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Nota di contenuto	Introduction -- Fundamentals of Explosions -- Blast Effects on Buildings -- Analysis of SDOF Systems Subjected to Idealized Blast Load -- Analysis of Monolithic Glass Plates Subjected to Idealized Blast Load -- Glass Strength for Impact and Blast Load -- Blast Pressure Capacity of Glass Plates -- Laminated Glass Subjected to Blast Load -- Summary and Conclusions.
Sommario/riassunto	The present doctoral dissertation contributes to the analysis of glass panels subjected to blast load, concentrating on monolithic and laminated glass prior to glass fracture. A straightforward graphical solution for monolithic glass is presented to identify maximum deformation and maximum principal stress for small and large deformations for static and idealized blast load without software. On the basis of experimental tests, load duration factors $k_{mod}$ for impact and blast load design for annealed glass, heat strengthened glass and fully tempered glass are proposed and design strength values for impact and blast design based on the European and German standards are suggested. As a result, blast pressure capacity charts for monolithic

fully tempered glass plates subjected to idealized blast load are presented. Moreover, design temperatures of interlayer in blast design situation based on empirical data in accordance with Eurocode are determined for vertical double glazed and triple glazed units for Germany, showing that laminated glass should not be regarded with monolithic glass approach in general. Matthias Förch studied structural engineering at the University of Applied Sciences in Biberach. After several years of practical experience as structural engineer within the Permasteelisa Group and Nordex, he joined the working group for Façade Systems and Building Envelopes of HafenCity University Hamburg as research associate from 2012 to 2018. Here, his research focus was on bomb blast protection of windows and facades and structural glass design.

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