

Stanag 4569 Edition 2

Modern engineering practice requires advanced numerical modeling because, among other things, it reduces the costs associated with prototyping or predicting the occurrence of potentially dangerous situations during operation in certain defined conditions. Thus far, different methods have been used to implement the real structure into the numerical version. The most popular uses have been variations of the finite element method (FEM). The aim of this Special Issue has been to familiarize the reader with the latest applications of the FEM for the modeling and analysis of diverse mechanical problems. Authors are encouraged to provide a concise description of the specific application or a potential application of the Special Issue.

Adam Tweedsdale returns to Seggewiss believing that he is to become a flight instructor. Others in Special Operations have other ideas. He finds himself once again trying to stay alive on Groenland as he attempts to rescue his friends from the Hallsworth Incursion.

The shock and impact behaviour of structures is a difficult area, not only because of its obvious time-dependent aspects, but also because of the difficulties in specifying the external dynamic loading characteristics and in obtaining the full dynamic properties of materials. This book examines the interaction between blast pressure and surface or underground structures, whether the blast is from civilian, military, dust and natural explosions, or any other source. Including papers from the Ninth International Conference on Structures Under Shock and Impact, the book will be of significant interest to engineers from civil, military, nuclear, offshore, aeronautical, transportation and other backgrounds. Featured topics include: Impact and Blast Loading Characteristics; Protection of Structures from Blast Loads; Missile Penetration and Explosion; Air Craft and Missile Crash Against High-rise Buildings; Seismic Engineering Applications; Energy Absorbing Issues; Fluid Structure Interaction; Behaviour of Structural Concrete; Behaviour of Steel Structures; Structural Behaviour of Composites; Material Response to High Rate Loading; Structural Crashworthiness; Impact Biomechanics; Structural Serviceability under Impact Loading; Microdynamics; Interaction between Computational and Experimental Results; Software for Shock and Impact.

Mine-protected and mine-resistant, ambush-protected (MRAP) vehicles are today standard in the US, most major western armed forces and many other armies as a result of the wars in Iraq and Afghanistan. The South African Army was already routinely using mine-protected armored personnel carriers and patrol vehicles forty years ago even if they looked primitive and ungainly. A few years later, the South African Army had reached the stage where it could deploy entire combat groups into battle zones equipped with only mine-protected vehicles, including their ambulances and supply trucks. By then the mine-protected vehicles had also become effective for use in combat, rather than just protected transport, the Casspir being the chief example. More to the point, they saved countless soldiers and policemen from death or serious injury, and the basic concepts now live on in the various MRAP types in service today. The valuable lessons learned by the South Africans with their early designs of these combat-proven vehicles has led the country to become one of the global leaders in the design of MRAPs which are locally manufactured and exported around the world.

Surviving the Ride is a fascinating pictorial account featuring more than 120 of these unique South African-developed vehicles, spanning a forty-year period, with over 280 photographs, many of which are previously unpublished.

Highlights Recent Advances in Materials/Armour Technology As long as conflict exists in the world, protection technologies will always be in demand. *Armour: Materials, Theory, and Design* describes the existing and emerging protection technologies that are currently driving the latest advances in armour systems. This book explains the theory, applications, and material science aspects of modern armour design as they are used in relation to vehicles, ships, personnel, and buildings, and explores the science and technology used to provide protection against blasts and ballistic attacks. It covers materials technologies used in protection; addresses the system effects of adding blast-wave shaping to vehicles, as well as the effect on the human body; and outlines ballistic testing techniques. *Takes a Look at How Armour Works* The book discusses ceramics for armour applications; transparent armour; and metals for armour applications (including aluminium alloys, magnesium alloys, titanium alloys and steels); as well as composite armour systems; explosive reactive armour systems with reference to defensive aid suites for vehicles; and wound ballistics. In addition, the author lists more than 100 references for advanced study and further reading. *Armour: Materials, Theory, and Design* introduces a variety of armour technologies, outlines modern threats and dangers applicable to protection technology, and aids readers in implementing protective structures that can be used in battle, conflict, military zones, and other related environments.

