

Response of Full-Scale Room Building Against Blast Loading

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Abstract : In this paper full-scale brick masonry room along with the veranda of a typical school building was subjected to eight successive blast tests with increasing charge weights ranging from 0.5kg to 16.02kg at 3.66m fixed stand-off distance. Pressure-time histories were obtained by data acquisition system from pressure sensors, installed on different points of room as well as veranda columns. The resulting damage pattern of different locations was observed during each test. Weak zones of masonry room were identified. Scaled distances for different damage levels in masonry room were experimentally obtained. The results provided a basis for determining the response of masonry room building against blast loading in a specific threat scenario.

Keywords : peak pressure, composition-B, TNT, pressure sensor, scaled distance, masonry

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