NSTX CSU BELLOWS FIRST 10 MODE SHAPES

- Total weight = 18.1 lbs
- Bellows in fixed mode.

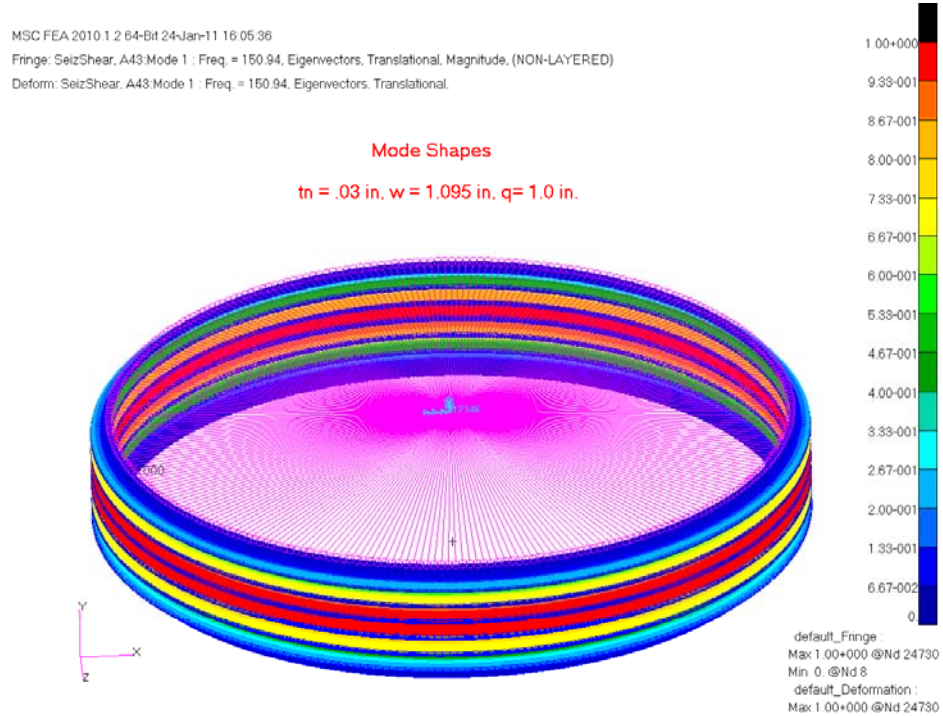
0 SUBCASE 1

R E A L E I G E N V A L U E S

MODE NO.	EXTRACTION ORDER	EIGENVALUE	RADIANS	CYCLES	GENERALIZED MASS	GENERALIZED STIFFNESS
1	1	8.994094E+05	9.483720E+02	1.509381E+02	1.000000E+00	8.994094E+05
2	2	2.629203E+06	1.621482E+03	2.580668E+02	1.000000E+00	2.629203E+06
3	3	2.629204E+06	1.621482E+03	2.580669E+02	1.000000E+00	2.629204E+06
4	4	2.969075E+06	1.723100E+03	2.742400E+02	1.000000E+00	2.969075E+06
5	5	2.969114E+06	1.723112E+03	2.742417E+02	1.000000E+00	2.969114E+06
6	6	3.471941E+06	1.863315E+03	2.965557E+02	1.000000E+00	3.471941E+06
7	7	3.471943E+06	1.863315E+03	2.965558E+02	1.000000E+00	3.471943E+06
8	8	3.523462E+06	1.877089E+03	2.987479E+02	1.000000E+00	3.523462E+06
9	9	4.063636E+06	2.015846E+03	3.208319E+02	1.000000E+00	4.063636E+06
10	10	4.063637E+06	2.015846E+03	3.208319E+02	1.000000E+00	4.063637E+06