Maritime Technology and Engineering includes the papers presented at the 2nd International Conference on Maritime Technology and Engineering (MARTECH 2014, Lisbon, Portugal, 15-17 October 2014). The contributions reflect the internationalization of the maritime sector, and cover a wide range of topics: Ports; Maritime transportation; Inland navigat

A Practical Introduction to Homeland Security and Emergency Management: From Home to Abroad offers a comprehensive overview of the homeland security field, examining topics such as counter-terrorism, border and infrastructure security, and emergency management. Authors Bruce Newsome and Jack Jarmon take a holistic look at the issues and risks, their solutions, controls, and countermeasures, and their political and policy implications. They also demonstrate through cases and vignettes how various authorities, policymakers and practitioners seek to improve homeland security. The authors evaluate the current practices and policies of homeland security and emergency management and provide readers with the analytical framework and skills necessary to improve these practices and policies.

The European Union's 25 member states have defence forces that include over 1.6 million personnel and inventories that include over 35,000 armoured vehicles, 2,000 combat aircraft, 60 submarines and over 140 major surface vessels. This text includes other vital facts and figures related to European defence issues.

Terrorist attacks and other destructive incidents caused by explosives have, in recent years, prompted considerable research and development into the protection of structures against blast loads. For this objective to be achieved, experiments have been performed and theoretical studies carried out to improve our assessments of the intensity as well as the space-time distribution of the resulting blast pressure on the one hand and the consequences of an explosion to the exposed environment on the other. This book aims to enhance awareness on

and understanding of these topical issues through a collection of relevant, Transactions of the Wessex Institute of Technology articles written by experts in the field. The book starts with an overview of key physics-based algorithms for blast and fragment environment characterisation, structural response analyses and structural assessments with reference to a terrorist attack in an urban environment and the management of its inherent uncertainties. A subsequent group of articles is concerned with the accurate definition of blast pressure, which is an essential prerequisite to the reliable assessment of the consequences of an explosion. Other papers are concerned with alternative methods for the determination of blast pressure, based on experimental measurements or neural networks. A final group of articles reports investigations on predicting the response of specific structural entities and their contents. The book concludes with studies on the effectiveness of steel-reinforced polymer in improving the performance of reinforced concrete columns and the failure mechanisms of seamless steel pipes used in nuclear industry.

Vinyl Compounds—Advances in Research and Application: 2013 Edition is a ScholarlyBrief™ that delivers timely, authoritative, comprehensive, and specialized information about ZZZAdditional Research in a concise format. The editors have built Vinyl Compounds—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about ZZZAdditional Research in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Vinyl Compounds—Advances in Research and Application: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

Lightweight Ballistic Composites: Military and Law-Enforcement Applications, Second Edition, is a fully revised and updated version of this informative book that explores the many changes in composite materials technology that have occurred since the book's first release in 2008, especially the type of commercial products used by armed forces around the world. Some changes can be attributed to the wars in Iraq and Afghanistan, whereas others are due to massive investment by private companies to neutralize the ever-increasing global threats and fulfill the military's appetite for lighter materials. Soldiers are now better protected against new ballistic threats and the overall weight of body protection has been reduced, while comfort has increased. New military vehicles are no longer purely armored with steel, and are instead lined with lightweight ballistic materials that increase the distance military vehicles can travel without refueling and also improve maneuverability. The book considers all aspects of lightweight ballistic composites from fiber manufacturing to commercial products and testing. Chapters also cover the many uses of lightweight ballistic composites in the military and law-enforcement industries. It will be an invaluable reference for ballistic composite design engineers, product development engineers, and all those involved in promoting new products for both defense and the law-enforcement industry. Gives comprehensive coverage on all aspects of lightweight ballistic composites, from fiber manufacturing, to commercial products and testing Discusses the wider applications of lightweight ballistic composites in military and law-enforcement industries Edited by a highly respected industry expert with over thirty years' experience developing lightweight composite ballistic materials and products

High Interstitial Stainless Austenitic Steels is of interest to all engineers and researchers working with stainless steel, either at universities or R&D departments in Industry. The new applications described appeal to design engineers while process engineers find interesting challenges. These novel steels enter more and more industrial applications. Their development

is presented by this book in its entirety, starting from the electronic scale of components. This makes it particularly attractive to Materials Scientists and Metal Physicists.

