

Figure 5.1: Moment -Deflection Plots of Control Beam



Figure 5.2: Crushing of the Concrete

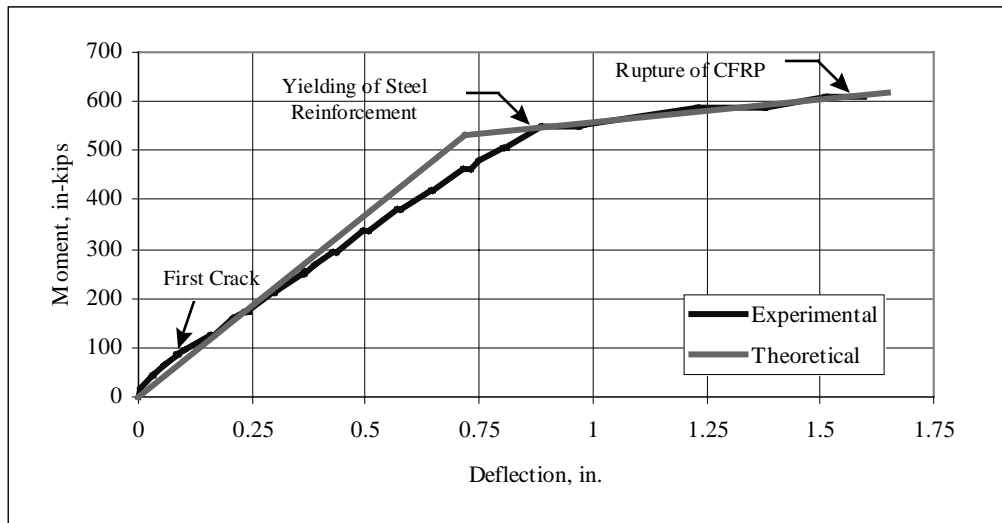


Figure 5.3: Moment -Deflection Plots of Two-Layer, $0^{\circ}/90^{\circ}$ Strengthened Beam

