PUBLISHABLE PHOTOS AND FIGURES

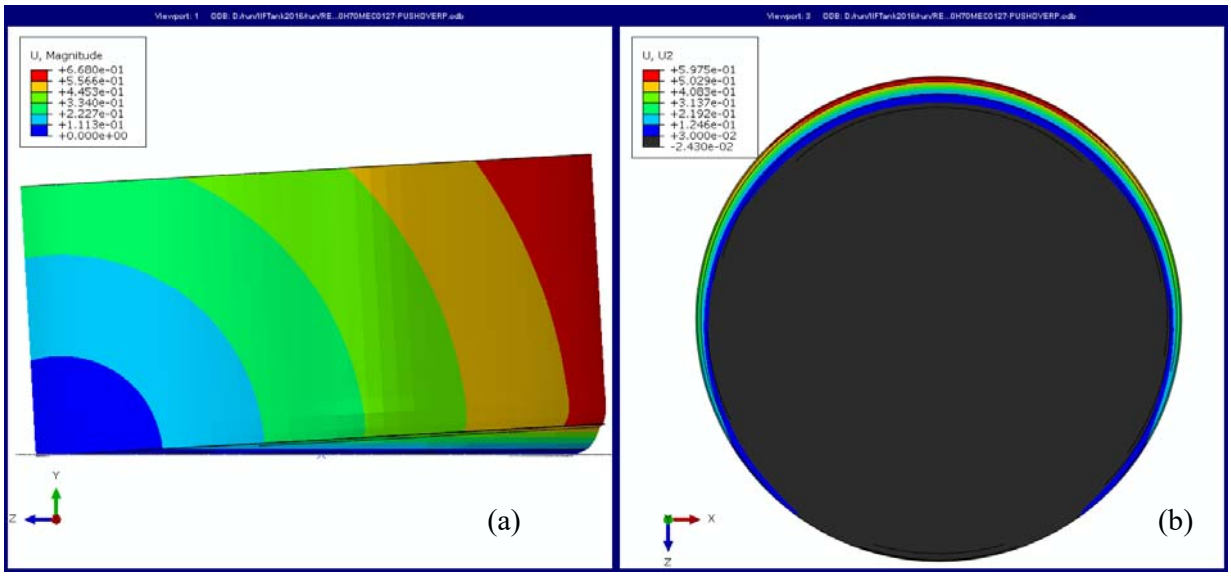

Fig. 9: Tank-A Tank base uplift under pushover loading (a) tank and rigid foundation and (b) tank base plate (dark region show locations with positive contact pressure)

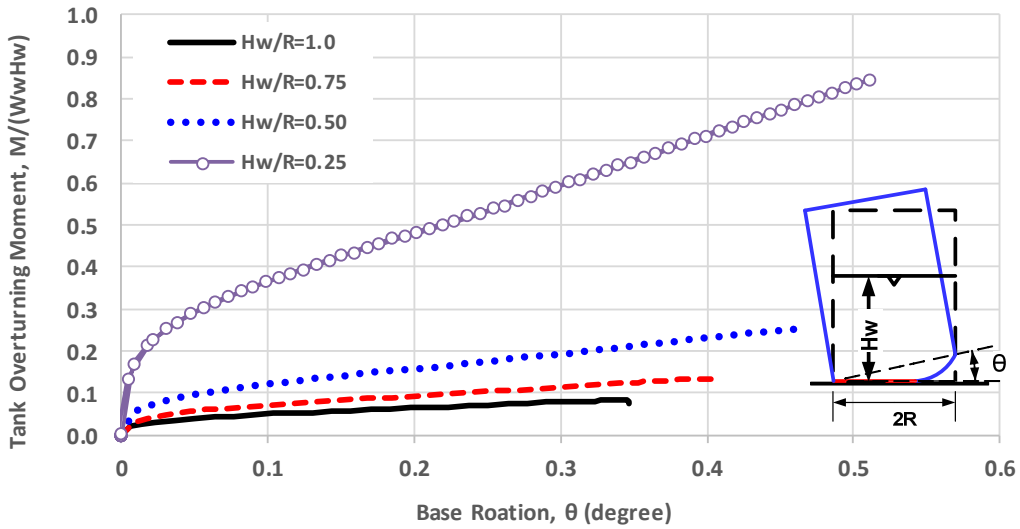

Fig. 10: Tank-A base rotation versus overturning moment $M/(W_wH_w)$ [M: overturning moment at the base; Ww: total liquid weight; H_w: liquid height]