The Modern Weaponry of the World's Armed Forces is a treatise of military weaponry. It depicts about forty present-day weapon systems possessed by various nations, describing three to four weapons of each category with images, specifications, origin, development and design briefly. The weapon systems presented are almost all from the twenty-first century or the weapons presently under development. Only a very few officers in the three services know the finer distinctions between, say, cruise missile and ballistic missile, fourth generation jet fighter and fifth generation jet fighter and howitzer and a field gun. All such nuances are explained clearly. The beginning explains the 'history of military weapons' briefly and ends with information on the missile shield erected by most countries including India. The missile shield destroys the hostile incoming aircraft or missile automatically. The missile shield presented is real, exist on the ground today and not fictitious. The militaries win the war with the help of the man who stands erect in the face of the enemy fire and the weapon that is in his hands. All the students of military science must read this invaluable book about the gun in the hands of a soldier, what exactly it is and how much it matters.

The second volume of the series is devoted to applications of mechatronics in material processing and robotics. Both classical machining methods, such as extrusion, forging and milling, and modern ones, such as plasma and ultrasonic machining, are analyzed. An extensive part covers the modeling of these processes, also from a phenomenological point of view. The study analyzes the issues related to robotics in various technological processes as well.

Original research from around the world on weapons-grade projectiles, warheads, missiles, guns and their effects on target materials New information on shaped charges, fire, control strategies, simulation, blast resistance, non-lethal systems and more 190 original presentations in two printed volumes, plus searchable CD The first part of this 2-volume set, part of an ongoing series, presents previously unpublished research on the design and modeling of ballistic devices ranging from shells to missiles, including explosives, propellants and internal components. The second part investigates the effects of ballistic penetrants on a variety of targets, including human models, as well as hard targets and diverse armors made from engineered fibers, ceramics, metal alloys and concrete. Data is included on the modeling and testing of novel devices, explosives and shielding strategies. Papers in this text were presented at a symposium organized by the National Defense Industrial Association with the International Ballistics Society. The CD-ROM displays figures and illustrations in articles in full color along with a title screen and main menu screen. Each user can link to all papers from the Table of Contents and Author Index and also link to papers and front matter by using the global bookmarks which allow navigation of the entire CD-ROM from every article. Search features on the CD-ROM can be by full text including all key words, article title, author name, and session title. The CD-ROM has Autorun feature for Windows 2000 with Service Pack 4 or higher products along with the program for Adobe Acrobat Reader with Search 11.0. One year of technical support is included with your purchase of this product. Lightweight Ballistic Composites Military and Law-Enforcement Applications Woodhead Publishing

This book has been motivated by an urgent need for designing and implementation of innovative control algorithms and systems for tracked vehicles. Nowadays the unmanned vehicles are becoming more and more common. Therefore there is a need for innovative mechanical constructions capable of adapting to various applications regardless the ground, air or water/underwater environment. There are multiple various activities connected with tracked vehicles. They can be distributed among three main groups: design and control algorithms, sensoric and vision based information, construction and testing mechanical parts of unmanned vehicles. Scientists and researchers involved in mechanics, control algorithms, image processing, computer vision, data fusion, or IC will find this book useful.

Ceramic Engineering and Science Proceedings Volume 34, Issue 5 - Advances in Ceramic Armor IX A collection of 14 papers from The American Ceramic Society's 37th International Conference on Advanced Ceramics and Composites, held in Daytona Beach, Florida, January 27-February 1, 2013. This issue includes papers presented in the Armor Ceramics Symposium on topics such as Manufacturing; High-Rate Real-Time Characterization; Microstructural Design; Nondestructive Characterization; and Phenomenology and Mechanics of Ceramics Subjected to Ballistic Impact.

Following the publication of Al Venter's successful Portugal's Guerrilla Wars in Africa - shortlisted by the New York Military Affairs Symposium's 'Arthur Goodzeit Book Award for 2013' - his Battle for Angola delves still further into the troubled history of this former Portuguese African colony. This is a completely fresh work running to almost 600 pages including 32 pages of color photos, with the main thrust on events before and after the civil war that followed Lisbon's over-hasty departure back to the metrópole. There are also several sections that detail the role of South African mercenaries in defeating the rebel leader Dr Jonas Savimbi (considered by some as the most accomplished guerrilla leader to emerge in Africa in the past century). There are many chapters that deal with Pretoria's reaction to the deteriorating political and military situation in Angola, the role of the Soviets and mercenaries in the political transition, as well as the civil war that followed. With the assistance of several notable military authorities he elaborates in considerable detail on South Africa's 23-year Border War, from the first guerrilla incursions to the last. In this regard he received solid help from the former the head of 4 Reconnaissance Regiment, Colonel Douw Steyn, who details several cross-border Recce strikes, including the sinking by frogmen of two Soviet ships and a Cuban freighter in an Angolan deepwater port.