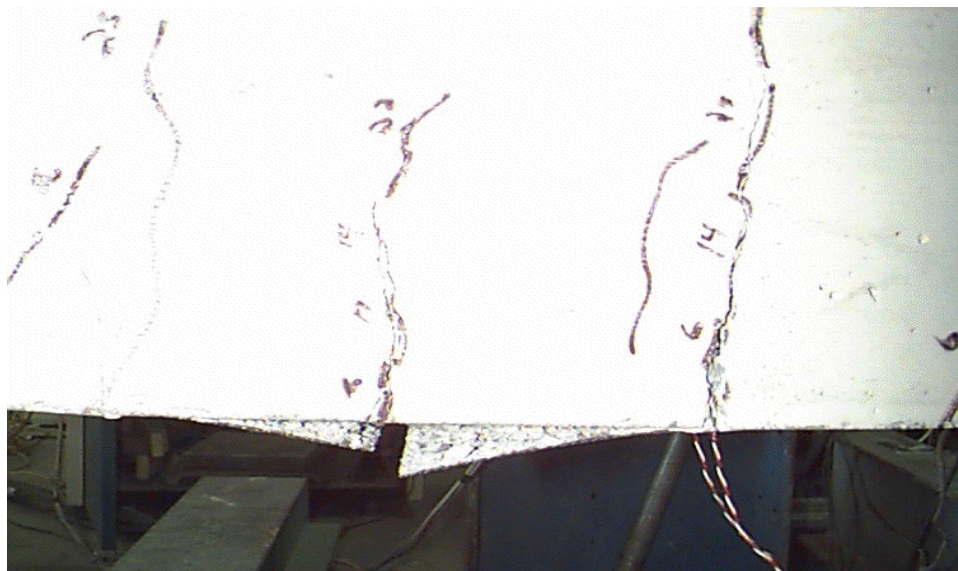


Figure 5.4: Rupturing of the CFRP

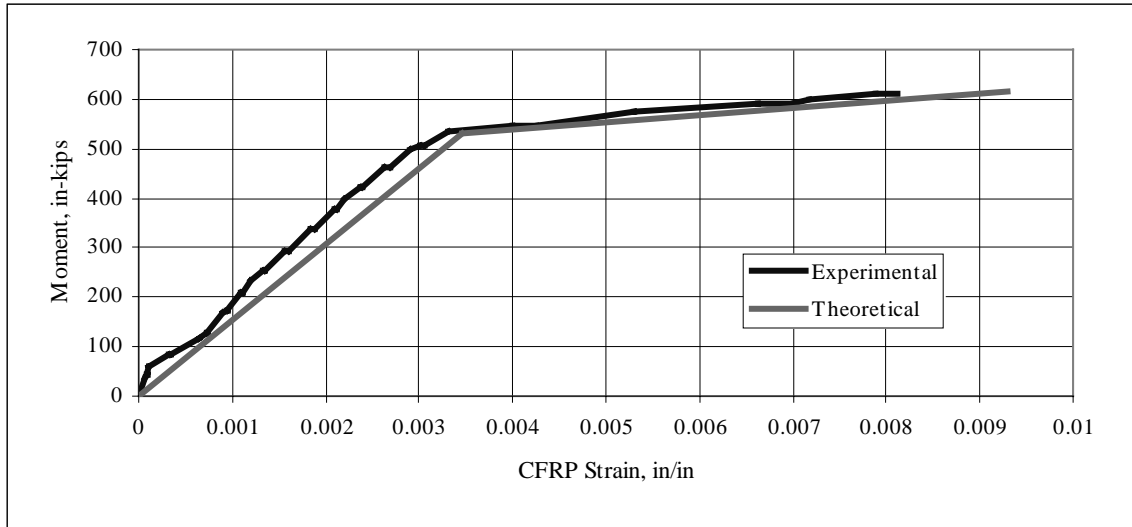


Figure 5.5: Moment -CFRP Strain Plots of Two-Layer, 0°/90° Strengthened Beam

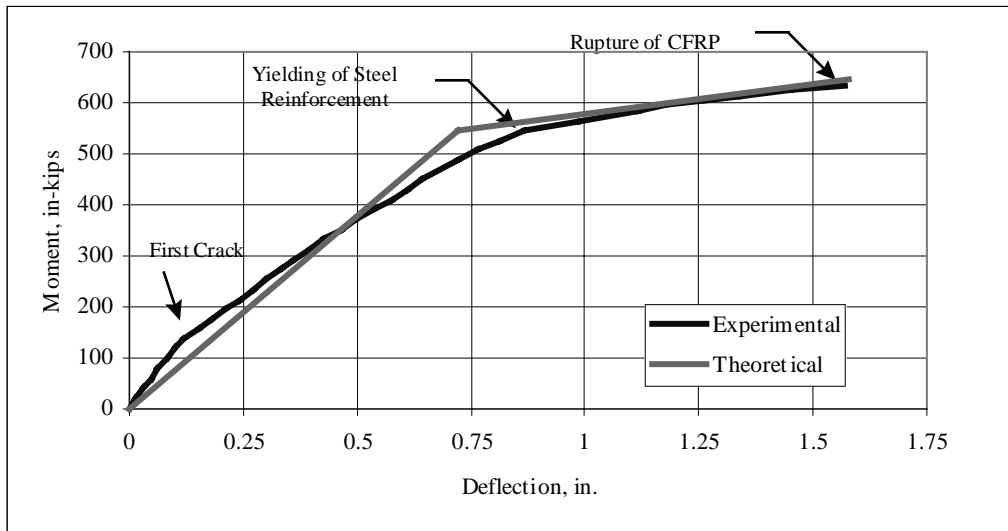


Figure 5.6: Moment -Deflection Plots of Three-Layer, 0°/90° Strengthened Beam

