XTRACT Analysis Report - Educational

For use only in an academic or research setting.

Section Name: Section1

Loading Name: I have a name!

Analysis Type: Moment Curvature

Educational License
TRC
9/23/2021
T-Section Example
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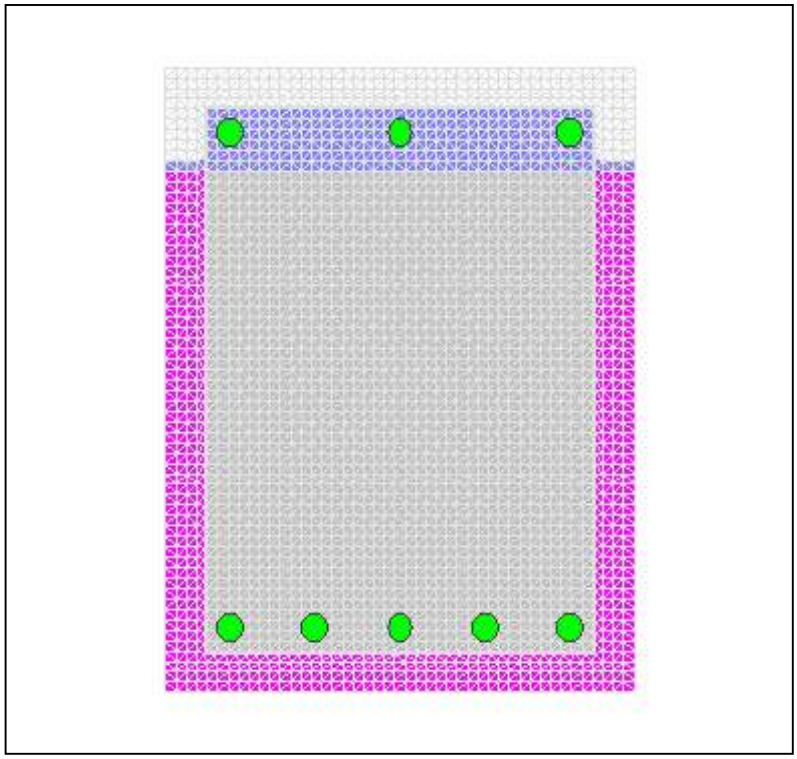
Section Details:

X Centroid:	-28.43E-9 in
Y Centroid:	-.2207 in
Section Area:	432.0 in^2
Section Igxx:	21.28E+3 in^4
Section Igyy:	11.81E+3 in^4



Loading Details:

Incrementing Loads:	Mxx Only
Number of Points:	31
Analysis Strategy:	Displacement Control

Analysis Results:

Failing Material:	Steel1
Failure Strain:	.1600 Tension
Curvature at Initial Load:	0 1/in
Curvature at First Yield:	-.1636E-3 1/in
Ultimate Curvature:	-9.137E-3 1/in
Moment at First Yield:	-5161 kip-in
Ultimate Moment:	-7046 kip-in
Centroid Strain at Yield:	.8617E-3 Ten
Centroid Strain at Ultimate:	75.22E-3 Ten
N.A. at First Yield:	-5.269 in
N.A. at Ultimate:	-8.232 in
Energy per Length:	57.63 kips
Effective Yield Curvature:	.1809E-3 1/in
Effective Yield Moment:	5709 kip-in
Mp:	-668.6 kip-in
Mn(e=0.003):	-5327 kip-in
Over Strength Factor:	1.234
EI Effective:	31.56E+6 kip-in^2
Yield EI Effective:	149.3E+3 kip-in^2
I Effective:	8754 in^4
Bilinear Harding Slope:	.4731 %
Curvature Ductility:	50.50