Throughout, the author was helped by a variety of notable authorities, including the French historian Dr René Pélissier and the American academic and former naval aviator Dr John (Jack) Cann. With their assistance, he covers several ancillary uprisings and invasions, including the Herero revolt of the early 20th century; the equally troubled Ovambo insurrection, as well as the invasion of Angola by the Imperial German Army in the First World War. Former deputy head

of the South African Army Major General Roland de Vries played a seminal role. It was he - dubbed 'South Africa's Rommel' by his fellow commanders - who successfully nurtured the concept of 'mobile warfare' where, in a succession of armored onslaughts 'thin-skinned' Ratel Infantry Fighting Vehicles tackled Soviet main battle tanks and thrashed them. There is a major section on South African Airborne – the 'Parabats' –by Brigadier-General McGill Alexander, one of the architects of that kind of warfare under Third World conditions. Finally, the role of Cuban Revolutionary Army receives the attention it deserves: officially there were almost 50,000 Cuban troops deployed in the Angolan war, though subsequent disclosures in Havana suggest that the final total was much higher. Major Hal Skaarup has woven together an informative and detailed synopsis of the carefully preserved and restored armoured fighting vehicles on display in Canada. He highlights the importance of these upon key turning points in history when these AFVs were in use as tools of war at home and overseas. We often associate the evolution of military prowess with the advancement of sophisticated technology. Major Skaarup's descriptions of Canadian armour as it evolved to the level it has today reveals that military planners have had to be continuously creative in adapting to the changes in modern combat. They had to devise many intricate techniques, tactics and procedures to overcome the insurgents and opposition forces faced in Afghanistan and future overseas missions where Canadian armour will be brought into play. This guide book will show the interested reader where to find examples of the historical armour preserved in Canada, and perhaps serve as a window on how Canada's military contribution to safety and security in the world has evolved.

This book presents the proceedings of the "International Conference of the Polish Society of Biomechanics – BIOMECHANICS 2018" held in Zielona Góra, Poland from September 5 to 7, 2018, and discusses recent research on innovations in biomechanics. It includes a collection of selected papers in all key areas of biomechanics, including cellular, molecular, neuro and musculoskeletal biomechanics, as well as sport, clinical and rehabilitation biomechanics. These themes are extremely important in the development of engineering concepts and methods to provide new medical solutions, especially in the context of an ageing population. Presenting the latest technical advances and research methods used in clinical biomechanics, this book is of interest to scientists as well as junior researchers and students of interdisciplinary fields of engineering, medical, and sports sciences.

Fully illustrated with a mixture of dramatic archive photos and manufacturers' images, this volume covers the little-known history of riot control vehicles. It explores the world of these vehicles from 1945 through to the present day – from adapted military armoured cars such as the Humber Pig (UK) and BRDM (Soviet Union) to the fully computerized systems of the Russian Lavina-Uragan and Canadian INKAS Armored Riot Control Vehicle – showing how their development and deployment has blurred the lines between civilian actions and military operations. It charts how the vehicles have evolved in terms of technology and layout, and also details how the associated weapon systems have been refined over time, from water cannon

and tear gas launchers to subsonic sound waves and microwave energy. The operational history of the vehicles is explained in the dramatic context of major incidents across the world, from the streets of Northern Ireland and Eastern Europe to the favelas of Brazil and the battlegrounds of Iraq.

These proceedings of the 13th International Conference on Computer Aided Engineering present selected papers from the event, which was held in Polanica Zdrój, Poland, from June 22 to 25, 2016. The contributions are organized according to thematic sections on the design and manufacture of machines and technical systems; durability prediction; repairs and retrofitting of power equipment; strength and thermodynamic analyses for power equipment; design and calculation of various types of load-carrying structures; numerical methods for dimensioning materials handling; and long-distance transport equipment. The conference and its proceedings offer a major interdisciplinary forum for researchers and engineers to present the most innovative studies and advances in this dynamic field.

