

## **TAREA 3 TRUSS, FRAMES**

**Presentado por:**

Miguel Angel Reales Gaitan - mreales@unal.edu.co

**Profesor:**

Diego Alfredo Quexada Rodriguez  
*elgomezl@unal.edu.co*

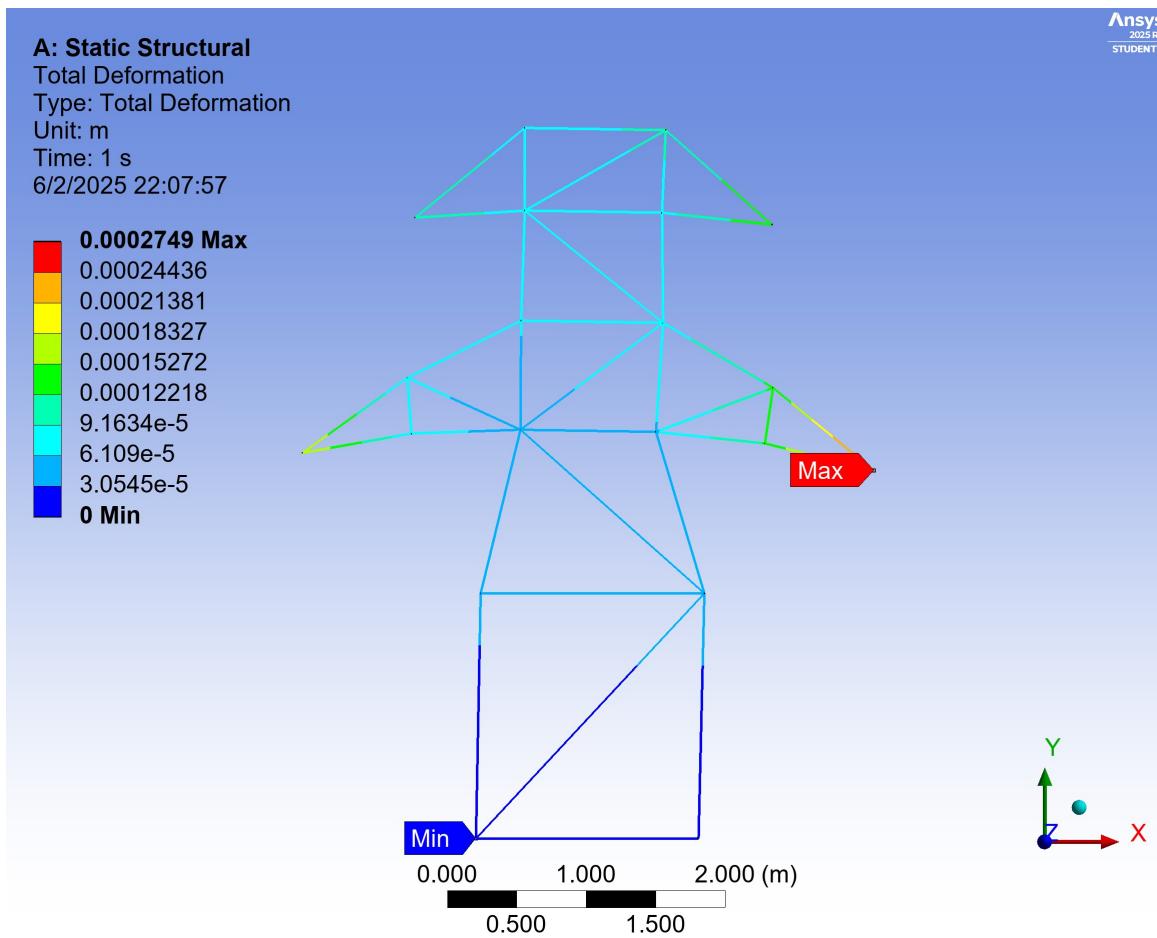
Viernes 2 De Febrero



**Universidad Nacional de Colombia**  
**Facultad de Ingeniería**  
**Departamento de Ingeniería Mecánica**  
**2024**  
**Aplicación métodos Finitos**

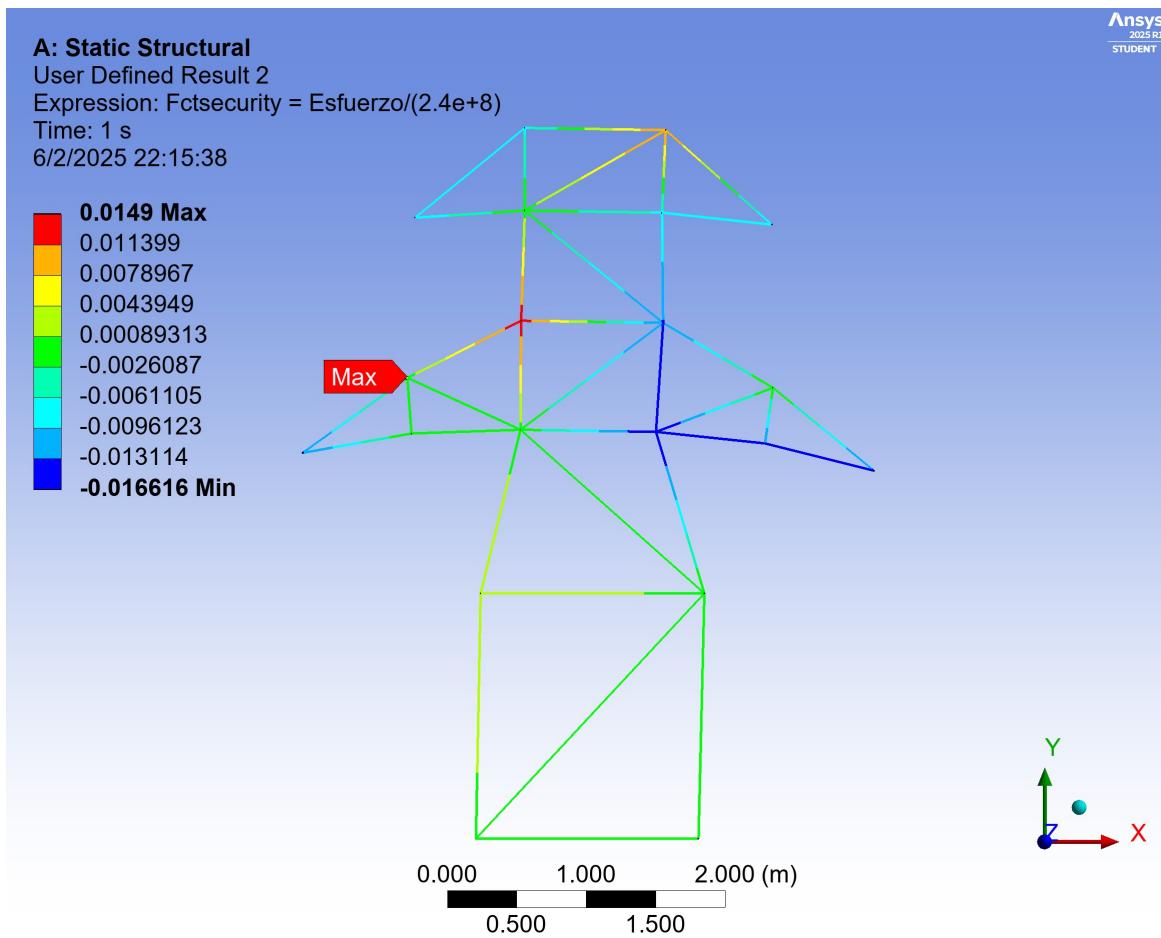
# Total Deformation

**Subject:** Tarea 3  
**Author:** Miguel Angel Reales Gaitan  
**Prepared For:** Truss Analysis (Steel)  
**Date** Thursday, February 6, 2025  
**Comments:**



