

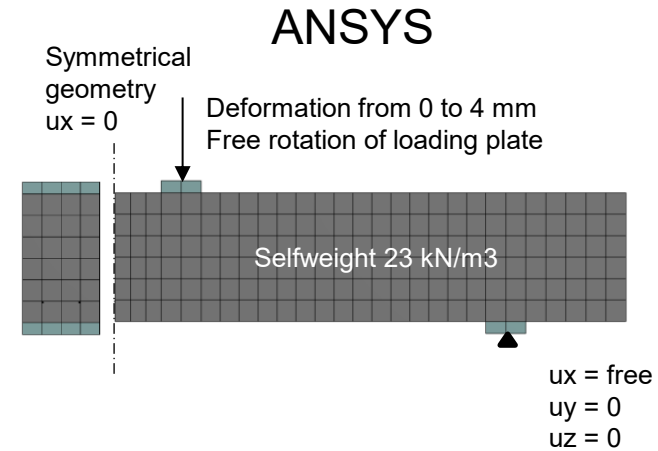
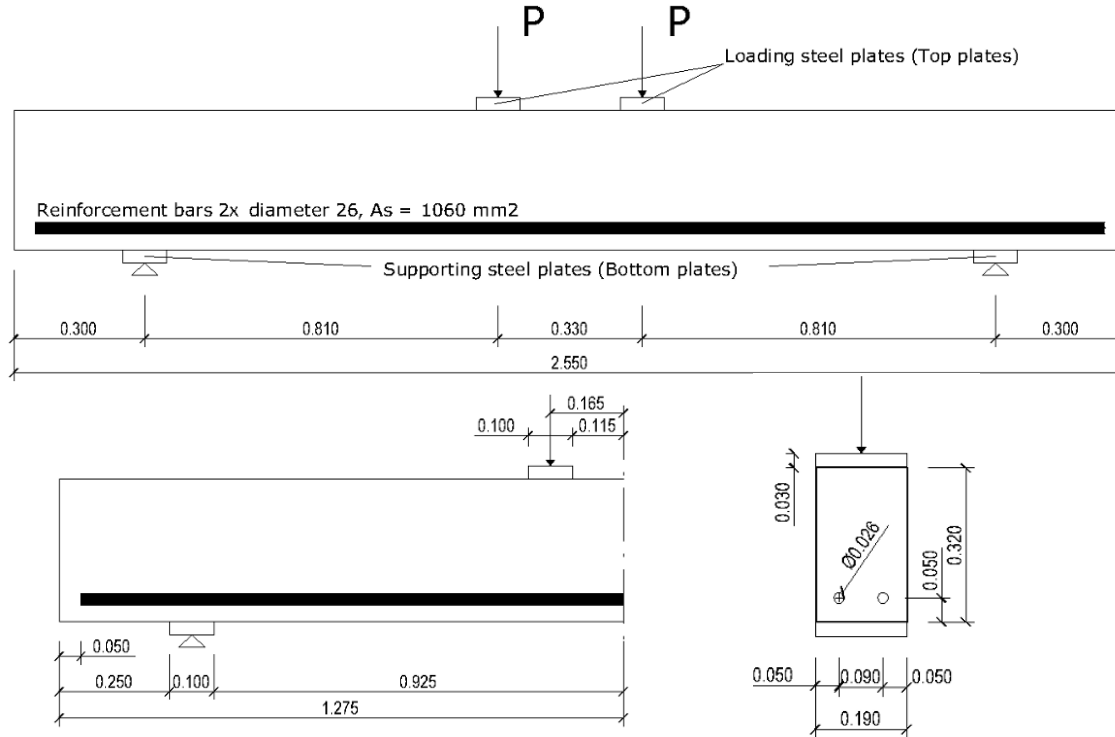
# Leonhardt beam ATENA-C4A + ANSYS 2025R1

[1] LEONHARDT AND WALTHER, SCHUBVERSUCHE AN EINFELDTRAGEN STAHLBETONBALKEN MIT UND OHNE SCHUBBEWEHRUNG, DEUTSCHER AUSSCHUSS FÜR STAHLBETON, HEFT 51, BERLIN 1962, ERNST & SOHN.