Dynamic Behavior of Materials, Volume 1: Proceedings of the 2012 Annual Conference on Experimental and Applied Mechanics represents one of seven volumes of technical papers presented at the Society for Experimental Mechanics SEM 12th International Congress & Exposition on Experimental and Applied Mechanics, held at Costa Mesa, California, June 11-14, 2012. The full set of proceedings also includes volumes on Challenges in Mechanics of Time -Dependent Materials and Processes in Conventional and Multifunctional Materials, Imaging Methods for Novel Materials and Challenging Applications, Experimental and Applied Mechanics, 2nd International Symposium on the Mechanics of Biological Systems and Materials 13th International Symposium on MEMS and Nanotechnology and, Composite Materials and the 1st International Symposium on Joining Technologies for Composites. With the upsurge in terrorism in recent years and the possibility of accidental blast threats, there is growing interest in manufacturing blast 'hardened' structures and retrofitting blast mitigation materials to existing structures. Composites provide the ideal material for blast protection as they can be engineered to give different levels of protection by varying the reinforcements and matrices. Part one discusses general technical issues with chapters on topics such as blast threats and types of blast damage, processing polymer matrix composites for blast protection, standards and specifications for composite blast protection materials, high energy absorbing composite materials for blast resistant design, modelling the blast response of hybrid laminated composite plates and the response of composite panels to blast wave pressure loadings. Part two reviews applications including ceramic matrix composites for ballistic protection of vehicles and personnel, using composites to protect military vehicles from mine blasts, blast protection of buildings using FRP matrix composites, using composites in blast resistant walls for offshore, naval and defence related structures, using composites to improve the blast resistance of columns in buildings, retrofitting using fibre reinforced polymer composites for blast protection of buildings and retrofitting to improve the blast response of concrete masonry walls. With its distinguished editor and team of expert contributors, Blast protection of civil infrastructures and vehicles using composites is a standard reference for all those concerned with protecting structures from the effects of blasts in both the civil and military sectors. Reviews the role of composites in blast protection with an examination of technical issues, applications of composites and ceramic matrix composites Presents numerical examples of simplified blast load computation and an overview of the basics of high explosives includes important properties and physical forms Varying applications of composites for protection are explored including military and non-military vehicles and increased resistance in building columns and masonry walls

This book serves as a comprehensive resource on various traditional, advanced and futuristic material technologies for aerospace applications encompassing nearly 20 major areas. Each of the chapters addresses scientific principles behind processing and production, production

details, equipment and facilities for industrial production, and finally aerospace application areas of these material technologies. The chapters are authored by pioneers of industrial aerospace material technologies. This book has a well-planned layout in 4 parts. The first part deals with primary metal and material processing, including nano manufacturing. The second part deals with materials characterization and testing methodologies and technologies. The third part addresses structural design. Finally, several advanced material technologies are covered in the fourth part. Some key advanced topics such as “Structural Design by ASIP”, “Damage Mechanics-Based Life Prediction and Extension” and “Principles of Structural Health Monitoring” are dealt with at equal length as the traditional aerospace materials technology topics. This book will be useful to students, researchers and professionals working in the domain of aerospace materials.

Selected, peer reviewed papers from the 13th International Conference “Special Concrete and Composite 2016”, October 13-14, 2016, Skalský Dv?r, Czech Republic

A Practical Introduction to Security and Risk Management is the first book to introduce the full spectrum of security and risks and their management. Author and field expert Bruce Newsome helps readers learn how to understand, analyze, assess, control, and generally manage security and risks from the personal to the operational. They will develop the practical knowledge and skills they need, including analytical skills, basic mathematical methods for calculating risk in different ways, and more artistic skills in making judgments and decisions about which risks to control and how to control them. Organized into 16 brief chapters, the book shows readers how to: analyze security and risk; identify the sources of risk (including hazards, threats, and contributors); analyze exposure and vulnerability; assess uncertainty and probability; develop an organization’s culture, structure, and processes congruent with better security and risk management; choose different strategies for managing risks; communicate and review; and manage security in the key domains of operations, logistics, physical sites, information, communications, cyberspace, transport, and personal levels.