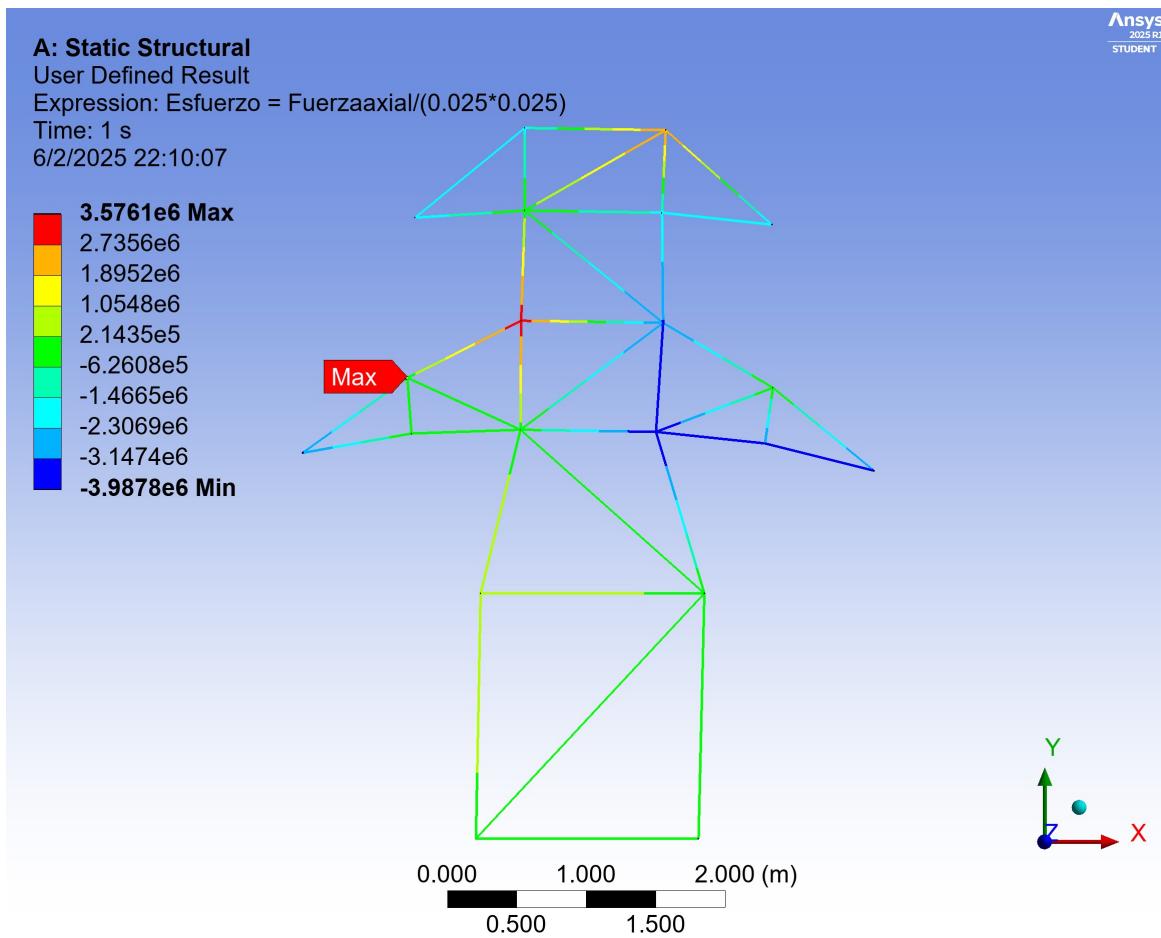
# User Defined Result 2

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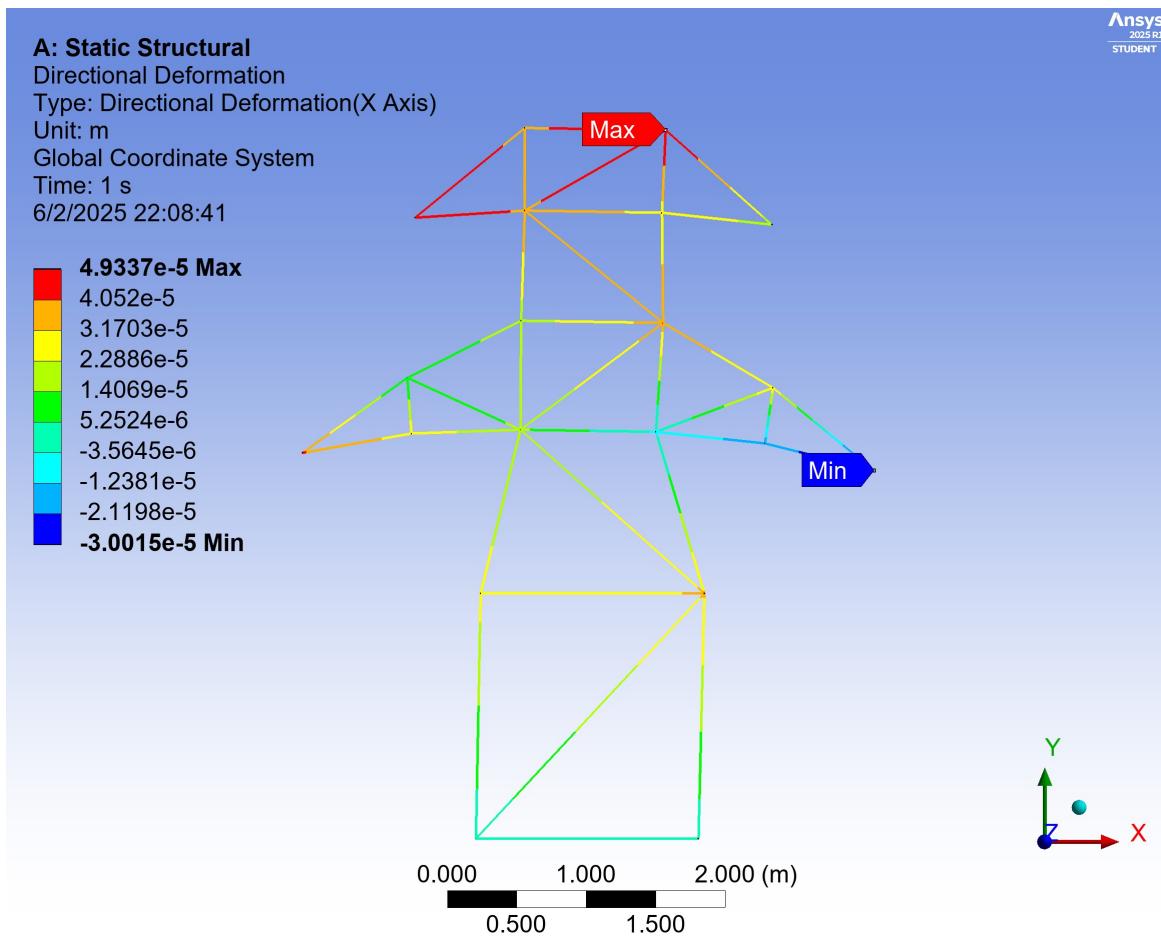
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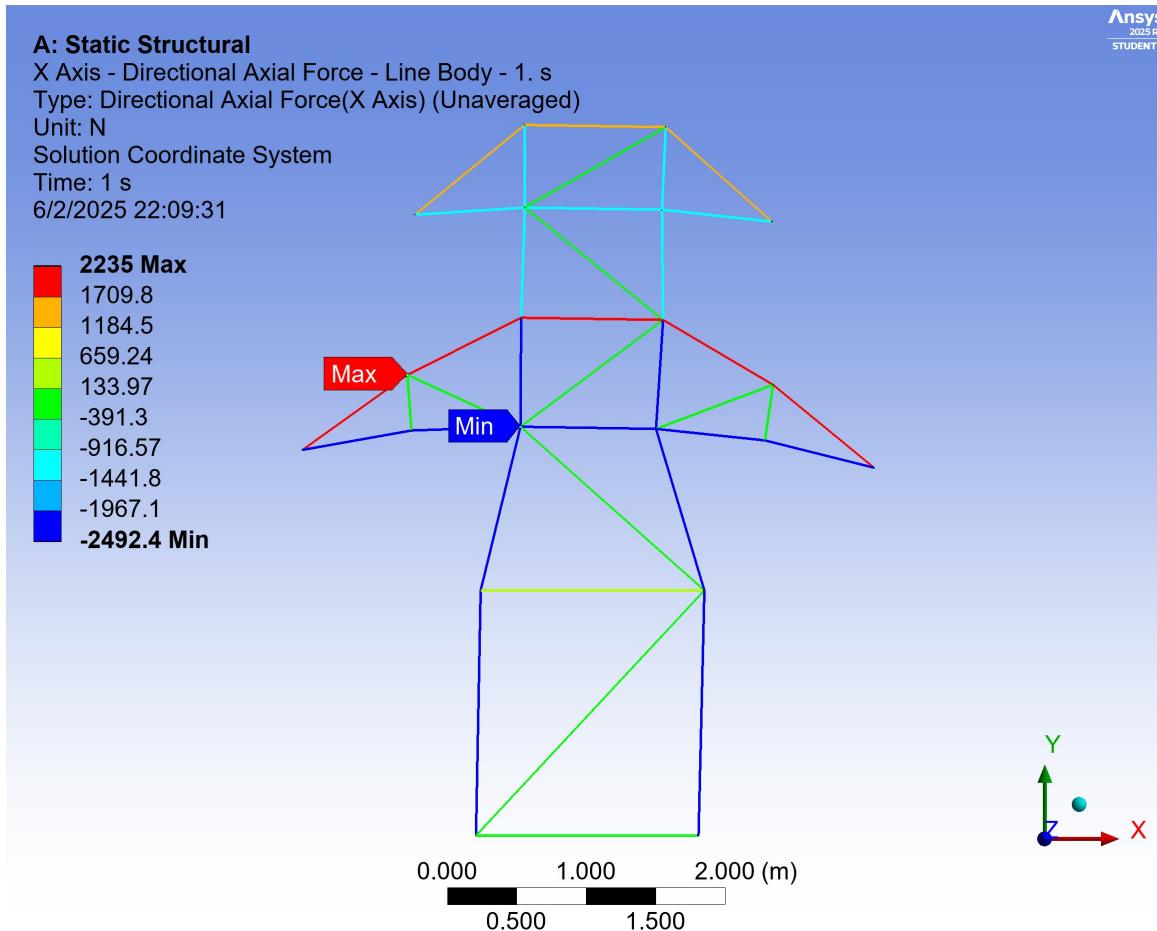
# Directional Deformation

