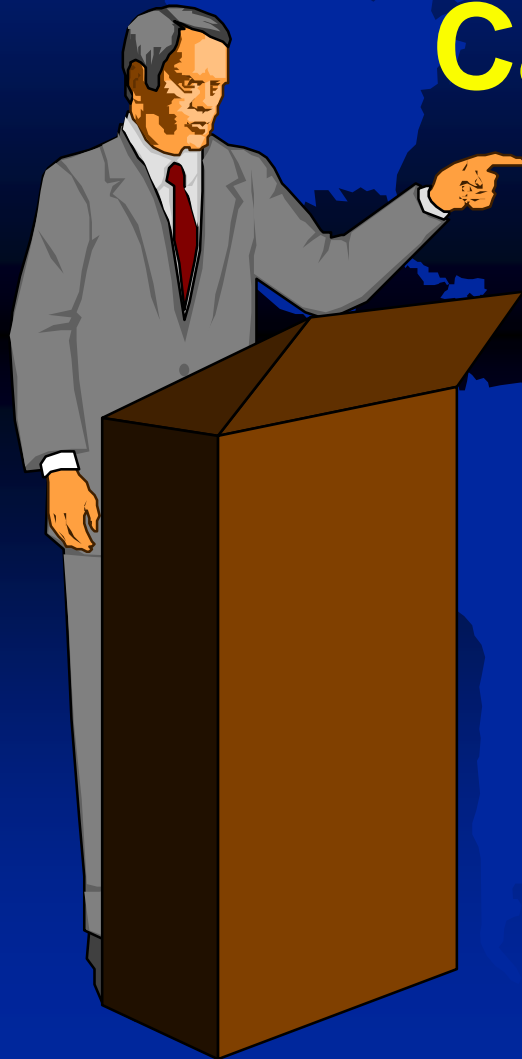




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“FRP Reinforced Concrete: Calculations for Deflections”

Zhao W, Pilakoutas K and Waldron P

Centre for Cement and Concrete

University of Sheffield

Presented by: Prof Waldron

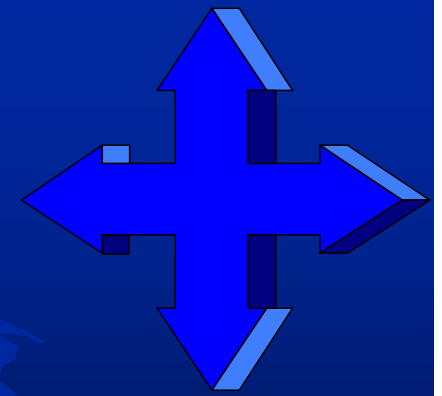
Pro-Vice Chancellor - University of Sheffield