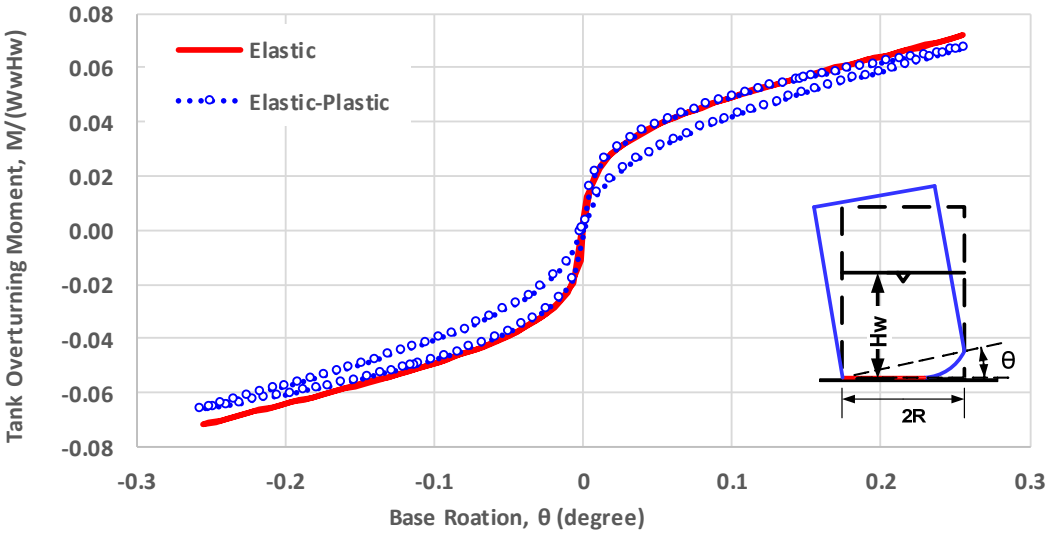

Fig. 17: Cyclic relationship between tank base rotation and overturning moment

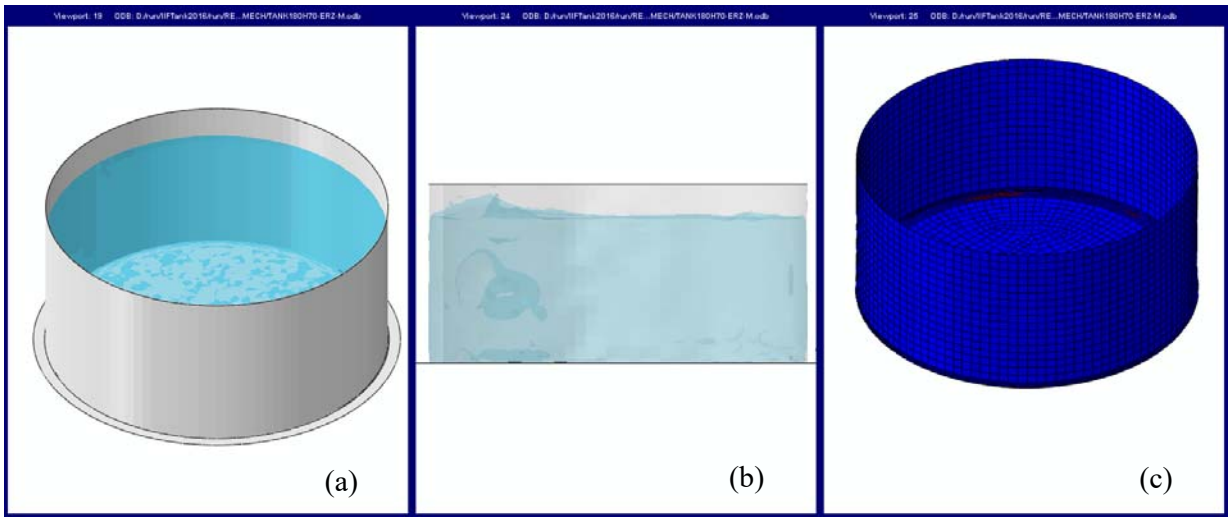

Fig. 20: CEL Modelling (a) before earthquake loading, (b) during loading and water sloshing, (c) tank during loading

