

# XTRACT Analysis Report

Section Name: 0.25x1.5  
Loading Name: MC1  
Analysis Type: Moment Curvature

2014-10-23  
Muro 0.25x1.5  
0.25x1.5  
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## Section Details:

X Centroid: 4.66E-18 m  
Y Centroid: 1.41E-17 m  
Section Area: .3750 m^2

## Loading Details:

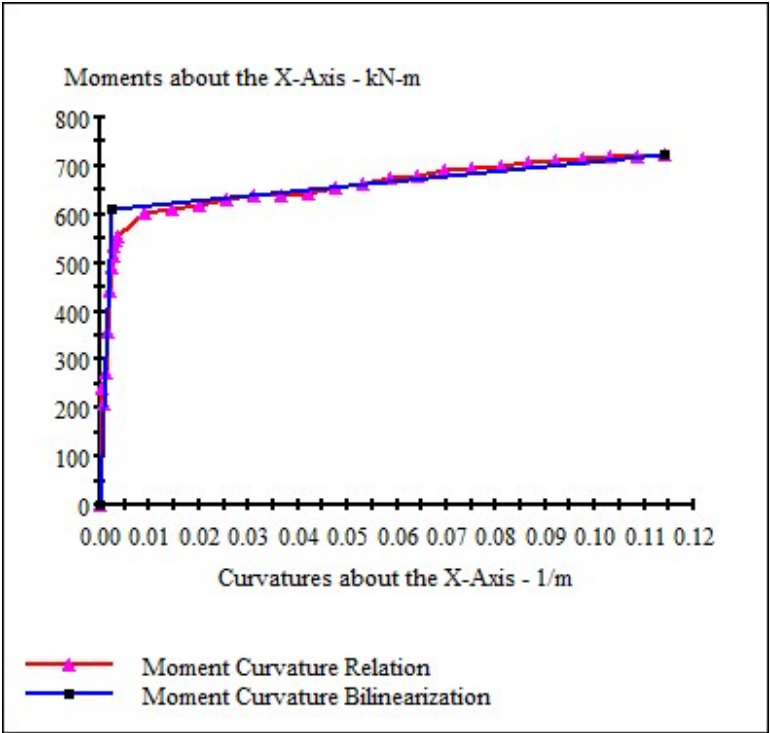
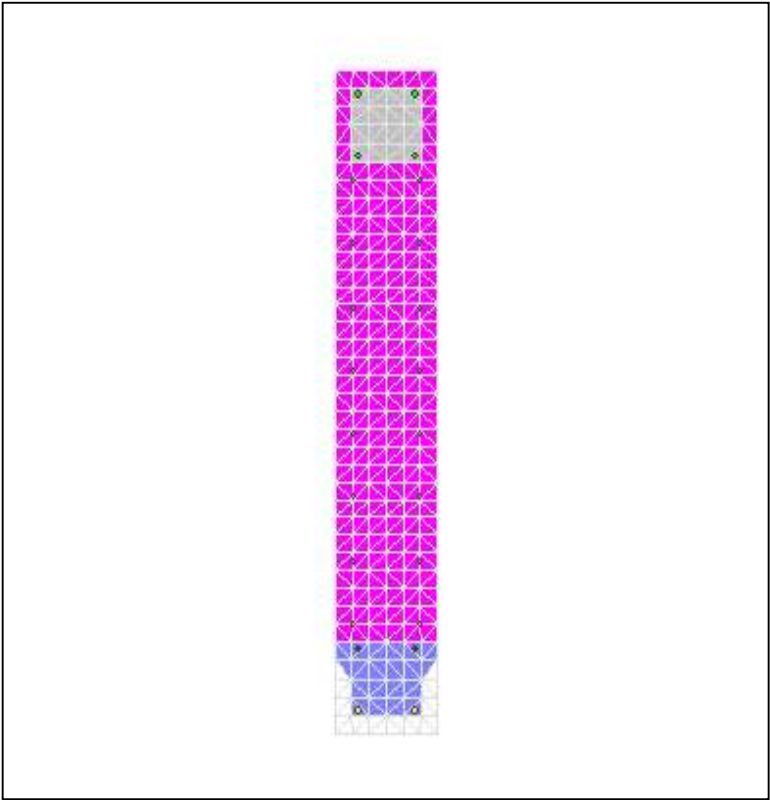
Constant Load - P: 1.000E-3 kN  
Incrementing Loads: Mxx Only  
Number of Points: 30  
Analysis Strategy: Displacement Control

