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Published by

WIT Press

Ashurst Lodge, Ashurst, Southampton, SO40 7AA, UK

Tel: 44 (0) 238 029 3223; Fax: 44 (0) 238 029 2853

E-Mail: witpress@witpress.com

<http://www.witpress.com>

For USA, Canada and Mexico

Computational Mechanics Inc

25 Bridge Street, Billerica, MA 01821, USA

Tel: 978 667 5841; Fax: 978 667 7582

E-Mail: infousa@witpress.com

<http://www.witpress.com>

British Library Cataloguing-in-Publication Data

A Catalogue record for this book is available
from the British Library

ISBN: 1-84564-175-2

ISSN: 1746-4498 (print)

ISSN: 1743-3509 (online)

*The texts of the papers in this volume were set
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Preface

This book contains the papers presented at the ninth International Conference on Structures Under Shock and Impact held at the Wessex Institute of Technology, in the New Forest, England, in July 2006. The earlier meetings were held in Cambridge, Massachusetts, USA in 1989, Portsmouth, UK in 1992, Madrid, Spain in 1994, Udine, Italy in 1996, Thessaloniki, Greece in 1998, Cambridge, U.K. in 2000, Montreal, Canada in 2002 and Crete, Greece in 2004. It was the objective of these meetings to bring together engineers and scientists from a wide-range of academic and industrial backgrounds who have an interest in the shock and impact response of structures and materials. In this way, the major developments in different areas can be brought to the attention of the entire community, thereby ensuring that industries benefit from the latest advances.

The shock and impact behaviour of structures is a challenging area, not only because of the obvious time-dependent aspects, but also because of the difficulties in specifying the external dynamic loading characteristics for structural designs and hazard assessments and in obtaining the dynamic properties of materials. Thus, it is important to recognise and utilise fully the contributions and understanding emerging from theoretical, numerical and experimental studies on structures, as well as investigations into the material properties under dynamic loading conditions.

The papers presented in this volume reflect the broad range of practical interest in the shock and impact response of structures. Featured topics include: Impact and blast loading characteristics; Material response to high rate loading; Missile penetration and explosion; Protection of structures from blast loads; Behaviour of structural concrete; Structural behaviour of composites; Interaction between computational and experimental results; Energy absorbing issues; Structural crashworthiness; Structural serviceability under impact loading; Seismic engineering applications.

It is clear from the collection of papers in this volume that the shock and impact behaviour of structures is an active field and that the range of topics is ever expanding when viewed from the perspective of the nine conferences. This situation bodes well for the future growth of the subject, particularly since 9/11. It is hoped that the contents of this book will encourage and motivate many research workers and designers to apply the methods presented to new practical problems and to contribute, in due course, to our better understanding of the shock and impact

behaviour of structures to the benefit of the worldwide community.

The Editors are grateful to the members of the International Scientific Advisory Committee and other colleagues who have helped to review the papers included in this volume, as well to all the authors for their contributions.

The Editors,
UK, 2006

Contents

Section 1: Impact and blast loading characteristics

Approximation of blast loading and single degree-of-freedom modelling parameters for long span girders <i>J. C. Gannon, K. A. Marchand & E. B. Williamson</i>	3
Numerical study of water plume behavior under shallow depth explosion <i>C.-C. Liang, T.-H. Liu & W.-M. Tseng</i>	13
Rubble pile characterization model <i>W. Schonberg, J. Baird, P. Worsey, A. Belarbi, R. LaBoube, B. Lusk, R. Flanagan, H. Burlison, R. Woodley & W. Noll</i>	23
Laboratory simulation of blast loading on building and bridge structures <i>M. M. Gram, A. J. Clark, G. A. Hegemier & F. Seible</i>	33
Numerical analysis of the hydrodynamic ram of a CFRP integral tank <i>P. Stephani, P. Middendorf & Ch. Leß</i>	45
Simplified blast simulation procedure for hazard mitigation planning <i>T. Tadepalli & C. L. Mullen</i>	55
Elastodynamic contact in plate-like bodies <i>R. Sburlati</i>	65
Effect of silty-sand compressibility on transferred velocity from impulsive blast loading <i>K. Scherbatiuk, D. Pope, J. Fowler & J. Fang</i>	73

Section 2: Material response to high rate loading

Advances in high strain rate material testing <i>P. Verleysen, J. Van Slycken, F. Van den Abeele & J. Degrieck</i>	87
---	----

The behavior of elastomers at high strain rates <i>M. S. Hoo Fatt & X. Ouyang</i>	97
Strain rate effect in material testing of bulk adhesive <i>W. Pan & R. Schmidt</i>	107
An investigation of the dynamic behavior of 3-D four direction carbon-fibers/epoxy braid composites at various strain rates <i>B. J. Pang, Z. H. Tan, B. Jia & B. Z. Gai</i>	117
Influence of dynamic effects on the resistance of steel building structures to brittle failures <i>E. Basko, V. Larionov & V. Lazutin</i>	127
The effect of braid angle on the dynamic response of 3-D four direction carbon/epoxy braid composites at high strain rates <i>Z. H. Tan, B. Jia, B. J. Pang & B. Z. Gai</i>	137
Explosive shock and laser exposure of metallic and ceramic materials <i>O. T. Inal, P. F. Gerity & D. H. Lopez</i>	147
Numerical modeling of bumps using the stress stages <i>P. P. Prochazka</i>	155
Explosion-induced damage to oilwell perforating gun carriers <i>B. Grove, A. Werner & C. Han</i>	165