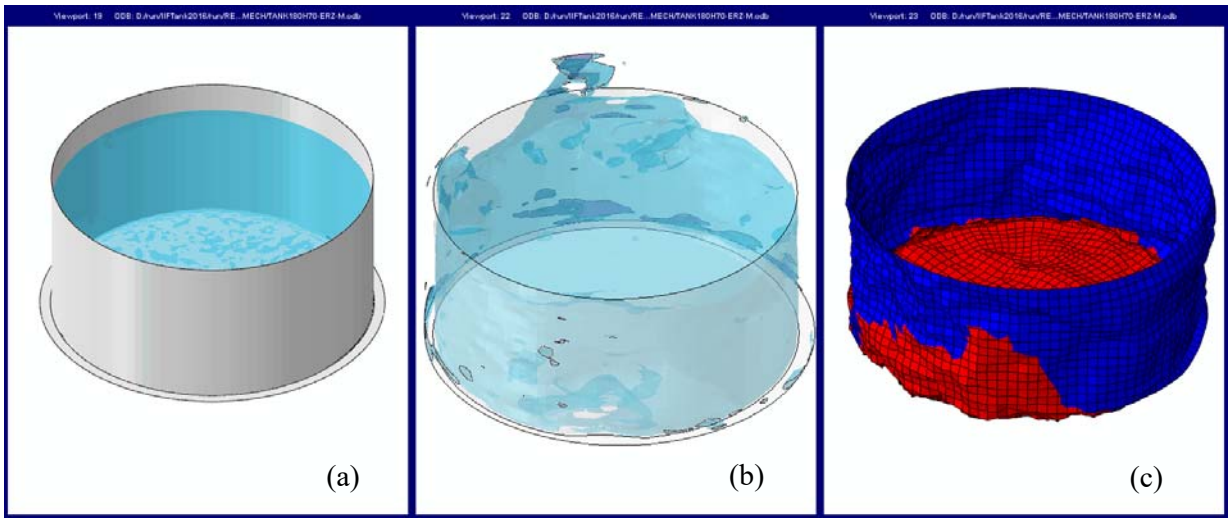

Fig. 21: CEL Modelling (a) before earthquake loading, (b) during loading and water sloshing, (c) tank during buckling loading

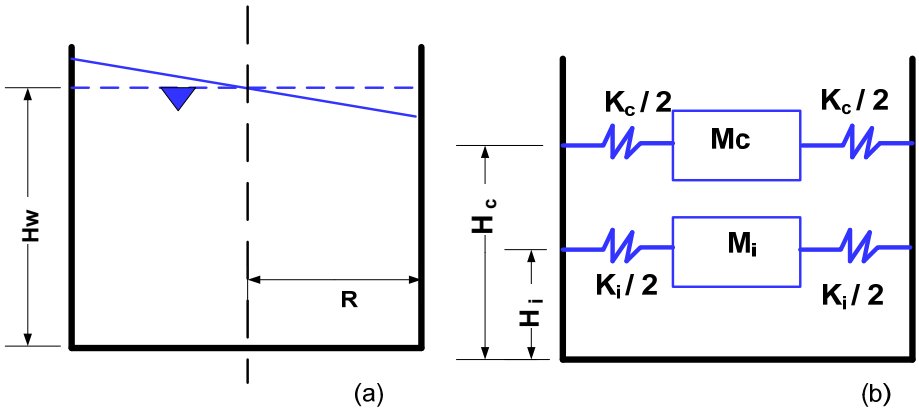

Fig. 22: Equivalent dynamic system for a water tank, (a) tank with oscillating water surface and (b) equivalent mechanical model where M_i and M_c produce dynamic forces equivalent to those produced by the water