## Analysis Results:

Failing Material: Acero  
Failure Strain: .1420 Tension  
Curvature at Initial Load: 0 1/m  
Curvature at First Yield: 1.833E-3 1/m  
Ultimate Curvature: .1139 1/m  
Moment at First Yield: 440.6 kN-m  
Ultimate Moment: 723.5 kN-m  
Centroid Strain at Yield: .8278E-3 Ten  
Centroid Strain at Ultimate: 62.91E-3 Ten  
N.A. at First Yield: .4517 m  
N.A. at Ultimate: .5522 m  
Energy per Length: 75.06 kN  
Effective Yield Curvature: 2.538E-3 1/m  
Effective Yield Moment: 610.2 kN-m  
Over Strength Factor: 1.186  
EI Effective: 240.41E+6 N-m^2  
Yield EI Effective: 1.016E+6 N-m^2  
Bilinear Harding Slope: .4228 %  
Curvature Ductility: 44.89

## Comments:

User Comments



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Mxx (kN-m)	Kxx (1/m)
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0	0
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241.6	.3668E-3
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209.8	.7337E-3
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274.8	1.101E-3
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357.8	1.467E-3
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441.0	1.834E-3
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491.0	2.201E-3
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514.3	2.568E-3
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534.9	2.935E-3
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545.3	3.302E-3
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556.0	3.668E-3
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602.1	9.182E-3
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611.3	14.70E-3
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619.4	20.21E-3
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631.6	25.72E-3
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637.9	31.24E-3
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640.8	36.75E-3
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644.4	42.26E-3
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653.9	47.78E-3
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665.2	53.29E-3
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674.0	58.80E-3
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679.0	64.32E-3
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689.5	69.83E-3
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694.3	75.34E-3
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700.8	80.86E-3
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705.9	86.37E-3
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710.1	91.88E-3
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716.1	97.40E-3
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718.2	.1029
-------	-------

721.1	.1084
-------	-------

723.5	.1139
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# XTRACT Analysis Report

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Section Name: 0.15x2  
Loading Name: MC1  
Analysis Type: Moment Curvature

2014-10-23  
Muro 0.15x2  
0.15x2  
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## Section Details:

X Centroid: -4.14E-18 m  
Y Centroid: -1.10E-17 m  
Section Area: .3500 m^2

## Loading Details:

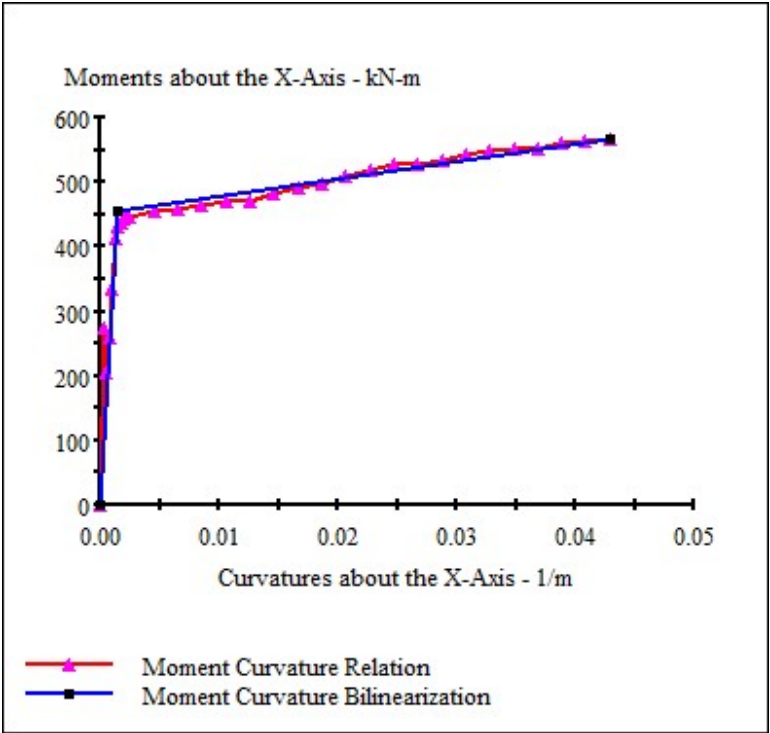
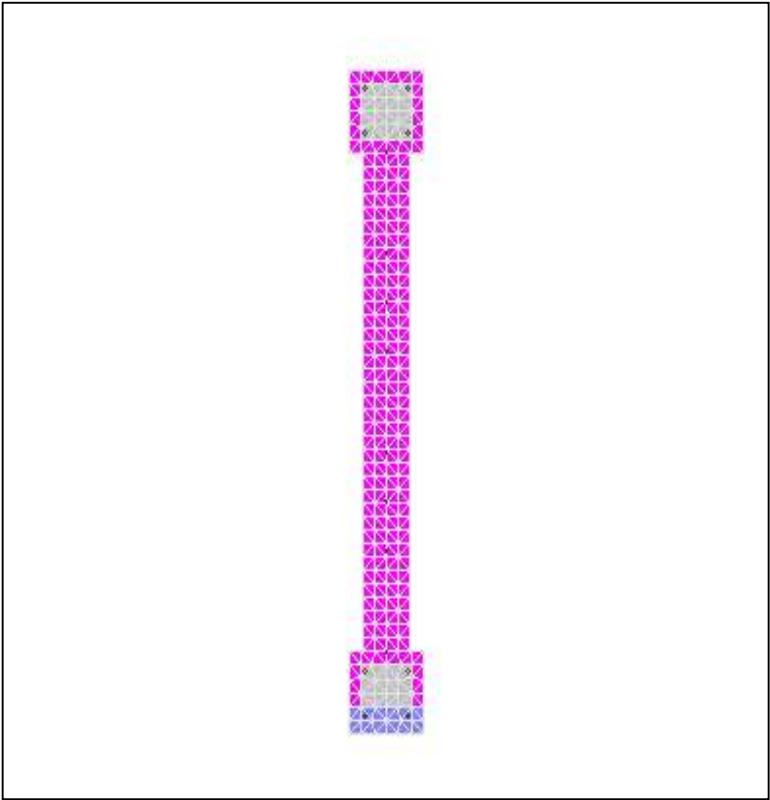
Constant Load - P: 1.000E-3 kN  
Incrementing Loads: Mxx Only  
Number of Points: 31  
Analysis Strategy: Displacement Control

## Analysis Results:

Failing Material: Malla  
Failure Strain: 71.00E-3 Tension  
Curvature at Initial Load: 0 1/m  
Curvature at First Yield: 1.262E-3 1/m  
Ultimate Curvature: 42.93E-3 1/m  
Moment at First Yield: 411.0 kN-m  
Ultimate Moment: 567.9 kN-m  
Centroid Strain at Yield: .9087E-3 Ten  
Centroid Strain at Ultimate: 38.80E-3 Ten  
N.A. at First Yield: .7202 m  
N.A. at Ultimate: .9038 m  
Energy per Length: 21.55 kN  
Effective Yield Curvature: 1.396E-3 1/m  
Effective Yield Moment: 454.6 kN-m  
Over Strength Factor: 1.249  
EI Effective: 325.70E+6 N-m^2  
Yield EI Effective: 2.727E+6 N-m^2  
Bilinear Harding Slope: .8373 %  
Curvature Ductility: 30.76

