

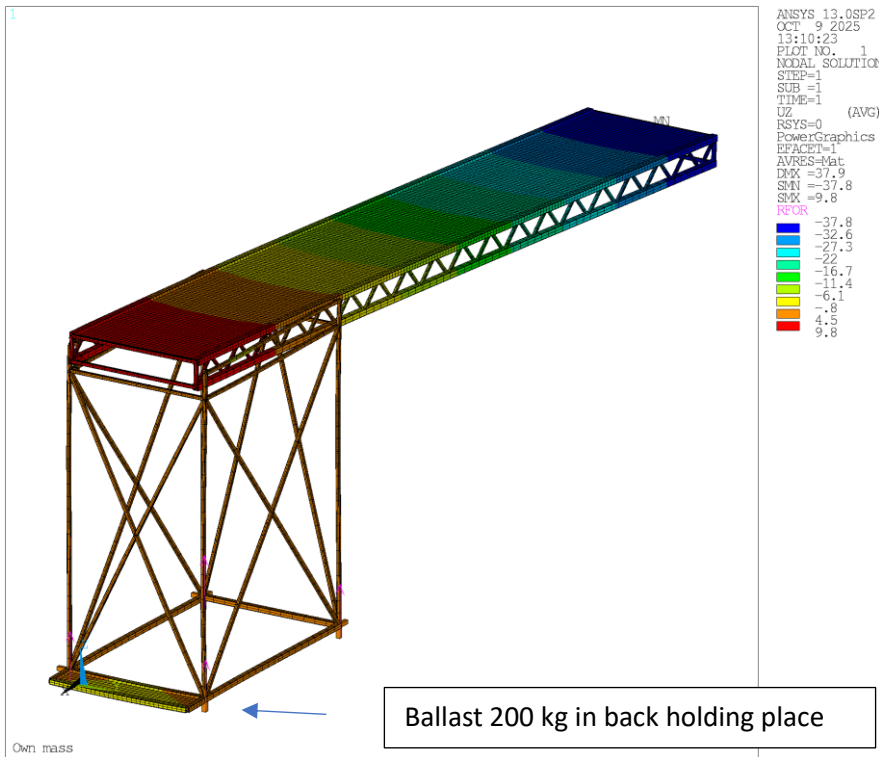
West Side Story

Balcony loads when fully extended vs extracted

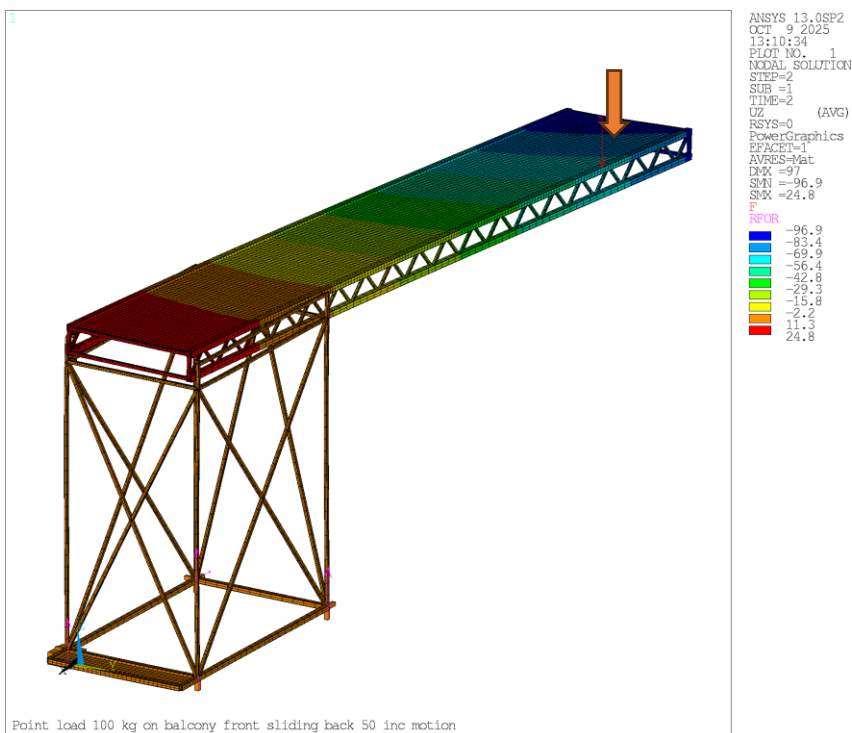
~STAND-ALONE SITUATION FOR SAFETY

Extended:

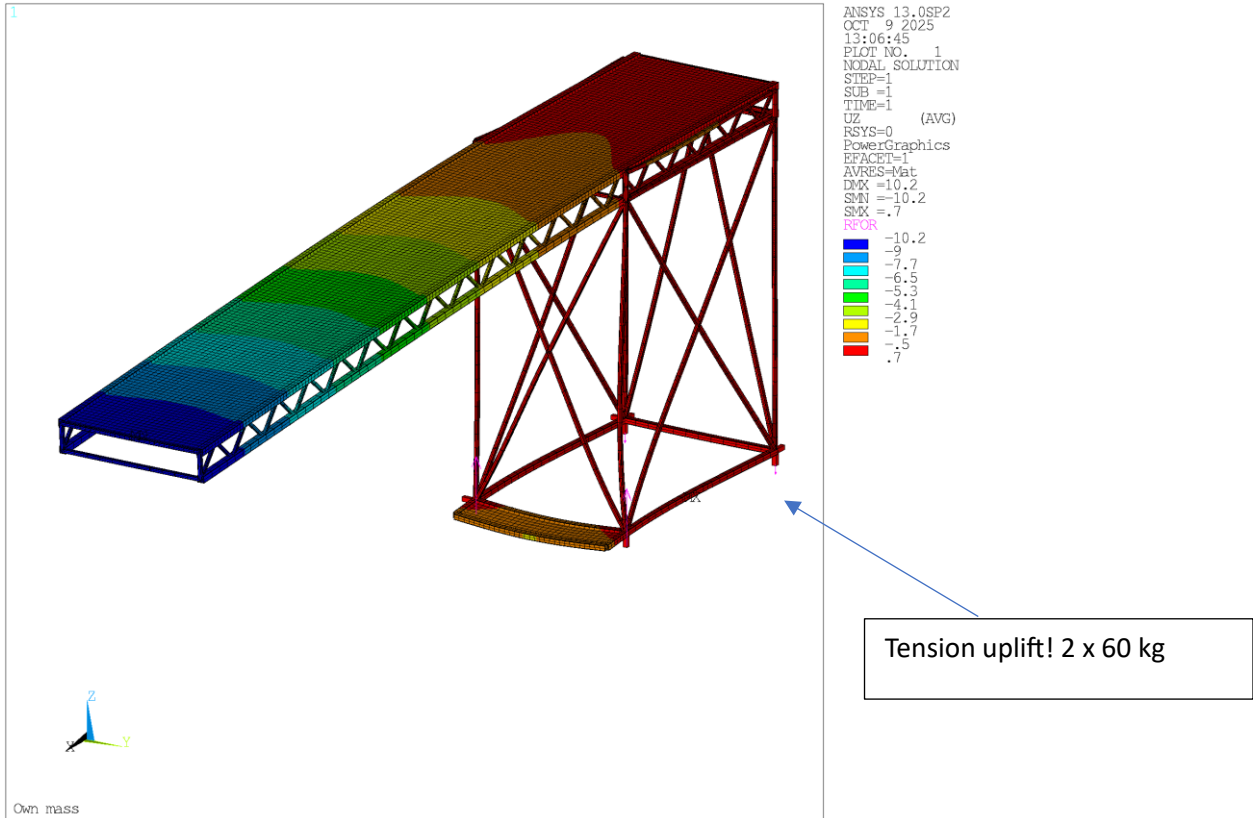
Own mass deflection at tip 38 mm (no load yet)