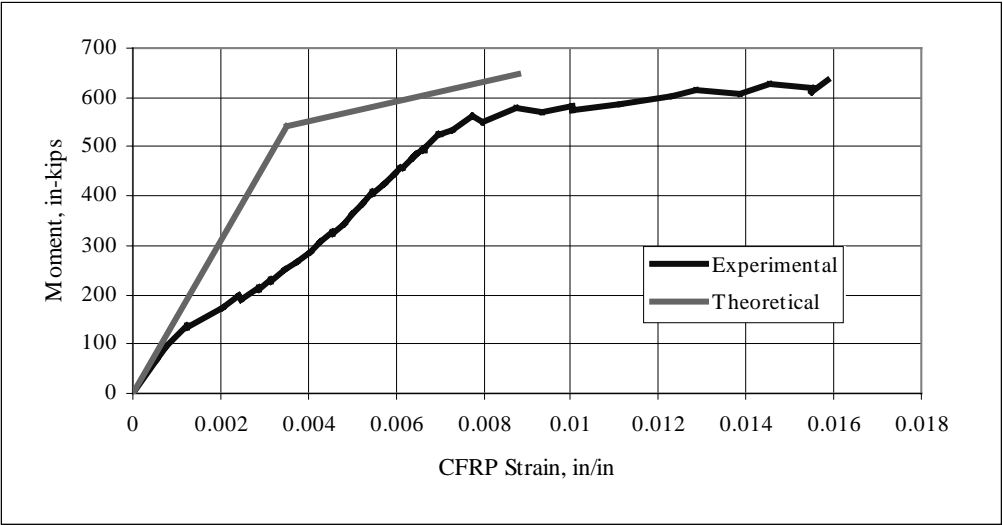


Figure 5.7: Moment -CFRP Strain Plots of Three-Layer, 0°/90° Strengthened Beam

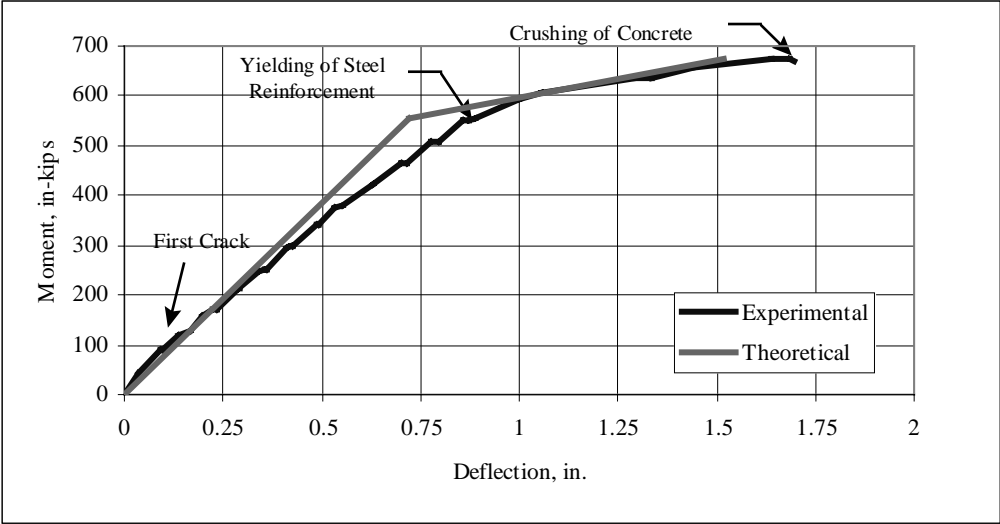


Figure 5.8: Moment -Deflection Plots of Four-Layer, 0°/90° Strengthened Beam

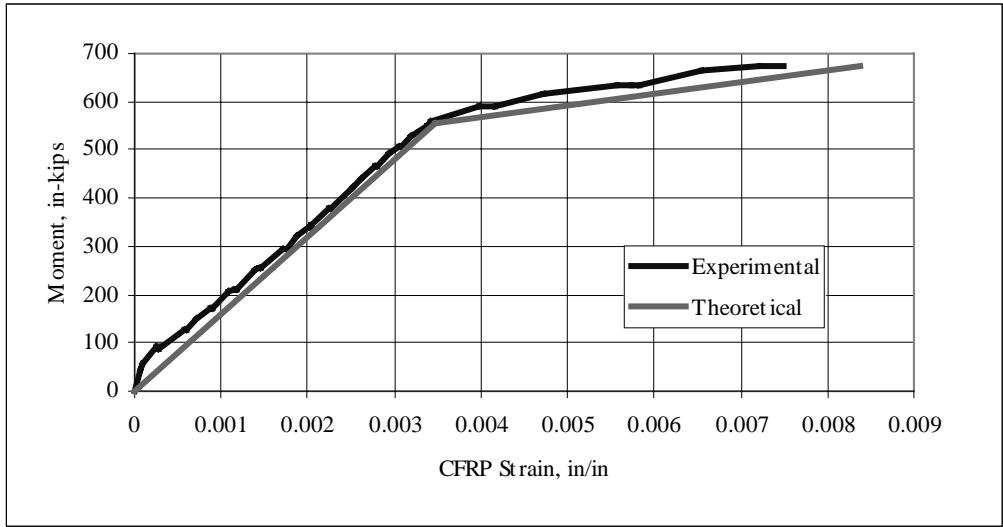