## Comments:

User Comments



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Muro 0.15x2  
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Mxx (kN-m)	Kxx (1/m)
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0	0
---	---

275.4	.2527E-3
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205.2	.5055E-3
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258.9	.7582E-3
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334.0	1.011E-3
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411.6	1.264E-3
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430.6	1.516E-3
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438.1	1.769E-3
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442.2	2.022E-3
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445.6	2.275E-3
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447.4	2.527E-3
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453.9	4.547E-3
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459.6	6.567E-3
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465.6	8.586E-3
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470.5	10.61E-3
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471.2	12.63E-3
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483.6	14.65E-3
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491.8	16.66E-3
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496.9	18.68E-3
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510.7	20.70E-3
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519.9	22.72E-3
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526.6	24.74E-3
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527.6	26.76E-3
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532.3	28.78E-3
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543.2	30.80E-3
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547.3	32.82E-3
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550.4	34.84E-3
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552.5	36.86E-3
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560.9	38.88E-3
-------	----------

562.4	40.90E-3
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567.9	42.92E-3
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Mxx (kN-m)	Kxx (1/m)
567.9	42.93E-3

# XTRACT Analysis Report

Section Name: .25x1.5  
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2014-10-23  
Muro .25x1.5  
.25x1.5  
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## Section Details:

X Centroid: -2.31E-18 m  
Y Centroid: .4320E-3 m  
Section Area: .3750 m^2

## Loading Details:

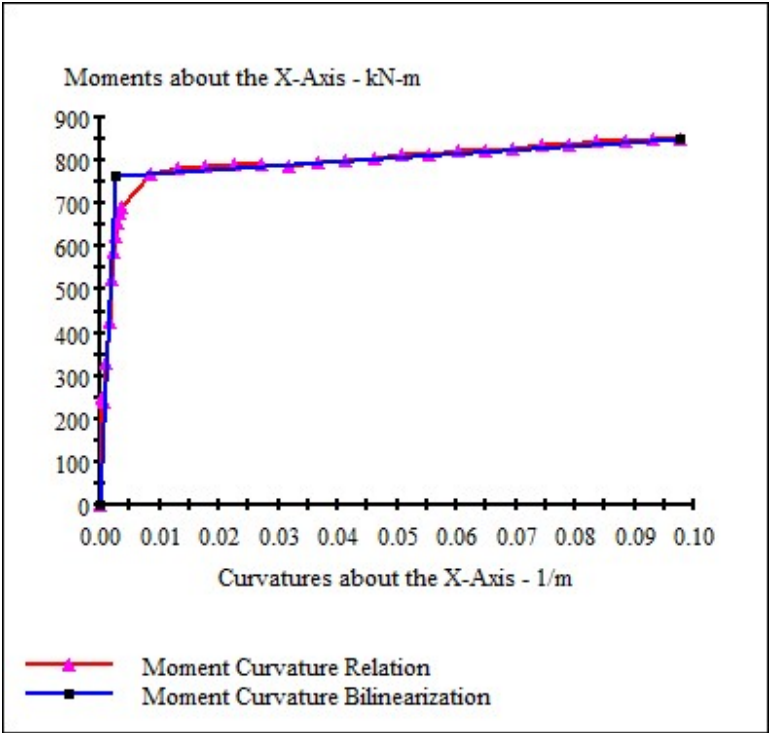
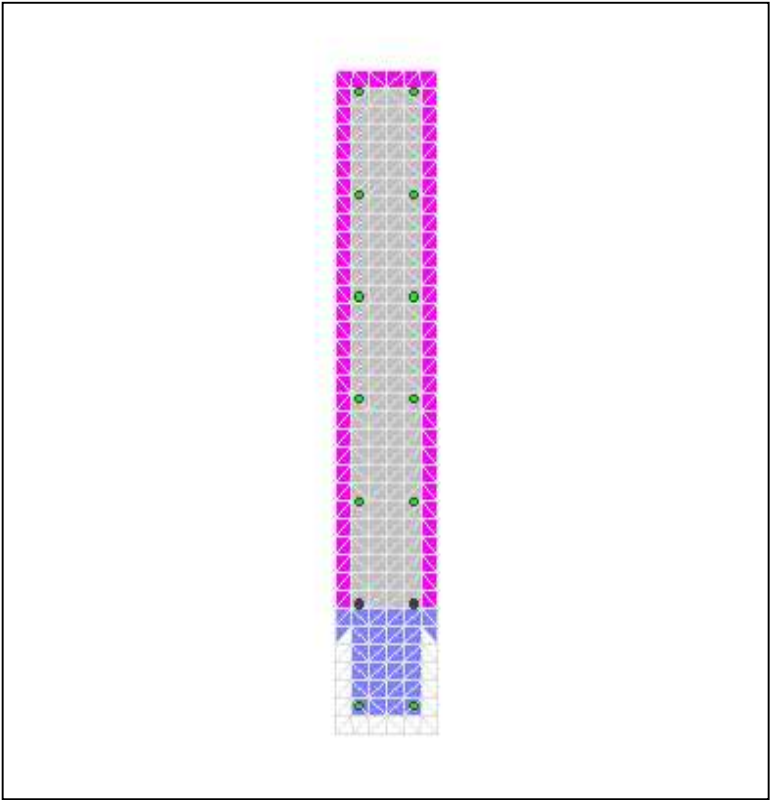
Constant Load - P: 1.000E-3 kN  
Incrementing Loads: Mxx Only  
Number of Points: 31  
Analysis Strategy: Displacement Control