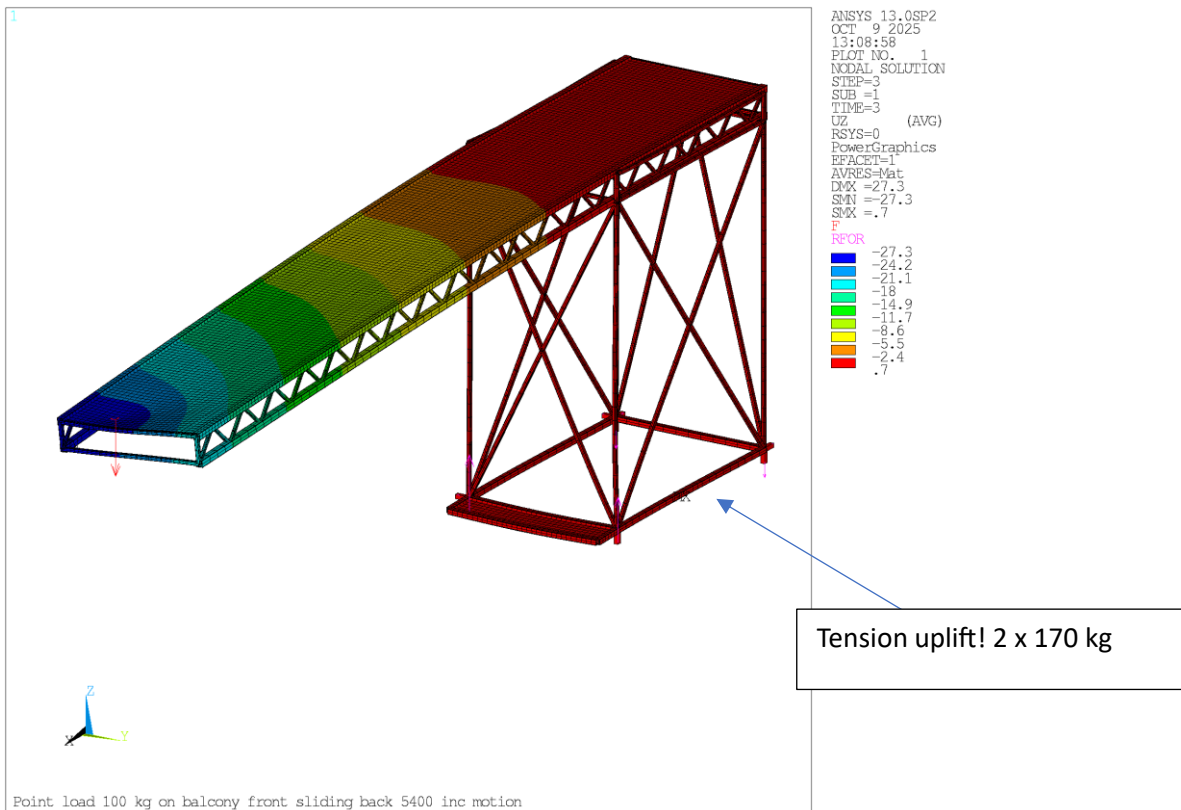
Deflection at end when fully extended: 100 mm down



Retracted fully backwards (-5400 mm)



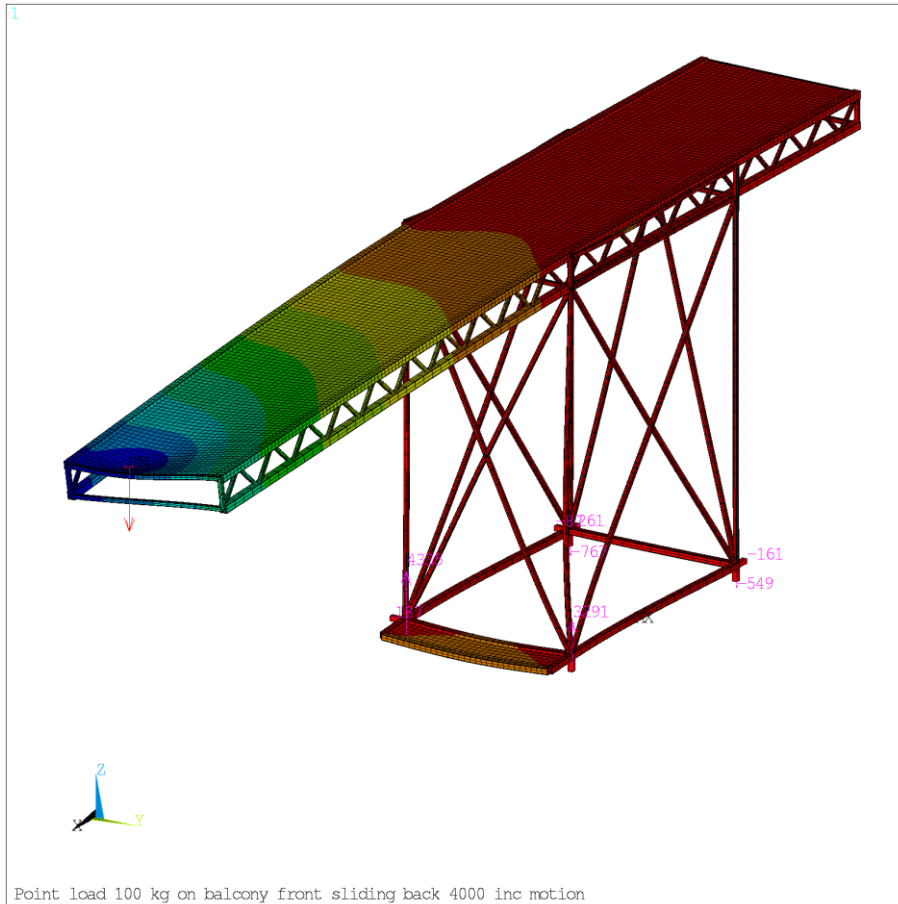
WARNING: this is already leading tot tension at the non-ballasted points, 60 kg tension per point