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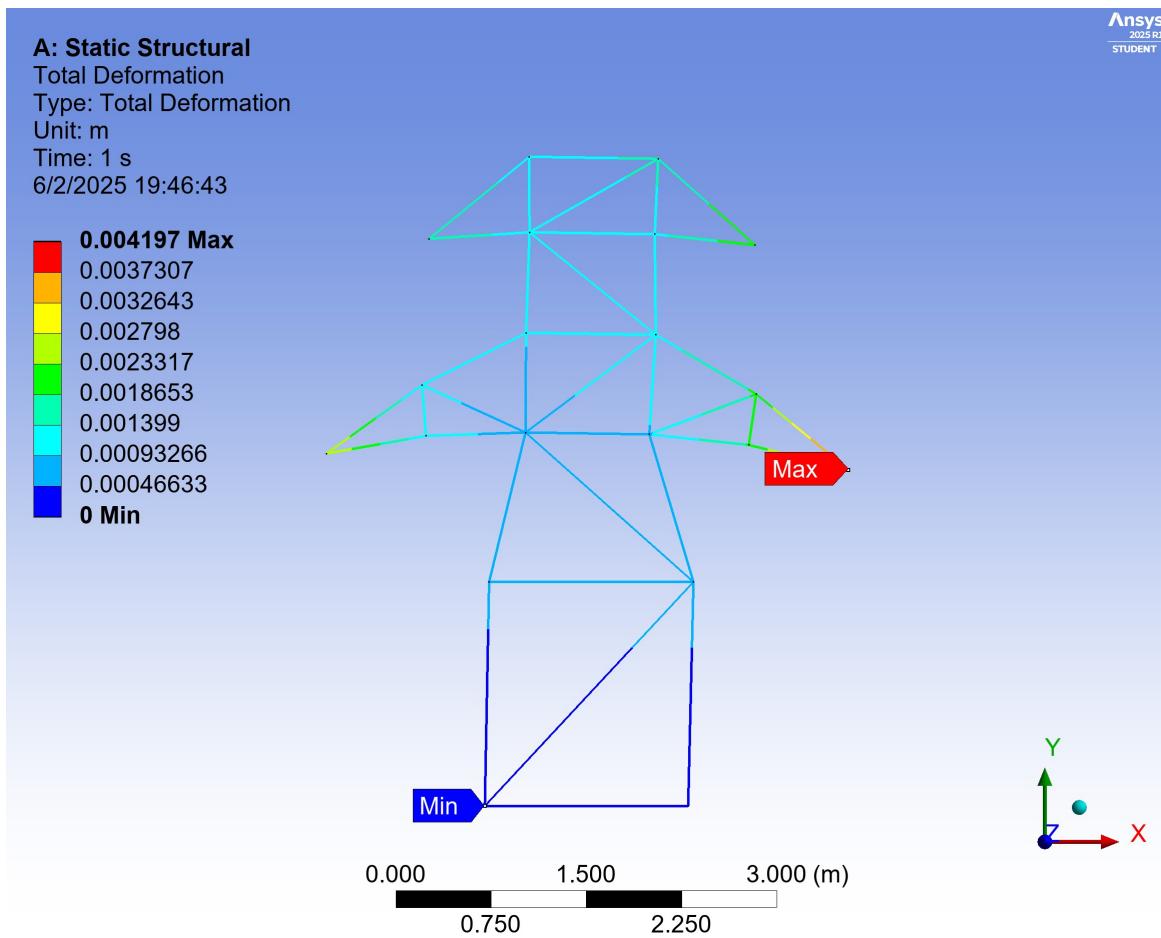
# X Axis - Directional Axial Force - Line Body - 1. s

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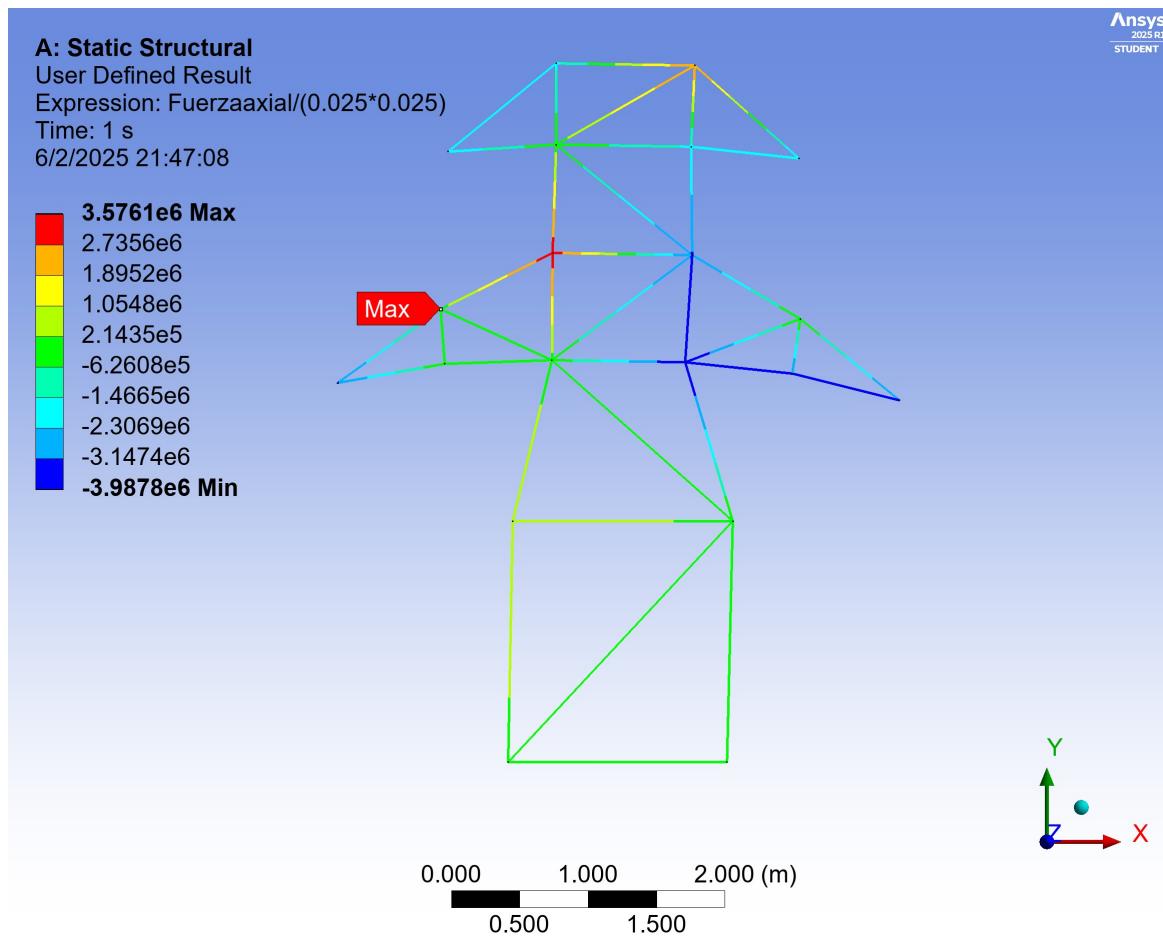
# Total Deformation