Director - Centre for Cement and Concrete



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OUTLINE

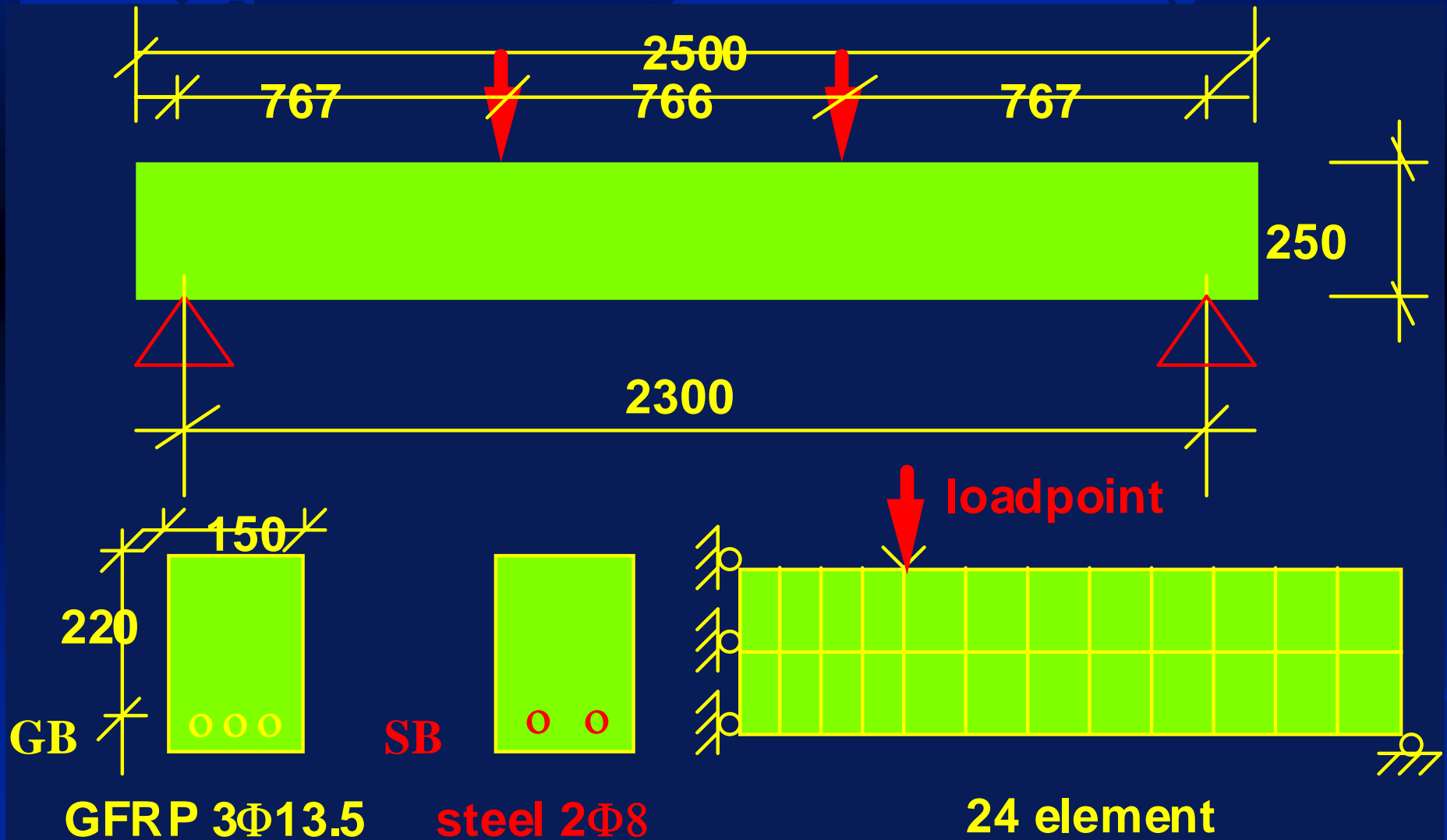


- ◆ **FE and Sectional Analysis results**
