“FRP Reinforced Concrete: Calculations for Deflections”

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OUTLINE

◆ FE and Sectional Analysis results
◆ ACI deflection Prediction
◆ Neutral axis shift
◆ Conclusions
Analysis Results
Load vrs Deflection GB5
Analysis Results
Load vrs Deflection SB8

deflection mm
Analysis Results
Load vrs Deflection Comparisons

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GB5
SB8

deflection mm
Deflection Predictions
GB5

Sectional ana.  
ACI prediction  
Test data  
Benmokrane eq.4.
Deflection Predictions

SB8
Neutral Axis Variation with Load
Second Moment of Area
Variation with Load GB5
Second Moment of Area
Variation with Load SB8

Second moment of inertia (mm$^4$)

- $I_{exp\ ACI}$
- $I_{ef\ ACI}$
Conclusions

- FE and Sectional Analysis OK
- Neutral axis shifts
- ACI deflection Prediction OK