1 MSC.NASTRAN JOB CREATED ON 17-NOV-10 AT 11:54:20 JANUARY 24, 2011 MSC.NASTRAN 6/19/08 PAGE

P.Rogoff
1/24/2011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Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.00+000
9.33-001
8.67-001
8.00-001
7.33-001
6.67-001
6.00-001
5.33-001
4.67-001
4.00-001
3.33-001
2.67-001
2.00-001
1.33-001
6.67-002
0
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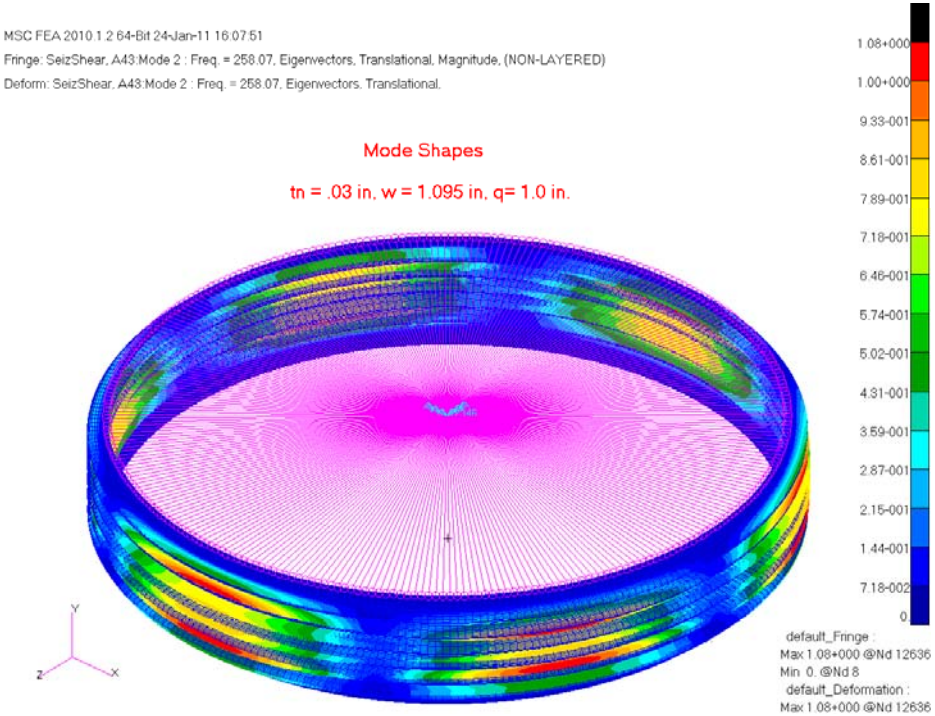
Max 1.00+000 @Nd 24730
Min 0. @Nd 8
default_Deformation :
Max 1.00+000 @Nd 24730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Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.08+000
1.00+000
9.33-001
8.61-001
7.89-001
7.18-001
6.46-001
5.74-001
5.02-001
4.31-001
3.59-001
2.87-001
2.15-001
1.44-001
7.18-002
0
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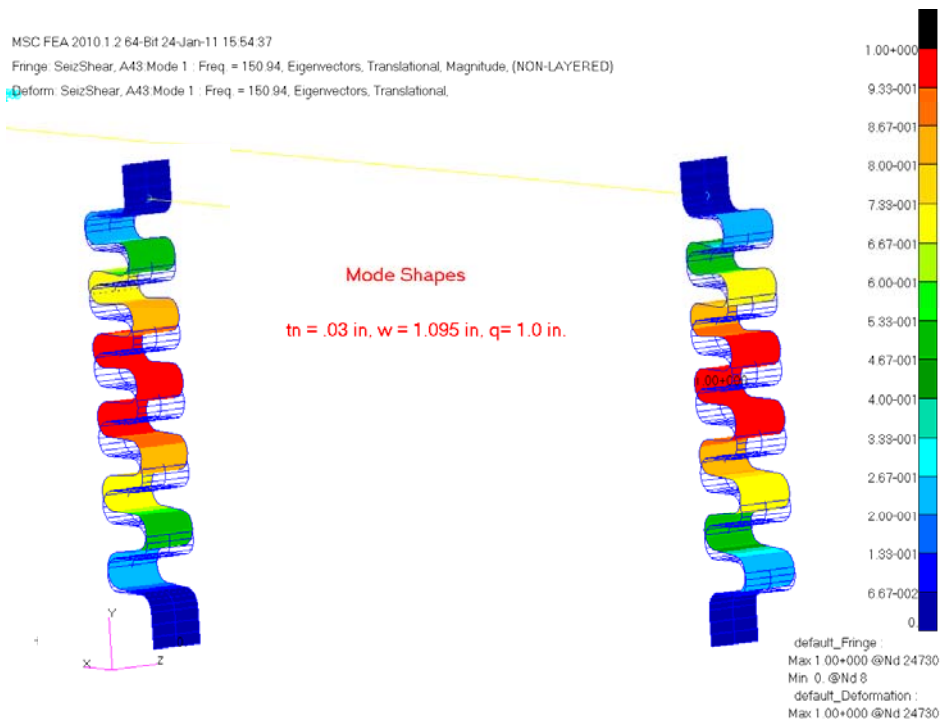
Max 1.08+000 @Nd 12636
Min 0. @Nd 8
default_Deformation :
Max 1.08+000 @Nd 12636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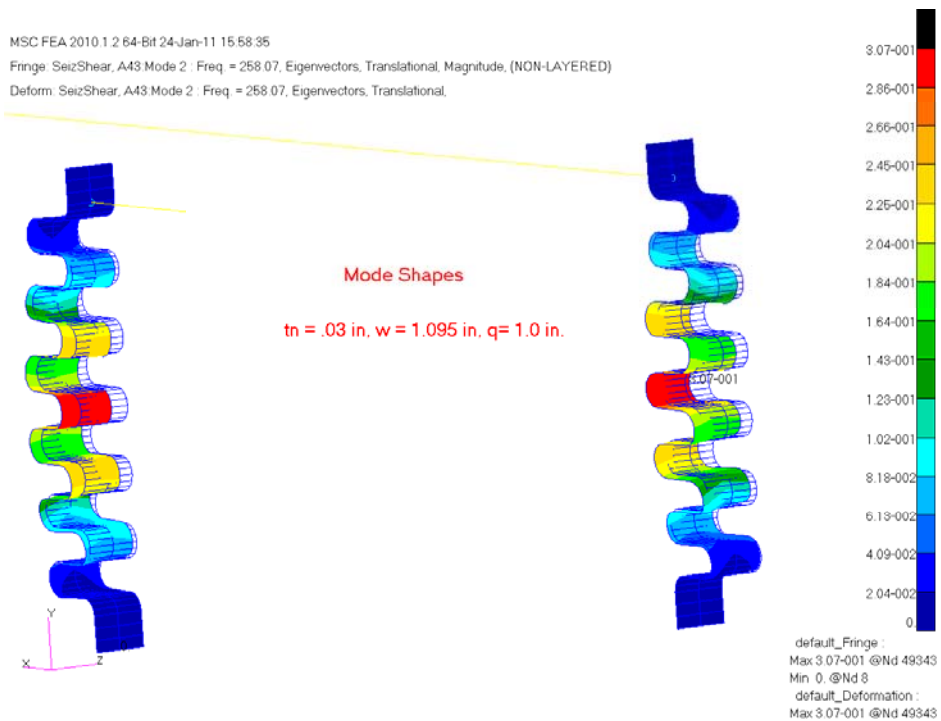
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.00+000
9.33-001
8.67-001
8.00-001
7.33-001
6.67-001
6.00-001
5.33-001
4.67-001
4.00-001
3.33-001
2.67-001
2.00-001
1.33-001
6.67-002
0
default_Fringe :
Max 1.00+000 @Nd 24730
Min 0. @Nd 8
default_Deformation :
Max 1.00+000 @Nd 24730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Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
3.07-001
2.86-001
2.66-001
2.45-001
2.25-001
2.04-001
1.84-001
1.64-001
1.43-001
1.23-001
1.02-001
8.18-002
6.13-002
4.09-002
2.04-002
0