- ◆ **ACI deflection Prediction**
- ◆ **Neutral axis shift**
- ◆ **Conclusions**



Analysis Model

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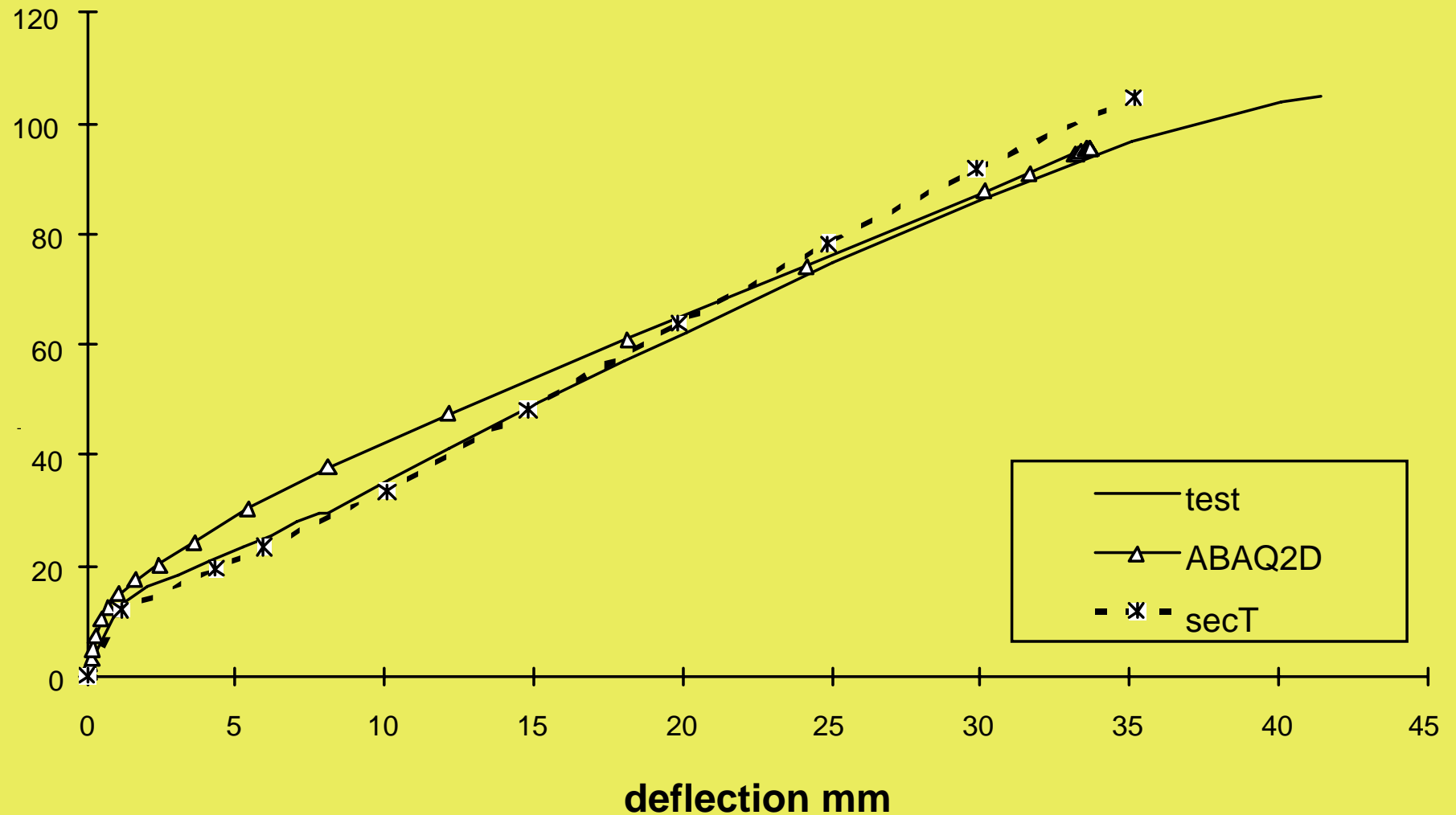