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**Prepared For:** Truss Analysis (douglas fir)  
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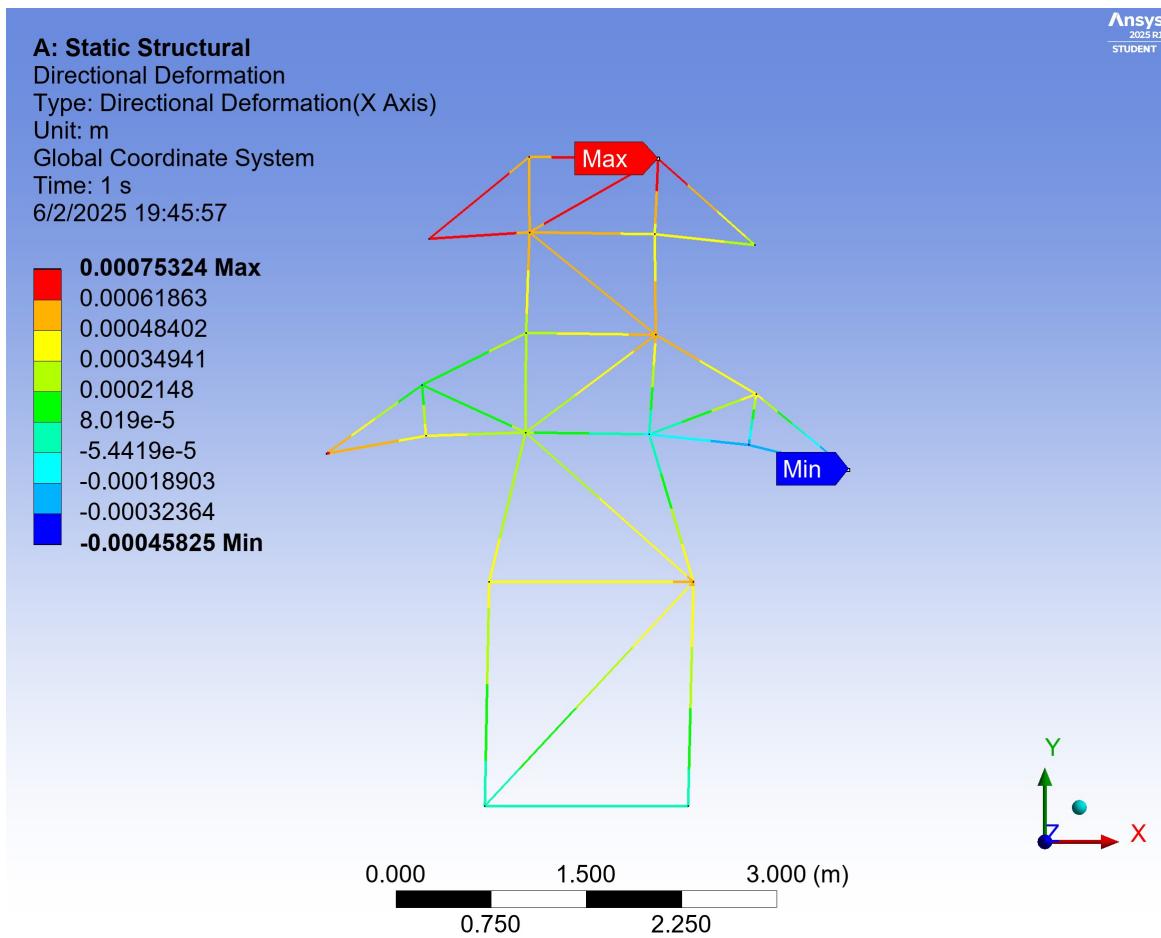
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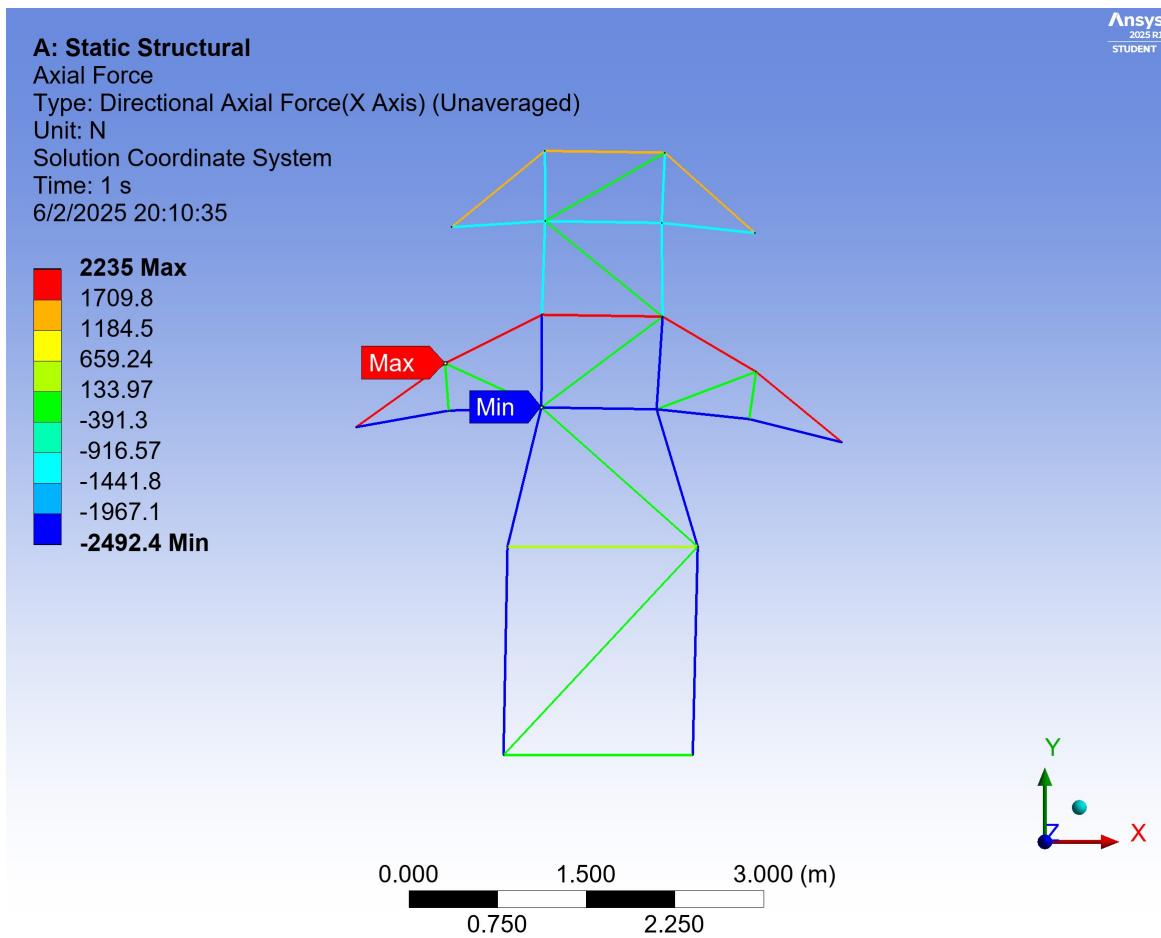
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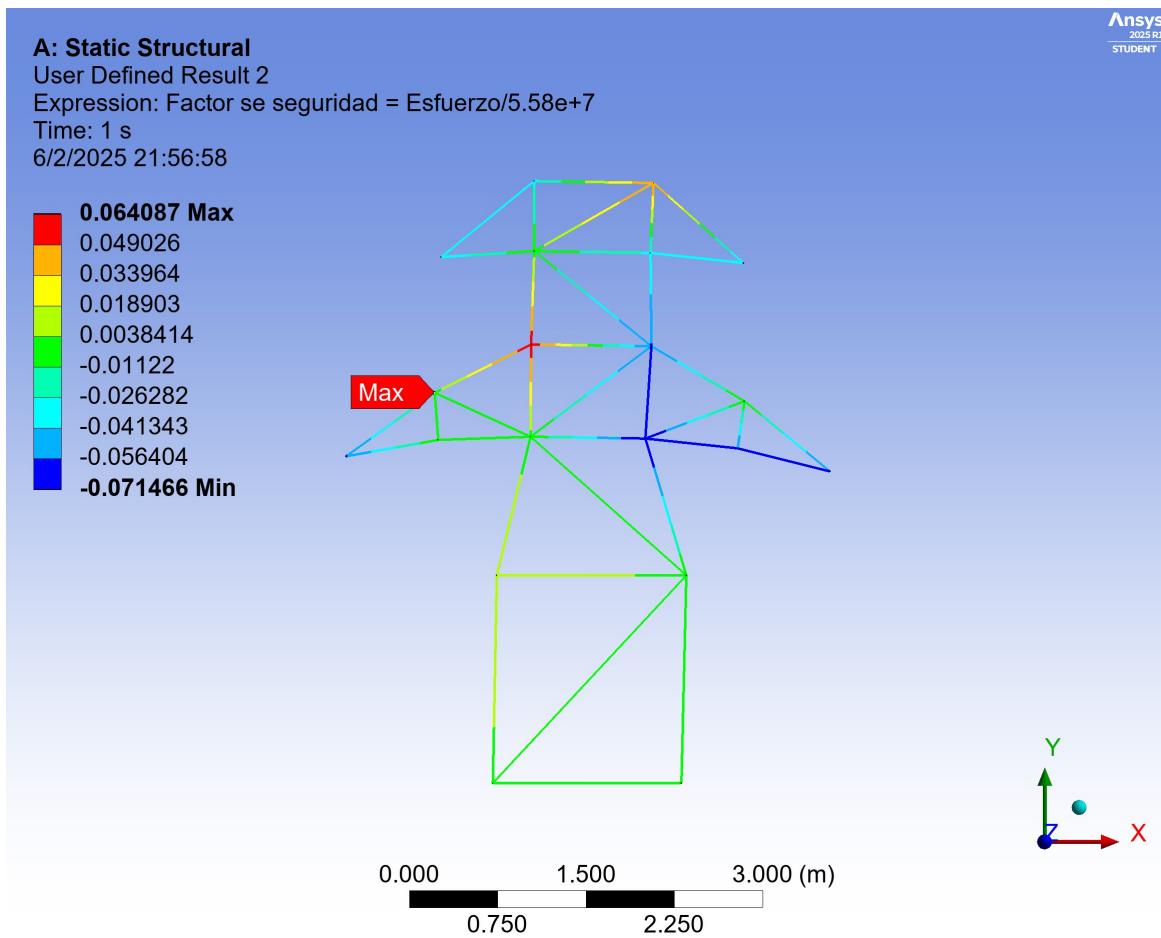
# Axial Force