Figure 5.9: Moment -CFRP Strain Plots of Four-Layer, $0^{\circ}/90^{\circ}$ Strengthened Beam

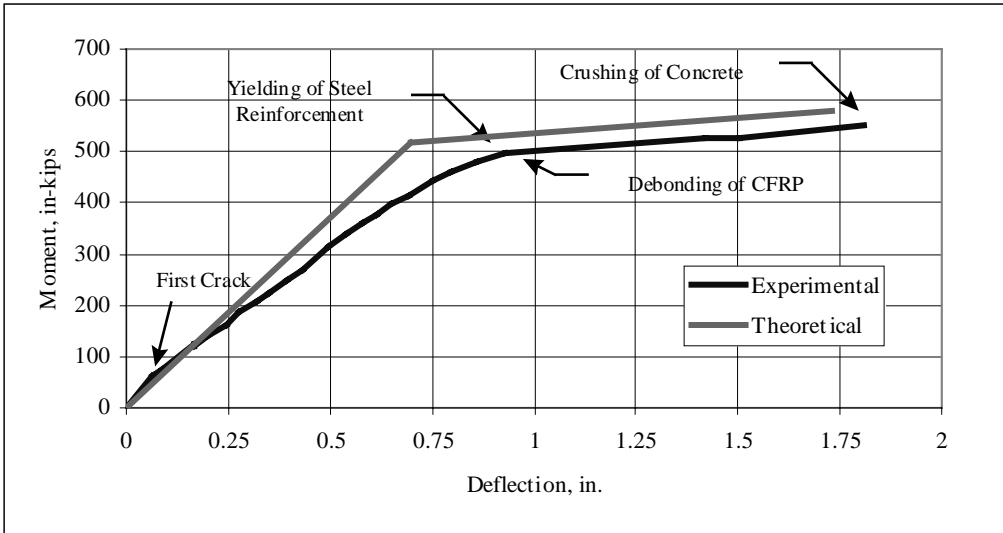


Figure 5.10: Moment -Deflection Plot for Two-Layer, $\pm 45^{\circ}$ Strengthened Beam



Figure 5.11: Debonding of the CFRP on Edge of Two-Layer $\pm 45^\circ$ Composite Beam