Analysis Results

Load vrs Deflection GB5

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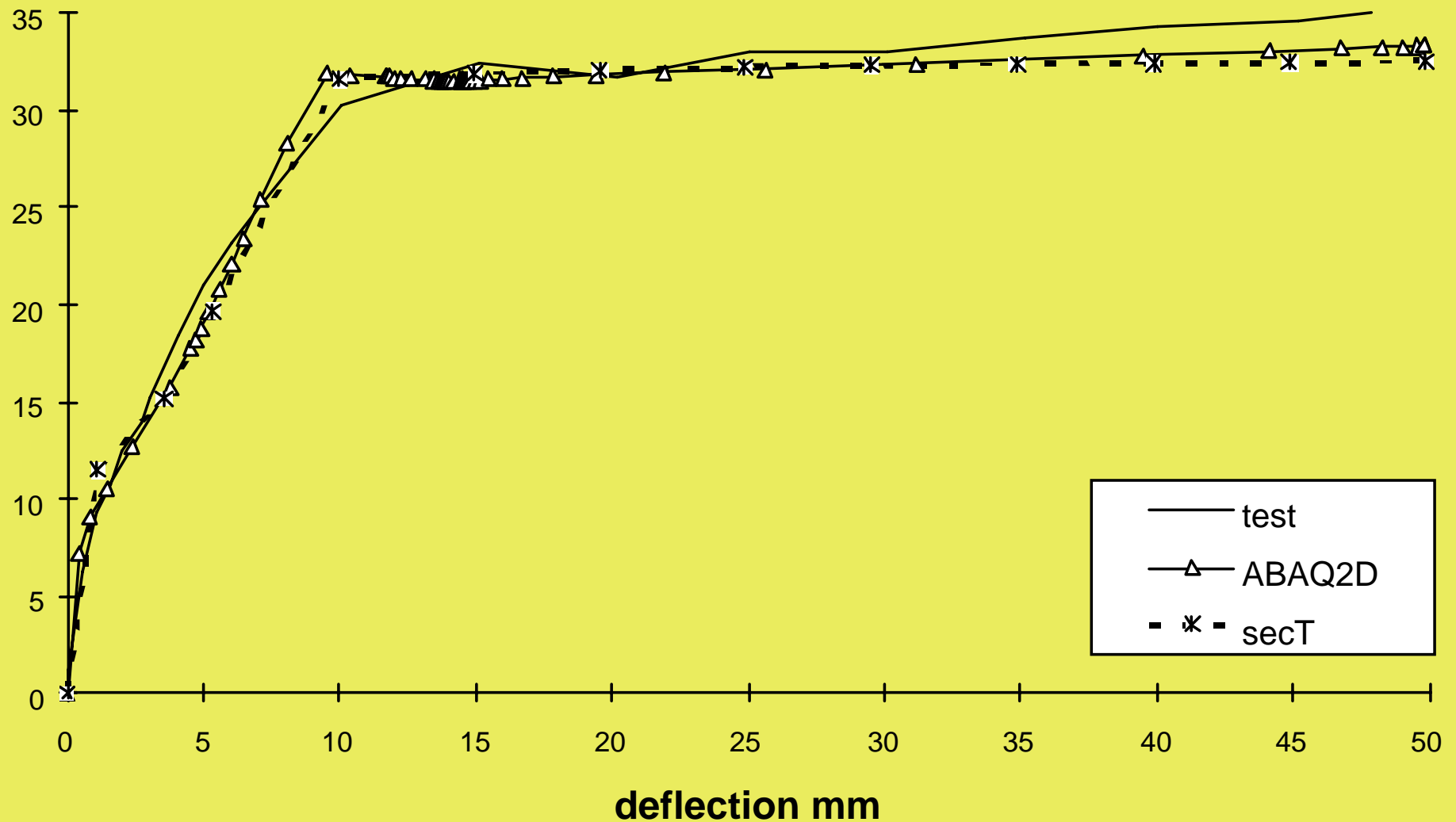