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**Comments:**



DESPLAZAMIENTOS NODALES con código implementado Douglas Fir

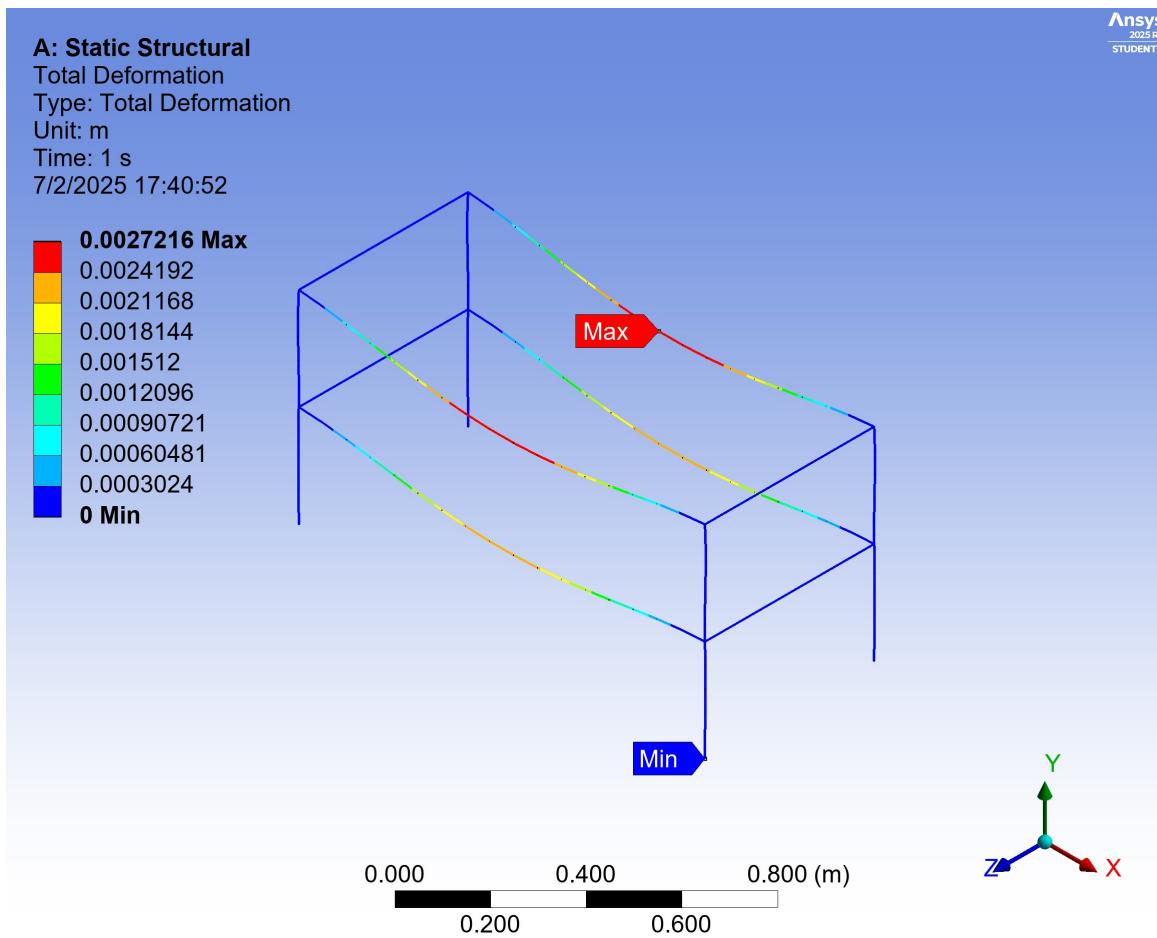
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1   0.000000e+00	0.000000e+00		
2   0.000000e+00	0.000000e+00		
3   -1.234567e-04	-2.345678e-04		
4   1.234567e-04	-2.345678e-04		
5   -2.468135e-04	-3.456789e-04		
6   -2.098765e-04	-3.567890e-04		
7   -1.728395e-04	-3.678991e-04		
8   1.728395e-04	-3.678991e-04		
9   2.098765e-04	-3.567890e-04		
10   2.468135e-04	-3.456789e-04		
11   -2.839506e-04	-4.567890e-04		
12   2.839506e-04	-4.567890e-04		
13   -3.210876e-04	-5.678991e-04		
14   3.210876e-04	-5.678991e-04		
15   -3.582247e-04	-6.789012e-04		
16   -3.953617e-04	-7.890123e-04		
17   3.953617e-04	-7.890123e-04		
18   3.582247e-04	-6.789012e-04		
19   -4.324988e-04	-8.901234e-04		
20   4.324988e-04	-8.901234e-04		