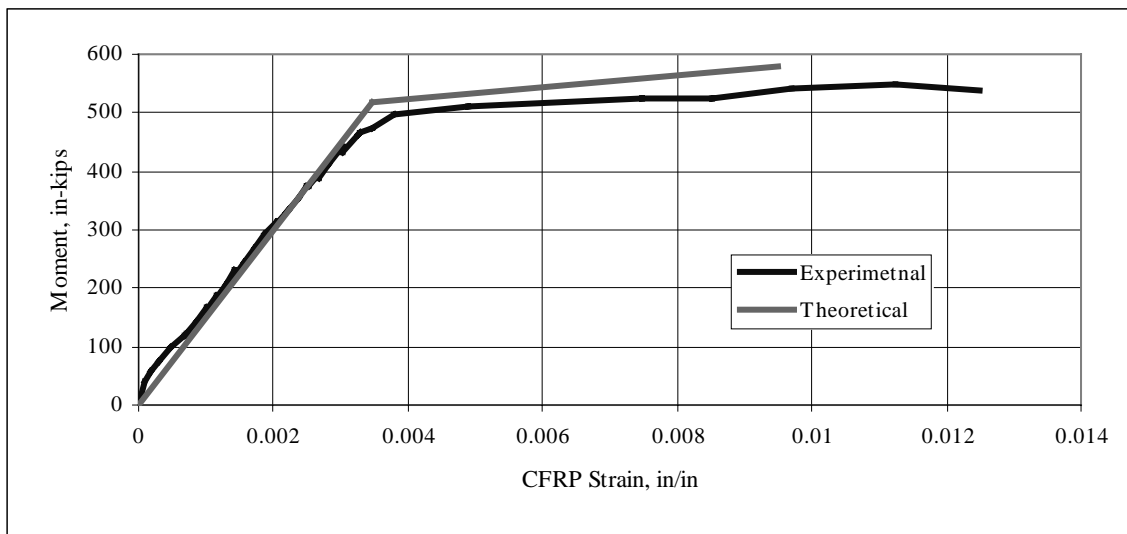


Figure 5.12: Moment -CFRP Strain Plots of Two-Layer, $\pm 45^\circ$ Strengthened Beam

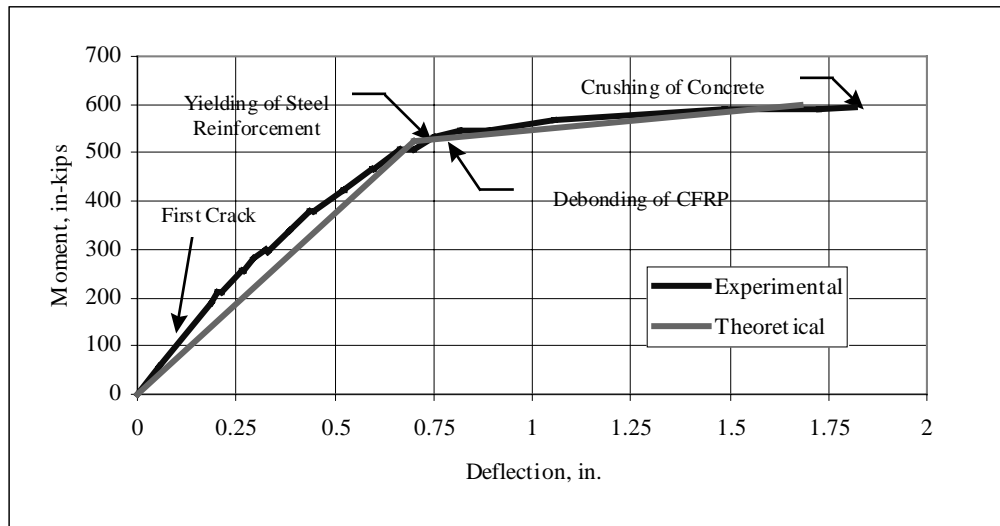


Figure 5.13: Moment -Deflection Plots of Three-Layer, $\pm 45^\circ$ Strengthened Beam



Figure 5.14: Debonding of the CFRP

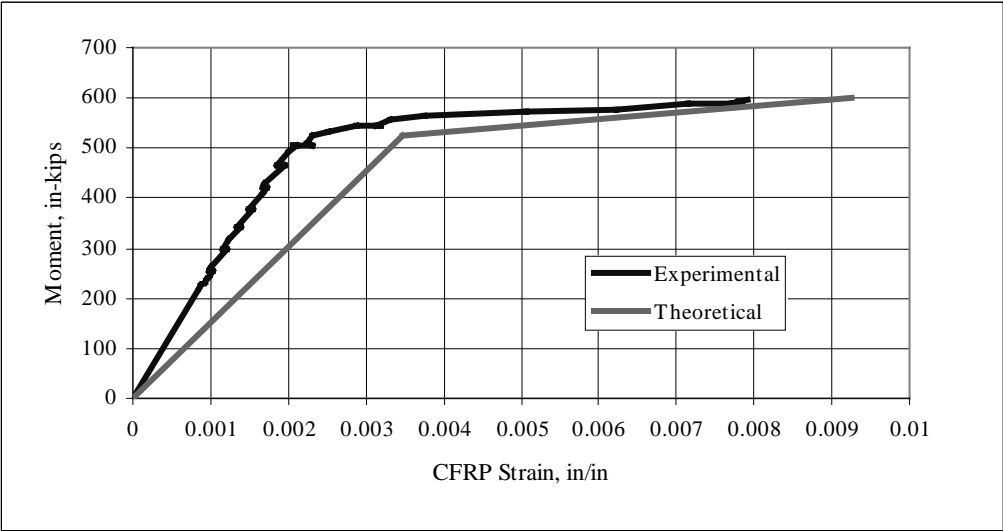


Figure 5.15: Moment -CFRP Strain Plots of Three-Layer, $\pm 45^\circ$ Strengthened Beam