The University of Manchester hosted the 28th International Symposium on Shock Waves between 17 and 22 July 2011. The International Symposium on Shock Waves first took place in 1957 in Boston and has since become an internationally acclaimed series of meetings for the wider Shock Wave Community. The ISSW28 focused on the following areas: Blast Waves, Chemically Reacting Flows, Dense Gases and Rarefied Flows, Detonation and Combustion, Diagnostics, Facilities, Flow Visualisation, Hypersonic Flow, Ignition, Impact and Compaction, Multiphase Flow, Nozzle Flow, Numerical Methods, Propulsion, Richtmyer-Meshkov, Shockwave Boundary Layer Interaction, Shock Propagation and Reflection, Shock Vortex Interaction, Shockwave Phenomena and Applications, as well as Medical and Biological Applications. The two Volumes contain the papers presented at the symposium and serve as a reference for the participants of the ISSW 28 and individuals interested in these fields.

In constant effort to eliminate mine danger, international mine action community has been developing safety, efficiency and cost-effectiveness of clearance methods.

Demining machines have become necessary when conducting humanitarian demining where the mechanization of demining provides greater safety and productivity. Design of Demining Machines describes the development and testing of modern demining machines in humanitarian demining. Relevant data for design of demining machines are included to explain the machinery implemented and some innovative and inspiring development solutions. Development technologies, companies and projects are discussed to provide a comprehensive estimate of the effects of various design factors and to proper selection of optimal parameters for designing the demining machines.

Covering the dynamic processes occurring in machine assemblies and their components to a broader understanding of demining machine as a whole, *Design of Demining Machines* is primarily tailored as a text for the study of the fundamentals and engineering techniques involved in the calculation and design of demining machines. It will prove as useful resource for engineers, designers, researchers and policy makers working in this field.

This book gathers the latest advances, innovations, and applications in the field of computational engineering, as presented by leading international researchers and engineers at the 24th International Conference on Computational & Experimental Engineering and Sciences (ICCES), held in Tokyo, Japan on March 25-28, 2019. ICCES covers all aspects of applied sciences and engineering: theoretical, analytical, computational, and experimental studies and solutions of problems in the physical, chemical, biological, mechanical, electrical, and mathematical sciences. As such, the book discusses highly diverse topics, including composites; bioengineering & biomechanics; geotechnical engineering; offshore & arctic engineering; multi-scale & multi-physics fluid engineering; structural integrity & longevity; materials design & simulation; and computer modeling methods in engineering. The contributions, which were selected by means of a rigorous international peer-review process, highlight numerous exciting ideas that will spur novel research directions and foster multidisciplinary collaborations.

This volume provides a one-stop resource, compiling current research on ceramic armor and addressing the challenges facing armor manufacturers. It is a collection of papers from The American Ceramic Society's 32nd International Conference on Advanced Ceramics and Composites, January 27-February 1, 2008. Topics include novel materials concepts for both vehicle and body armors, transparent ceramics for impact resistance, and more. This is a valuable, up-to-date resource for researchers in industry, government, or academia who are working with ceramic armor.

Academic researchers who are working on the development of composite materials for ballistic protection need a deeper understanding on the theory of material behavior during ballistic impact. Those working in industry also need to select proper composite constituents, to achieve their desired characteristics to make functional products. *Composite Solutions for Ballistics* covers the different aspects of ballistic protection, its different levels and the materials and structures used for this purpose. The emphasis in the book is on the application and use of composite materials for ballistic protection. The chapters provide detailed information on the various types of impact events and the complexity of materials to respond to those events. The characteristics of ballistic composites and modelling and simulation results will enable the reader to better understand impact mechanisms according to the theory of dynamic material behavior. A complete description of testing conditions is also given that includes sensors and high-speed devices to monitor ballistic events. The book includes detailed approaches and schemes that can be implemented in academic research into solutions for ballistic protection in both theoretical and experimental fields, to find solutions for existing and next generation threats. The book will be an essential reference resource for materials scientists and engineers, and academic and industrial researchers working in composite materials and textiles for ballistic protection, as well as postgraduate students on materials science, textiles and mechanical engineering courses. Discusses

the fundamentals of impact response mechanisms and related solutions covering advantages and disadvantages for both existing and next generation applications Includes various methods for evaluation of ballistic constituents according to economic and environmental criteria, types of green ballistics are considered to enhance sustainable production of applications as well as hybrid composites from natural wastes Discusses selection methodologies for ballistic applications and detailed information on the use of textiles for reinforcement fabrication

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