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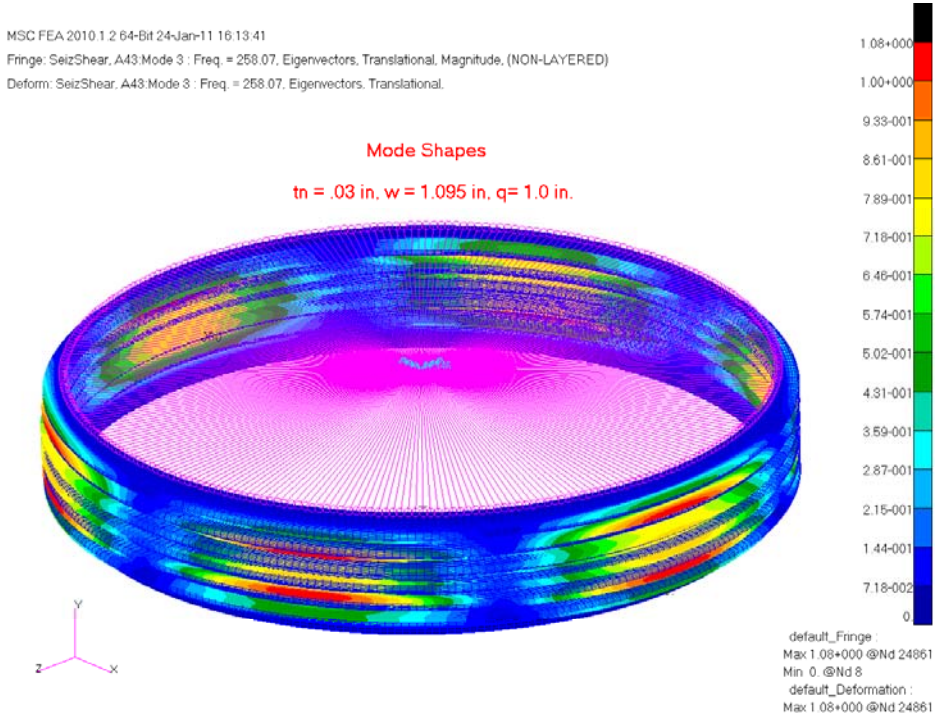
Min 0. @Nd 8
default_Deformation :
Max 3.07-001 @Nd 49343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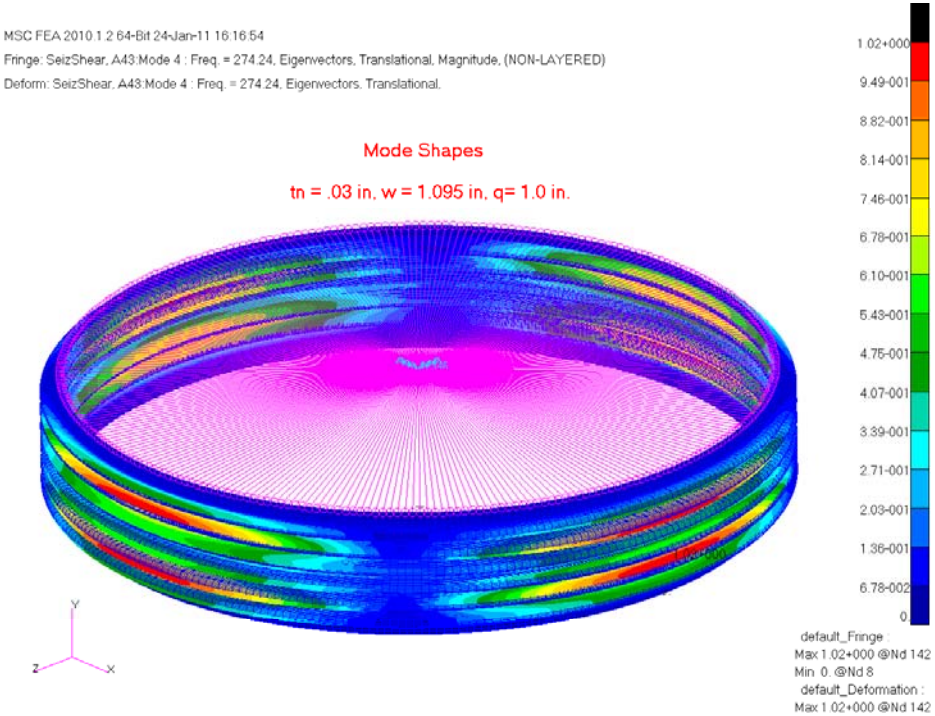
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.08+000
1.00+000
9.33-001
8.61-001
7.89-001
7.18-001
6.46-001
5.74-001
5.02-001
4.31-001
3.59-001
2.87-001
2.15-001
1.44-001
7.18-002
0.
default_Fringe :
Max 1.08+000 @Nd 24861
Min 0. @Nd 8
default_Deformation :
Max 1.08+000 @Nd 24861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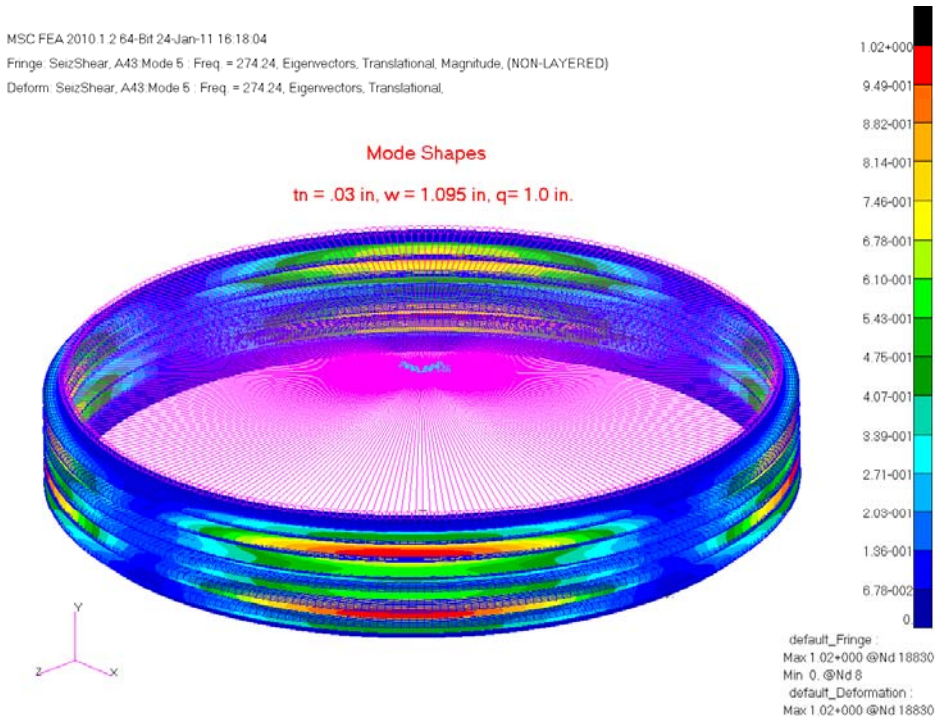
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.02+000
9.49-001
8.82-001
8.14-001
7.46-001
6.78-001
6.10-001
5.43-001
4.75-001
4.07-001
3.39-001
2.71-001
2.03-001
1.36-001
6.78-002
0
default_Fringe :
Max 1.02+000 @Nd 142
Min 0. @Nd 8
default_Deformation :
Max 1.02+000 @Nd 142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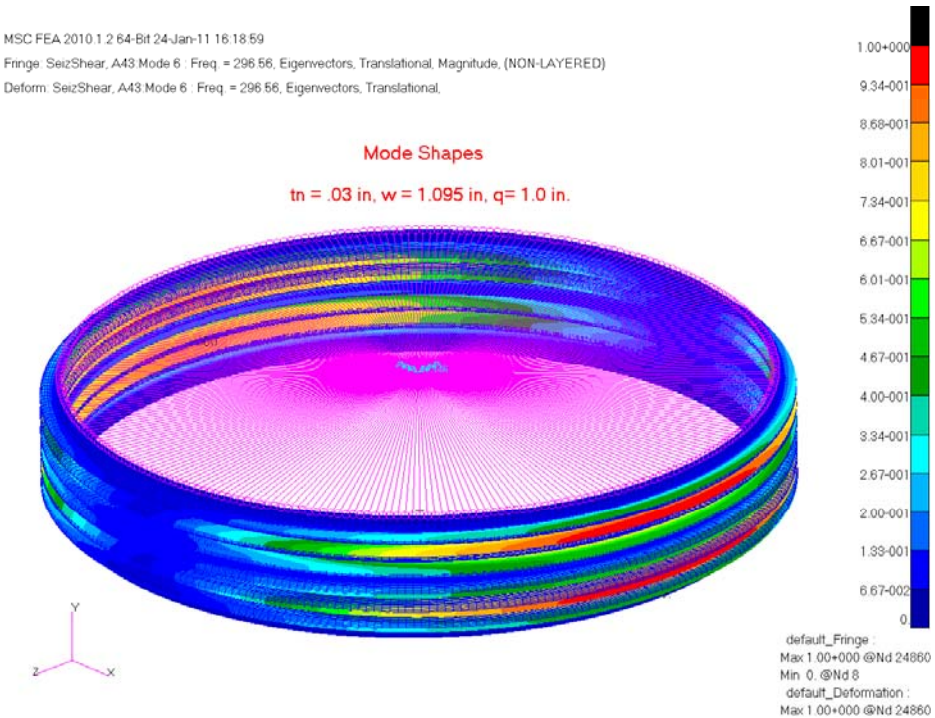
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.02+000
9.49-001
8.82-001
8.14-001
7.46-001
6.78-001
6.10-001
5.43-001
4.75-001
4.07-001
3.39-001
2.71-001
2.03-001
1.36-001
6.78-002
0
default_Fringe :
Max 1.02+000 @Nd 18830
Min 0. @Nd 8
default_Deformation :
Max 1.02+000 @Nd 18830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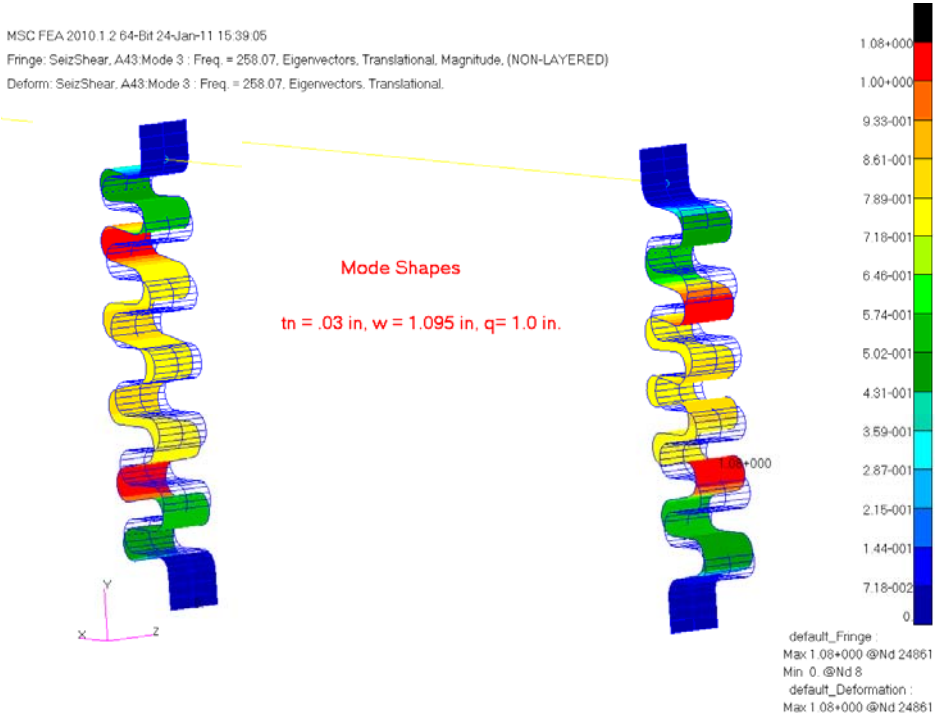
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.00+000
9.34-001
8.68-001
8.01-001
7.34-001
6.67-001
6.01-001
5.34-001
4.67-001
4.00-001
3.34-001
2.67-001
2.00-001
1.33-001
6.67-002
0