## Analysis Results:

Failing Material: Muro  
Failure Strain: 22.60E-3 Compression  
Curvature at Initial Load: 0 1/m  
Curvature at First Yield: 1.869E-3 1/m  
Ultimate Curvature: 97.80E-3 1/m  
Moment at First Yield: 523.3 kN-m  
Ultimate Moment: 850.6 kN-m  
Centroid Strain at Yield: .7928E-3 Ten  
Centroid Strain at Ultimate: 45.56E-3 Ten  
N.A. at First Yield: .4243 m  
N.A. at Ultimate: .4658 m  
Energy per Length: 77.91 kN  
Effective Yield Curvature: 2.737E-3 1/m  
Effective Yield Moment: 766.5 kN-m  
Over Strength Factor: 1.110  
EI Effective: 280.04E+6 N-m^2  
Yield EI Effective: 885.0E+3 N-m^2  
Bilinear Harding Slope: .3160 %  
Curvature Ductility: 35.73

## Comments:

User Comments



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Mxx (kN-m)	Kxx (1/m)
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0	0
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246.8	.3743E-3
-------	----------

241.8	.7486E-3
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328.3	1.123E-3
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425.7	1.497E-3
-------	----------

524.1	1.872E-3
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587.0	2.246E-3
-------	----------

624.8	2.620E-3
-------	----------

657.5	2.994E-3
-------	----------

677.6	3.369E-3
-------	----------

691.6	3.743E-3
-------	----------

767.0	8.446E-3
-------	----------

782.1	13.15E-3
-------	----------

786.7	17.85E-3
-------	----------

791.1	22.55E-3
-------	----------

790.4	27.26E-3
-------	----------

787.4	31.96E-3
-------	----------

794.2	36.66E-3
-------	----------

799.0	41.36E-3
-------	----------

806.1	46.07E-3
-------	----------

812.1	50.77E-3
-------	----------

816.3	55.47E-3
-------	----------

823.2	60.17E-3
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824.1	64.88E-3
-------	----------

829.8	69.58E-3
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834.8	74.28E-3
-------	----------

838.3	78.99E-3
-------	----------

844.4	83.69E-3
-------	----------

847.2	88.39E-3
-------	----------

850.3	93.09E-3
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850.6	97.80E-3
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Mxx (kN-m)	Kxx (1/m)
850.6	97.80E-3