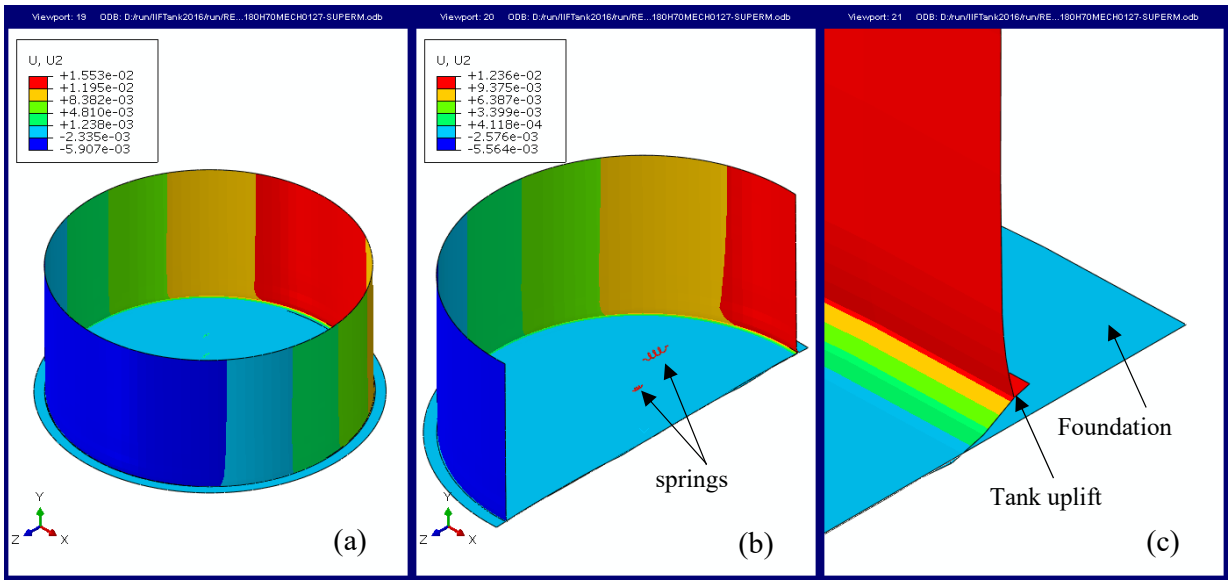

Fig. 24: Mechanical model (a) tank vertical deflection counters, (b) springs, and (c) base plate uplift (earthquake accelerations are in "Z" direction)

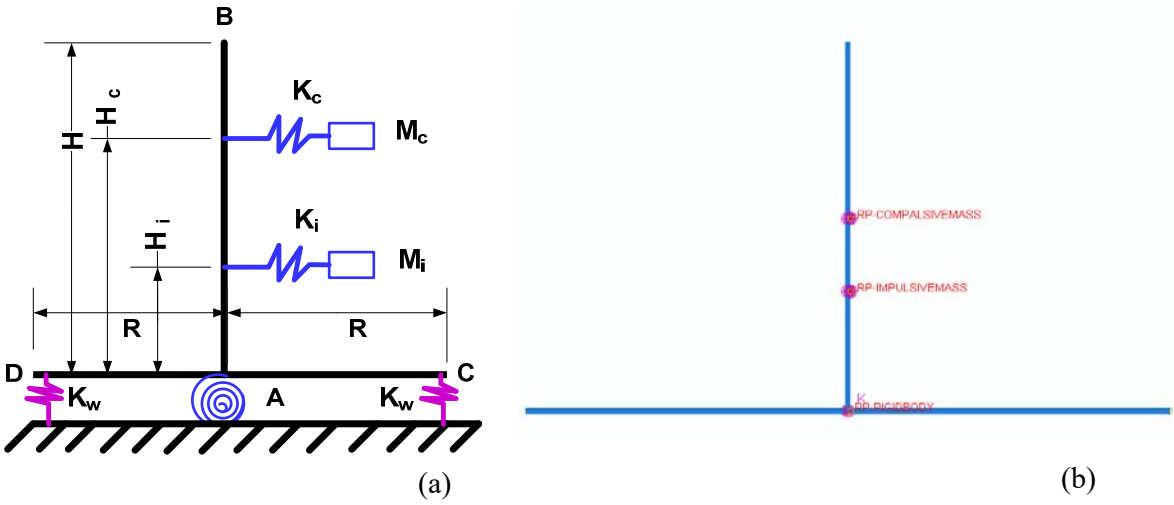

Fig. 25: Proposed "*SDOF Spring-stick*" model (a) theoretical and (b) developed FE model (springs not shown)