default_Fringe :
Max 1.00+000 @Nd 24860
Min 0. @Nd 8
default_Deformation :
Max 1.00+000 @Nd 24860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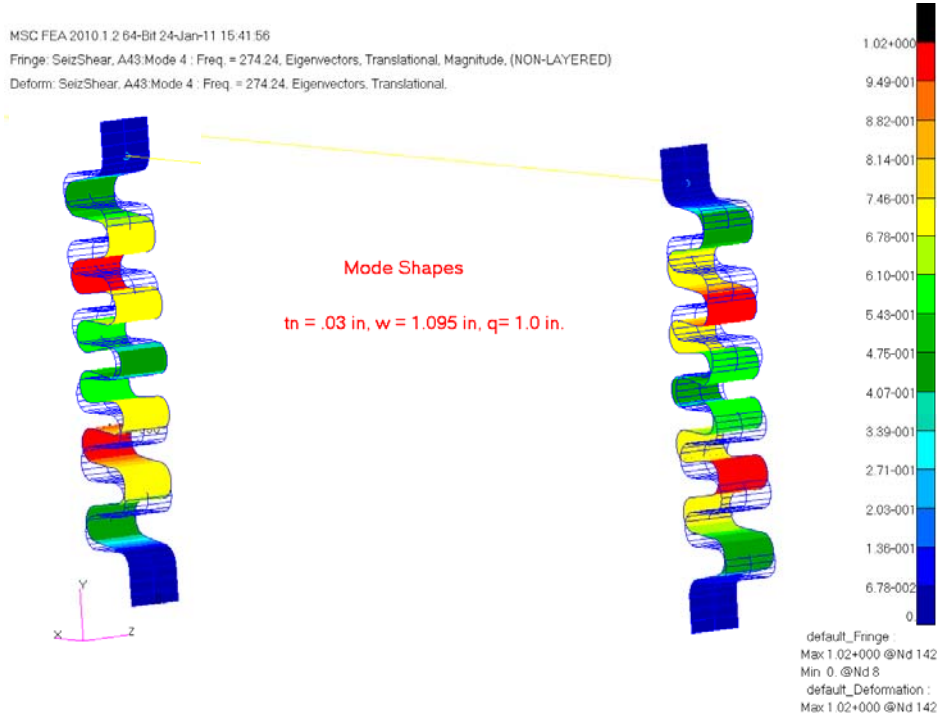
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.08+000
1.00+000
9.33-001
8.61-001
7.89-001
7.18-001
6.46-001
5.74-001
5.02-001
4.31-001
3.59-001
2.87-001
2.15-001
1.44-001
7.18-002
0.
default_Fringe :
Max 1.08+000 @Nd 24861
Min 0. @Nd 8
default_Deformation :
Max 1.08+000 @Nd 24861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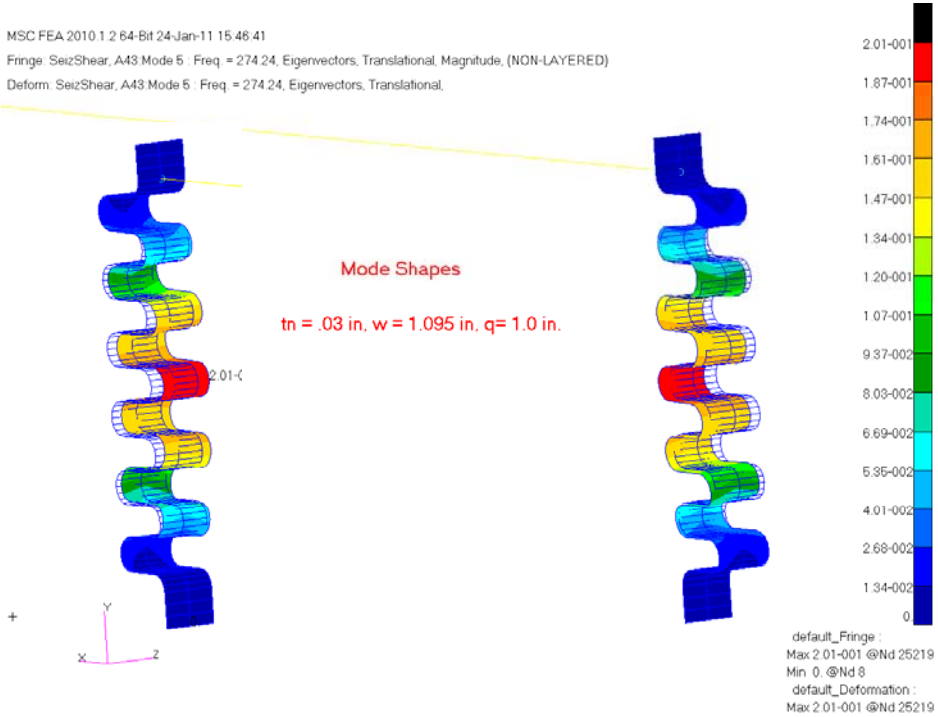
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.02+000
9.49-001
8.82-001
8.14-001
7.46-001
6.78-001
6.10-001
5.43-001
4.75-001
4.07-001
3.39-001
2.71-001
2.03-001
1.36-001
6.78-002
0
default_Fringe :
Max 1.02+000 @Nd 142
Min 0. @Nd 8
default_Deformation :
Max 1.02+000 @Nd 142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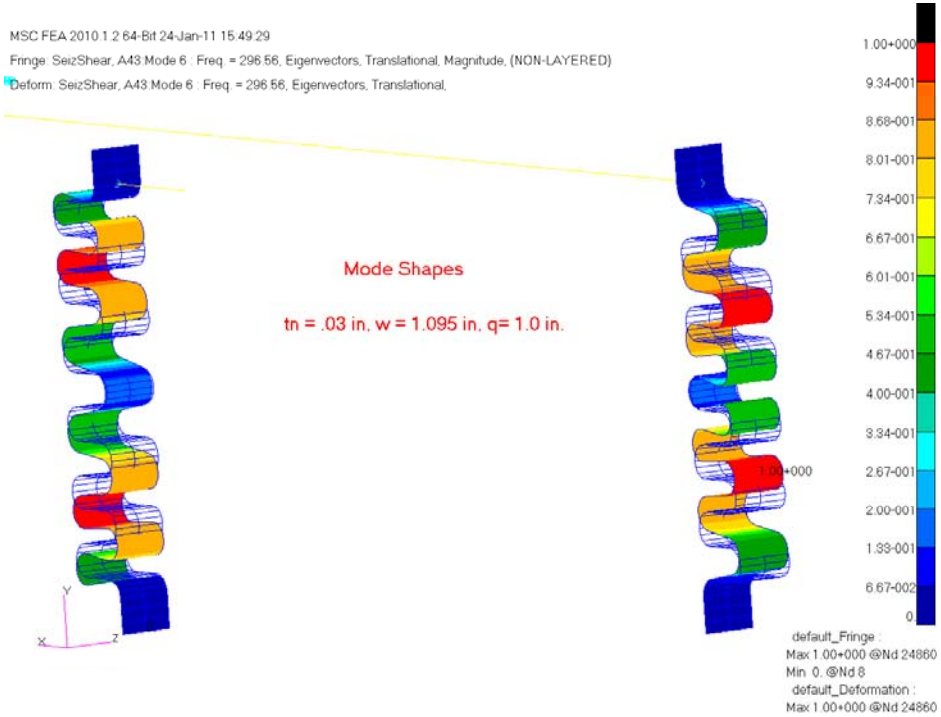
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
2.01-001
1.87-001
1.74-001
1.61-001
1.47-001
1.34-001
1.20-001
1.07-001
9.37-002
8.03-002
6.69-002
5.35-002
4.01-002
2.68-002
1.34-002
0.
default_Fringe :
Max 2.01-001 @Nd 25219
Min 0. @Nd 8
default_Deformation :
Max 2.01-001 @Nd 25219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Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.00+000
9.34-001
8.68-001
8.01-001
7.34-001
6.67-001
6.01-001
5.34-001
4.67-001
4.00-001
3.34-001
2.67-001
2.00-001
1.33-001
6.67-002
0
default_Fringe :
Max 1.00+000 @Nd 24860
Min 0. @Nd 8
default_Deformation :
Max 1.00+000 @Nd 24860

