handbook for blast resistant design of buildings

Donald O. Dusenberry (Editor)


DESCRIPTION

Unique single reference supports functional and cost-efficient designs of blast resistant buildings

Now there's a single reference to which architects, designers, and engineers can turn for guidance on all the key elements of the design of blast resistant buildings that satisfy the new ASCE Standard for Blast Protection of Buildings as well as other ASCE, ACI, and AISC codes. The Handbook for Blast Resistant Design of Buildings features contributions from some of the most knowledgeable and experienced consultants and researchers in blast resistant design.

This handbook is organized into four parts:

• Part 1, Design Considerations, sets forth basic principles, examining general considerations in the design process; risk analysis and reduction; criteria for acceptable performance; materials performance under the extraordinary blast environment; and performance verification for technologies and solution methodologies.

• Part 2, Blast Phenomena and Loading, describes the explosion environment, loading functions needed for blast response analysis, and fragmentation and associated methods for effects analysis.
Part 3, System Analysis and Design, explains the analysis and design considerations for structural, building envelope, component space, site perimeter, and building system designs.

Part 4, Blast Resistant Detailing, addresses the use of concrete, steel, and masonry in new designs as well as retrofitting existing structures.

As the demand for blast resistant buildings continues to grow, readers can turn to the Handbook for Blast Resistant Design of Buildings, a unique single source of information, to support competent, functional, and cost-efficient designs.

ABOUT THE AUTHOR

DONALD O. DUSENBERRY, PE, is Senior Principal of Simpson Gumpertz & Heger Inc., where he has worked since 1975. He is also the Committee Chair of the ASCE/SEI Blast Protection of Buildings Standard Committee and the ASCE/SEI Minimum Design Loads for Buildings and Other Structures Standard Committee, and he serves on the Board of Governors of the ASCE Structural Engineering Institute. Serving as the principal investigator, Mr. Dusenberry studied the sinking of the Lacey V. Murrow Memorial Bridge near Seattle, the collapse of L'Ambiance Plaza in Bridgeport, and the 9/11 attack on New York City's World Trade Center.

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