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ABSTRACT**

Title of abstract:	High performance retrofits for protection of glass facades against blast loads
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Abstract:	<p>Many office and public buildings today are constructed with so called external curtain walls, i.e., large glass facades. Although such structures are aesthetically pleasing and architecturally attractive, protecting such buildings from conventional bomb attacks poses enormous challenge. A standard curtain wall exposed to a bomb blast instantly becomes a source of flying debris of sharp shards which are often more deadly than the blast itself.</p> <p>This paper addresses an approach to providing blast resistant window systems in which the window pane is prevented from blowing forcefully into the room upon an external blast thus protecting occupants from risks of being killed or injured by flying sharp debris. The protective systems use a combination of debris catching systems and strengthening of existing windows to prevent debris from entering the occupied space. The key to optimising the performance of these systems is to use energy absorbing devices that are capable of absorbing displacement of the window pane and converting it into heat or mechanical work. Dynamic non-linear analyses were performed to optimise the parameters of the blast protection systems for glass facades. Practical examples of window retrofit systems with energy absorbing devices will be provided.</p>