MSC FEA 2010.1.2 64-Bit 24-Jan-11 16:20:21
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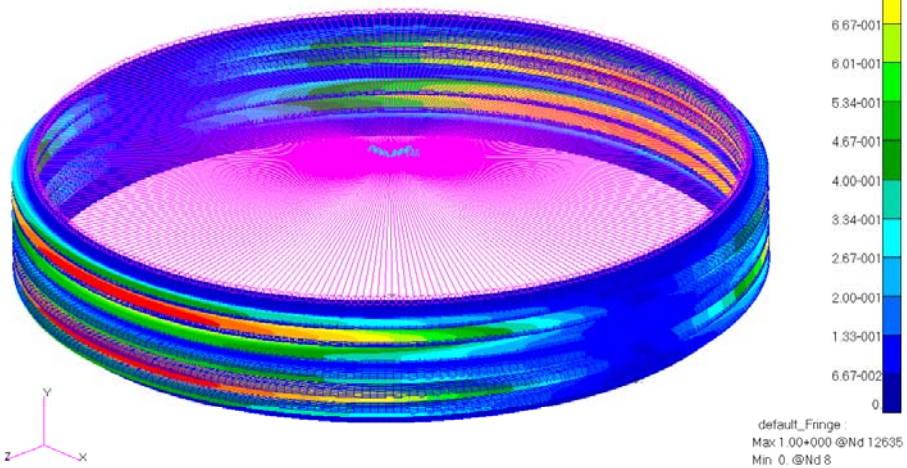
Mode Shapes

