

XTRACT Analysis Report -

For use only in an academic or research setting.

Section Name: Section1
Loading Name: pm1
Analysis Type: Moment Curvature

em

1/21/2020

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Section Details:

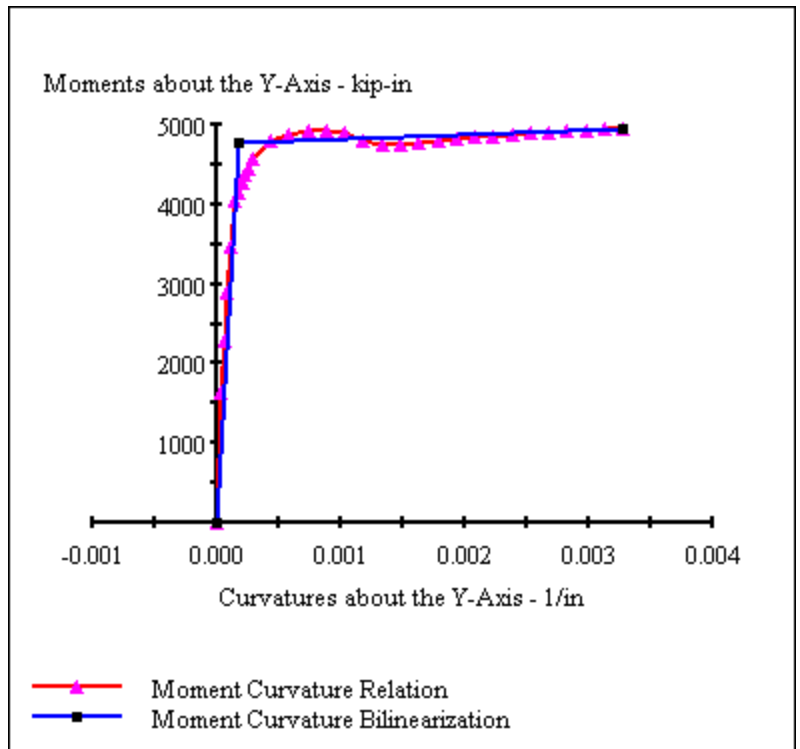
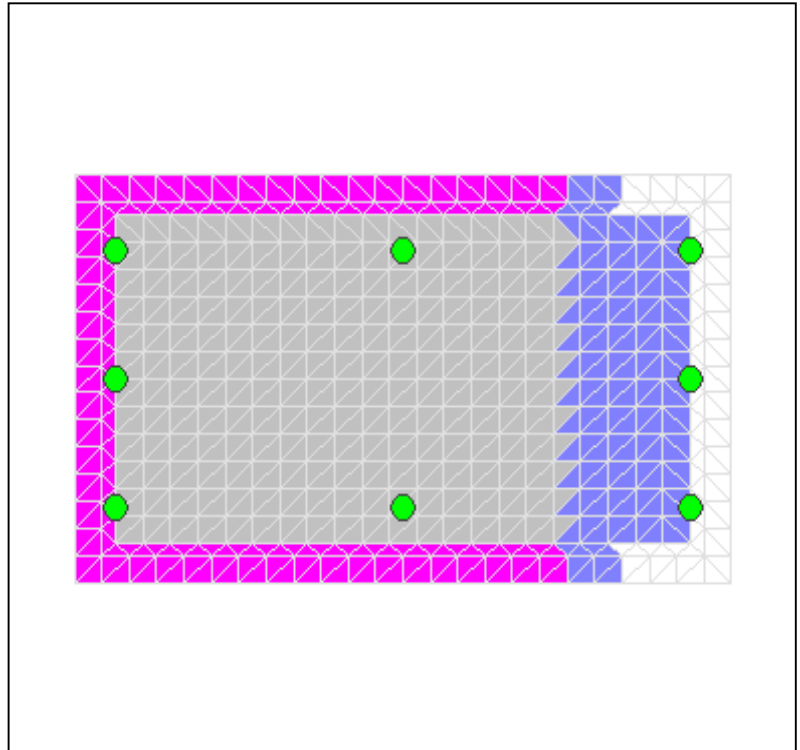
X Centroid: $-.4845E-15$ in
Y Centroid: $.1956E-16$ in
Section Area: 360.0 in²

Loading Details:

Constant Load - P: 180.0 kips
Incrementing Loads: Myy Only
Number of Points: 30
Analysis Strategy: Displacement Control

Analysis Results:

Failing Material: Confined1
Failure Strain: $14.00E-3$ Compression
Curvature at Initial Load: $-.2059E-9$ 1/in
Curvature at First Yield: $.1444E-3$ 1/in
Ultimate Curvature: $3.277E-3$ 1/in
Moment at First Yield: 4034 kip-in
Ultimate Moment: 4941 kip-in
Centroid Strain at Yield: $.5527E-3$ Ten
Centroid Strain at Ultimate: $19.33E-3$ Ten
N.A. at First Yield: 3.827 in
N.A. at Ultimate: 5.900 in
Energy per Length: 15.48 kips
Effective Yield Curvature: $.1706E-3$ 1/in
Effective Yield Moment: 4765 kip-in
Over Strength Factor: 1.037
EI Effective: $2.79E+7$ kip-in²
Yield EI Effective: $56.91E+3$ kip-in²
Bilinear Harding Slope: .2037 %
Curvature Ductility: 19.21



Comments:

User Comments