Section 3: Missile penetration and explosion

Low velocity perforation design of metal plates <i>N. Jones & R. S. Birch</i>	179
Penetration of a coarse sand target by rigid projectiles <i>M. D. Hankins, B. C. Stoltz, K. L. Torres & S. E. Jones</i>	187
The calculation of the depth of penetration for projectiles into rock <i>M. Y. Wang, Z. Shanbiao & Z. Daliang</i>	197
Robust prediction of residual velocities and ballistic limits of projectiles for impact on thin aluminium plates <i>M. Raguraman & A. Deb</i>	205
Experimental and numerical investigations on projectile penetration into polypropylene fiber reinforced concrete targets <i>Q. Fang, X. F. Hou, Y. N. Zhang & Y. D. Zhang</i>	215

Section 4: Protection of structures from blast loads

Design of optimally safe recovery boilers against occurrence and consequences of internal explosions <i>H. Martikka, I. Pöllänen & J. Simonen</i>	227
Development of thin, spray-on liner and composite superliner area supports for damage mitigation in blast- and rockburst-induced rock failure events <i>J. F. Archibald & P. A. Dirige</i>	237
Blast protection in military land vehicle programmes: approach, methodology and testing <i>M. Müller, U. Dierkes & J. Hampel</i>	247
Blast induced glass hazards: a comparison of design approaches and recent research <i>K. A. Marchand, E. J. Conrath, D. J. Stevens & S. B. Meyer</i>	259
Prediction of airblast loads in complex environments using artificial neural networks <i>A. M. Remennikov & P. A. Mendis</i>	269
Consequences on port facilities of a tanker explosion <i>P. L. Metropolo & A. E. P. Brown</i>	279

Section 5: Behaviour of structural concrete

Testing and simulation of local damage in a concrete plate by the impact of a hard projectile <i>K. Miwa, M. Beppu, T. Ohno & M. Katayama</i>	287
Optimization design of a RC slab under impact load using DPSO-based multiple optimal solutions <i>M. Beppu, H. Emoto, H. Nakamura & A. Miyamoto</i>	297
The principle of crater-formation of a concrete target plate penetrated by a projectile <i>G. Shiqiao, J. Lei, L. Haipeng & L. Kejie</i>	313
Dynamic interpretation of brittle fracture <i>P. Brož</i>	323
Reactive powder concrete plate response to a flat projectile impact <i>Y.-S. Tai & C.-C. Tang</i>	333

Section 6: Structural behaviour of composites

Vacuum infusion of a composite E-glass vinylester laminate for nautical application: experimental response to repeated impacts <i>G. Belingardi, M. P. Cavatorta & D. S. Paolino</i>	345
Modelling of the bullet perforation of textile targets <i>R. Barauskas, A. Abraitiene & A. Vilkauskas</i>	355
Some insights into the impact fatigue damage behaviour in laminated composites <i>Y. Ouroua, K. Azouaoui, A. Mesbah, N. Ouali & T. Boukharouba</i>	367
A novel lightweight sandwich panel with substantial resistance to ballistic penetration <i>T. Farquhar & R. Marlowe</i>	377

Section 7: Interaction between computational and experimental results

Identification and simulation of the impact characteristics of the viscous mount <i>H. Andou, T. Koizumi & N. Tsujiuchi</i>	391
Numerical studies on impact tests of a full-size metal storage cask <i>N. Kageyama & K. Shirai</i>	401

Section 8: Energy absorbing issues

Compact energy absorbing cellular structure <i>M. Ali, A. Qamhiyah, D. Flugrad & M. Shakoor</i>	413
Energy absorption of safety nets in building construction <i>E. G. Segovia Eulogio & R. Irlas Más</i>	421

Section 9: Structural crashworthiness

Materials behaviour and numerical simulation of a turbine blade-off containment analysis <i>F. Gálvez, D. A. Cendón, A. Enfedaque & V. Sánchez-Galvez</i>	433
Experimental investigation of the energy absorption capability of bonded crash boxes <i>L. Peroni & M. Avalle</i>	445

Mechanical properties of plain-woven CFRP reinforced by spread fiber tow during and after drop-weight impact <i>K. Toyota, K. Okubo, T. Fujii, T. Oguri, T. Uenoya & T. Sugawara</i>	455
---	-----

Section 10: Structural serviceability under impact loading

Structural serviceability under impact and dynamic loading <i>A. Farah</i>	467
Application of the island-genetic algorithm to optimal impact resistance design of a RC slab <i>A. Miyamoto & H. Emoto</i>	475
Dynamic response of an office building loaded by an explosion-generated air wave <i>D. Makovička & D. Makovička Jr</i>	495
Drop impact of a typical portable electronic device <i>C. Y. Zhou, T. X. Yu & R. S. W. Lee</i>	505
Non-ideal explosive performance in a building structure <i>K. Kim, W. Wilson, J. Colon, T. Kreitinger, C. Needham, R. Miller, J. Orphal, J. Rocco, J. Thomsen & L. V. Benningfield</i>	515

Section 11: Seismic engineering applications

Spectrum-based estimation method for peak structural responses of a SDOF system pounding against rigid structures <i>B. T. Tran & K. Kasai</i>	527
A high precision spectrum rectifying technique <i>J. Zhou & Y. Zhong</i>	539
Prediction of response spectral parameters for Bhuj earthquake (26 th January 2001) using a component attenuation modelling technique <i>S. H. Lodi & M. Kumar</i>	547
Poundings of seismically isolated buildings during strong earthquakes <i>P. Komodromos</i>	557
Author index	569