tn = .03 in, w = 1.095 in, q= 1.0 in.



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Min 0. @Nd 8
default_Deformation :
Max 1.00+000 @Nd 12635

MSC FEA 2010.1.2 64-Bit 24-Jan-11 16:22:33
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Mode Shapes

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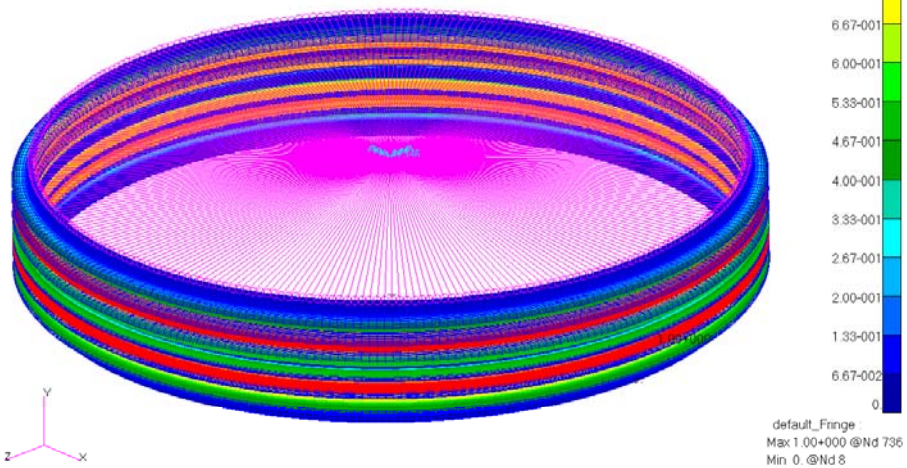

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default_Deformation :
Max 1.00+000 @Nd 736

MSC FEA 2010.1.2 64-Bit 24-Jan-11 16:24:21
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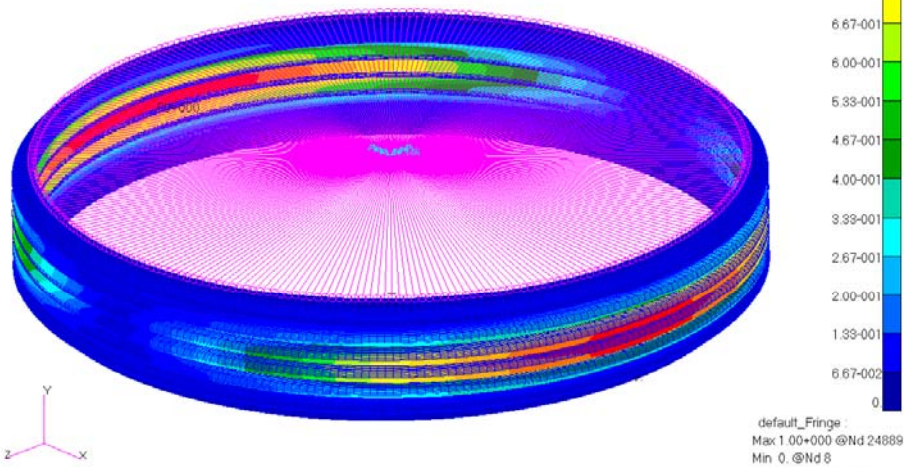
Mode Shapes

tn = .03 in, w = 1.095 in, q= 1.0 in.



default_Fringe :
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Min 0. @Nd 8
default_Deformation :
Max 1.00+000 @Nd 24889

