

STATIC DESIGN OF A NEW SMART WAGON GEOMETRY: A CASE STUDY

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Summary: As transport policies evolve to meet environmental demands, rail transport is emerging as a basis of future mobility, with projected increases in both freight volume and speed. The European Green Deal sets an ambitious goal of doubling the amount of goods transported by rail by 2050, highlighting the need for optimized and efficient vehicles to fully leverage existing rail transport. Building on a defined regulatory framework, this paper aims to address the various safety demonstrations required to ensure the secure transportation of goods in an Sggrs(s) 80' wagon. After quantifying the applicable loads and structural resistance, numerical results were evaluated using detailed global models and submodelling in areas requiring higher precision.

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