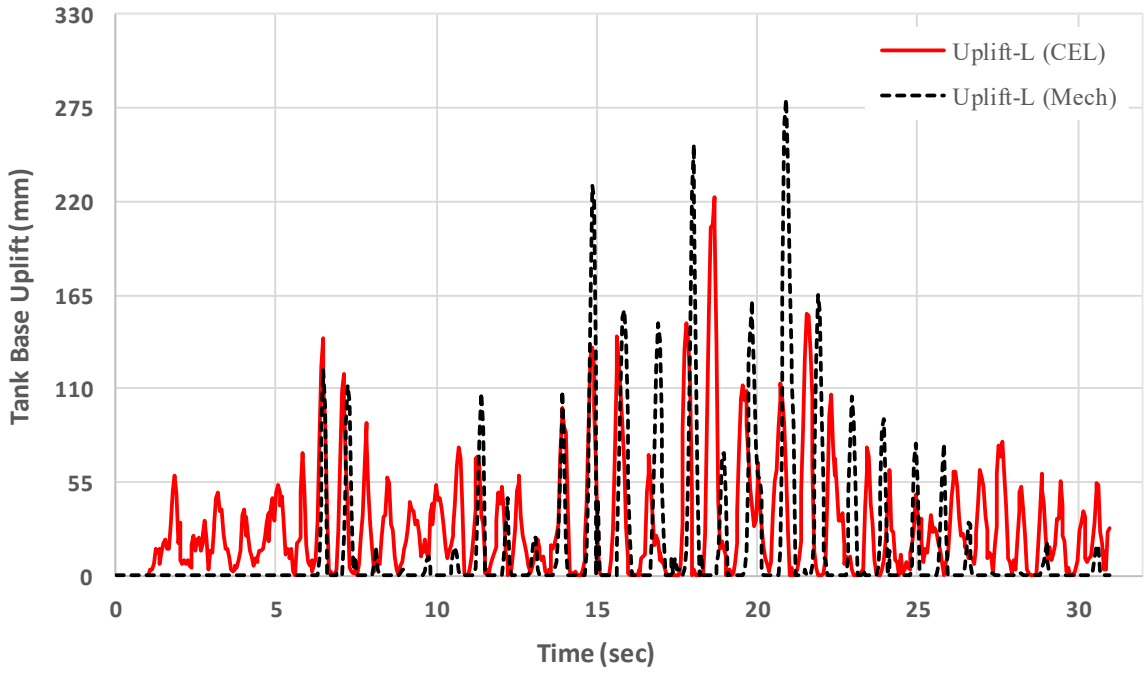

Fig. 26: Tank-A base uplift history for "left" monitoring point for CEL and Mechanical models under EQ1