MSC FEA 2010.1.2 64-Bit 24-Jan-11 16:25:15
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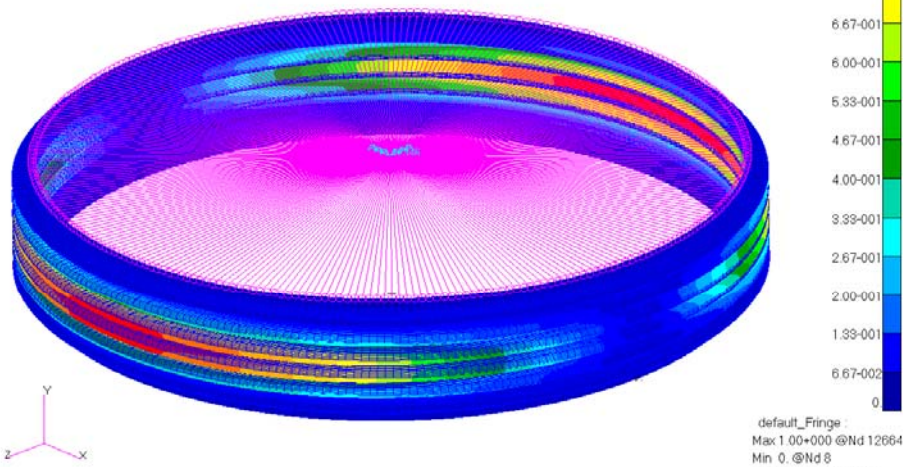
Mode Shapes

tn = .03 in, w = 1.095 in, q= 1.0 in.