[2] ČERVENKA, J., PAPANIKOLAOU, V.K., THREE DIMENSIONAL COMBINED FRACTURE-PLASTIC MATERIAL MODEL FOR CONCRETE, INT. J. PLASTICITY (2008), DOI:10.1016/J.IJPLAS.2008.01.004

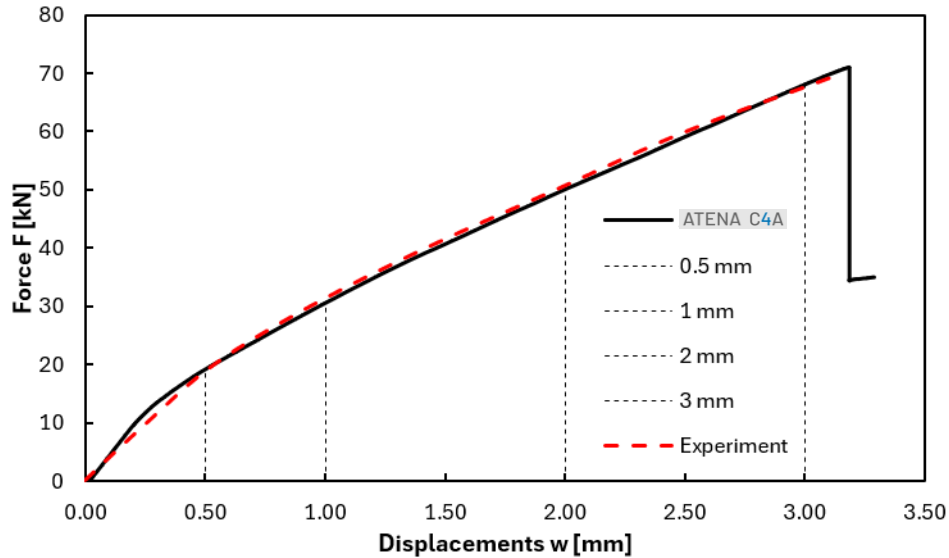
# Leonhardt beam

- Symmetric half of the beam was modelled



# RESULTS

L-D diagram



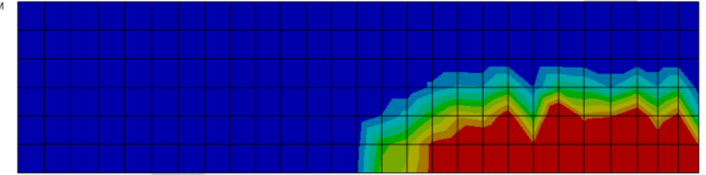
SVAR49 - Crack width for material direction X  
Expression: SVAR50  
Time: 0.50297 s  
7/16/2026 9:46:24 AM

1.2046e-5 Max  
1.0708e-5  
9.3692e-6  
8.0308e-6  
6.6923e-6  
5.3538e-6  
4.0154e-6  
2.6769e-6  
1.3385e-6  
0 Min



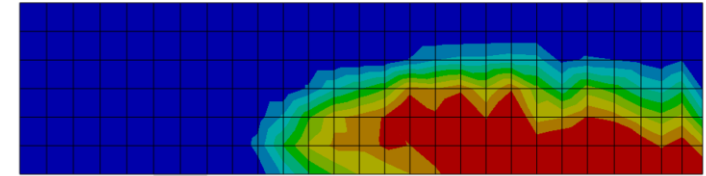
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Expression: SVAR50  
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7/16/2026 9:47:01 AM

2.6277e-5 Max  
1.07e-5  
9.3625e-6  
8.025e-6  
6.6875e-6  
5.35e-6  
4.0125e-6  
2.675e-6  
1.3375e-6  
0 Min



SVAR49 - Crack width for material direction X  
Expression: SVAR50  
Time: 2.003 s  
7/16/2026 11:45:54 AM

4.9193e-5 Max  
3e-5  
2.625e-5  
2.25e-5  
1.875e-5  
1.5e-5  
1.125e-5  
7.5e-6  
3.75e-6  
0 Min



SVAR49 - Crack width for material direction X  
Expression: SVAR50  
Time: 3.2194 s  
Max: 0.00095671  
Min: 0  
8/27/2026 9:01:48 AM

0.00095671  
0.00015  
5e-5  
4.2857e-5  
3.5714e-5  
2.8571e-5  
2.1429e-5  
1.4286e-5  
7.1429e-6  
0