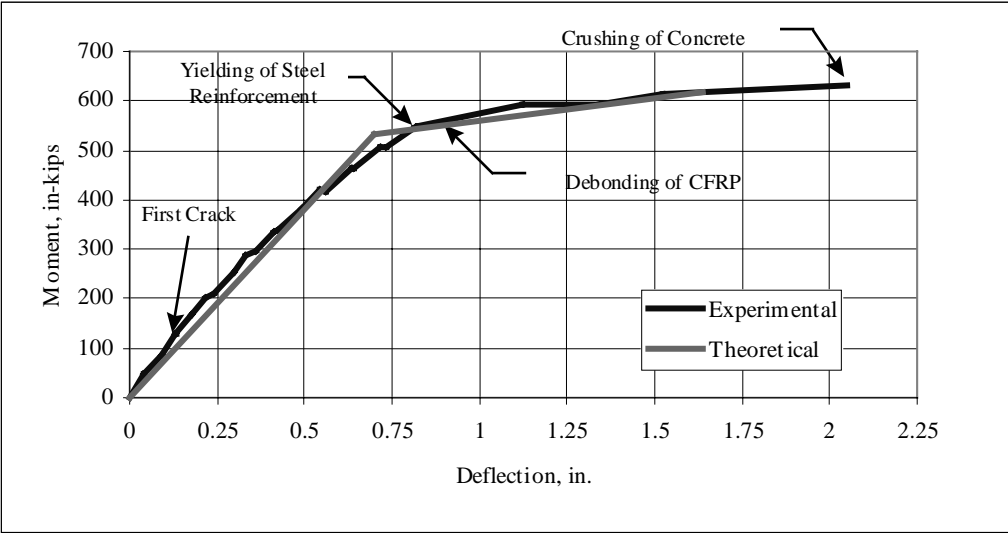


Figure 5.16: Moment -Deflection Plots of Four-Layer, $\pm 45^\circ$ Strengthened Beam

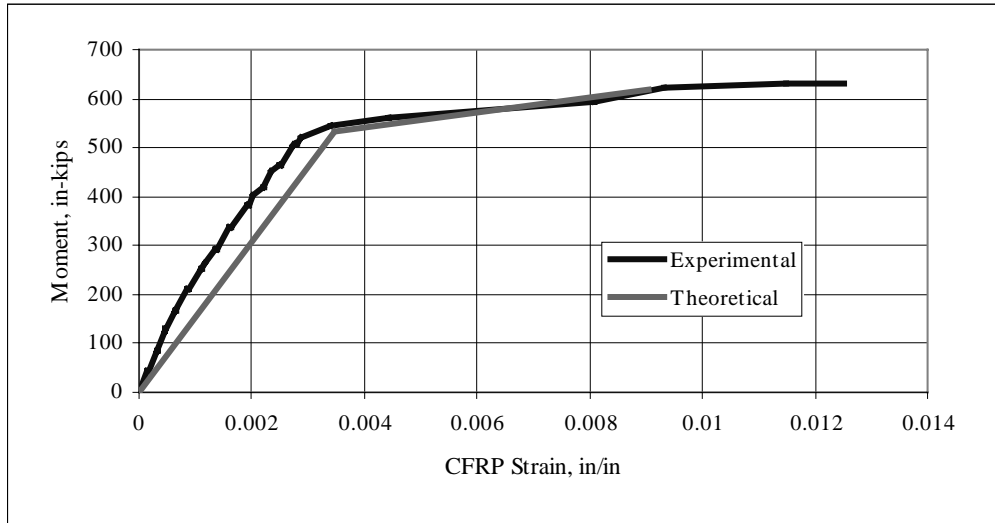


Figure 5.17: Moment -CFRP Strain Plots of Four-Layer, $\pm 45^\circ$ Strengthened Beam