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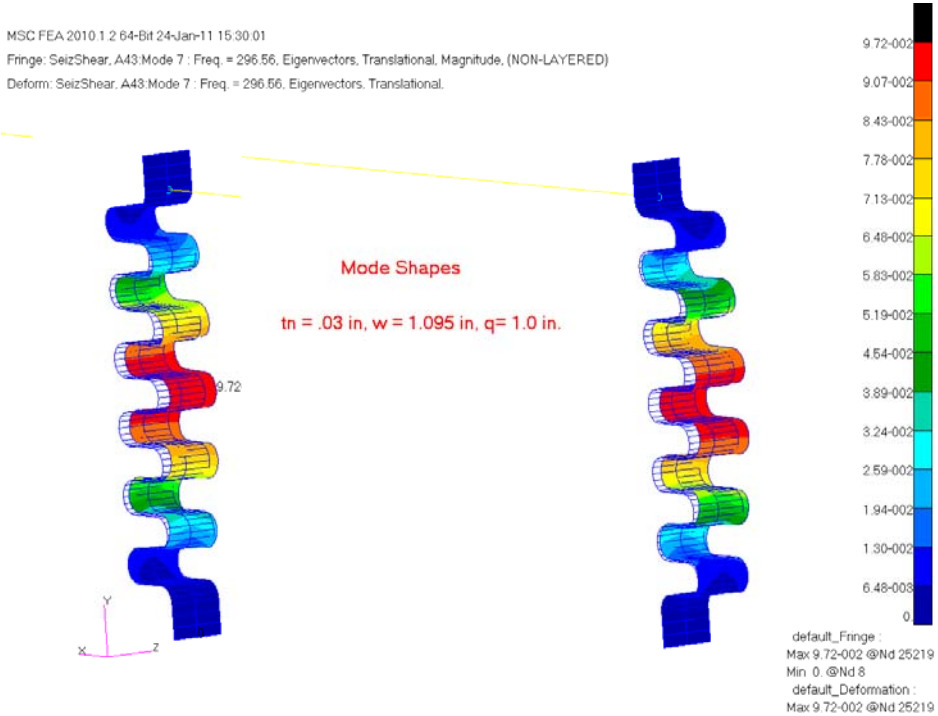
default_Deformation :
Max 1.00+000 @Nd 12664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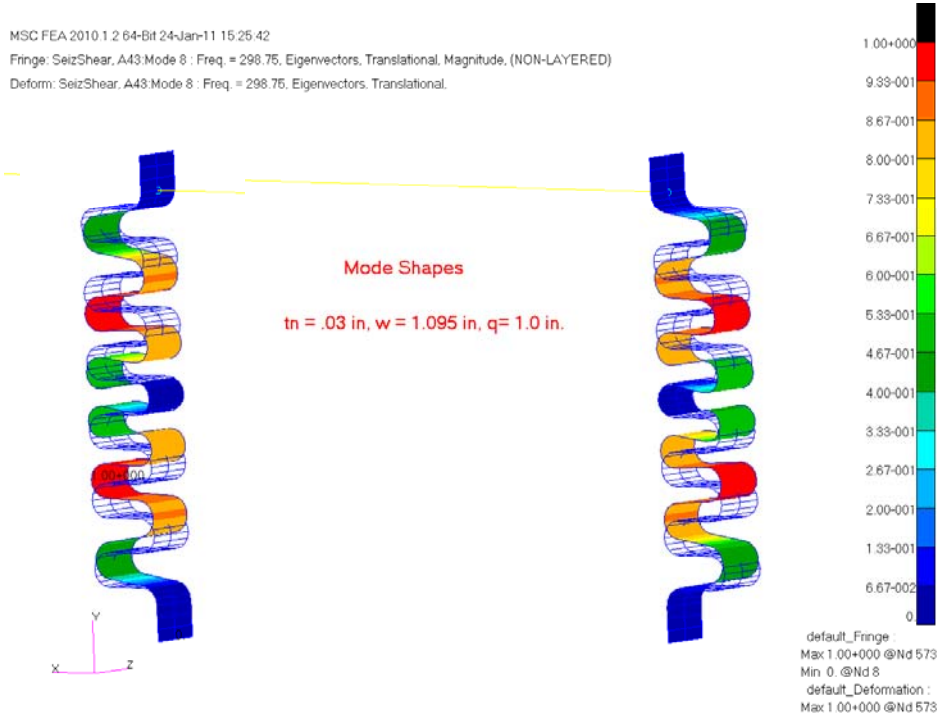
Deform: SeizShear, A43:Mode 7 : Freq. = 296.56, Eigenvectors, Translational,
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
9.72
9.72-002
9.07-002
8.43-002
7.78-002
7.13-002
6.48-002
5.83-002
5.19-002
4.54-002
3.89-002
3.24-002
2.59-002
1.94-002
1.30-002
6.48-003
0.
default_Fringe :
Max 9.72-002 @Nd 25219
Min 0. @Nd 8
default_Deformation :
Max 9.72-002 @Nd 25219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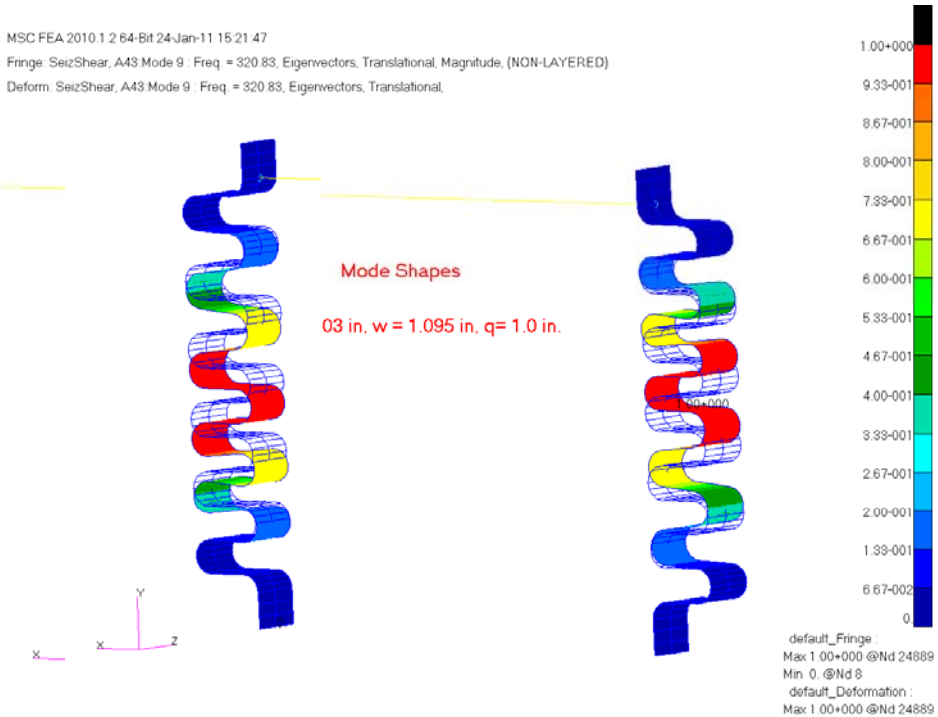
Deform: SeizShear, A43:Mode 8 : Freq. = 298.75, Eigenvectors, Translational,
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
1.00+000
9.33-001
8.67-001
8.00-001
7.33-001
6.67-001
6.00-001
5.33-001
4.67-001
4.00-001
3.33-001
2.67-001
2.00-001
1.33-001
6.67-002
0
default_Fringe :
Max 1.00+000 @Nd 573
Min 0. @Nd 8
default_Deformation :
Max 1.00+000 @Nd 573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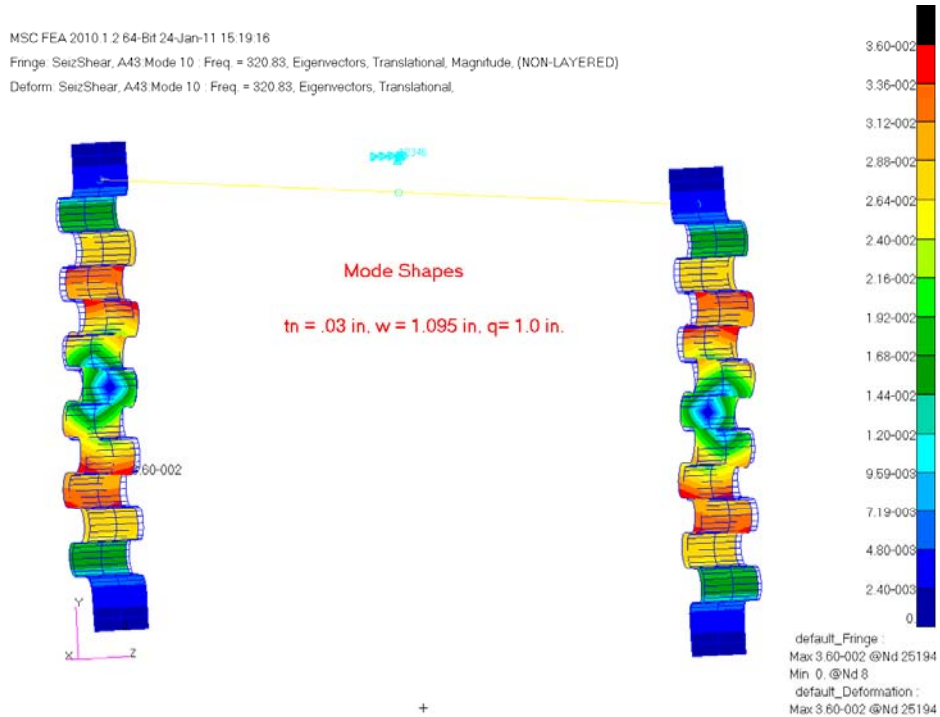
Deform: SeizShear, A43:Mode 9 : Freq. = 320.83, Eigenvectors, Translational,
Mode Shapes
03 in, w = 1.095 in, q= 1.0 in.
1.00+000
9.33-001
8.67-001
8.00-001
7.33-001
6.67-001
6.00-001
5.33-001
4.67-001
4.00-001
3.33-001
2.67-001
2.00-001
1.33-001
6.67-002
0.
default_Fringe :
Max 1.00+000 @Nd 24889
Min 0. @Nd 8
default_Deformation :
Max 1.00+000 @Nd 24889


MSC FEA 2010.1.2 64-Bit 24-Jan-11 15:19:16
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Deform: SeizShear, A43:Mode 10 : Freq. = 320.83, Eigenvectors, Translational,
Mode Shapes
tn = .03 in, w = 1.095 in, q= 1.0 in.
3.60-002
3.36-002
3.12-002
2.88-002
2.64-002
2.40-002
2.16-002
1.92-002
1.68-002
1.44-002
1.20-002
9.59-003
7.19-003
4.80-003
2.40-003
0.
default_Fringe :
Max 3.60-002 @Nd 25194
Min 0. @Nd 8
default_Deformation :
Max 3.60-002 @Nd 25194