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Analysis Results

Load vrs Deflection SB8

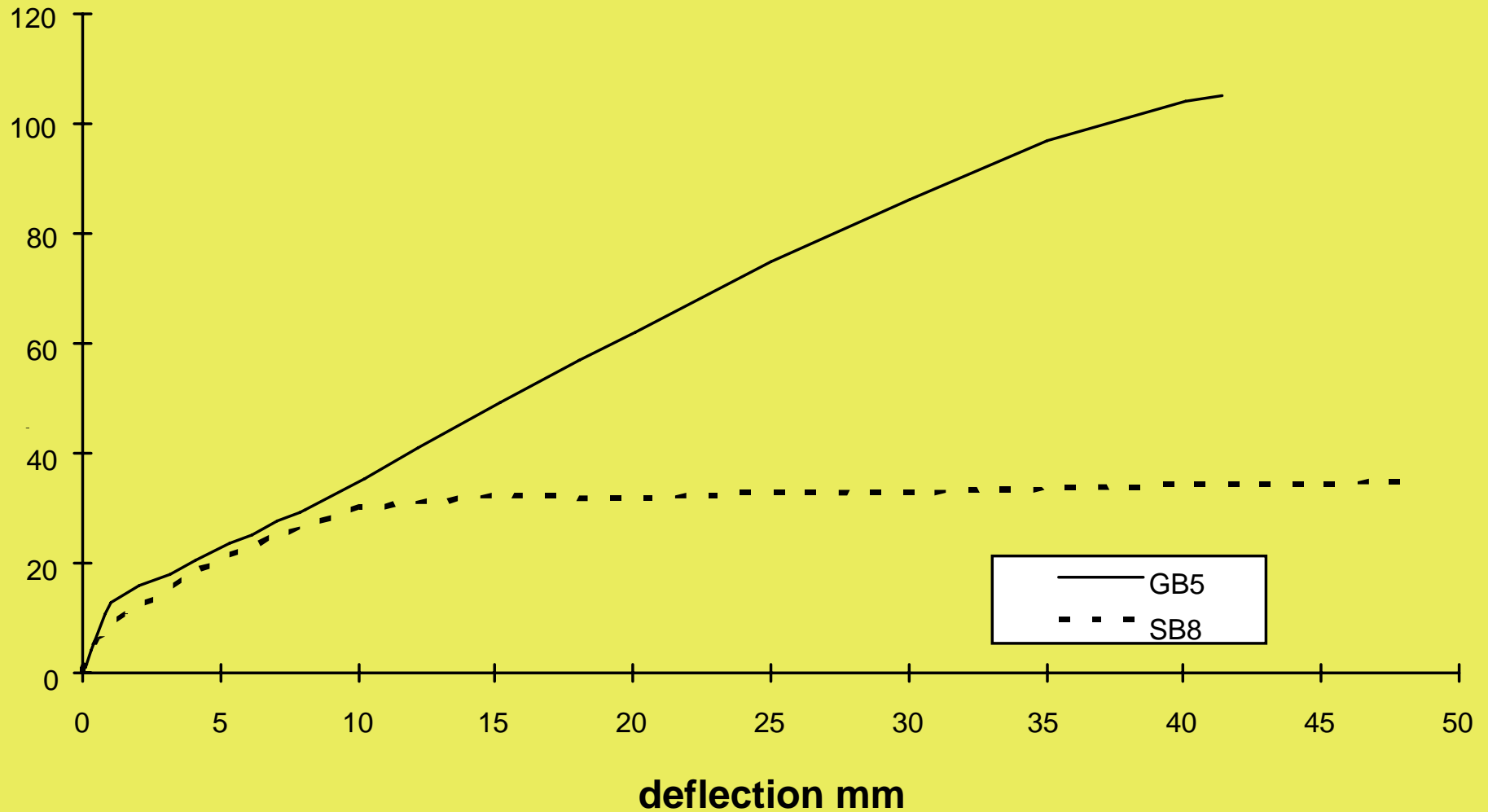




Analysis Results

Load vrs Deflection Comparisons

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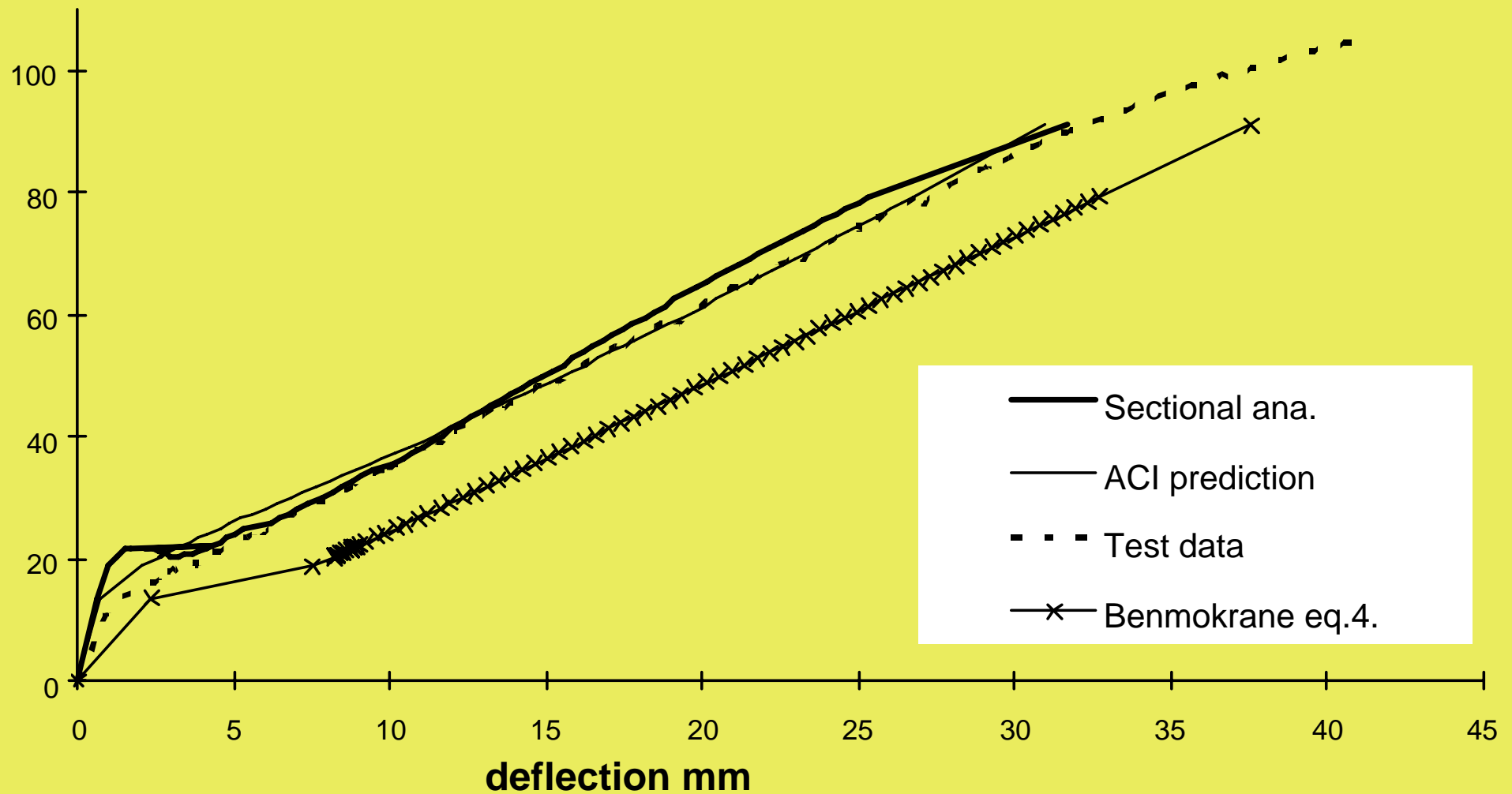