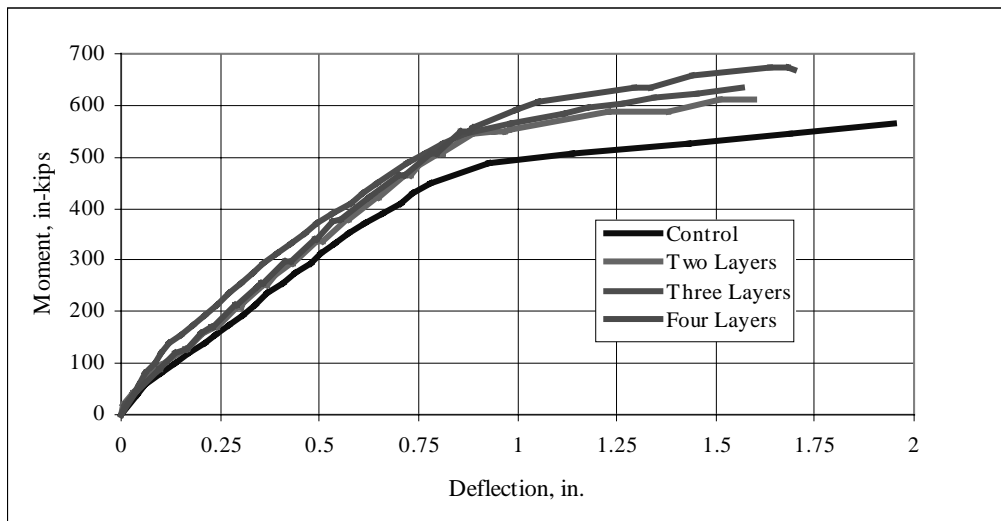


Figure 5.18: Moment -Deflection Plots of $0^\circ/90^\circ$ CFRP Strengthened Beams

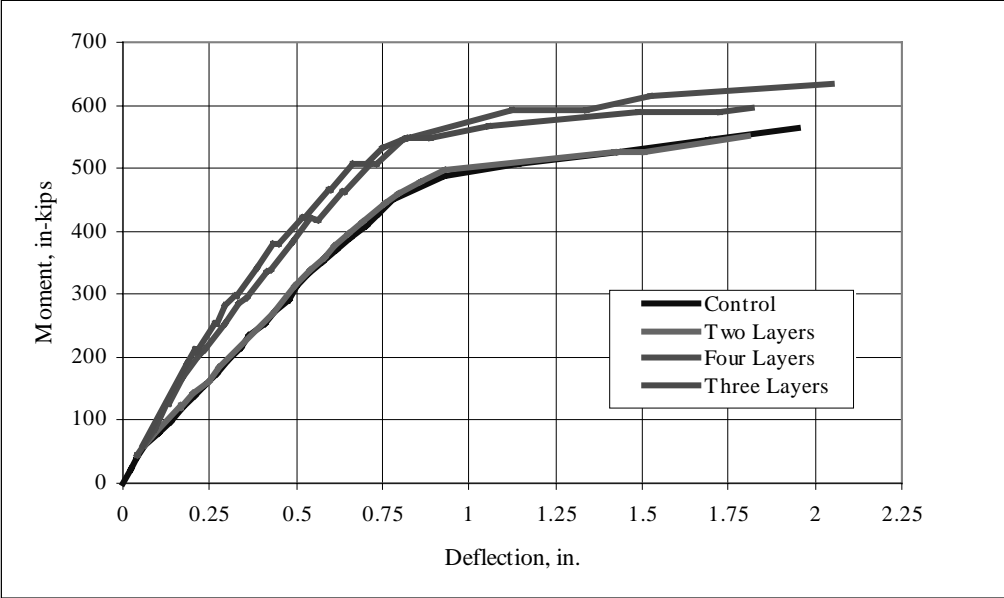


Figure 5.19: Moment -Deflection Plots of $\pm 45^\circ$ CFRP Strengthened Beams