DESPLAZAMIENTOS NODALES con código implementado Steel Structural

Nodo   Desplazamiento X (m)   Desplazamiento Y (m)
----- ----- -----
1   0.000000e+00   0.000000e+00
2   0.000000e+00   0.000000e+00
3   -1.372141e-04   -2.744282e-04
4   1.372141e-04   -2.744282e-04
5   -2.744282e-04   -4.116423e-04
6   -2.331640e-04   -4.251436e-04
7   -1.918997e-04   -4.386449e-04
8   1.918997e-04   -4.386449e-04
9   2.331640e-04   -4.251436e-04
10   2.744282e-04   -4.116423e-04
11   -3.157925e-04   -5.488564e-04
12   3.157925e-04   -5.488564e-04
13   -3.571568e-04   -6.860705e-04
14   3.571568e-04   -6.860705e-04
15   -3.985211e-04   -8.232846e-04
16   -4.398854e-04   -9.604987e-04
17   4.398854e-04   -9.604987e-04
18   3.985211e-04   -8.232846e-04
19   -4.812497e-04   -1.097713e-03
20   4.812497e-04   -1.097713e-03

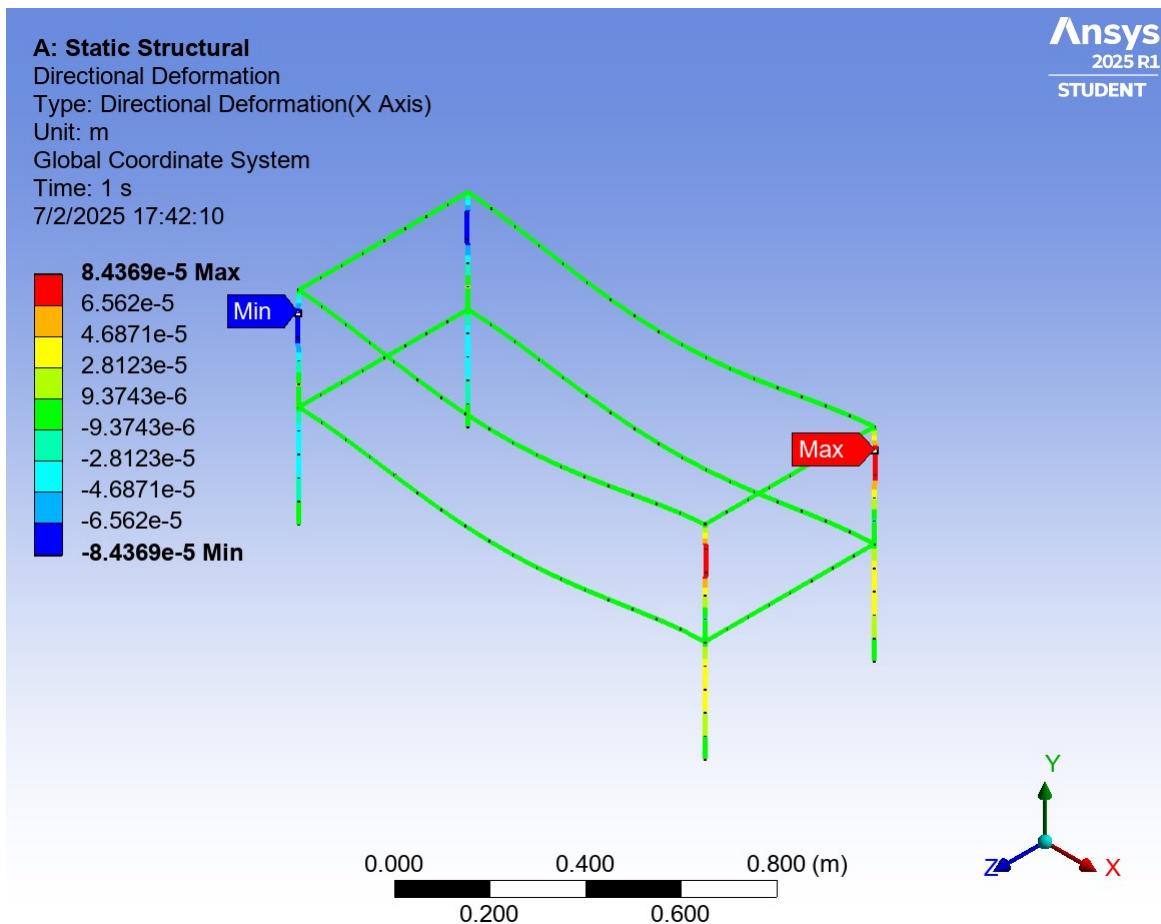
# Total Deformation

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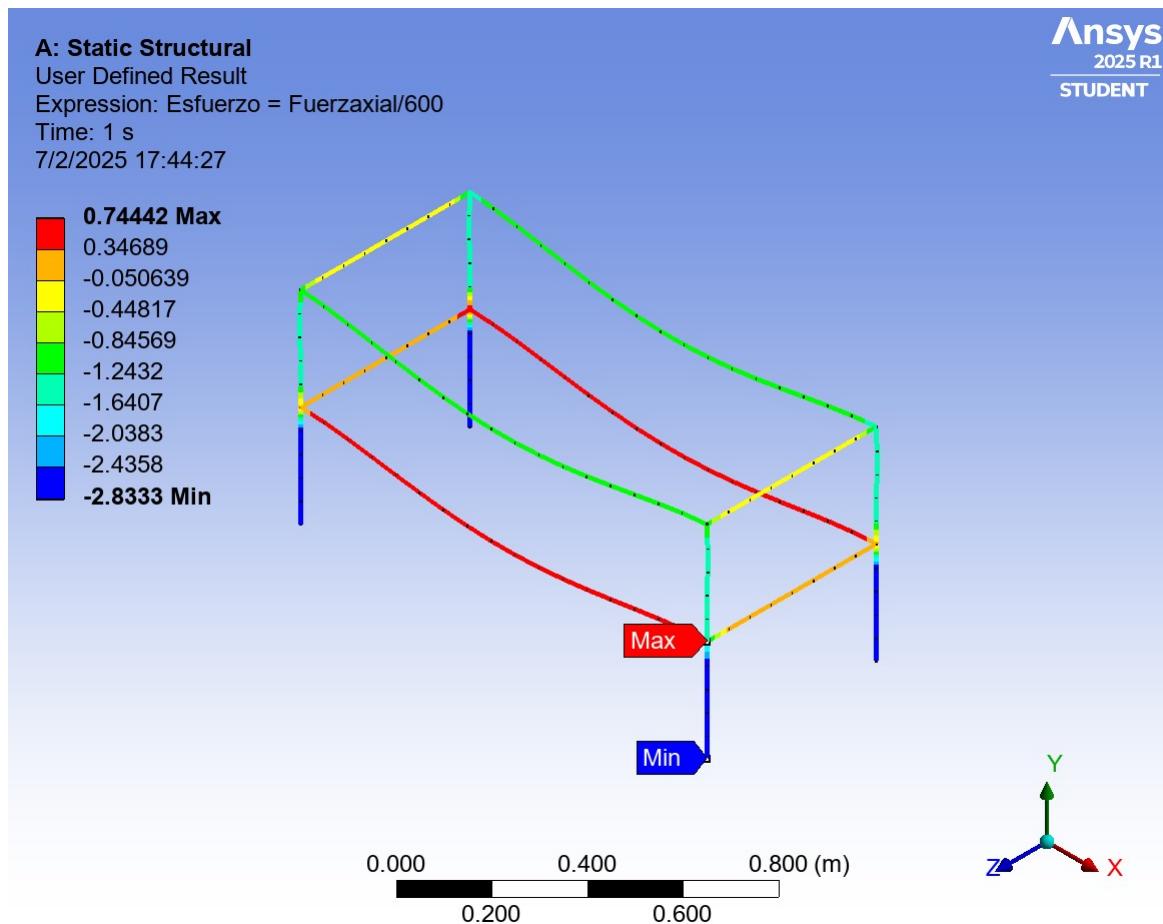
# Directional Deformation

