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Effective use of steel composites in blast and impact load damage mitigation

The response of structural systems and elements subjected to blast and impact loadings have been broadly investigated both experimentally and numerically. However, the response of steel composite or multilayered structural systems subjected to extreme loadings have received less focus within the research community. With the increasing demand towards lightweight composites in structural applications, focus of using steel in conjunction with other lightweight materials has come in to elite within the last few years. The damage caused to a structure by a blast wave is primarily dependent on its ability to absorb the released energy. Therefore improvements of energy absorption techniques in steel and composite structures are important in designing such structures for survivability under those extreme loadings. Recent work done on steel-polymer composites in blast and impact load damage mitigation shows great potential of using such structural systems in the future applications.

Biography

Damith Mohotti is currently working as a Lecturer in the School of Civil Engineering at the Faculty of Engineering and IT at University of Sydney, Australia. He currently works as a Member of the Industrial Engagement Committee of the school and hold the responsibility of delivering three key units of studies on design of concrete and pre-stressed concrete structures. In addition to his expertise as a Researcher, he has gained worthy of experience working as a Structural Engineer and a Consultant. He is a Member of International Association of Protective Structures (IAPS), Concrete Institute of Australia (CIA) and Engineers Australia (EA).

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