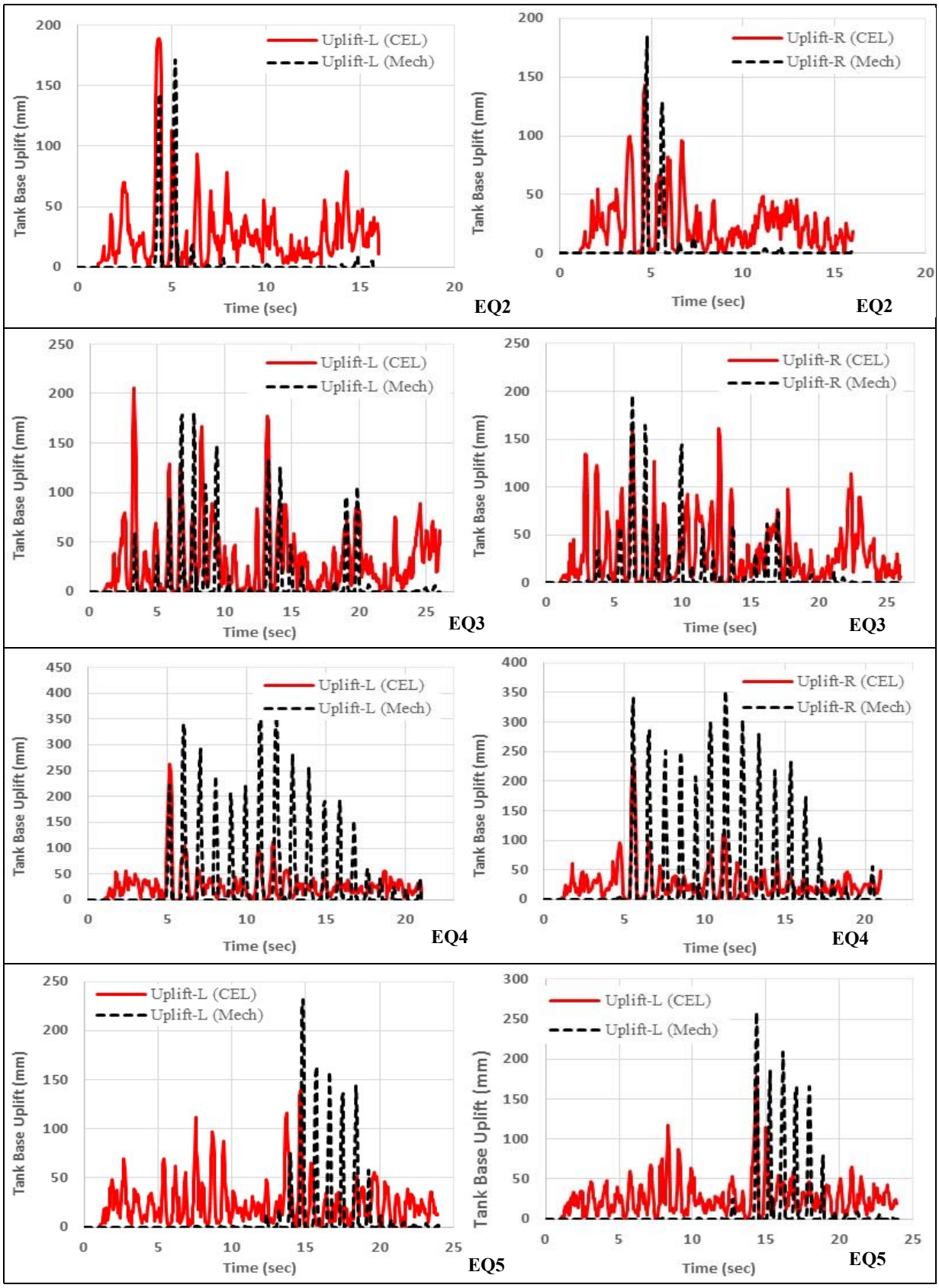

Fig. 32: Tank-A base uplift history for CEL and Mechanical models

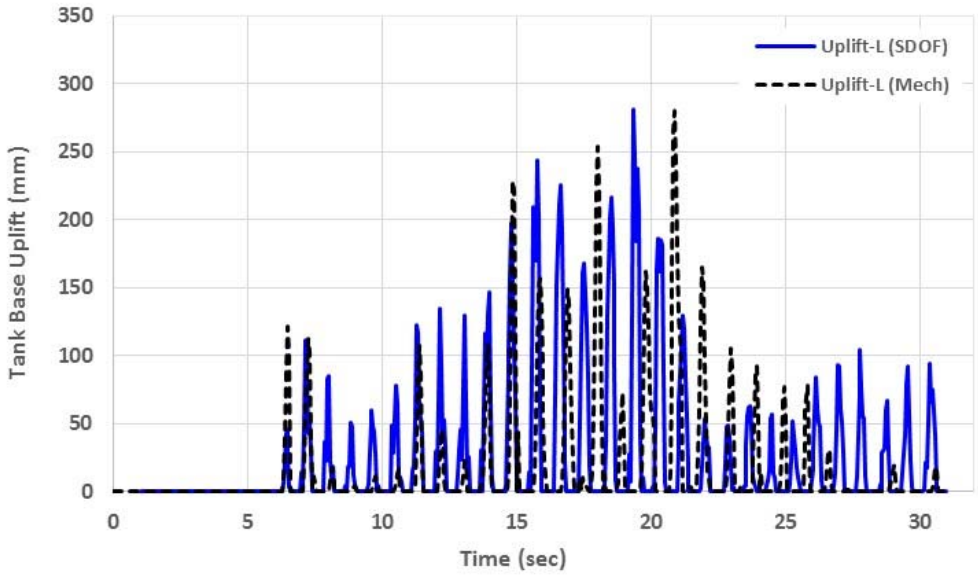

Fig. 34: Tank-A base uplift history for "left" monitoring point for SDOF and Mechanical models under EQ1