

8 RECOMMENDATIONS AND FUTURE STUDY LINES

First of all when designing a metallic structure one should have in mind to stiffen the structure by using membranes, braced fields, coupling to concrete hoistways or walls, etc.. When an excitation of dynamic movements is to expect, one should try to isolate the origin. As to say, maintain a ramp disconnected to a building nearby, use dampers in machinery basements, etc.. There will still be dynamic excitations like wind loads, but with different frequencies and intensities.

If these points cannot be realised due to boundary conditions, the solution to dynamic problems can go in these directions: change Eigenfrequencies in order to avoid resonance, restrict excitation intensity, e.g. limiting speed or number of heavy vehicles on a ramp or bridge, or adapting the receiving side by use of dampers for example.

Future studies could investigate the influence of damping on this real case study or in a general case.