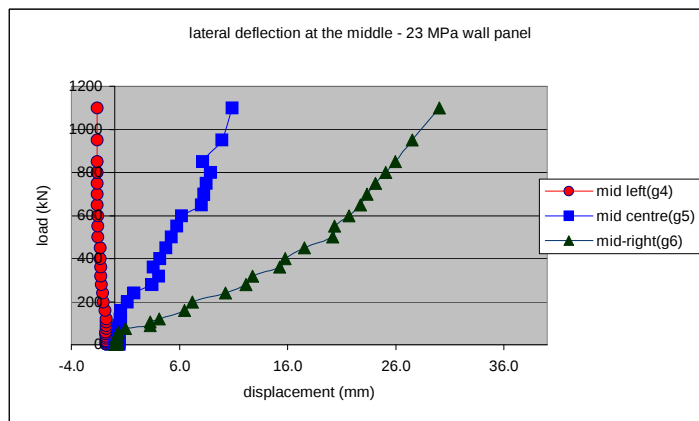
Figure 7 Mode of failure 23MPa units specimen

Details of 23 MPa units specimen

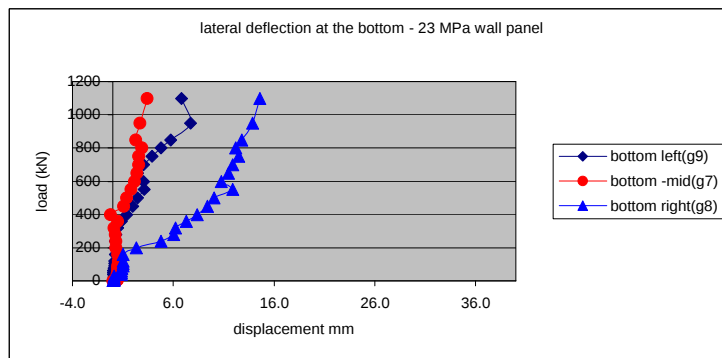
Initial load at units failure	650 kN
Max. load at total failure	1360 kN
Max. Lateral deflection	46 mm
Type of failure: localised crushing and extension of cracks	



a) wall lateral deflection at the top



b) wall lateral deflection at the middle



c) wall lateral deflection at the bottom

Figure 8 Lateral deflection 12 MPa units specimen

Conventional wall



a)-side view -before and after test

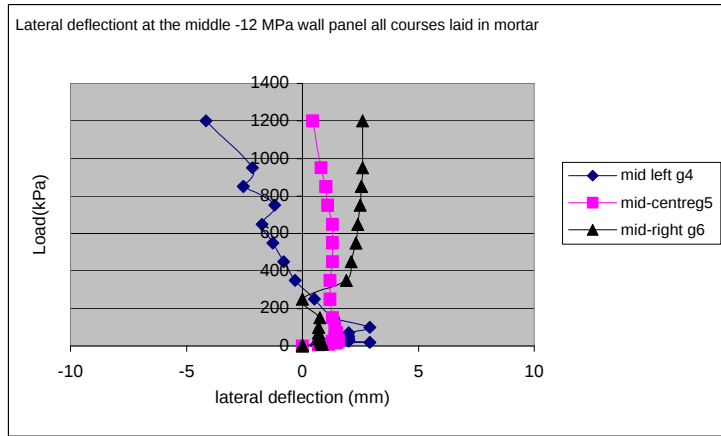


b) elevation

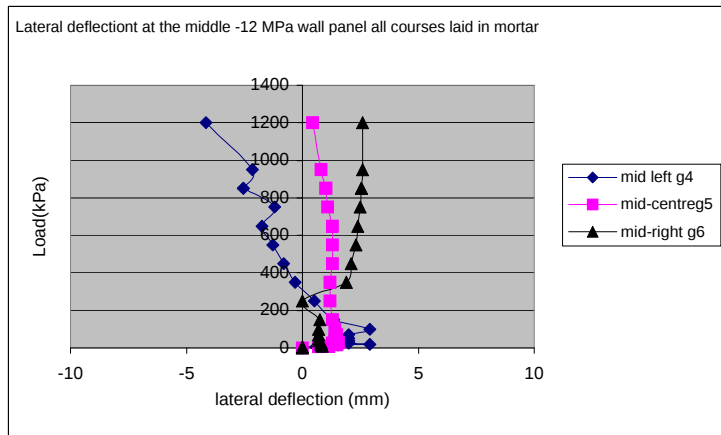
Figure 9 Mode of failure conventional wall

Details of the conventional wall (12MPa) units strength

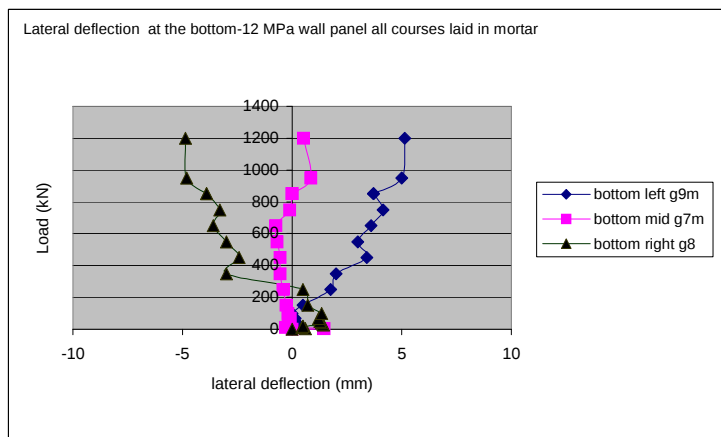
Initial load at units failure	1300 kN
Max. load at total failure	1553 kN
Max. Lateral deflection	27.85 mm
Type of failure: propagations of vertical cracks	



a) lateral deflection at the top



b) lateral deflection at the middle



c) lateral deflection at the bottom

Figure 10 Lateral deflection conventional wall