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Deflection Predictions

GB5

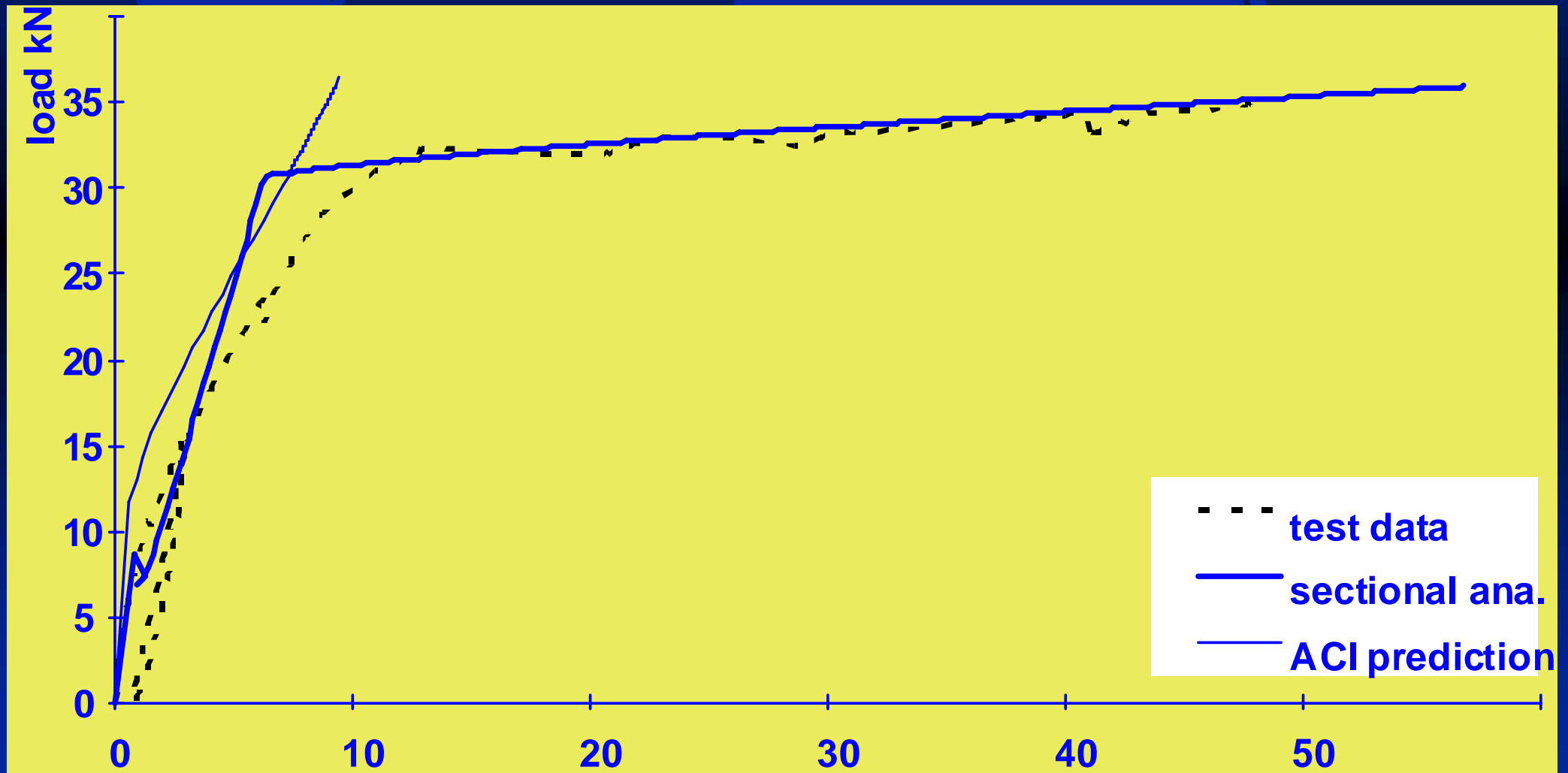




Deflection Predictions

SB8