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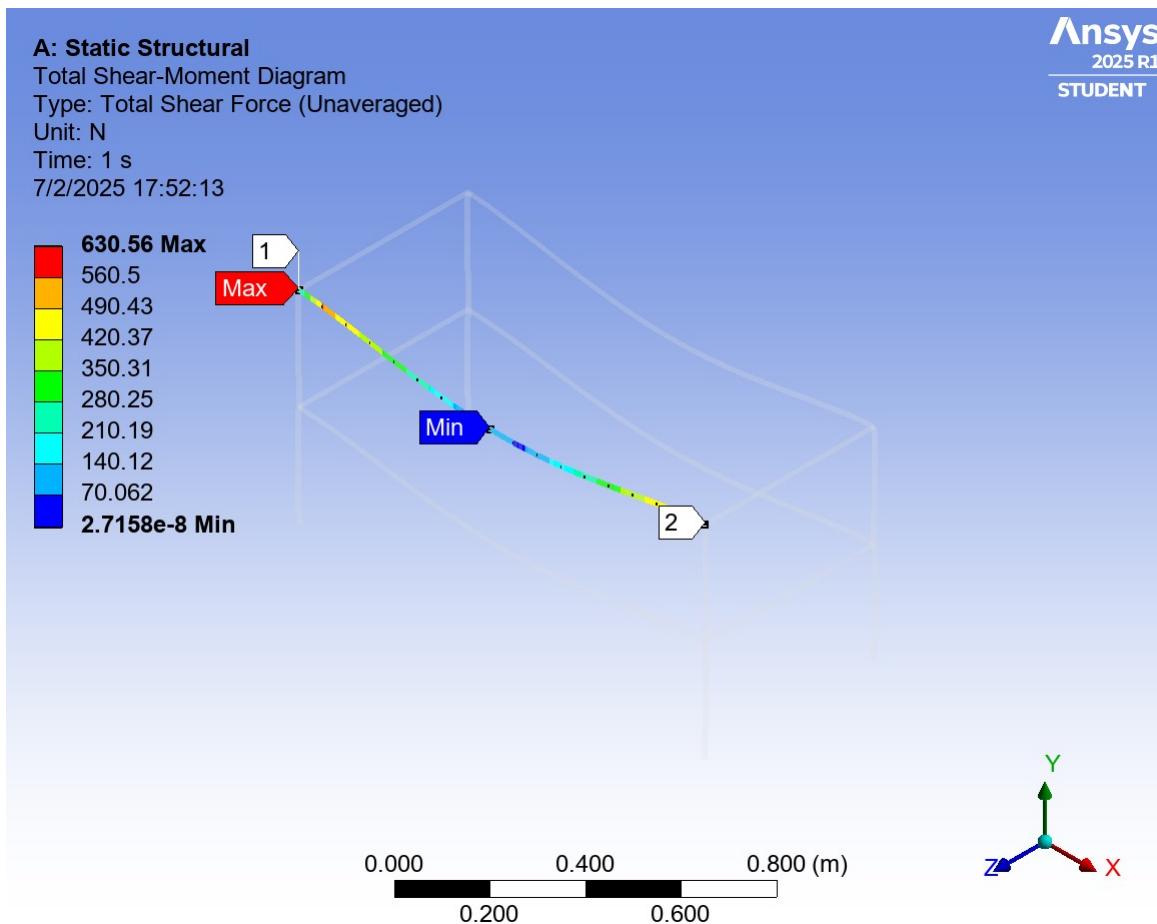
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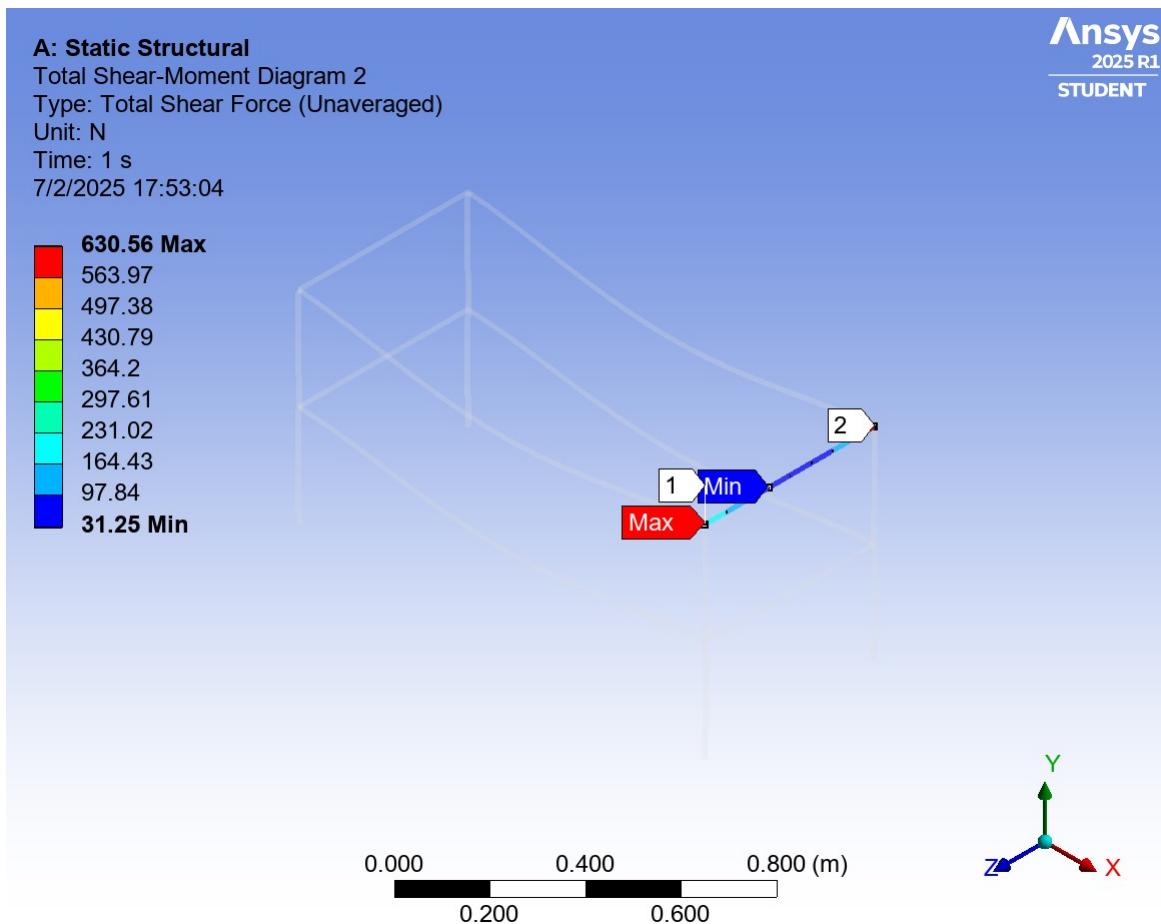
# Total Shear-Moment Diagram

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# Total Shear-Moment Diagram 2