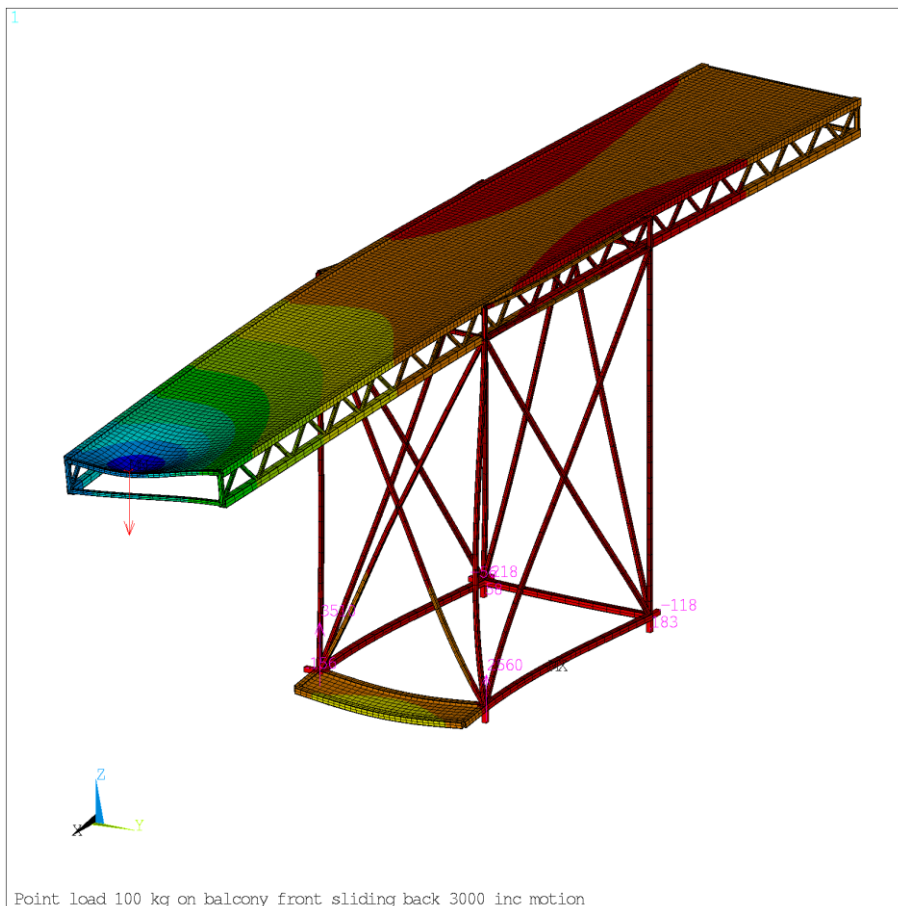
Tension for when person is present: 170 kg

Intermediate steps:

Retraction -4000 plus a person



Retraction -3000 mm plus a person



Conclusion:

Only when at least 350 kg ballast is present at the front side, a single person is allowed to enter fully retracted (-5400) balcony.

Only at -3000 retraction, there can be a person added at the back without tension on the wheels