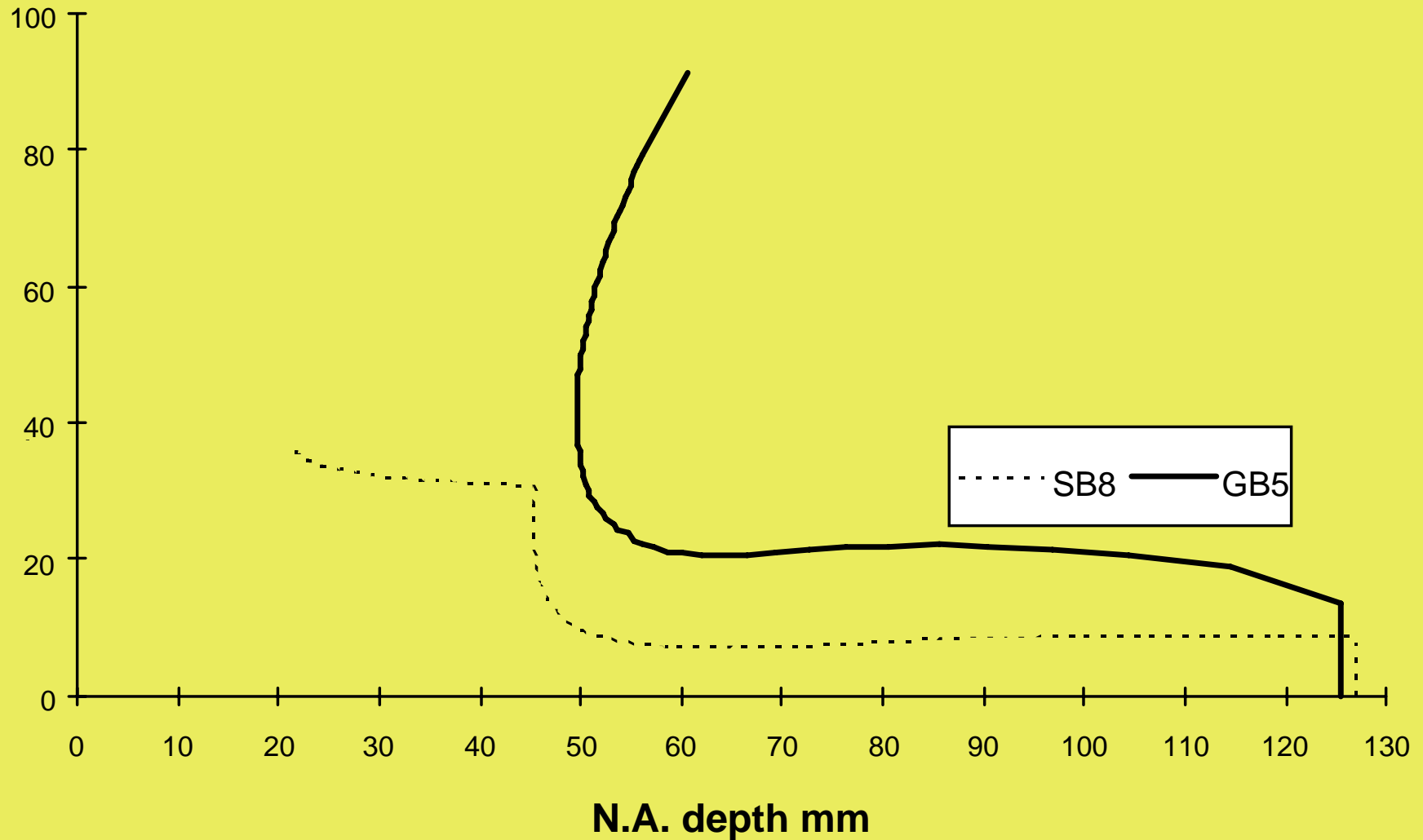
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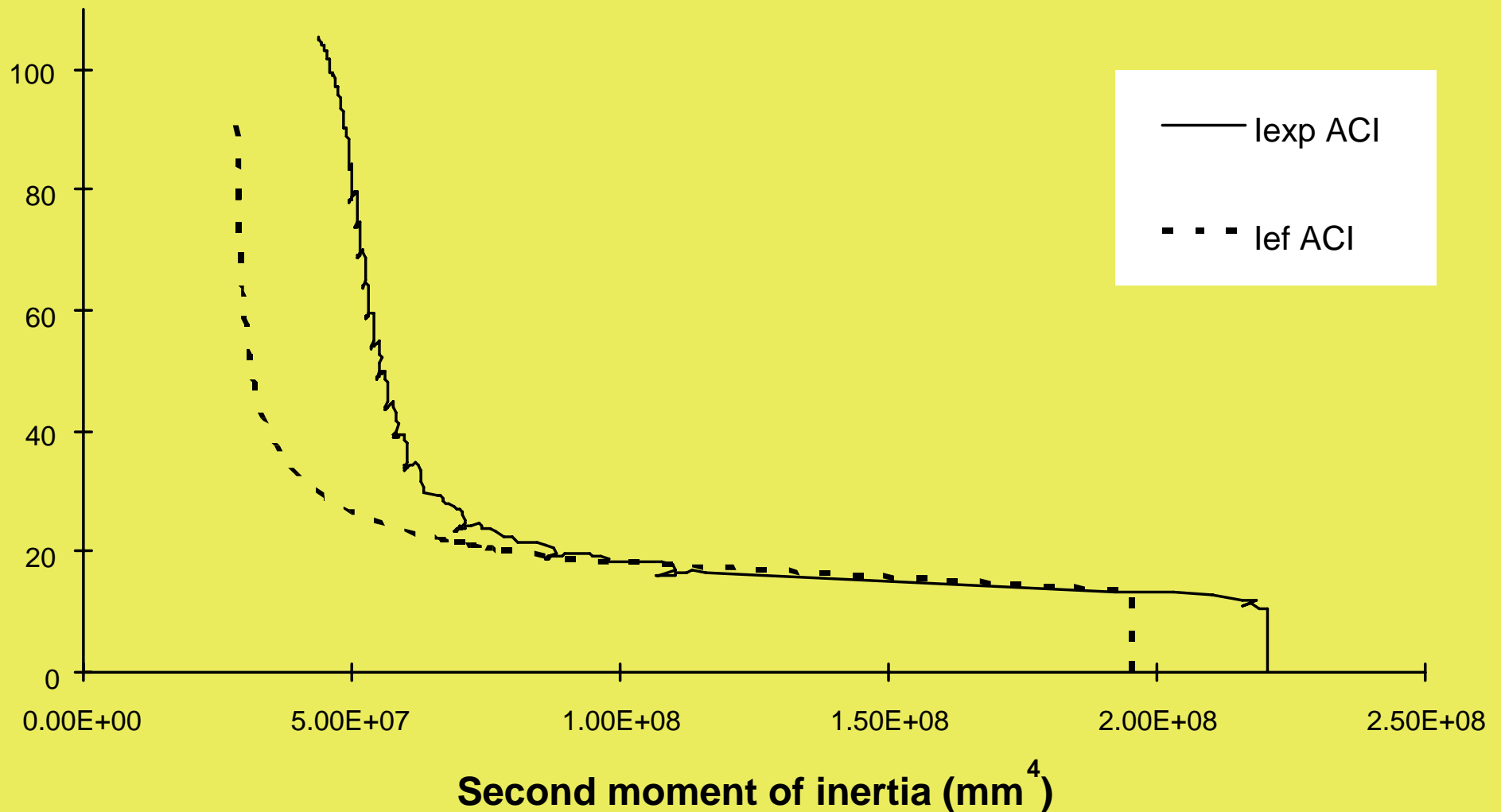
Neutral Axis Variation with Load