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## SHEAR MOMENT

Diagrama Elemento corto

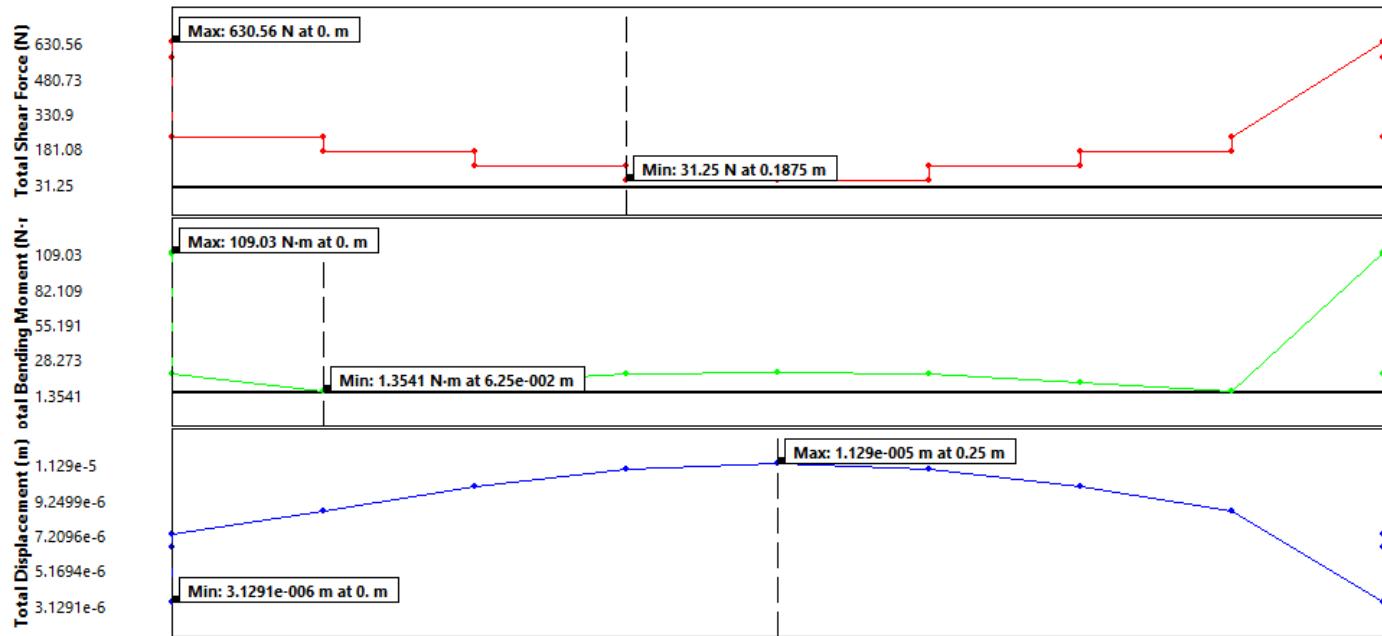
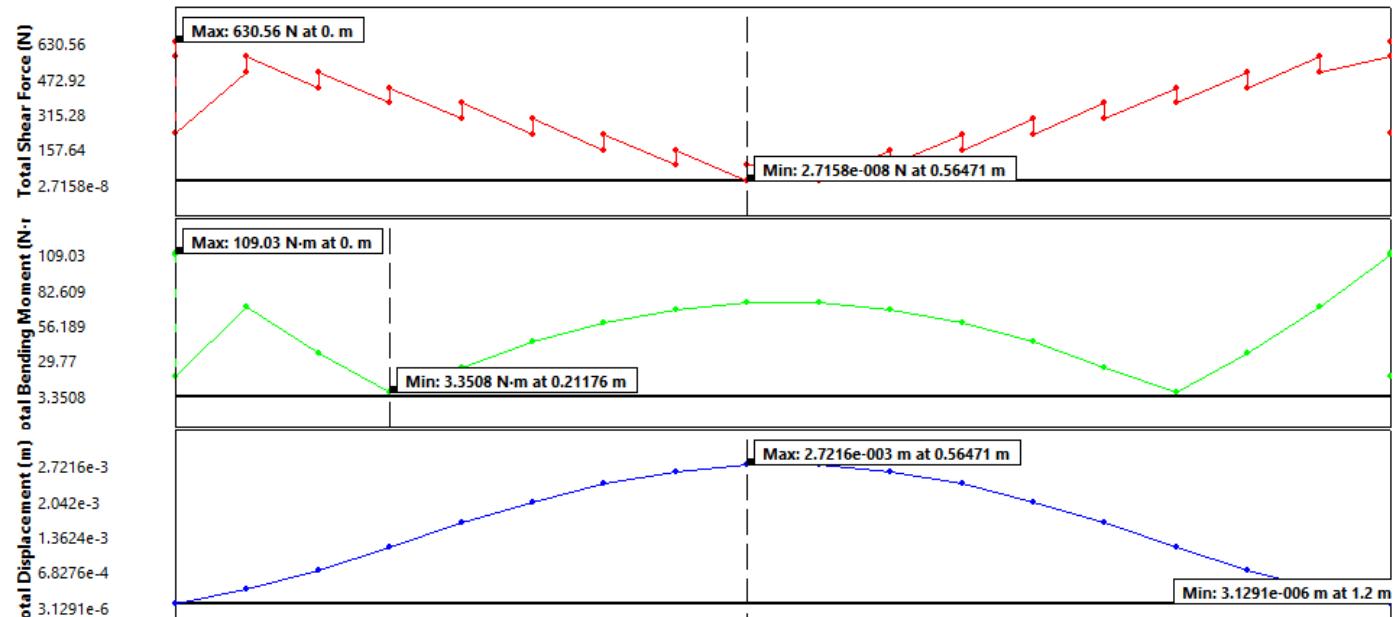
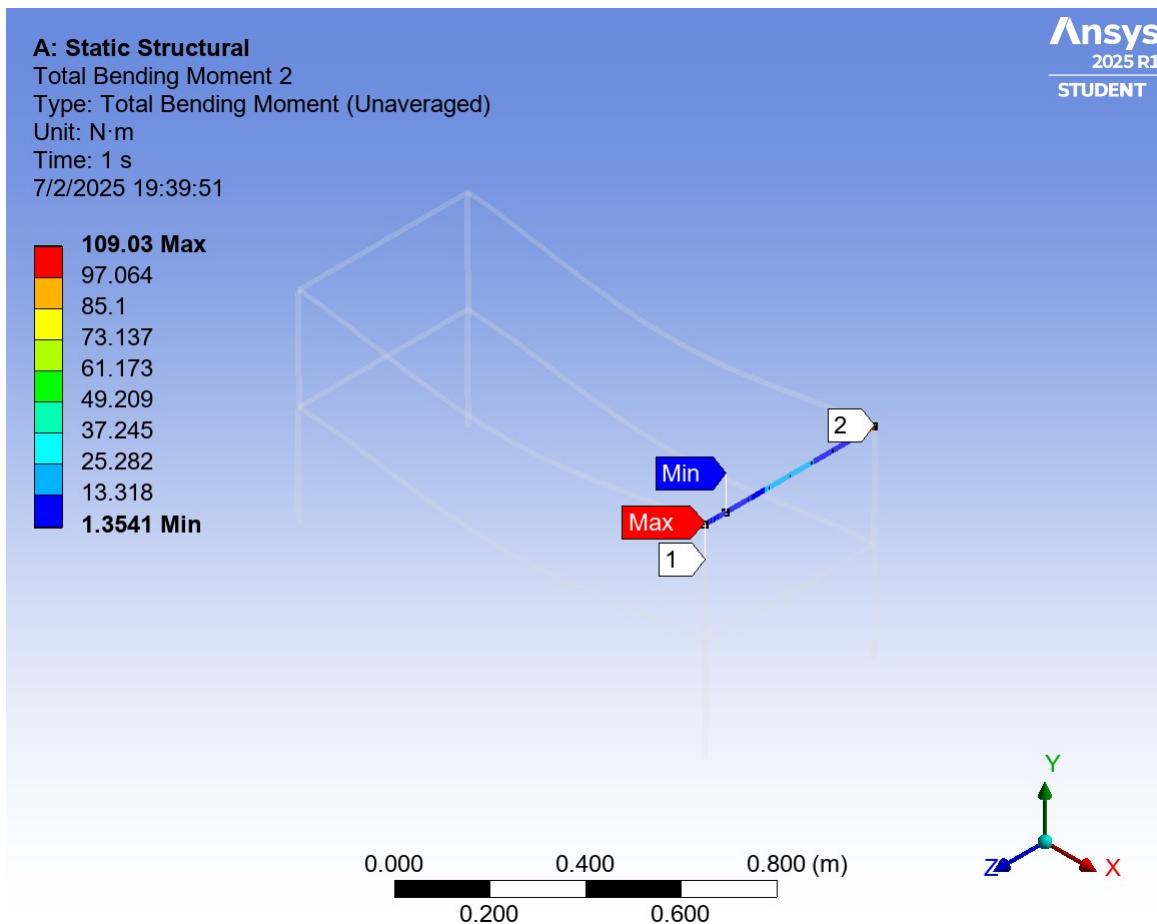


Diagrama Elemento largo



# Total Bending Moment 2

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# Total Bending Moment

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