

3rd Euro Congress on

STEEL AND STRUCTURAL ENGINEERING

November 16-17, 2017 | London, UK

Modal damping ratios of low rise steel frames with seesaw system

George A Papagiannopoulos, Panagiota S Katsimpini and Manolis G Sfakianakis
University of Patras, Greece

The seesaw system, originally proposed by Kang and Tagawa, consists of a pin-supported seesaw, two spiral strand ropes with turnbuckles that intersect from the edges of the seesaw and a couple of dampers installed vertically on the seesaw. Variations of this system regarding its installation type as well as the kind of dampers used (fluid, viscoelastic, slit) can be also found in the literature. For seismic response/design purposes of steel frames with the seesaw system, modal damping ratios have to be computed in order to be applied in the context of the spectrum analysis of seismic codes. This work provides modal damping ratios for some low-rise steel frames equipped with a seesaw system with linear fluid (viscous) dampers.

Biography

George A Papagiannopoulos has completed his Diploma, MSc and PhD degrees from the Department of Civil Engineering of the University of Patras. He has authored two chapters in books in English, 16 papers in refereed international journals and 22 papers in proceedings of international conferences or workshops. He has 57 citations and H-index of five excluding self-citations per Scopus and Google Scholar. His current research interests include analysis and design of steel structures, earthquake engineering, passive and active control systems and computational mechanics.

gpapagia@upatras.gr