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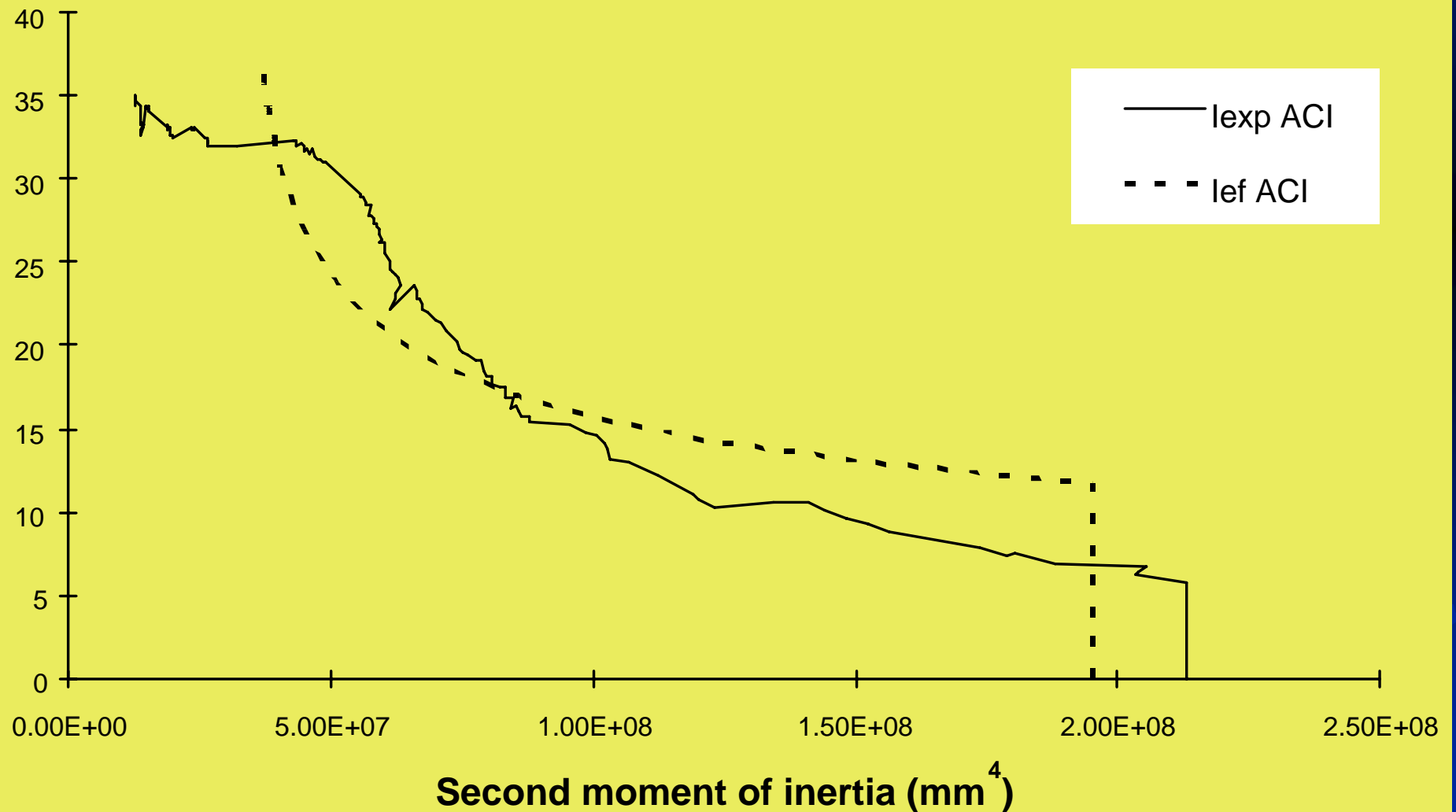
Second Moment of Area Variation with Load GB5





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Second Moment of Area Variation with Load SB8





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Conclusions

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